



October 2025

**BOARD OF DIRECTORS**

**CONTRACT DOCUMENTS FOR THE CONSTRUCTION OF ECHOWATER RESOURCE RECOVERY FACILITY**

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- Q. Orozco
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# X09 OUTFALL SWITCHGEAR REPLACEMENT PROJECT

## BID SET

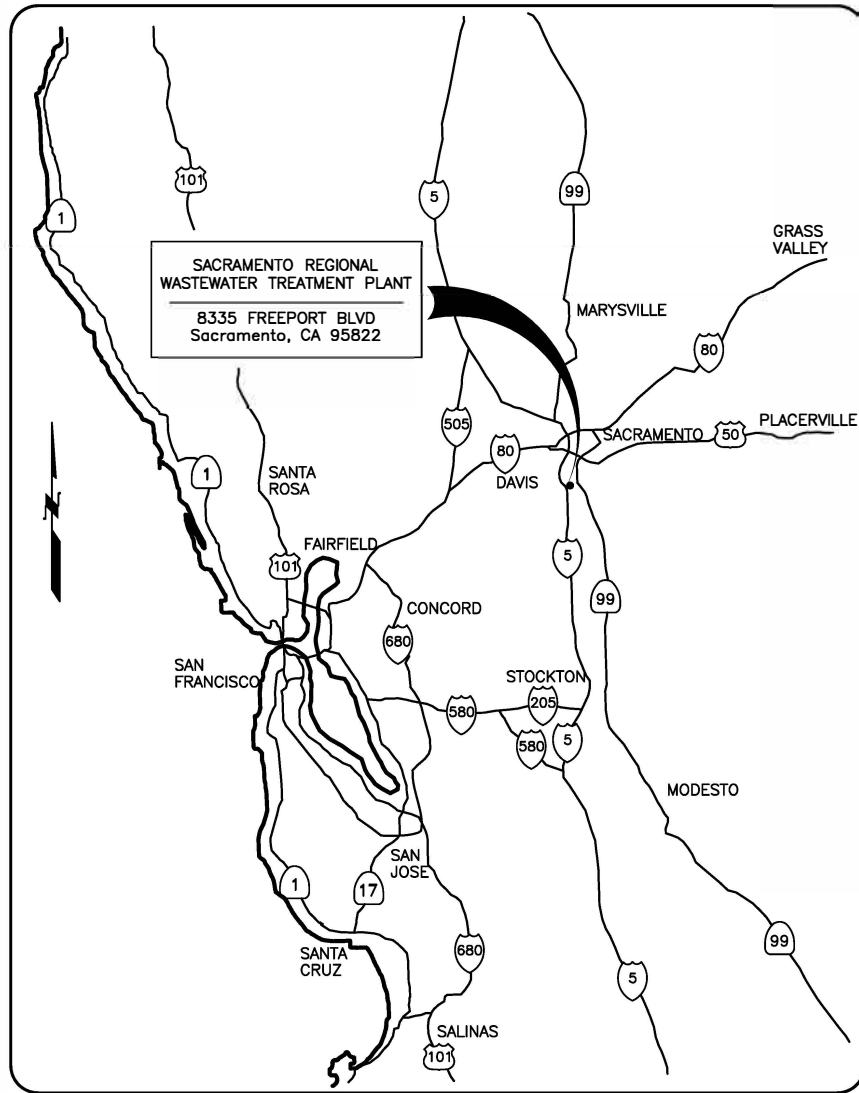
Version: 2024.1.0

### PART C - DRAWINGS VOLUME 2 OF 2

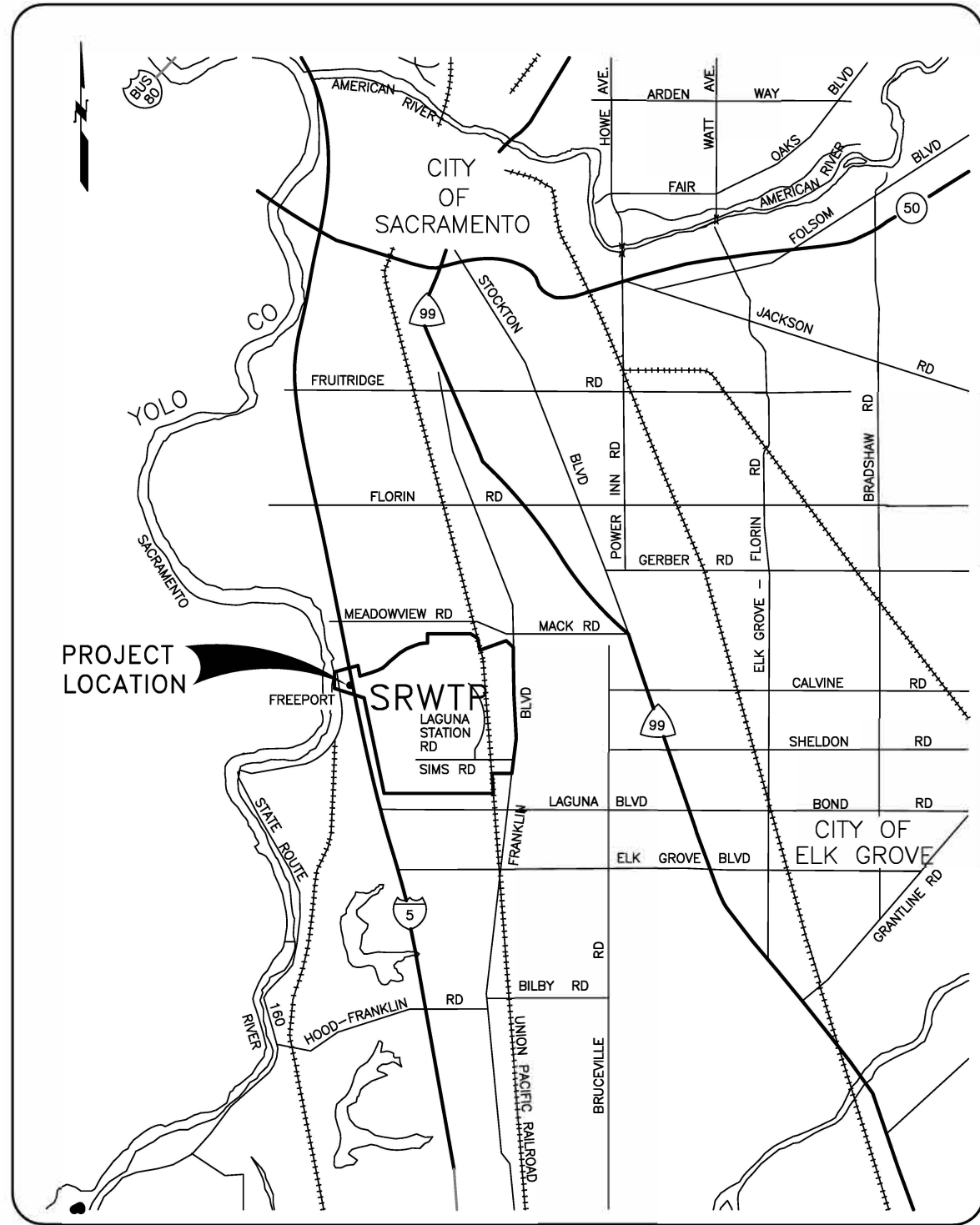
#### APPROVALS

<small>DocuSigned by:</small>  <small>747631920287457...</small> SUBMITTED: <b>R. BAPTISTA, PE</b> PROJECT ENGINEER	10/21/2025 DATE	<small>Signed by:</small>  <small>1C2F33B03050164...</small> SUBMITTAL APPROVED: <b>SANJAY SIVAPRASAD, PE</b> PROJECT MANAGER	10/21/2025 DATE			
<small>Signed by:</small>  <small>D432B8D55629454...</small> SUBMITTAL APPROVED: <b>W. YU, PE</b> ENGINEERING MANAGER, ECHOWATER OPERATIONS DEPARTMENT	10/21/2025 DATE	<small>Signed by:</small>  <small>1C33FE8AE2DC4BE...</small> SUBMITTAL APPROVED: <b>S. LUNDE, PE</b> PLANT MANAGER, DIRECTOR ECHOWATER OPERATIONS	10/23/2025 DATE	<small>DocuSigned by:</small>  <small>ABF187D2508B41C...</small> APPROVED: <b>C. DOBSON, PE</b> DISTRICT ENGINEER	10/23/2025 DATE	<b>CONTRACT NUMBER</b> <b>RFB 8496</b>

Sheet Set Manager: TERTIARY FILTRATION FACILITIES BASIS OF DESIGN  
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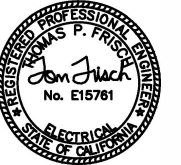
VICINITY MAP



LOCATION MAP

**EchoWater Facility Engineering Design**

SUB CONSULTANT  
**FRISCH ENGINEERING, INC.**  
 CONSULTING ELECTRICAL ENGINEERS  
 13485 FOLSOM BLVD, UNIT 600  
 FOLSOM, CA 95630  
 PH 916 353 1025  
 WWW.FRISCHENGINEERING.COM  
 FILE: 2308A-ED1.DWG  
 DATE: SEP 17, 2024 TIME: 4:34:37PM



**EchoWater Resource Recovery Facility**

**X09 OUTFALL SWITCHGEAR REPLACEMENT PROJECT**

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MARK	DATE	DESCRIPTION
<b>ISSUE BLOCK</b>		
DESIGNED	T. FRISCH	
DRAWN	N. CONANT	
CHECKED	M. FRISCH	
APPROVED	####	
FILENAME	####	
DESIGNER PROJECT NUMBER	####	
CONTRACT NUMBER	###	
CONTRACT SEQUENCE NUMBER	###	
DISCIPLINE	GENERAL	

**LOCATION AND VICINITY MAP**

DRAWING NUMBER	1
<b>G01</b>	OF 10

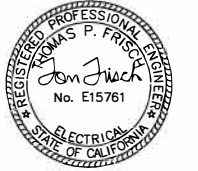
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 Filename: 003 E01 ELECTRICAL SYMBOLS.dwg Plot Date: November 25, 2024 - 9:28 AM CADD User: Long, Brett

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
<b>COMPONENTS</b>				<b>SWITCHES - PROCESS</b>			
	RESISTOR		FLOW SWITCH - CLOSSES UPON INCREASING FLOW		CONTACTOR OR STARTER M1	<b>WIRING - CONNECTIONS</b>	
	SOLENOID COIL		FLOW SWITCH - OPENS UPON INCREASING FLOW		CONTROL RELAY CR1	PANEL OR EQUIPMENT WIRING FIELD WIRING	
	HEATER		LEVEL SWITCH - CLOSSES UPON INCREASING LEVEL		TIME DELAY RELAY TR2 - ADJUSTABLE TIME DELAY RANGE & SETTING AS SHOWN	CONDUCTORS - NOT CONNECTED CONDUCTORS - CONNECTED	
	CAPACITOR		LEVEL SWITCH - OPENS UPON INCREASING LEVEL		TIME DELAY ON ENERGIZATION TIME DELAY ON DE-ENERGIZATION	GROUND CONNECTION PLUG AND RECEPTACLE	
	DIODE		PRESSURE SWITCH - CLOSSES UPON INCREASING PRESSURE (DECREASING VACUUM)		REFERENCED RELAY WITH N.O. CONTACT ON LINE 107 N.C. CONTACT ON LINE 121	INCOMING LINE TERMINAL BLOCKS WITH TERMINAL NUMBER AS SHOWN OR AS DETERMINED BY SUBMITTAL	
	DIODE, ZENER		PRESSURE SWITCH - OPENS UPON INCREASING PRESSURE (DECREASING VACUUM)		NORMALLY CLOSED, RELAY CONTACT - ACTUATED BY RELAY CR1 COIL LOCATED ON LINE 105	DISCONNECTING TERMINAL BLOCK FUSE	
	METAL OXIDE VARISTOR		TEMPERATURE SWITCH - CLOSSES UPON INCREASING TEMPERATURE		NORMALLY OPEN, TIME DELAY RELAY CONTACT - CONTACT CLOSSES AFTER TR2 IS ENERGIZED	SHIELDED CABLE	
	AUDIBLE ALARM		TEMPERATURE SWITCH - OPENS UPON INCREASING TEMPERATURE		LIMIT SWITCH - CLOSSES AT SET LIMIT	<b>PLAN - SYMBOLS</b>	
	MOTOR STARTER NEMA SIZE SHOWN		LIMIT SWITCH - OPENS AT SET LIMIT		TORQUE SWITCH - CLOSSES UPON INCREASING TORQUE	CONDUIT, EXPOSED CONDUIT, IN SLAB OR BELOW GRADE	
	3 PHASE MOTOR ? = MOTOR HP		TORQUE SWITCH - OPENS UPON INCREASING TORQUE		CONDUIT CONCEALED IN WALL OR CEILING	CONDUIT STUBBED OUT & CAPPED CONDUIT BENDS TOWARD OBSERVER	
	3 PHASE MOTOR		CONDUIT BENDS AWAY FROM OBSERVER		CONDUIT ENDS	FLEXIBLE CONDUIT CONNECTION FROM J-BOX TO EQUIPMENT CONDUIT CHANGE IN ELEVATION	
	SINGLE PHASE MOTOR		CONDUIT ENDS		BARE COPPER GROUND WIRE	GROUND CONNECTION BOLTED TYPE GROUND CONNECTION EXOTHERMIC WELD TYPE	
	TRANSFORMER SIZE AND VOLTAGE AS SHOWN		CONDUIT ENDS		DISCONNECT SWITCH	FIELD MOUNTED DEVICE TELEPHONE/DATA RECEPTACLE	
	UTILITY POWER METER		CONDUIT ENDS		CONDUIT REFERENCE TO SCHEDULE	THERMOSTAT EYS SEAL	
	NEUTRAL AND GROUND WITH DISCONNECT LINK		CONDUIT ENDS		JUNCTION BOX	CONDUIT SEALING BUSHING PULL BOX OF SIZE SHOWN (CHRISTY BOX SIZE MINIMUM)	
	UFER GROUND		CONDUIT ENDS		LIGHTING FIXTURE	# - CIRCUIT BREAKER NUMBER A - FIXTURE SCHEDULE REF. O - CONTROL SWITCH REFERENCE	
	GROUND ROD OR SYSTEM		CONDUIT ENDS		DUPLEX RECEPTACLE	# - CIRCUIT BREAKER NUMBER WP - WEATHERPROOF (IF SHOWN) GFI - GROUND FAULT TYPE	
	CURRENT TRANSFORMER RATIO AS NOTED		CONDUIT ENDS		TOGGLE SWITCH	o - FIXTURES CONTROLLED 3 - 3 WAY M = MOTION DETECTOR T = TIMER SWITCH	
	DISCONNECT SWITCH SIZED PER FEEDER		CONDUIT ENDS		SPECIAL RECEPTACLE AS REQUIRED FOR EQUIPMENT TO BE CONNECTED		
	POWER DISTRIBUTION BLOCK		CONDUIT ENDS				
<b>SWITCHES - OPERATOR</b>		<b>DEVICES - FRONT PANEL</b>		<b>DEVICES - PROTECTIVE</b>			
	TOGGLE OR DISCONNECT SWITCH		INDICATING LIGHT, LETTER "X" INDICATES COLOR: R=RED G=GREEN, A=AMBER, W=WHITE Y=YELLOW, B=BLUE		LOW VOLTAGE MOLDED CASE, INSULATED CASE OR POWER CIRCUIT BREAKER. RATINGS AS SHOWN IN DRAWINGS AND AS DEFINED BELOW: xA: CIRCUIT BREAKER AMPERAGE xA: AMPERAGE TRIP xA: AMPERAGE FRAME xP: NUMBER OF POLES xT: TRIP PROTECTION MCP: MOTOR CIRCUIT PROTECTION TM: THERMAL MAGNETIC L: LONG TIME DELAY S: SHORT TIME DELAY I: INSTANTANEOUS TRIP G: GROUND FAULT A: ARC FLASH PROTECTION 100% DUTY RATED PER SPECIFICATIONS y: BREAKER FEATURES / OPTIONS - SHUNT TRIP - KIRK-KEY INTERLOCK - MANUALLY CHARGED PUSHBUTTON OPERATION - ELECTRICALLY CHARGED PUSHBUTTON OPERATION	MEDIUM VOLTAGE CIRCUIT BREAKER TRIP FUNCTIONS PER DRAWINGS AND SPECIFICATIONS MULTIFUNCTION RELAY PER SPECIFICATIONS	
	PUSHBUTTON - NORMALLY OPEN, MOMENTARY ACTION		INDICATING LIGHT, PUSH TO TEST		CT SHORTING TERMINAL BLOCK	FUSED POTENTIAL TRANSFORMER, 208 / 120 V SECONDARY OR AS SHOWN POWER MONITOR SURGE PROTECTION DEVICE VOLTAGE MONITORING RELAY	
	PUSHBUTTON - NORMALLY CLOSED, MOMENTARY UNLESS LOS (LOCK OUT STOP) WHERE MECHANICALLY HELD		PUSHBUTTON, MECHANICALLY CONNECTED, DOUBLE CIRCUIT - NORMALLY CLOSED AND NORMALLY OPEN		THERMAL OVERLOAD CONTACT	THERMAL OVERLOAD ELEMENT FUSE	
	PUSHBUTTON, MECHANICALLY CONNECTED, DOUBLE CIRCUIT - NORMALLY CLOSED AND NORMALLY OPEN		SELECTOR SWITCH, 3 POSITION - CONTACT STATUS SHOWN EXISTS I.E. AT POSITION OF HAND, OFF, OR AUTO		CONTACTOR, (NEMA) SIZE SHOWN		
	PUSHBUTTON, MECHANICALLY CONNECTED, DOUBLE CIRCUIT - NORMALLY CLOSED AND NORMALLY OPEN		SELECTOR SWITCH, 2 POSITION - MIDDLE POSITION IS DELETED				
	PUSHBUTTON, MECHANICALLY CONNECTED, DOUBLE CIRCUIT - NORMALLY CLOSED AND NORMALLY OPEN		ALTERNATE METHOD: X00 = HAND OOX = AUTO, OX0 = OFF				
	POTENTIOMETER						

MISCELLANEOUS ABBREVIATIONS			
&	AND	N	NEUTRAL
@	AT	NC	NORMALLY CLOSED
A	AMBER, AMPERES	NDL	NEUTRAL DISCONNECT LINK
AC	ALTERNATING CURRENT	NHC	NORMALLY HELD CLOSED
ACK	ACKNOWLEDGE	NHO	NORMALLY HELD OPEN
AFF	ABOVE FINISHED FLOOR	NIC	NOT IN CONTRACT
AH	AMP HOUR	NL	NIGHT LIGHT
AI	ANALOG INPUT	NO	NORMALLY OPEN
AIC	AMP INTERRUPTING CAPACITY SYMMETRICAL	NTS	NOT TO SCALE
AM	AMP METER	(N)	NEW
AO	ANALOG OUTPUT	OC	ON CENTER
AWG	AMERICAN WIRE GAUGE	OI, OIT	OPERATOR INTERFACE
ATS	AUTOMATIC TRANSFER SWITCH	OL	OVERLOAD
BATT	BATTERY	ORP	OXIDATION REDUCTION POTENTIAL
BFC	BELOW FINISHED CEILING	P	POLE
BOD	BIOCHEMICAL OXYGEN DEMAND	PB	PUSHBUTTON
BPF	BAND PASS FILTER	PBX	PULL BOX
BYP	BYPASS	PDB	POWER DISTRIBUTION BLOCK
C	CONDUIT	PE	POLYETHYLENE
CAP	CAPACITOR	PF	POWER FACTOR
CB	CIRCUIT BREAKER	PFR	POWER FAIL RELAY
CKT	CIRCUIT	PH	HYDROGEN ION CONCENTRATION
COAX	COAXIAL CABLE	PLC	PROGRAMMABLE LOGIC CONTROLLER
COMM	COMMUNICATION	PM	POWER MONITOR
CR	CONTROL RELAY	PNL	PANEL
CT	CURRENT TRANSFORMER	POT	POTENTIOMETER
CS	CONSTANT SPEED	PR	PAIR, TWISTED AND SHIELDED
CJ	COPPER	PRI	PRIMARY
DC	DIRECT CURRENT	PROVIDE	FURNISH, INSTALL, AND CONNECT
DET	DETAIL	PS	PRESSURE SWITCH
DI	DIGITAL INPUT	PT	POTENTIAL TRANSFORMER
DISC	DISCONNECT	PTT	PUSH TO TEST
DO	DIGITAL OUTPUT	PVC	POLYVINYLCHLORIDE
DPDT	DOUBLE POLE DOUBLE THROW	PWR	POWER
DWG	DRAWING	REF	REFERENCE
E-DTL	ELECTRICAL DRAWING DETAIL	RFI	RADIO FREQUENCY INTERFERENCE
ELEV	ELEVATION	RMS	ROOT MEAN SQUARE
ENET	ETHERNET	RTD	RESISTANCE TEMPERATURE DETECTOR
ETM	ELAPSED TIME METER	RST	RESET
ESW	ETHERNET SWITCH	RVAT	REDUCE VOLTAGE AUTO TRANSFORMER
(E)	EXISTING	RTU	REMOTE TERMINAL UNIT
FCS	FIELD CONTROL STATION	(R)	REWIRE, RELOCATE, REVISE, REUSE
FLA	FULL LOAD AMPS	SCH	SCHEDULE
FLEX	FLEXIBLE LIQUID TIGHT CONDUIT	SEC	SECONDARY, SECOND
FS	FULL SPEED, FLOW SWITCH	SECS	SECONDS
FVNR	FULL VOLTAGE NON-REVERSING	SEL	SELECTOR
FVR	FULL VOLTAGE REVERSING	SFA	SERVICE FACTOR AMPS
FWD	FORWARD	SPEC	SPECIFICATION
(F)	FUTURE	SPD	SURGE PROTECTIVE DEVICE
GALV	GALVANIZED	SS	STAINLESS STEEL
GFI	GROUND FAULT INTERRUPTER	SSRC	STAINLESS STEEL RIGID CONDUIT
GND	GROUND	SSS	SOLID STATE STARTER
GRS	GALVANIZED RIGID STEEL CONDUIT	STT	START
GRS-PVC	PVC COATED GRS CONDUIT	STP	STOP
HI	HIGH	SV	SOLENOID VALVE
HIM	HUMAN INTERFACE MODULE	SW	SWITCH
HOA	HAND OFF AUTO	SWBD	SWITCHBOARD
HP	HORSE POWER	SYM	SYMMETRICAL
HPS	HIGH PRESSURE SODIUM	TB	TERMINAL BLOCK
HS	HAND SWITCH	TC	TIME CLOCK
HTR	HEATER	TDOD	TIME DELAY ON DE-ENERGIZATION
HZ	HERTZ	TDOE	TIME DELAY ON ENERGIZATION
HZD	HAZARD	TELCO	TELEPHONE COMPANY
I	INTERLOCK	TM	THERMAL MAGNETIC
I/O	INPUT/OUTPUT	TEMP	TEMPERATURE
INST	INSTANTANEOUS	TR	TIME DELAY RELAY
ISR	INTRINSICALLY SAFE RELAY	TRIAD	TWISTED AND SHIELDED 3 CONDUCTOR
IS	INTRINSICALLY SAFE	TS	TEMPERATURE SWITCH
J	JUNCTION BOX	TSPR	TWISTED AND SHIELDED PAIR
K	KILO, PREFIX	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
LA	LIGHTNING ARRESTOR	TYP	TYPICAL
LC	LIGHTING CONTACTOR	UG	UNDERGROUND
LEL	LOWER EXPLOSION LIMIT	ULH	ULTRA LOW HARMONIC
LOS	LOCK OUT STOP	UON	UNLESS OTHERWISE NOTED
LP	LIGHTING PANELBOARD	UPS	UNINTERRUPTIBLE POWER SUPPLY
LS	LIMIT SWITCH	V	VOLTAGE
M	MOTOR CONTACTOR	VA	VOLT AMPS
MAG	MAGNETIC FLOWMETER	VAR	VOLT AMPS REACTIVE
MAX	MAXIMUM	VFD	VARIABLE FREQUENCY DRIVE
MCC	MOTOR CONTROL CENTER	VLV	VALVE
MCM	THOUSAND CIRCULAR MILS	VM	VOLTMETER
MCP	MOTOR CIRCUIT PROTECTOR	VMR	VOLTAGE MONITOR RELAY
MCS	MOLDED CASE SWITCH	VR	VOLTAGE RELAY
MH	MANHOLE	W	WATTS
MIN	MINIMUM, MINUTE	WP	WEATHER PROOF, NEMA 3R
MODEM	MODEM	WTP	WATER TREATMENT PLANT
MOV	MOTOR OPERATED VALVE	WWTP	WASTE WATER TREATMENT PLANT
MTR	MOTOR	XFMR	TRANSFORMER
MUX	MULTIPLEXER	Z	IMPEDANCE
MV	MERCURY VAPOR, MEDIUM VOLTAGE	ZS	LIMIT SWITCH

**EchoWater Facility Engineering Design**

SUB CONSULTANT  
**FRISCH ENGINEERING, INC.**  
 CONSULTING ELECTRICAL ENGINEERS  
 13405 FOLSOM BLVD, UNIT 600  
 FOLSOM, CA 95630  
 PH 916 353 1025  
 WWW.FRISCHENGINEERING.COM  
 FILE: 2308A-E01.DWG  
 DATE: SEP 17, 2024 TIME: 4:34:37PM



**EchoWater Resource Recovery Facility**  
**X09 OUTFALL SWITCHGEAR REPLACEMENT PROJECT**

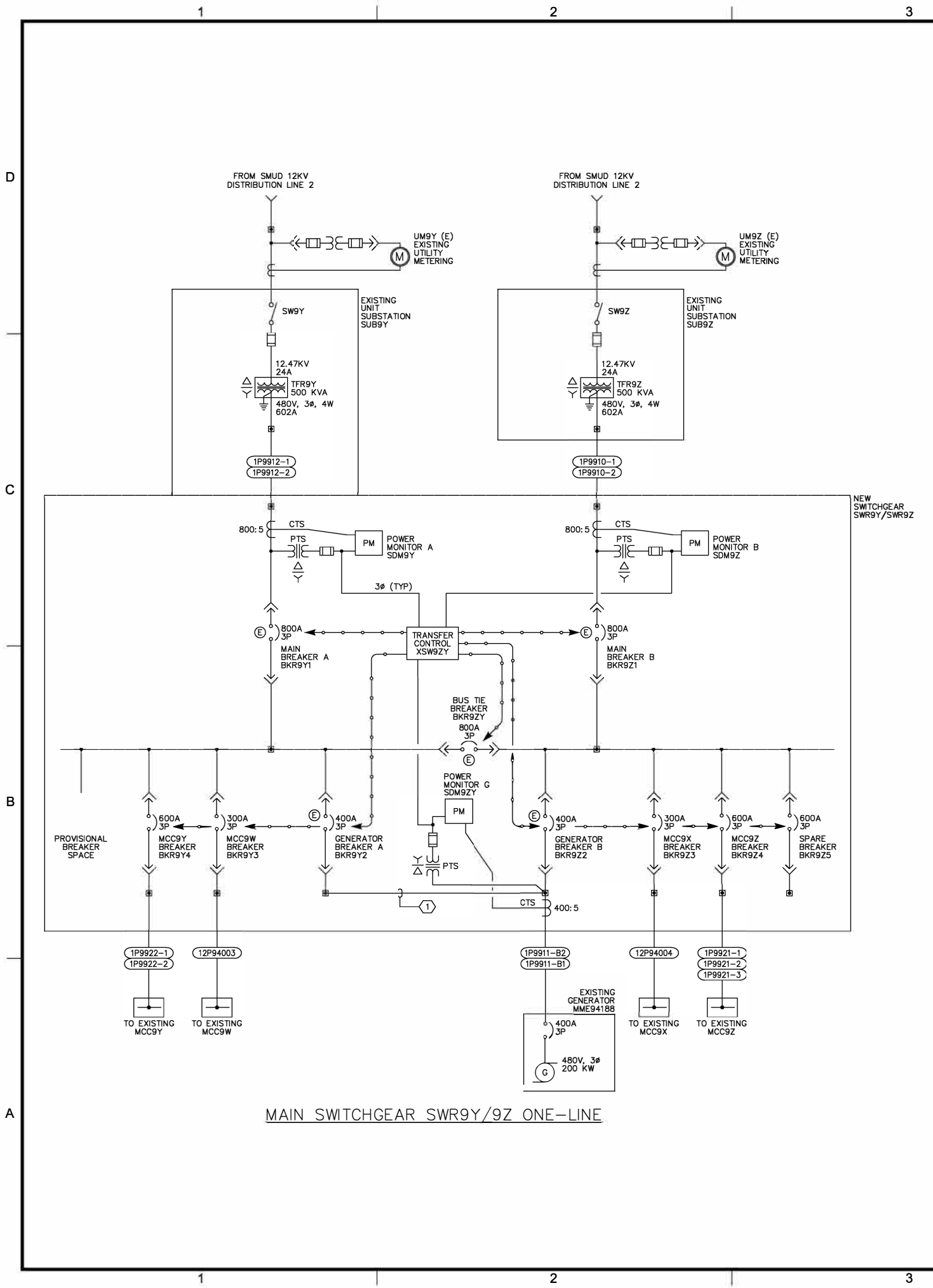
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ISSUE BLOCK	
DESIGNED	T. FRISCH
DRAWN	N. CONANT
CHECKED	M. FRISCH
APPROVED	####
FILENAME	####
DESIGNER PROJECT NUMBER	###
CONTRACT NUMBER	###
CONTRACT SEQUENCE NUMBER	###
DISCIPLINE	ELECTRICAL

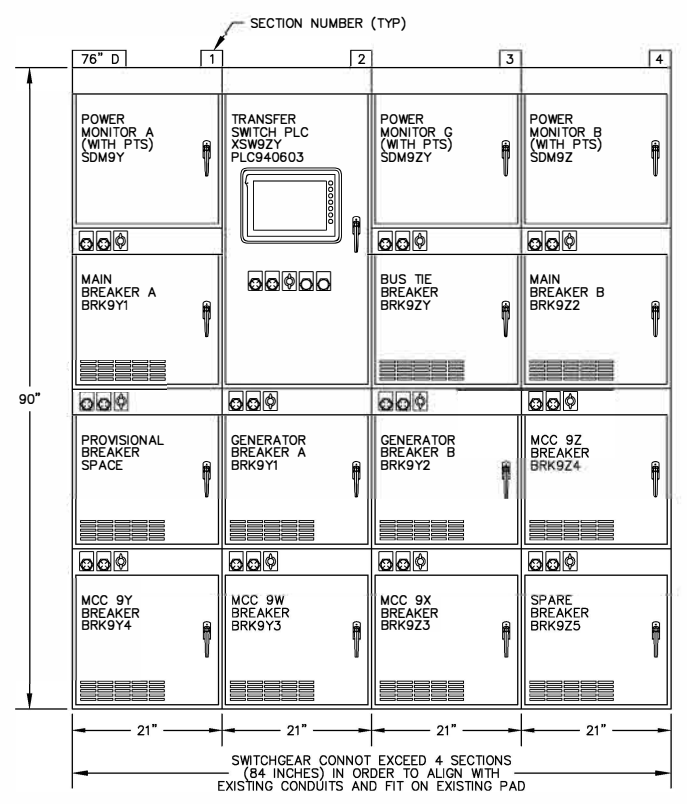
ELECTRICAL SYMBOLS AND ABBREVIATIONS	
DRAWING NUMBER	2 OF 10
E01	

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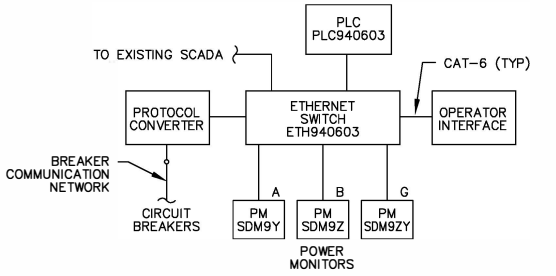
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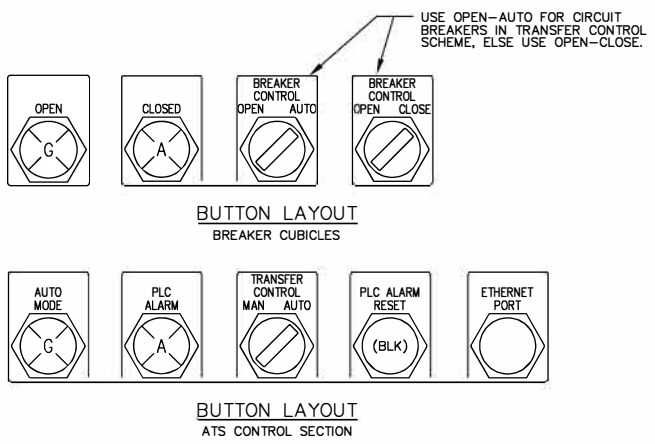
MAIN SWITCHGEAR SWR9Y/9Z ONE-LINE



SWITCHGEAR SWR9ZY ELEVATION  
 NEMA 3R, WALK-IN  
 ALL COMPONENTS ARE NEW



ETHERNET COMMUNICATION BLOCK DIAGRAM  
 ALL COMPONENTS ARE NEW



SWITCHGEAR WALK-IN ENCLOSURE PLAN

1. ALL DIMENSIONS ARE APPROXIMATE. ACTUAL DIMENSIONS SHALL BE PER MANUFACTURER APPROVED IN SUBMITTAL.

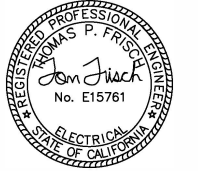
- LEGEND:
- PTS POTENTIAL TRANSFORMER WITH FUSE PROTECTION ON PRIMARY AND SECONDARY.
  - (E) ELECTRICALLY OPERATED BREAKER IN TRANSFER CONTROL SCHEME.
  - ↔ CIRCUIT BREAKER COMMUNICATION NETWORK.

NOTES REFERENCED IN DRAWING:  
 (1) #500 CABLES SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR.

SCALE IN INCHES 0 1/2 1 2 4 (IF SCALE BAR IS NOT 4", SCALE ACCORDINGLY)

EchoWater Facility Engineering Design

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 DATE: SEP 17, 2024 TIME: 4:34:37PM



EchoWater Resource Recovery Facility

X09 OUTFALL SWITCHGEAR REPLACEMENT PROJECT

MARK	DATE	DESCRIPTION
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ISSUE BLOCK

DESIGNED T. FRISCH  
 DRAWN N.CONANT  
 CHECKED M.FRISCH  
 APPROVED ###  
 FILENAME ###  
 DESIGNER PROJECT NUMBER ###  
 CONTRACT NUMBER ###  
 CONTRACT SEQUENCE NUMBER ###

DISCIPLINE ELECTRICAL  
 MAIN SWITCHGEAR SWR9ZY ONE-LINE AND ELEVATION

DRAWING NUMBER E02 3 OF 10



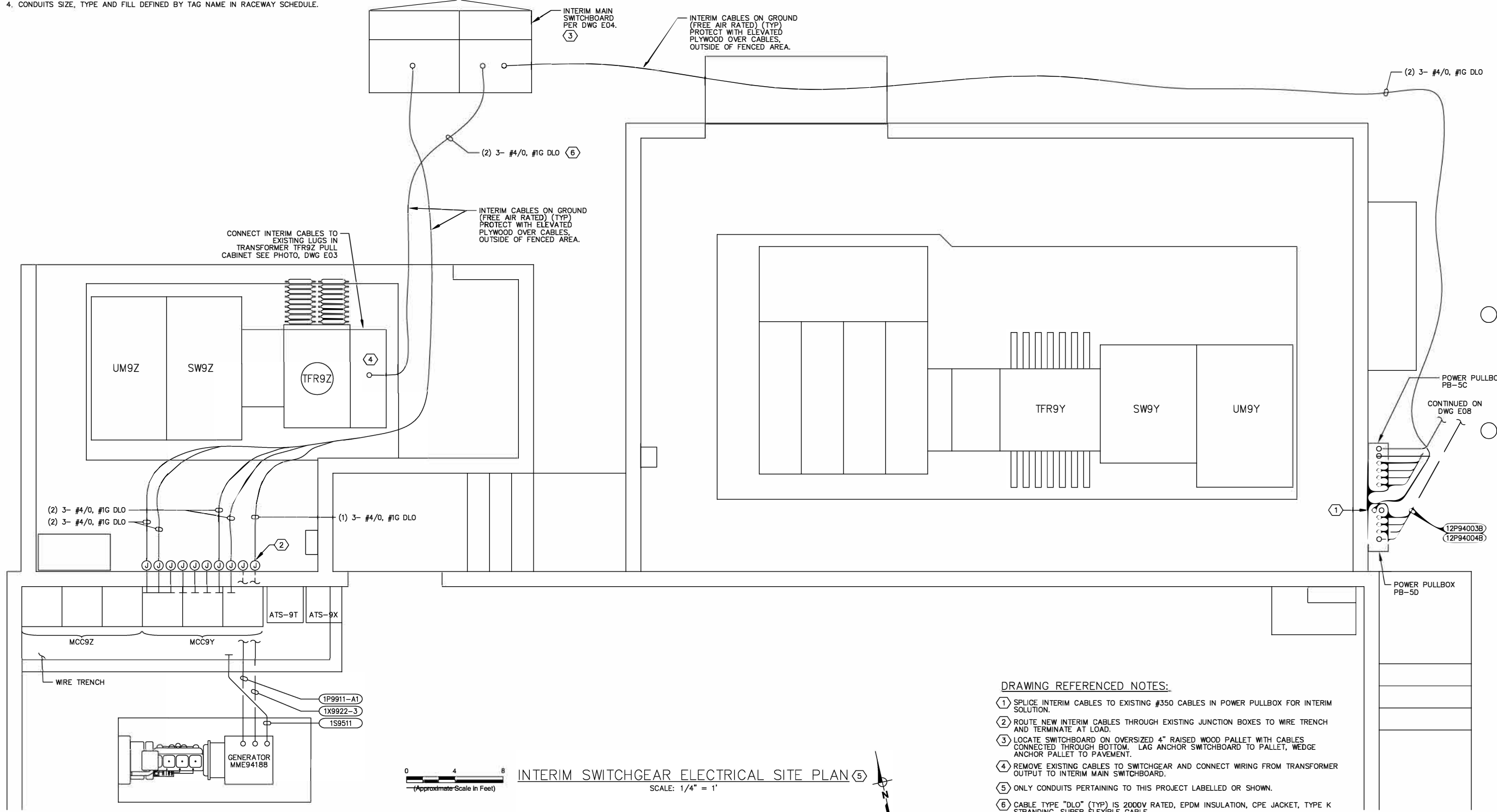




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 Filename: 008 E08 INTERIM SITE PLAN.dwg Plot Date: November 25, 2024 - 9:35 AM CADD User: Long, Brett

**ELECTRICAL PLAN NOTES:**

- SEE ELECTRICAL SYMBOLS AND ABBREVIATIONS DRAWING FOR SYMBOL DEFINITION.
- ALL WORK SHALL CONFORM TO LOCAL CODES AND NATIONAL ELECTRIC CODE.
- SITEPLAN ACCURATE FOR ELECTRICAL WORK ONLY. COORDINATE WITH OTHER DISCIPLINES.
- CONDUITS SIZE, TYPE AND FILL DEFINED BY TAG NAME IN RACEWAY SCHEDULE.



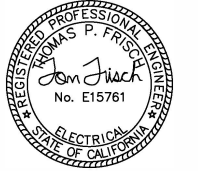
**DRAWING REFERENCED NOTES:**

- SPLICE INTERIM CABLES TO EXISTING #350 CABLES IN POWER PULLBOX FOR INTERIM SOLUTION.
- ROUTE NEW INTERIM CABLES THROUGH EXISTING JUNCTION BOXES TO WIRE TRENCH AND TERMINATE AT LOAD.
- LOCATE SWITCHBOARD ON OVERSIZED 4" RAISED WOOD PALLET WITH CABLES CONNECTED THROUGH BOTTOM. LAG ANCHOR SWITCHBOARD TO PALLET, WEDGE ANCHOR PALLET TO PAVEMENT.
- REMOVE EXISTING CABLES TO SWITCHGEAR AND CONNECT WIRING FROM TRANSFORMER OUTPUT TO INTERIM MAIN SWITCHBOARD.
- ONLY CONDUITS PERTAINING TO THIS PROJECT LABELLED OR SHOWN.
- CABLE TYPE "DLO" (TYP) IS 2000V RATED, EPDM INSULATION, CPE JACKET, TYPE K STRANDING, SUPER FLEXIBLE CABLE.

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**X09 OUTFALL SWITCHGEAR REPLACEMENT PROJECT**

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**ISSUE BLOCK**

DESIGNED	T. FRISCH
DRAWN	N. CONANT
CHECKED	M. FRISCH
APPROVED	###
FILENAME	###
DESIGNER PROJECT NUMBER	###
CONTRACT NUMBER	###
CONTRACT SEQUENCE NUMBER	###
DISCIPLINE	###

**INTERIM SWITCHGEAR ELECTRICAL SITE PLAN**

DRAWING NUMBER	7
<b>E06</b>	OF 10

Sheet Set Manager: TERTIARY FILTRATION FACILITIES BASIS OF DESIGN  
 Path: \\pwrn2\regional\_san\_shared\Engineering\Projects\X09 Switchgear Replacement Project\00 Design Drawings And Specs  
 Filename: 011 E09 RACEWAY SCHEDULE.dwg Plot Date: August 27, 2025 - 12:46 PM CADD User: Melendez, Jorge


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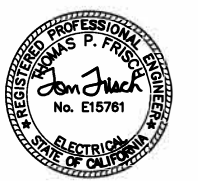
D  
C  
B  
A

RACEWAY SCHEDULE											
REV	DETAILS -- CONDUIT			POWER WIRE		CONTROL WIRE		GROUND	NOTES		
TAG NO.	FROM	TO	QTY	SIZE	TYPE	QTY	SIZE	QTY	SIZE	SIZE	
12P94003-A, B	SWITCHGEAR SWR9ZY	MCC-9W	1	3"	(E)	3	#350	-	-	#1/0	VIA PB-50
12P94004-A, B	SWITCHGEAR SWR9ZY	MCC-9X	1	3"	(E)	3	#350	-	-	#1/0	VIA PB-50
1C 9512	SWITCHGEAR SWR9ZY	MCC-9Y	1	3"	(E)	-	-	-	-	-	EXISTING WIRE RECONNECT
1C 9520	UTILITY METERING UM9Y	JUNCTION BOX	1	1"	(E)	-	-	-	-	-	EXISTING WIRE NOT USED
1C 9910	TRANSFORMER TFR9Z PULLBOX	SWITCHGEAR SWR9ZY	1	1"	(E)	-	-	-	-	-	EXISTING WIRE NOT USED
1C 9912	MV SWITCH SW9Y	SWITCHGEAR SWR9ZY	1	2"	(E)	-	-	-	-	-	EXISTING WIRE NOT USED
1P 9910- 1	TRANSFORMER TFR9Z PULLBOX	SWITCHGEAR SWR9ZY	1	3"	(E)	6	#250	-	-	#1/0	
1P 9910- 2	TRANSFORMER TFR9Z PULLBOX	SWITCHGEAR SWR9ZY	1	3"	(E)	6	#250	-	-	#1/0	
1P 9911- B1	GENERATOR MME94188	SWITCHGEAR SWR9ZY	1	3"	(E)	3	#4/0	-	-	#1	
1P 9911- B2	GENERATOR MME94188	SWITCHGEAR SWR9ZY	1	3"	(E)	3	#4/0	-	-	#1	
1P 9912- 1	TRANSFORMER TFR9Y	SWITCHGEAR SWR9ZY	1	-	-	3	#500	-	-	#1/0	ROUTE THRU (E) WIRE CHASE
1P 9912- 2	TRANSFORMER TFR9Y	SWITCHGEAR SWR9ZY	1	-	-	3	#500	-	-	#1/0	ROUTE THRU (E) WIRE CHASE
1P 9921- 1	SWITCHGEAR SWR9ZY	MCC-9Z	1	3"	(E)	3	#350	-	-	#1/0	
1P 9921- 2	SWITCHGEAR SWR9ZY	MCC-9Z	1	3"	(E)	3	#350	-	-	#1/0	
1P 9921- 3	SWITCHGEAR SWR9ZY	MCC-9Z	1	3"	(E)	-	-	-	-	-	PULL ROPE
1P 9922- 1	SWITCHGEAR SWR9ZY	MCC-9Y	1	3"	(E)	3	#350	-	-	#1/0	
1P 9922- 2	SWITCHGEAR SWR9ZY	MCC-9Y	1	3"	(E)	3	#350	-	-	#1/0	
1S 9510- A	SWITCHGEAR SWR9ZY	MCC-9Z	1	3"	(E)	-	-	-	-	-	EXISTING WIRE RECONNECT
1S 9514	SWITCHGEAR SWR9ZY	SW9Z AREA INTRUSION SWITCHES	1	1"	(E)	-	-	-	-	-	EXISTING WIRE RECONNECT
1S 9519- A	SWITCHGEAR SWR9ZY	SWR9ZY AREA INTRUSION SWITCHES	1	3/4"	(E)	-	-	-	-	-	EXISTING WIRE RECONNECT
1X 9922- 3	SWITCHGEAR SWR9ZY	MCC-9Y	1	3"	(E)	-	-	-	-	-	FOR FUTURE USE
IX 9500- 1	SWITCHGEAR SWR9ZY	CAP OUTSIDE FENCE	1	3"	(E)	-	-	-	-	-	FOR FUTURE USE
IX 9500- 2	SWITCHGEAR SWR9ZY	CAP OUTSIDE FENCE	1	3"	(E)	-	-	-	-	-	FOR FUTURE USE
54C 9406- 01	SWITCHGEAR SWR9ZY	CONTROL PANEL CPNL940603	1	4"	(E)	-	-	-	-	-	REMOVE WIRE
54C 9406- 02	SWITCHGEAR SWR9ZY	CONTROL PANEL CPNL940603	1	2"	(E)	-	-	2	CAT-6	-	REPLACE WIRE
54C 9406- 03	SWITCHGEAR SWR9ZY	CONTROL PANEL CPNL940603	1	2"	(E)	-	-	-	-	-	REMOVE WIRE
IX 9501- 1	SWITCHGEAR SWR9ZY	CAPPED OUTSIDE FENCE	1	3"	(E)	-	-	-	-	-	FOR FUTURE USE
IX 9501- 2	SWITCHGEAR SWR9ZY	CAPPED OUTSIDE FENCE	1	3"	(E)	-	-	-	-	-	FOR FUTURE USE

**EchoWater Facility  
Engineering Design**

SUB CONSULTANT


**FRISCH ENGINEERING, INC.**  
 CONSULTING ELECTRICAL ENGINEERS  
 13405 FOLSOM BLVD, UNIT 600  
 FOLSOM, CA 95630  
 PH 916 353 1025  
 WWW.FRISCHENGINEERING.COM  
 FILE: 2308A-E01.DWG  
 DATE: SEP 17, 2024 TIME: 4:34:37PM



**EchoWater Resource  
Recovery Facility**

**X09 OUTFALL  
SWITCHGEAR  
REPLACEMENT  
PROJECT**

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MARK DATE DESCRIPTION

**ISSUE BLOCK**

DESIGNED  
 T. FRISCH  
 DRAWN  
 N. CONANT  
 CHECKED  
 M. FRISCH  
 APPROVED  
 ###  
 FILENAME  
 ###  
 DESIGNER PROJECT NUMBER  
 ###  
 CONTRACT NUMBER  
 ###  
 CONTRACT SEQUENCE NUMBER  
 ###  
 DISCIPLINE  
 ELECTRICAL

**ELECTRICAL RACEWAY  
SCHEDULE**

DRAWING NUMBER  
**E09**

8  
 OF  
 10

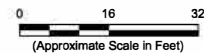
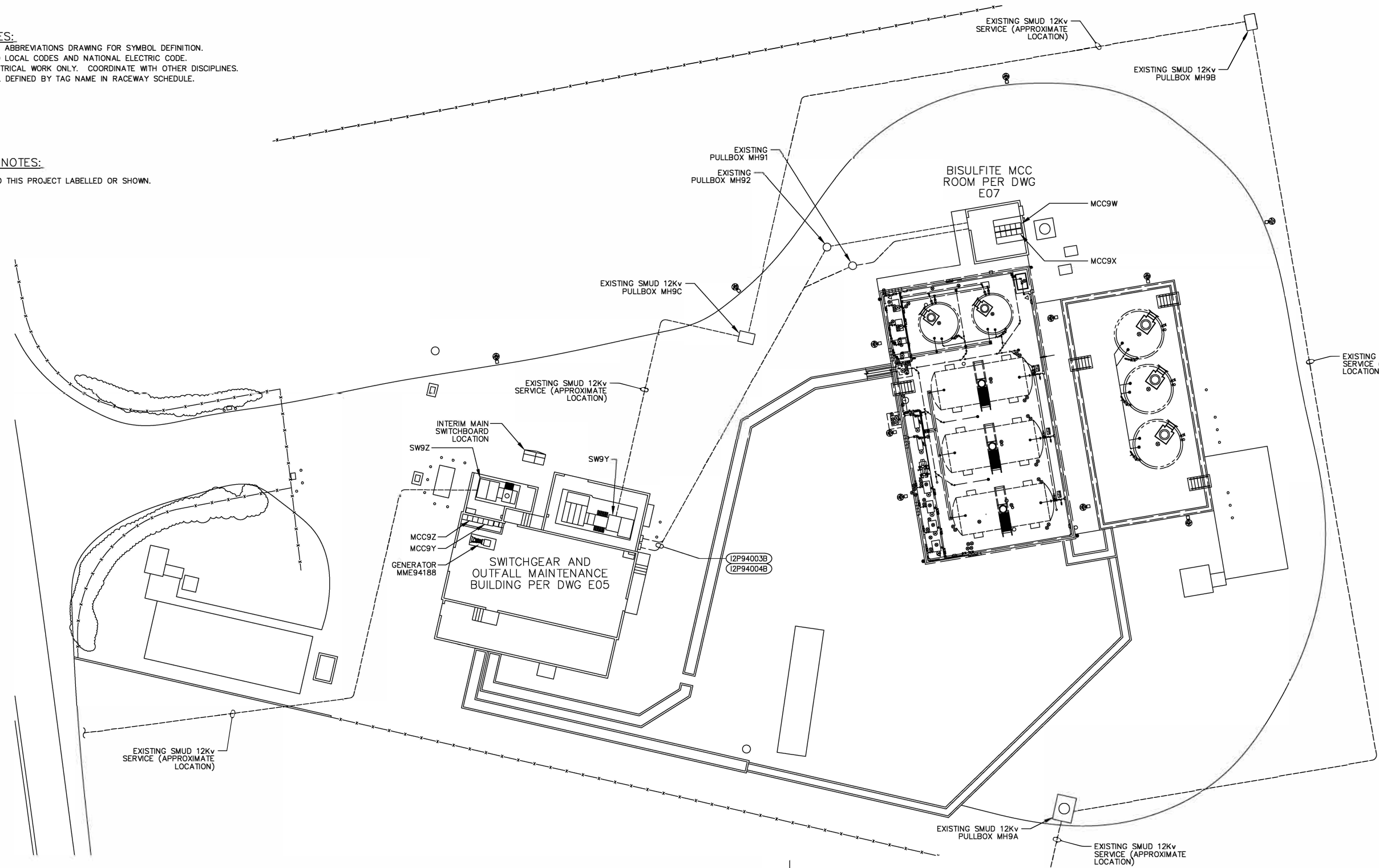
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**ELECTRICAL PLAN NOTES:**

1. SEE ELECTRICAL SYMBOLS AND ABBREVIATIONS DRAWING FOR SYMBOL DEFINITION.
2. ALL WORK SHALL CONFORM TO LOCAL CODES AND NATIONAL ELECTRIC CODE.
3. SITEPLAN ACCURATE FOR ELECTRICAL WORK ONLY. COORDINATE WITH OTHER DISCIPLINES.
4. CONDUITS SIZE, TYPE AND FILL DEFINED BY TAG NAME IN RACEWAY SCHEDULE.

**DRAWING REFERENCED NOTES:**

- ① ONLY CONDUITS PERTAINING TO THIS PROJECT LABELLED OR SHOWN.



**OUTFALL AREA ELECTRICAL SITE PLAN ①**  
SCALE: 1/16" = 1'



**EchoWater Facility Engineering Design**

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 WWW.FRISCHENGINEERING.COM  
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 DATE: SEP 17, 2024 TIME: 4:34:37PM



**EchoWater Resource Recovery Facility**

**X09 OUTFALL SWITCHGEAR REPLACEMENT PROJECT**

MARK	DATE	DESCRIPTION
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**ISSUE BLOCK**

DESIGNED	T. FRISCH
DRAWN	N. CONANT
CHECKED	M. FRISCH
APPROVED	###
FILENAME	###
DESIGNER PROJECT NUMBER	###
CONTRACT NUMBER	###
CONTRACT SEQUENCE NUMBER	###
DISCIPLINE	ELECTRICAL

**OUTFALL AREA ELECTRICAL SITE PLAN**

DRAWING NUMBER	E08	9 OF 10
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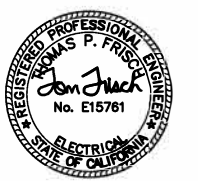
D  
C  
B  
A

RACEWAY SCHEDULE											
REV	DETAILS -- CONDUIT			POWER WIRE		CONTROL WIRE		GROUND	NOTES		
TAG NO.	FROM	TO	QTY	SIZE	TYPE	QTY	SIZE	QTY	SIZE	SIZE	
12P94003-A, B	SWITCHGEAR SWR9ZY	MCC-9W	1	3"	(E)	3	#350	-	-	#1/0	VIA PB-50
12P94004-A, B	SWITCHGEAR SWR9ZY	MCC-9X	1	3"	(E)	3	#350	-	-	#1/0	VIA PB-50
1C 9512	SWITCHGEAR SWR9ZY	MCC-9Y	1	3"	(E)	-	-	-	-	-	EXISTING WIRE RECONNECT
1C 9520	UTILITY METERING UM9Y	JUNCTION BOX	1	1"	(E)	-	-	-	-	-	EXISTING WIRE NOT USED
1C 9910	TRANSFORMER TFR9Z PULLBOX	SWITCHGEAR SWR9ZY	1	1"	(E)	-	-	-	-	-	EXISTING WIRE NOT USED
1C 9912	MV SWITCH SW9Y	SWITCHGEAR SWR9ZY	1	2"	(E)	-	-	-	-	-	EXISTING WIRE NOT USED
1P 9910- 1	TRANSFORMER TFR9Z PULLBOX	SWITCHGEAR SWR9ZY	1	3"	(E)	6	#250	-	-	#1/0	
1P 9910- 2	TRANSFORMER TFR9Z PULLBOX	SWITCHGEAR SWR9ZY	1	3"	(E)	6	#250	-	-	#1/0	
1P 9911- B1	GENERATOR MME94188	SWITCHGEAR SWR9ZY	1	3"	(E)	3	#4/0	-	-	#1	
1P 9911- B2	GENERATOR MME94188	SWITCHGEAR SWR9ZY	1	3"	(E)	3	#4/0	-	-	#1	
1P 9912- 1	TRANSFORMER TFR9Y	SWITCHGEAR SWR9ZY	1	-	-	3	#500	-	-	#1/0	ROUTE THRU (E) WIRE CHASE
1P 9912- 2	TRANSFORMER TFR9Y	SWITCHGEAR SWR9ZY	1	-	-	3	#500	-	-	#1/0	ROUTE THRU (E) WIRE CHASE
1P 9921- 1	SWITCHGEAR SWR9ZY	MCC-9Z	1	3"	(E)	3	#350	-	-	#1/0	
1P 9921- 2	SWITCHGEAR SWR9ZY	MCC-9Z	1	3"	(E)	3	#350	-	-	#1/0	
1P 9921- 3	SWITCHGEAR SWR9ZY	MCC-9Z	1	3"	(E)	-	-	-	-	-	PULL ROPE
1P 9922- 1	SWITCHGEAR SWR9ZY	MCC-9Y	1	3"	(E)	3	#350	-	-	#1/0	
1P 9922- 2	SWITCHGEAR SWR9ZY	MCC-9Y	1	3"	(E)	3	#350	-	-	#1/0	
1S 9510- A	SWITCHGEAR SWR9ZY	MCC-9Z	1	3"	(E)	-	-	-	-	-	EXISTING WIRE RECONNECT
1S 9514	SWITCHGEAR SWR9ZY	SW9Z AREA INTRUSION SWITCHES	1	1"	(E)	-	-	-	-	-	EXISTING WIRE RECONNECT
1S 9519- A	SWITCHGEAR SWR9ZY	SWR9ZY AREA INTRUSION SWITCHES	1	3/4"	(E)	-	-	-	-	-	EXISTING WIRE RECONNECT
1X 9922- 3	SWITCHGEAR SWR9ZY	MCC-9Y	1	3"	(E)	-	-	-	-	-	FOR FUTURE USE
IX 9500- 1	SWITCHGEAR SWR9ZY	CAP OUTSIDE FENCE	1	3"	(E)	-	-	-	-	-	FOR FUTURE USE
IX 9500- 2	SWITCHGEAR SWR9ZY	CAP OUTSIDE FENCE	1	3"	(E)	-	-	-	-	-	FOR FUTURE USE
54C 9406- 01	SWITCHGEAR SWR9ZY	CONTROL PANEL CPNL940603	1	4"	(E)	-	-	-	-	-	REMOVE WIRE
54C 9406- 02	SWITCHGEAR SWR9ZY	CONTROL PANEL CPNL940603	1	2"	(E)	-	-	2	CAT-6	-	REPLACE WIRE
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IX 9501- 1	SWITCHGEAR SWR9ZY	CAPPED OUTSIDE FENCE	1	3"	(E)	-	-	-	-	-	FOR FUTURE USE
IX 9501- 2	SWITCHGEAR SWR9ZY	CAPPED OUTSIDE FENCE	1	3"	(E)	-	-	-	-	-	FOR FUTURE USE

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**EchoWater Resource  
Recovery Facility**

**X09 OUTFALL  
SWITCHGEAR  
REPLACEMENT  
PROJECT**

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N. CONANT  
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M. FRISCH  
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 DISCIPLINE  
ELECTRICAL

ELECTRICAL RACEWAY  
SCHEDULE

DRAWING NUMBER  
**E09** OF 10