

## STEAM VAULT ELECTRICAL DETAIL E1.01 SCALE: NO SCALE

## **GENERAL NOTES**

- APPLY SEALING COMPOUND AT ALL CONDUIT COUPLINGS AND TERMINATE SEALING SLEEVES. PROVIDE PLASTI-BOND #PRHTOUCHUP-GRAY-PT OR EQUAL.
- ALL CONDUIT SHALL BE THREADED PVC COATED RIGID METAL CONDUIT (RMC). FIELD SPRAY ALL CUT METAL WITH GALVANIZING PAINT TO PREVENT CORROSION.
- ALL CONDUIT & EQUIPMENT SIZES, LENGTHS, QUANTITIES SHOWN HERE ARE TYPICAL. SPECIFIC PROJECTS SHALL VERIFY SIZES. LENGTHS, QUANTITIES AS REQUIRED.
- PROVIDE 316 STAINLESS STEEL CONCRETE WEDGE ANCHORS WITH THREADED 5/8" DIA. ROD FOR MOUNTING ALL EQUIPMENT AND ENCLOSURES AS REQUIRED, FIELD SPRAY ALL CUT METAL WITH GALVANIZING PAINT TO PREVENT CORROSION.
- 5. PHYSICAL MOUNTING LOCATIONS AND ELEVATIONS ABOVE BOTTOM OF VAULT SHALL BE EVALUATED ON A VAULT BY VAULT BASIS AND COORDINATED WITH UNL PRIOR TO WORK. SEE OTHER VAULT DETAILS FOR OTHER VAULT REQUIREMENTS.
- 6. PROVIDING CONDUIT BENDS AND OFFSETS AS REQUIRED. TAKE CARE IN BENDING PVC COATED CONDUIT SO AS NOT TO DAMAGED THE PVC COATING. UTILIZE CONDUIT BENDERS AND OTHER TOOLS APPROVED FOR PVC COATED CONDUIT APPLICATIONS.
- EXACT POSITION OF THE SAFETY SWITCHES WILL VARY ON A CASE-BY-CASE BASIS. REVIEW WITH PROJECT MANAGER AND MAKE NECESSARY ADJUSTMENTS TO LAYOUT.

## (#) KEY NOTES

- 1. STAINLESS STEEL TERMINAL JUNCTION BOX. STAINLESS STEEL ENCLOSURE & COVER WITH STAINLESS STEEL (S.S.) QUARTER TURN LATCH. INCLUDES HIGH-TEMPERATURE SILICON GASKET. PROVIDE WITH GALVANIZED STEEL BACK PANEL. HOFFMAN EXE SERIES ENCLOSURE OR EQUAL. 16"X16"X5" ENCLOSURE (MODEL #EXE16166SS61), WITH BACK PANEL (MODEL #CP1616G) IS DEPICTED IN THE DETAIL. SPECIFIC ENCLOSURE SIZE WILL BE DETERMINED ON A VAULT-BY-VAULT BASIS. MOUNT TO UNISTRUT (SEE NOTE 12).
- TYPE XHHW COPPER CONDUCTORS. MINIMUM 2#8, 1#10G BETWEEN VAULTS, MINIMUM 2#12, 1#12G FROM TERMINAL BLOCKS TO VAULT LOADS. 600V, HIGH-HEAT & MOISTURE RESISTANT STRANDED CONDUCTORS WITH XLP INSULATION. SOUTHWIRE XHHW-2 SIMPULL CONDUCTORS OR EQUAL.
- PROVIDE NEMA STANDARD POWER DISTRIBUTION BLOCKS AS ILLUSTRATED. COPPER BLOCKS GANGED TOGETHER AND MOUNTED TO BACK PLAN OF BOX WITH MINIMUM (2) MAIN SIDE AND (4) BRANCH SIDE POLES PER BLOCK. TERMINATE INCOMING FEEDER AND OUTGOING PUMP BRANCH CIRCUITING WIRING AT BLOCKS.
- PVC COATED 1-1/2" MYERS HUB. NEMA 4X HUB WITH HIGH TEMPERATURE MOLDED PVC GASKET, O-RING GASKET, AND SEALING SLEEVE. INCLUDES 40 MIL PVC EXTERIOR COATING AND 2MIL URETHANE INTERIOR COATING. PLASTI-BOND #PRST5 OR EQUAL. QUANTITY & SIZES OF HUBS AS REQUIRED TO MATCH SPECIFIC VAULT CONDITIONS. APPLY SEALING COMPOUND AROUND EACH SLEEVE AFTER INSTALLATION, PLASTI-BOND #PRHTOUCHUP-GRAY-PT OR EQUAL.
- SPARE 3/4" CONDUIT PENETRATION AT BOTTOM OF ENCLOSURE FOR FUTURE LOAD CONNECTION. PROVIDE WITH ALUMINUM 'CAP-OFF' DEVICE WITH GASKET, COOPER CROUSEHINDS MODEL #STAC2 OR EQUAL.
- PVC COATED 1-1/2" FEMALE-MALE UNY UNION. NEMA 4X UNION WITH HIGH TEMPERATURE MOLDED PVC GASKET AND SEALING SLEEVE. INCLUDES 40 MIL PVC EXTERIOR COATING AND 2MIL URETHANE INTERIOR COATING. PLASTI-BOND #PRUNF505 OR EQUAL. QUANTITY & SIZES OF UNIONS AS REQUIRED TO MATCH SPECIFIC VAULT CONDITIONS.
- PVC COATED 3/4" RMC CONDUIT. INCLUDES 40 MIL PVC EXTERIOR COATING AND 2MIL URETHANE INTERIOR COATING. PLASTI-BOND #PRHCONDUIT-3/4 OR EQUAL, QUANTITY AS REQUIRED TO MATCH SPECIFIC VAULT CONDITIONS.
- MECHANICALLY-INTERLOCKED, WATERTIGHT, FUSED, SHROUDED FUSED SAFETY SWITCH. NEMA 4X, NON-METALLIC ENCLOSED SWITCH RATED FOR 600V, IP66 RATED. PROVIDE HUBBELL #FDS30 OR EQUAL. MOUNT TO UNISTRUT (SEE NOTE 12). PROVIDE DUAL ELEMENT, CURRENT-LIMITING, TIME-DELAY CLASS J FUSES, BUSSMAN LPJ OR EQUAL. FOR SUMP PUMPS SIZED 1/3 HP, 208V, SINGLE PHASE, PROVIDE 7 AMP FUSES. FOR ALL OTHER PUMP SIZES CONSULT UNL PROJECT MANAGER.
- PROVIDE CONDUIT SEAL OFF FITTING WITH DRAIN IN EACH RECEPTACLE CONDUIT x 3/4" HUB RATED FOR CLASSIFIED LOCATIONS. CROUSE HINDS #EYD21 OR EQUAL. FILL WITH CHICO. WATER PROOFING COMPOUND.
- 10. CONNECT PUMP CABLE INDIVIDUAL CONDUCTORS TO FUSE BLOCKS IN SAFETY SWITCH, SEAL CABLE INTO SWITCH AS REQUIRED TO PREVENT MOISTURE MIGRATION.
- 11. PVC COATED 1-1/2" RMC CONDUIT. INCLUDES 40 MIL PVC EXTERIOR COATING AND 2MIL URETHANE INTERIOR COATING. PLASTI-BOND #PRHCONDUIT-1-1/2 OR EQUAL. CONDUIT SIZE & QUANTITY AS REQUIRED TO MATCH SPECIFIC VAULT CONDITIONS.
- 12. GALVANIZED UNISTRUT STANDOFFS. PROVIDE STACKED UNISTRUT STANDOFFS VERTICALLY POSITIONED ON EACH SIDE OF THE ENCLOSURE (QUANTITY AND LENGTHS AS REQUIRED). SECURE TO THE VAULT WALL. LOCATE WALL ANCHORS ABOVE AND BELOW THE ENCLOSURE. PROVIDE ALL STAINLESS STEEL MOUNTING HARDWARE. FIELD SPRAY ALL CUT METAL WITH GALVANIZING PAINT TO PREVENT CORROSION.
- 13. PVC COATED 3/4" MYERS HUB. NEMA 4X HUB WITH HIGH TEMPERATURE MOLDED PVC GASKET, O-RING GASKET, AND SEALING SLEEVE. INCLUDES 40 MIL PVC EXTERIOR COATING AND 2MIL URETHANE INTERIOR COATING. PLASTI-BOND #PRST2 OR EQUAL, QUANTITY & SIZES OF HUBS AS REQUIRED TO MATCH SPECIFIC VAULT CONDITIONS, APPLY SEALING COMPOUND AROUND EACH SLEEVE AFTER INSTALLATION, PLASTI-BOND #PRHTOUCHUP-GRAY-PT OR EQUAL.
- 14. AT EACH HUB CONNECTED TO THE JUNCTION BOX PROVIDE FOAM DUCT SEALANT WITHIN THE CONDUIT. SEALANT SHALL BE TWO-PART HIHG-EXPANSION FOAM WITH HIGH TEMPERATURE RANGE AFTER CURING, MINIMUM 200 DEG F. POLYWATER #FST FOAM SEALANT OR EQUAL. PROVIDE WITH NECESSARY APPLICATOR AND MIXING CONTAINERS. CLEAN ALL EXCESS SEALANT FROM AREA PRIOR TO SEALANT FULLY CURING.
- 15. PROVIDE A 1/2" NEMA 4X DRAIN WITH BREATHER IN BOTTOM OF ENCLOSURE. CROUSE-HINDS #CD1 N4D DRAIN WITH #ECD1 N4B BREATHER OR EQUAL.
- 16. MOUNT ALL ELECTRICAL AS HIGH AS PRACTICAL ON THE VAULT WALL WHEN POSSIBLE, COORDINATE EXACT LOCATION WITH UNL PROJECT MANAGER. LOCATE TO AVOID OBSTACLES AND INSTALL SO ROUTINE VAULT MAINTENANCE AND PUMP SERVICING AND TESTING CAN BE DONE SAFELY. ALL ELECTRICAL INFRASTRUCTURE INCLUDING PUMP DISCONNECTS, PULLBOXES, AND JUNCTION BOXES SHALL BE LOCATED AT LEAST 12 INCHES ABOVE THE VAULT 'NORMAL' STANDING WATER MARK. THIS HEIGHT WILL VARY FROM VAULT TO VAULT AND SHALL BE VERIFIED WITH UNL PROJECT MANAGER ON A CASE BY CASE BASIS.