

SWITCHING

CONSTRUCTION NOTES

TO CALL FOR EQUIPMENT MOUNTING PIT, SEE PAD SECTION.

SWITCH/FUSE ASSEMBLY OPTIONS:

UVS*6/6	UVPS	UVSR*3
UVS*9/3	UVSA*12	UVSRT
UVS*12	UVSA*5	UVSRT2

Detailing Engineer: When ordering Manhole for Vacpac Switchgear (SWELO001), specify Vacpac Switch Compartment to be installed on side wall of Manhole Vault. See UVPS plate in this section and Manhole Section.

See PULL-BOX Plate, Secondary Section, for details of Switch Handle Boxes to be used for Vacpac Switch Gear.

For Primary Termination of Vacpac Switchgear, see Plate UVT8 in Termination Section.

Sump Pump to be installed in Manhole with Vacpac Switch. See UDBP Plate in Manhole Section.

For Fusing, see System Protection Section.

For Auto Transfer Switch or other requirements, consult with Standards.

UG SYSTEM SWITCH RATINGS CAPABILITIES AND OPERATING GUIDELINES					
MANUFACTURER	kV			AMPERES, RMS LIVE SWITCHING	
	NOM.	MAX.	BIL	CONT.	LOAD
LOAD INTERRUPTER SWITCHES (GROUP)					
JEA TECHNICAL SPECIFICATION	25	27	125	600	400
S&C WITH MINI-RUPTER (PMH GEAR)	25	29	125	600	400
EEI AUTO - JET II (PSI GEAR)	25	27	125	600	600
COOPER VFI (PADMOUNT GEAR)	25	27	125	600	600
KEARNY (VACPAC)	15	15.5	95	600	600
JOSYLN TRANSFER	25	27	125	600	600
INTEGRAL LOAD BREAK FUSES (HOOK)					
JEA TECHNICAL SPECIFICATION	25	27	125	200	200
S&C UNI-RUPTER (FOR THE SML-4Z)	25	29	125	200	200
S&C UNI-RUPTER (FOR THE FAULT FITER)	25	29	125	600	200
EEI SM-4 (FOR THE S&C SML-4Z)	25	27	125	200	200
<p>The above list represents certified manufacturer ratings. These are the ratings they performed ANSI certification test and recommend for our use. However, the Cooper gear is certified at 27 kV and Cooper's opinion is that their gear would pass the certification test required for a 29 kV rating. When operating a switch, Standards recommends following the certified ratings located on the cabinet name plate.</p>					

UVS* PRIMARY PADMOUNT SWITCH / FUSE ASSEMBLY

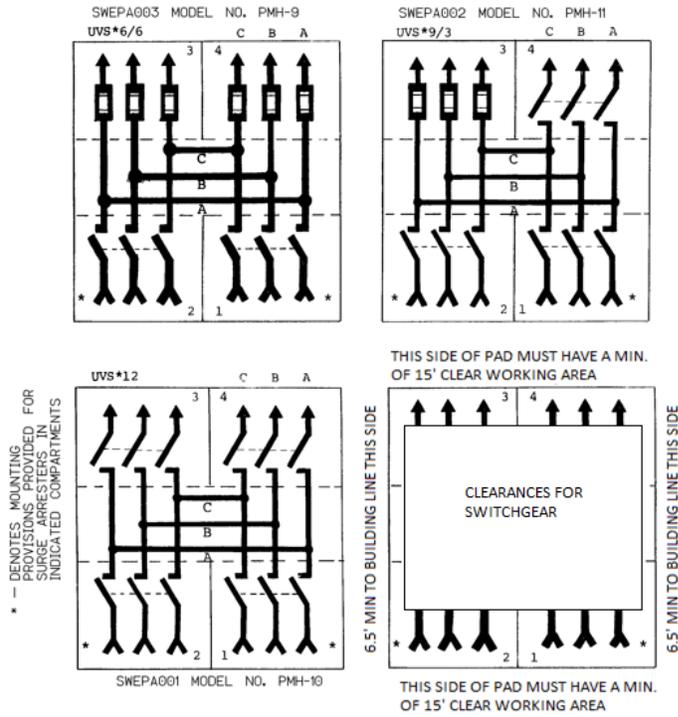


PLATE	ITEM	QTY	DESCRIPTION
All Include	ADCFO500	2	FOAM SEALANT, QUICK SEAL EXPANDING FOAM
	ADCSE140	2	SILICONE SEALANT
	ADCWS500	2	WEATHER SEAL W/ ADHESIVE BACKING.
	ARRLI013	6	ARRESTER, SURGE 21KV
	CODPL003	2	PLUG, CONDUIT, PVC, 4" ID, TYPE EB
	CODPL004	2	PLUG, CONDUIT, PVC, 6" ID, TYPE EB
	SIGSH002	1	SHRUB LABEL
UVS*6/6	INDCF012	3	FAULT INDICATOR
	LOCPA001	4	PADLOCK ALL BRASS 1-3/4 IN SHANK OPENING
	SWEPA003	1	SWITCHGEAR, PADMOUNT 25KV 2-200A TAP
UVS*9/3	INDCF012	9	FAULT INDICATOR
	LOCPA001	5	PADLOCK ALL BRASS 1-3/4 IN SHANK OPENING
	SWEPA002	1	SWITCHGEAR, PADMOUNT 25KV 1-200A TAP
UVS*12	INDCF012	12	FAULT INDICATOR
	LOCPA001	6	PADLOCK ALL BRASS 1-3/4 IN SHANK OPENING
	SWEPA001	1	SWITCHGEAR, PADMOUNT 25KV 4-WAY

NOTES:

- The 21 kV surge arresters are included in the plate. The 21kV arresters are used on the 26.4 kV system. The 4 kV system requires a 3 kV arrester and the 13.2 kV system requires a 10 kV arrester. Item out the 21 kV arresters and item in the required arresters.
Use item ARRLI009 for 3 kV and ARRLI010 for 10 kV.
- Install Fault Indicators on the Group switch compartments.

UVSA* SPECIAL APPLICATION PRIMARY PADMOUNT SWITCH, FUSE ASSEMBLY (FAULT FITER)

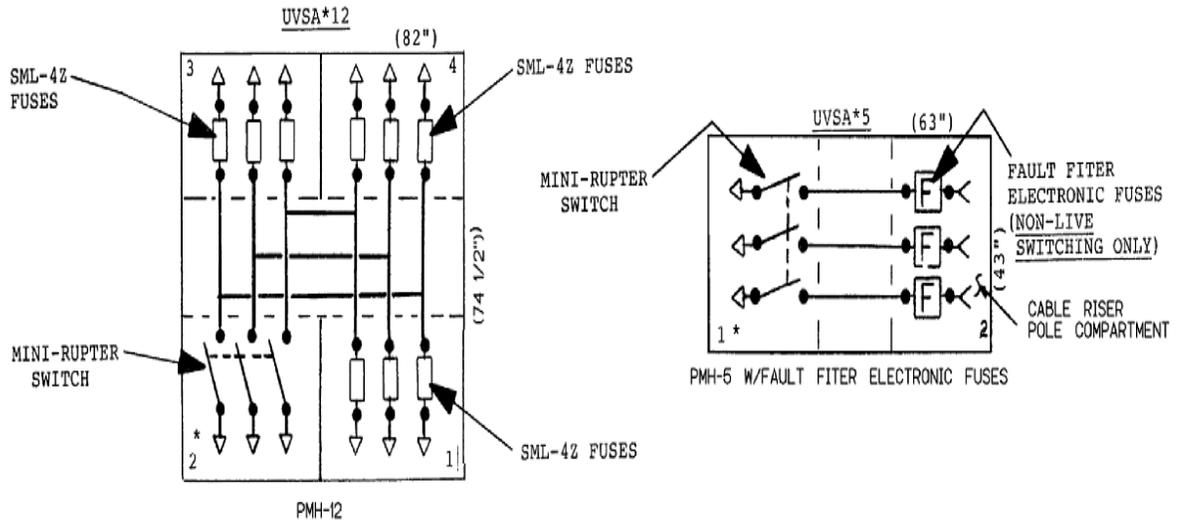


PLATE	ITEM ID	QTY	DESCRIPTION
All Include	ADCFO500	2	FOAM SEALANT, QUICK SEAL EXPANDING FOAM
	ADCSE140	2	SILICONE SEALANT
	ADCWS500	2	WEATHER SEAL W/ ADHESIVE BACKING.
	ARRLI013	3	ARRESTER, SURGE 21KV
	CODPL003	2	PLUG, CONDUIT, PVC, 4" ID, TYPE EB
	CODPL004	2	PLUG, CONDUIT, PVC, 6" ID, TYPE EB
	INDCF012	3	FAULT INDICATOR
	LOCPA001	3	PADLOCK, BRASS, 1 3/4" SHANK
SIGSH002	1	SHRUB LABEL	
UVSA*12	SWEPA004	1	SWITCHGEAR, PADMOUNT, 25KV, SPECIAL APPLICATION
Use Pit Plate UPD11			
UVSA*5	SWEPA005	1	SWITCHGEAR, PADMOUNT, 25KV, SPECIAL APPLICATION
Use Pit Plate UPD15			

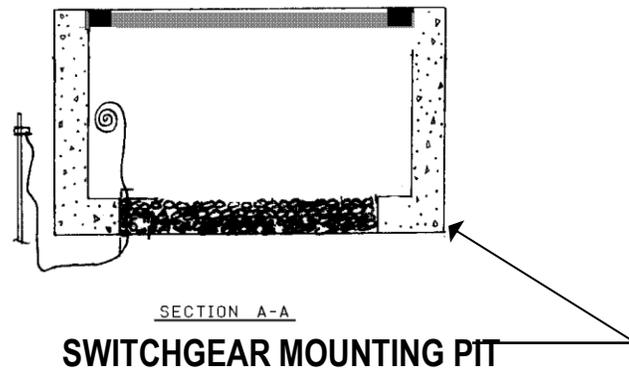
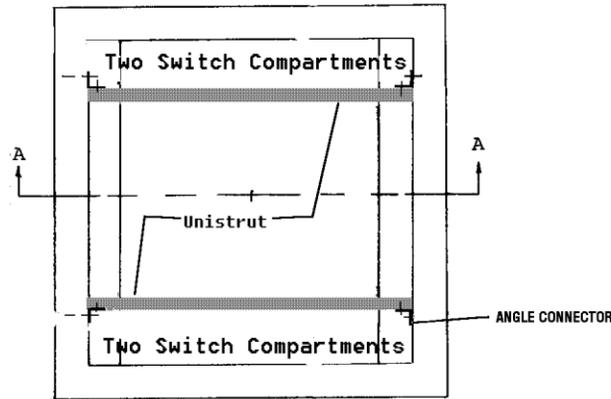
*Denotes mounting provisions provided for surge arresters in indicated compartments.

NOTES:

1. The 21 kV surge arresters are included in the plate. The 21kV arresters are used on the 26.4 kV system. The 4 kV system requires a 3 kV arrester and the 13.2 kV system requires a 10 kV arrester. Item out the 21 kV arresters and item in the required arresters.
Use item ARRLI009 for 3 kV and ARRLI010 for 10 kV.
2. Install Fault Indicators on the Group switch compartments.

CBLX

CABLE AND TERMINATION SUPPORT



SWITCHGEAR MOUNTING PIT
 CABLE AND TERMINATION SUPPORT
 FOR ENCLOSED PIT MOUNTED SWITCHGEAR

APPLICATION:

For one or two switch compartments which contain 1000kCM cable terminations. Plate one (1) CBLX plate which will provide the material to support and align the cables directly below the terminations in two switch compartments.

PLATE	ITEM	QTY	DESCRIPTION
CBLX	RAICH001	1	RAIL, CHANNEL, UNISTRUT
	RAICA001	2	ANGLE CONNECTOR
	TIECA001	6	CABLE TIES
	BOLMH007	2	BOLT, 1/2" X 1-1/2"
	BOLMH009	2	BOLT, 1/2" X 2-1/2"

UVSR*3

PRIMARY PADMOUNT REMOTE CONTROL SWITCH

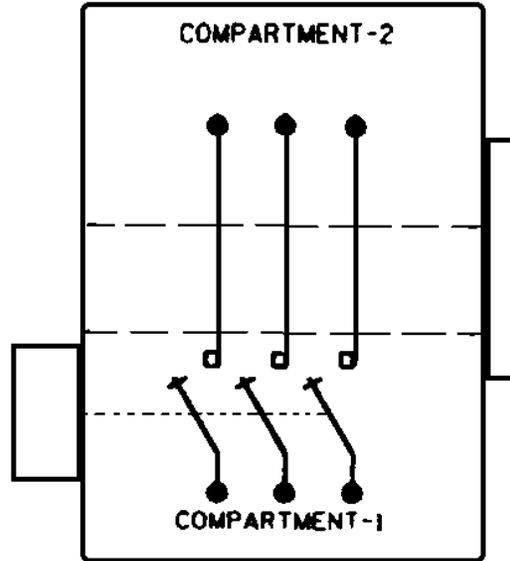


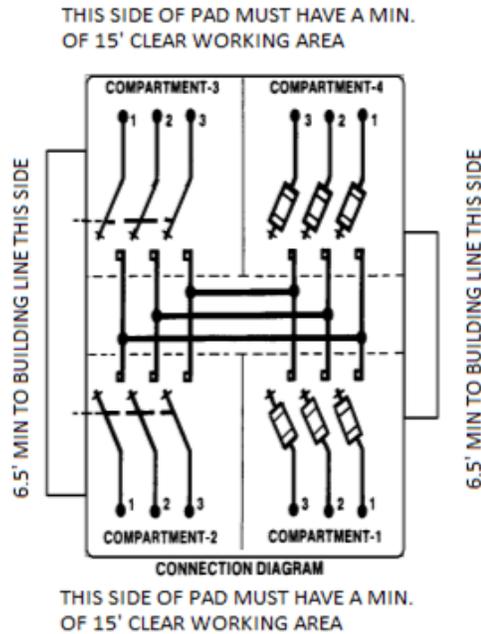
PLATE	ITEM	QTY	DESCRIPTION
UVSR*3	ADCFO500	2	FOAM SEALANT, QUICK SEAL EXPANDING FOAM
	ADCSE140	2	SILICONE SEALANT
	ARRLI013	3	ARRESTER, SURGE 21KV
	ADCWS500	2	WEATHER SEAL W/ ADHESIVE BACKING.
	CODPL003	2	PLUG, CONDUIT, PVC, 4" ID, TYPE EB
	CODPL004	2	PLUG, CONDUIT, PVC, 6" ID, TYPE EB
	LOCPA001	4	PADLOCK ALL BRASS 1-3/4 IN SHANK OPENING
	INDCF012	3	FAULT INDICATOR
	SIGSH002	1	LABEL; SHRUB; FOR SWITCHGEAR
	SWEPA010	1	SWITCHGEAR, PADMOUNT 25KV Radio Control

NOTES:

- The 21 kV surge arresters are included in the plate. The 21 kV arresters are used on the 26.4 kV system. The 4 kV system requires a 3 kV arrester and the 13.2 kV system requires a 10 kV arrester. Item out the 21 kV arresters and item in the required arresters. Use item ARRLI009 for 3 kV and ARRLI010 for 10 kV.
- Install Fault Indicators on the Group switch compartment.

UVSRT

PRIMARY PADMOUNT REMOTE CONTROL AUTOMATIC TRANSFER SWITCH (S&C AIR INSULATED)



FACTORY SETTINGS		
Loss of Source: 85 Volts	Return of Source: 105 Volts	Switch Operation Time: .25 seconds
Loss of Source Delay: 2 seconds	Return of Source Delay: Manual	
Transfer Time = Loss of Source Delay + Switch Operation Time		
Example: Transfer Time = 2 seconds + .25 seconds = 2.25 seconds		

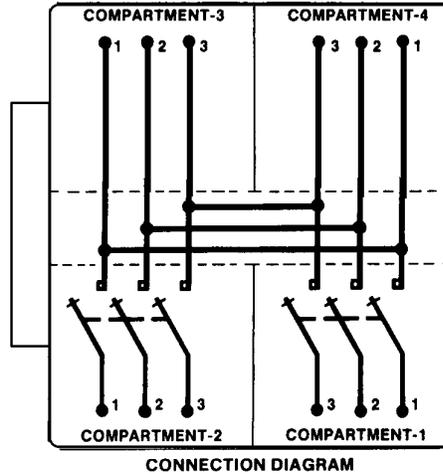
PLATE	ITEM	QTY	DESCRIPTION
UVSRT	LOCPA001	4	PADLOCK ALL BRASS 1-3/4 IN SHANK OPENING
	SWEPA009	1	SWITCHGEAR, PADMOUNT 25KV Radio Control ATS
	ARRLI013	6	ARRESTER, SURGE 21KV
	SIGSH002	1	LABEL; SHRUB; FOR SWITCHGEAR

NOTES:

1. The 21 kV surge arresters are included in the plate. The 21kV arresters are used on the 26.4 kV system. The 4 kV system requires a 3 kV arrester and the 13.2 kV system requires a 10 kV arrester. Item out the 21 kV arresters and item in the required arresters. Use item ARRLI009 for 3 kV and ARRLI010 for 10 kV.
2. Install Fault Indicators on the Group switch compartments.
3. Construction Crews will record the magnitude, phase, & the phase location (A, B, C) of the (3) VTs & (6) CTs installed. This information will be stored in the low voltage compartment (i.e. radio compartment).
4. Requires engineer to design a By-Pass circuit.

UVSRT2

PRIMARY PADMOUNT REMOTE CONTROL AUTOMATIC TRANSFER SWITCH (CANADA POWER SF6 INSULATED)



CONNECTION DIAGRAM

FACTORY SETTINGS:		
Loss of Source: 85 Volts	Return of Source: 105 Volts	Switch Operation Time: 16 seconds
Loss of Source Delay: 2 seconds	Return of Source Delay: 3 Min	
Transfer Time = Loss of Source Delay + Switch Operation Time		
Example: Transfer Time = 2 seconds + 16seconds = 18 seconds		

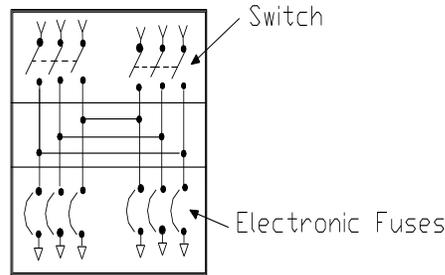
PLATE	ITEM	QTY	DESCRIPTION
UVSRT	LOCPA001	4	PADLOCK ALL BRASS 1-3/4 IN SHANK OPENING
	SWEPA008	1	SWITCHGEAR, PADMOUNT 25KV Radio Control ATS
	SIGSH002	1	LABEL; SHRUB; FOR SWITCHGEAR

NOTES:

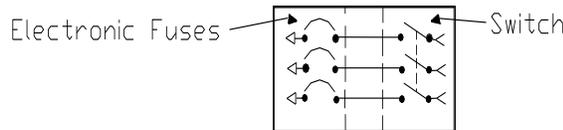
1. This is a 200 Amp Dead Front gear requiring load break elbow terminations. Plate UVT7*1/0L to terminate load & source cables. See page TE-10 of the standards book.
2. Requires engineer to design a by-pass circuit.
3. Requires engineer to design a 120 volt secondary supply for the controls.

UVFI*

PRIMARY PADMOUNT VACUUM FAULT INTERRUPTER



PMH-9 Style Deadfront switch gear with Electronic Fuses



PMH-5 Style Deadfront switch gear with Electronic Fuses

PLATE	ITEM ID	QTY	DESCRIPTION
UVFI*9	SWEIN003	1	SWITCHGEAR, PADMOUNT, 25KV, SPECIAL APPLICATION
	LOCPA001	3	PADLOCK, BRASS, 1 3/4" SHANK
	ARREL001	3	ARRESTER, SURGE 21KV
	INDCF012	3	FAULT INDICATOR
	SIGSH002	1	SHRUB LABEL
USE PIT PLATE UPD11			
UVFI*5	SWEIN004	1	SWITCHGEAR, PADMOUNT, 25KV, SPECIAL APPLICATION
	LOCPA001	3	PADLOCK, BRASS, 1 3/4" SHANK
	ARREL001	3	ARRESTER, SURGE 21KV
	INDCF012	3	FAULT INDICATOR
	SIGSH002	1	SHRUB LABEL
USE PIT PLATE UPD15			

*Denotes mounting provisions provided for surge arresters in indicated compartments.

NOTES:

The 21 kV surge arresters are included in the plate. The 21kV arresters are used on the 26.4 kV system. The 4 kV system requires a 3 kV arrester and the 13.2 kV system requires a 9 kV arrester. Item out the 21 kV arresters and item in the required arresters.

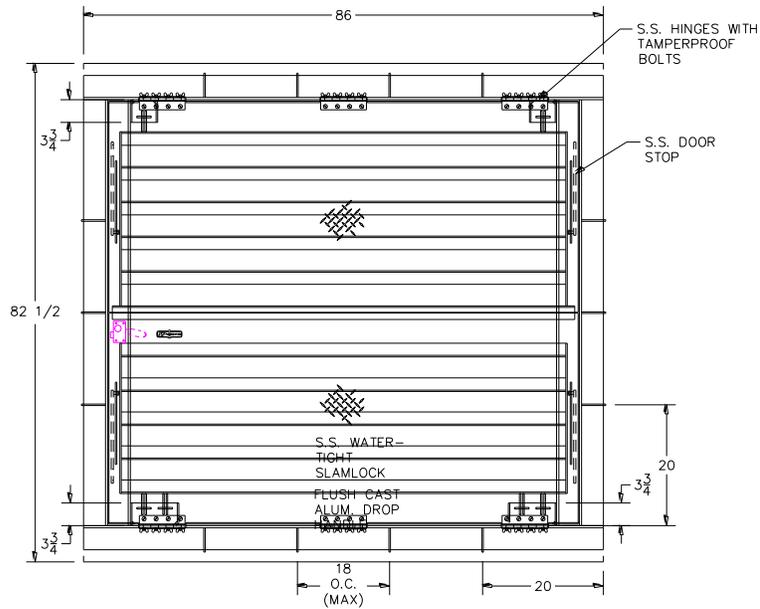
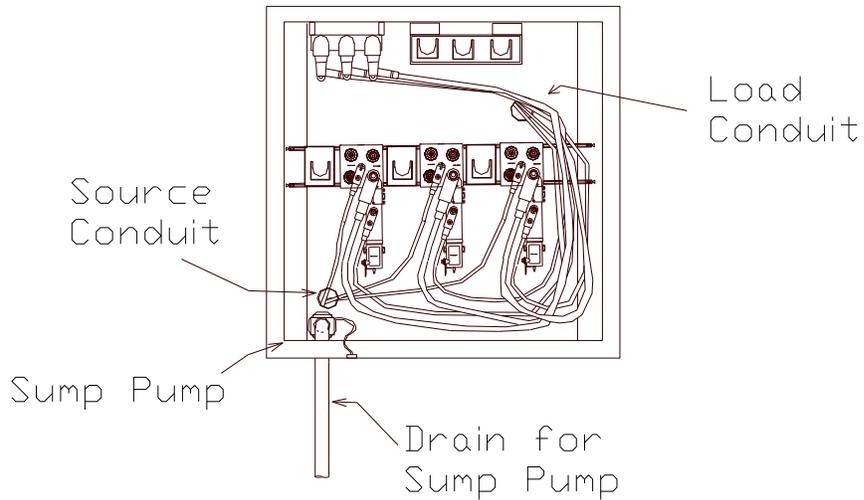
Use item ARREL003 for 3 kV and ARREL002 for 9 kV.

Install Fault Indicators on the Group switch compartments.

Engineer to specify single phase or gain operation.

Relay settings are determined by the Relay group under USC Project Design.

BUVFI-200 (THIS PLATE REQUIRES STANDARDS APPROVAL BEFORE USE).
BELOW GRADE 200 AMP PRIMARY VACUUM FAULT INTERRUPTER
(DO NOT INSTALL IN TRAFFIC LANES)
(PAGE 1 OF 4)

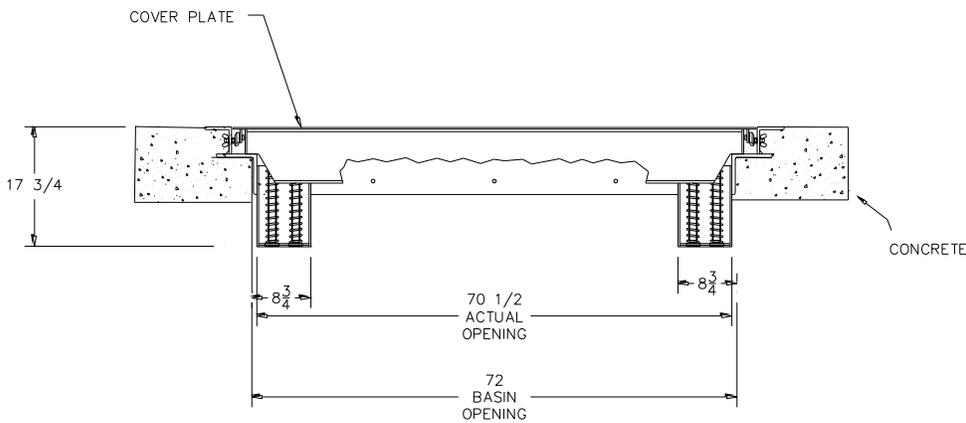
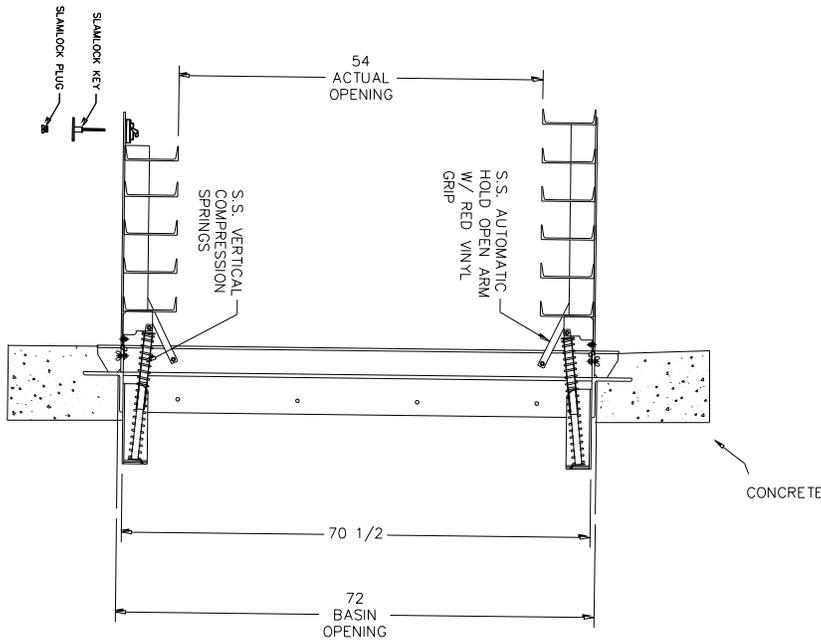


BUVFI-200

BELOW GRADE 200 AMP PRIMARY VACUUM FAULT INTERRUPTER

(DO NOT INSTALL IN TRAFFIC LANES)

(PAGE 2 OF 4)



BUVFI-200

BELOW GRADE 200 AMP PRIMARY VACUUM FAULT INTERRUPTER

(DO NOT INSTALL IN TRAFFIC LANES)

(PAGE 3 OF 4)

ITEM	QTY	DESCRIPTION
SWELO002	1	SWITCHGEAR, 3-PHASE, 25KV, SPECIAL APPLICATION
SWELO003	3	INTERRUPTER, 1-PHASE, 25KV, SPECIAL APPLICATION
JUNLO005	3	JUNCTION BLOCK, 600AMP, 25KV
XXXXX	3	BRACKET, STANDOFF 1-PHASE 200 AMP (NON STOCK CURRENTLY)
XXXXX	1	BRACKET, STANDOFF 3-PHASE 200 AMP (NON STOCK CURRENTLY)
RACUC010	3	RAIL, STAINLESS STEEL
XXXXX	1	DOOR HATCH, SPRING AND SLAMLOCK (NON STOCK CURRENTLY)
PUMSU001	1	PUMP, SUMP 4/10 HP
PUMSU004	1	DOUBLE FLOAT PUMP SWITCH
FUSUG046	1	FUSE, ONE TIME 20 AMP
FUSH003	1	FUSE HOLDER
SCWH515	40	1 ½" BOLT S.S.
ANCSD001	12	½" ANCHOR STUD S.S.
CLATG001	8	CLAMP TX TANK GROUND
CNNVG003	24	WISE TYPE CONNECTOR #6-#2
COBCO028	75 ft	#4 BARE COPPER
LOCPA001	1	PADLOCK
CNNLB001	12	200 AMP ELBOW CONNECTOR
CNNNL001	3	600 AMP T-BODY
PLGVT001	3	PLUG MALE DEAD END
XXXX	3	600 AMP DEAD END CAP (NON STOCK CURRENTLY)
XXXX	3	600 AMP CONNECTING PLUG (NON STOCK CURRENTLY)
TAPEL013	6	LINER LESS RUBBER TAPE
TAPEL009	3	VINYL PLASTIC TAPE
TAGHO002	4	TAG HOLDER 1"
PUMSU005	1	WEATHER PROOF BOX
PUMSU006	1	WEATHER PROOF RECEPTABLE COVER
XXXX	1	120 VOLT RECEPTABLE (NON STOCK CURRENTLY)
XXXX	1	120 VOLT WEATHER PROOF SWITCH (NON STOCK CURRENTLY)
XXXX	32	SPRING NUT ASSEMBLY S.S. (CURRENTLY NON STOCK)
WASFG500	12	ROUND WASHER ½" S.S.
WASLC550	12	LOCK WASHER ½" S.S.

BUVFI-200

BELOW GRADE 200 AMP PRIMARY VACUUM FAULT INTERRUPTER

(DO NOT INSTALL IN TRAFFIC LANES)

(PAGE 4 OF 4)

ITEM	QTY	DESCRIPTION
PPESC200	4ft	2" PCV SCHEDULE 40
FTGD650	1	2" PVC 90
FTGDF165	1	2" SLIP X MALE PIPE THREAD ADAPTER
FTGDF315	1	2" SLIP X SLIP COUPLING
CODEP006	3	4" ELL 90
CODEP002	1	2" ELL 90

NOTES:

Relay settings are determined by the Relay group under USC Project Design.

USE PIT PLATE UPD11

SWCAB-SEAL

MATERIAL TO SEAL SWITCH CABINETS

PLATE	ITEM	QTY	DESCRIPTION
SWCAB-SEAL	ADCFO500	2	FOAM SEALANT, QUICK SEAL EXPANDING FOAM
	ADCSE140	2	SILICONE SEALANT
	ADCWS500	2	WEATHER SEAL W/ ADHESIVE BACKING (GASKET)
	CODPL003	2	PLUG, CONDUIT, PVC, 4" ID, TYPE EB
	CODPL004	2	PLUG, CONDUIT, PVC, 6" ID, TYPE EB

INSTRUCTIONS TO SEAL SWITCH CABINETS (FOR SNAKE MITIGATION)

1. Install spray foam into both pit ground wire holes if they sit above final grade to seal those openings.
2. Install a gasket onto the cabinet door top edge and on the non-hinged side of the doors vertical edge.
3. Install a gasket into the cabinets' lower door channel where the doors bottom edge meets the cabinet.
4. Install silicone sealant where the cabinet bottom edge meets the pit top sealing up any gaps between them.
5. Install duct plugs with pull strings tied on into all empty conduits inside the switch pit.

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