

GROUND ELECTRODE MEASUREMENT

SCOPE:

GROUNDING TESTS SHALL BE 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)

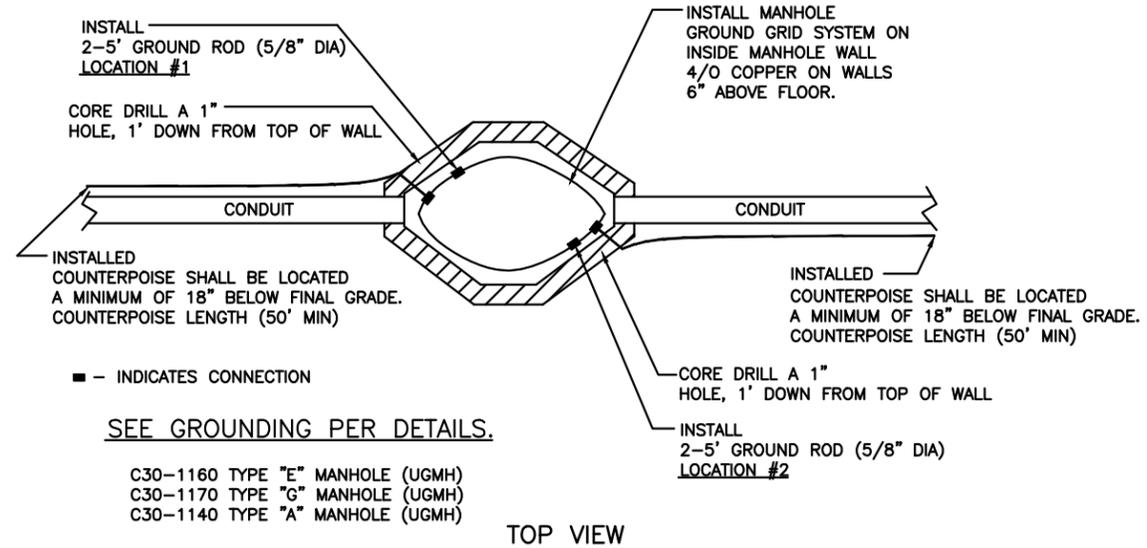
TESTS SHALL BE PERFORMED WHEN THE GROUND IS NOT FROZEN TO ELIMINATE HIGH RESISTANCE READINGS IN THE MANHOLES. THE CLAMP ON TEST SHALL BE DONE AT EACH GROUND ROD AND COUNTERPOISE CONNECTION AND FROM THE MANHOLE PERIMETER GROUND CABLE TO THE GROUND ROD. AEMC INSTRUMENT MODEL 3710, 3730, OR EQUIVALENT MAY 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.

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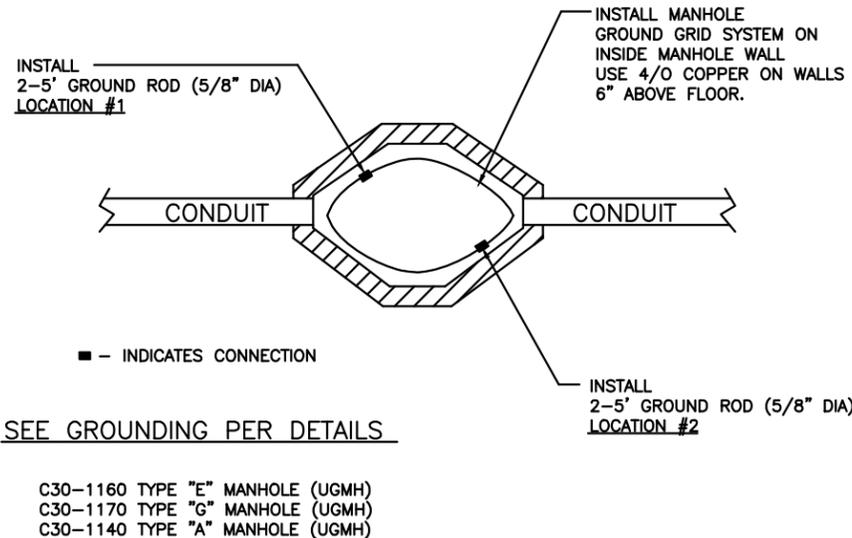
CLAMP ON METER TEST STANDARD MANHOLE

(GROUNDING WITH GROUND RODS AND COUNTERPOISE)



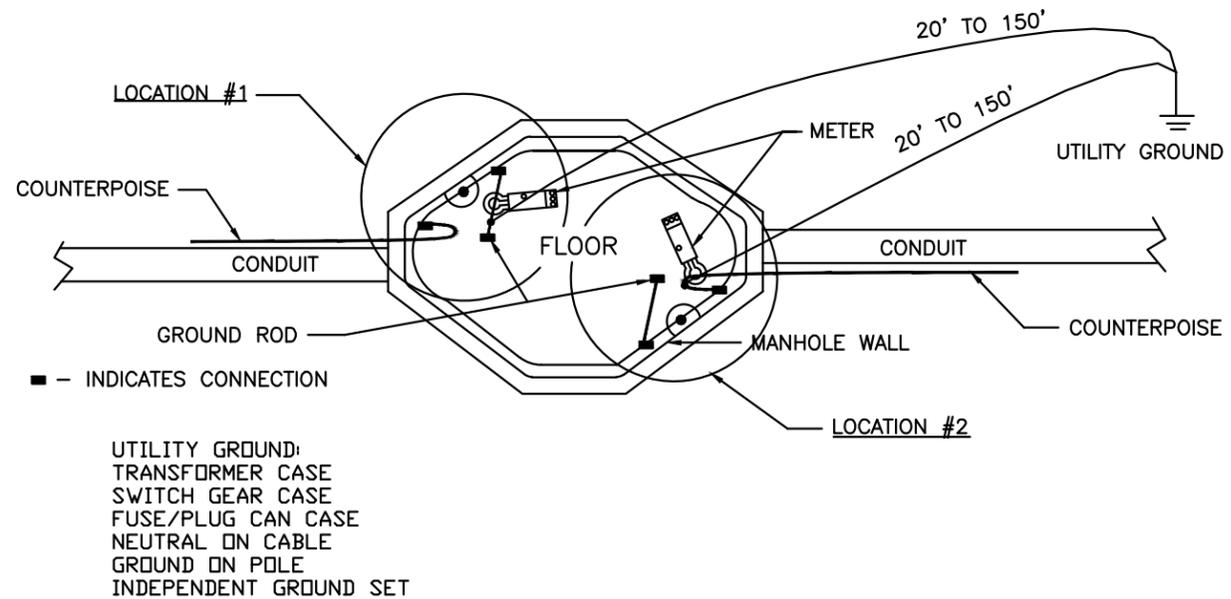
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STANDARD MANHOLE (GROUNDING WITH RODS)



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PLACEMENT OF METER FOR READING



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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338/IL 59	2011-035-1	DUPAGE		
CONTRACT 60P42				
FED.ROAD.DIST.NO.	ILLINOIS	FED. AID PROJECT		

PROJECT TITLE ROUTE 59 ROAD IMPROVEMENTS				
PROJECT DESCRIPTION DETAILS AND STANDARDS				
ENGINEER BCC	DRAFTING DATE 5-11-12	MAP # 4211,4212,4223	SCALE N.T.S.	
GIS DESIGN BY DL	DRAFTED BY PSM	REVISIONS DATE N/A	PROJECT # EU-12	SHEET # 33 OF 63
CHECKED BY	APPROVED BY	CAD FILE 0060648001D133.DWG	WORK REQUEST # 60468	
Naperville		Department of Public Utilities Electric Division		