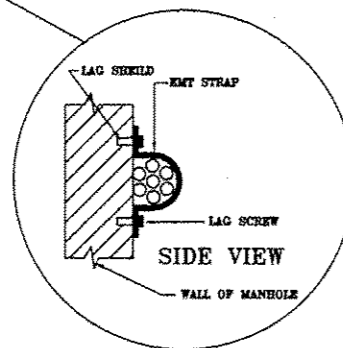
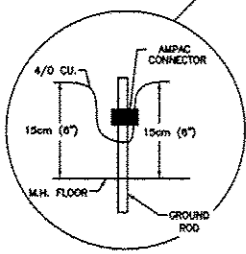
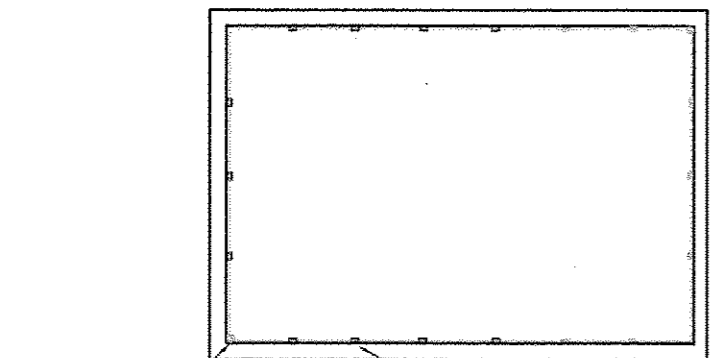


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338/IL 59	2011-035-1	DUPAGE		
CONTRACT 60P42				
FED.ROAD.DIST.NO.	ILLINOIS	FED. AID PROJECT		

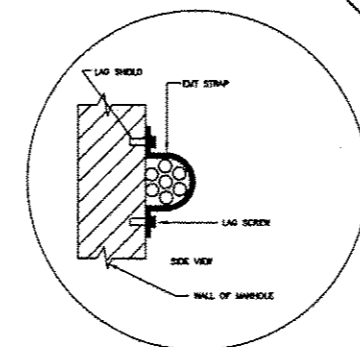
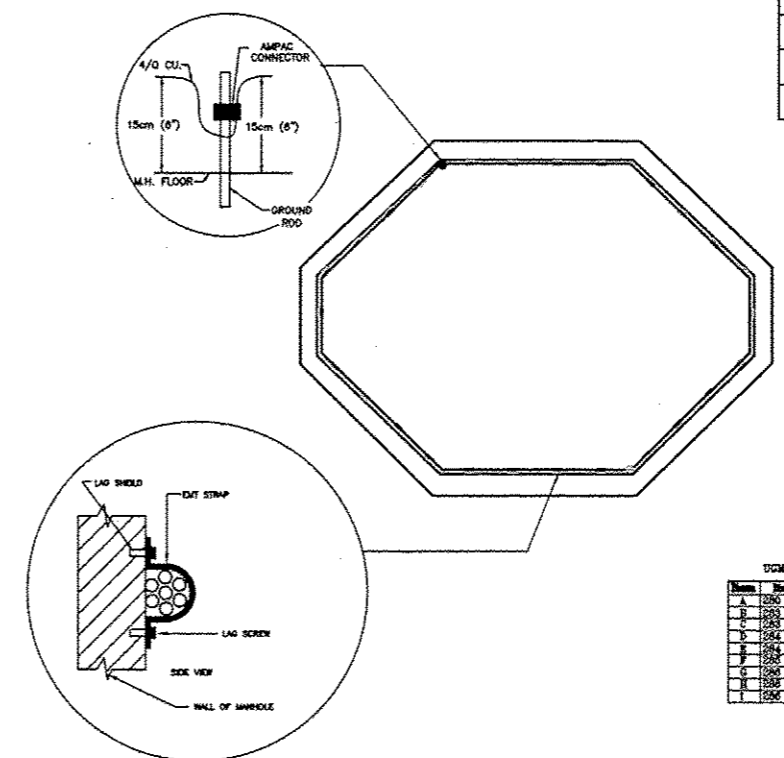


Item	Item Code	Description 1	Description 2	QTY	QTY	QTY	QTY
A	280 107 00070	CU BARE 50	4/0 7-STR	40	40	40	200
B	283 100 00020	GROUND ROD COPPER CLAD	5/8" X 6' USE 10 FOOTER	4	4	4	4
C	283 100 00040	COUPLING BRONZE	5/8" ROD	2	2	2	2
D	284 100 00040	LAG SHIELD LEAD SHEET	1/4"	20	20	20	20
E	284 100 00070	LAG SCREW SS	1/4" X 1"	20	20	20	20
F	285 100 00000	STRAP NUT	1/2" SS	20	20	20	20
G	286 100 00050	CONNECTOR BRONZE CU	4/0 STRUT - 4/0 STRUT	2	2	2	2
H	286 100 00020	CONNECTOR BRONZE CU	4/0 STRUT - 5/8" ROD	2	2	2	2
I	286 101 00010	SHIELD WEDGE AMP	WHITE	3	3	3	3

- KEEP 4/0 CU IN ONE PIECE AROUND INNER WALL; TIE TOGETHER WITH ONE AMPAC.
- 4/0 IS SUPPORTED ALONG INNER WALL OF M.H., 15cm (6") ABOVE M.H. FLOOR, AT (2 FOOT) INTERVALS.
- COPPER STRAP AND LEAD ANCHOR SHALL BE INSTALL AT 60cm (TWO FOOT) INTERVALS.
- THE TWO KNOCKOUTS IN THE FLOOR SHOULD BE USED. IF SOLID ROCK IS ENCOUNTERED UNDER THE MANHOLE, REFER TO ENGINEERING.
- TWO 1.5 METER (5') GROUND RODS AND ONE COUPLING SHOULD BE INSTALLED WITH A DRIVING STUD PER KNOCKOUT.
- SEE STANDARD C30-0020 FOR COUNTERPOISE IF TYPICAL DRIVEN GROUNDS ARE IMPOSSIBLE.

ASSEMBLY CODES		
CODE	QTY	DESCRIPTION
UGMH	1	GROUNDING MANHOLE

NAPEVILLE PUBLIC UTILITIES DEPARTMENT	GROUNDING DETAIL TYPE "A" MANHOLE	DATE 03-17-04	C30-1140
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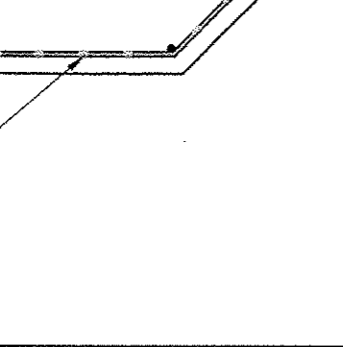
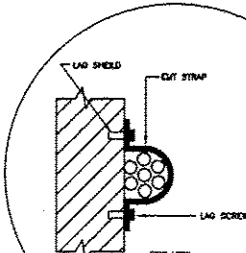
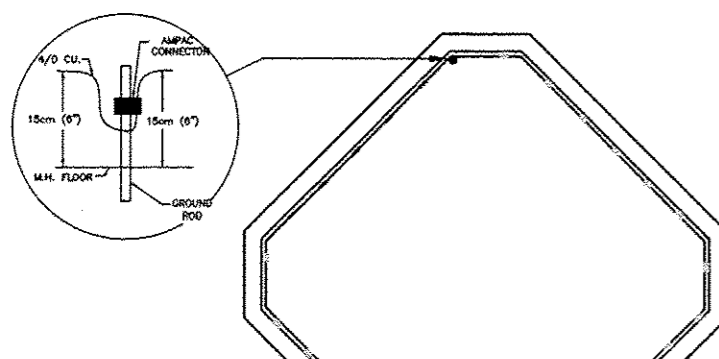


Item	Item Code	Description 1	Description 2	QTY	QTY	QTY	QTY
A	280 107 00070	CU BARE 50	4/0 7-STR	40	40	40	200
B	283 100 00020	GROUND ROD COPPER CLAD	5/8" X 6' USE 10 FOOTER	4	4	4	4
C	283 100 00040	COUPLING BRONZE	5/8" ROD	2	2	2	2
D	284 100 00040	LAG SHIELD LEAD SHEET	1/4"	20	20	20	20
E	284 100 00070	LAG SCREW SS	1/4" X 1"	20	20	20	20
F	285 100 00000	STRAP NUT	1/2" SS	20	20	20	20
G	286 100 00050	CONNECTOR BRONZE CU	4/0 STRUT - 4/0 STRUT	2	2	2	2
H	286 100 00020	CONNECTOR BRONZE CU	4/0 STRUT - 5/8" ROD	2	2	2	2
I	286 101 00010	SHIELD WEDGE AMP	WHITE	3	3	3	3

- KEEP 4/0 CU IN ONE PIECE AROUND INNER WALL; TIE TOGETHER WITH ONE AMPAC.
- 4/0 IS SUPPORTED ALONG INNER WALL OF M.H., 15cm (6") ABOVE M.H. FLOOR, AT (2 FOOT) INTERVALS.
- COPPER STRAP AND LEAD ANCHOR SHALL BE INSTALL AT 60cm (TWO FOOT) INTERVALS.
- THE TWO KNOCKOUTS IN THE FLOOR SHOULD BE USED. IF SOLID ROCK IS ENCOUNTERED UNDER THE MANHOLE, REFER TO ENGINEERING.
- TWO 1.5 METER (5') GROUND RODS AND ONE COUPLING SHOULD BE INSTALLED WITH A DRIVING STUD PER KNOCKOUT.
- SEE STANDARD C30-0020 FOR COUNTERPOISE IF TYPICAL DRIVEN GROUNDS ARE IMPOSSIBLE.

ASSEMBLY CODES		
CODE	QTY	DESCRIPTION
UGMH	1	GROUNDING MANHOLE

NAPEVILLE PUBLIC UTILITIES DEPARTMENT	GROUNDING DETAIL TYPE "E" MANHOLE	DATE 03-17-04	C30-1160
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Item	Item Code	Description 1	Description 2	QTY	QTY	QTY	QTY
A	280 107 00070	CU BARE 50	4/0 7-STR	40	40	40	200
B	283 100 00020	GROUND ROD COPPER CLAD	5/8" X 6' USE 10 FOOTER	4	4	4	4
C	283 100 00040	COUPLING BRONZE	5/8" ROD	2	2	2	2
D	284 100 00040	LAG SHIELD LEAD SHEET	1/4"	20	20	20	20
E	284 100 00070	LAG SCREW SS	1/4" X 1"	20	20	20	20
F	285 100 00000	STRAP NUT	1/2" SS	20	20	20	20
G	286 100 00050	CONNECTOR BRONZE CU	4/0 STRUT - 4/0 STRUT	2	2	2	2
H	286 100 00020	CONNECTOR BRONZE CU	4/0 STRUT - 5/8" ROD	2	2	2	2
I	286 101 00010	SHIELD WEDGE AMP	WHITE	3	3	3	3

- KEEP 4/0 CU IN ONE PIECE AROUND INNER WALL; TIE TOGETHER WITH ONE AMPAC.
- 4/0 IS SUPPORTED ALONG INNER WALL OF M.H., 15cm (6") ABOVE M.H. FLOOR, AT (2 FOOT) INTERVALS.
- COPPER STRAP AND LEAD ANCHOR SHALL BE INSTALL AT 60cm (TWO FOOT) INTERVALS.
- THE TWO KNOCKOUTS IN THE FLOOR SHOULD BE USED. IF SOLID ROCK IS ENCOUNTERED UNDER THE MANHOLE, REFER TO ENGINEERING.
- TWO 1.5 METER (5') GROUND RODS AND ONE COUPLING SHOULD BE INSTALLED WITH A DRIVING STUD PER KNOCKOUT.
- SEE STANDARD C30-0020 FOR COUNTERPOISE IF TYPICAL DRIVEN GROUNDS ARE IMPOSSIBLE.

ASSEMBLY CODES		
CODE	QTY	DESCRIPTION
UGMH	1	GROUNDING MANHOLE

NAPEVILLE PUBLIC UTILITIES DEPARTMENT	GROUNDING DETAIL TYPE "G" MANHOLE	DATE 03-17-04	C30-1170
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- NOTES:
- ALL MANHOLES SHALL BE INSTALLED AND GROUNDS INSTALLED AND GROUND RODS TESTED IMMEDIATELY.
 - IF TESTING INDICATES A GROUND RESISTANCE MORE THAN 25 OHMS ADDITIONAL RODS NEED TO BE ADDED OR COUNTER POISE INSTALLED.
 - THE COUNTER POISE IF REQUIRED, WILL BE INSTALLED IN THE TRENCH WHEN THE DUCT IS INSTALLED. INSTALL 4/0 BARE 7-STRAND COPPER WIRE THRU THE 2-KNOCKOUTS IN WALL TRAIN AROUND MANHOLE TO DUCT RUNS AND INSTALL 200 FEET OF COUNTER POISE IN TWO DIRECTIONS FROM MANHOLE ABOVE DUCT AND BEFORE BACK FILLING.
 - CONTRACTOR IS ADVISED IF THE DUCT IS INSTALLED PRIOR TO MANHOLE WORK, THE CONTRACTOR SHALL TEST SOIL RESISTANCE AT MANHOLE LOCATION PRIOR TO INSTALLING DUCT.
 - AFTER COUNTER POISE IS INSTALLED GROUNDS SHALL BE RETESTED AND FINDINGS GIVEN TO THE CITY.

PROJECT TITLE				ROUTE 59 ROAD IMPROVEMENTS			
PROJECT DESCRIPTION				DETAILS AND STANDARDS			
ENGINEER	DRAFTING DATE	MAP #	SCALE				
BCC	5-11-12	4211,4212,4223	N.T.S.				
DESIGN BY	DRAWN BY	REVISIONS DATE	AT&T JOINT AGREEMENT #	PROJECT #			
DL	PSM	N/A		EU-12			
CHECKED BY	APPROVED BY	GD FILE	SHEET #				
		0060648001D123DWG	23 OF 63				
Naperville			Department of Public Utilities		WORK REQUEST #		
			Electric Division		60468		