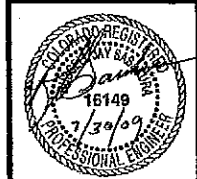


ELECTRICAL LEGEND

- ⌘ WP LIGHTING SWITCH
WP = WEATHERPROOF
- Ⓝ JUNCTION BOX
- [F] DENOTES FIELD MOUNTED EQUIPMENT
- Ⓢ^{N4} MANUAL MOTOR STARTER
N4 = NEMA ENCLOSURE CLASS
- LP / 2 BRANCH CIRCUIT DESIGNATION
LP = PANEL ID, 2 = CKT NUMBER
- Ⓢ WP DUPLEX GROUNDED RECEPTACLE
WP = WEATHERPROOF
- GFI GROUND FAULT INTERRUPTER
- Ⓧ HP Ⓜ MOTOR
- WIRING RUN EXPOSED } 3-NO. 12, 3/4" C
- - - WIRING RUN CONCEALED } UNLESS NOTED OR
— UNDERGROUND ELECTRICAL } SCHEDULED
- ⚡ POWER TRANSFORMER
- Ⓧ EARTH GROUNDING CONNECTION
- Ⓧ Z MOTOR STARTER WITH OVERLOADS
X = CONTACTOR NEMA SIZE
Z = UNIT MOUNTED PILOT DEVICE
A = RED/GREEN LIGHTS
B = 6 DIGIT RUN TIME METER
C = HAND-OFF-AUTO SWITCH
D = OFF-RUN SWITCH
RVSS = REDUCED VOLTAGE SOLID STATE
- Ⓧ WH UTILITY METER
- 15/3 TM AIR CIRCUIT BREAKER
AMPS/POLES
TM = THERMAL MAGNETIC
MCP = MOTOR CIRCUIT PROTECTOR
- SPD SURGE PROTECTIVE DEVICE
- FUSE, RATING AND TYPE SHOWN
- CPT CONTROL POWER TRANSFORMER
- Ⓧ CABLE/CONDUIT MARK
- Ⓧ Y LIGHT FIXTURE REFERENCE
X = TYPE
Z = INPUT WATTS
- 1 2 3 XDD 123 SELECTOR SWITCH, ROTARY TYPE,
X DENOTES CONTACT CLOSURE
DEVELOPEMENT AS RELATED TO SWITCH POSITION
- Ⓧ CONTROL DEVICE CONTACTS - NO, NC
- Ⓧ ELECTROMECHANICAL DEVICE COIL
- Ⓧ R PUSH TO TEST TRANSFORMER TYPE PILOT LIGHT
- Ⓧ LIMIT SWITCH



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NO.	DATE	REVISIONS	BY

DRAWN	JWL/CBD	DESIGNED	RJS	DATE	JUNE 2009
CHECKED	RJS	APPROVED	RJS	PROJ. NO.	09028.20

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LIFT STATION AND HEADWORKS FACILITIES
 CITY OF LAMAR, COLORADO

SITE PLAN, LEGEND, ABBREVIATIONS

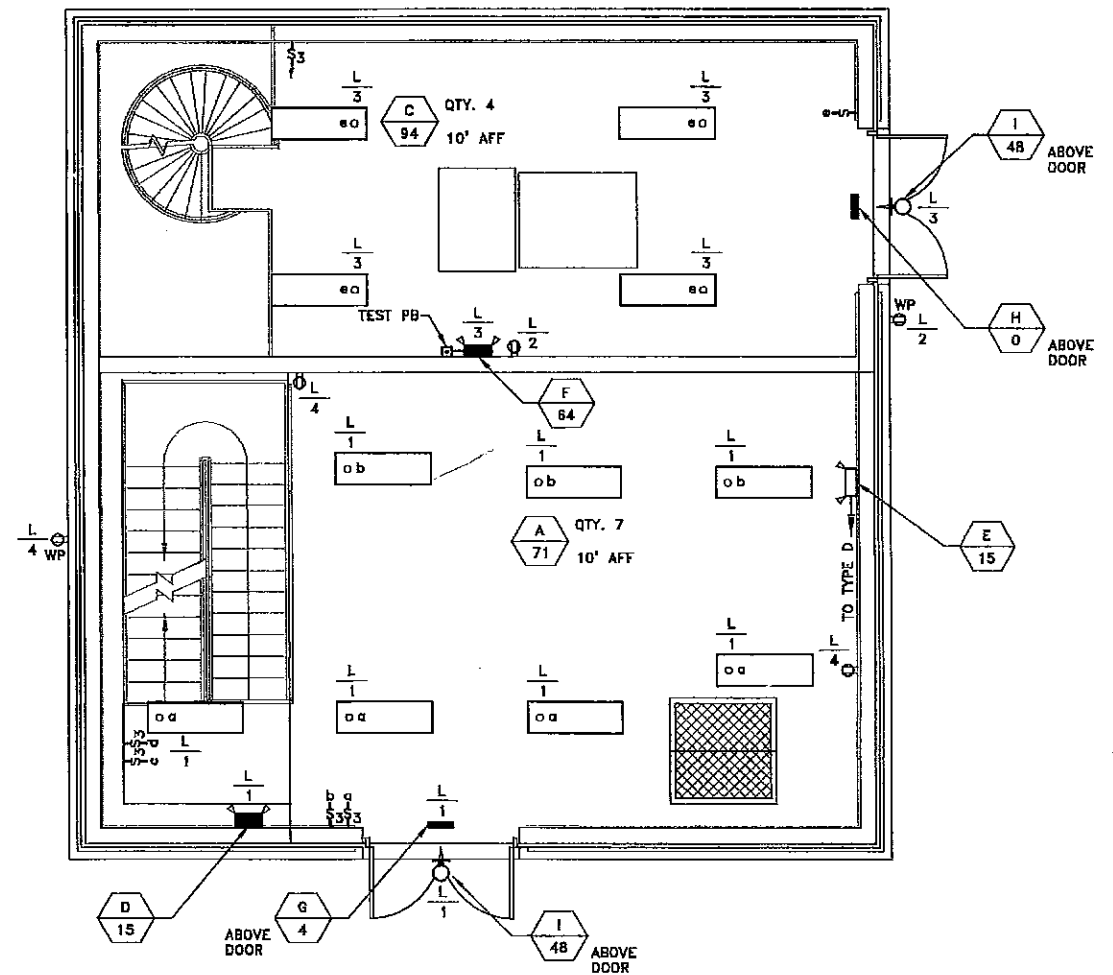
SCALE VERIFICATION	SHEETS	SHEET
0 1" IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	7	E1



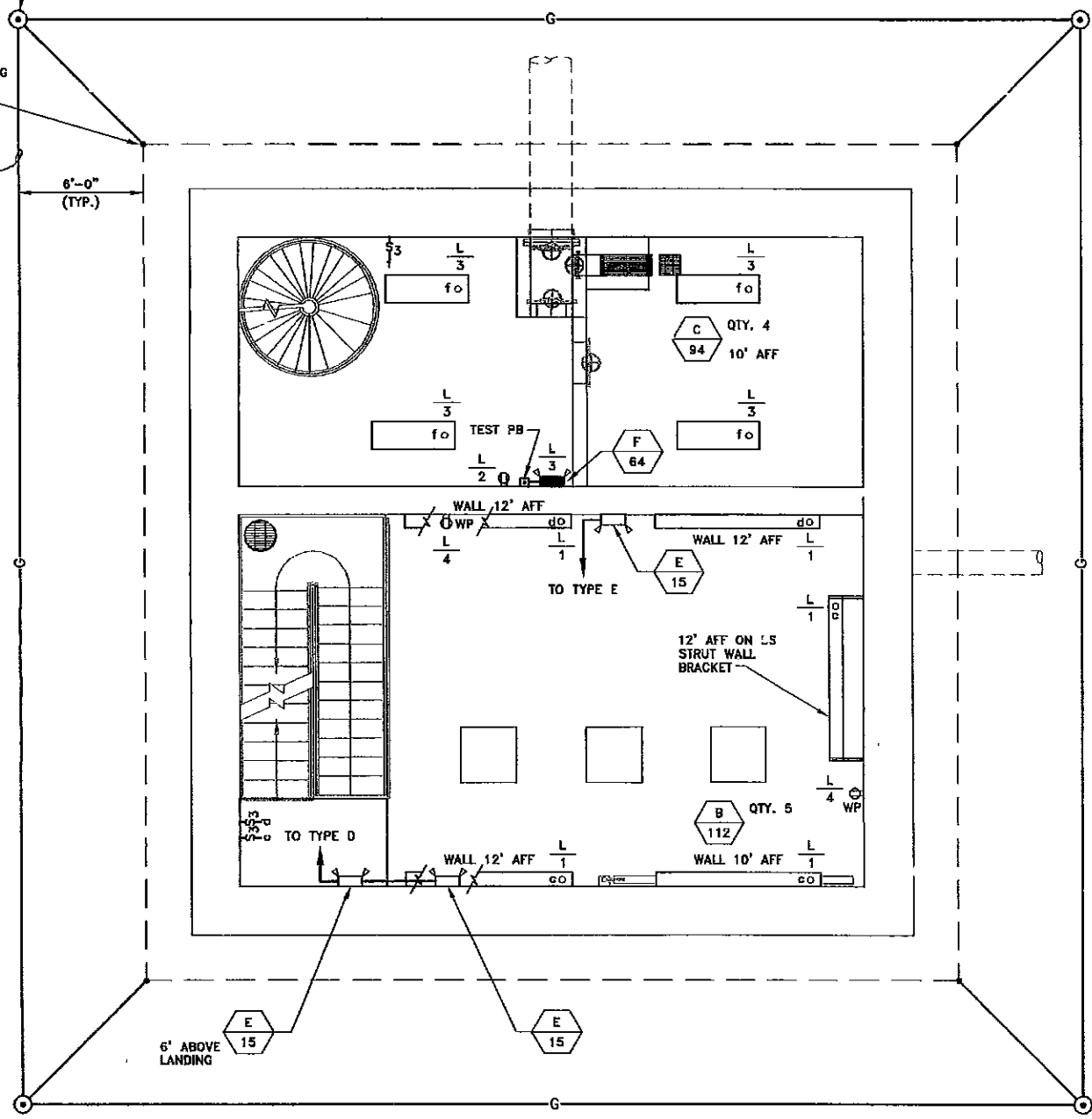
3/4" x 10' GROUND
ROD DRIVEN 24"
BELOW GRADE (TYP.)

BOND TO REINFORCING
STEEL IN
FOOTING (TYP.)

NO. 2/0 AWG
BARE COPPER
30" BELOW GRADE



UPPER PLAN
SCALE: 1/4"=1'-0"



LOWER PLAN
SCALE: 1/4"=1'-0"
PIPING NOT SHOWN FOR CLARITY

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JWL/CBD	RJS		JUNE 2009
CHECKED	APPROVED	RJS	
SCALE			PROJ. NO.
AS SHOWN			09028.20

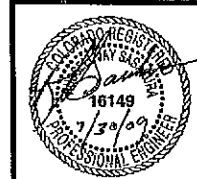
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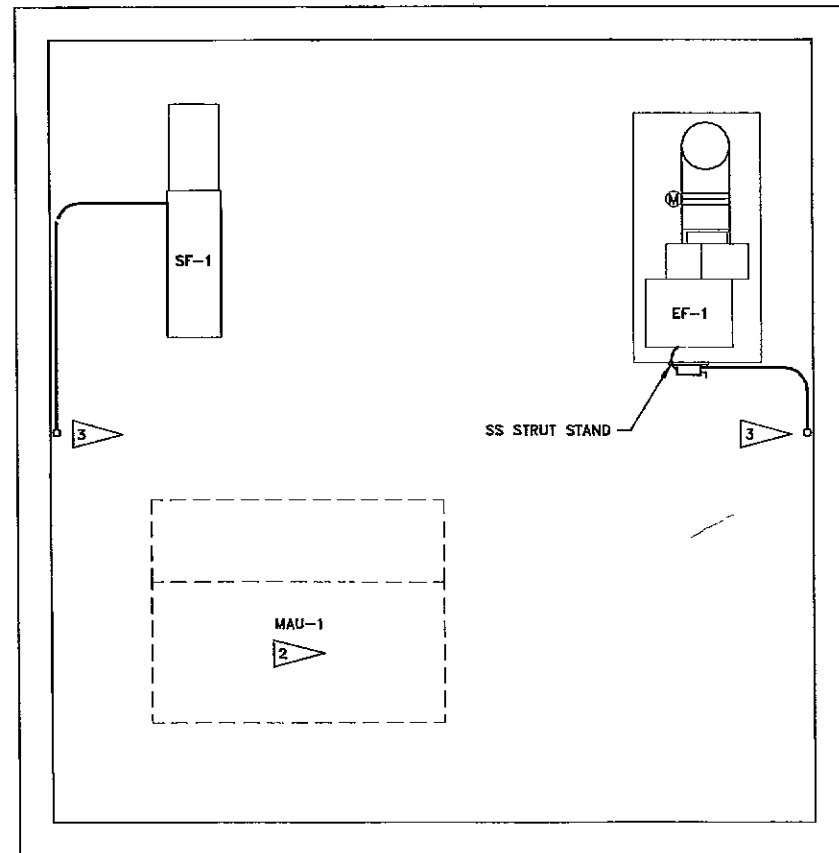
LIFT STATION AND HEADWORKS FACILITIES
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LIGHTING AND RECEPTACLE PLANS

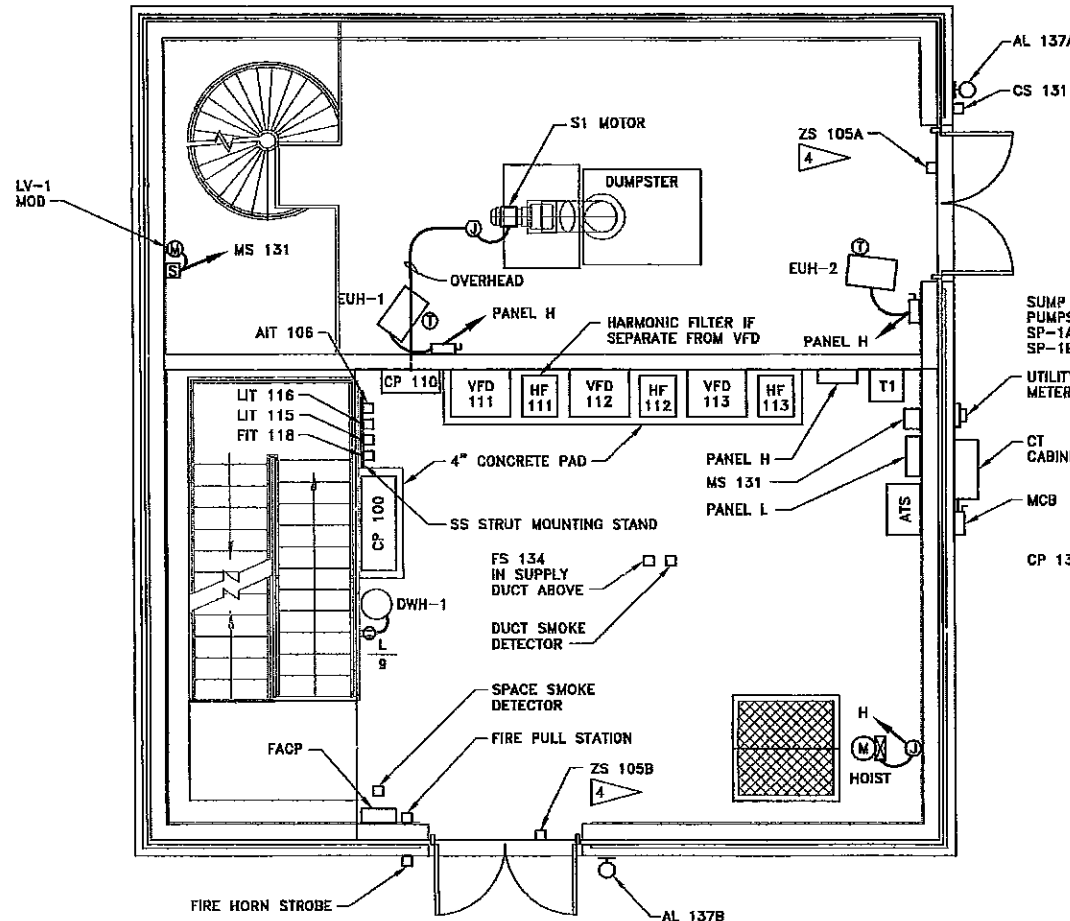
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SHEETS	SHEET
7	E2

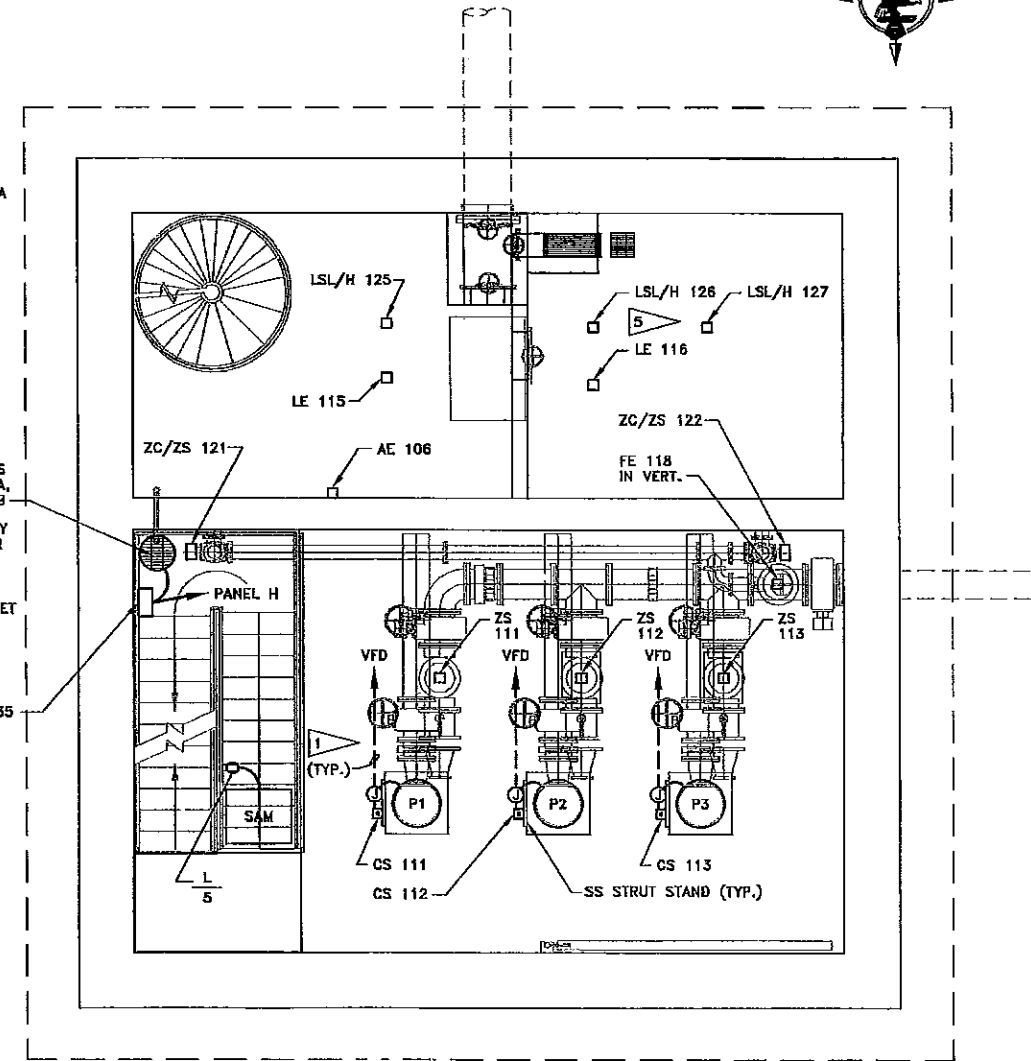




ROOF PLAN
SCALE: 1/4"=1'-0"



UPPER PLAN
SCALE: 1/4"=1'-0"



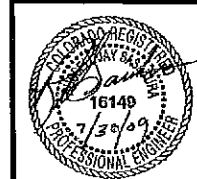
LOWER PLAN
SCALE: 1/2"=1'-0"

FLAG NOTES:

- 1. ROUTE CONDUITS UNDER SLAB, TURN UP UNDER RESPECTIVE VFD.
- 2. WIRE MAU FROM BELOW, STUB UP LOCATION PER MANUFACTURER.
- 3. STUB UP THROUGH ROOF FROM UNCLASSIFIED SIDE, SURFACE ROUTE CONDUIT ALONG PARAPET TO EQUIPMENT.
- 4. LOCATE AT FIRST TO OPEN DOOR.
- 5. MOUNT FLOATS AND ULTRASONICS FROM BEAMS UNDER FLOOR PLATES, ROUTE CONDUITS UNDER FLOOR TO DIVIDER WALL, TURN UP TO PULL BOX AND PENETRATE WALL INTO PUMP ROOM. ALL CIRCUITS INTRINSICALLY SAFE, DO NOT COMBINE WITH OTHER CIRCUIT TYPES.

NOTES:

- 1. WETWELL (NORTH) PORTION OF BUILDING, ALL LEVELS CLASSIFIED HAZARDOUS CLASS I, DIV. 1, GROUP D, NEMA 7. DRYWELL (SOUTH) PORTION OF BUILDING, LOWER LEVEL CLASSIFIED WET, NEMA 4 TO 6 FT. AFF, ABOVE 6 FT. AND ENTIRE UPPER LEVEL UNCLASSIFIED DRY, NEMA 12.
- 2. ALL CONDUIT RUNS MAY NOT BE SHOWN IN PLAN VIEWS, SINGLE CONDUIT ROUTING LINES MAY REPRESENT MULTIPLE CONDUITS, SEE ONE-LINE DIAGRAMS AND SCHEDULES FOR REQUIREMENTS.



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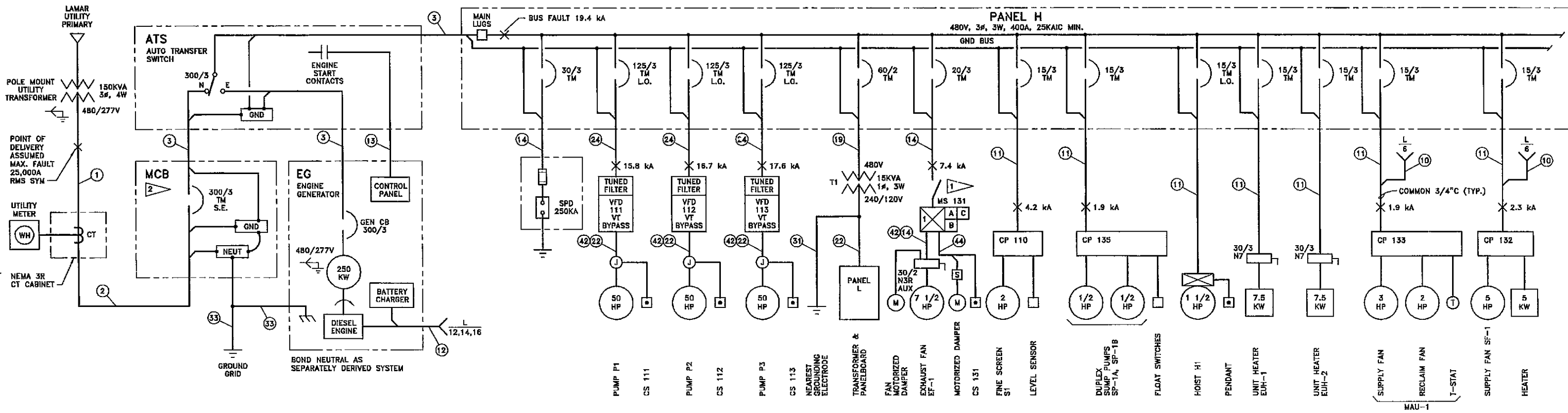
DRAWN	JWL/CBD	DESIGNED	RJS	DATE	JUNE 2009
CHECKED		APPROVED	RJS	PROJ. NO.	09028.20

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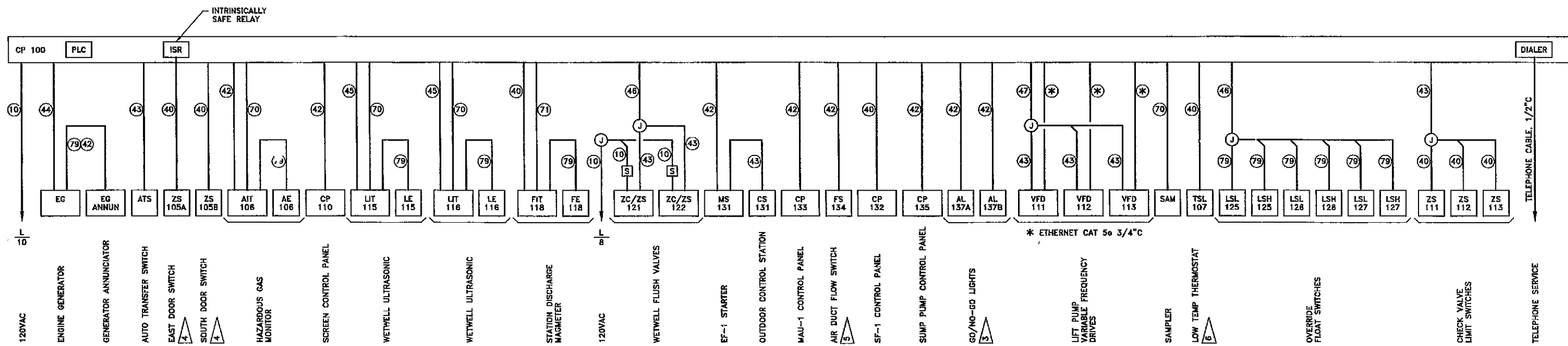
LIFT STATION AND HEADWORKS FACILITIES
CITY OF LAMAR, COLORADO

POWER PLANS
SCALE VERIFICATION: 0.1"=1'-0"
IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SHEETS	7	SHEET	E3
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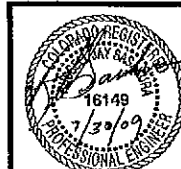
POWER ONE-LINE DIAGRAM



CONTROL ONE-LINE DIAGRAM

NOTES:

1. CABLE/CONDUIT REFERENCES REFER TO POINT TO POINT END CONNECTIONS AT DEVICES ACTUAL CONDUIT SIZES AND/OR COMMON CONDUIT USE MAY VARY IN DUCT BANKS PER SCHEDULE.
2. X DENOTES MAXIMUM CALCULATED FAULT CURRENT RMS SYMMETRICAL AMPERES x 1000.
3. SEE SHEET E5 FOR FLAG NOTES.



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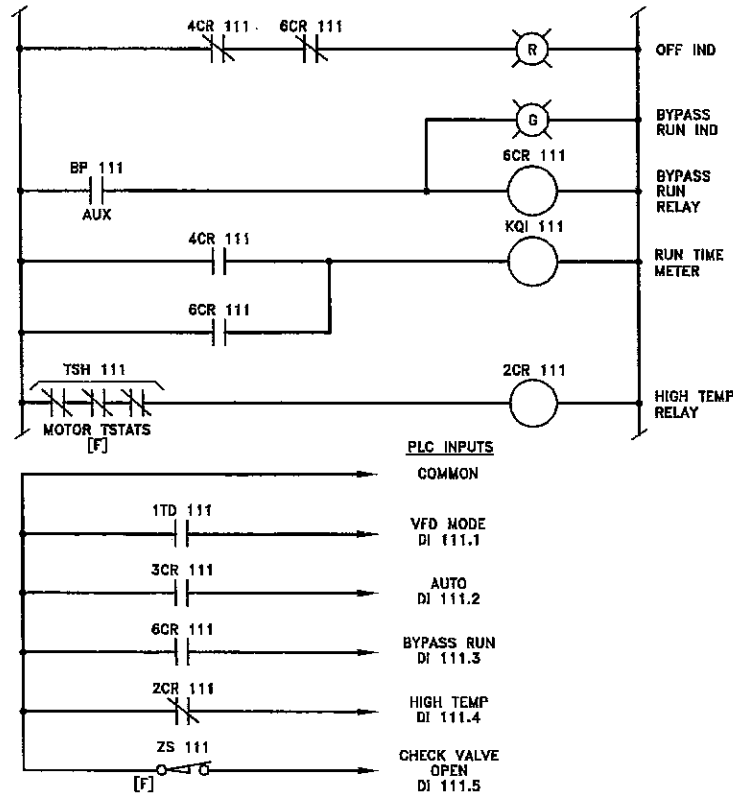
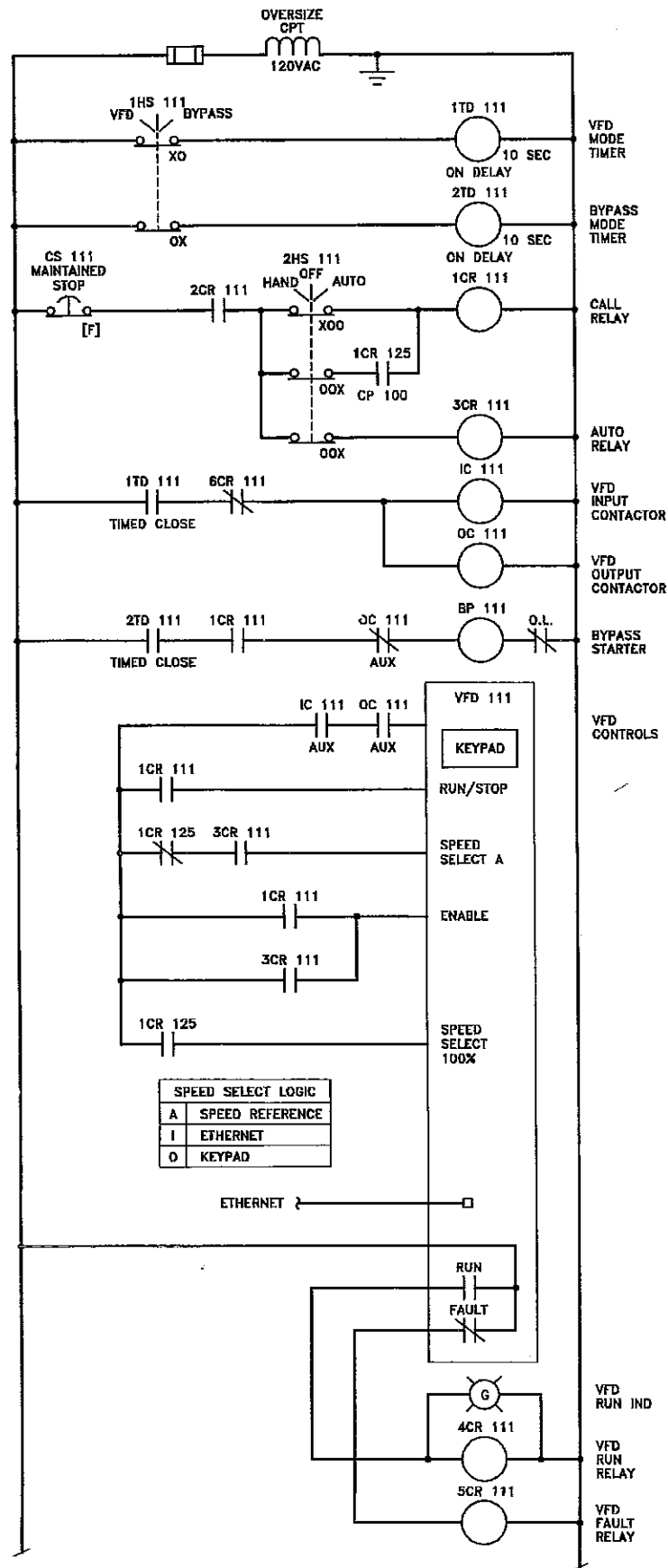
NO.	DATE	REVISIONS	BY

DRAWN	DESIGNED	RJS	DATE	JUNE 2009
CHECKED		RJS		
SCALE	NONE	APPROVED	RJS	PROJ. NO. 09028.20

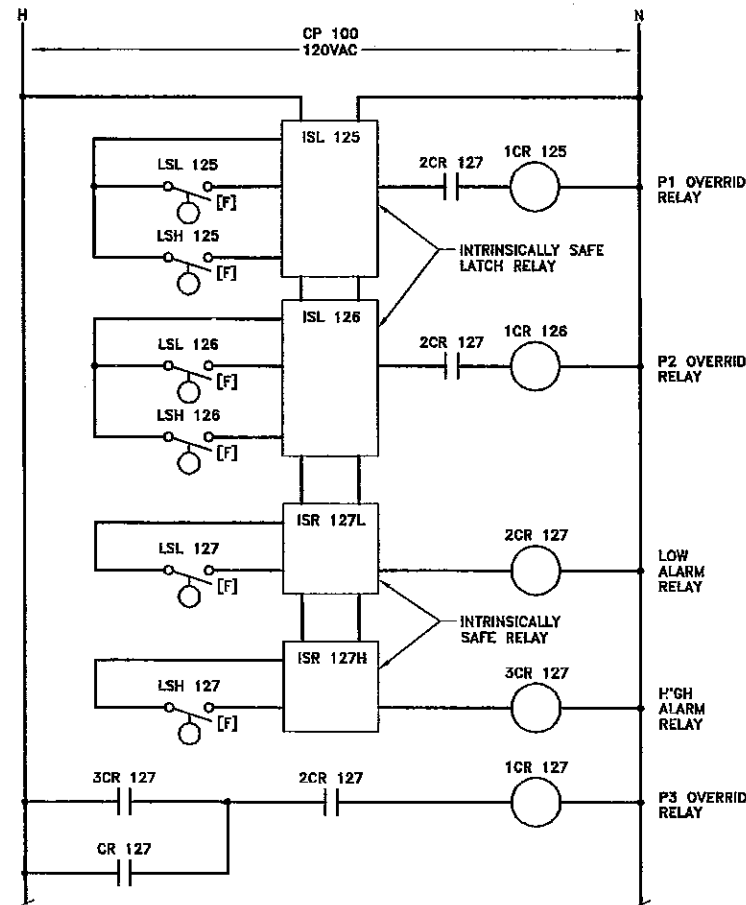
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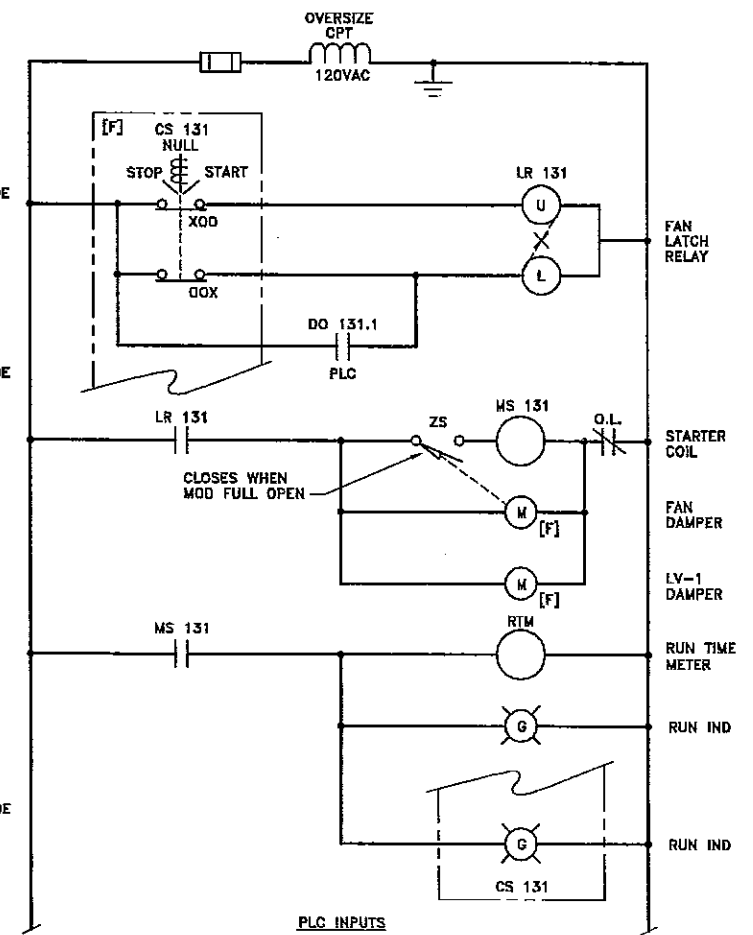
SCALE VERIFICATION	SHEETS	SHEET
0 1" = 1' IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	7	E4



LIFT PUMP P1
ALL DEVICES AT VFD UNLESS NOTED
P2, P3 SIMILAR



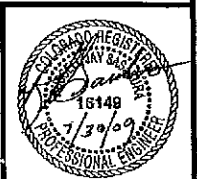
WETWELL OVERRIDE CONTROLS
ALL DEVICES AT CP 100 UNLESS NOTED



EXHAUST FAN EF-1
ALL DEVICES AT STARTER UNLESS NOTED

FLAG NOTES:

1. COMBINATION STARTER WITH NON-FUSED DISCONNECT IN NEMA 12 ENCLOSURE. CONTROL CIRCUIT PER SCHEMATIC.
2. MCB: MAIN MOLDED CASE CIRCUIT BREAKER, NEMA 3R ENCLOSURE. SERVICE ENTRANCE RATED, INTERCHANGABLE ELECTRONIC LSI TRIP, 35KAIC AT 480 VOLTS, LINE AND LOAD LUGS, CUTLER HAMMER KD 3300 OR APPROVED EQUIVALENT.
3. TWO UNIT LED STACK LIGHT, STEADY GREEN, FLASH RED, NO AUDIBLE, CUTLER HAMMER E26 OR EQUIVALENT.
4. ZS: MAGNETIC DOOR SWITCH, SURFACE MOUNT WATERPROOF ALUMINUM HOUSING WITH ARMORED CABLE LEADS, ADEMCO 960-XTP OR APPROVED EQUIVALENT.
5. AIR DUCT FLOW SWITCH: STAINLESS STEEL VANE, ADJUSTABLE 400-1600 FPM VELOCITY, 15 AMP SPDT CONTACT, HORIZONTAL MOUNT, U.L. LISTED, DWYER MODEL 530 OR APPROVED EQUIVALENT.
6. THERMOSTAT: ADJUSTMENT RANGE 20°-90°, SPST SWITCH OPEN ON RISE. ADJUSTABLE DIFFERENTIAL, HEAVY DUTY, WALL MOUNT, U.L. LISTED, WHITE RODGERS 2A37-1 OR APPROVED EQUIVALENT.



NO.	DATE	REVISIONS	BY

DRAWN	DESIGNED	RJS	DATE	JUNE 2009
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SCALE	APPROVED	RJS	PROJ. NO.	09028.20

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LIFT STATION AND HEADWORKS FACILITIES
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SCHEMATICS

SHEETS	7	SHEET	E5
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SCALE VERIFICATION
0 1" = 1'
IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

CABLE/CONDUIT SCHEDULE							
MARK	PARALLEL RUNS	PHASE	NEUTRAL	GROUND	CONTROL	TRADE SIZE CONDUIT	
1	1	3-350 KCMIL	1-NO. 1/0			4"	
2	1	3-350 KCMIL	1-NO. 1/0	1-NO. 4		3"	
3	1	3-350 KCMIL		1-NO. 4		3"	
MARK	CONDUCTORS	GROUND	CONDUIT	MARK	CONDUCTORS	GROUND	CONDUIT
10	2-NO. 12	1-NO. 12	3/4"	40	2-NO. 14	1-NO. 14	3/4"
11	3-NO. 12	1-NO. 12	3/4"	41	3-NO. 14	1-NO. 14	3/4"
12	4-NO. 12	1-NO. 12	3/4"	42	4-NO. 14	1-NO. 14	3/4"
13	2-NO. 10	1-NO. 10	3/4"	43	6-NO. 14	1-NO. 14	3/4"
14	3-NO. 10	1-NO. 10	3/4"	44	8-NO. 14	1-NO. 14	3/4"
15	4-NO. 10	1-NO. 10	3/4"	45	10-NO. 14	1-NO. 14	3/4"
16	2-NO. 8	1-NO. 10	3/4"	46	12-NO. 14	1-NO. 14	1"
17	3-NO. 8	1-NO. 10	3/4"	47	16-NO. 14	1-NO. 14	1"
18	4-NO. 8	1-NO. 10	1"	48	20-NO. 14	1-NO. 14	1 1/2"
19	2-NO. 6	1-NO. 8	1"	49	24-NO. 14	1-NO. 14	1 1/2"
20	3-NO. 6	1-NO. 8	1"	50	30-NO. 14	1-NO. 14	2"
21	4-NO. 6	1-NO. 8	1 1/4"	51	36-NO. 14	1-NO. 14	2"
22	3-NO. 4	1-NO. 6	1 1/4"	52	40-NO. 14	1-NO. 14	2"
23	4-NO. 4	1-NO. 6	1 1/4"	53	48-NO. 14	1-NO. 14	2"
24	3-NO. 2	1-NO. 6	1 1/2"	54	60-NO. 14	1-NO. 14	2"
25	4-NO. 2	1-NO. 6	1 1/2"	55			
26				56			
27				57			
28				58			
29				59			
30		1-NO. 8	3/4"	70	1-2C #18TS		3/4"
31		1-NO. 6	3/4"	71	2-2C #18TS		3/4"
32		1-NO. 4	3/4"	72	3-2C #18TS		3/4"
33		1-NO. 2	3/4"	73	4-2C #18TS		3/4"
34		1-NO. 1/0	1"	74	5-2C #18TS		1"
35		1-NO. 2/0	1"	75	6-2C #18TS		1 1/4"
36		1-NO. 3/0	1 1/4"	76	7-2C #18TS		1 1/2"
				77	8-2C #18TS		2"
				78	10-2C #18TS		2"
				79	MANUF CABLE		3/4"

- NOTES:
- ①②③④ DENOTES COMMON CONDUIT (INCREASE CONDUIT SIZE IF REQUIRED) USE SINGLE LARGEST GROUNDING CONDUCTOR.
 - CONDUIT SIZES MAY VARY IN DUCT BANKS.

LIGHTING FIXTURE SCHEDULE					
TYPE	LAMPS	DESCRIPTION	FINISH	MOUNTING	MANUFACTURER'S NO.
A 71	(2) F32T8	INDUSTRIAL FLUORESCENT FIXTURE 120V ELECTRONIC BALLAST, STEEL BODY AND REFLECTORS, 15% UPLIGHT, NEC 410.13(G) DISCONNECT, U.L. LISTED	WHITE ENAMEL	CHAIN PENDANT CORD PLUG/TWIST LOCK RECEIPT CONNECTED	COLUMBIA KL4-232-EU
B 112	(2) F58T8 8' FLUOR	VAPORTIGHT FLUORESCENT FIXTURE 120V ELECTRONIC BALLAST, FIBERGLASS BODY, ACRYLIC DIFFUSER, NEC 410.13(G) DISCONNECT, U.L. LISTED	WHITE	CHAIN PENDANT OR WALL AS NOTED	COLUMBIA LUNB-296T8-EU
C 94	(3) F32T8	HAZARDOUS AREA CORROSION RESISTANT 4' (3) LAMP FIXTURE, CLASS I, DIV. 1, 120VAC ELECTRONIC BALLAST, U.L. LISTED	ALUMINUM/STAINLESS STEEL	PENDANT	HUBBELL HLHFX-265-1-3
D 15	(2) 7.2W INCAND	NEMA 4 EMERGENCY FIXTURE 100 WATT, 6 VOLT, 1 1/2 HOUR POWER SUPPLY, 120VAC PRIMARY, SELF DIAGNOSTIC, U.L. LISTED	GRAY	WALL 7"-6" AFF OR AS NOTED	DUAL-LITE N4X14-1
E 15	(2) 7.2W INCAND	NEMA 4 EMERGENCY TWIN LAMP REMOTE HEAD, U.L. LISTED	GRAY	WALL 7"-6" AFF OR AS NOTED	DUAL-LITE GNXDB
F 64	(2) 32W CFL	EMERGENCY LOW PROFILE LUMINAIRE WITH INTEGRAL BATTERY AND CHARGER, CLASS I, DIV. 1, GROUP D, 120VAC, U.L. LISTED, WIRE FOR EMERGENCY USE ONLY	ALUMINUM/STAINLESS STEEL	WALL AT 8" AFF	CROUSE HINDS EVLFFBX02641
G 4	LED COMPACT FLUORESCENT	ILLUMINATED SINGLE FACE EXIT SIGN WITH BATTERY BACK-UP, 120/277VAC PRIMARY, ALUMINUM HOUSING, U.L. LISTED	WHITE/GREEN LETTERS	AS NOTED	DUAL-LITE SEMPRA SESGWE
H 0	NONE	SELF LUMINOUS EXIT SIGN, SINGLE FACE, TRITIUM GAS FILLED PHOSPHOR COATED SEALED TUBES, 20 HR LIFE, CLASS I, DIV. 1, U.L. LISTED	GREEN/WHITE	WALL	SURE-LITES TRX11GWH20
I 48	(1) 42W COMPACT FLUORESCENT	OUTDOOR WALL FIXTURE WITH PHOTOCELL 120VAC, U.L. LISTED MOTION SENSOR	BRONZE	WALL AS NOTED	HUBBELL NRG-304B-PC/SO OR EQUIVALENT

DUCT BANK CONDUIT SCHEDULE						
CONDUIT	FROM	TO	QTY	SIZE	DESCRIPTION	VOLTAGE
E1-1	UTILITY TRANSFORMER	CT CABINET	1	4"	SERVICE LATERAL	480/277
E2-1	GENERATOR CC	ATS	1	3"	STANDBY POWER	480
E2-2	GENERATOR	PANEL LP	1	.75"	BRANCH CKT: L12, 14, 16	240/120
E2-3	GENERATOR CP	ATS	1	.75"	ENGINE START	24
E2-4	GENERATOR CP	CP 100	1	.75"	CONTROLS	24
E2-5	GENERATOR CP	ANNUNCIATOR	1	.75"	NETWORK CABLE, POWER	24

NO.	DATE	REVISIONS	BY

DRAWN	CB	DESIGNED	RJS	DATE	JUNE 2009
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SCHEDULES

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SHEET 7 OF 7

