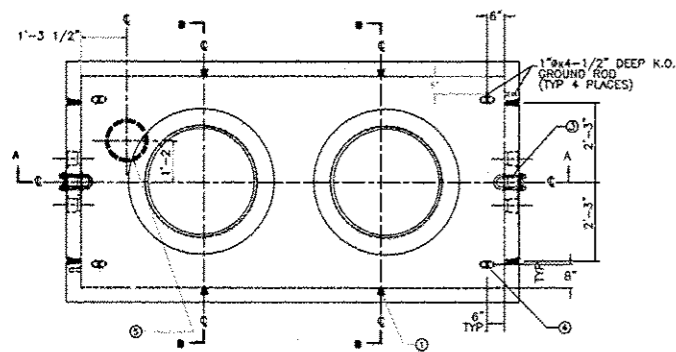
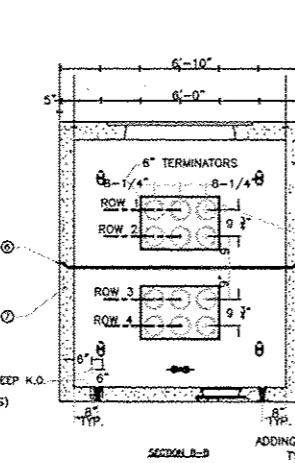
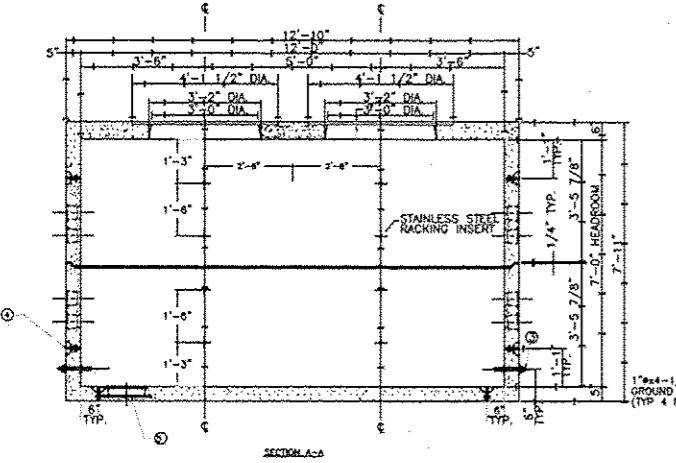
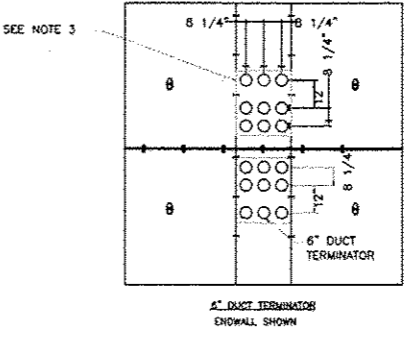
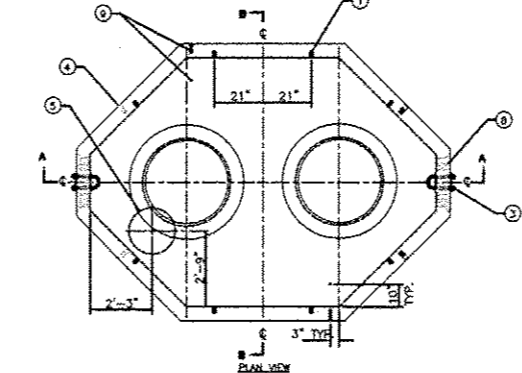


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338/IL 59	2011-035-1	DUPAGE		
CONTRACT 60P42				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



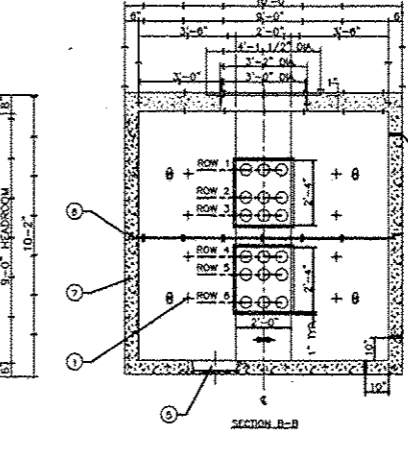
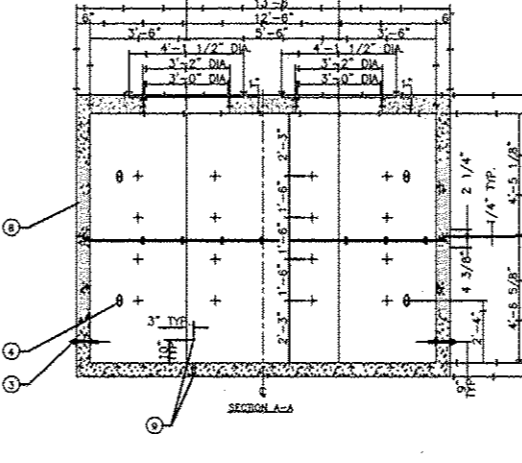
ITEM	DESCRIPTION	QTY	NOTE
1	TOTAL MANHOLE WEIGHT	5000 P.S.I.	40,615 LBS.
2	TOP SECTION WEIGHT	CONC.	13,570 LBS.
3	BASE SECTION WEIGHT	CONC.	27,045 LBS.
4	REBAR, EP. COATED	2	
5	1" x 5 1/2" GROUND WIRE HOLE, 1/2" KNOCKOUT	4	
6	6" DUCT TERMINATORS	24	
7	1" BUTYL RUBBER JOINT SEALANT	4 ROLLS	
8	1" SUMP DEPRESSION	1	
9	6" LIFTING ANCHORS	8	
10	1" S.S. PULLING IRONS	2	
11	CABLE RACK INSERTS: 1/2" 304 STAINLESS STEEL THREADED INSERTS EACH WITH 1/2" x 2" 304 S.S. HEX HEAD BOLT, 1/2" S.S. WASHER, AND 1/2" PVC WASHER	32	

- NOTES:
- CONCRETE: 5000 psi @ 28 DAYS, 5%-8% ENTRAINED AIR, 4" MAX. SLUMP.
 - REBAR: ASTM A-615 GRD. 60, EPOXY COATED.
 - DUCT ENTRANCE: SINGLE DUCT TERMINATORS TO ACCEPT 6" DIAMETER SCH. 40 PVC CONDUIT. SEE DETAIL ON THIS SHEET.
 - PLEASE NOTE PULLING IRON DESIGNED AS PER A.C.I. 318 FOR WORKING LOAD CAPACITY OF 28,000 POUNDS APPLIED COINCIDENT TO THE MAJOR AXIS OF THE PULLING IRON.
 - IDENTIFICATION: IMPRESSED INTO CEILING OF VAULT.
 - DESIGN CRITERIA:
 - DESIGNED AND BUILT IN ACCORDANCE WITH ASTM C858 "STANDARD SPECIFICATION FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES".
 - ALL LOADING AS PER ASTM C857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES" INCLUDING:
 - EARTH COVER: MIN. 2.0', MAX. 5.0'.
 - ASHTO HS-20 WHEEL LOAD AND APPLICABLE IMPACT.
 - VERTICAL AND LATERAL SOIL PRESSURES DETERMINED USING A SOIL DENSITY OF 120 PCF.
 - GROUNDWATER AT 3'-0" BELOW GRADE.
 - STRUCTURAL DESIGN PERFORMED USING ASHTO STRENGTH DESIGN METHOD.
 - REINFORCING COVER REQUIREMENTS AS PER ACI 318.
 - SEE SPECIFICATION C30-1900 FOR ROW IDENTIFICATION WITH CONDUIT.



ADDING THE MANHOLE CENTER ASSEMBLY CONVERTS TYPE "A" MANHOLE TO TYPE "C" MANHOLE.

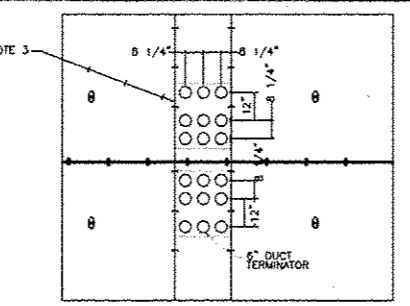
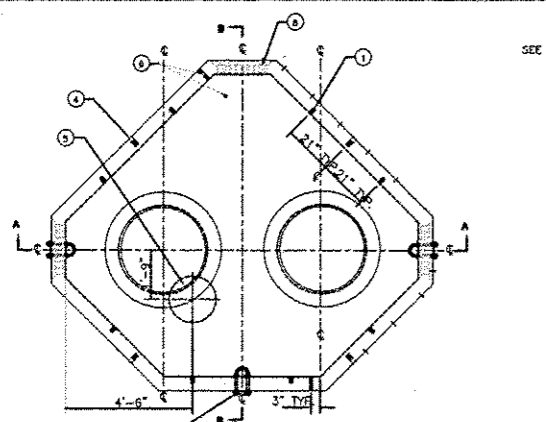
NAPEVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC DIVISION	TYPE A MANHOLE	DATE 05-08-08 M30-1140
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NAPEVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC DIVISION	TYPE E MANHOLE	DATE 05-08-08 M30-1160
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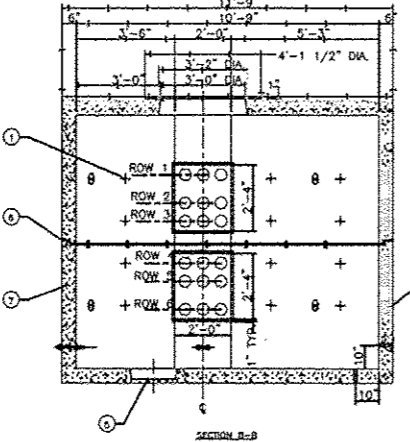
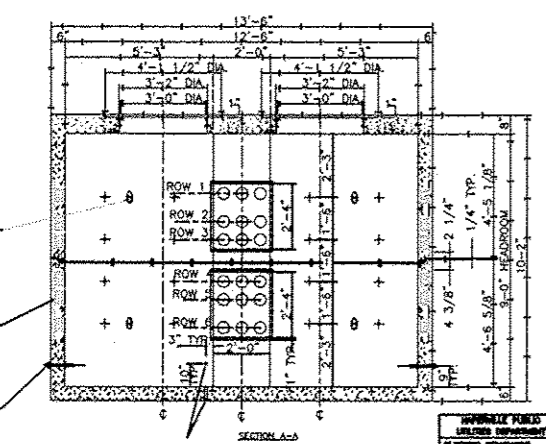
ITEM	DESCRIPTION	QTY	NOTE
1	TOTAL MANHOLE WEIGHT	5000 P.S.I.	42,470 LBS.
2	TOP SECTION WEIGHT	CONC.	21,470 LBS.
3	BASE SECTION WEIGHT	CONC.	21,000 LBS.
4	REBAR, EPOXY COATED	2	
5	1" x 5 1/2" GROUND WIRE HOLE, 1/2" KNOCKOUT	4	
6	6" DUCT TERMINATORS	36	
7	1" BUTYL RUBBER JOINT SEALANT	4 ROLLS	
8	1" SUMP DEPRESSION	1	
9	6" LIFTING ANCHORS	8	
10	1" S.S. PULLING IRONS	2	
11	CABLE RACK INSERTS: 1/2" 304 STAINLESS STEEL THREADED INSERTS EACH WITH 1/2" x 2" 304 S.S. HEX HEAD BOLT, 1/2" S.S. WASHER, AND 1/2" PVC WASHER	32	

- NOTES:
- CONCRETE: 5000 psi @ 28 DAYS, 5%-8% ENTRAINED AIR, 4" MAX. SLUMP.
 - REBAR: ASTM A-615 GRD. 60, EPOXY COATED.
 - DUCT ENTRANCE: SINGLE DUCT TERMINATORS TO ACCEPT 6" DIAMETER SCH. 40 PVC CONDUIT. SEE DETAIL THIS SHEET.
 - PLEASE NOTE PULLING IRON DESIGNED AS PER A.C.I. 318 FOR WORKING LOAD CAPACITY OF 28,000 POUNDS APPLIED COINCIDENT TO THE MAJOR AXIS OF THE PULLING IRON.
 - IDENTIFICATION: IMPRESSED INTO CEILING OF VAULT.
 - DESIGN CRITERIA:
 - DESIGNED AND BUILT IN ACCORDANCE WITH ASTM C858 "STANDARD SPECIFICATION FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES".
 - ALL LOADING AS PER ASTM C857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES" INCLUDING:
 - EARTH COVER: MIN. 2.0', MAX. 5.0'.
 - ASHTO HS-20 WHEEL LOAD AND APPLICABLE IMPACT.
 - VERTICAL AND LATERAL SOIL PRESSURES DETERMINED USING A SOIL DENSITY OF 120 PCF.
 - GROUNDWATER AT 3'-0" BELOW GRADE.
 - STRUCTURAL DESIGN PERFORMED USING ASHTO STRENGTH DESIGN METHOD.
 - REINFORCING COVER REQUIREMENTS AS PER ACI 318.
 - SEE SPECIFICATION C30-1900 FOR ROW IDENTIFICATION WITH CONDUIT.



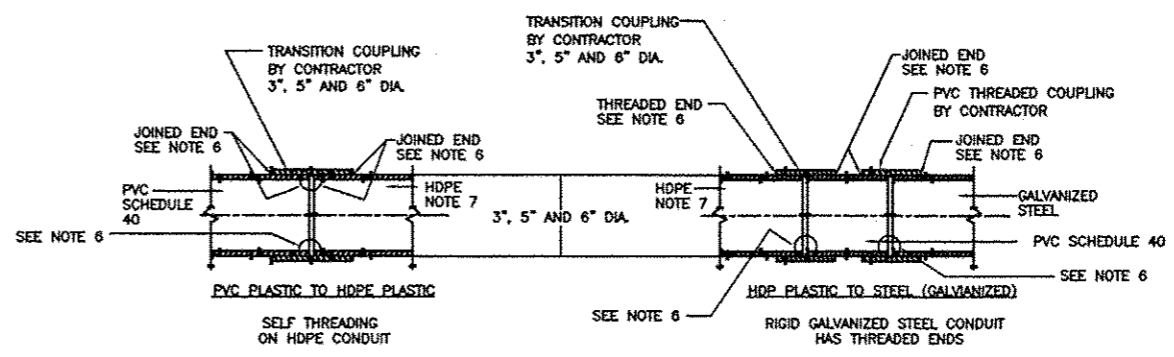
ITEM	DESCRIPTION	QTY	NOTE
1	TOTAL MANHOLE WEIGHT	5000 P.S.I.	45,470 LBS.
2	TOP SECTION WEIGHT	CONC.	23,470 LBS.
3	BASE SECTION WEIGHT	CONC.	22,000 LBS.
4	REBAR, EPOXY COATED	2	
5	1" x 5 1/2" GROUND WIRE HOLE, 1/2" KNOCKOUT	4	
6	6" DUCT TERMINATORS	54	
7	1" BUTYL RUBBER JOINT SEALANT	4 ROLLS	
8	1" SUMP DEPRESSION	1	
9	6" LIFTING ANCHORS	8	
10	1" S.S. PULLING IRONS	2	
11	CABLE RACK INSERTS: 1/2" 304 STAINLESS STEEL THREADED INSERTS EACH WITH 1/2" x 2" 304 S.S. HEX HEAD BOLT, 1/2" S.S. WASHER, AND 1/2" PVC WASHER	32	

- NOTES:
- CONCRETE: 5000 psi @ 28 DAYS, 5%-8% ENTRAINED AIR, 4" MAX. SLUMP.
 - REBAR: ASTM A-615 GRD. 60, EPOXY COATED.
 - PULLING IRON: 1" STAINLESS STEEL.
 - ADD GROUND ROD KNOCKOUTS IN FLOOR AND WALLS.
 - RACKING INSERTS: STAINLESS STEEL.
 - IDENTIFICATION: IMPRESSED INTO CEILING OF VAULT.
 - DESIGN CRITERIA:
 - DESIGNED AND BUILT IN ACCORDANCE WITH ASTM C858 "STANDARD SPECIFICATION FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES".
 - ALL LOADING AS PER ASTM C857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES" INCLUDING:
 - EARTH COVER: MIN. 2.0', MAX. 5.0'.
 - ASHTO HS-20 WHEEL LOAD AND APPLICABLE IMPACT.
 - VERTICAL AND LATERAL SOIL PRESSURES DETERMINED USING A SOIL DENSITY OF 120 PCF.
 - GROUNDWATER AT 3'-0" BELOW GRADE.
 - STRUCTURAL DESIGN PERFORMED USING ASHTO STRENGTH DESIGN METHOD.
 - REINFORCING COVER REQUIREMENTS AS PER ACI 318.
 - SEE SPECIFICATION C30-1900 FOR ROW IDENTIFICATION WITH CONDUIT.



NAPEVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC DIVISION	TYPE C MANHOLE	DATE 05-08-08 M30-1170
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3, 5 AND 6 INCH PLASTIC TRANSITION CONDUIT COUPLINGS
PVC TO HDPE
GALVANIZED STEEL TO HDPE



- NOTES:
- CONTRACTOR SHALL SUPPLY TRANSITION COUPLING TO GO FROM HDPE TO STEEL AND HDPE TO PVC SCHEDULE 40.
 - THE COST OF THIS MATERIAL IS INCLUDED IN UNIT PRICES FOR VAULTS AND HANDHOLES, PLUG CANS, FUSE CANS, SIDE WALK SPLICE BOXES AND CONDUIT.
 - THE CONTRACTOR SHALL SUPPLY ALL TRANSITION COUPLINGS.
 - THE CONTRACTOR SHALL NOT USE TRANSITION COUPLING TO CONNECT HDPE TO HDPE IN THE MAIN LINE. ALL MAINLINE CONNECTIONS SHALL BE BUTT FUSED.
 - CONTRACTOR TO USE ELECTROFUSION PROCESS AT ALL TIMES TO MAKE HDPE TO HDPE CONNECTIONS.
 - CONTRACTOR TO ASSEMBLE, CUT, ALIGN, BEVEL, AND FIT TO CREATE A SMOOTH INSIDE INTERFACE AT CONNECTION POINT.
 - HDPE, PVC AND STEEL CONDUIT HAVE DIFFERENT INSIDE DIAMETER.
 - ENCASE IN CONCRETE FOR 5 FEET.

PROJECT TITLE				ROUTE 59 ROAD IMPROVEMENTS			
PROJECT DESCRIPTION				DETAILS AND STANDARDS			
ENGINEER	BCC	DRAWING DATE	5-11-12	DATE	4211,4212,4223	SCALE	N.T.S.
DESIGNED BY	DL	DRAWN BY	PSM	REVISIONS DATE	N/A	PROJECT #	EU-12
CHECKED BY		APPROVED BY		CAD FILE	00606480010121.DWG	SHEET #	21 OF 63
Naperville				Department of Public Utilities Electric Division			
				60468			