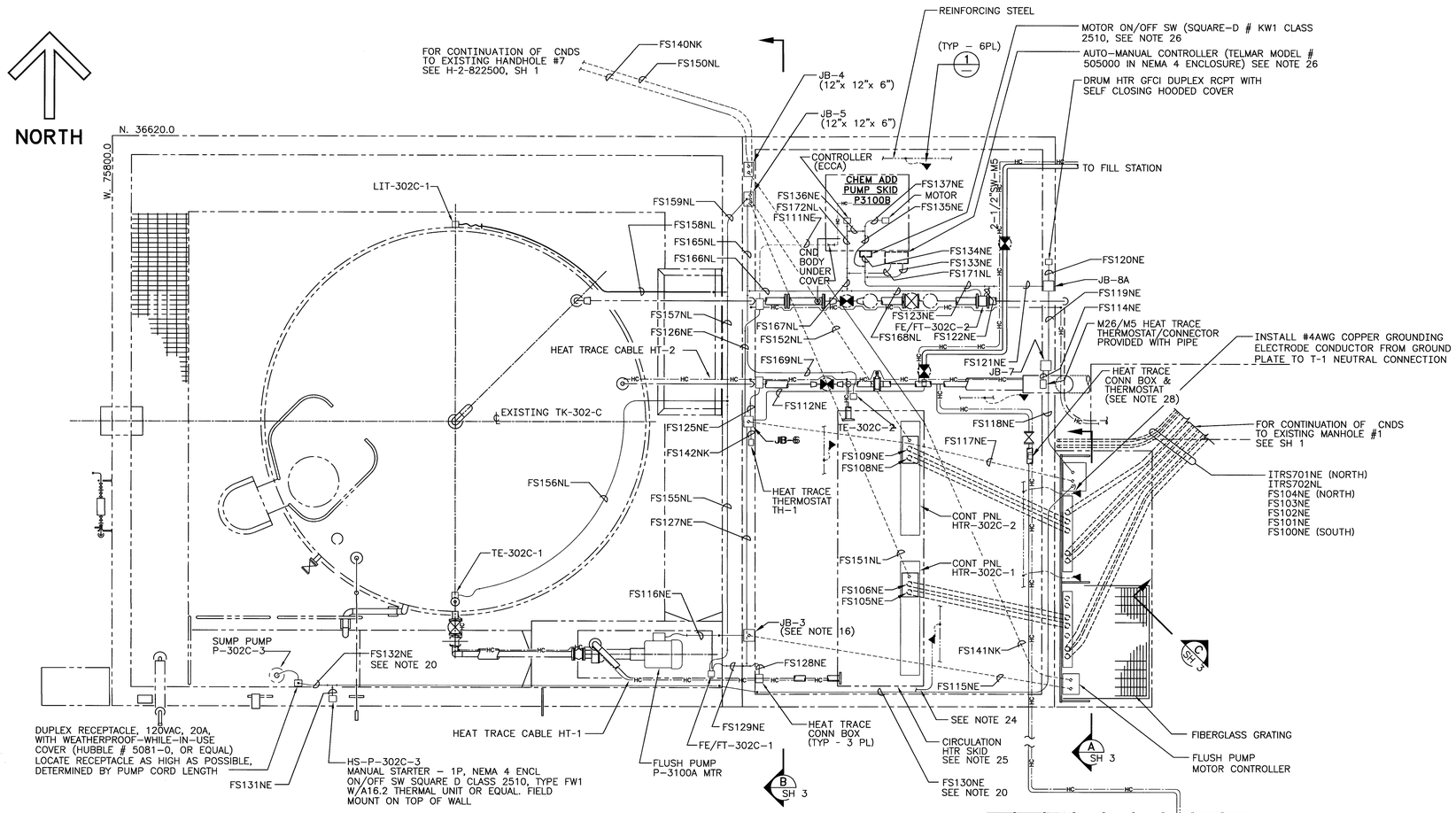
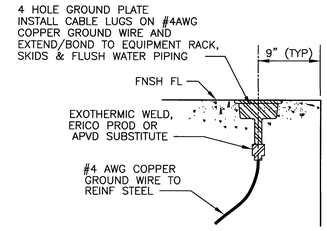


ENLARGED PLAN - FLUSH TANK

SCALE: 3/8"=1'-0"

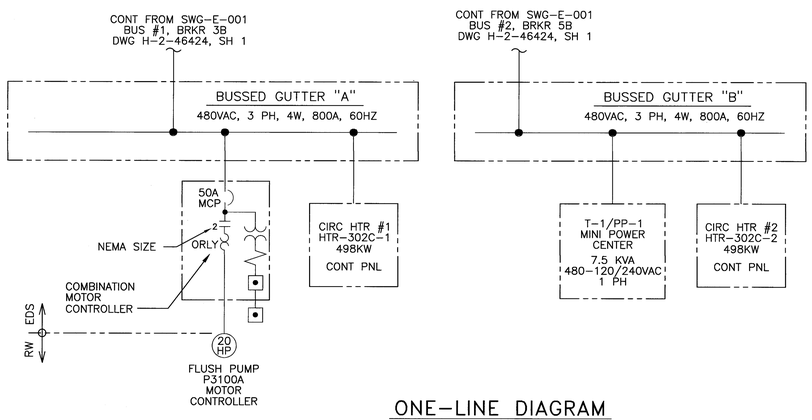


DETAIL

SCALE: NONE

NOTES: (CONTINUED FROM SHEET 1)

10. ATTACH TWO 24" VERTICAL LENGTHS OF 1-5/8" x 1-5/8" FRAMING CHANNEL, CENTERED TO CORRESPOND TO JUNCTION BOX MOUNTING LUG LOCATIONS, WITH 3/8"? EXPANSION ANCHORS (MIN EMBED DEPTH 1-5/8" & MIN QUANTITY 3 IN EACH CHANNEL) TO EAST SIDE OF VALVE PIT (FRAMING CHANNEL TO BE FLUSH WITH TOP OF PIT). INSTALL TWO 18" HORIZONTAL BRACKETS (UNISTRUT P2515 OR EQUAL) TO VERTICAL CHANNELS. ATTACH FEET OF JUNCTION BOX (O-Z GEDNEY YW-121204-24T) TO BRACKETS.
11.
12. RUN CONDUIT DUCT BANK (AS SHOWN IN DETAIL 3, SH 3) OVER THE EXST TRANSFER LINES LOCATED IN THE SURFACE RADIATION AREA. MAINTAIN THE 18" BELOW GRADE AS SHOWN IN DETAIL 3 IF POSSIBLE.
13. SEPARATE INSTRUMENTATION (NL) AND CONTROL (NK) CABLE IN EXST HANDHOLE #7 & MANHOLE #1 BY INSTALLING AND ROUTING CABLES THROUGH LIQUIDTIGHT FLEXIBLE CONDUITS FOR EACH CLASSIFICATION OF CABLE FROM ONE SIDE OF HH/MH TO THE OTHER SIDE. PROVIDE SUPPORTS AS REQUIRED.
14. CORE DRILL AND GROUT HANDHOLE/MANHOLE FOR CONDUIT ENTRY SLEEVES AS REQUIRED. SLEEVES TO BE RIGID METAL CUNDUIT.
15. INSTALL ONE - 2 CHANNEL (LARGE) FODUCT BY AEROQUIP CO. IN SPARE 4" DUCT FROM HH-7 TO MH-1.
16. ALL JUNCTION BOXES SHOWN ON DRAWINGS SHALL BE 6"x 6"x 4" UNLESS OTHERWISE NOTED.
17. DUCTS SHALL BE SLOPED A MINIMUM OF 3 INCHES PER 100 FEET TO DRAIN INTO A HANDHOLE OR CONDUIT DRAIN. ALL LOW POINTS SHALL BE DRAINED.
18. SPACING OF CONDUIT SUPPORTS SHALL NOT EXCEED 8 FEET. LENGTH OF VERTICAL REINFORCING BARS SHALL BE AS REQUIRED FOR FIRM ANCHORAGE. THE HORIZONTAL REINFORCING BARS SHALL BE WIRE TIED OR WELDED TO THE VERTICAL DRIVEN BARS.
19. AT CONSTRUCTION JOINTS IN ENCASEMENTS, 4 FOOT LENGTHS OF #6 REINFORCING BARS SHALL BE PLACED IN EACH CORNER OF THE ENCASEMENT, A MIN OF 2 INCHES FROM THE OUTSIDE EDGES AND CENTERED ACROSS THE JOINT.
20. PROVIDE SUPPORTS FOR CONDUIT AND JUNCTION BOXES USING UNISTRUT FASTENED TO EXISTING WALL USING 1/4" EXPANSION ANCHORS WITH 1-1/8" MIN EMBEDMENT.
21. SPEC W-058-C5 TO FURNISH AND INSTALL EQUIPMENT, RACEWAY & CABLES FOR THE INSTALLATION OF THE FLUSH TANK SYSTEM INCLUDING TWO POWER CIRCUIT BREAKERS FOR EXISTING SWITCHGEAR SWG-E001. TERMINATION OF WIRING AT PCU-1 BY SPEC W-058-C3.
22. RELOCATE EXISTING ELECTRICAL POLE GUY WIRE TO CLEAR NEW FLUSH TANK EQUIPMENT PAD.
23. INSTALL MINIMUM 8"x8"x6" NEMA 4 OR NEMA 3R JUNCTION BOX ON EXISTING CONDUIT SY-322-NE (PULL BACK EXISTING CABLE AS REQUIRED AND INSTALL WITH 'CGB' TYPE CABLE CONNECTOR ON BOX). INSTALL 1-1/2" CONDUIT (RGS OR LIQUIDTIGHT FLEXIBLE METAL) FROM JUNCTION BOX TO UTILITY TRENCH. SUPPORT CONDUIT OFF OF TRAILER AS REQUIRED.
24. BOND PUMP P-3100A AND TANK TK-302-C WITH #4/0 AWG COPPER WIRE FROM GROUND PLATE.
25. INSULATE AND HEAT TRACE ALL LINES TO, FROM, AND IN BETWEEN THE ELECTRIC CIRCULATION HEATERS #1 AND #2, PER CONSTRUCTION SPEC W-058-C5. SEE DRAWING H-2-822400, SHEET 1.
26. INSTALL ON/OFF SWITCH AND AUTO-MANUAL CONTROLLER ON FRAMING CHANNEL. USE 1/4" DIAMETER ANCHOR BOLTS (MIN EMBEDMENT = 2") IN PUMP SKID CONCRETE BASE TO SUPPORT FRAMING CHANNEL. MOUNTING HEIGHT SHALL BE APPROXIMATELY 1'-0" ABOVE CONCRETE BASE.
27. "INTRINSIC SAFE RELAY IS B/W CONTROLS MODEL 5300-S-V-OC, ENERGY LIMITED TO 1MA AT 9.6 VDC. TERMINAL BLOCKS ARE PHOENIX, TYPE UK4 GRAY OR BLUE.
28. HEAT TRACE AND INSULATE NEW RAW WATER LINE USING THE FOLLOWING (OR APPROVED SUBSTITUTE):
    150' ROLL CABLE-SWIFT - RAYCHEM 5BTV1-CT
    1 THERMOSTAT - RAYCHEM AMC-1A
    2 END SEALS - RAYCHEM E-150
    1 POWER CONNECTOR KIT - RAYCHEM PMK-J1LP-8-10



ONE-LINE DIAGRAM

PANELBOARD PP-1 LOCATION WATER FLUSH TANK VOLTS 240/120VAC
MFG & TYPE - POWER SUPPLIED FROM BUSSED GUTTER "B" 1PH (SWG-E-001-5B)
CKT BRKR TYPE PLUG-IN
NEMA TYPE ENCL 3R ☒ MAIN CKT BRKR ☐ PANELBOARD GROUND ____ AMP BUS
☒ SURFACE MOUNTED ☐ MAIN LUGS ONLY FAULT PROTECTION ____ AMP NEUT
☐ FLUSH MOUNTED ☒ TOP ☐ BOT ☒ GROUND BUS

SERVICE	VA	NO.	A	B	NO.	VA	SERVICE
ELEC RACK LIGHTS & DUPLEX RCPT	480	1	20	20	2	1360	PIPE HEAT TRACE(FS117NE)
CHEMICAL ADD PUMP SKID	600	3	20	20	4	750	DRUM HEATER RCPT
SPARE		5	20		6	2120	DOUBLE PIPE HEAT TRACE
FE/FT 302C-2	15	7	20	20*			
SUMP PUMP P-302C-3	1380	9	20	20**	10	750	3" SERVICE WATER LINE HEAT TRACE
SPARE		11	20	20	12		SPARE
			S/N				

* - GFCI CIRCUIT BREAKER

** - GFEP CIRCUIT BREAKER

SEP 26 2013 DATE: STA: 4 HANFORD RELEASE ID: 11

NOTE:

REVISION 4 OF THIS DRAWING WAS FIELD WALKED DOWN IN APRIL 2011. FOR CHANGES MADE AND FOR ITEMS NOT VERIFIED IN FIELD, SEE ECN-11-000770.

DWG NUMBER	TITLE	REF NUMBER	TITLE
		H-14-105161	GFCI RCPT POWER SOURCE SCHED

DRAWING TRACEABILITY LIST — REFERENCES — NEXT USED ON SH 1

REV NO.	DESCRIPTION
6	INC ECN-12-001103

REVISIONS

BLDG. NO. 241SY 242S

INDEX NO. 7404 7201 7301

CAUTION NOT COMPLETE WITHOUT CURRENT CHANGE DOCUMENTS FROM DATABASE

ATTENTION DESTROY THIS DOCUMENT BY SHREDDING MAY CONTAIN SENSITIVE INFORMATION

	NAME	DATE	COMPANY
DRAWN BY	SJ SAUNDERS	8/5/13	WRPS
CHIEF TECH APPROVAL	RE DUNBAR	9/18/13	WRPS
DISCIPLINE ENGINEER			WRPS
DA ENGINEER	KENNETH EWER	9/18/13	WRPS

U.S. DEPARTMENT OF ENERGY
Office of River Protection

ELECTRICAL
PARTIAL PLAN & DETAILS
"SY" TANK FARM

SIZE F | DRAWING NUMBER H-2-822500 | SHEET 2 | REV 6

SCALE NONE

5251

DOE_TB_F.DWG (JAN 2012)