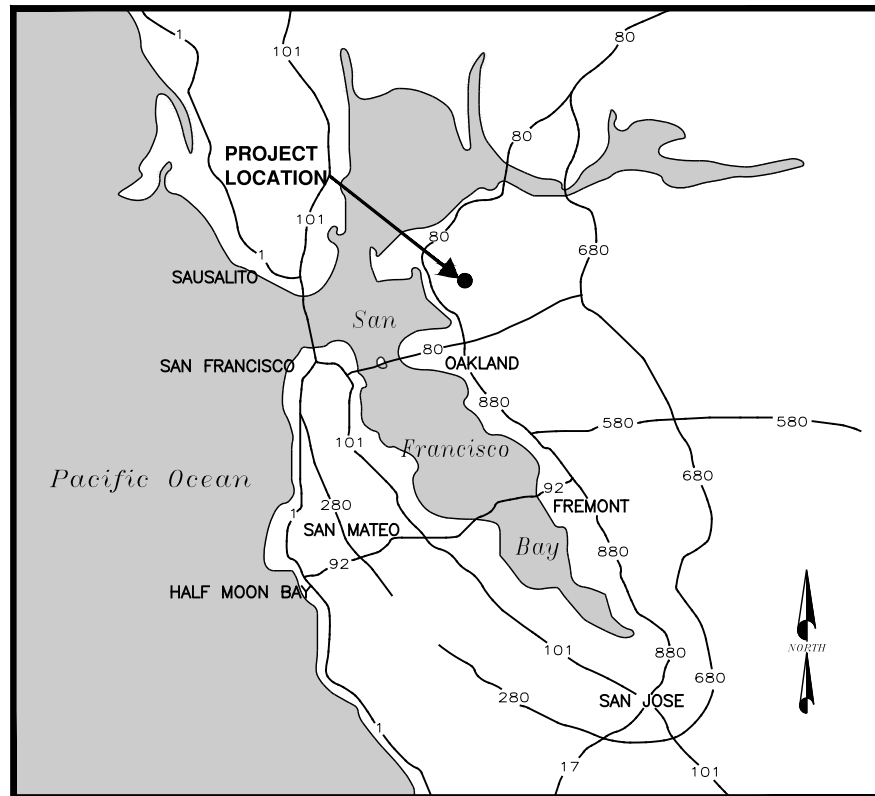


STEGE SANITARY DISTRICT CANON SEWER PUMP STATION IMPROVEMENTS PROJECT



VICINITY MAP
NTS

SHEET NO.	DWG NO.	TITLE
1	G1	TITLE SHEET
2	G2	NOTES, LEGEND AND ABBREVIATIONS
3	D1	DEMOLITION SITE PLAN
4	D2	DEMOLITION SECTION
5	C1	IMPROVEMENT SITE PLAN - BASE BID
6	C2	IMPROVEMENT SITE PLAN BID ALTERNATE
7	C3	PUMP STATION PLAN AND SECTION
8	C4	CIVIL DETAILS
9	C5	CIVIL DETAILS
10	E1	SYMBOLS, ABBREVIATIONS AND GENERAL NOTES
11	E2	SITE PLAN & ONE-LINE DIAGRAM - REMOVAL WORK
12	E3	SITE PLAN & ONE-LINE DIAGRAM - NEW WORK
13	E4	PUMP NO. 1 CONTROL SCHEMATIC DIAGRAM
14	E5	MISC. CONTROL SCHEMATIC DIAGRAMS - SHEET 1
15	E6	MISC. CONTROL SCHEMATIC DIAGRAMS - SHEET 2
16	E7	CONTROL PANEL ELEVATION
17	E8	ELECTRICAL DETAILS - SHEET 1
18	E9	CONDUIT AND CIRCUIT SCHEDULE
19	E10	SCADA RTU INTERCONNECTION DIAGRAM
20	PG&E	OH/UG CONSTRUCTION DRAWING

REV	DESCRIPTION	BY	DATE

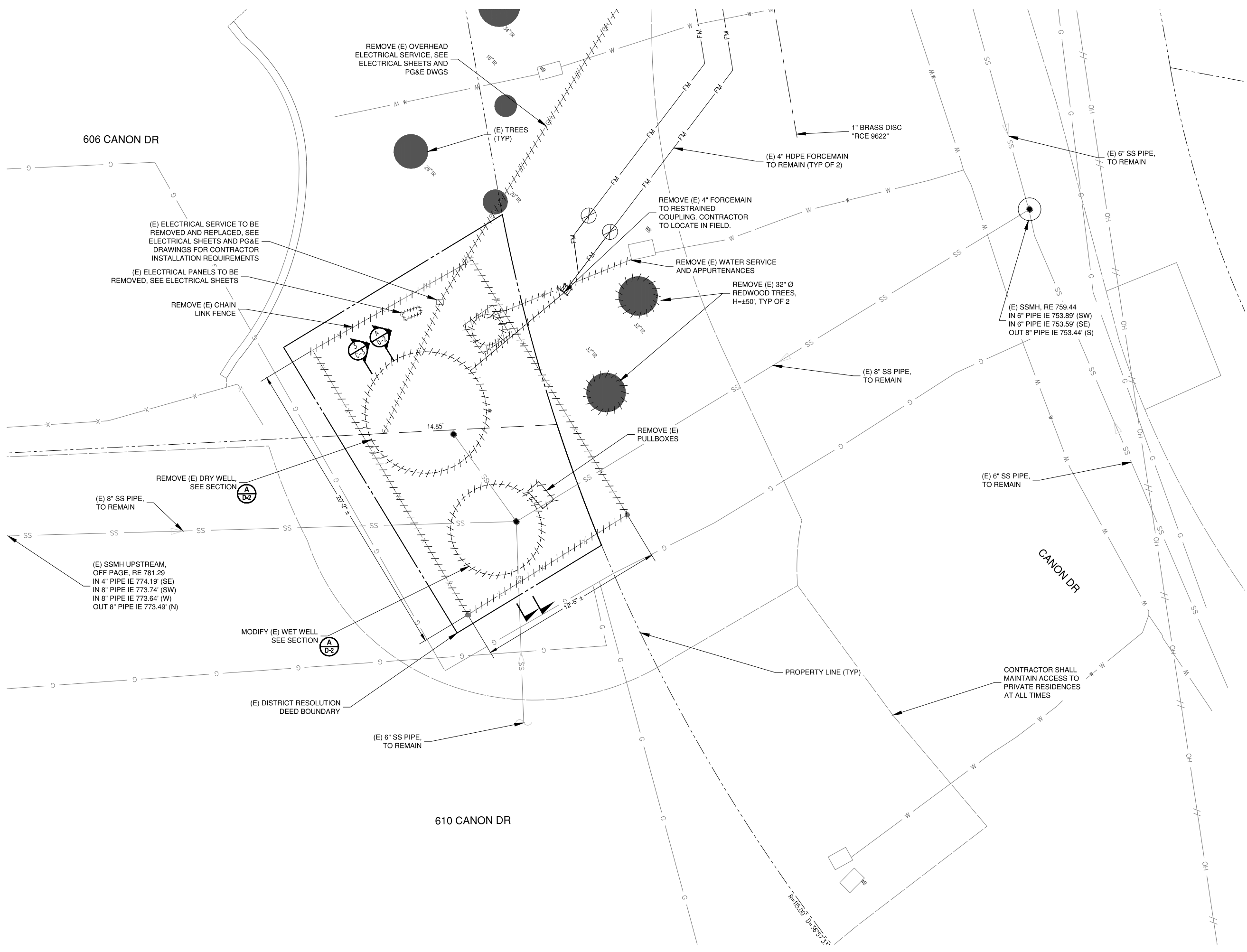
Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS
4699 OLD IRONSIDES DR., STE. 350
SANTA CLARA, CA 95054
(408) 246-4848



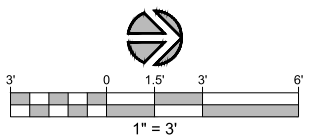
CANON SEWER PUMP STATION
IMPROVEMENTS
PREPARED AT THE REQUEST OF
STEGE SANITARY DISTRICT
TITLE SHEET



DRAWN BY: BFC
CHECKED BY: LDJ
DATE: 10/25/2023

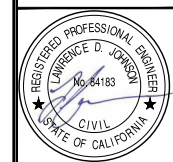


DEMOLITION SITE PLAN
SCALE: 1" = 3'



REV.	DESCRIPTION	BY	DATE

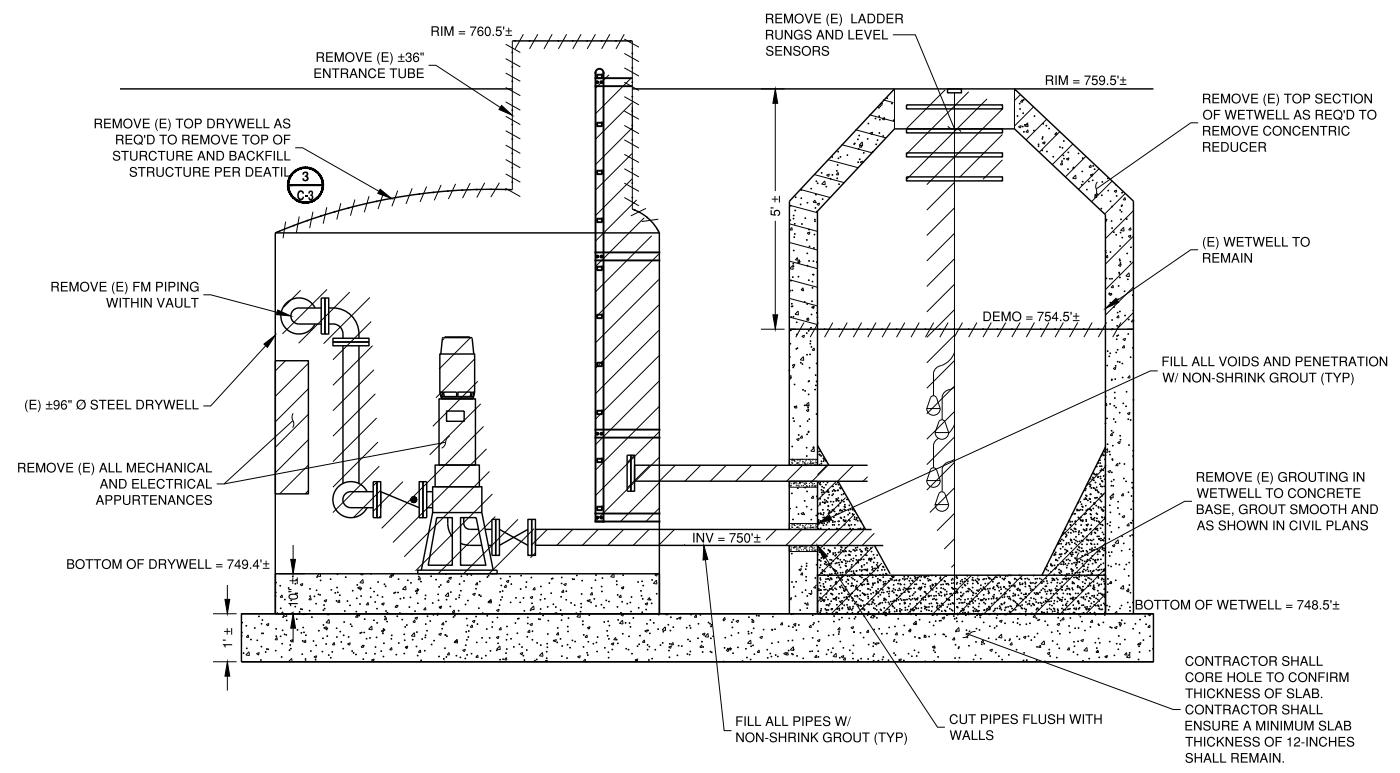
Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS
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SANTA CLARA, CA 95054
(408) 246-4848



CANON SEWER PUMP STATION IMPROVEMENTS
PREPARED AT THE REQUEST OF STEGE SANITARY DISTRICT
DEMOLITION SITE PLAN



DRAWN BY: BFC
CHECKED BY: LDJ
DATE: 10/25/2023
SHEET



DEMO SECTION A
SCALE: 1/2" = 1'

DEMOLITION NOTES
1. ALL ELEVATIONS AND DIMENSIONS ARE BASED ON ASBUILTS DATED FROM 1962. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS AND NOTIFY THE ENGINEER WHERE CONFLICTS OCCUR.

REV	DESCRIPTION	DATE	BY

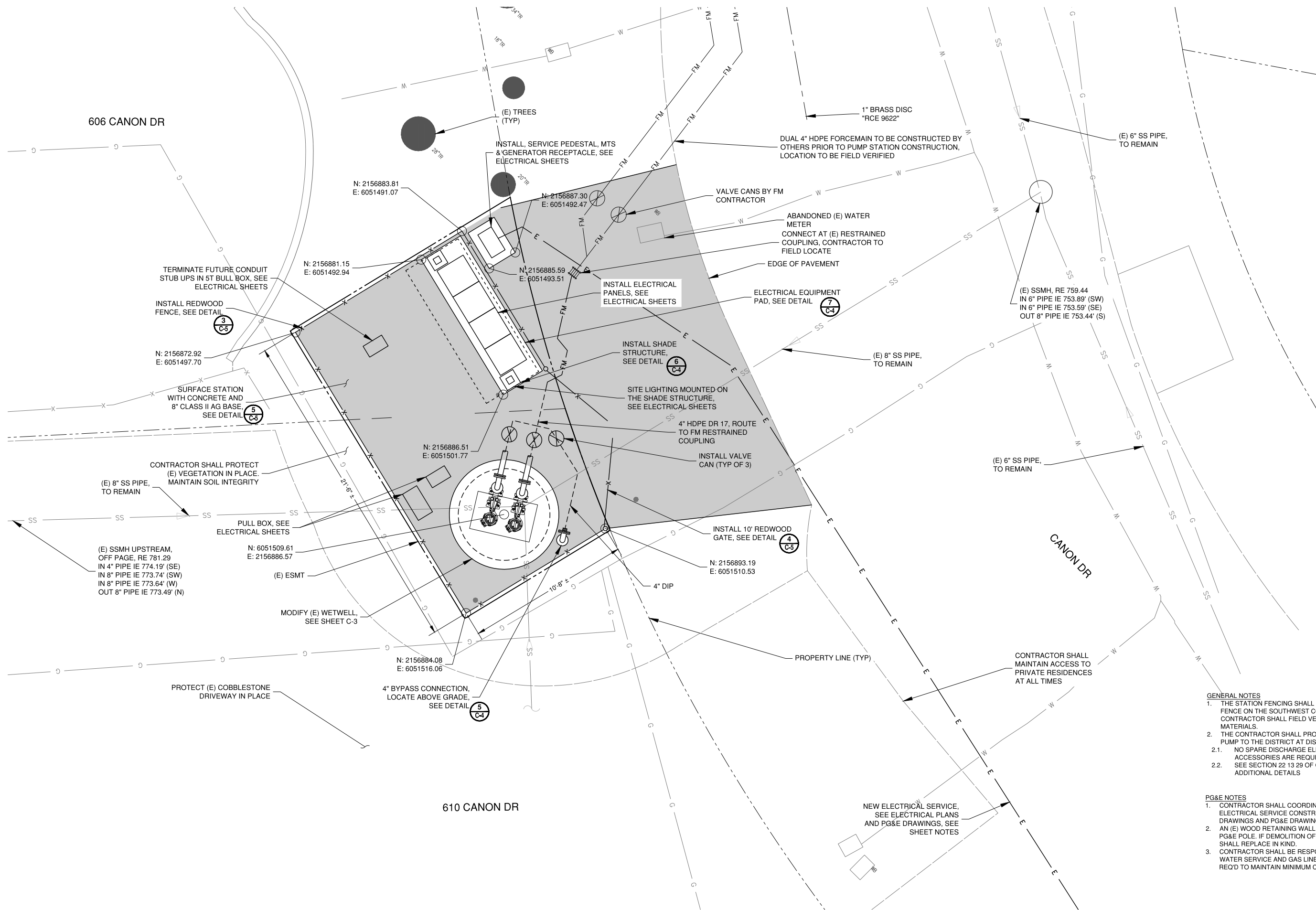
Schaaf & Wheeler
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4699 OLD IRONSIDES DR., STE. 350
SANTA CLARA, CA 95054
(408) 246-4848



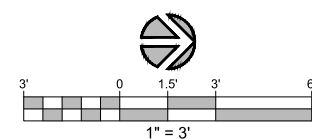
CANON SEWER PUMP STATION
IMPROVEMENTS
PREPARED AT THE REQUEST OF
STEVE SANITARY DISTRICT
DEMOLITION SECTION



DRAWN BY: BFC
CHECKED BY: LDJ
DATE: 10/25/2023



IMPROVEMENT SITE PLAN - BASE BID
SCALE: 1" = 3'

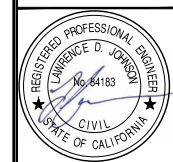


- GENERAL NOTES**
1. THE STATION FENCING SHALL MATCH THE EXISTING PROPERTY FENCE ON THE SOUTHWEST CORNER OF THE STATION. CONTRACTOR SHALL FIELD VERIFY FENCE STYLE AND MATERIALS.
 2. THE CONTRACTOR SHALL PROVIDE A THIRD, IDENTICAL SPARE PUMP TO THE DISTRICT AT DISTRICT HEADQUARTERS.
 - 2.1. NO SPARE DISCHARGE ELBOW, GUIDERAILS, NOR OTHER ACCESSORIES ARE REQUIRED FOR THE SPARE PUMP
 - 2.2. SEE SECTION 22 13 29 OF CONTRACT SPECIFICATIONS FOR ADDITIONAL DETAILS

- PG&E NOTES**
1. CONTRACTOR SHALL COORDINATE WITH PG&E FOR ELECTRICAL SERVICE CONSTRUCTION. SEE ELECTRICAL DRAWINGS AND PG&E DRAWINGS FOR ADDITIONAL DETAILS.
 2. AN (E) WOOD RETAINING WALL IS LOCATED ADJACENT TO PG&E POLE. IF DEMOLITION OF WALL IS REQ'D, CONTRACTOR SHALL REPLACE IN KIND.
 3. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING (E) WATER SERVICE AND GAS LINE. FIELD ROUTE CONDUIT AS REQ'D TO MAINTAIN MINIMUM CLEARANCES.

REV	DESCRIPTION	DATE

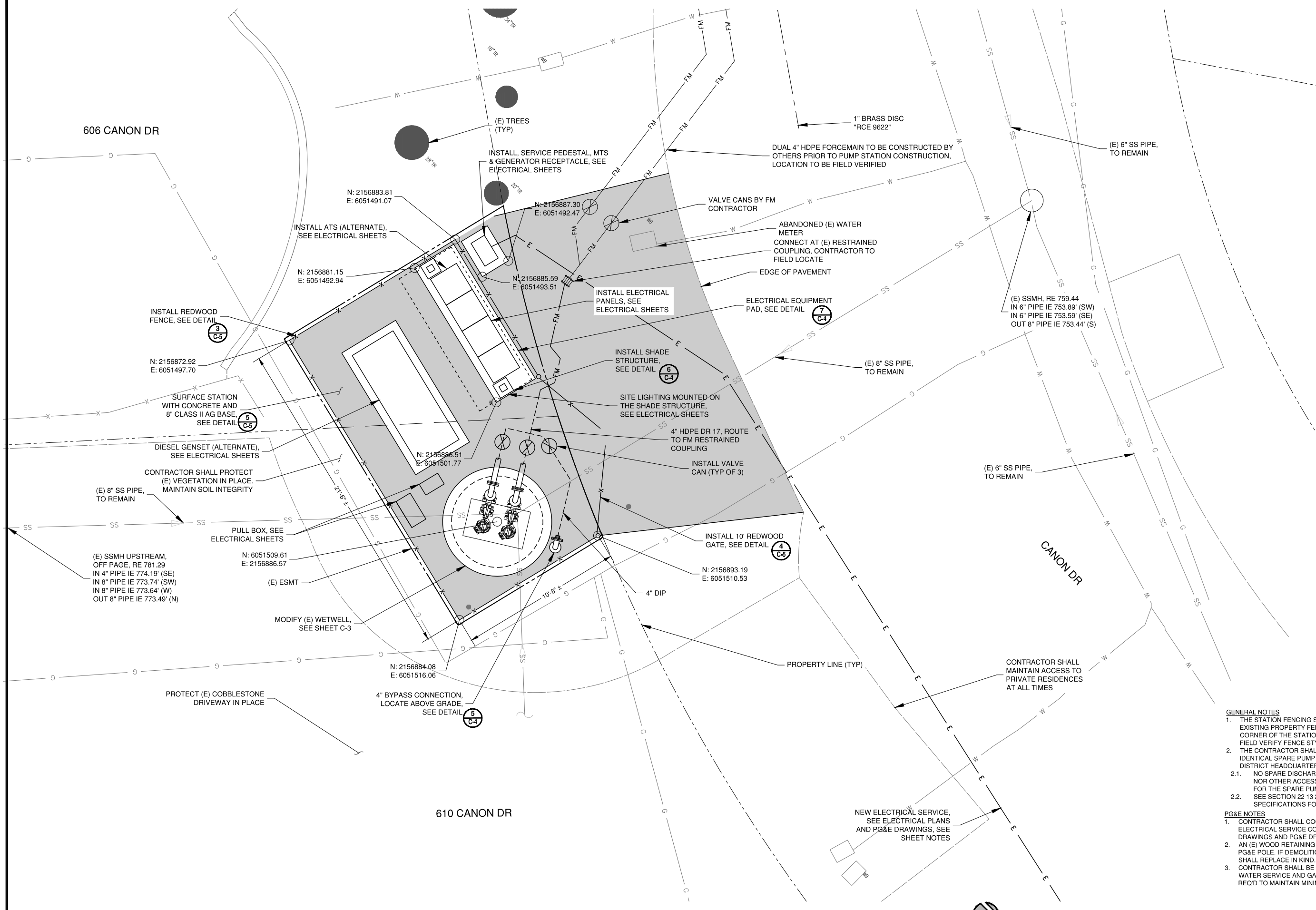
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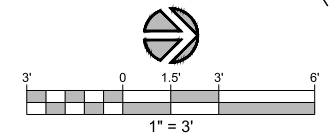
CANON SEWER PUMP STATION IMPROVEMENTS
PREPARED AT THE REQUEST OF STEGE SANITARY DISTRICT
IMPROVEMENT SITE PLAN - BASE BID



DRAWN BY: BFC
CHECKED BY: LDJ
DATE: 10/25/2023
SHEET



IMPROVEMENT SITE - BID ALTERNATE
SCALE: 1" = 3'



GENERAL NOTES

1. THE STATION FENCING SHALL MATCH THE EXISTING PROPERTY FENCE ON THE SOUTHWEST CORNER OF THE STATION. CONTRACTOR SHALL FIELD VERIFY FENCE STYLE AND MATERIALS.
2. THE CONTRACTOR SHALL PROVIDE A THIRD, IDENTICAL SPARE PUMP TO THE DISTRICT AT DISTRICT HEADQUARTERS.
 - 2.1. NO SPARE DISCHARGE ELBOW, GUIDERAILS, NOR OTHER ACCESSORIES ARE REQUIRED FOR THE SPARE PUMP
 - 2.2. SEE SECTION 22.13.29 OF CONTRACT SPECIFICATIONS FOR ADDITIONAL DETAILS

PG&E NOTES

1. CONTRACTOR SHALL COORDINATE WITH PG&E FOR ELECTRICAL SERVICE CONSTRUCTION. SEE ELECTRICAL DRAWINGS AND PG&E DRAWINGS FOR ADDITIONAL DETAILS.
2. AN (E) WOOD RETAINING WALL IS LOCATED ADJACENT TO PG&E POLE. IF DEMOLITION OF WALL IS REQ'D, CONTRACTOR SHALL REPLACE IN KIND.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING (E) WATER SERVICE AND GAS LINE. FIELD ROUTE CONDUIT AS REQ'D TO MAINTAIN MINIMUM CLEARANCES.

REV.	DESCRIPTION	DATE

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS
4699 OLD IRONSIDES DR., STE. 330
SANTA CLARA, CA 95054
(408) 246-4848



CANON SEWER PUMP STATION IMPROVEMENTS
PREPARED AT THE REQUEST OF STEGE SANITARY DISTRICT
IMPROVEMENT SITE PLAN BID ALTERNATE



DRAWN BY: BFC
CHECKED BY: LDJ
DATE: 10/25/2023
SHEET

GENERAL SYMBOLS AND LEGEND

(E)	EXISTING
(N)	NEW
(R)	RELOCATED
Δ	DELTA CONNECTIONS OR DELTA CONNECTED WINDINGS
Y	OPEN DELTA CONNECTIONS
Y	WYE CONNECTIONS OR WYE CONNECTED WINDINGS
⊥	GROUND, GROUND CONNECTION
②	SHEET NOTE IDENTIFICATION, REFER TO SHEET NOTE NUMBER 2
K	KEY INTERLOCK
M	MECHANICAL INTERLOCK
↔	DISCONNECTING MEANS
-X-X-X-	FENCE
±	APPROXIMATE DIMENSION
⊙	POLE MOUNTED ANTENNA
ELECTRICAL SYMBOLS	
⊕	POWER TRANSFORMER, TWO WINDING
⊕	SWITCH
⊕	SWITCH, FUSED
⊕	TEMPERATURE SWITCH, CLOSED AT LOW TEMPERATURE
⊕	TEMPERATURE SWITCH, OPEN AT LOW TEMPERATURE
⊕	FLOAT SWITCH, CLOSED AT LOW WATER LEVEL
⊕	FLOAT SWITCH, OPEN AT LOW WATER LEVEL
⊕	OVERLOAD ELEMENT
⊕	LOW VOLTAGE MOLDED CASE CIRCUIT BREAKER
⊕	CAPACITOR, STARTING
⊕	NORMALLY OPEN CONTACT
⊕	NORMALLY CLOSED CONTACT
⊕	FUSE
RES	RESISTOR, IN CONTROL CIRCUIT
⊕	SOLENOID VALVE OPERATING COIL
⊕	INDICATING LIGHT, G-GREEN, R-RED, W-WHITE, A-AMBER
⊕	CONTROL RELAY
⊕	STARTING RELAY
⊕	BATTERY BANK
⊕	UNDervOLTAGE RELAY
⊕	AMP REVENUE METER
⊕	GENERATOR RECEPTACLE
⊕	POLE MOUNTED LIGHT FIXTURE
⊕	4 FOOT FLUORESCENT LIGHT FIXTURE
⊕	SINGLE POLE LIGHT SWITCH, 20A, 120V
⊕	DUPLEX RECEPTACLE, SURFACE MOUNTED, NEMA 5-20R, 20 AMP, 125 VOLT, +15" MIN. UON. SUBSCRIPT "GFI" DENOTES WITH GROUND FAULT INTERRUPTER WHERE INDICATED ON PLAN. ALL OUTDOOR RECEPTACLES SHALL BE WEATHERPROOF (WP) WITH LOCKABLE COVER.
⊕	E-S EMERGENCY STOP SWITCH
---	CENTERLINE, STRUCTURE OR EQUIPMENT
LV	LOW VOLTAGE WIRING SYSTEM
---	CONDUIT STUB-DOWN
~	FLEXIBLE WIRING AND EQUIPMENT CONNECTION.
///	EXISTING EQUIPMENT TO BE REMOVED

UNDERGROUND DISTRIBUTION AND GROUNDING

---	UNDERGROUND CONDUITS
-G-G-	GROUND GRID, BURIED OR IN MH/VAULT
---	UNDERGROUND CONDUIT, CAPPED
---	GROUNDING PIGTAILS
⊕	UNDERGROUND THERMO-WELD CONNECTIONS
⊕	3/4" DIA X 10' LONG COPPERCLAD GROUND ROD
⊕	3/4" DIA X 10' LONG COPPERCLAD GROUND ROD IN ACCESSIBLE CONCRETE GROUND ROD BOX
ooo	CONDUIT STUB-UPS

ABBREVIATIONS

A	A	AMPERE
	A.C.	ALTERNATING CURRENT
	AI	ANALOG INPUT
	AIC	AMPS INTERRUPTING CURRENT
	AMP	ALAMEDA MUNICIPAL POWER
	ANN	ANNUNCIATOR
	AO	ANALOG OUTPUT
	AS	AMMETER SWITCH
	ATS	AUTOMATIC TRANSFER SWITCH
	AUX.	AUXILIARY
	AWG	AMERICAN WIRE GAUGE
B	BAL	BALANCE
	BATT.	BATTERY
	BCW	BARE COPPER WIRE
	BKR	BREAKER
	BLDG.	BUILDING
	BOT	BOTTOM
C	C	CONDUIT
	CB	CIRCUIT BREAKER
	CAB	CABINET
	CAP	CAPACITOR
	CHGR.	CHARGER
	CKT	CIRCUIT
	CL.CLE	CURRENT LIMITING, CURRENT LIMITING "E" FUSE
	COL	COLUMN
	COMP	COMPARTMENT
	CONT.	CONTROL
	CNTRLR	CONTROLLER
	CO	CONDUIT ONLY
	CONC	CONCRETE
	COND.	CONDUCTOR
	CP	CONTROL PANEL
	CPT	CONTROL POWER TRANSFORMER
	C.S.	CONTROL SWITCH
	CT	CURRENT TRANSFORMER
	CU	COPPER
	CUB	CUBICLE
D	D	DEEP
	DB	DUCT BANK
	DC	DIRECT CURRENT
	D.E.	DEAD END
	DI	DIGITAL INPUT
	DIA	DIAMETER
	DIM	DIMENSION
	DISC	DISCONNECT
	DIST.	DISTRIBUTION
	DN	DOWN
	DO	DIGITAL OUTPUT
	DP	DISTRIBUTION PANEL
	DW	DRY WEATHER
	DWG	DRAWING
E	EA	EACH
	EF	EXHAUST FAN
	EO	ELECTRICALLY OPERATED
	ELEC	ELECTRICAL
	ELEV	ELEVATION
	EPR	ETHYLENE PROPYLENE RUBBER
	EQPMNT	EQUIPMENT
	ETM	ELAPSED TIME METER

ABBREVIATIONS (CONTINUED)

F	FDR	FEEDER
	F, FU	FUSE
	FLD	FIELD
	FLC	FULL LOAD CURRENT
	FLS	FLOAT SWITCH
	FT	FOOT, FEET
	FUT.	FUTURE
	FVR	FULL VOLTAGE REVERSING
	FVNR	FULL VOLTAGE NON-REVERSING
G	GAL	GALLONS
	GALV	GALVANIZED
	GC	GROUND CHECK
	GFI, GFCI	GROUND FAULT CIRCUIT INTERRUPTER
	G.L.	GRADE LEVEL
	GND	GROUND
H	HI	HIGH
	HT	HEIGHT
	HH	HANDHOLE
	HTR	HEATER
	HOA	HAND-OFF-AUTO
	HV	HIGH VOLTAGE
I	IC	INTERRUPTING CAPACITY
	INC	INCOMING
	IND	INDICATION
	INS	INSULATOR
	IRR	IRRIGATION
	ISR	INTRINSICALLY SAFE RELAY
J	JB	JUNCTION BOX
K	KCM	THOUSAND CIRCULAR MILS
	KV	KILOVOLT
	KVA	KILOVOLT AMPERE
	KVAR	KILOVOLT AMPERE REACTIVE
	KW	KILOWATT
L	L	LONG, LENGTH
	L.A.	LIGHTNING ARRESTER
	LBS	POUNDS
	LCP	LIGHTING CONTROL PANEL
	L-L	LINE TO LINE
	L-N	LINE TO NEUTRAL
	LTG	LIGHTING
	LO	LOW
	LVL	LEVEL
	LxWxH	LENGTH, WIDTH AND HEIGHT
	LPS	LOW PRESSURE SODIUM
	LV	LOW VOLTAGE
M	MAX	MAXIMUM
	MCC	MOTOR CONTROL CENTER
	MCCB	MOLDED CASE CIRCUIT BREAKER
	MCP	MOTOR CIRCUIT PROTECTOR
	MCS	MOLDED CASE SWITCH
	MED	MEDIUM
	MFR.	MANUFACTURER
	MH	MANHOLE
	MI	MECHANICAL INTERLOCK
	MIN	MINIMUM
	MISC	MISCELLANEOUS
	MO	MANUALLY OPERATED
	MR	MULTI-RATIO
	MTD	MOUNTED
	MV	MEDIUM VOLTAGE
N	N.C.	NORMALLY CLOSED
	N.I.C.	NOT IN CONTRACT
	N.O.	NORMALLY OPEN
	NTS	NOT TO SCALE
	NP	NAMEPLATE
O	OC	ON CENTER
	O/C	OVERCURRENT
	O.H.	OVERHEAD
	OL	OVERLOAD
	OPER.	OPERATING

ABBREVIATIONS (CONTINUED)

P	PB	PULL BOX
	PCB	POLYCHLORINATED BIPHENYLS
	PCC	PORTLAND CEMENT CONCRETE
	PF	POWER FACTOR
	PFR	POWER FAIL RELAY
	PH	PHASE
	PLC	PROGRAMMABLE LOGIC CONTROLLER
	PMP	PUMP
	PNL	PANEL
	PT	POTENTIAL TRANSFORMER
	PTT	PUSH-TO-TEST
	PVC	POLYVINYL CHLORIDE
	PWR	POWER
R	R	RADIUS
	(R)	RELOCATE
	REM	REMOVE
	RSC, RSG	RIGID STEEL CONDUIT, GALVANIZED
	REQ'D	REQUIRED
	RTU	REMOTE TERMINAL UNIT
S	S.A.	SURGE ARRESTERS
	SB	SHORTING BLOCK
	SBC	SBC COMMUNICATIONS, INC.
	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
	SCH	SCHEDULE
	SCTB	SHORT CIRCUITING TERMINAL BLOCK
	SEC	SECONDARY
	SHLD.	SHIELDED
	SHT	SHEET
	SPR	SPARE
	SPD	SURGE PROTECTION DEVICE
	SS	STAINLESS STEEL
	SSRVS	SOLID STATE REDUCED VOLTAGE STARTER
	STA.	STATION
	STD	STANDARD
	SUB	SUBSTATION
	SVCE	SERVICE
	SV	SOLENOID VALVE
	SW	SWITCH
	SWBD	SWITCHBOARD
	SWG	SWITCHGEAR
	SYM	SYMMETRICAL
T	TEL	TELEPHONE
	TELEM	TELEMETERING
	TEMP	TEMPORARY
	TERM	TERMINAL
	TOC	TOP OF CONCRETE
	TS	TEST SWITCH
	TSP	TWISTED SHIELDED PAIR
	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	TYP.	TYPICAL
U	UG	UNDERGROUND
	UON	UNLESS OTHERWISE NOTED
	UL	UNDERWRITER LABORATORIES
	UPS	UNINTERRUPTIBLE POWER SUPPLY
	UV	UNDERVOLTAGE
V	V	VOLT
	V.C.B.	VACUUM CIRCUIT BREAKER
	VF	VENTILATING FAN
	VFD	VARIABLE FREQUENCY DRIVE
	VS	VOLTMETER SWITCH
	V.T.	VOLTAGE TRANSFORMER
W	W/	WITH
	WT	WEIGHT
	WP	WEATHERPROOF
X	XDCR	TRANSDUCER
	XFMR	TRANSFORMER
	XFR	TRANSFER
	XMTR	TRANSMITTER

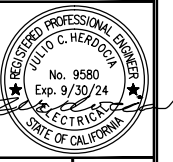
GENERAL NOTES:

1. THE COMPLETE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF NATIONAL ELECTRICAL CODE, THE LATEST RULES AND REGULATIONS OF THE SAFETY ORDERS ISSUED BY THE DIVISION OF INDUSTRIAL SAFETY, THE NATIONAL FIRE PROTECTION ASSOCIATION AND ALL APPLICABLE STATE AND LOCAL CODES ISSUED BY AUTHORITIES HAVING JURISDICTION.
2. LOCATION(S) OF CONTROLLERS, CONDUIT, PULL BOXES AND OTHER EQUIPMENT AS SHOWN ON THE PLAN IS APPROXIMATE AND MAY BE CHANGED TO SUIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
3. PULL ROPE SHALL BE PROVIDED IN ALL EMPTY CONDUITS.
4. ELECTRICAL EQUIPMENT AND FEEDER SHALL BE SUPPORTED AND/OR ANCHORED IN ACCORDANCE WITH 2019 CBC SEISMIC REQUIREMENTS.
5. ALL CONDUCTORS SHALL BE 600 VOLT, STRANDED COPPER, WITH TYPE XHHW-2 INSULATION, UNLESS OTHERWISE NOTED. THE MINIMUM SIZE CONDUCTORS SHALL BE #12 AWG UNLESS OTHERWISE NOTED.

SYMBOLS AND ABBREVIATIONS ARE FOR GENERAL USE. DISREGARD THOSE WHICH ARE NOT USED ON THE DRAWINGS.

DATE	BY	DESCRIPTION

engineers, inc.
 3350 scott blvd. bldg. 11
 santa clara, ca 95054
 (408) 986-8555
 FAX (408) 986-9627
 PROJECT NO. 20697-01



CANON SEWER PUMP STATION
 IMPROVEMENTS
 PREPARED AT THE REQUEST OF
 STEGE SANITARY DISTRICT
SYMBOLS, ABBREVIATIONS AND GENERAL NOTES



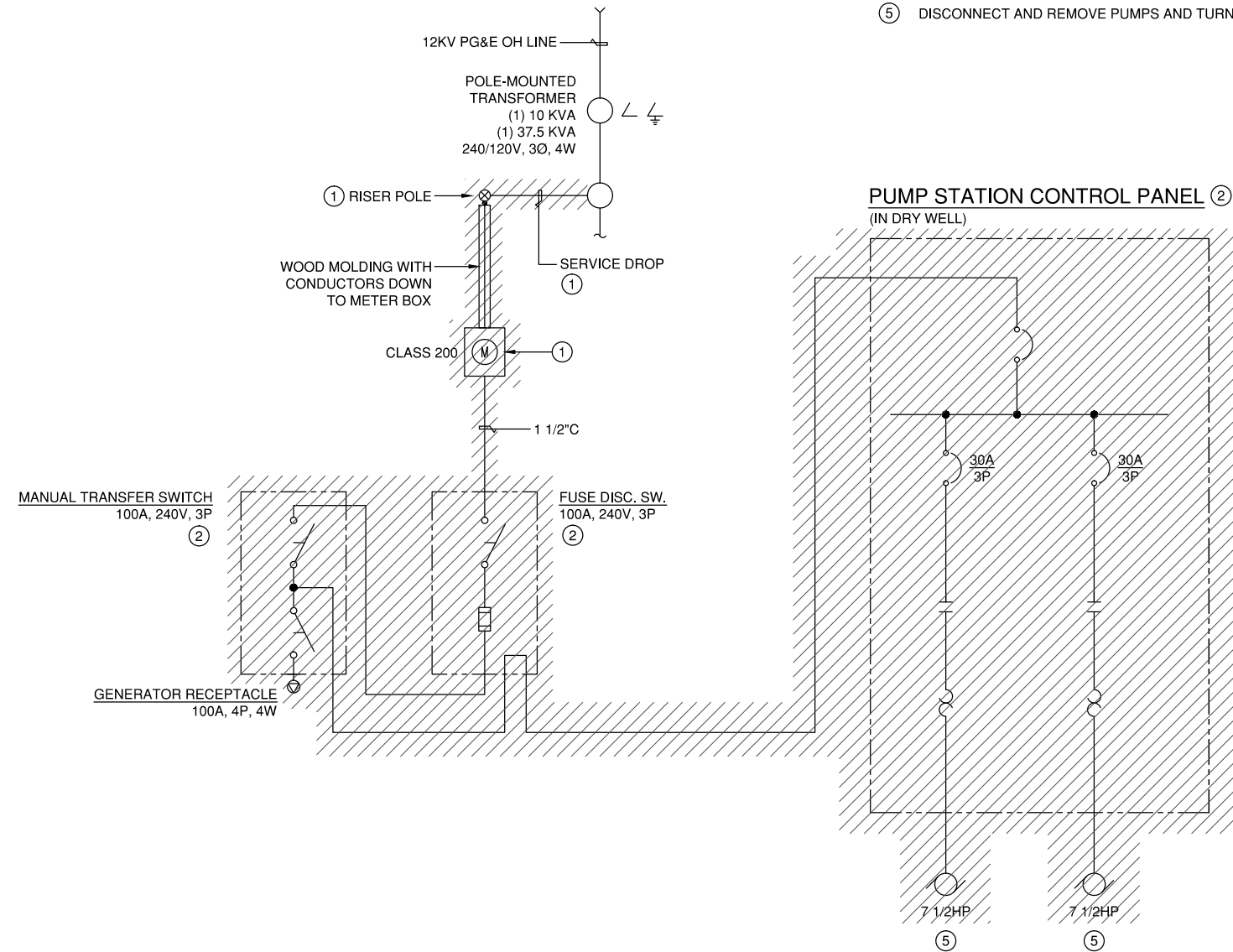
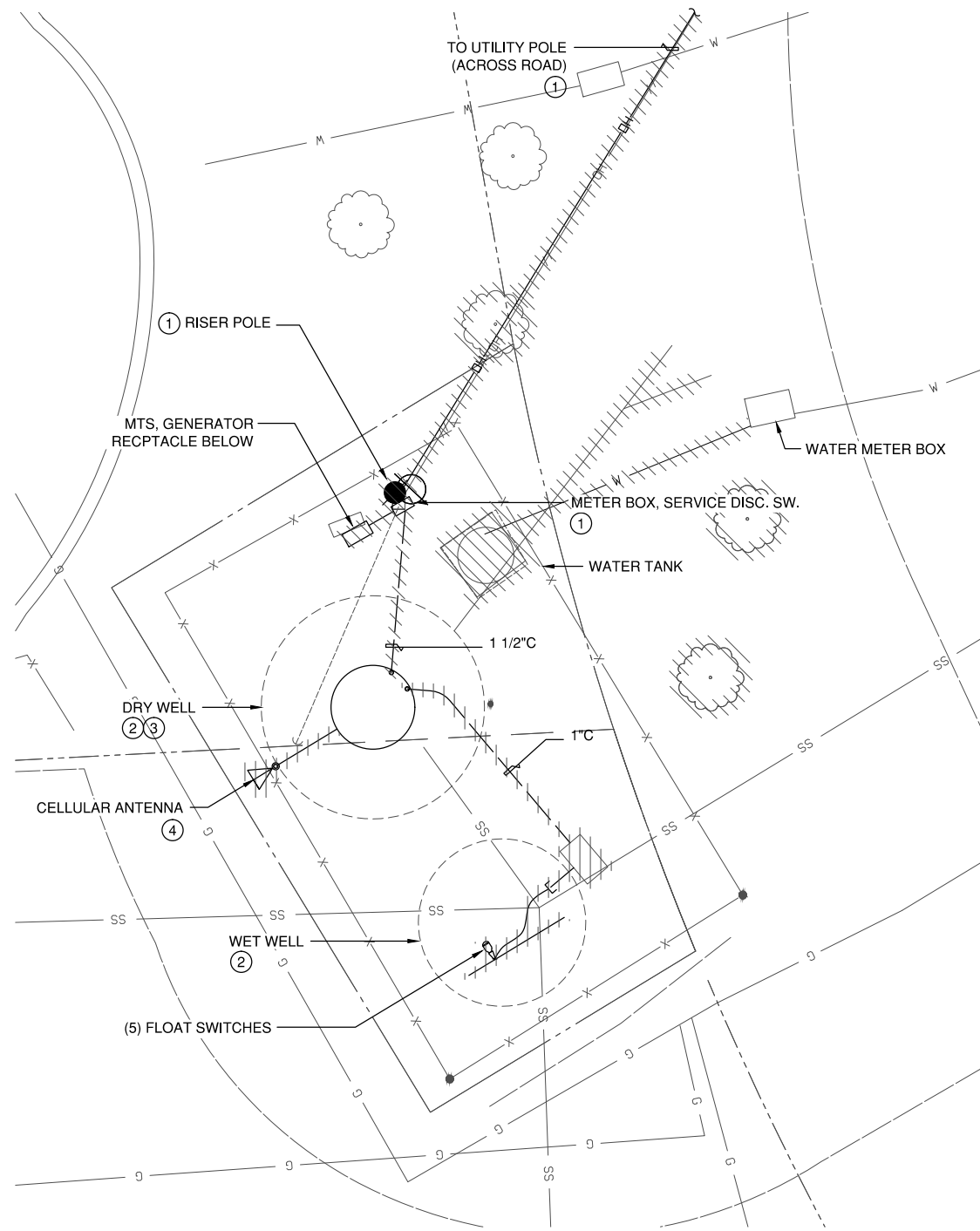
DRAWN BY: BFC
CHECKED BY: LDJ
JOB NUMBER:
SHEET
E1
10 OF 20

GENERAL NOTES:

- DISTRICT RESERVES THE RIGHT OF REFUSAL ON ANY OF THE EXISTING EQUIPMENT AND DEVICES BEING REMOVED IN THIS PROJECT. ANY EQUIPMENT OR DEVICES NOT WANTED BY THE DISTRICT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT SITE.
- IT IS THE INTENTION OF THIS PROJECT TO LEAVE EXISTING DRY WELL AND WET WELL COMPLETELY CLEAR AND FREE OF ANY AND ALL EXISTING ELECTRICAL APPARATUS THAT IS NOT IN USE OR THAT IS BEING REPLACED BY THIS PROJECT. THIS INCLUDES DEVICES, CONDUIT, BOXES, IN GROUND BOXES SERVING THE WELL BUT LOCATED OUTSIDE THE WELL, AND ANY OTHER SYSTEMS THAT EXIST BUT WILL NOT BE USED OR REPLACED AT THE COMPLETION OF THIS PROJECT WHETHER SHOWN SPECIFICALLY ON THESE PLANS FOR REMOVAL OR NOT.

SHEET NOTES:

- COORDINATE WITH PG&E FOR REMOVAL OF OVERHEAD SERVICE DROP, REMOVAL OF RISER POLE, AND REMOVAL OF PUMP STATION METER.
- REMOVE ELECTRICAL EQUIPMENT INCLUDING ALL ENCLOSED EQUIPMENT AND DEVICES. VERIFY CONNECTIONS AND EXISTING CONDITIONS TO THE EXTENT REQUIRED TO SAFELY REMOVE EQUIPMENT.
- REMOVE SCADA RTU EQUIPMENT INSIDE DRYWELL AND TURN OVER TO THE DISTRICT.
- REMOVE CELLULAR ANTENNA.
- DISCONNECT AND REMOVE PUMPS AND TURN OVER TO THE DISTRICT.



REV.	DATE	DESCRIPTION

MH engineers, inc.
3350 Scott Blvd., Bldg. 11
Santa Clara, CA 95054
(408) 986-8555
FAX (408) 966-9627
PROJECT NO. 20697-01

REGISTERED PROFESSIONAL ENGINEER
VILLO C. HEREDIA
No. 9580
Exp. 9/30/24
ELECTRICAL
STATE OF CALIFORNIA

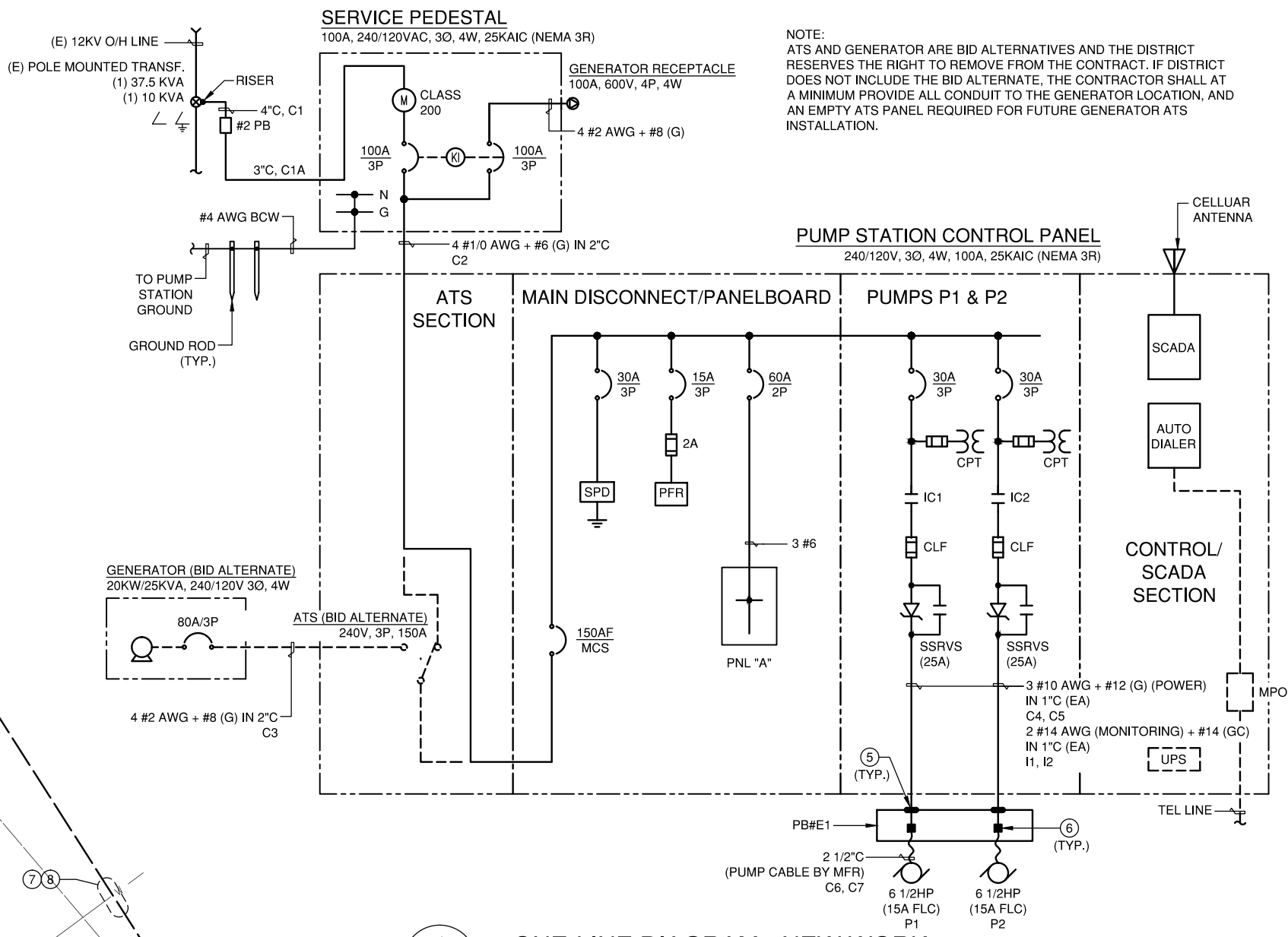
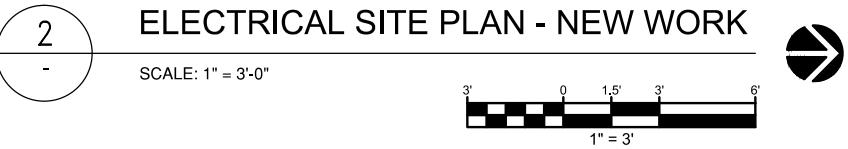
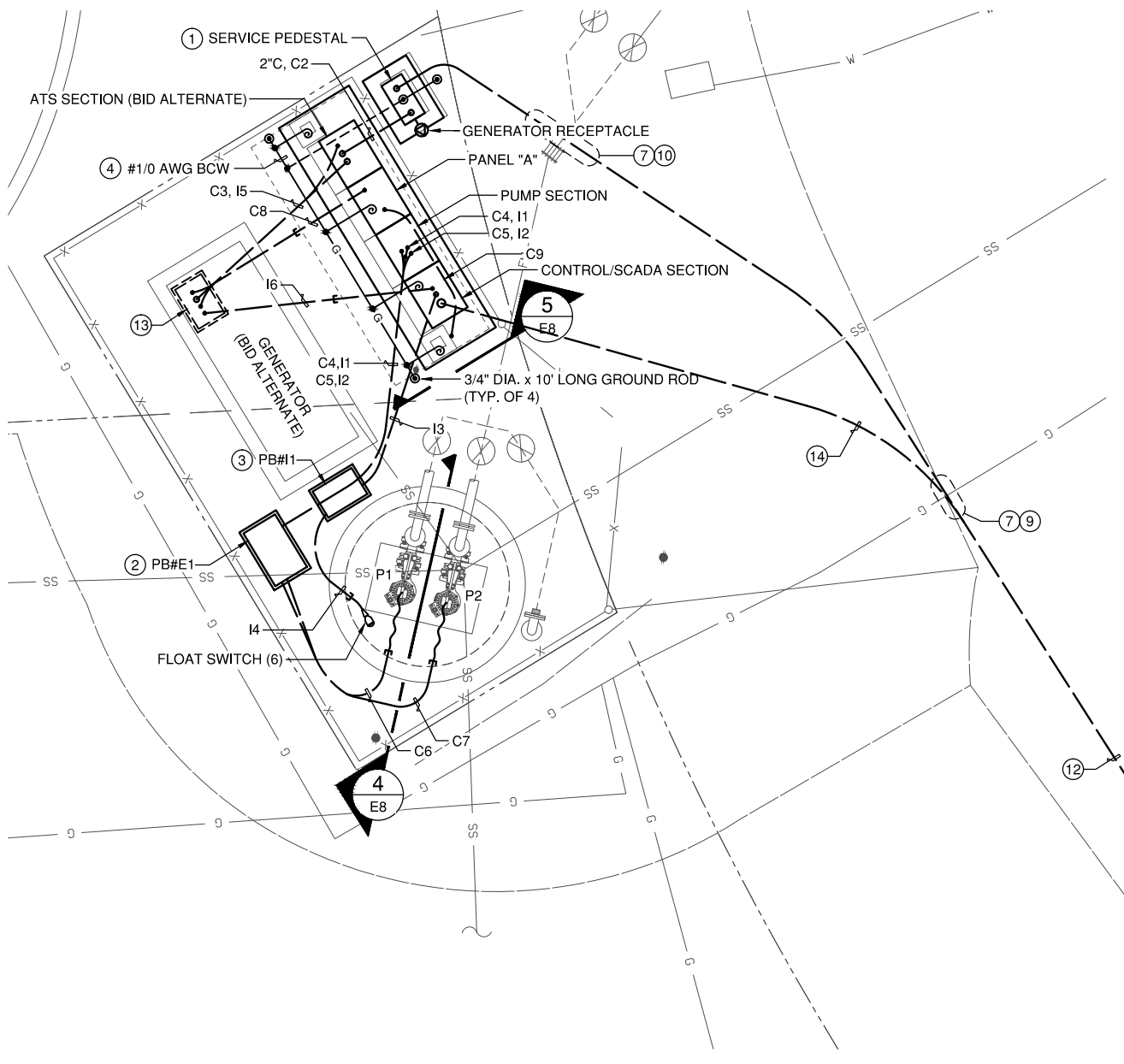
CANON SEWER PUMP STATION IMPROVEMENTS
PREPARED AT THE REQUEST OF STIAGE SANITARY DISTRICT
SITE PLAN & ONE-LINE DIAGRAM - REMOVAL WORK



DRAWN BY: BFC
CHECKED BY: LDJ
JOB NUMBER:

SHEET
E2
11 OF 20

File: M:\20697-01_Canon Pump Station\01E2.dwg, 2/9/2023 6:49 PM, Last saved: Rcatris, PlotDate: 4/3/2023 1:53 PM, By: Robbie Cotris, Plot scale: 1:2,5849, Plot Size: ANSI A (8.50 x 11.00 Inches)
Xref: A21016-BS CANON_100PER 6STA100102-Canon TS-A21016



NOTE:
ATS AND GENERATOR ARE BID ALTERNATIVES AND THE DISTRICT RESERVES THE RIGHT TO REMOVE FROM THE CONTRACT. IF DISTRICT DOES NOT INCLUDE THE BID ALTERNATE, THE CONTRACTOR SHALL AT A MINIMUM PROVIDE ALL CONDUIT TO THE GENERATOR LOCATION, AND AN EMPTY ATS PANEL REQUIRED FOR FUTURE GENERATOR ATS INSTALLATION.

1 ONE-LINE DIAGRAM - NEW WORK
SCHEMATIC

GENERAL NOTES:

- ALL EQUIPMENTS AND INSTALLATION SHOWN ON THIS DRAWING IS NEW UNLESS OTHERWISE NOTED AS (E) OR EXISTING.
- SEE DWG. E9 FOR CONDUIT AND CIRCUIT SCHEDULE.
- ALL UNDERGROUND CONDUITS SHALL BE PVC SCH 40, EXCEPT AS OTHERWISE NOTED.

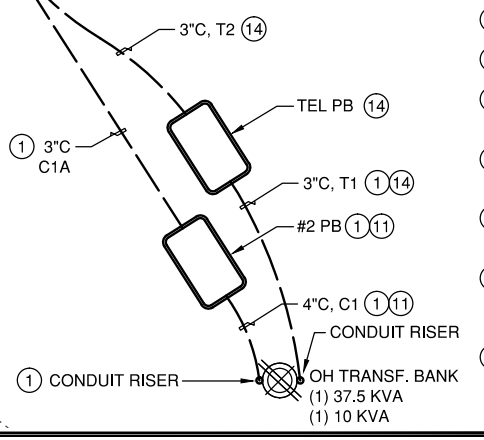
SHEET NOTES:

- CONTRACTOR TO COORDINATE, PROVIDE, AND INSTALL PG&E 4" CONDUIT RISER, #2 PULLBOX, AND 3" C TO SERVICE PEDESTAL. INSTALLATION SHALL BE PER PG&E STANDARDS AND ATTACHED PG&E DWG PM35313105. COORDINATE UTILITY METER INSTALLATION WITH PG&E.
- PROVIDE IN-GROUND PULL BOX FOR PUMP POWER MONITORING CONTROL CIRCUITS, SIZE 5T, CHRISTY BOX B1324 WITH 12" EXTENSION (13"x24") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATED COVER.
- PROVIDE IN-GROUND PULL BOX FOR INSTRUMENTATION, SIZE 3-1/2T, CHRISTY BOX B1017 WITH 12" EXTENSION (10"x17") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATED COVER.
- BURY GROUND CONDUCTOR 18" BELOW FINISH GRADE.
- PROVIDE CLASS I, DIVISION 1 SEALING FITTINGS.
- SUBMERSIBLE SPLICE.
- HAND EXCAVATE AT UTILITY CROSSING.
- MAINTAIN 12" VERTICAL SEPARATION AT WATER LINE CROSSING.
- MAINTAIN 6" VERTICAL SEPARATION AT GAS LINE CROSSING.
- COORDINATE INSTALLATION OF SECONDARY CONDUIT WITH FORCE MAIN LINES. MAINTAIN 12" VERTICAL SEPARATION.
- REMOVE PORTION OR WOOD RETAINING WALL TO FACILITATE CONDUIT RISER AND #2 PB INSTALLATION. RESTORE WOOD RETAINING WALL TO ORIGINAL CONDITION.
- SAW CUT AND REMOVE PAVEMENT FOR CONDUIT INSTALLATION. RESTORE PAVEMENT TO ORIGINAL CONDITION.
- PROVIDE IN-GROUND PULL BOX ON TOP OF CONDUIT STUB-UPS IF DISTRICT DOES NOT ELECT TO INCLUDE THE BID ALTERNATE GENERATOR. PULL BOX SHALL BE CHRISTY SIZE 3-1/2T B1017 TRAFFIC RATED WITH CHECKERED PLATE STEEL COVER.
- CONTRACTOR TO APPLY FOR TELEPHONE SERVICE ON BEHALF OF THE DISTRICT, COORDINATE, PROVIDE AND INSTALL TELEPHONE CONDUIT AND PULL BOX. INSTALLATION SHALL BE PER AT&T STANDARDS.

ENCLOSURE NEMA 1, INTERRUPTING 240/120V VOLT, 1 PHASE, 3 WIRE							
MOUNTING PANEL, BREAKER 22KAIC, MLO A. MAIN BREAKER, 100 A. BUS							
DESCRIPTION	LOADS/VA	BKR. POLE	CKT. NO.	PHASE	BKR. POLE	LOADS/VA	DESCRIPTION
UPS EQUIPMENT	1500	20/1	1	A	2	20/1	SPARE (FUT GEN JWH)
MCC CONV. GFCI	1100	20/1	3	B	4	-	(FUT BATT CHGR)
MCC HEATERS	750	20/1	5	A	6	-	
MCC LIGHTS	200	20/1	7	B	8	-	
MCC FAN	100	20/1	9	A	10	-	
SPARE			11	B	12	-	
			13	A	14	-	
			15	B	16	-	
			17	A	18	-	SITE LIGHTING
			19	B	20	-	
			21	A	22	-	
			23	B	24	-	
			25	A	26	-	
			27	B	28	-	
			29	A	30	-	
			31	B	32	-	
			33	A	34	-	
			35	B	36	-	
			37	A	38	-	
			39	B	40	-	
			41	A	42	-	
TOTAL:	2350 1300						

TOTAL: 3.65 KVA PANEL # "A" FEEDER SIZE SEE ONE-LINE DIAGRAM

LOAD DESCRIPTION	POWER (KVA)
PUMP P-1 (6 1/2 HP)	6.24
PUMP P-2 (6 1/2 HP)	6.24
CONTROL PANEL "A"	3.65
SUBTOTAL	16.13
25% LARGEST MOTOR	1.56
25% CONTINUOUS	0.91
TOTAL	18.6
240V, 3 PHASE	44.74 (AMP)



DATE	
BY	
DESCRIPTION	
REV	

engineers, inc.
3350 scott blvd. bldg. 11
san diego, ca 92108
(408) 986-8555
FAX (408) 986-9627
PROJECT NO. 20697-01

REGISTERED PROFESSIONAL ENGINEER
VILLO C. HEREDIA
No. 9580
Exp. 9/30/24
ELECTRICAL
STATE OF CALIFORNIA

CANON SEWER PUMP STATION IMPROVEMENTS
PREPARED AT THE REQUEST OF STEGE SANITARY DISTRICT

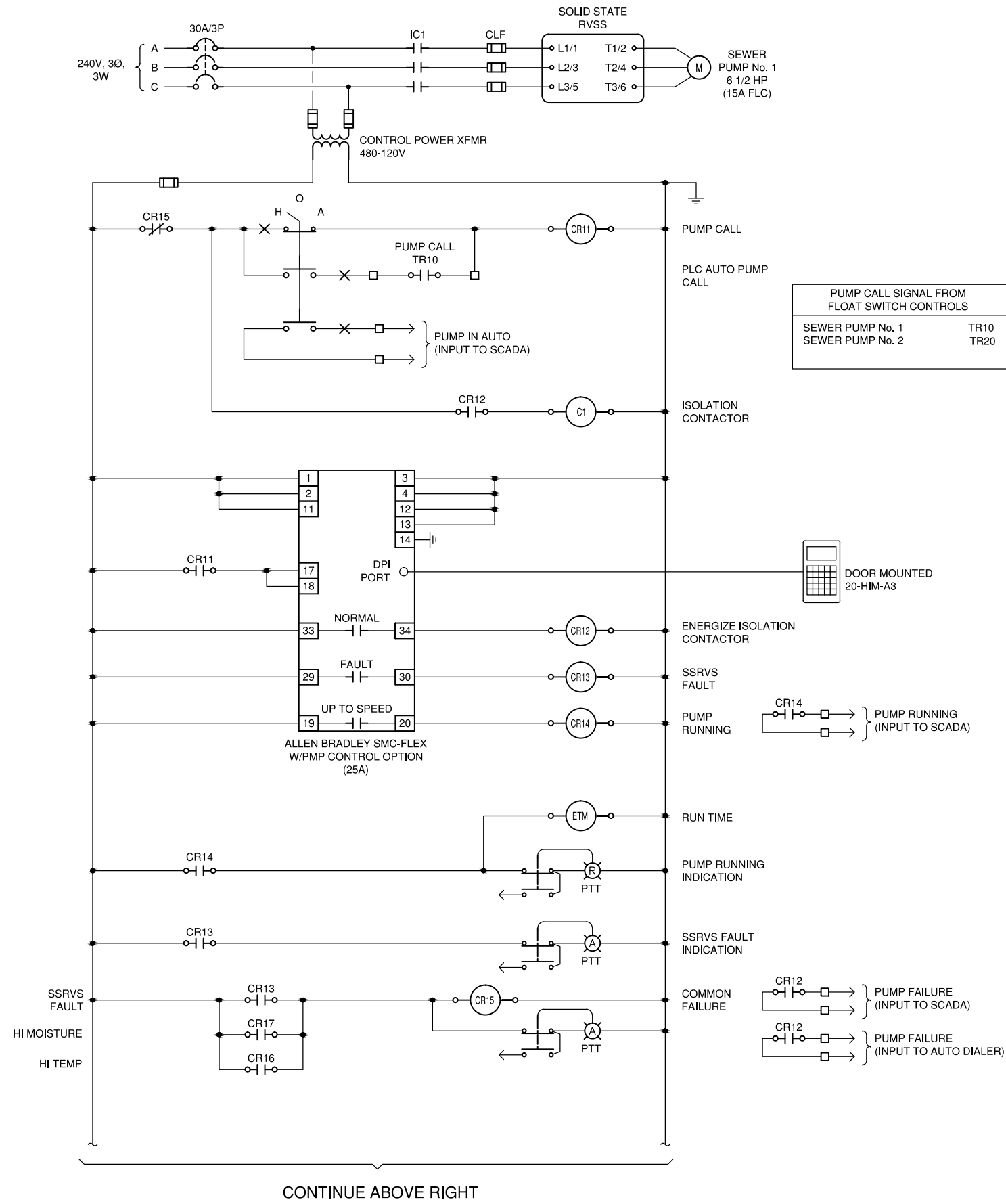
SITE PLAN & ONE-LINE DIAGRAM - NEW WORK

DRAWN BY: BFC
CHECKED BY: LDJ
JOB NUMBER:
SHEET

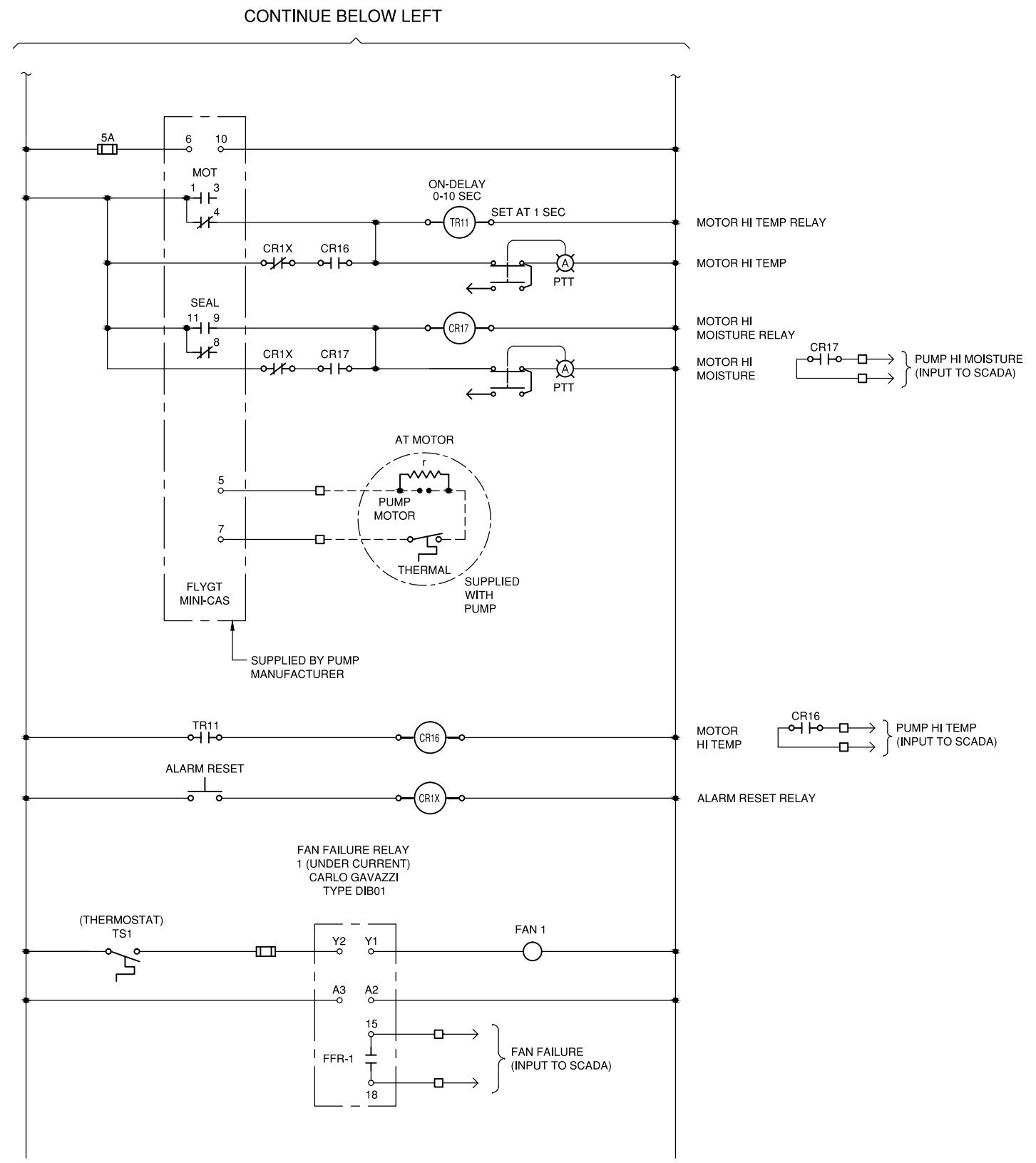
E3

12 OF 20

File: M:\20697-01_Canon_Pump_Station\01E3.dwg, 4/3/2023 1:51 PM, Last saved by: rccatris, PlotDate: 4/3/2023 1:53 PM By: Robbie Cotris, Plot scale: 1:2,5849, Plot Size: ANSI A (8.50 x 11.00 inches) Xref: A21016-BS CANON_10DPER XR-TITLE 65TA100102-Canon TS-A21016



CONTINUE ABOVE RIGHT



CONTINUE BELOW LEFT

SEWER PUMP No. 1 CONTROL SCHEMATIC DIAGRAM
(SIMILAR FOR SEWER PUMP No. 2)

File: M:\20697-01_Canon Pump Station\01E4.dwg, 4/3/2023 1:54 PM, Last saved: Rcatris, PlotDate: 4/3/2023 1:54 PM, Plot scale: 1:2,5849, Plot Size: ANSI A (8.50 x 11.00 Inches), Xref: XR-TITLE

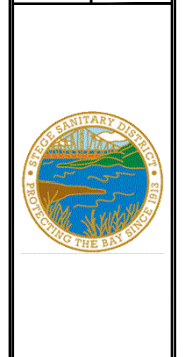
REV	DATE	DESCRIPTION

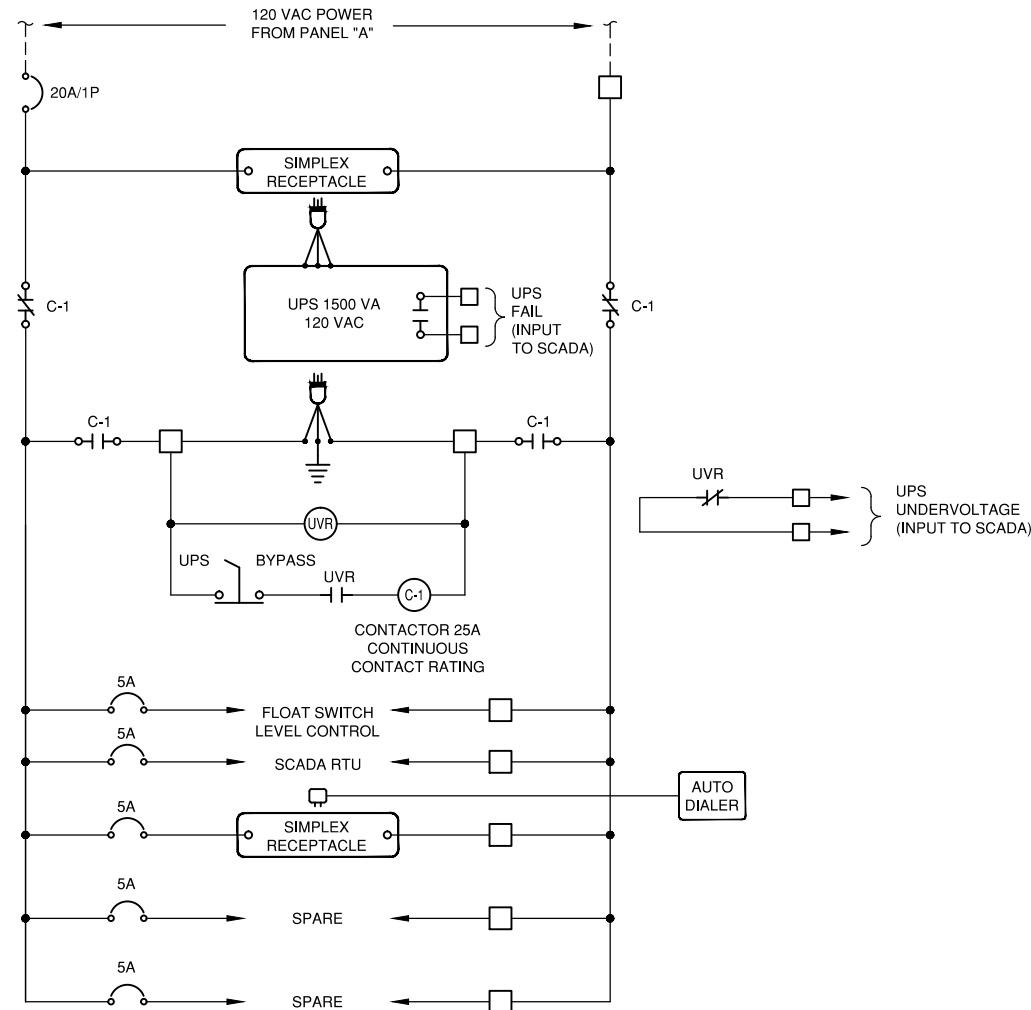
engineers, inc.
3350 Scott Blvd., Bldg. 11
Santa Clara, CA 95054
408-986-8555
FAX 408-986-9627
PROJECT NO. 20697-01

REGISTERED PROFESSIONAL ENGINEER
VILLO C. HEREDIA
No. 9580
Exp. 9/30/24
ELECTRICAL
STATE OF CALIFORNIA

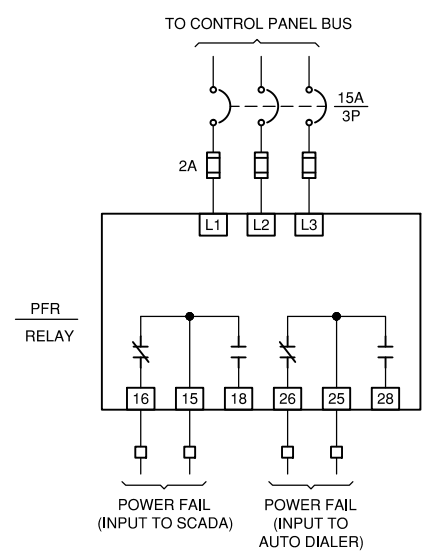
CANON SEWER PUMP STATION
IMPROVEMENTS
PREPARED AT THE REQUEST OF
STEVE SANITARY DISTRICT

PUMP No. 1 CONTROL SCHEM. DIAGRAM

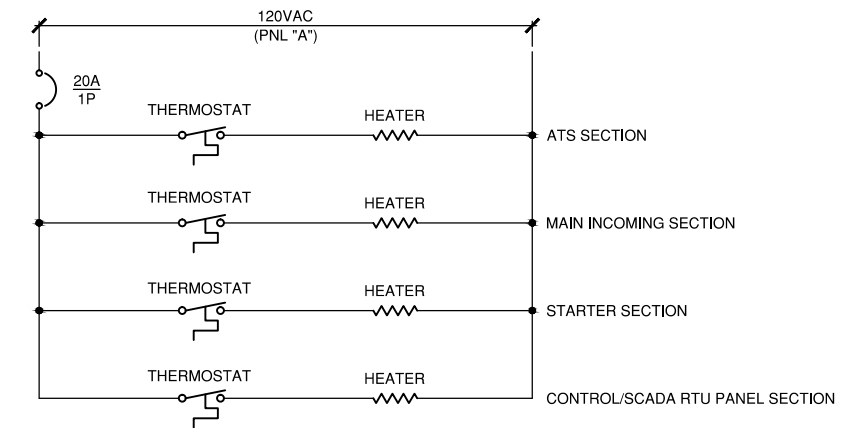




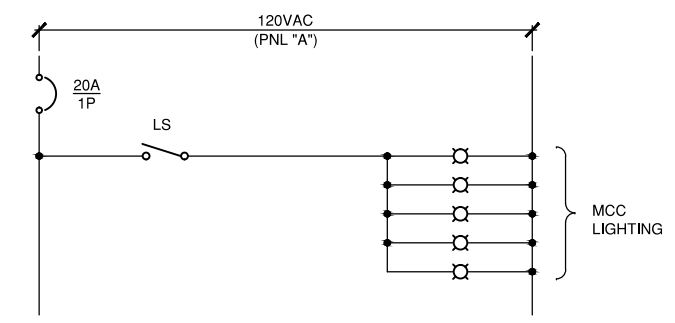
UPS POWER SUPPLY SCHEMATIC



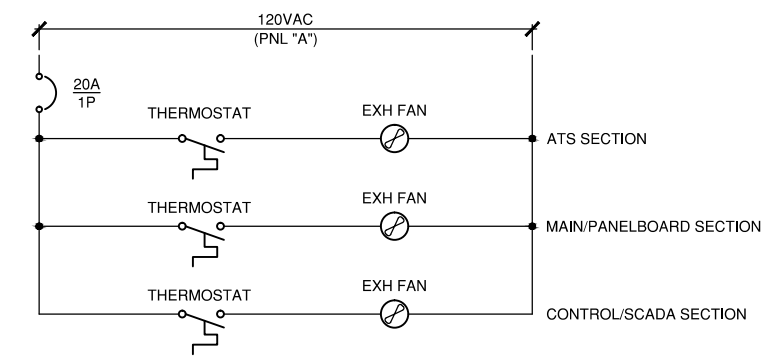
POWER FAILURE RELAY SCHEMATIC



CONTROL PANEL HEATERS CONTROL SCHEMATIC



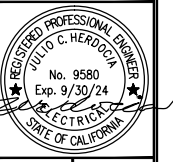
CONTROL PANEL LIGHTS CONTROL SCHEMATIC



CONTROL PANEL EXHAUST FAN CONTROL SCHEMATIC

REV	DATE	DESCRIPTION

engineers, inc.
 3350 Scott Blvd., Bldg. 11
 Santa Clara, CA 95054
 (408) 986-8555
 FAX (408) 966-9627
 PROJECT NO. 20697-01



CANON SEWER PUMP STATION IMPROVEMENTS
 PREPARED AT THE REQUEST OF STEGE SANITARY DISTRICT
 MISC. CONTROL SCHEMATIC DIAGRAMS - SHT 1

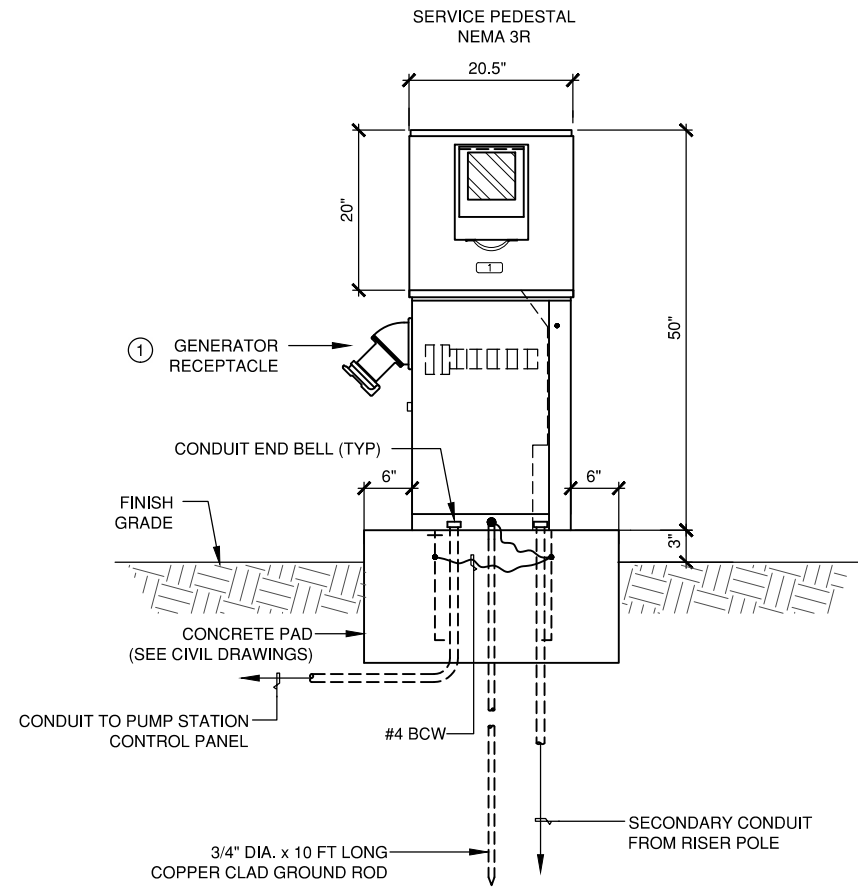


DRAWN BY: BFC
CHECKED BY: LDJ
JOB NUMBER:
SHEET
E5
14 OF 20

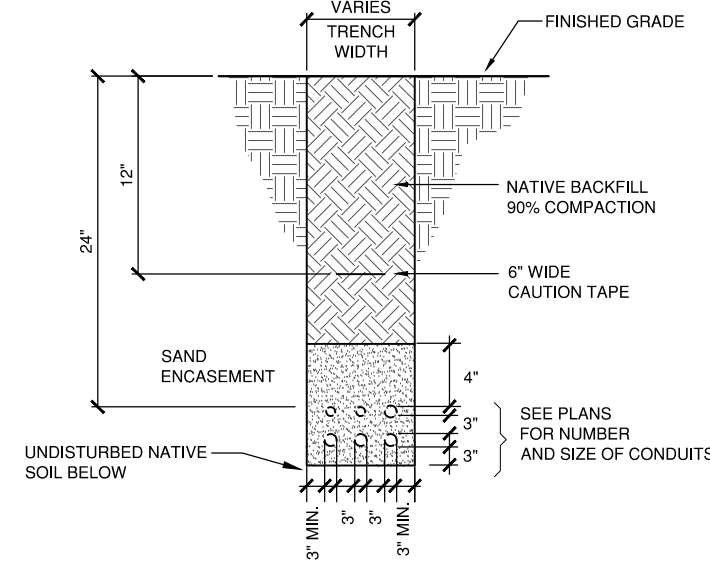
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SHEET NOTES:

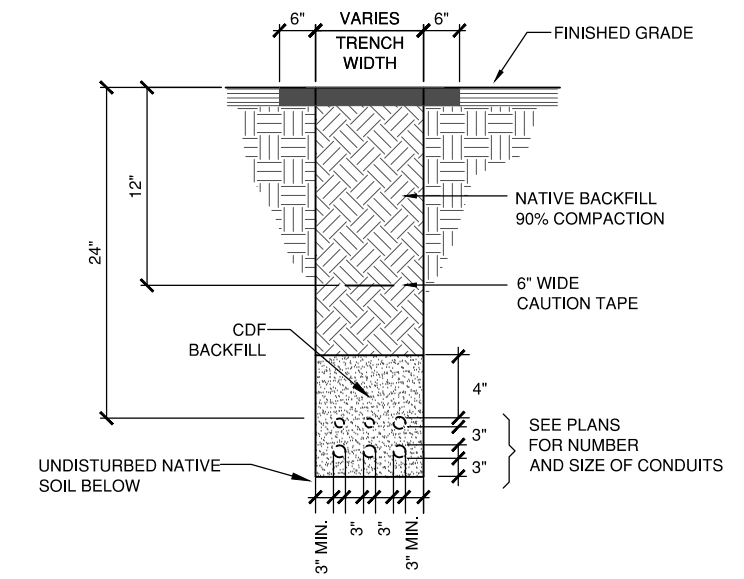
- ① GENERATOR RECEPTACLE, 600 VAC, 100A, PIN AND SLEEVE, REVERSE FEED 4W, 4P, STYLE 1 "APPLETON" CAT. #ADR1044RS, WITH ANGLE ADAPTER CAT. #AJA100 AND PLUG CAT. #ACP1044CD.
- ② STAINLESS STEEL HOOK, STAINLESS STEEL CHANNEL, STAINLESS STEEL ANCHOR BOLTS, AND STAINLESS STEEL CABLE GRIP.
- ③ STAINLESS STEEL HOOK, STAINLESS STEEL CHANNEL, STAINLESS STEEL ANCHOR BOLTS, AND STAINLESS STEEL CABLE GRIP, STAINLESS STEEL THIMBLE, STAINLESS STEEL CABLE CLAMPS, AND PVC COATED 15-POUND WEIGHT.
- ④ 1/4" DIA. STAINLESS STEEL CABLE WITH FLOAT SWITCH CABLES TIE-WRAPPED WITH HEAVY PLASTIC TIE AT EVERY 2 FT.



3 SERVICE PEDESTAL DETAIL
SCALE: NTS

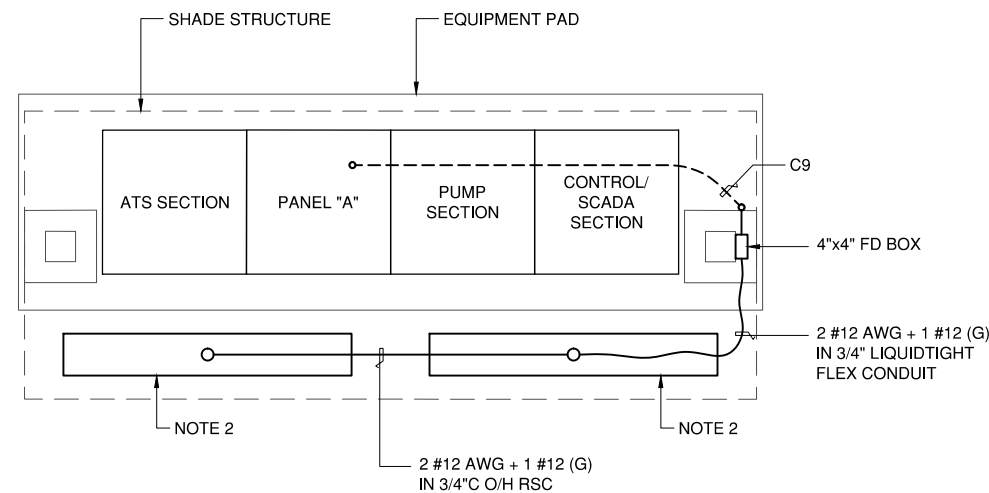


2 TYPICAL UNDERGROUND CONDUIT DETAIL (UNPAVED AREAS)
SCALE: NTS

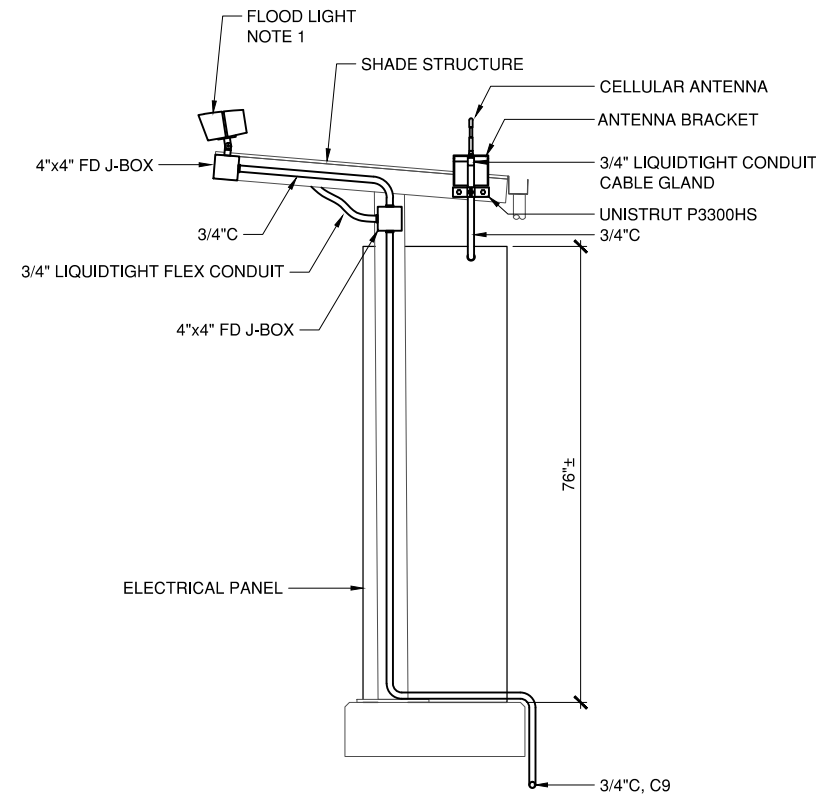


1 TYPICAL UNDERGROUND CONDUIT DETAIL (PAVED AREAS)
SCALE: NTS

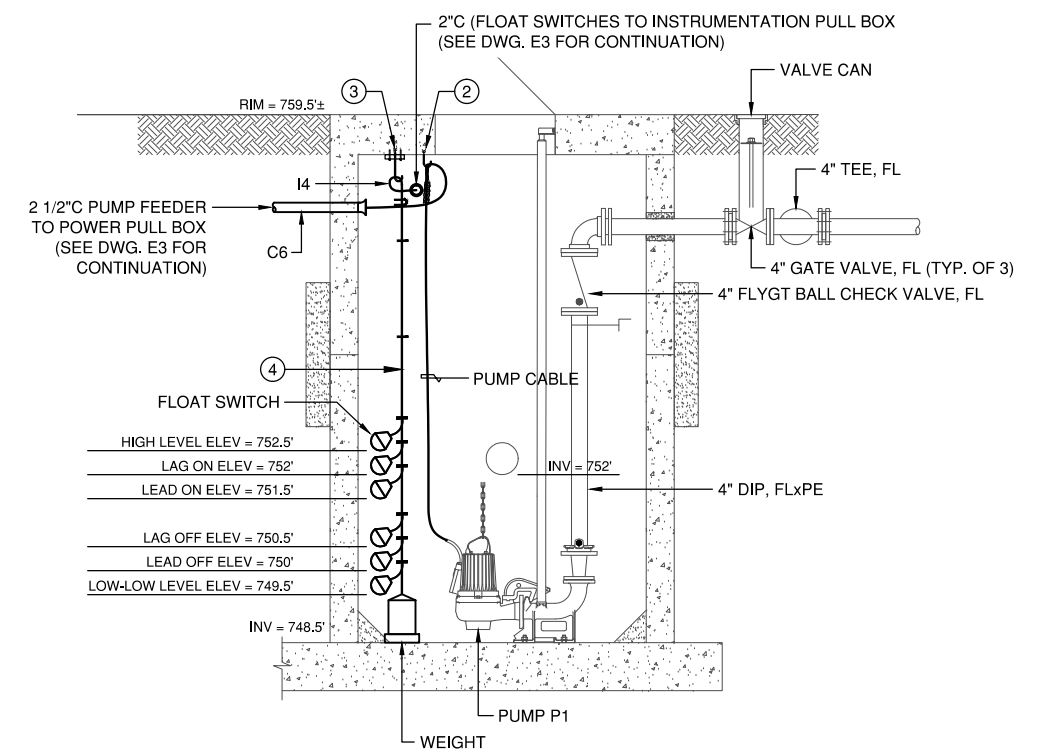
- NOTE 1: RAB FLOOD LIGHT, 120V, 39W, OUTDOOR RATED, BRONZE COLOR, 4000K COLOR TEMPERATURE, DLIPFITTER MOUNTING, CAT. NO. FFLED-39-SF-N. PROVIDE WITH 90 DEGREE, BRONZE COLOR BRACKET TO BE BOLTED TO CANOPY ROOF FRAME.
- NOTE 2: METALUX VAPORTITE LED, CAT. #4VT3-LD5-4-W-UNV-L835-SSLTP-U



6 SHADE STRUCTURE LIGHTING
SCALE: 3/4" = 1'-0"



5 SITE LIGHTING AT SHADE STRUCTURE
SCALE: 3/4" = 1'-0"



4 WET WELL ELEVATION
SCALE: 1/2" = 1'-0"

REV	DATE	DESCRIPTION

M engineers, inc.
3350 Scott Blvd., Bldg. 11
Santa Clara, CA 95054
(408) 986-8559
FAX (408) 986-9627
PROJECT NO. 20697-01

REGISTERED PROFESSIONAL ENGINEER
VILLO C. HEREDIA
No. 9580
Exp. 9/30/24
ELECTRICAL
STATE OF CALIFORNIA

CANON SEWER PUMP STATION IMPROVEMENTS
PREPARED AT THE REQUEST OF STEIG SANITARY DISTRICT
ELECTRICAL DETAILS - SHEET 1



File: M:\20697-01_Canon_Pump_Station\01E8.dwg, 12/5/2022 12:23 PM, Last saved by: Robbie Cotris, PlotDate: 4/3/2023 1:55 PM, By: Robbie Cotris, Plot scale: 1:2,5849, Plot Size: ANSI A (8.50 x 11.00 inches), Xref: XR-TITLE_CANON_90PER_65TA100102-Canon_TS-A21016-A21016-B5

CONDUIT AND CIRCUIT SCHEDULE


RACEWAY DATA					CABLE DATA					
DESIGNATION	FROM	TO	TYPE	SIZE	TYPE	QTY	SIZE	GND	VOLTS	NOTES
C1	PG&E RISER POLE	PULLBOX	PVC	4"	-	-	-	-	-	SERVICE CONDUCTORS BY PG&E
C1A	PULLBOX	SERVICE PEDESTAL	PVC	3"	-	-	-	-	-	SERVICE CONDUCTORS BY PG&E
C2	SERVICE PEDESTAL	CONTROL PANEL / ATS SECTION	PVC	2"	XHHW-2	4	#1/0	#6	600	UTILITY POWER
C3	GENERATOR	CONTROL PANEL / ATS SECTION	PVC/RSC	2"	XHHW-2	4	#2	#8	600	EMERGENCY POWER (BID ALTERNATE)
C4	CNTL PNL / PUMP P-1 STARTER	PB #E1	PVC/RSC	1"	XHHW-2	3	#10	#12	600	PUMP P-1 POWER
C5	CNTL PNL / PUMP P-2 STARTER	PB #E1	PVC/RSC	1"	XHHW-2	3	#10	#12	600	PUMP P-2 POWER
C6	PB #E1	PUMP P-1	PVC	2 1/2"		1				MFR SUPPLIED CABLE PUMP P-1 POWER AND MONITORING
C7	PB #E1	PUMP P-2	PVC	2 1/2"		1				MFR SUPPLIED CABLE PUMP P-2 POWER AND MONITORING
C8	CONTROL PANEL / PANEL "A"	GENERATOR	PVC/RSC	1"	XHHW-2	2	#10	#10	600	JACKET WATER HEATER
						2	#10		600	BATTERY CHARGER
C9	CONTROL PANEL / PANEL "A"	CANOPY COLUMN	PVC/RSC	3/4"	XHHW-2	2	#10	#12	600	OUTDOOR LIGHT

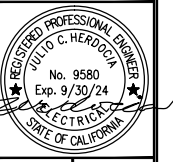
CONDUIT AND CIRCUIT SCHEDULE

RACEWAY DATA					CABLE DATA					
DESIGNATION	FROM	TO	TYPE	SIZE	TYPE	QTY	SIZE	GND	VOLTS	NOTES
I1	CNTL PNL / PUMP P-1 STARTER	PB #E1	PVC/RSC	1"	XHHW-2	2	#14	#14	600	PUMP P-1 MONITORING
I2	CNTL PNL / PUMP P-2 STARTER	PB #E1	PVC/RSC	1"	XHHW-2	2	#14	#14	600	PUMP P-2 MONITORING
I3	CNTL PNL / SCADA SECTION	PB #1	PVC/RSC	2"	-	6				MFR SUPPLIED CABLE FLOAT LEVEL SWITCHES
I4	PB #1	FLOAT SWITCHES	PVC	2"	-	6				MFR SUPPLIED CABLE FLOAT LEVEL SWITCHES
I5	CONTROL PANEL / ATS SECTION	GENERATOR	PVC/RSC	1"	XHHW-2	2	#14	#14	600	GENERATOR START SIGNAL
I6	CONTROL PANEL / ATS SECTION	GENERATOR	PVC/RSC	1"	XHHW-2	16	#14	#14	600	GENERATOR ALARM
T1	PG&E RISER POLE	TEL PULL BOX	PVC	3"						TEL CABLE BY AT&T
T2	TEL PULL BOX	CONTROL PANEL / CONTROL SECTION	PVC	3"						TEL CABLE BY AT&T

File: M:\20697-01_Canon Pump Station\01ES.dwg, 4/3/2023 1:50 PM, Last saved: Rcatris, PlotDate: 4/3/2023 1:55 PM, By: Robbie Catris, Plot scale: 1:2,5849, Plot Size: ANSI A (8.50 x 11.00 Inches), Xref: XR-TITLE

REV	DATE	DESCRIPTION

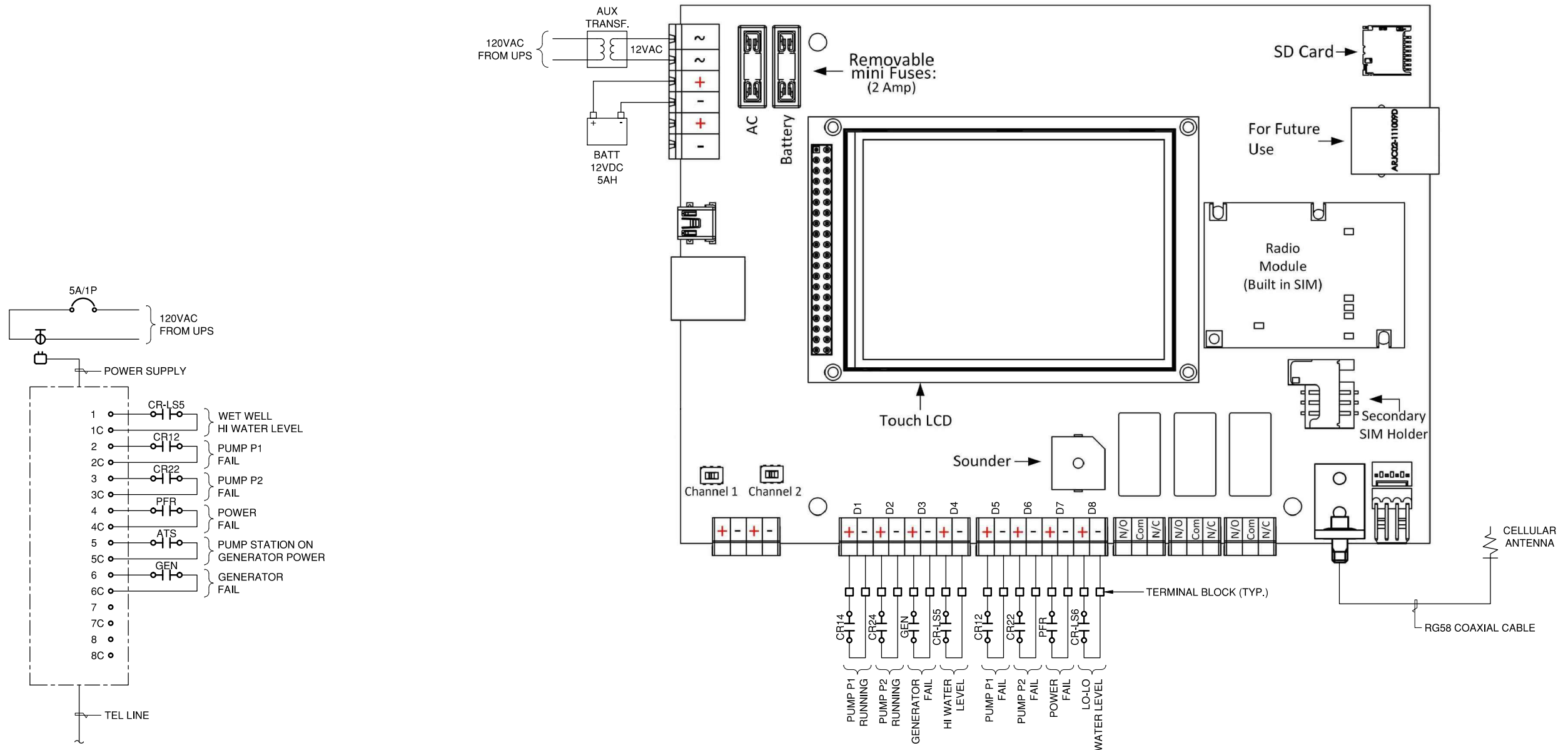

Schaaf & Wheeler engineers, inc.
 3350 Scott Blvd., Bldg. 11
 Santa Clara, CA 95054
 (408) 986-8555
 FAX (408) 986-9627
 PROJECT NO. 20697-01



CANON SEWER PUMP STATION IMPROVEMENTS
 PREPARED AT THE REQUEST OF
 STEGE SANITARY DISTRICT
CONDUIT AND CIRCUIT SCHEDULE



DRAWN BY: BFC
 CHECKED BY: LDJ
 JOB NUMBER:
 SHEET
E9
18 OF 20



AUTO DIALER
SENSAPHONE 800

MISSION COMMUNICATIONS
MyDro M150

File: M:\20697-01_Canon Pump Station\01E10.dwg, 4/3/2023 1:50 PM, Last saved: Rocris, PlotDate: 4/3/2023 1:55 PM, By: Robbie Catris, Plot scale: 1:2.5649, Plot Size: ANSI A (8.50 x 11.00 Inches), Xref: XR-TITLE

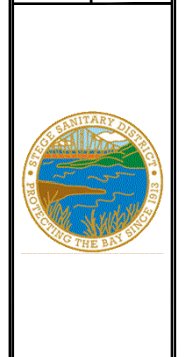
REV	DATE	DESCRIPTION

MH engineers, inc.
3350 Scott Blvd., Bldg. 11
Santa Clara, CA 95054
(408) 986-8555
FAX (408) 966-9627
PROJECT NO. 20697-01

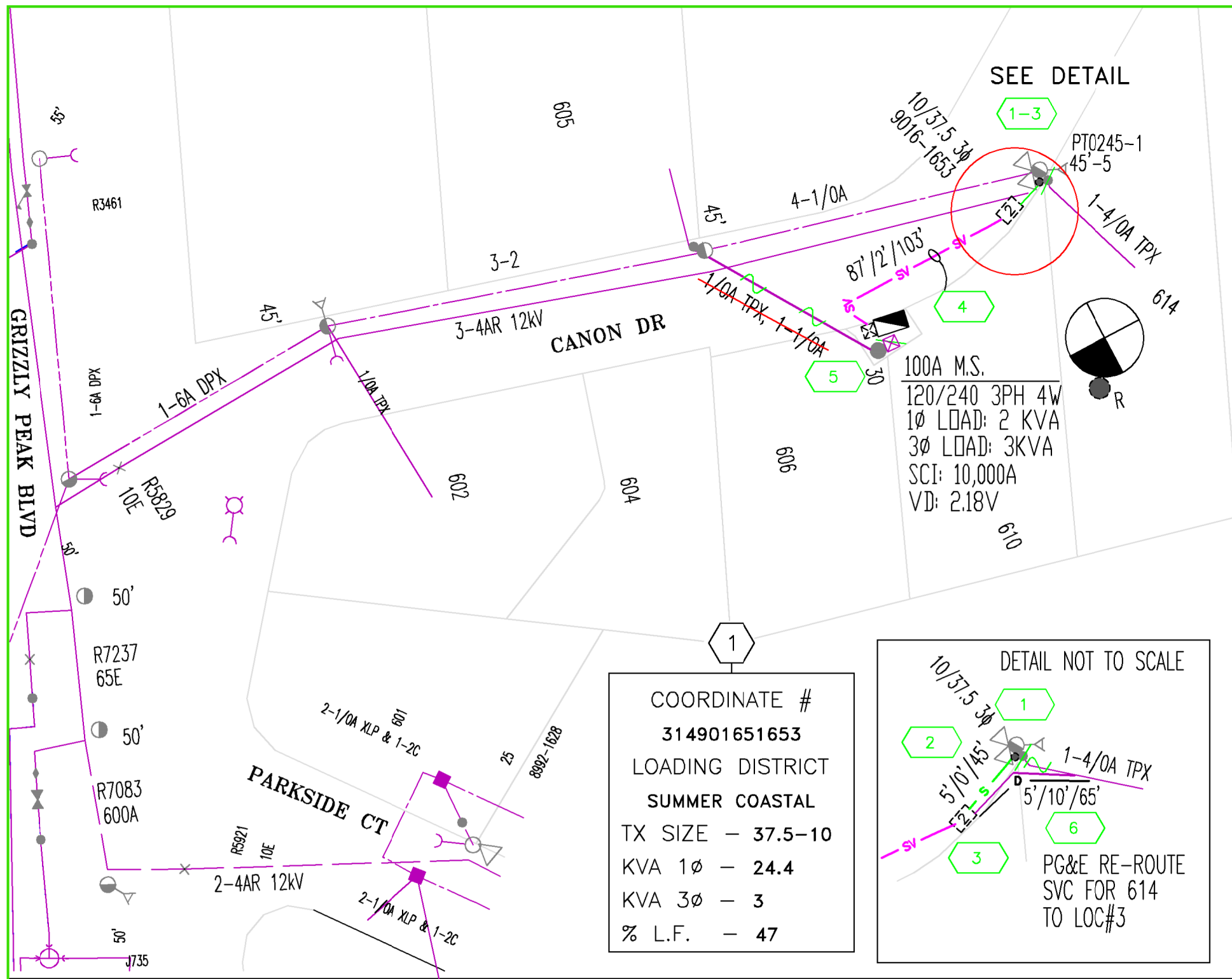
REGISTERED PROFESSIONAL ENGINEER
VILLO C. HEREDIA
No. 9580
Exp. 9/30/24
ELECTRICAL
STATE OF CALIFORNIA

CANON SEWER PUMP STATION IMPROVEMENTS
PREPARED AT THE REQUEST OF
STEVE SANITARY DISTRICT

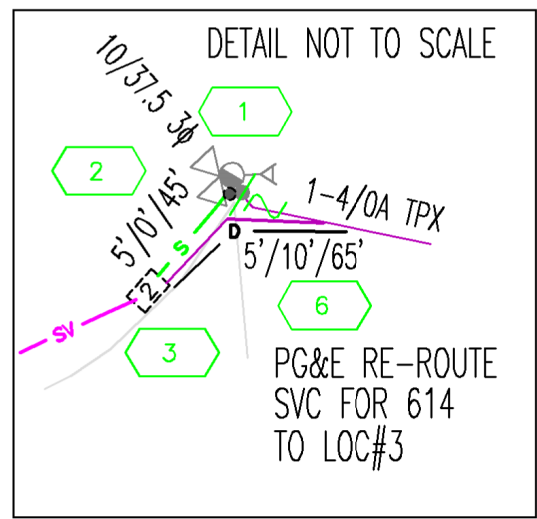
SCADA RTU INTERCONNECTION DIAGRAM



DRAWN BY: BFC
CHECKED BY: LDJ
JOB NUMBER:
SHEET
E10
19 OF 20



COORDINATE #
314901651653
 LOADING DISTRICT
 SUMMER COASTAL
 TX SIZE - 37.5-10
 KVA 1Ø - 24.4
 KVA 3Ø - 3
 % L.F. - 47



LEGEND

- | INSTALL | DESCRIPTION |
|---------|-------------------------------------------------------------------------|
| | PG&E INSTALL 1/0A QPX SERVICE CABLE IN 1-3" APPLICANT INSTALLED CONDUIT |
| | PG&E INSTALL 350A QPX CABLE IN 1-4" APPLICANT INSTALLED CONDUIT |
| | PG&E INSTALL 1-3" CONDUIT |
| | APPLICANT INSTALL 17" X 30" X 26"D ENCLOSURE |
| | PG&E INSTALL RISER |
| | PG&E INSTALL METER ON 100A PANEL |
| | FRANCHISE'/PRIVATE'/CABLE' |
| | APPLICANT INSTALLED PEDESTAL |
| REMOVE | DESCRIPTION |
| | PG&E REMOVE METER |
| | PG&E REMOVE SERVICE CABLE |
| | PG&E REMOVE RISER |
| | REPAIR RETAINING WALL AS NEEDED TO RE-ROUTE SERVICE TO 614 CANON DR. |

APPLICANT TO TRENCH AND INSTALL SUBSTRUCTURES.

PG&E TO COMPLETE EXTENSION

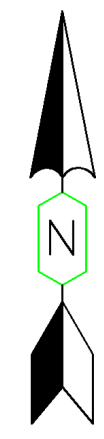
UNDERGROUND SERVICE ALERT
 TO AVOID CONTACT AND LIABILITY WITH UNKNOWN UNDERGROUND UTILITIES CONTACT USA @ (800) 227-2600 48 HR IN ADVANCE OF TRENCHING.
 WHEN TRENCHING WITHIN 5' OF KNOWN ENERGIZED ELECTRIC FACILITIES CONTACT PG&E INSPECTOR 48HRS. IN ADVANCE TO MAKE STANDBY ARRANGEMENTS.

DEVELOPERS/CONTRACTORS PLEASE NOTE:
 CONTACT THE UNDERGROUND INSPECTOR DEPARTMENT (510-437-2100) A MINIMUM OF 48HRS. PRIOR TO BEGINNING SUBSTRUCTURE WORK. WORK NOT PROPERLY INSPECTED WILL BE REJECTED.

FOR PG&E GREENBOOK INFORMATION ONLINE GO TO WWW.PGE.COM/GREENBOOK

SUBSTRUCTURE NOTES

- TRANSFORMERS PAD(S) TO BE INSTALLED PER PG&E DRAWING(S) O45292 FOR 3 PHASE PADS OR O64309 FOR 1 PHASE DEAD FRONT PADS, INSTALLATION TO INCLUDE GROUNDS. INSTALL PAD ON A FLAT LEVEL SURFACE MAINTAIN 8' IN FRONT OF PAD. LEVEL AND CLEAR OF OBSTRUCTIONS MAINTAIN OTHER CLEARANCES AS REQUIRED PER PG&E DRAWING O51122
- BARRIER POSTS TO BE INSTALLED PER PG&E DRAWING O51122 & PG&E UG INSPECTOR'S INSTRUCTIONS, IF NECESSARY
- PRIMARY SPLICE BOXES, PRIMARY EQUIPMENT ENCLOSURES AND TX ENCLOSURES TO BE INSTALLED PER PG&E DRAWING O62000. MAINTAIN OTHER CLEARANCE AS REQUIRED PER PG&E DRAWING O51122
- SECONDARY SPLICE BOXES AND PEDESTALS TO BE INSTALLED PER PG&E DRAWING O28028
- CONDUIT TO BE INSTALLED PER PG&E DRAWING O62288. USE A MINIMUM 3' RADIUS HORIZONTAL & 2' RADIUS VERTICAL BENDS ON 3" CONDUITS. USE A MINIMUM 5' RADIUS HORIZONTAL & 3' RADIUS VERTICAL BENDS ON 4" & 5" CONDUITS. BELL ENDS OR DUCT TERMINATORS ARE TO BE UTILIZED ON ALL CONDUIT THAT TERMINATED IN A PRIMARY ENCLOSURE. TEMPORARY END CAPS ARE TO BE INSTALLED ON ALL CONDUITS.



OH/UG CONSTRUCTION DRAWING		EST: JOHN HOGGLUND 925-270-2214
SVC UPGRADE		ADE: STANLEY HUI 510-277-5456
BTWN 606 & 610 CANON DR., BERKELEY		SUPV: PAUL LUCAS 925-270-2275
PLNR: DEANNA WILLIAMS 510-385-6288		NOTIF: 121881601 JPA#:
NO ENVIRONMENTAL ISSUES		SCALE: 1"=50'
GAS CONFLICT: IN PROXIMITY		DATE: 6/28/2022
NEAR LOC: 4		PM: 35313105 SHEET: 1 OF 1 REV: 0
PRIMARY VOLTAGE: 12 kV	VOLTAGE AREA: 3	
LATITUDE: 37.90519	LONGITUDE: -122.26834	
SOURCE SIDE DEVICE: R5829		
SUB & CIRCUIT: EL CERRITO G 250-1105	RAPTOR ZONE: N	
DSGN SAG: S5U	ARRESTER DIST: 3	
LOADING AREA: LIGHT	INSULATION DIST: AA	
CORROSION AREA: MODERATE	FIRE AREA: LRA	
EXEMPT EQUIP. INST.: N/A		