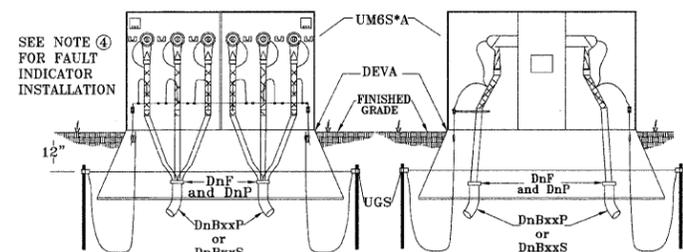


NOTES (CONTINUED):

- 8) THIS DRAWING SHOWS AN EXISTING SWITCH GEAR WITH CABLE INSTALLED WITH MATERIAL LIST ON RIGHT.
- 9) CONTRACTOR TO OBTAIN OUTAGE OF SWITCH GEAR PRIOR TO DOING ANY WORK.
- 10) CONTRACTOR TO INSTALL 3", 5" AND 6" CONDUIT INTO EXISTING AS SPECIFIED IN SPECIFICATIONS CAP AND PLUGS ALL CONDUITS.
- 11) ALL GROUNDING CONNECTIONS AND TERMINATORS SHALL BE INSPECTED TO DETERMINE CONDITION OF CONNECTIONS BY THE CONTRACTOR REPORT FINDING.



- SEE NOTE 4 FOR FAULT INDICATOR INSTALLATION
- NOTES:
- BENDS SHALL BE INSTALLED PER FIELD CONDITION.
 - SPARES NOT SHOWN.
 - INSTALL ELBOW ARRESTERS AT NORMAL OPEN SWITCH LOCATIONS ON 600A SIDE.
 - SEE C30-1010 FOR FAULT INDICATOR LOCATION.
 - FOR VAULT INSTALLATIONS ONLY, INSTALL LIDS - DEVAL
 - GROUND GRID INSTALLED 12" FROM VAULT AND 12" BELOW GRADE.
 - CONTRACTOR IS ADVISED THIS SPECIFICATION INDICATES WHAT IS INSIDE AN EXISTING ENERGIZED SWITCH GEAR THAT IS TO BE WORKED IN BY THE CONTRACTOR.

ASSEMBLY CODES	
CODE	DESCRIPTION
DEVA	Vault, Air Switch
DnBxxP	Bend, PVC
DnBxxS	Bend, Steel
DnF	Bell Fitting, PVC
DnP	Plug, PVC
U115n	Faulted Circuit Indicator
UFnSMU	Fuse Unit, 15kV, SMU 20
UM6S*A	Switch, Pad mounted
UGS#	Grounding, Switchgear
UT15AE	Arrester, Elbow, 9kV
UT15En	Elbow, 15kV

n is dependent on size
 ** qty is dependent on application
 xx bend angle dependent on field condition, (typically 45°)
 # V for vault only, E for switchgear only

DEVA: VAULT, AIR SWITCH		TE	A	TC	PC	F	AE	M	AL
Item Code	Description 1	Description 2	Qty	Qty	Qty	Qty	Qty	Qty	Qty
284 100 00120	EXTENDER, 10 TRF VAULT	44" X 44" X 9" W/25 X25" OPEN	1						
284 101 00010	VAULT, AIR SWITCH	74" X 76" X 36" (FIBER-CRETE)	1						
284 101 00020	VAULT, 10 TRF/FUSE CAN	44" X 44" X 32" (FIBER-CRETE)		1					
284 101 00030	VAULT, 30 PLUG CAN	25" X 69" X 30" (FIBER-CRETE)			1				
284 101 00040	VAULT, 30 FUSE CAN	49" X 69" X 30" (FIBER-CRETE)				1			
284 101 00100	EXTENDER, AIR SWITCH VAULT	74" X 76" X 9" (FIBER-CRETE)					1		
NON	CA-6	CRUSHED LIMESTONE			1	.25	.25	.5	
NON	VAULT, 12.47kV PRI. METERING	56" X 56" X 20" (FIBER-CRETE)							1
NON	LID, AIR SWITCH VAULT	2-PIECE DESIGN W/HARDWARE							1

DnBxxP: BEND, PVC		Description 1	Description 2	Qty
D3B30P	285 101 00025	ELBOW, PVC 30 DEG 3"	STANDARD RADIUS SCH 40	1
D3B45P	285 101 00030	ELBOW, 30" R PVC 45 DEG 3"	SCH 40	1
D3B90P	285 101 00040	ELBOW, 30" R PVC 90 DEG 3"	SCH 40	1
D5B30P	285 101 00080	ELBOW, 30" R PVC 30 DEG 5"	SCH 40	1
D5B45P	285 101 00090	ELBOW, 30" R PVC 45 DEG 5"	SCH 40	1
D5B90P	285 101 00100	ELBOW, 30" R PVC 90 DEG 5"	SCH 40	1
D6B30P	285 101 00220	ELBOW, 48" R PVC 30 DEG 6"	SCH 40	1
D6B45P	285 101 00230	ELBOW, 48" R PVC 45 DEG 6"	SCH 40	1
D6B90P	285 101 00240	ELBOW, 48" R PVC 90 DEG 6"	SCH 40	1

D3BxxS: BEND, 3" STEEL		Description 1	Description 2	D3B90S
Item Code	Description 1	Description 2	Qty	Qty
285 101 00140	ELBOW, 30" R STL 90 DEG 3"	GALVANIZED	1	1
285 102 00040	COUPLING, PVC 3"	LONG LINE SCH 40	1	1

D5BxxS: BEND, 5" STEEL		Description 1	Description 2	D5B30S	D5B45S	D5B90S
Item Code	Description 1	Description 2	Qty	Qty	Qty	
285 101 00160	ELBOW, 30" R STL 30 DEG 5"	GALVANIZED	1	1	1	
285 101 00170	ELBOW, 30" R STL 45 DEG 5"	GALVANIZED	1	1	1	
285 101 00180	ELBOW, 30" R STL 90 DEG 5"	GALVANIZED	1	1	1	
285 102 00110	COUPLING, PVC 5"	LONG LINE SCH 40	1	1	1	

D6BxxS: BEND, 6" STEEL		Description 1	Description 2	D6B11S	D6B22S	D6B30S	D6B45S	D6B90S
Item Code	Description 1	Description 2	Qty	Qty	Qty	Qty	Qty	Qty
285 101 00186	ELBOW, 48" R STL 11 DEG 6"	GALVANIZED	1	1	1	1	1	1
285 101 00196	ELBOW, 48" R 22.5 DEG 6"	GALVANIZED	1	1	1	1	1	1
285 101 00190	ELBOW, 48" R STL 30 DEG 6"	GALVANIZED	1	1	1	1	1	1
285 101 00200	ELBOW, 48" R STL 45 DEG 6"	GALVANIZED	1	1	1	1	1	1
285 101 00210	ELBOW, 48" R STL 90 DEG 6"	GALVANIZED	1	1	1	1	1	1
285 102 00140	COUPLING, PVC 6"	LONG LINE SCH 40	1	1	1	1	1	1

DnF: BELL FITTING, PVC		Description 1	Description 2	D3F	D5F	D6F
Item Code	Description 1	Description 2	Qty	Qty	Qty	
285 103 00040	BELL FITTING, PVC 3"	SCH 40 & SCH 80	1	1	1	
285 103 00080	BELL FITTING, PVC 5"	SCH 40 & SCH 80	1	1	1	
285 103 00100	BELL FITTING, PVC 6"	SCH 40 & SCH 80	1	1	1	

DnP: PLUG, PVC		Description 1	Description 2	D3P	D5P	D6P
Item Code	Description 1	Description 2	Qty	Qty	Qty	
285 103 00030	PLUG, PVC 3"	WITH PULL TAB	1	1	1	
285 103 00070	PLUG, PVC 5"	WITH PULL TAB	1	1	1	
285 103 00090	PLUG, PVC 6"	WITH PULL TAB	1	1	1	

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 30 15kV AIR SWITCH MODULE ASSEMBLY
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 ELECTRIC STANDARDS
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3570	00-00116-00-BR	DUPAGE	106	66
STA. 4+38.47		TO STA. 14+62.4		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT 83827				

UFnSMU: FUSE UNIT, 15KV, SMU20		Description 1	Description 2	25	50	65	80	100	140	200
Item Code	Description 1	Description 2	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty
289 105 00030	FUSE UNIT, SMU20, 15KV	25K	1							
289 105 00040	FUSE UNIT, SMU20, 15KV	50K		1						
289 105 00050	FUSE UNIT, SMU20, 15KV	65K			1					
289 105 00060	FUSE UNIT, SMU20, 15KV	80K				1				
289 105 00070	FUSE UNIT, SMU20, 15KV	100K					1			
289 105 00080	FUSE UNIT, SMU20, 15KV	140K						1		
289 105 00090	FUSE UNIT, SMU20, 15KV	200K							1	

UGS: GROUNDING, SWITCHGEAR		Description 1	Description 2	UGS	UGSV	UGSE
Item Code	Description 1	Description 2	Qty	Qty	Qty	
280 107 00070	CH BASK SD	4/0 7-STR	75	45	30	
283 156 00010	GROUND ROD, COPPER CLAD	5/8" X 10'	4	4	4	
284 199 00184	CLAMP, CABLE TO FLAT GND	#6 SOL - 250 MCM CU	4	4	4	
286 100 00260	CONNECTOR, WEDGE CU	4/0 STR (7) - 4/0 STR (7)	4	2	2	
286 100 00320	CONNECTOR, WEDGE CU	4/0 STR (7) - 5/8" ROD	4	4	4	
286 101 00010	SHRDL, WEDGE AMP	WHITE	6	4	4	
286 199 00220	BREAK-AWAY	1/0-4/0 STR X 1/0 - 4/0 STR	12	-	12	

U115: FAULTED CIRCUIT INDICATOR		Description 1	Description 2	S1	S3	L3
Item Code	Description 1	Description 2	Qty	Qty	Qty	
283 199 00210	GUARD, WIRE	SPIRAL	4	8	8	
284 120 00010	FAULT INDICATOR, 1/0 - 4/0	15kV	4	4	4	
284 120 00020	FAULT INDICATOR, 750 - 1000	15kV	-	3	3	
284 120 00030	INDICATOR CABLE, 3 TO 1	10 FOOT	-	1	1	
284 120 00040	INDICATOR CABLE, 1 TO 1	6 FOOT	-	-	-	
284 120 00050	TIES, CABLE	SMALL	4	6	6	
284 120 00060	CLIP	ADHESIVE BACKED	4	6	6	

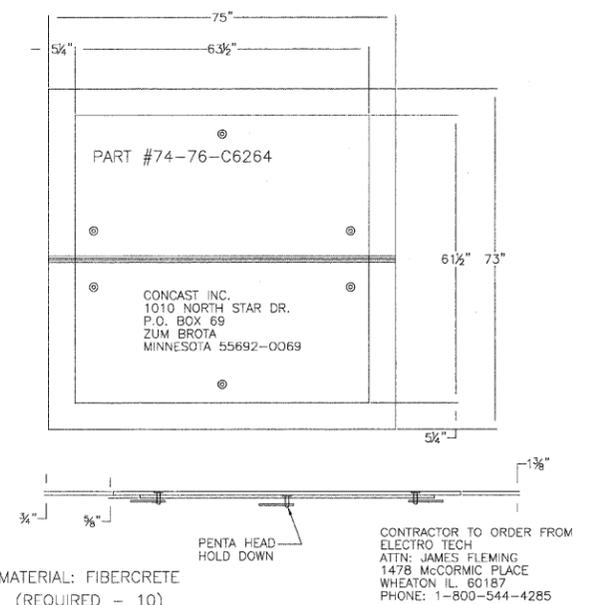
UM6S*A: SWITCH, PAD MOUNTED		Description 1	Description 2	2A	3A	2AA	3AA
Item Code	Description 1	Description 2	Qty	Qty	Qty	Qty	
NON	3PH, 2-WAY AUTOMATED SWITCH	15kV, 600A				1	
NON	3PH, 3-WAY AUTOMATED SWITCH	15kV, 600A				1	
284 200 00050	3PH, 2-WAY	8.3/15kV, 600A	1				
284 200 00060	3PH, 3-WAY	8.3/15kV, 600A		1			
284 199 00310	SIGN NOTICE/OBSTRUCTION	8" X 6"	2	2	2	2	
287 109 00240	PADLOCK, BRONZE	W/1-1/2" SHACKLE	4	5	5	5	

UTAB: BUSHING INSERT, 15KV 200		Description 1	Description 2	Qty
Item Code	Description 1	Description 2	Qty	Qty
284 117 00060	INSERT, LOADER/BREAK BUSHING	15kV, 200A	1*	1*

UT15AE: ARRESTER, ELBOW, 9KV		Description 1	Description 2	B	E	P
Item Code	Description 1	Description 2	Qty	Qty	Qty	
284 116 00020	ARRESTER, ELBOW	9/10 kV	1	1	1	
284 116 00030	ARRESTER, PARKING STAND	9/10 kV	1	1	1	
284 116 00040	ARRESTER, BUSHING INSERT	9/10kV	1	1	1	
286 199 00220	CONNECTOR, BREAKAWAY CU	1/0 - 4/0 STR	1	1	1	

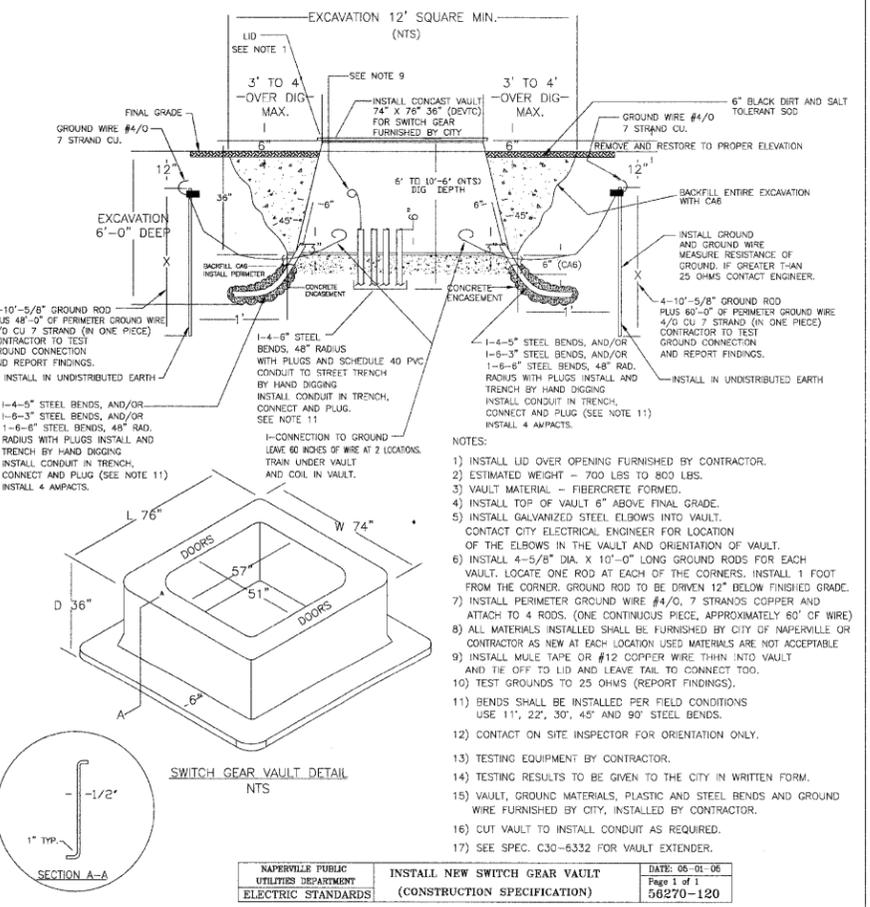
UT15E: ELBOW, 15KV		Description 1	Description 2	10	10F	40	40F	C75	C99	10	40	75	99
Item Code	Description 1	Description 2	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty
284 109 00010	FUSE, ELBOW 8kV	30A	1										
284 117 00020	ELBOW, FUSED 8.3kV 200A	1/0 STR AL 175-220 MIL	1										
284 117 00030	ELBOW, 15kV 200A	1/0 STR AL 175-220 MIL	1										
284 117 00031	ELBOW, 15kV 200A EXTENDED	1/0 STR AL 175-220 MIL			1								
284 117 00040	ELBOW, 15kV 200A	4/0 STR AL 175-220 MIL				1							
284 117 00041	ELBOW, 15kV 200A EXTENDED	4/0 STR AL 175-220 MIL					1						
284 117 00065	ELBOW, 15kV 600A, W/LRTP	750 MCM STR AL 175-220 MIL						1					
284 117 00066	ELBOW, 15kV 600A EXTENDED	750 MCM STR AL 175-220 MIL							1				
284 117 00065	ELBOW, 15kV 600A, W/LRTP	1000 MCM STR AL 175-220 MIL								1			
284 117 00098	ELBOW, 15kV 600A EXTENDED	1000 MCM STR AL 175-220 MIL									1		
284 117 00400	ELBOW, 15kV 600A	4/0 STR AL 175-220 MIL										1	
284 117 00430	KIT CABLE JACKET SEAL	1/0-4/0 (0.85"-1.50")	1	1	1	1	1	1	1	1	1	1	1
284 117 00440	KIT CABLE JACKET SEAL	250-1000 MCM (1.50"-2.67")											
255 199 00100	CABLE CLEANER	QUARTS	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
284 199 00120	CAP, INSULATED W/GROUND	15kV 200A											

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
 ELECTRIC STANDARDS
 30 15kV AIR SWITCH MODULE ASSEMBLY
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- NOTE:
- INSTALL THIS COVER OVER SWITCH GEAR VAULT UNTIL SWITCH IS INSTALLED.
 - RETURN COVER TO CITY OF NAPERVILLE'S STOCK ROOM.
 - CONTRACTOR TO FURNISH LID.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
 ELECTRIC STANDARDS
 SWITCH GEAR VAULT COVER (50 LBS.)
 (CONSTRUCTION SPECIFICATION)
 DATE: 05-01-05
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- NOTES:
- INSTALL LID OVER OPENING FURNISHED BY CONTRACTOR.
 - ESTIMATED WEIGHT - 700 LBS TO 800 LBS.
 - VAULT MATERIAL - FIBERCRETE FORMED.
 - INSTALL TOP OF VAULT 6" ABOVE FINAL GRADE.
 - INSTALL GALVANIZED STEEL ELBOWS INTO VAULT.
 - CONTACT CITY ELECTRICAL ENGINEER FOR LOCATION OF THE ELBOWS IN THE VAULT AND ORIENTATION OF VAULT.
 - INSTALL 4-5/8" DIA. X 10'-0" LONG GROUND RODS FOR EACH VAULT. LOCATE ONE ROD AT EACH OF THE CORNERS. INSTALL 1 FOOT FROM THE CORNER. GROUND ROD TO BE DRIVEN 12" BELOW FINISHED GRADE.
 - INSTALL PERIMETER GROUND WIRE #4/0, 7 STRANDS COPPER AND ATTACH TO 4 RODS. (ONE CONTINUOUS PIECE, APPROXIMATELY 60' OF WIRE)
 - ALL MATERIALS INSTALLED SHALL BE FURNISHED BY CITY OF NAPERVILLE OR CONTRACTOR AS NEW AT EACH LOCATION USED MATERIALS ARE NOT ACCEPTABLE