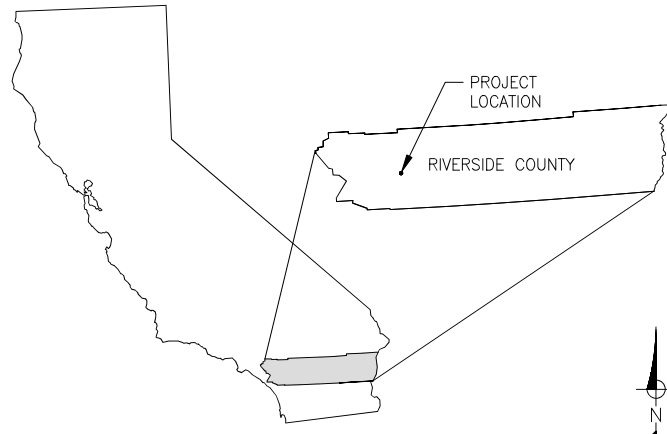


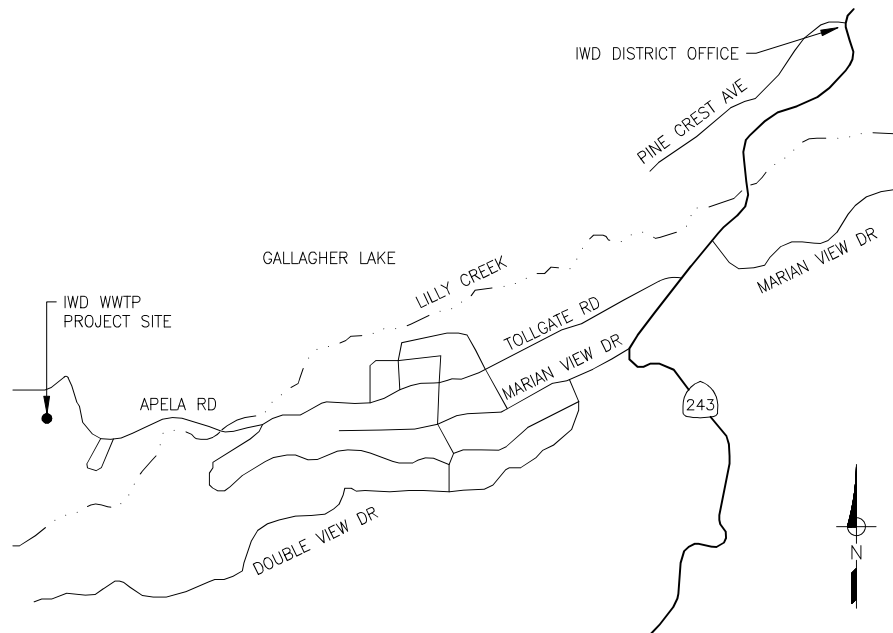
# IDYLLWILD WASTEWATER TREATMENT PLANT

## SEPTEMBER 2024

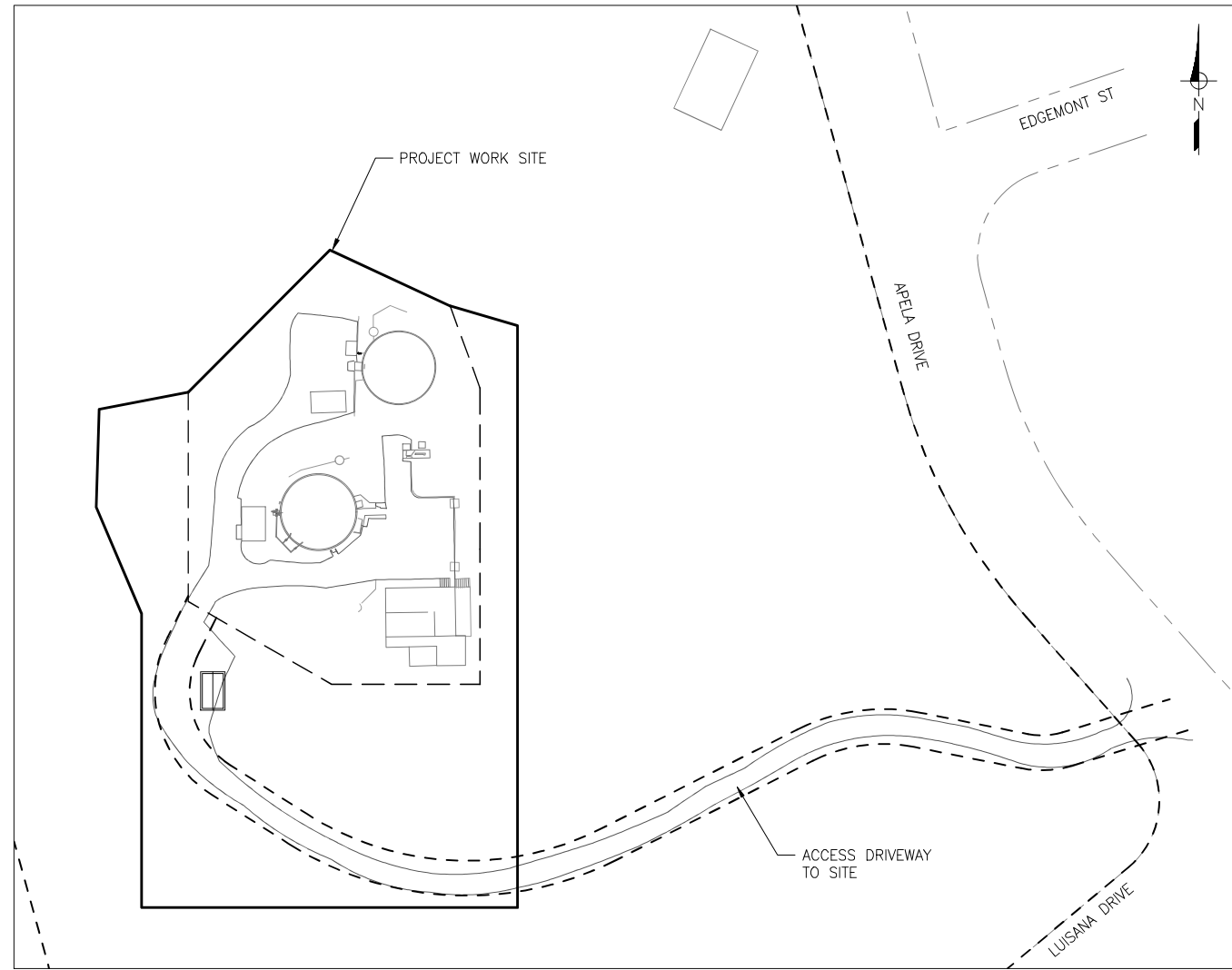
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**LOCATION MAP**  
NTS



**VICINITY MAP**  
NTS



**PROJECT MAP**  
1"=50'

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**PLAN APPROVAL:**

REVIEWED FOR CONFORMANCE WITH THE IDYLLWILD.....?? STANDARDS AND REQUIREMENTS. APPROVAL FOR CONSTRUCTION IS SUBJECT TO THE INFORMATION SHOWN HEREIN. THE IDYLLWILD.....?? AND THE UNDERSIGNED ARE NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY EXIST IN THESE PLANS.

\_\_\_\_\_  
NAME, TITLE

\_\_\_\_\_  
DATE

**OWNER**

IDYLLWILD WATER DISTRICT  
LEO HAVENER, GENERAL MANAGER  
25945 HWY 243  
IDYLLWILD, CA 92549-0397  
OFFICE: (951) 659-2143

**ENGINEER**

NATHAN THOMAS  
SENIOR ENGINEER  
1234 NORTH MARKET BLVD  
SACRAMENTO, CA 95834  
(916) 553-4900



C R W A  
1234 N MARKET BLVD  
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(916) 553-4900

AS NOTED  
ONE INCH  
AT FULL SCALE



IDYLLWILD TREATMENT PLANT  
**COVER SHEET**  
IDYLLWILD, CA

DRAFT --  
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CONSTRUCTION

DATE:	NO.	REVISIONS	BY	APP	DATE	SHEET 1 OF X
9/5/24						<b>G1</b>
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**GENERAL NOTES:**

- ALL DRILLING AND CONSTRUCTION ACTIVITIES SHALL CONFORM TO THE 2019 EDITION OF THE CALIFORNIA BUILDING CODE (CBC) AND THE CONTRACT DOCUMENTS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL PERMITS NECESSARY TO COMPLETE THE WORK.
- THE CONTRACTOR SHALL AT THE TIME OF BIDDING, AND THROUGHOUT THE PERIOD OF THE CONTRACT, RETAIN A CALIFORNIA CONTRACTORS' LICENSE CLASS 'A' IN GOOD STANDING.
- THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING AT THE JOB SITE WITH THE OWNER, SUBCONTRACTORS, AND AFFECTED AGENCIES AT LEAST TWO WORKING DAYS PRIOR TO STARTING THE WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCURATE VERTICAL AND HORIZONTAL CONTROL THROUGHOUT THE PROJECT.
- CONTRACTOR SHALL CONTROL DUST GENERATED BY DRILLING AND CONSTRUCTION ACTIVITIES.
- THE OWNER WILL PROVIDE WATER FOR DRILLING. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO CONNECTING TO WATER. THE MANIPULATION OF EXISTING VALVES SHALL BE DONE BY BOX SPRINGS MWC PERSONNEL.
- CONTRACTOR SHALL CONTAIN WATER FROM DRILLING AND CONSTRUCTION ACTIVITIES ON-SITE AND DISPOSE OF OFF-SITE AFTER CLARIFICATION.
- REGULAR HOURS OF WORK WILL BE LIMITED TO 7AM TO 6PM, MONDAY THROUGH FRIDAY. THE CONTRACTOR MUST SUBMIT A WRITTEN REQUEST FOR APPROVAL BY THE OWNER AT LEAST TWO WORKING DAYS IN ADVANCE TO WORK DURING OTHER HOURS, WEEKENDS, OR HOLIDAYS.
- THE CONTRACTOR MUST MAINTAIN ALL-WEATHER ACCESS TO THE SITE AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR'S OPERATIONS SHALL CONFORM TO THE RULES AND REGULATIONS OF U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- SITE ENTRY AND EXIT LOCATIONS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF MUD OR DEBRIS OR FLOWING SEDIMENT ONTO PUBLIC RIGHT OF WAYS INCLUDING SIDEWALKS AND PLANTED AREAS. ALL SEDIMENT SPILLED, DRILLED, WASHED, OR TRACKED ON A PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY. ALL FINES IMPOSED FOR TRACKING ONTO PUBLIC RIGHT OF WAY SHALL BE PAID BY THE CONTRACTOR.
- THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND BE APPROVED BY THE PREPARER OF THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY BEYOND THE ADEQUACY OF THE DESIGN CONTAINED HEREIN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING ALL CONFLICTS, ERRORS, OMISSIONS, ETC. TO THE ENGINEER IMMEDIATELY UPON DISCOVERY. IF SO DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL STOP WORK UNTIL MITIGATION CAN BE MADE. ANY COSTS INCURRED RESULTING FROM THE CONTRACTOR'S FAILURE TO STOP WORK AS DIRECTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR RELATED ACTIVITY, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT CRWA AT (916) 553-4900 FOR FURTHER EXPLANATION.
- AT THE CONCLUSION OF ITS WORK, THE CONTRACTOR SHALL REPAIR OR REPLACE IN KIND ALL DAMAGED PROPERTY (PUBLIC AND PRIVATE) FOR WHICH HE IS RESPONSIBLE. THE WORK SITE AND ADJACENT AREAS SHALL BE CLEANED UP. THIS REPAIR AND REPLACEMENT, AND CLEAN-UP WORK SHALL BE SUBJECT TO THE APPROVAL AND ACCEPTANCE OF THE OWNER.
- CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE (CBC) CURRENT EDITION AND APPLICABLE STATE AND LOCAL CODES.
- THE CONTRACTOR SHALL BE IN RECEIPT OF APPROVED PLANS PRIOR TO BEGINNING ANY IMPROVEMENTS.
- WHERE THE DRAWINGS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE BEST QUALITY ARE TO BE USED.
- THE LOCATIONS OF EXISTING UNDERGROUND FACILITIES (INCLUDING UTILITIES) SHOWN ON THESE DRAWINGS WERE OBTAINED BY SEARCH OF AVAILABLE RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT ANY EXISTING FACILITY WHETHER OR NOT SHOWN, AND IS RESPONSIBLE FOR CORRECTING ANY DAMAGE TO EXISTING FACILITIES. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (1-800-422-4133) TO OBTAIN A U.S.A. IDENTIFICATION NUMBER AND TO HAVE EXISTING UTILITIES LOCATED.

- LOCATION AND ELEVATION OF EXISTING IMPROVEMENTS SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION OF NEW WORK. CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES. RESOLVE CONFLICTS BETWEEN EXISTING CONDITIONS AND INFORMATION SHOWN ON THE DRAWINGS WITH THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
- THE TYPES, LOCATIONS, SIZES, AND DEPTHS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THESE DRAWINGS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY EXCAVATION WILL REVEAL THE TYPE, EXTENT, SIZE, LOCATION, AND DEPTH OF SUCH UNDERGROUND UTILITIES. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE UNDERGROUND UTILITIES, HOWEVER THE ENGINEER CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES, NOR THE EXISTENCE OF OTHER FACILITIES NOT SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR FURNISHING, INSTALLING AND MAINTAINING ALL WARNING SIGNS AND DEVICES NECESSARY TO SAFEGUARD THE GENERAL PUBLIC AND THE WORK, AND TO PROVIDE FOR PROPER AND CONTINUOUS SAFE ROUTING OF VEHICLE AND PEDESTRIAN TRAFFIC DURING WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT LIMITED TO WORKING HOURS.
- ALL CONSTRUCTION EQUIPMENT, STOCKPILES, AND MATERIALS MUST BE CONTAINED IN THE CONSTRUCTION AREAS AS SHOWN IN THE PLANS.
- WATER LINES SHALL HAVE A MINIMUM OF 30 INCHES OF COVER, UNLESS OTHERWISE NOTED.
- ALL DIFFERING PIPE MATERIAL SHALL BE DIELECTRICALLY SEPARATED.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS AND APPURTENANCES. PIPE FITTINGS 4 INCHES AND LARGER SHALL BE DUCTILE IRON, MANUFACTURED IN ACCORDANCE WITH REQUIREMENTS OF AWWA C-110 OR C-153. PROVIDE ASPHALT OUTSIDE COATING ON ALL BURIED DUCTILE IRON FITTINGS, VALVES, AND OTHER APPURTENANCES. USE BITUMINOUS REPAIR COATING OVER EXPOSED HARDWARE AND DAMAGED AREAS. WRAP ALL IN POLYETHYLENE SHEET, LAPPED MINIMUM ONE FOOT, AND TAPED.
- ALL BOLTED PIPE CONNECTIONS AND FITTINGS WHETHER FLANGE TO FLANGE TYPE OR SPECIALIZED MECHANICAL JOINTS, SHALL USE STAINLESS STEEL BOLTS, WASHERS, AND NUTS. IRON BOLTS WILL BE ACCEPTABLE WHEN SPECIAL BOLTED CONNECTORS, SUCH AS "T" SHAPED BOLTS, ARE NOT AVAILABLE IN STAINLESS STEEL.
- ALL BURIED PIPING SHALL BE MECHANICALLY RESTRAINED. NO THRUST BLOCKS ARE ALLOWED.
- WATER SERVICE IS NOT TO BE INTERRUPTED FOR MORE THAN 4 HOURS AT A TIME. THE CONTRACTOR SHALL MEET WITH THE ENGINEER AND BOX SPRINGS MWC ONE WEEK PRIOR TO THE START OF WORK TO DISCUSS CONSTRUCTION REQUIREMENTS AND SERVICE INTERRUPTIONS.
- THE CONTRACTOR SHALL MAINTAIN EXISTING WATER FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL THE NEW WATER IMPROVEMENTS ARE FUNCTIONING AND ACCEPTED.
- CONTRACTOR SHALL PROVIDE AT LEAST TWO WORKING DAYS ADVANCE NOTICE TO BOX SPRINGS MWC PRIOR TO CONNECTING TO EXISTING FACILITIES. THE MANIPULATION OF EXISTING VALVES SHALL BE DONE BY BOX SPRINGS MWC PERSONNEL.
- CONTRACTOR'S OPERATIONS SHALL CONFORM TO THE RULES AND REGULATIONS OF THE STATE OF CALIFORNIA CONSTRUCTION SAFETY ORDERS PERTAINING TO TRENCHES AND EXCAVATIONS.
- WORK SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF BOX SPRINGS MWC. WORK SHALL NOT BE BACKFILLED OR COVERED PRIOR TO INSPECTION AND APPROVAL. REJECTED WORK SHALL BE REDONE AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS OR MARKERS. MONUMENTS OR MARKERS DESTROYED, DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.
- IF ANY CULTURAL FEATURES OR ARCHAEOLOGICAL MATERIALS ARE UNCOVERED DURING GRADING, TRENCHING, OR OTHER EXCAVATION WORK, ALL WORK WITHIN ONE HUNDRED FEET OF THESE MATERIALS SHALL BE STOPPED UNTIL A PROFESSIONAL ARCHAEOLOGIST HAS HAD AN OPPORTUNITY TO EVALUATE THE SIGNIFICANCE OF THE FIND AND APPROPRIATE MITIGATION MEASURES ARE DETERMINED AND IMPLEMENTED.
- GROUND MEASUREMENTS REPORTED ARE CERTIFIED TO AN ACCURACY OF +/- 0.3' HORIZONTAL AND VERTICAL. VERTICAL DATUM IS NAVD88 BASED ON 6.0 HR STATIC GPS OCCUPATION PROCESSED THROUGH NGS OPLUS. TEMPORARY BENCHMARK DESCRIPTIONS ARE AVAILABLE UPON REQUEST TO SONOMA LAND SERVICES (707) 496-1796.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TO THE ENGINEER RECORD DRAWINGS INCORPORATING FIELD CHANGES. THIS RECORD DRAWINGS PLAN SET SHALL BE USED TO VERIFY ANY MODIFICATIONS TO THE CONTRACT QUANTITIES AND MUST BE SUBMITTED PRIOR TO INVOICING THE FINAL PROGRESS BILLING.

**ABBREVIATIONS:**

- AB AGGREGATE BASE
- AC ASPHALT CONCRETE
- ARV AIR RELEASE VALVE
- BLDG BUILDING
- CLR CLEARANCE
- DDCV DOUBLE DETECTOR CHECK VALVE
- DIA DIAMETER
- DIP DUCTILE IRON PIPE
- (E) EXISTING
- EL ELEVATION
- EM ELECTROMAGNETIC FLOW METER
- EW EACH WAY
- FCA FLANGE COUPLING ADAPTOR
- FG FINISHED GRADE
- FH FIRE HYDRANT
- FL FLANGED
- FT FEET
- GALV GALVANIZED
- GV GATE VALVE
- HP HORSEPOWER
- IE INVERT ELEVATION
- LAT LATITUDE
- LONG LONGITUDE
- LF LEAD FREE
- MFR MANUFACTURER
- MAX MAXIMUM
- MIN MINIMUM
- NTS NOT TO SCALE
- OC ON CENTER
- OD OUTSIDE DIAMETER
- PCC PORTLAND CEMENT CONCRETE
- PSI POUNDS PER SQUARE INCH
- PVC POLYVINYL CHLORIDE
- RAS RETURN ACTIVATED SLUDGE
- REQ'D REQUIRED
- SCH SCHEDULE
- SF SQUARE FEET
- SS SANITARY SEWER
- SST STAINLESS STEEL
- SQ SQUARE
- TEL TELEPHONE
- TYP TYPICAL
- UNO UNLESS NOTED OTHERWISE
- W WATER
- WAS WASTE ACTIVATED SLUDGE

**STANDARD SYMBOLS LEGEND:**

PROPOSED:		EXISTING:
	STORM DRAIN & SIZE	
	SANITARY SEWER & SIZE	
	SANITARY SEWER FORCEMAIN & SIZE	
	WATER MAIN & SIZE	
	PRESSURIZED AIR LINE & SIZE	
	MANHOLE	
	DRAIN INLET	
	CLEANOUT	
	FIRE HYDRANT	
	BLOWOFF VALVE	
	WATER METER	
	BACKFLOW ASSEMBLY	
	GATE VALVE	
	CHECK VALVE	
	BUTTERFLY VALVE	
	BLIND FLANGE	
	PLUG VALVE	
	ELECTRICAL TRENCH	
	GAS TRENCH	
	TELEPHONE/CABLE LINE (BURIED)	
	OVERHEAD ELECTRICAL	
	OVERHEAD TELECOMMUNICATIONS	
	PROPERTY LINE	
	CENTERLINE	
	FENCE	
	WOOD WALL	
	CONCRETE WALL	
	GROUND ELEVATION	
	SHEET DRAINAGE FLOW	
	POWER POLE	
	ELECTRICAL UTILITY FEATURE	
	WATER UTILITY FEATURE	
	GAS METER	



CRWA  
1234 N MARKET BLVD  
SACRAMENTO, CA 95834  
(916) 553-4900

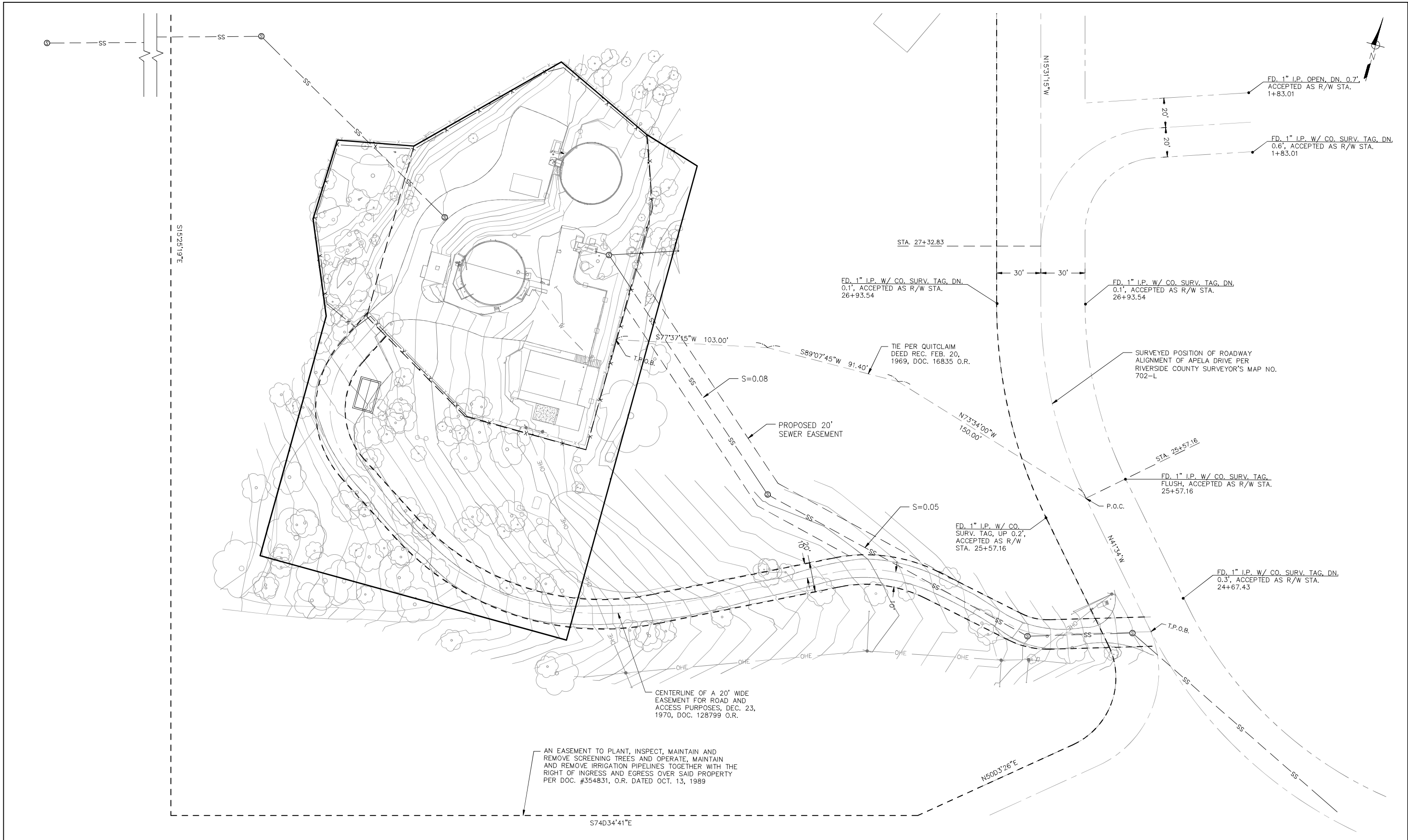
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IDYLLWILD TREATMENT PLANT  
NOTES, LEGEND, & ABBREVIATIONS  
IDYLLWILD, CA

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NOT FOR  
CONSTRUCTION

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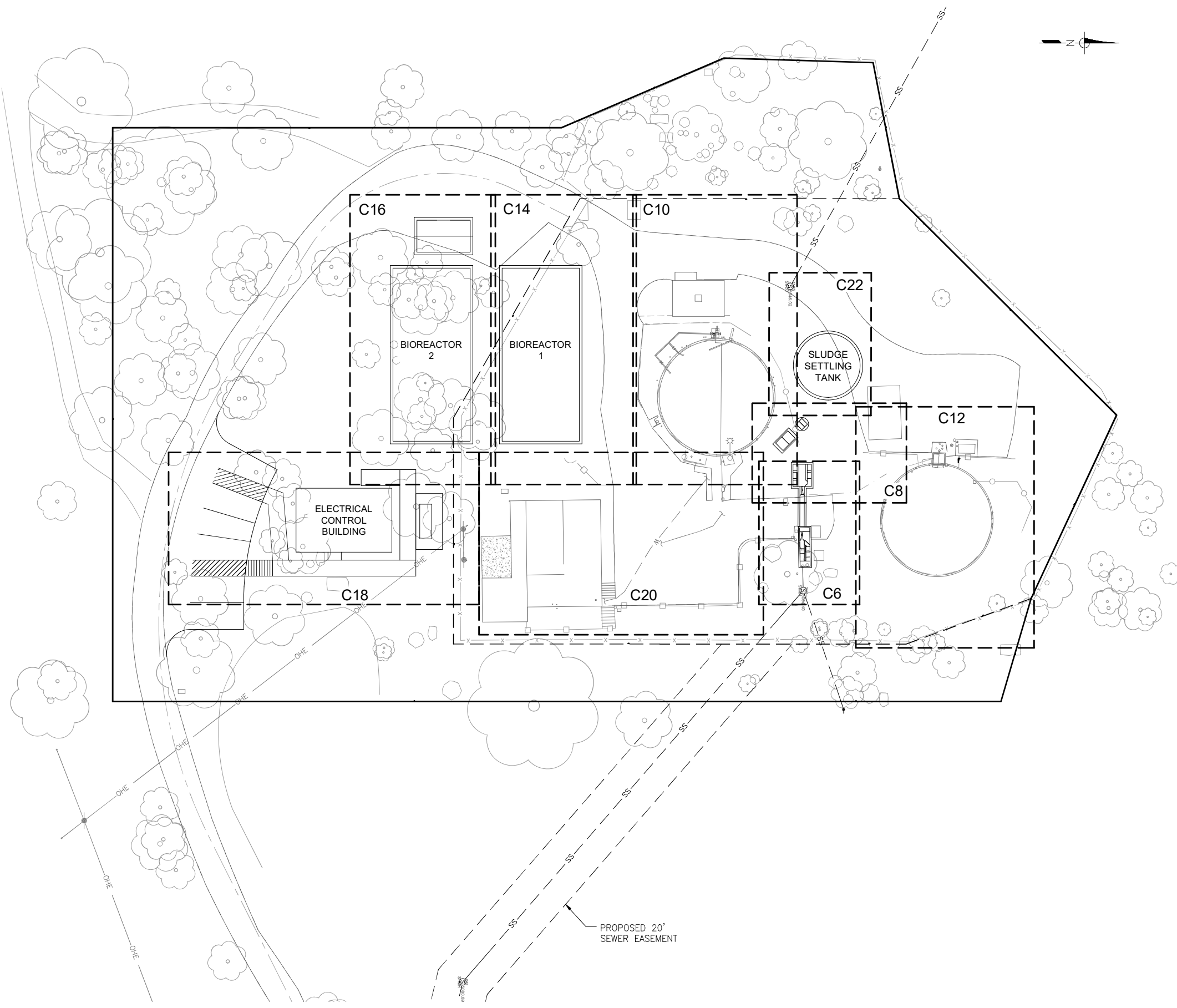
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IDYLLWILD TREATMENT PLANT  
OVERALL SITE PLAN  
IDYLLWILD, CA

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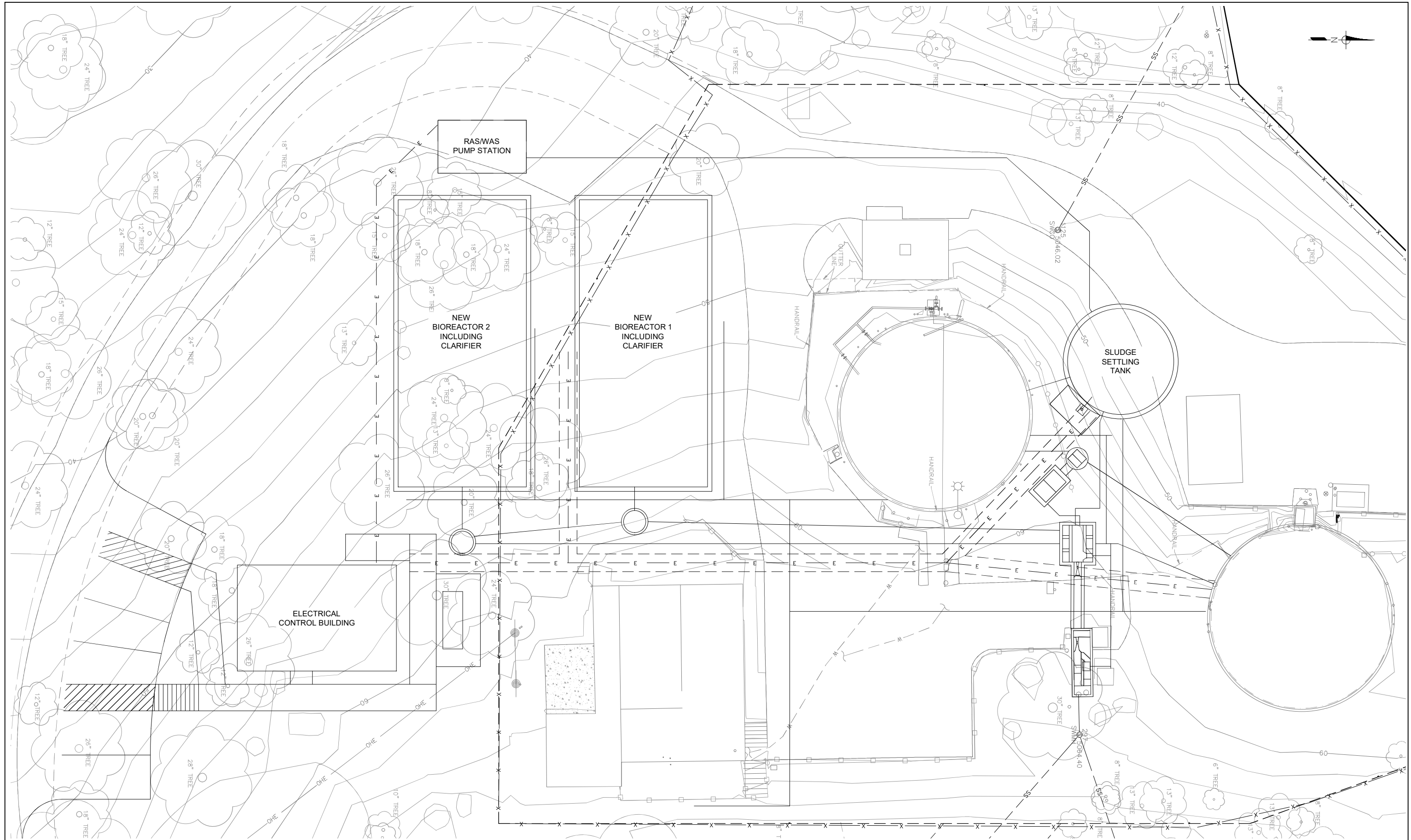
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

















IDYLLWILD TREATMENT PLANT  
**PLAN**  
**SHEET KEY**  
 IDYLLWILD, CA

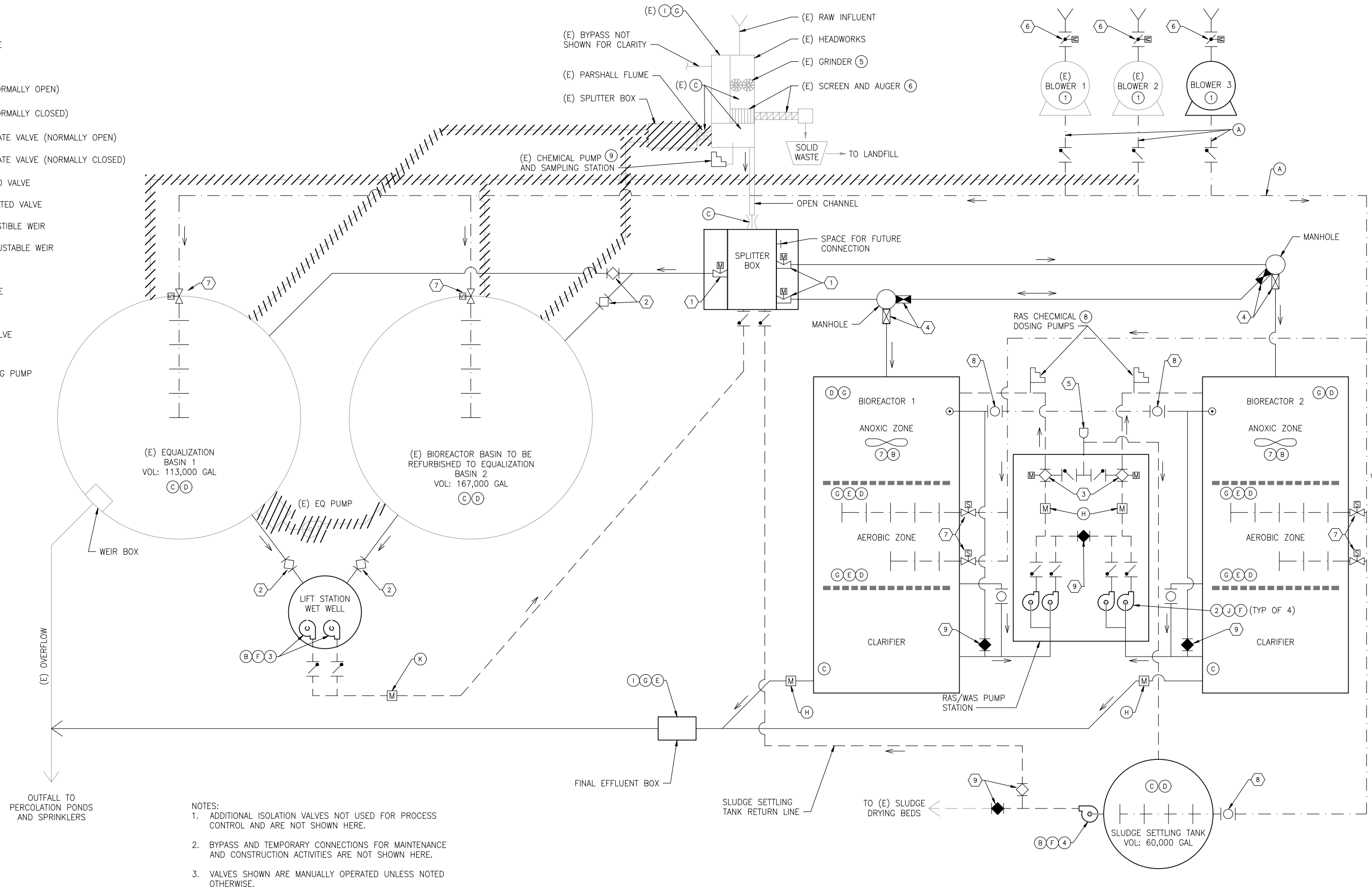
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DATE:	NO.	REVISIONS	BY	APP	DATE	SHEET 4 OF X
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**LEGEND**

-  PUMP
-  PARSHALL FLUME
-  FLOW METER
-  PLUG VALVE (NORMALLY OPEN)
-  PLUG VALVE (NORMALLY CLOSED)
-  SLUICE/SLIDE GATE VALVE (NORMALLY OPEN)
-  SLUICE/SLIDE GATE VALVE (NORMALLY CLOSED)
-  MOTOR ACTUATED VALVE
-  SOLENOID ACTUATED VALVE
-  MANUALLY ADJUSTABLE WEIR
-  AUTOMATED ADJUSTABLE WEIR
-  CHECK VALVE
-  BUTTERFLY VALVE
-  BALL VALVE
-  AIR RELEASE VALVE
-  AIR LIFT PUMP
-  CHEMICAL DOSING PUMP
-  AIR LINE
-  GRAVITY FLOW
-  FORCEMAIN



- NOTES:**
1. ADDITIONAL ISOLATION VALVES NOT USED FOR PROCESS CONTROL AND ARE NOT SHOWN HERE.
  2. BYPASS AND TEMPORARY CONNECTIONS FOR MAINTENANCE AND CONSTRUCTION ACTIVITIES ARE NOT SHOWN HERE.
  3. VALVES SHOWN ARE MANUALLY OPERATED UNLESS NOTED OTHERWISE.



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IDYLLWILD TREATMENT PLANT  
PROCESS FLOW DIAGRAM  
IDYLLWILD, CA

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DATE:	9/5/24	NO.	REVISIONS	BY	APP	DATE	SHEET 6 OF X
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VALVE SCHEDULE							
NO.	TYPE	FUNCTION	SIZE	QUANTITY	ACTUATOR	INDICATOR	SECTION
①	V-NOTCH WEIR	PROPORTION FLOW TO BIOREACTORS AND EQUALIZATION		3	ELECTRICALLY ACTUATED WITH REVERSIBLE MOTORS	POSITION SENSOR	
②	PLUG VALVE	MANUAL CONTROL OF FLOW DIRECTION			NON ACTUATED	OPEN/CLOSED ON SOME VALVES	
③	PLUG VALVE, ACTUATED	3 WAY VALVE TO DIRECT RAS/WAS		2	ELECTRICALLY ACTUATED WITH REVERSIBLE MOTORS	OPEN/OPEN	
④	SLIDE GATE	MANUAL CONTROL OF FLOW DIRECTION		4	NON ACTUATED		
⑤	AIR RELEASE VALVE	PREVENT AIR LOCKING IN FORCEMANS			NON ACTUATED		
⑥	BUTTERFLY VALVE	AIR MODULATING VALVES, BLOWERS		3	ELECTRONICALLY ACTUATED WITH REVERSIBLE MOTOR	POSITION SENSOR	
⑦	SOLENOID	AIR CONTROL VALVES, AUTOMATED AERATORS		TBD	AUTOMATED	REPORT ENERGIZED/OPEN	
⑧	BALL VALVE	AIR CONTROL VALVES, MANUAL AERATORS			NON ACTUATED		
⑨	PLUG VALVE	MANUAL CONTROL OF FLOW DIRECTION			NON ACTUATED		

MOTOR SCHEDULE							
NO.	UNIT	UNIT TYPE	MOTOR TYPE	QUANTITY	HP	VOLTAGE/ PHASE	VFD
①	BLOWER	CENTRIFUGAL	TEFC, HORIZONTAL, CLOSE COUPLED	3	40	460/3	N
②	RAS/WAS PUMP STATION	CENTRIFUGAL, DRY PIT VERTICAL MOUNTED, SOLIDS HANDLING	SUBMERSIBLE	4	3	460/3	Y
③	EQUALIZATION LIFT STATION PUMPS	CENTRIFUGAL, SOLIDS HANDLING	SUBMERSIBLE	2	3	460/3	N
④	SLUDGE SETTLING TANK PUMP	CENTRIFUGAL, SOLIDS HANDLING	SUBMERSIBLE	1	3	460/3	N
⑤	(E) GRINDER PUMP			1		460/3	N
⑥	(E) AUGER			1		460/3	N
⑦	ANOXIC MIXERS	TBD		2		460/3	
⑧	CHEMICAL DOSING PUMPS AT RAS PUMPS	PERISTALTIC		2		120/1	Y
⑨	(E) CHEMICAL DOSING PUMP AT HEADWORKS	PERISTALTIC		1		120/1	Y

INSTRUMENTATION SUMMARY					
LETTER	INSTRUMENT	FUNCTION	QUANTITY	RANGE	NOTES
Ⓐ	PRESSURE TRANSDUCER	MONITOR AIR LINE PRESSURE	4	0-30 PSI	ALARM: LOW PRESSURE
Ⓑ	MOISTURE SENSOR IN MOTOR	MONITOR MOTOR SEAL	5	Y/N	ALARM: MOISTURE PRESENT
Ⓒ	RADAR LEVEL SENSOR	MONITOR FLUME WATER LEVEL FOR FLOW CALCULATIONS	5	0-18 IN	ALARM: HIGH LEVEL, NO FLOW OR MALFUNCTION
Ⓓ	DISSOLVED OXYGEN SENSOR	MONITOR OXYGEN IN TANK	9		ALARM: LOW O2 LEVEL
Ⓔ	TEMPERATURE SENSOR	MONITOR TEMPERATURE IN TANK	6	35'-80' F	
Ⓕ	TEMPERATURE SWITCH	MONITOR MOTOR OVER TEMPERATURE	7		ALARM: HIGH TEMPERATURE
Ⓖ	pH SENSOR	MONITOR pH IN TANK	6		ALARM: LOW pH, HIGH pH
Ⓗ	ELECTROMAGNETIC FLOW METER	MONITOR FULL PIPE FLOW RATE	4	0-400 GPM	
Ⓘ	ELECTRICAL CONDUCTIVITY SENSOR	MONITOR CONDUCTIVITY OF WATER	2		ALARM: HIGH CONDUCTIVITY
Ⓙ	PRESSURE TRANSDUCER	MONITOR FORCEMAIN PRESSURE	4	0-70 PSI	ALARM: HIGH PRESSURE
Ⓚ	ELECTROMAGNETIC FLOW METER	MONITOR FULL PIPE FLOW RATE	1	0-300 GPM	



**California**  
Rural Water Association

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SACRAMENTO, CA 95834  
(916) 553-4900

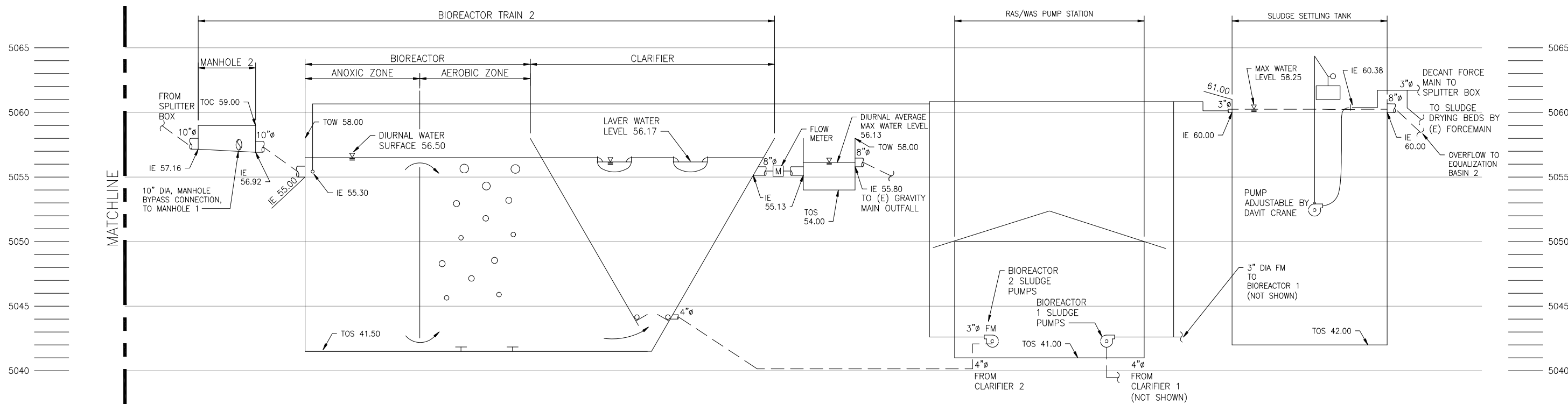
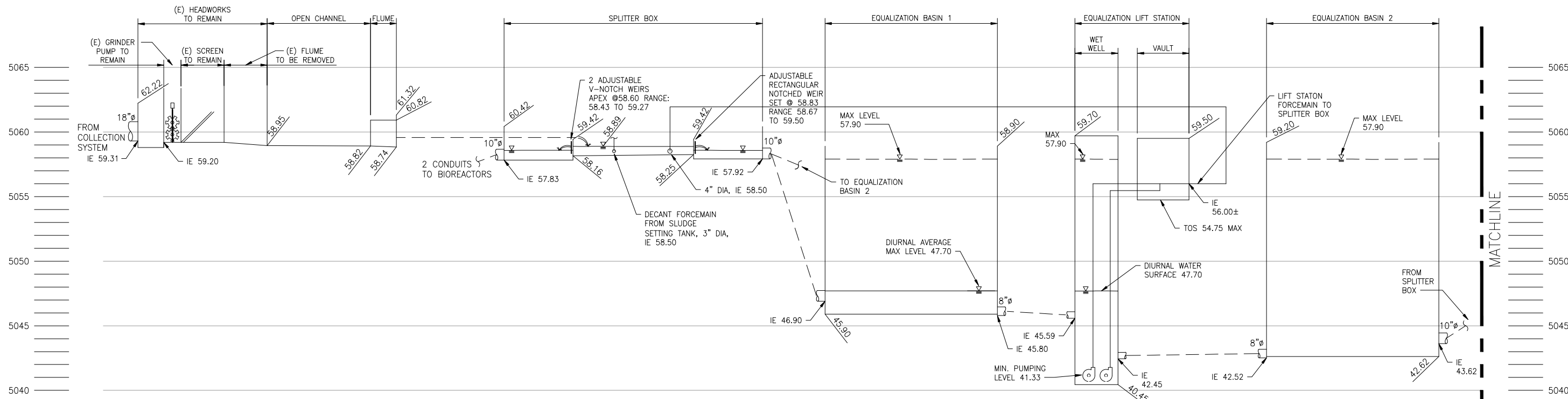
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ONE INCH  
AT FULL SCALE



IDYLLWILD TREATMENT PLANT  
PROCESS FLOW DIAGRAM NOTES  
IDYLLWILD, CA

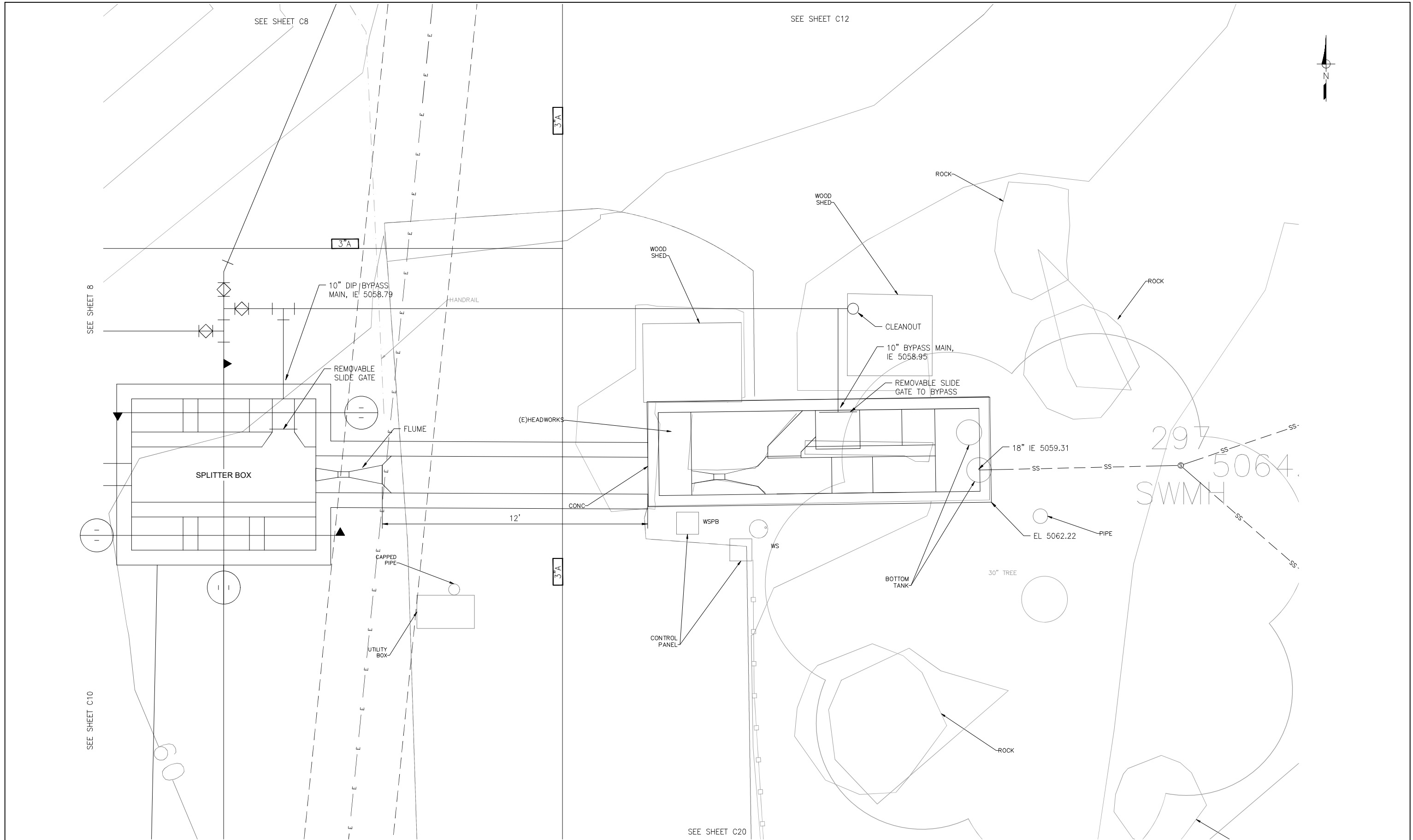
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NOT FOR  
CONSTRUCTION

DATE:	9/5/24	NO.	REVISIONS	BY	APP	DATE	SHEET 7 OF X
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- NOTES
- INSTRUMENTATION IS SHOWN ON THIS SHEET FOR REFERENCE ONLY. ACTUAL INSTRUMENTATION IS DETAILED ON I-SHEETS, IN CASE OF CONFLICT I-SHEETS SHALL CONTROL.
  - GROUND ELEVATIONS ARE APPROXIMATE.
  - CONDUITS ARE SHOWN SCHEMATICALLY.
  - ELEVATIONS ARE BASED ON THE HILWIG & GOODROW SURVEY FROM 2021.
  - NOTE: WATER SURFACE ELEVATIONS INDICATED BY CALLOUTS REPRESENT THE DESIGN FLOW (HYDRAULIC GUIDELINE).





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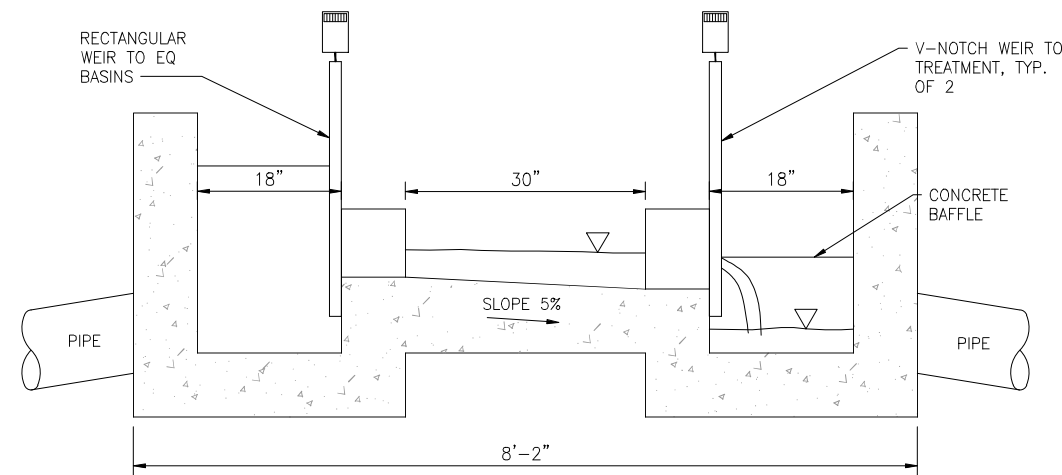
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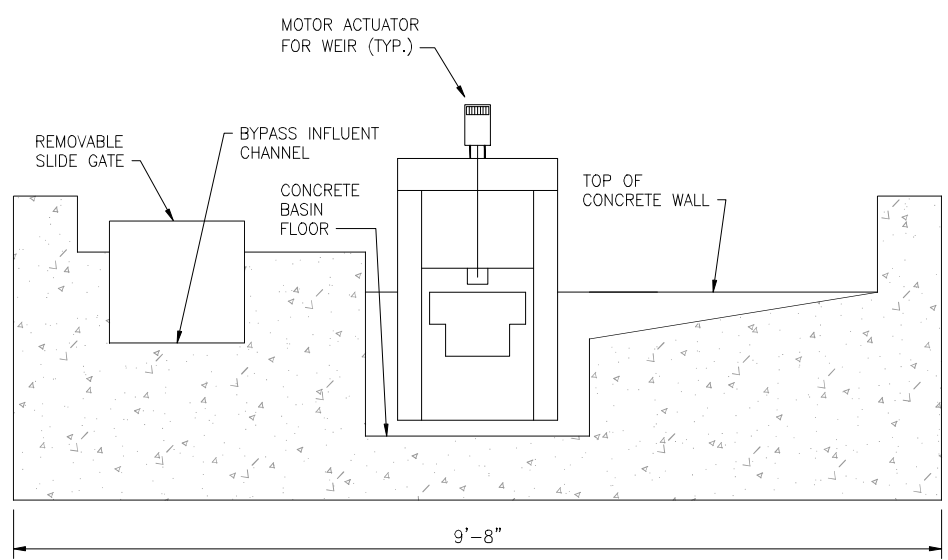
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 HEADWORKS AND SPLITTER BOX PLAN  
 IDYLLWILD, CA

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 CONSTRUCTION

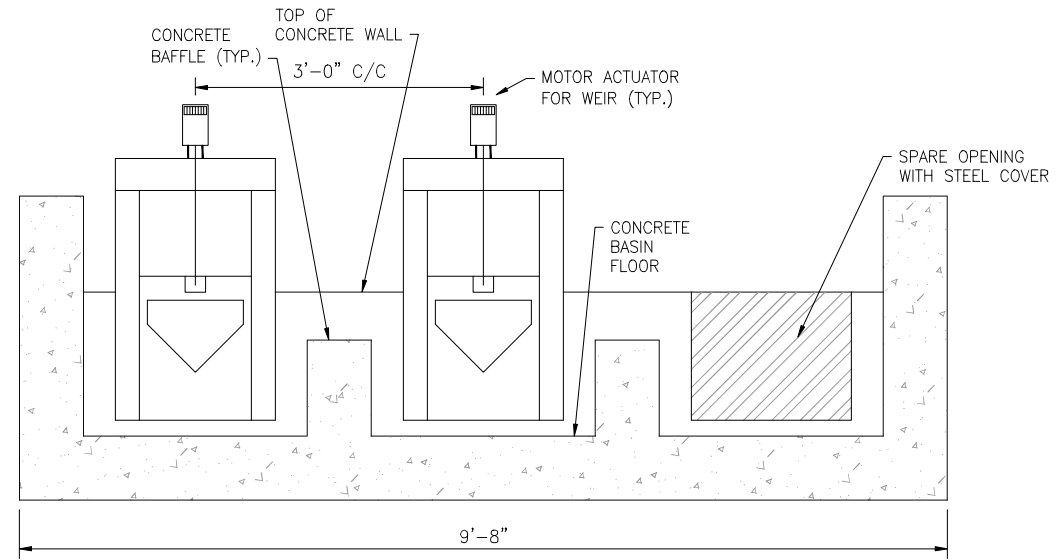
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9/5/24						C6
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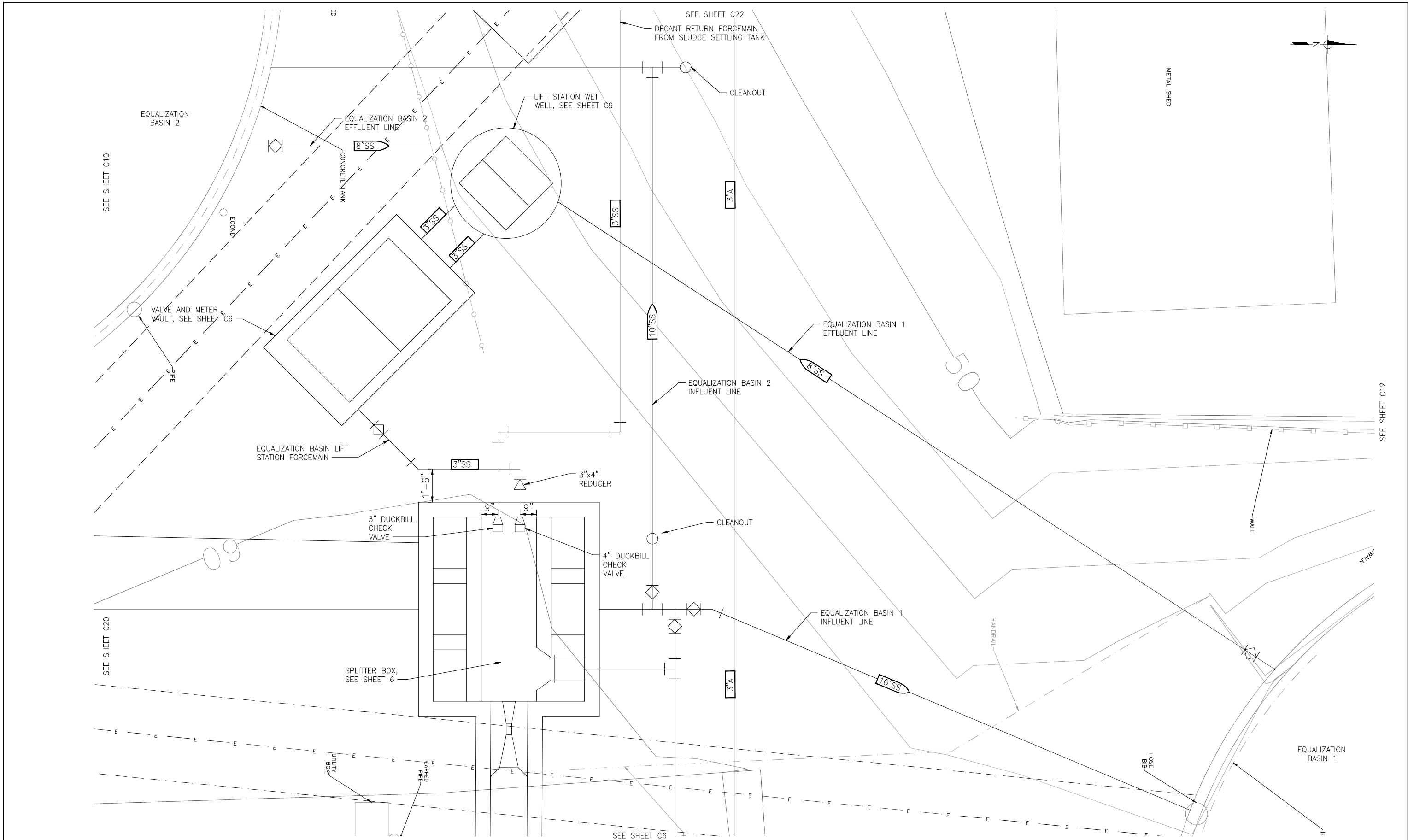
**A - SPLITTER BOX SECTION**  
1"=1'-0"



**C - EQUALIZATION WEIR**  
1"=1'-0"



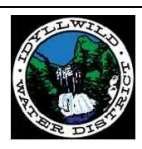
**B - TREATMENT TRAIN WEIRS**  
1"=1'-0"



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 (916) 553-4900

1"=2'  
 ONE INCH  
 AT FULL SCALE

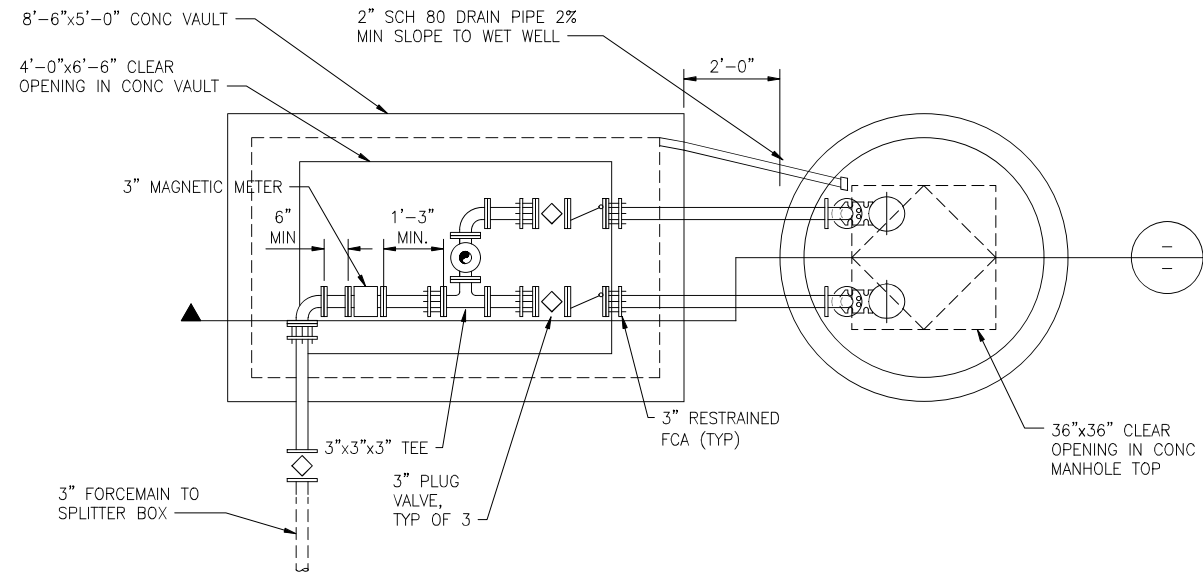
**DIGALERT**  
 CALL AT LEAST TWO  
 WORKING DAYS  
 BEFORE YOU DIG



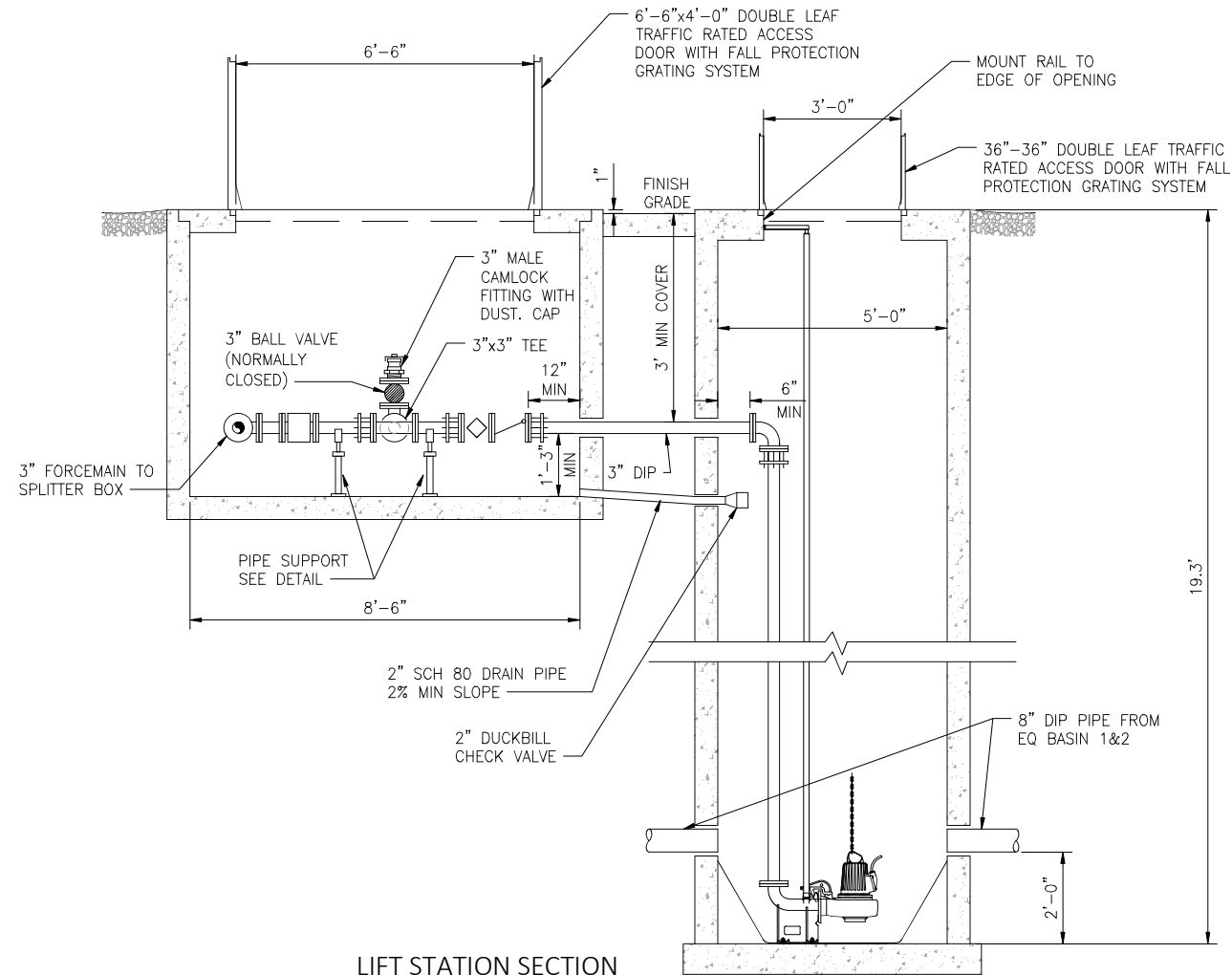
IDYLLWILD TREATMENT PLANT  
**EQUALIZATION  
 LIFT STATION PLAN**  
 IDYLLWILD, CA

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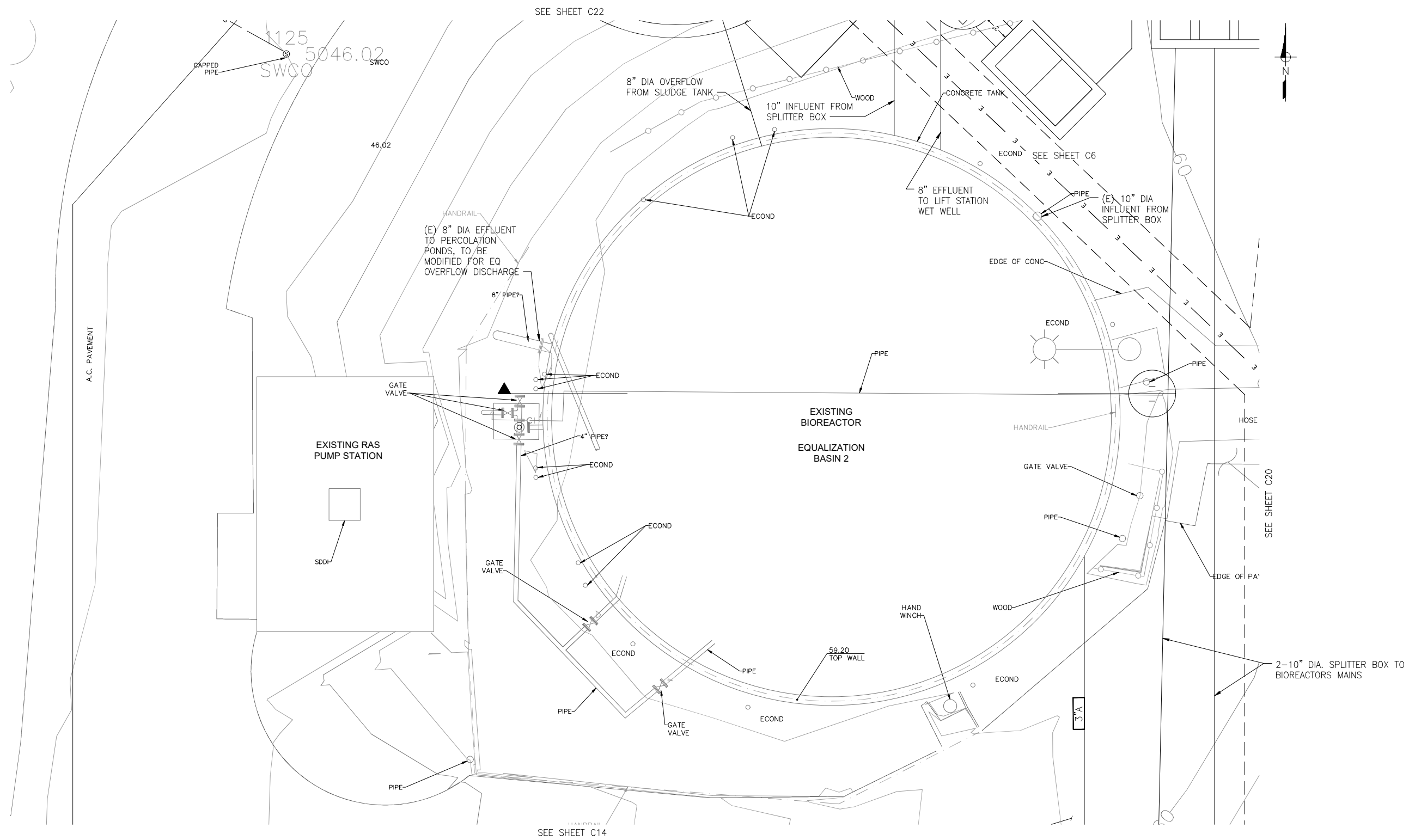
DATE:	NO.	REVISIONS	BY	APP	DATE	SHEET 9 OF X
9/5/24						C8
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CHECKED:						



**LIFT STATION PLAN**  
1/2"=1'-0"



**LIFT STATION SECTION**  
1/2"=1'-0"



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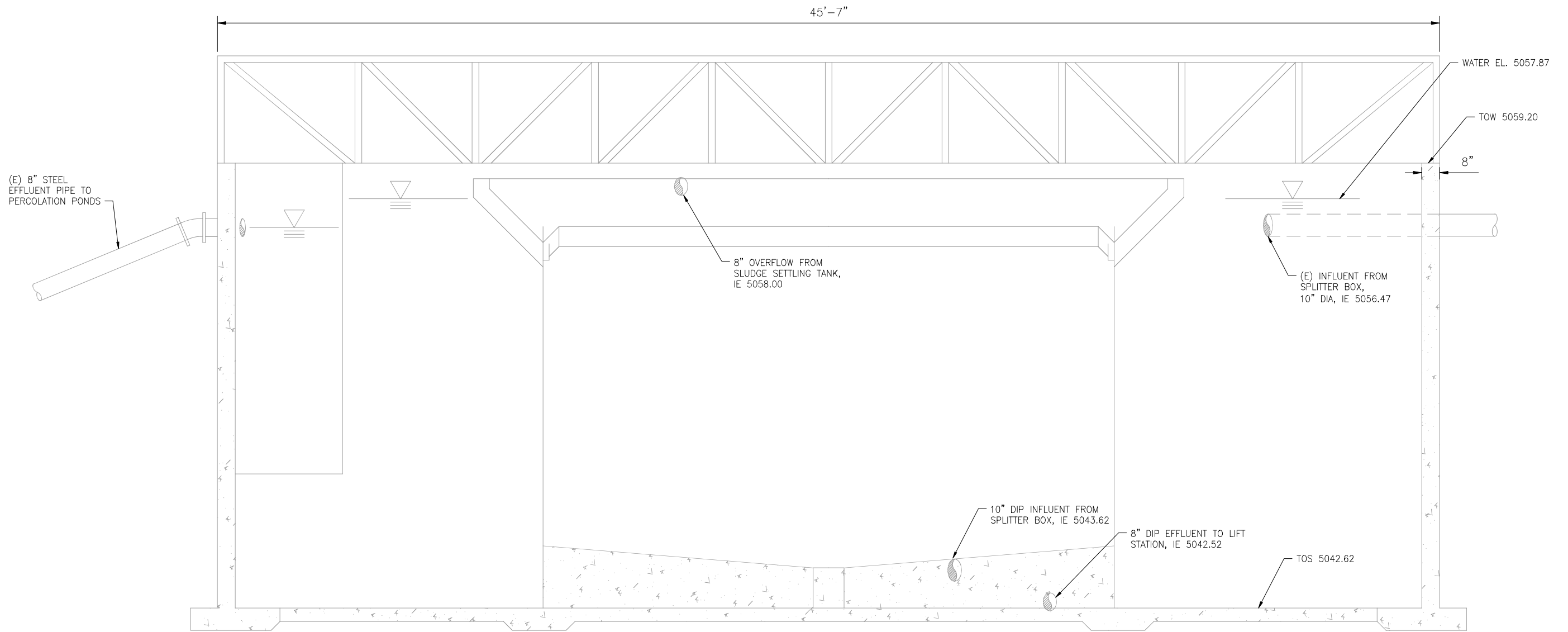
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 AT FULL SCALE



IDYLLWILD TREATMENT PLANT  
 EXISTING BIOREACTOR  
 PLAN  
 IDYLLWILD, CA

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 CONSTRUCTION

DATE:	NO.	REVISIONS	BY	APP	DATE	SHEET 11 OF X
9/5/24						C10
DESIGN:	NMT					
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CHECKED:	NMT					



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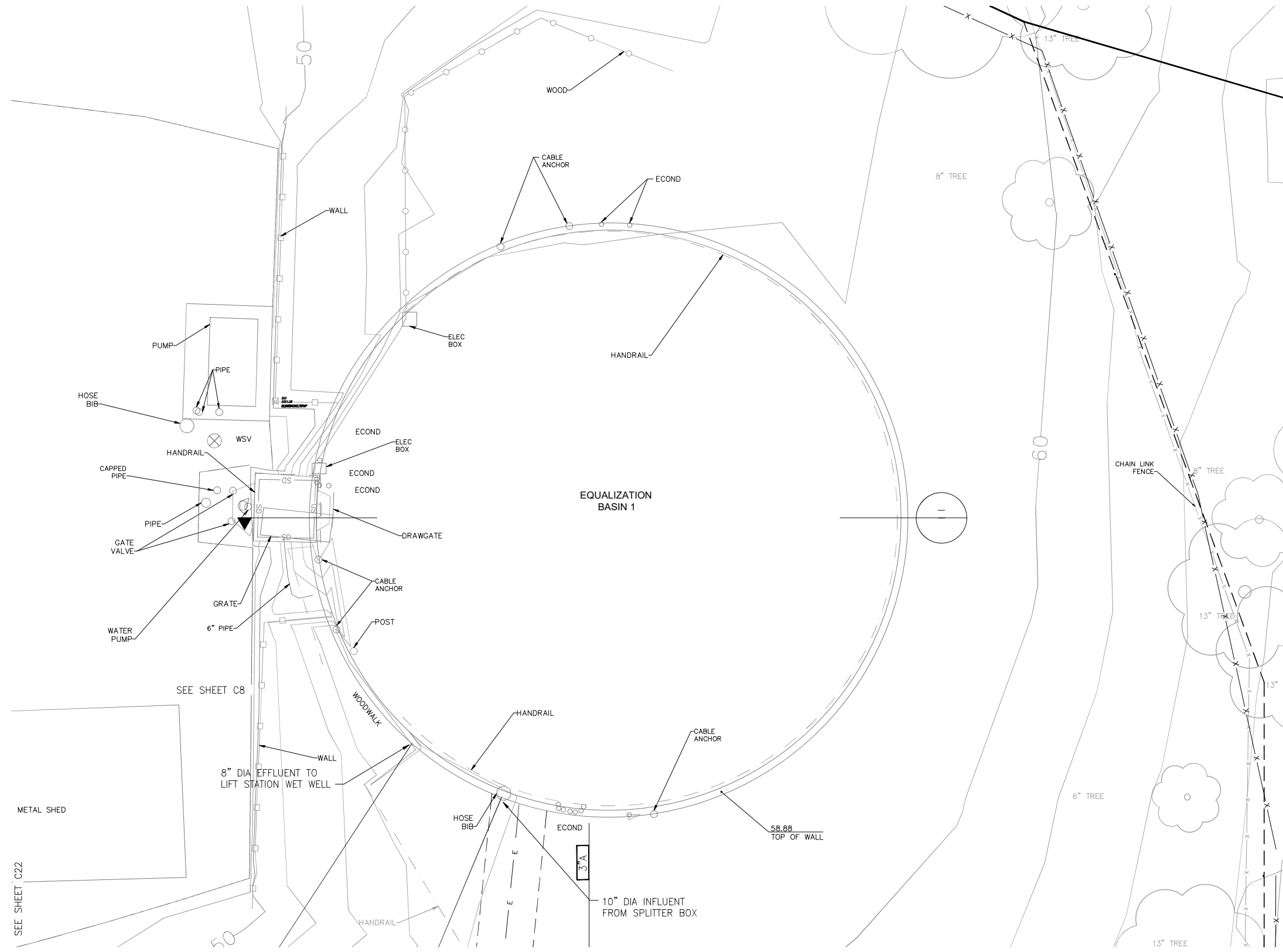
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 ONE INCH  
 AT FULL SCALE



IDYLLWILD TREATMENT PLANT  
 EXISTING BIOREACTOR  
 SECTIONS  
 IDYLLWILD, CA

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DATE:	NO.	REVISIONS	BY	APP	DATE	SHEET 11 OF X
9/5/24						C11
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CHECKED: NMT						



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SACRAMENTO, CA 95834  
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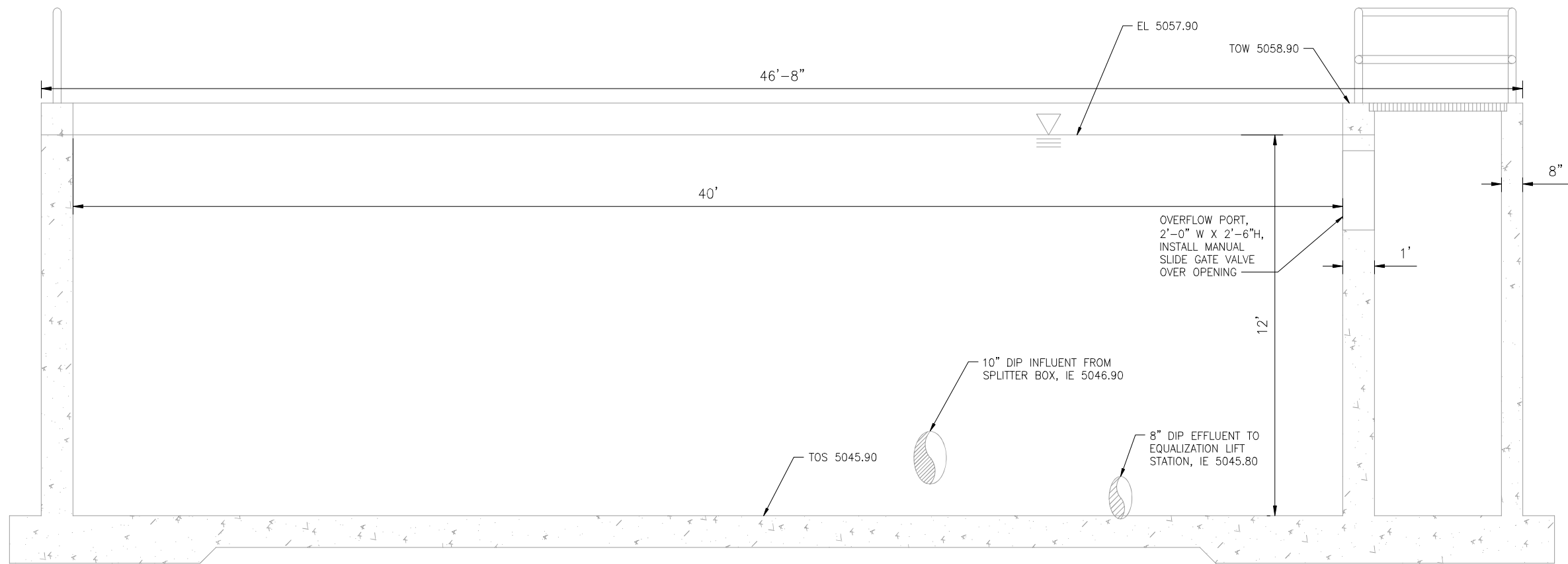
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AT FULL SCALE



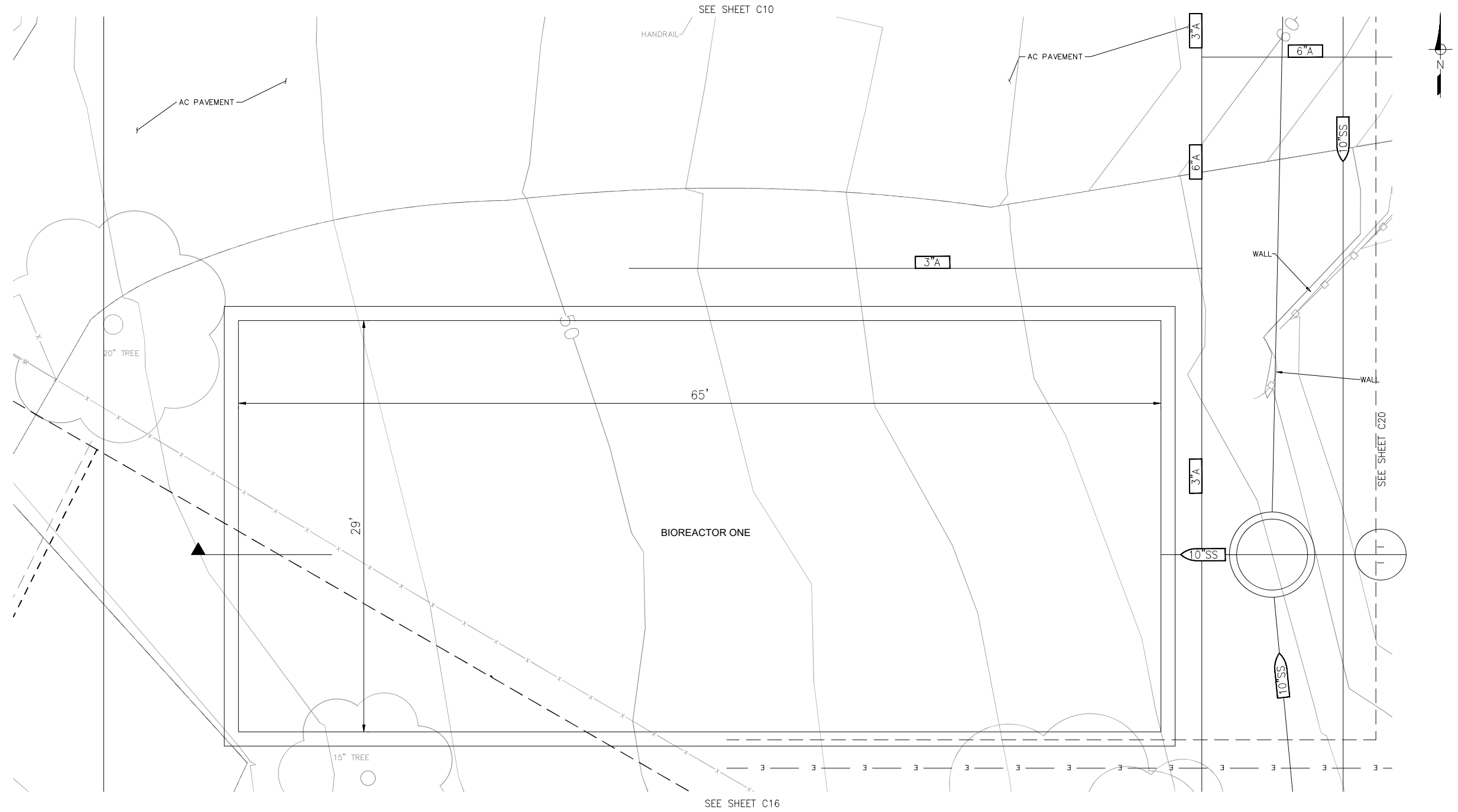
IDYLLWILD TREATMENT PLANT  
EQUALIZATION TANK ONE  
PLAN  
IDYLLWILD, CA

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CONSTRUCTION

DATE:	NO.	REVISIONS	BY	APP	DATE
9/5/24					
DESIGN:	NMT				
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CHECKED:	NMT				







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 SACRAMENTO, CA 95834  
 (916) 553-4900

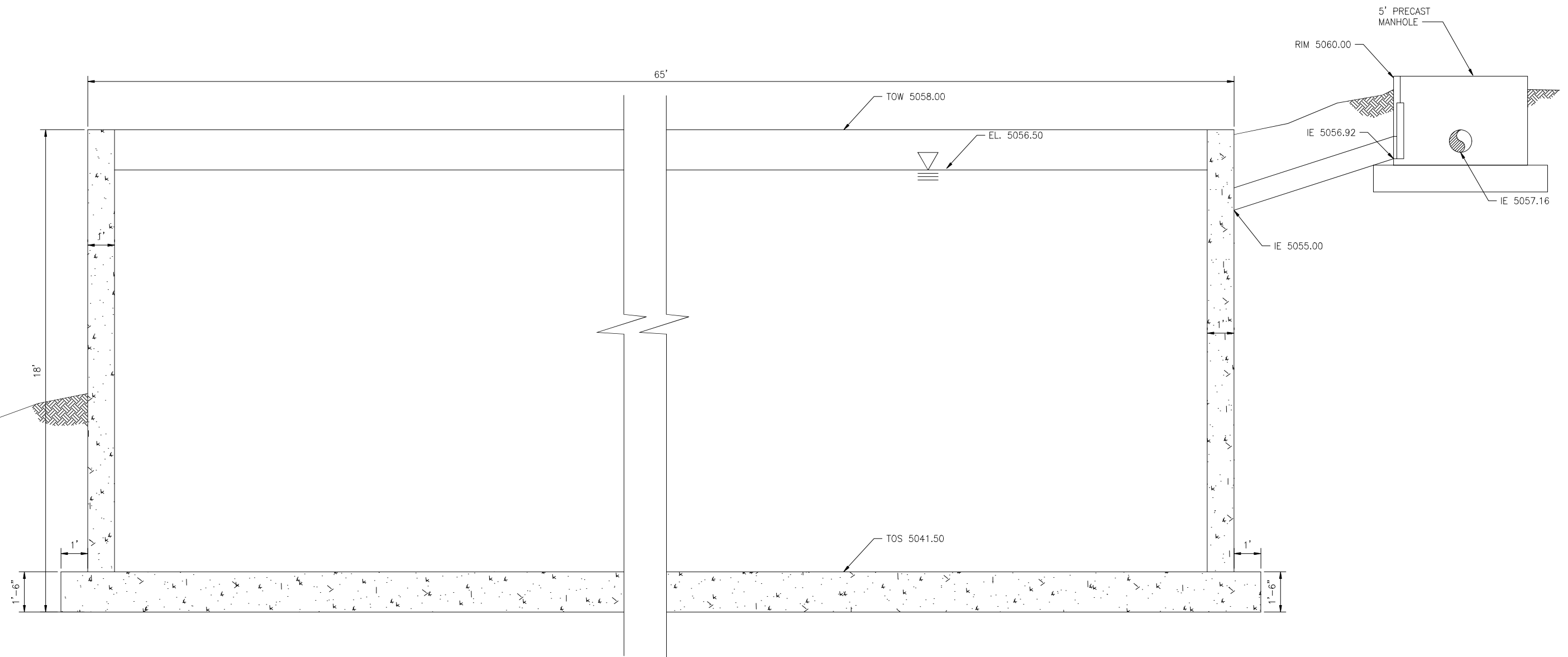
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 AT FULL SCALE



IDYLLWILD TREATMENT PLANT  
 BIOREACTOR ONE  
 PLAN  
 IDYLLWILD, CA

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 CONSTRUCTION

DATE:	NO.	REVISIONS	BY	APP	DATE	SHEET 13 OF X
9/5/24						C14
DESIGN: NMT						
DRAWN: MAH						
CHECKED: NMT						



C R W A  
1234 N MARKET BLVD  
SACRAMENTO, CA 95834  
(916) 553-4900

1"=2'  
ONE INCH  
AT FULL SCALE

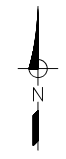
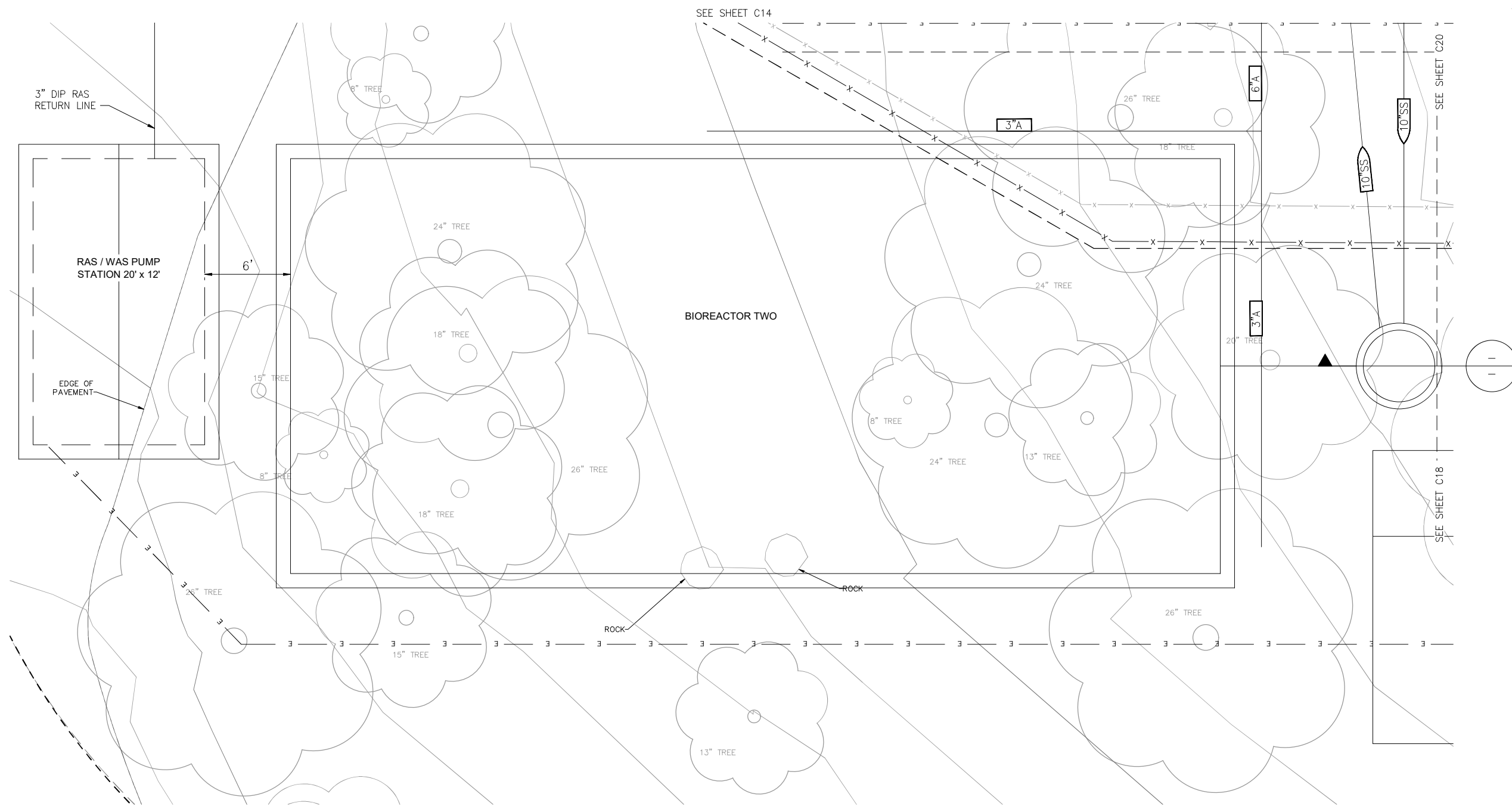


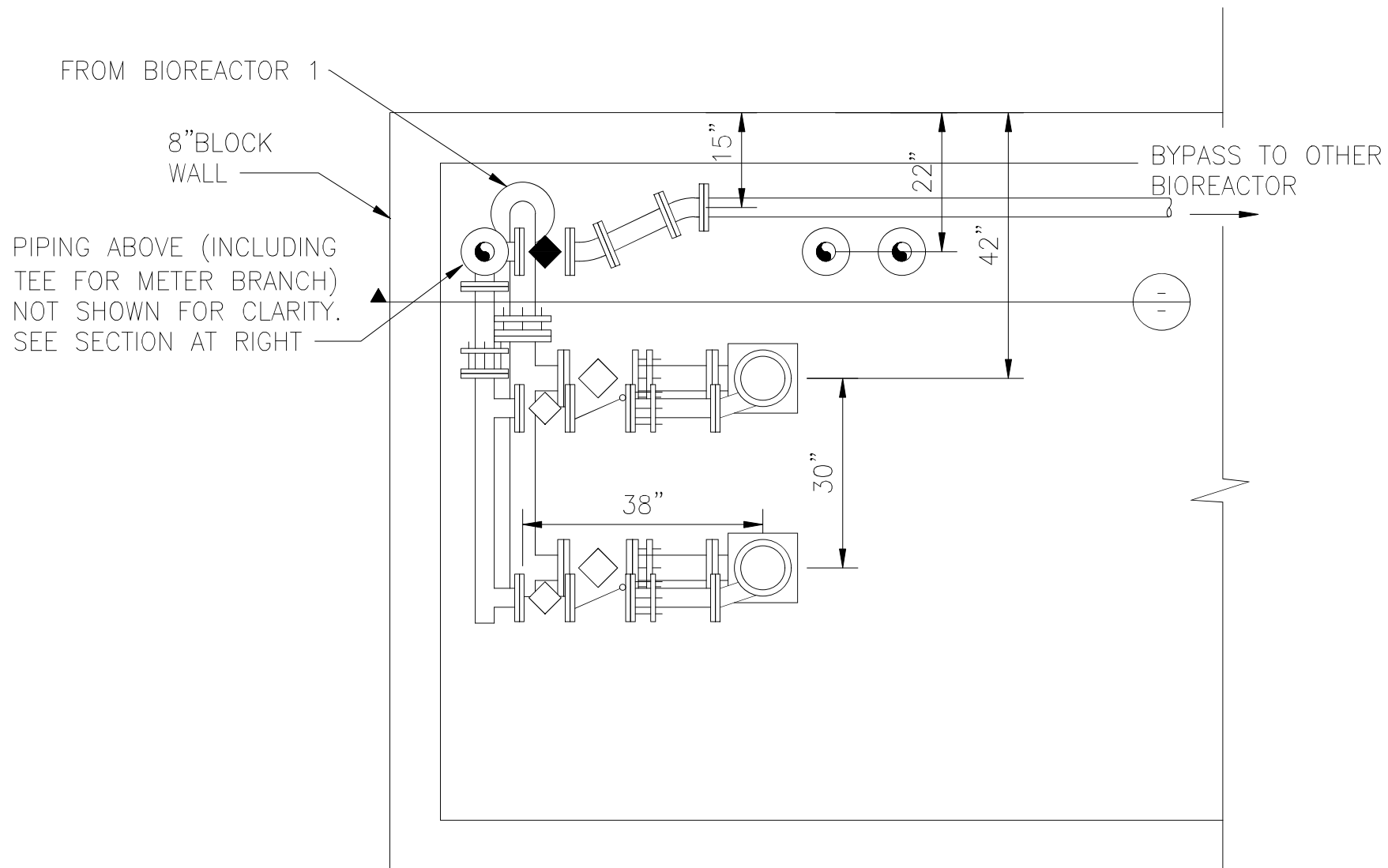
IDYLLWILD TREATMENT PLANT  
BIOREACTOR ONE  
SECTIONS  
IDYLLWILD, CA

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NOT FOR  
CONSTRUCTION

DATE:	NO.	REVISIONS	BY	APP	DATE
9/5/24					
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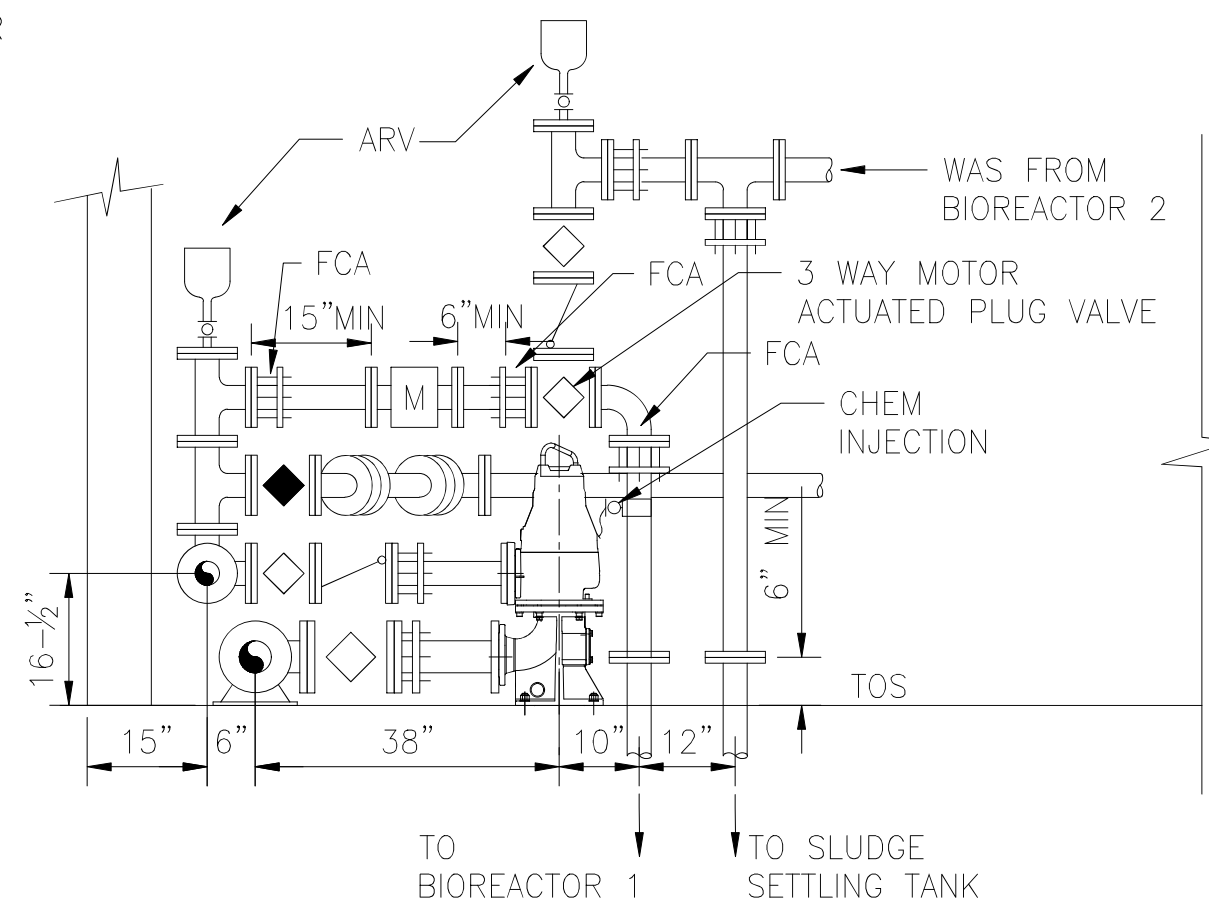
SHEET 13 OF X  
**C15**





**BIOREACTOR 1  
RAS PUMPS PLAN**

1"=1'-0"



**BIOREACTOR 1  
RAS PUMPS SECTION**

1"=1'-0"



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SACRAMENTO, CA 95834  
(916) 553-4900

1"=1'  
ONE INCH  
AT FULL SCALE

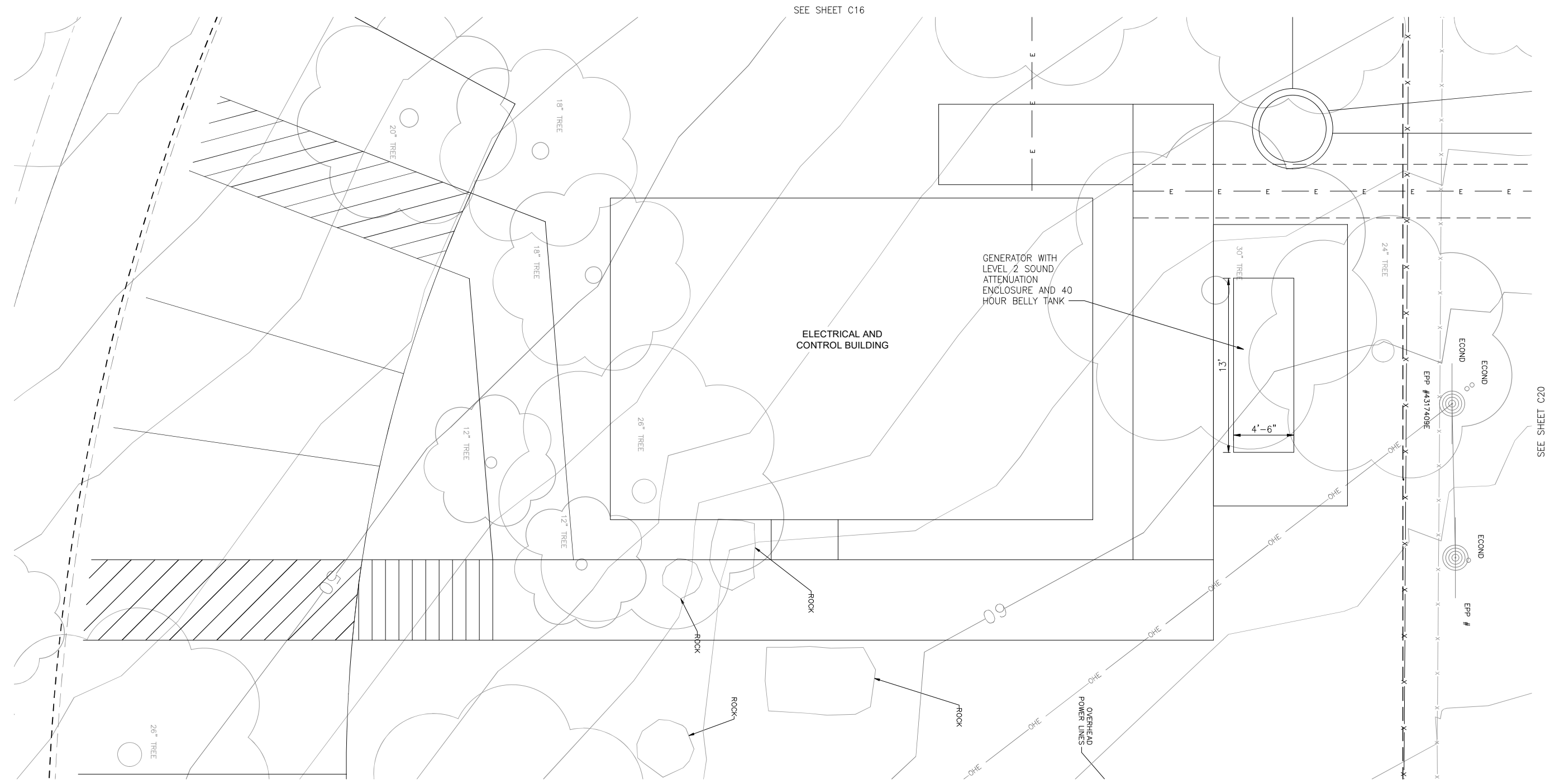


IDYLLWILD TREATMENT PLANT  
RAS / WAS PUMP  
STATION  
IDYLLWILD, CA

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CONSTRUCTION

DATE: 9/5/24	NO.	REVISIONS	BY	APP	DATE
DESIGN: NMT					
DRAWN: MAH					
CHECKED: NMT					

SHEET 14 OF X  
**C17**



SEE SHEET C16

SEE SHEET C20



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1234 N MARKET BLVD  
SACRAMENTO, CA 95834  
(916) 553-4900

1"=4'  
ONE INCH  
AT FULL SCALE

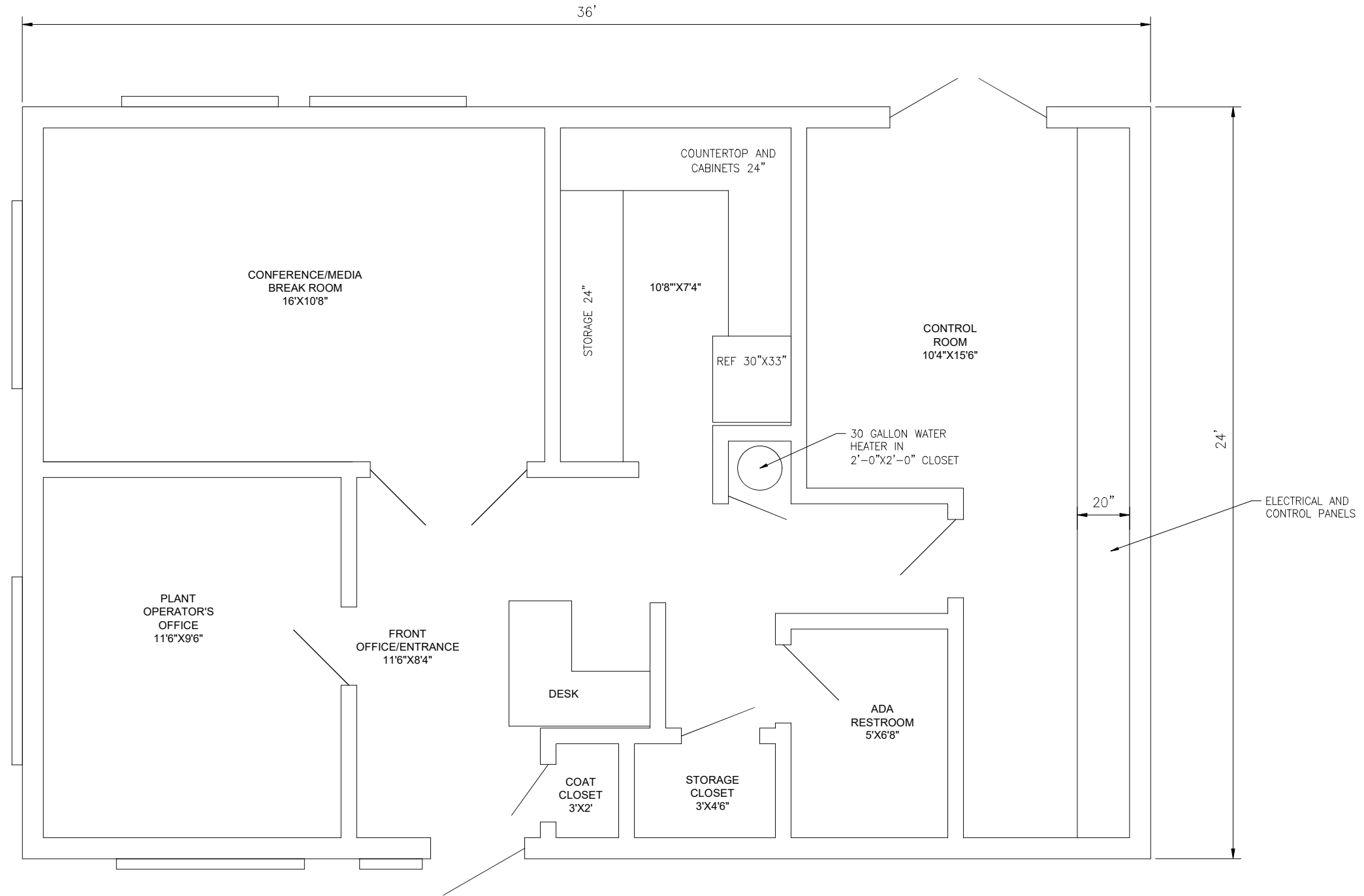


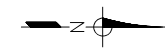
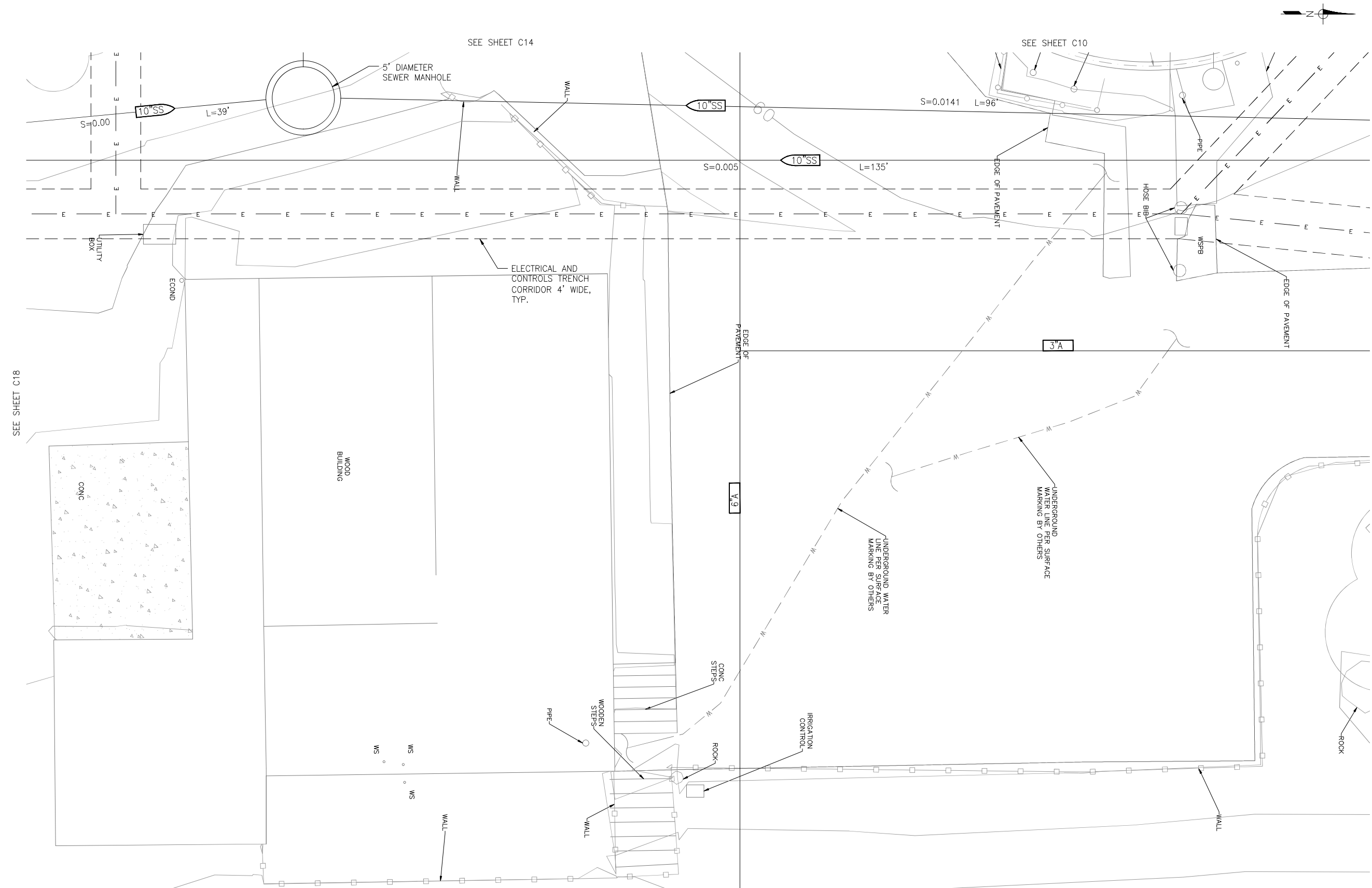
IDYLLWILD TREATMENT PLANT  
ELECTRICAL AND CONTROL BUILDING  
PLAN  
IDYLLWILD, CA

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CONSTRUCTION

DATE:	NO.	REVISIONS	BY	APP	DATE
9/5/24					
DESIGN: NMT					
DRAWN: MAH					
CHECKED: NMT					

SHEET 15 OF X  
**C18**





SEE SHEET C18

SEE SHEET C6

**California**  
Rural Water Association

C R W A  
1234 N MARKET BLVD  
SACRAMENTO, CA 95834  
(916) 553-4900

1"=4'  
ONE INCH  
AT FULL SCALE

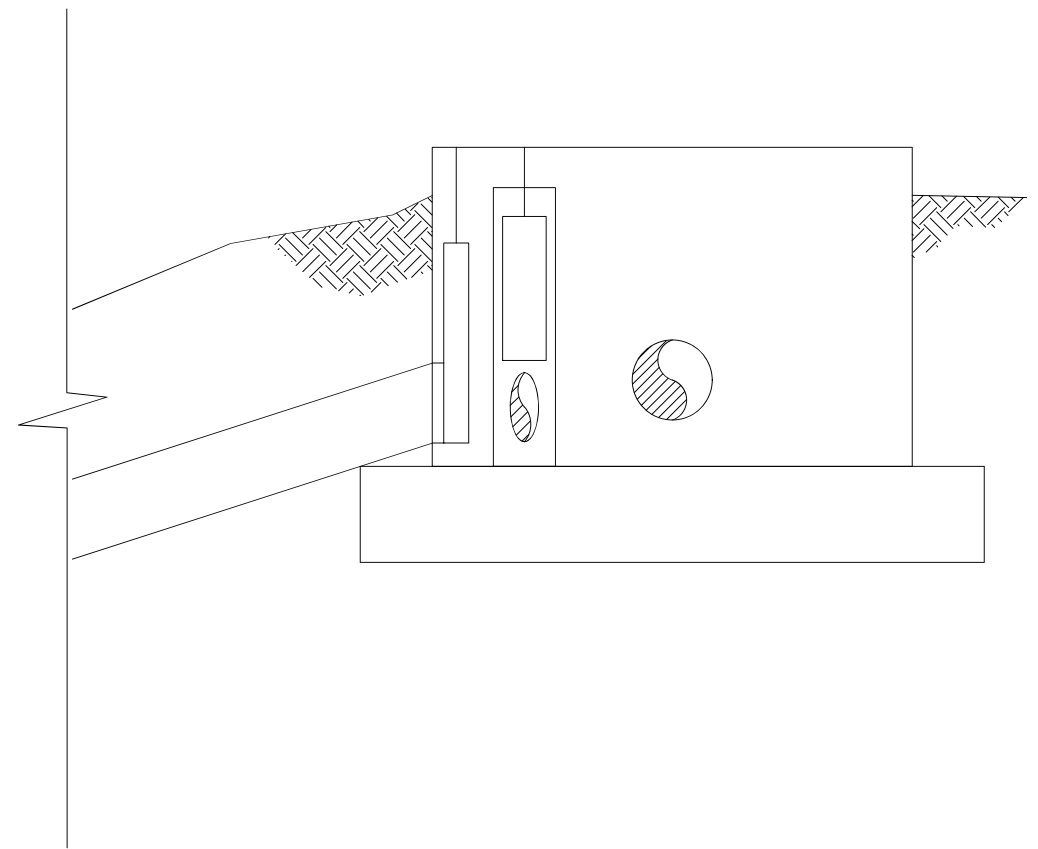
**DIGALERT**  
CALL AT LEAST TWO  
WORKING DAYS  
BEFORE YOU DIG



IDYLLWILD TREATMENT PLANT  
YARD TRENCH  
PLAN  
IDYLLWILD, CA

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CONSTRUCTION

DATE:	NO.	REVISIONS	BY	APP	DATE	SHEET 16 OF X
9/5/24						C20
DESIGN: NMT						
DRAWN: MAH						
CHECKED: NMT						



**California**  
Rural Water Association

C R W A  
1234 N MARKET BLVD  
SACRAMENTO, CA 95834  
(916) 553-4900

1"=4'  
ONE INCH  
AT FULL SCALE



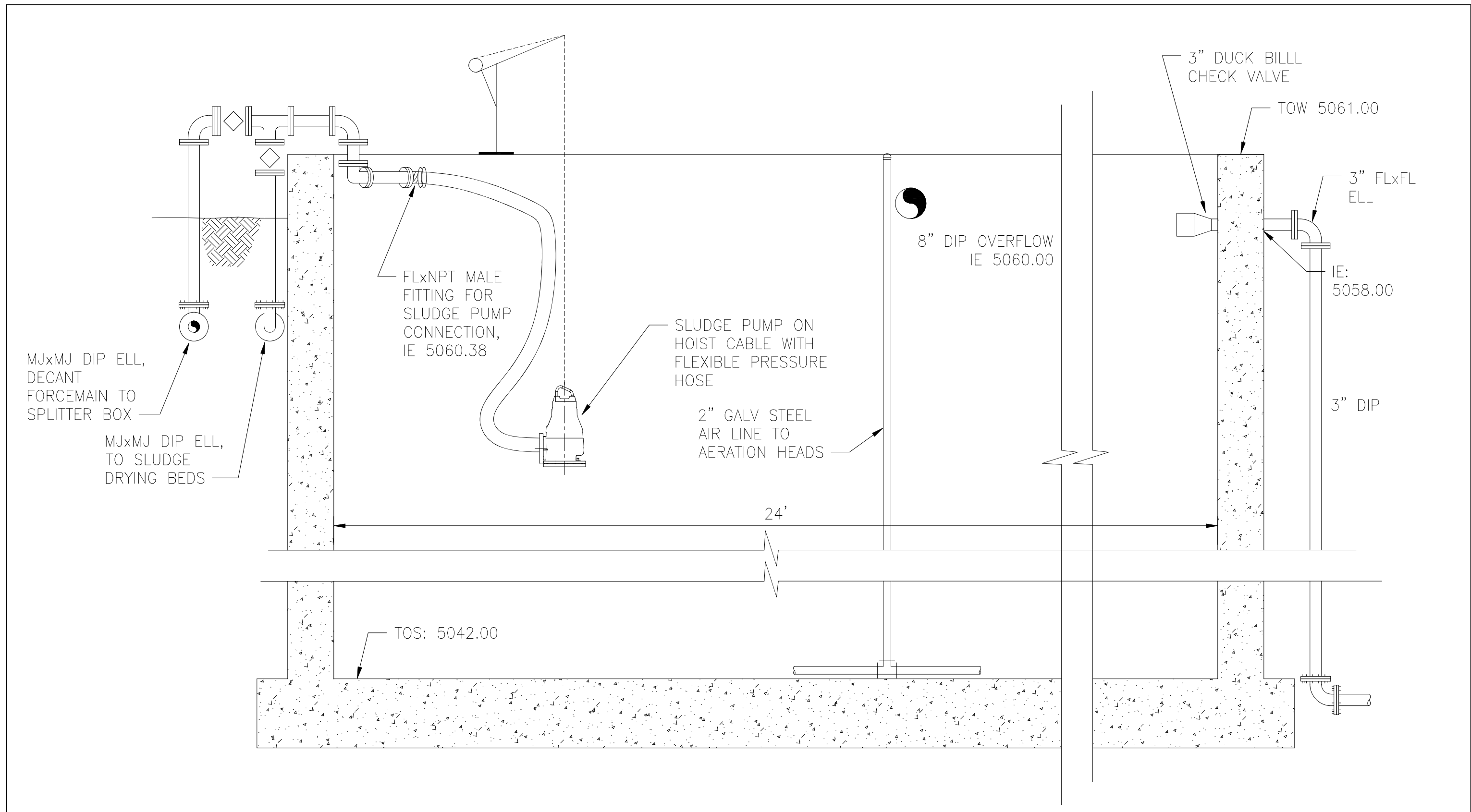
IDYLLWILD TREATMENT PLANT  
YARD TRENCH  
SECTIONS  
IDYLLWILD, CA

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CONSTRUCTION

DATE:	9/5/24	NO.	REVISIONS	BY	APP	DATE	SHEET 16 OF X
DESIGN:	NMT						C21
DRAWN:	MAH						
CHECKED:	NMT						







**SLUDGE SETTLING TANK SECTION**

1"=1'-0"

<p><b>California</b> Rural Water Association</p>	<p>C R W A 1234 N MARKET BLVD SACRAMENTO, CA 95834 (916) 553-4900</p>	<p>1"=1' ONE INCH AT FULL SCALE</p>	<p>CALL AT LEAST TWO WORKING DAYS BEFORE YOU DIG</p>		<p>IDYLLWILD TREATMENT PLANT SLUDGE SETTLING TANK SECTIONS IDYLLWILD, CA</p>	<p>DRAFT -- NOT FOR CONSTRUCTION</p>	DATE: 9/5/24	NO.	REVISIONS	BY	APP	DATE	SHEET 10 OF X
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C23

D:\Projects\active\WDX21-001 - Idyllwild WTP Modernization - Design\AutoCAD\ACT\WDX21-001 - E01 - ELEC SYMBOLS.dwg 8-30-24 03:28:50 PM JosephDonati

SINGLE LINE DIAGRAM SYMBOLS	SINGLE LINE DIAGRAM SYMBOLS (CONT.)	SCHEMATIC DIAGRAM SYMBOLS	SCHEMATIC DIAGRAM SYMBOLS (CONT.)	LIGHTING SYMBOLS
<p><b>THERMAL MAGNETIC CIRCUIT BREAKER</b></p> <p>30AT ← AMP TRIP 100AF ← AMP FRAME</p> <p><b>MCP CIRCUIT BREAKER</b></p> <p>100A ← CONTINUOUS AMPS MCP ← TRIP SETTING BASED ON MOTOR HORSEPOWER</p> <p><b>LOW VOLTAGE DRAWOUT CIRCUIT BREAKER</b></p> <p>20AT (LSIG) 100AF L = LONG TIME S = SHORT TIME I = INSTANTANEOUS G = GROUND FAULT</p> <p><b>COMBINATION NEMA RATED MOTOR STARTER</b></p> <p>30A ← NEMA X MCP Y ← NEMA SIZE X = NEMA SIZE Y = TYPE (FVNR, FVR)</p> <p><b>VARIABLE FREQUENCY DRIVE</b> X = HP RATING</p> <p><b>REDUCED VOLTAGE SOLID STATE STARTER</b> X = HP RATING</p> <p><b>PACKAGED EQUIPMENT</b> X = EQUIPMENT SIZE Y = TYPE (KW, KVA, OR HP AS INDICATED)</p> <p><b>KEY INTERLOCK</b></p> <p><b>TRANSFER SWITCH (MANUAL OR AUTOMATIC)</b></p> <p><b>AMMETER SWITCH</b></p> <p><b>CONTROL SWITCH</b></p> <p><b>SHORTING BLOCK</b></p> <p><b>VOLTMETER SWITCH</b></p> <p><b>METERING DEVICE</b> X = METER TYPE</p> <p>100/5</p> <p>WHM — WATT HOUR METER WM — WATT METER AM — AMMETER VM — VOLTMETER PFM — POWER FACTOR METER</p> <p><b>POTENTIAL TRANSFORMER</b> RATIO AND NUMBER OF PT'S AS INDICATED</p> <p>(3)</p> <p><b>CURRENT TRANSFORMER</b> RATIO AND NUMBER OF CT'S AS INDICATED</p> <p>(3)</p> <p>5A FUSE SIZE AS INDICATED</p> <p>X FLA MOTOR SFA X = HORSEPOWER</p> <p><b>DELTA-WYE TRANSFORMER WITH SECONDARY KVA SIZE AND VOLTAGE RATIO AS INDICATED</b></p> <p>Y</p>	<p><b>FUSED CONTROL POWER TRANSFORMER</b></p> <p><b>ELECTRICAL MOTOR OPERATED VALVE, WITH INTEGRAL REVERSING STARTER</b></p> <p>MOV</p> <p>30A DISCONNECT SWITCH SIZE AS INDICATED</p> <p>30A DISCONNECT SWITCH WITH EMERGENCY STOP SIZE AS INDICATED</p> <p>ESTP DISCONNECT SWITCH WITH EMERGENCY STOP SIZE AS INDICATED</p> <p>ESTP X Y FUSED DISCONNECT SWITCH SIZE AS INDICATED X = DISC SIZE Y = FUSE SIZE</p> <p>CAPACITOR</p> <p>SPD SURGE PROTECTIVE DEVICE</p> <p>SSM SOLID STATE METERING DEVICE</p> <p>LIGHTNING ARRESTOR AND SURGE CAPACITOR</p> <p>X</p> <p>POWER FILTER/CONDITIONER</p> <p><b>CONDUIT AND RACEWAY SYMBOLS</b></p> <p>EXPOSED OR CONCEALED CONDUIT</p> <p>CONDUIT RUN (IN CONCRETE)</p> <p>CONDUIT RUN (UNDERGROUND)</p> <p>CONDUIT RUN (CHANGE IN ELEVATION)</p> <p>CONDUIT TURNING UP</p> <p>CONDUIT TURNING DOWN</p> <p>CONDUIT GROUPED TOGETHER AND SHOWN AS SINGLE LINE FOR CLARITY</p> <p>CONDUIT FROM FLOOR ABOVE TO FLOOR BELOW</p> <p>CONDUIT CAPPED, OR SEALED</p> <p>HOMERUN TO EQUIPMENT INDICATED (3/4" CONDUIT 2#12, 1#12GND UNLESS INDICATED OTHERWISE)</p> <p><b>MISCELLANEOUS SYMBOLS</b></p> <p>JUNCTION BOX OR FITTING</p> <p>POWER PANEL</p> <p>MOTOR</p> <p>THERMOSTAT</p> <p>FIELD DEVICE</p> <p>FIELD CONTROL STATION / DISCONNECT</p> <p><b>GROUNDING SYMBOLS</b></p> <p>GROUND ROD AND GROUND WELL</p> <p>GROUND ROD (3/4" X 10'-0")</p> <p>GROUND CONNECTION - "C" TAP GROUND CONNECTION</p> <p>GROUND CONNECTION - EXOTHERMIC TYPE</p> <p>GROUND CONNECTION - EXOTHERMIC TYPE</p> <p>BARE COPPER GROUND TO GROUND WIRE IN SLAB, OR UNDERGROUND GROUND GRID</p> <p>EARTH GROUNDING</p>	<p>SINGLE POLE TOGGLE SWITCH</p> <p>VACUUM OR PRESSURE SWITCH CLOSE/OPEN ON RISING PRESSURE</p> <p>FLOAT LEVEL SWITCH CLOSE/OPEN ON RISING LEVEL</p> <p>NORMALLY OPEN/CLOSED</p> <p>NORMALLY OPEN HELD CLOSED/OPEN</p> <p>MAINTAINED POSITION</p> <p>TS1 TS1 TEMPERATURE SWITCH CLOSE/OPEN ON RISING TEMPERATURE</p> <p>FLOW SWITCH CLOSE/OPEN ON INCREASING FLOW</p> <p>TORQUE SWITCH OPEN ON INCREASING TORQUE</p> <p>SOLENOID VALVE</p> <p><b>PLC INPUTS/OUTPUTS</b></p> <p>DIGITAL INPUT TO PLC/RTU/DCS</p> <p>DIGITAL OUTPUT FROM PLC/RTU/DCS NORMALLY OPEN</p> <p>DIGITAL OUTPUT FROM PLC/RTU/DCS NORMALLY CLOSED</p> <p>ANALOG INPUT TO PLC/RTU/DCS 4-20 mA (UNLESS INDICATED OTHERWISE)</p> <p>ANALOG OUTPUT FROM PLC/RTU/DCS 4-20 mA (UNLESS INDICATED OTHERWISE)</p> <p><b>OPERATIONAL CONTROLS</b></p> <p>E-STOP OR LOS PUSHBUTTON</p> <p>OPEN NORMALLY OPEN PUSHBUTTON</p> <p>STOP NORMALLY CLOSED PUSHBUTTON</p> <p>TWO - POSITION SWITCH</p> <p>NO/NC MAINTAINED PUSHBUTTON</p> <p>THREE - POSITION SELECTOR SWITCH</p> <p>TWO - POSITION SELECTOR SWITCH</p> <p>THREE - POSITION SPRING RETURN-TO-CENTER MOMENTARY CONTACT SWITCH</p>	<p><b>CONTROL RELAY AND CONTACTS</b></p> <p>M1 CONTROL RELAY OR COIL X = DEVICE</p> <p>CR — CONTROL RELAY TD — TIME DELAY RELAY (TIMING AS INDICATED) M — MOTOR STARTER PC — PHOTOCELL</p> <p>CR NORMALLY OPEN CONTACT</p> <p>CR NORMALLY CLOSED CONTACT</p> <p>XXXX NORMALLY OPEN CONTACT LINE REFERENCE</p> <p>XXXX NORMALLY CLOSED CONTACT LINE REFERENCE</p> <p><b>TIMED DELAY RELAY CONTACTS</b></p> <p><b>ENERGIZED</b></p> <p>TD1 NORMALLY OPEN WITH TIME DELAY CLOSING</p> <p>TD1 NORMALLY CLOSED WITH TIME DELAY OPENING</p> <p><b>DE-ENERGIZED</b></p> <p>TD1 NORMALLY OPEN WITH INSTANT CLOSING AND TIME DELAY OPENING</p> <p>TD1 NORMALLY CLOSED WITH INSTANT OPENING AND TIME DELAY CLOSING</p> <p><b>MISCELLANEOUS SYMBOLS</b></p> <p>X PILOT LIGHT X = LENS COLOR R — RED G — GREEN A — AMBER W — WHITE</p> <p>X PILOT LIGHT (PUSH-TO-TEST) X = LENS COLOR (SEE ABOVE)</p> <p>HORN</p> <p>ETM ELAPSED TIME METER</p> <p>HTR HEATER</p> <p>GROUND CONNECTION</p> <p>CROSSING OF CONDUCTORS - NOT CONNECTED</p> <p>CROSSING OF CONDUCTORS - CONNECTED</p> <p>FUSE</p> <p>VOLTAGE SURGE SUPPRESSOR</p> <p>FAN</p> <p>CIRCUIT BREAKER</p> <p>TERMINAL BLOCK - IN MCC</p> <p>TERMINAL BLOCK - IN FIELD</p> <p>DEVICE TERMINAL</p> <p>EARTH GROUNDING</p> <p>ELECTRICAL FIELD WIRING</p> <p>ELECTRICAL SCHEMATIC WIRING</p> <p>EQUIPMENT BOUNDARY</p>	<p><b>LUMINAIRE</b> X = LIGHTING PANEL DESIGNATION # = CIRCUIT NUMBER a = SWITCH DESIGNATION</p> <p>WALL MOUNTED LUMINAIRE</p> <p>POLE, BRACKET, ARM, AND STREETLIGHT</p> <p>FLUORESCENT LUMINAIRE</p> <p>EMERGENCY LUMINAIRE BATTERY OPERATED</p> <p>EXIT LIGHT, SHOWN WITH TWO ILLUMINATED SIDES, ARROWS INDICATE DIRECTION OF EXIT</p> <p>LUMINAIRE CALLOUT A = LUMINAIRE TYPE * = APPROXIMATE MOUNTING HEIGHT AFF CLG = CEILING MOUNT (SEE LUMINAIRE SCHEDULE FOR MORE DETAILS)</p> <p>LIGHT SWITCH X = LIGHTING PANEL DESIGNATION # = CIRCUIT DESIGNATION a = SWITCH DESIGNATION * = SWITCH TYPE</p> <p>3 — 3 WAY 4 — 4 WAY D — DIMMER M — MANUAL MOTOR STARTER</p> <p>X-# 120V DUPLEX RECEPTACLE, NEMA CONFIGURATION 5-20R (WALL MOUNT) X = PANELBOARD DESIGNATION # = CIRCUIT DESIGNATION * = TYPE</p> <p>WP — WEATHERPROOF XP — EXPLOSION PROOF GFCI — GROUND FAULT CIRCUIT INTERRUPTER</p> <p>120V DUPLEX RECEPTACLE, NEMA CONFIGURATION 5-20R (FLOOR MOUNT)</p> <p>WELDING RECEPTACLE X = AMPERAGE</p> <p>SPECIAL PURPOSE RECEPTACLE, 480 VAC X = AMPERAGE</p>



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(916) 553-4900

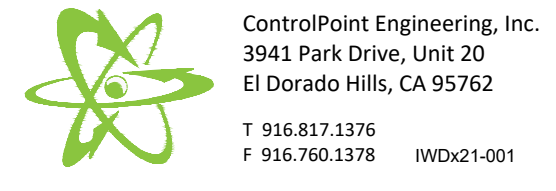
AS NOTED  
ONE INCH  
AT FULL SCALE



IDYLLWILD TREATMENT PLANT  
ELECTRICAL SYMBOLS  
IDYLLWILD, CA

DRAFT --  
NOT FOR  
CONSTRUCTION

DATE:	6/13/24	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
DESIGN:	MB						E001
DRAWN:	JD						
CHECKED:	JP						



ControlPoint Engineering, Inc.  
3941 Park Drive, Unit 20  
El Dorado Hills, CA 95762  
T 916.817.1376  
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ELECTRICAL ABBREVIATIONS		GENERAL ELECTRICAL NOTES		GENERAL ELECTRICAL NOTES (CONT.)	
<p>A AMPERE, AUTOMATIC AC ALTERNATING CURRENT AF CIRCUIT BREAKER FRAME SIZE AHF ACTIVE HARMONIC FILTER AM AMMETER ANN ANNUNCIATOR ASD ADJUSTABLE SPEED DRIVE AT AMPERE TRIP ATS AUTOMATIC TRANSFER SWITCH AUTO AUTOMATIC AWG AMERICAN WIRE GAUGE</p> <p>BATT BATTERY BC BARE COPPER BKR BREAKER</p> <p>C CONDUIT, CLOSED CB CIRCUIT BREAKER CKT CIRCUIT CLF CURRENT LIMITING FUSE CLG CEILING COM COMMON COMM COMMUNICATIONS COMP COMPARTMENT CP CONTROL PANEL CPT CONTROL POWER TRANSFORMER CR CONTROL RELAY, CARD READER CT CURRENT TRANSFORMER</p> <p>DCS DISTRIBUTED CONTROL SYSTEM DISC DISCONNECT DISTR DISTRIBUTION DP DISTRIBUTION PANEL DPDT DOUBLE POLE DOUBLE THROW DPST DOUBLE POLE SINGLE THROW</p> <p>E EMERGENCY EMT ELECTRICAL METALLIC TUBING ENCL ENCLOSURE ETM ELAPSED TIME METER EUPS ENGINE UTILITY PARALLELING SYSTEM</p> <p>F FREQUENCY, FUSE, FIXED FDR FEEDER FLA FULL LOAD AMPS FLUOR FLUORESCENT FM FREQUENCY METER FO FIBER OPTIC FPR FEEDER PROTECTION RELAY FVR FULL VOLTAGE REVERSING FVNR FULL VOLTAGE NON-REVERSING</p> <p>GEN GENERATOR GFCI GROUND FAULT CIRCUIT GFP INTERRUPTER GND GROUND FAULT PROTECTION GROUND</p> <p>H HAND HH HAND HOLE HID HIGH INTENSITY DISCHARGE HOA HAND-OFF-AUTOMATIC HPS HIGH PRESSURE SODIUM HRN HORN HS HAND SWITCH HZ HERTZ</p> <p>IMC INTERMEDIATE METALLIC CONDUIT INCAND INCANDESCENT IND INDICATION INST INSTANTANEOUS I/O INPUT/OUTPUT Isc SHORT CIRCUIT CURRENT, AMPS ISO ISOLATION</p> <p>J,JB JUNCTION BOX</p> <p>KA KILO AMPERES KAIC KILO AMP INTERRUPTING CURRENT KMIL KILO CIRCULAR MILS KV KILOVOLT KVA KILOVOLT AMPERE KW KILOWATT</p> <p>LCP LOCAL CONTROL PANEL LCS LOCAL CONTROL STATION LOC LOCAL LOR LOCAL-OFF-REMOTE LOS LOCKOUT STOP PUSHBUTTON LP LIGHTING PANEL LRA LOCKED ROTOR AMPS LS LEVEL SWITCH LTCP LIGHTING CONTROL PANEL LTG LIGHTING LTS LIGHTS</p>	<p>M MOTOR CONTACTOR COIL mA MILLIAMPERE MCC MOTOR CONTROL CENTER MCP MOTOR CIRCUIT PROTECTOR MLO MAIN LUGS ONLY MOV MOTOR OPERATED VALVE MSC MANUFACTURER SUPPLIED CABLE MTS MANUAL TRANSFER SWITCH</p> <p>NEUT NEUTRAL NP NAMEPLATE</p> <p>O OPEN, OFF OL OVERLOAD</p> <p>PA PUBLIC ADDRESS PB PUSHBUTTON, PULLBOX PC PHOTOCELL PCM PROCESS CONTROL MODULE PF POWER FACTOR PFM POWER FACTOR METER PH PHASE PL PILOT LIGHT PLC PANELBOARD PNLBD PROGRAMMABLE LOGIC CONTROLLER PP POWER PANELBOARD POS POSITION POT POTENTIOMETER PRI PRIMARY PT POTENTIAL TRANSFORMER PTZ PAN-TILT-ZOOM PWR POWER</p> <p>R REMOTE RECPT RECEPTACLE RGS RIGID GALVANIZED STEEL RMS ROOT MEAN SQUARE RTU REMOTE TERMINAL UNIT RVSS REDUCED VOLTAGE SOLID STATE</p> <p>SEL SW SELECTOR SWITCH SEQ SEQUENCE SHLD SHIELDED SIG SIGNAL SP SPARE SP HTR SPACE HEATER SPD SURGE PROTECTIVE DEVICE SPDT SINGLE POLE DOUBLE THROW SPST SINGLE POLE SINGLE THROW SSM SOLID STATE METER SSMP SOLID STATE MOTOR PROTECTOR ST, SH SHUNT TRIP STB STANDBY STR STARTER SSTU SOLID STATE TRIP UNIT SW SWITCH SWBD SWITCHBOARD SWGR SWITCHGEAR</p> <p>TB TERMINAL BOX TERM TERMINAL TM REPEAT CYCLE TIMER TD TIME DELAY RELAY TS TEMPERATURE SWITCH</p> <p>UPR UTILITY PROTECTION RELAY UPS UNINTERRUPTIBLE POWER SUPPLY</p> <p>V VOLTAGE, VOLTS VA VOLT AMPERE VAR VOLT AMPERE REACTIVE VM VOLTMETER VP VAPOR PROOF</p> <p>W WATTS, WIRE WM WATT METER WP WEATHERPROOF</p> <p>XFMR TRANSFORMER XMTR TRANSMITTER XP EXPLOSION PROOF</p>	<p>1. ALL RACEWAYS AND EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE AND APPLICABLE LOCAL CODES.</p> <p>2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF TERMINAL BOXES AND CONDUIT ENTRANCES OF ALL EQUIPMENT AGAINST APPROVED SHOP DRAWINGS BEFORE STUBBING UP CONDUITS.</p> <p>3. REFER TO SPECIFICATION SECTION 16110 FOR REQUIREMENTS RELATED TO FLEXIBLE CONDUIT INSTALLATION.</p> <p>4. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT OR STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO BEAMS AND WALLS.</p> <p>5. CONDUIT STUB-UPS SHALL NOT BE MORE THAN 6 INCHES FROM THE CENTERLINE OF TERMINAL BOXES.</p> <p>6. IN THE EVENT OF INTERFERENCE BETWEEN ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND OTHER EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING.</p> <p>7. LOCATION OF PULLBOXES ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE EXACT LOCATION WITH MECHANICAL PIPING AND SHALL BE 6 INCHES (MINIMUM) AWAY FROM MECHANICAL PIPING FLOW LINES.</p> <p>8. ONLY MAJOR PULLBOXES ARE SHOWN. THE CONTRACTOR SHALL PROVIDE ADDITIONAL PULLBOXES WHERE REQUIRED TO MAKE A WORKABLE INSTALLATION.</p> <p>9. THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE DETAILS WHETHER OR NOT THEY ARE REFERENCED ON THE DRAWINGS.</p> <p>10. ALL CONDUIT RUNS CROSSING EXPANSION JOINTS SHALL HAVE EXPANSION OR EXPANSION AND DEFLECTION TYPE FITTINGS. FOR LOCATIONS OF EXPANSION JOINTS, REFER TO THE STRUCTURAL DWGS.</p> <p>11. LUMINAIRES SHALL BE MOUNTED ACCORDING TO THE MOUNTING HEIGHT GIVEN ON THE DRAWINGS, WITH THE DISTANCE BEING MEASURED FROM THE BOTTOM OF THE LUMINAIRE TO THE FINISHED FLOOR. THE APPROPRIATE MOUNTING BRACKETS AND HARDWARE SHALL BE SUPPLIED.</p> <p>12. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.</p> <p>13. CONNECTIONS BETWEEN RIGID CONDUIT AND MOTOR TERMINAL BOXES OR SIMILAR EQUIPMENT SUBJECT TO VIBRATION SHALL BE FLEXIBLE LIQUID-TIGHT CONDUIT.</p> <p>14. CONDUITS SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTION TO MOTORS AND OTHER EQUIPMENT.</p> <p>15. CONDUITS FOR FUTURE EQUIPMENT OR EXTENSIONS SHALL BE TERMINATED AS SHOWN IN DETAIL OR AS SPECIFIED.</p> <p>16. MCC COMPARTMENT DESIGNATIONS SHALL BE AS FOLLOWS:  BLANK/SPACE: CONTAINS NECESSARY BUS AND HARDWARE FOR FUTURE ADDITION OF BREAKERS OR STARTERS.  SPARE: CONTAINS A COMPLETE INSTALLED BREAKER OR STARTER AVAILABLE FOR FUTURE USE.</p> <p>17. ALL MOTOR STARTER CONTROL POWER TRANSFORMERS SHALL BE SIZED TO PROVIDE SUFFICIENT VOLT-AMPERE CAPACITY FOR OPERATING ALL LOCAL AND REMOTE ELECTRICAL DEVICES ASSOCIATED WITH CONTROL OF THE MOTOR IN ADDITION TO THE STARTER COIL.</p> <p>18. MOTOR CONTROL CENTERS AND ALL FREE STANDING PANELS SHALL BE SET ON CONCRETE HOUSEKEEPING PADS WITH LEVELING CHANNELS EMBEDDED IN THE PAD.</p> <p>19. ALL RECEPTACLES IN OUTDOOR AND ANTICIPATED WET AREAS SHALL BE GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLES WITH WEATHERPROOF COVERS.</p>	<p>20. ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING THE PROJECT TO VERIFY THE SCOPE OF WORK WITH FIELD CONDITIONS. PARTICULAR ATTENTION SHOULD BE GIVEN TO NEW CONDUIT RUNS IN EXISTING BUILDINGS.</p> <p>21. EQUIPMENT LOCKOUTS SHALL BE IN STRICT ACCORDANCE WITH OWNER'S REQUIREMENTS.</p> <p>22. FOR LIGHTING AND RECEPTACLE SYSTEMS, ONLY CIRCUIT NUMBERS ARE SHOWN. CONTRACTOR SHALL PROVIDE ALL NECESSARY CONDUITS, WIRES, FITTINGS, JUNCTION BOXES AND ALL NECESSARY COMPONENTS SHOWN OR NOT SHOWN ON THE DRAWINGS, TO MAKE THE ELECTRICAL INSTALLATION COMPLETE AND OPERATIONAL. ALL CONDUIT RUNS SHALL BE CONCEALED UNLESS INDICATED OTHERWISE. CIRCUIT LOADING SHALL BE AS INDICATED IN THE PANEL SCHEDULES. ALL LIGHTING AND RECEPTACLE CIRCUITS SHALL INCLUDE GROUND WIRE.</p> <p>23. CONTRACTOR SHALL BE ADVISED THAT EVERY ATTEMPT HAS BEEN MADE TO INCLUDE ALL CONDUITS IN THE DUCTBANK SCHEDULES AND CONDUIT DEVELOPMENT DRAWINGS FOR SPECIFIC FACILITIES, HOWEVER THE CONTRACTOR IS RESPONSIBLE FOR ANY CONDUIT/WIRE THAT IS NOT SHOWN.</p> <p>24. ALL UNDERGROUND FACILITIES SHALL BE PROTECTED FROM DAMAGE. IF ANY UNDERGROUND FACILITIES ARE DAMAGED, IT SHALL BE REPORTED TO THE ENGINEER AND CONTRACTOR SHALL REPLACE OR REPAIR FACILITIES AT NO COST TO THE OWNER.</p> <p>25. THE FINAL DESIGN FOR CONCRETE EQUIPMENT PADS AND FOUNDATIONS SHALL BE PROVIDED BY THE CONTRACTOR IN A DESIGN-BUILD FORMAT. REFERENCE SPECIFICATION SECTIONS: * 01610: SEISMIC DESIGN CRITERIA * 01615: WIND DESIGN CRITERIA * 02020: GEOTECHNICAL REPORT PROVIDE STAMPED, SIGNED CALCULATIONS AND DRAWING FOR REVIEW AND APPROVAL OF THE ENGINEER BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER IN THE STATE OF CALIFORNIA.</p>		
				<b>ELECTRICAL DEMOLITION NOTES</b>	
				<p>1. BIDDING CONTRACTORS SHALL VISIT THE SITE TO ASSESS THE SCOPE OF DEMOLITION, REMOVAL AND MODIFICATION WORK.</p> <p>2. THE ELECTRICAL CONTRACTOR AND THE OWNER SHALL DE-ENERGIZE ALL WIRING PRIOR TO REMOVAL OF EQUIPMENT, DEVICES, MOTORS INSTRUMENTATION, CONTROL PANELS, ETC. CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FROM THE OWNER.</p> <p>3. EXPOSED RACEWAYS: REMOVE CONDUIT, WIRES, AND BOXES. PATCH TO MATCH EXISTING. FINISH-ALL OPENINGS IN WALLS AND FLOORS.</p> <p>4. CONCEALED CONDUITS IN THE SLAB: REMOVE EXISTING WIRES TO THE EXTENT POSSIBLE AND ABANDON CONDUITS IN THE SLAB. CUT CONDUIT FLUSH AND PATCH THE FLOOR TO MATCH EXISTING.</p>	



C R W A  
1234 N MARKET BLVD  
SACRAMENTO, CA 95834  
(916) 553-4900

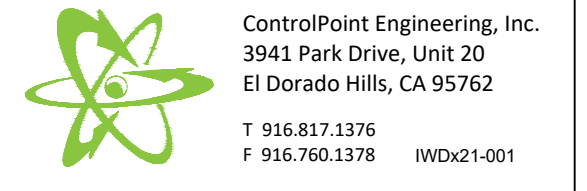
AS NOTED  
ONE INCH  
AT FULL SCALE



IDYLLWILD TREATMENT PLANT  
**ELECTRICAL ABBREVIATIONS  
AND GENERAL NOTES**  
IDYLLWILD, CA

DRAFT --  
NOT FOR  
CONSTRUCTION

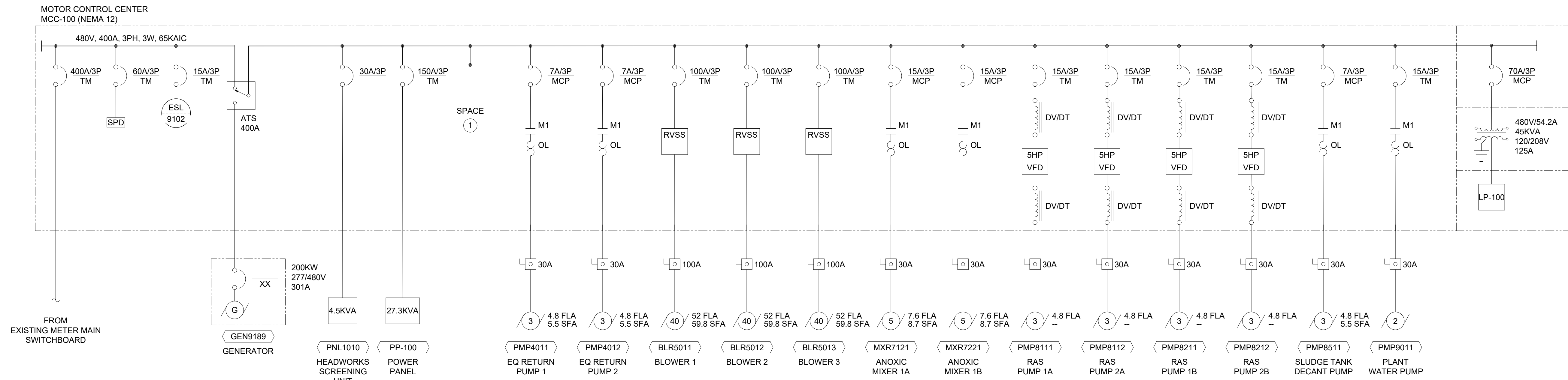
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DRAWN:	JD							
CHECKED:	JP							



- SHEET NOTES**
- PROVIDE MINIMUM SPACES FOR FUTURE MOTOR CONTROLS AS SHOWN ON MCC-100 ELEVATIONS. REFERENCE SHEET E004.

SERVICE LOAD CALCULATION				
LOAD CENTER: MSB-100 (E)		480 VAC, 3 PHASE		4-WIRE
FED FROM: SCE OH UTILITY		CONNECTED		UTILITY
EQUIPMENT DESCRIPTION	LOAD AMPS	LOAD (KVA)	RUN (KVA)	RUN (KVA)
MCC-100 MOTOR CONTROL CENTER 100	216.9	216.9	219.8	165.7
<b>SUBTOTAL (KVA)</b>		216.9	209.0	165.7
<b>SUBTOTAL (AMPS)</b>		260.9	251.3	199.3
<b>UTILITY:</b>	<b>GENERATOR:</b>			
SERVICE SIZE	251 A	SERVICE SIZE	199 A	
MAIN BREAKER SIZE	400 A	GEN SIZE (kW)	200	301 A
% LOADED	63%	% LOADED	66%	

LOAD CALCULATION									
LOAD CENTER: MCC-100					480 VAC, 3 PHASE SERVICE			3-WIRE	
EQUIPMENT NUMBER	HP	MOTOR CONTROL	EQUIPMENT DESCRIPTION	CONNECTED		UTILITY		GENERATOR	
				LOAD (AMPS)	LOAD (KVA)	RUN QTY	RUN (KVA)	RUN QTY	RUN (KVA)
PMP4011,2	3	FVNR	EQ LIFT PUMPS 1 & 2	4.8	4.0	1	4.0	1	4.0
BLR5011-3	40	SSRV	BLOWERS 1 - 3 (2(E) 1 (N))	52.0	129.7	3	129.7	2	86.5
MXR7121	5	FVNR	ANOXIC MIXER 1A	7.6	6.3	1	6.3	1	6.3
MXR7221	5	FVNR	ANOXIC MIXER 1B	7.6	6.3	1	6.3	1	6.3
PMP8111,2	3	VFD	RAS PUMP 1A - 2A	4.8	8.0	2	8.0	2	8.0
PMP8211,2	3	VFD	RAS PUMP 1B - 2B	4.8	8.0	2	8.0	2	8.0
PMP8011	3	FVNR	SLUDGE SETTLING TANK PUMP	4.8	4.0	1	4.0	1	4.0
PMP9011	2	FVNR	PLANT WATER PUMP	3.4	2.8	1	2.8	1	2.8
PP-100		CB	POWER PANEL	1	27.3	1	27.3	1	27.3
LP-100		CB	LIGHTING PANEL	1	12.5	1	12.5	1	12.5
<b>SUBTOTAL</b>					209.0		209.0		165.7
<b>LARGEST MOTOR @ 25%</b>				40	HP		10.8		
<b>TOTAL</b>							219.8		165.7
<b>3 PHASE CURRENT</b>				264 AMPS			100% MAXIMUM LOAD CURRENT		
<b>CALCULATED SERVICE SIZE</b>				264 AMPS					
<b>MAIN BREAKER SIZE</b>				400 AMPS					
<b>% MAIN BREAKER LOAD</b>				66%					

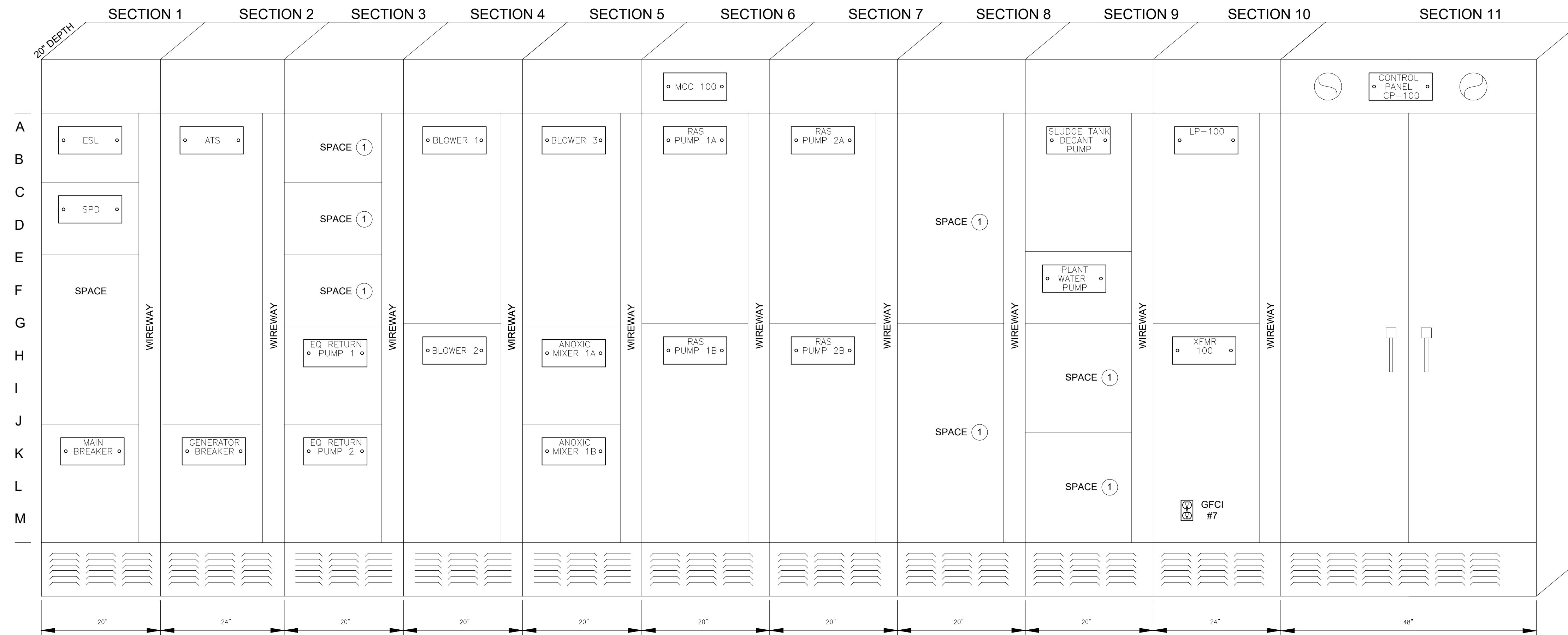


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	<b>California Rural Water Association</b> C R W A 1234 N MARKET BLVD SACRAMENTO, CA 95834 (916) 553-4900	AS NOTED ONE INCH AT FULL SCALE	CALL AT LEAST TWO WORKING DAYS BEFORE YOU DIG		IDYLLWILD TREATMENT PLANT SINGLE LINE DIAGRAM & LOAD CALCULATIONS IDYLLWILD, CA	DRAFT -- NOT FOR CONSTRUCTION	DATE: 6/13/24	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
							DESIGN: MB						
							DRAWN: JD						
							CHECKED: JP						

ControlPoint Engineering, Inc.  
 3941 Park Drive, Unit 20  
 El Dorado Hills, CA 95762  
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- SHEET NOTES**
- SPACES SHALL BE PROVIDED WITH DRAW-OUT BUCKETS AND BLANK HINGED DOORS.



**MOTOR CONTROL CENTER (MCC-100)**  
SCALE: NONE

PANEL SCHEDULE - PP-100												
LOCATION ELECTRICAL/CONTROL BUILDING MAIN BKR MLO AMPS												
VOLTAGE 480 SYSTEM 3φ, 3W 200												
TRIM SURFACE BUS RATING 225A												
CKT	LOAD	VA	AMPS	CB	PHASE LOADS-AMPS			CB	AMPS	VA	LOAD	CKT
					A	B	C					
1		1000	3.6		7.2			15/3	3.6	1000		2
3	MOG2041	1000	3.6	15/3		7.2		15/3	3.6	1000	MOV8141	4
5		1000	3.6				7.2		3.6	1000		6
7		1000	3.6		7.2				3.6	1000		8
9	MOG2042	1000	3.6	15/3		7.2		15/3	3.6	1000	MOV8142	10
11		1000	3.6				7.2		3.6	1000		12
13		1000	3.6		19.9				16.2	4500		14
15	MOG2043	1000	3.6	15/3		19.9		30/3	16.2	4500	HEADWORKS PANEL PNL-1010	16
17		1000	3.6				19.9		16.2	4500		18
19		2500	20.8		41.7				20.8	2500		20
21	LIGHTING TRANSFORM XFMR-LAB	2500	20.8	90/3		41.7		100/3	20.8	2500	MCC-EXISTING PUMP ROOM	22
23		2500	20.8				41.7		20.8	2500		24
25		0.0	0.0		0.0				0.0	0.0		26
27		0.0	0.0		0.0	0.0			0.0	0.0		28
29		0.0	0.0				0.0		0.0	0.0		30
31		0.0	0.0		0.0				0.0	0.0		32
33		0.0	0.0			0.0			0.0	0.0		34
35		0.0	0.0			0.0			0.0	0.0		36
Notes					A	B	C					
(L) Lockout Provision Required					76 A	76 A	76 A					
(H) HACR - Rated Breaker					9116 VA	9116 VA	9116 VA					
(G) Ground Fault Interrupt Rated Breaker					PHASE LOADS			AVERAGE	76 A			
(A) Arc-Fault Interrupt Rated Breaker					100%	100%	100%	TOTAL	27 KVA			

PANEL SCHEDULE - LP-100												
LOCATION MCC-100												
MAIN BKR 125A												
SYSTEM 3φ, 4W												
BUS RATING 125A												
CKT	LOAD	VA	AMPS	CB	PHASE LOADS-AMPS			CB	AMPS	VA	LOAD	CKT
					A	B	C					
1	CONTROL PANEL CP 100	640	5.3	20/1	6.3			20/1	1.0	120	LIGHTING-BLDG	2
3	LIGHTING-SITE	180	1.5	20/1		4.5		20/1	3.0	360	RECEPT-BLDG	4
5	RECEPT-SITE	360	3.0	20/1			8.0	20/1	5.0	600	SPARE	6
7	MCC-RECEPT	240	2.0	20/1	3.5			20/1	1.5	180	SPARE	8
9	SPARE	0	0.0	20/1		4.5		20/1	4.5	540	GENERATOR BATTERY CHARGER	10
11	SPARE	0	0.0	15/1			16.7	30/2	16.7	2000		12
13	SPARE	0	0.0	20/1	16.7			20/1	16.7	2000	GENERATOR BLOCK HEATER	14
15	SPARE	0	0.0	20/1		22.0		40/2 (H)	22.0	2640		16
17	SPARE	0	0.0	20/1			22.0	40/2 (H)	22.0	2640	ELECTRICAL BUILDING HVAC	18
19	SPARE	0	0.0	15/1	0.0				0.0	0	SPACE	20
21	SPARE	0	0.0			0.0			0.0	0	SPACE	22
23	SPARE	0	0.0				0.0		0.0	0	SPACE	24
25	SPARE	0	0.0	15/1	0.0			15/1	0.0	0	SPACE	26
27	SPARE	0	0.0			0.0		15/1	0.0	0	SPACE	28
29	SPARE	0	0.0	15/2			0.0	15/1	0.0	0	SPACE	30
31	SPARE	0	0.0	15/1	0.0			15/1	0.0	0	SPACE	32
33	SPARE	0	0.0	15/1		0.0		15/1	0.0	0	SPACE	34
35	SPARE	0	0.0				0.0	15/1	0.0	0	SPACE	36
37	SPARE	0	0.0		0.0				0.0	0	SPACE	38
39	SPARE	0	0.0			0.0			0.0	0	SPACE	40
41	SPARE	0	0.0				0.0		0.0	0	SPACE	42
Notes					A	B	C					
(L) Lockout Provision Required					27 A	31 A	47 A					
(H) HACR - Rated Breaker					3180 VA	3720 VA	5600 VA					
(GFI) Ground Fault Interrupt Rated Breaker					PHASE LOADS			TOTAL	12500 VA	208 V		
(AFI) Arc-Fault Interrupt Rated Breaker					76%	89%	134%	AMPS	35 A			

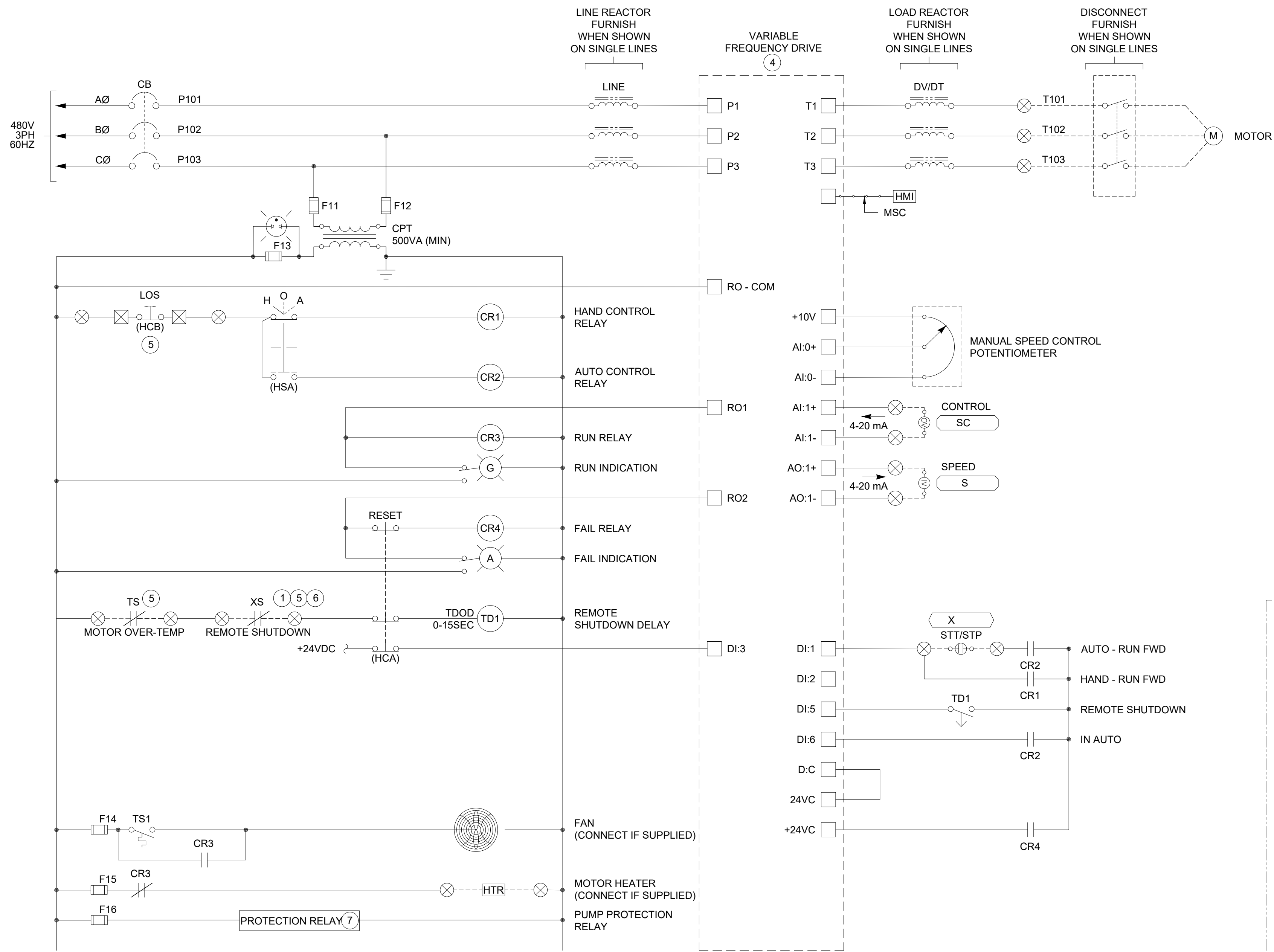
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	<b>California</b> Rural Water Association C R W A 1234 N MARKET BLVD SACRAMENTO, CA 95834 (916) 553-4900	AS NOTED ONE INCH AT FULL SCALE	 CALL AT LEAST TWO WORKING DAYS BEFORE YOU DIG		IDYLLWILD TREATMENT PLANT MCC ELEVATIONS AND LOAD CALCULATIONS IDYLLWILD, CA	DRAFT -- NOT FOR CONSTRUCTION	DATE: 6/13/24	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
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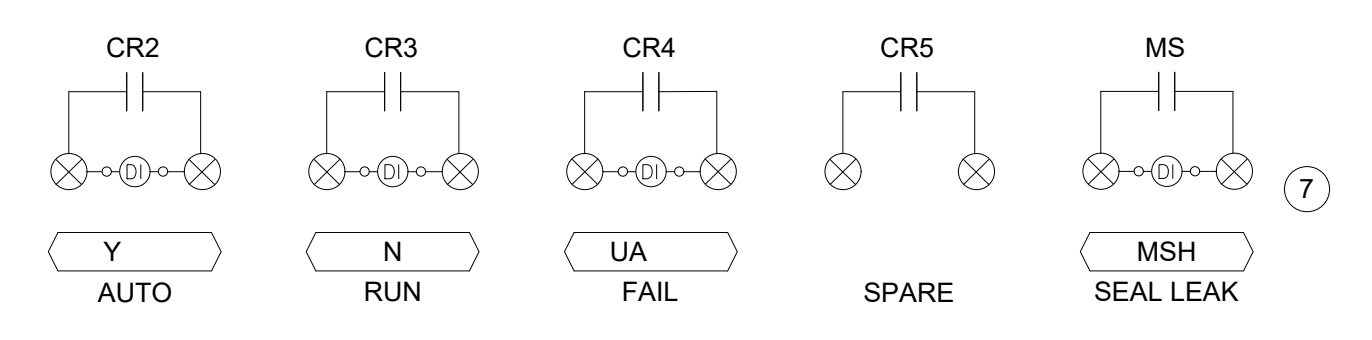
ControlPoint Engineering, Inc.  
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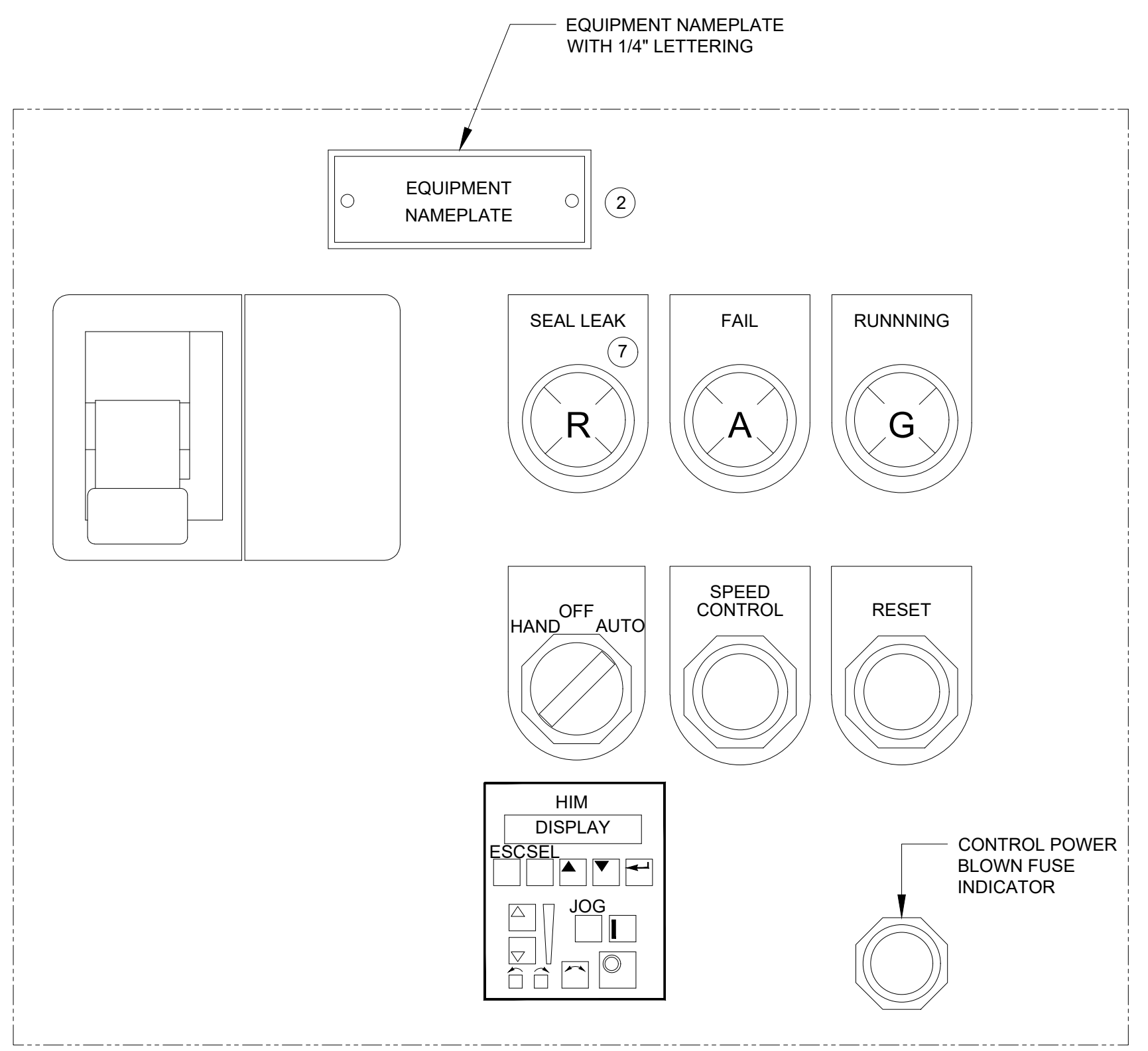
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**DETAIL 1**  
VFD MOTOR CONTROL DIAGRAM  
(CONTROLLED FROM MCC)  
SCALE: NONE



**DETAIL 3**  
FIELD CONTROL STATION  
ELEVATION  
SCALE: NONE



**DETAIL 2**  
MCC CUBICAL  
ELEVATION  
SCALE: NONE

**GENERAL NOTES**

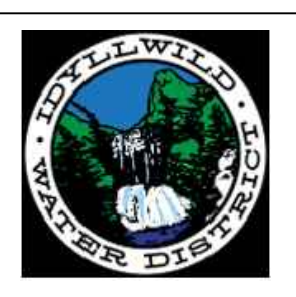
A. THESE DRAWINGS SHOW GENERAL CONTROL PHILOSOPHY AND DEVICES. NOT ALL REQUIRED CONTROL COMPONENTS AND DEVICES ARE SHOWN. CONTRACTOR IS RESPONSIBLE TO PROVIDE COMPLETE AND FUNCTIONAL SYSTEM.

- SHEET NOTES**
1. REMOTE SHUTDOWN XS => LSL, ZSHH, PSHH, ETC. PER P&ID. JUMPER IF NOT USED. THESE ARE TO BE CONTACTS OFF OF AUXILIARY RELAY CONTACTS LOCATED IN MCC CONTROL PANEL DRIVEN FROM FIELD DEVICE.
  2. EQUIPMENT NAMEPLATE TO CONTAIN EQUIPMENT DESCRIPTION AND EQUIPMENT NUMBER PER ELEVATION DIAGRAM. MOUNT ON OR ABOVE DEVICE BOX ON FCS.
  3. ILLUMINATED PUSH BUTTON RESET, TRIP CAUSE LED STATUS.
  4. ELECTRONIC OVERLOAD WITH PHASE LOSS PROTECTION, DIGITAL CURRENT SETTING, GROUND FAULT TRIP, AND SELECTABLE TRIP CLASS.DRIVE TYPE AS SHOWN ON ONE LINE DIAGRAM.
  5. JUMPER DEVICE IF NOT REQUIRED.
  6. PROVIDE QUANTITY OF LOCKOUT RELAY CONTACTS AS REQUIRED BY P&IDS.
  7. PUMP PROTECTION RELAY PROVIDED BY PUMP SUPPLIER INSTALLED BY MCC SUPPLIER WHEN SHOWN ON P&ID'S.



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AS NOTED  
ONE INCH  
AT FULL SCALE



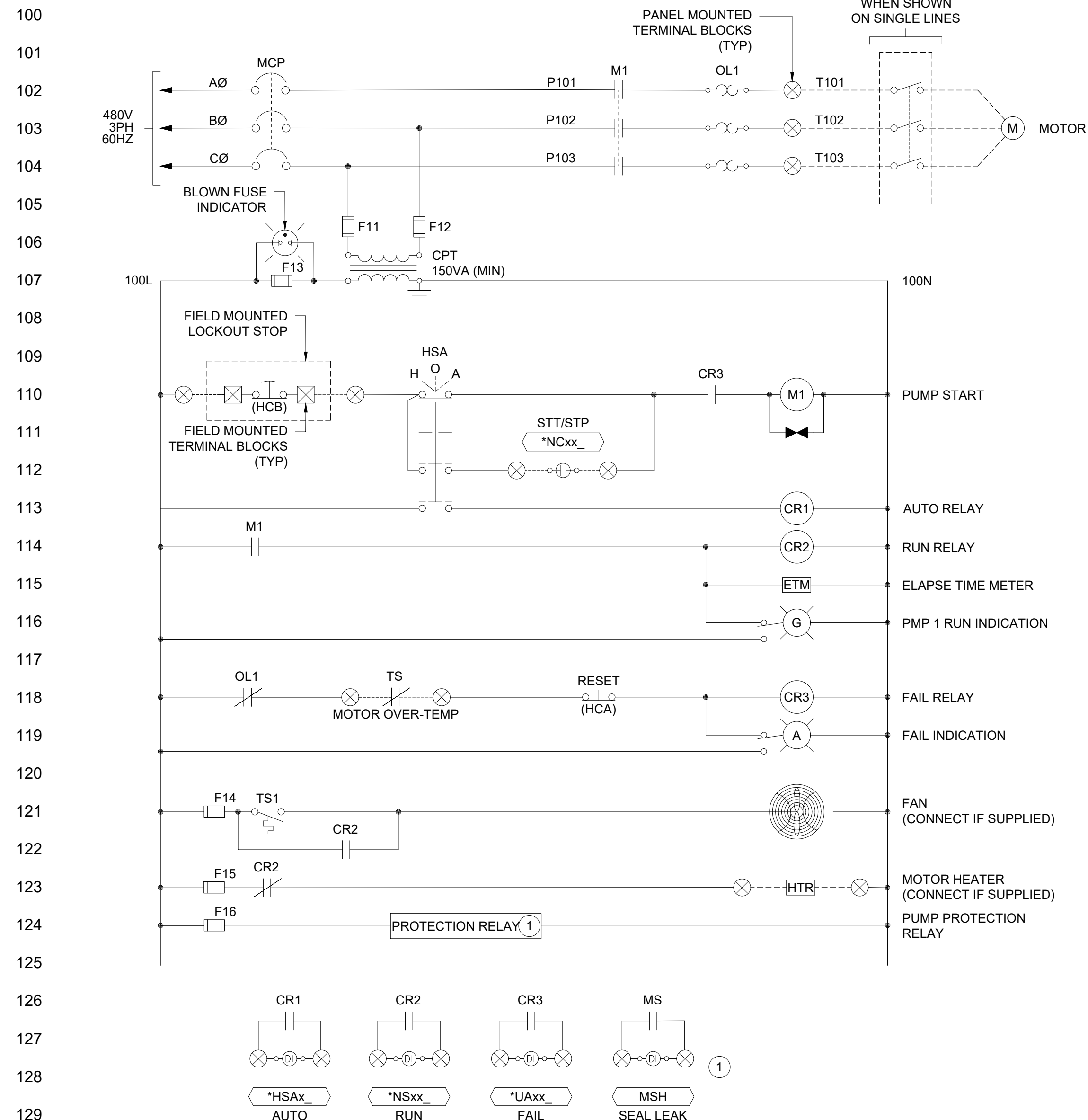
IDYLLWILD TREATMENT PLANT  
VFD DIAGRAM  
(CONTROLLED FROM MCC)  
IDYLLWILD, CA

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CONSTRUCTION

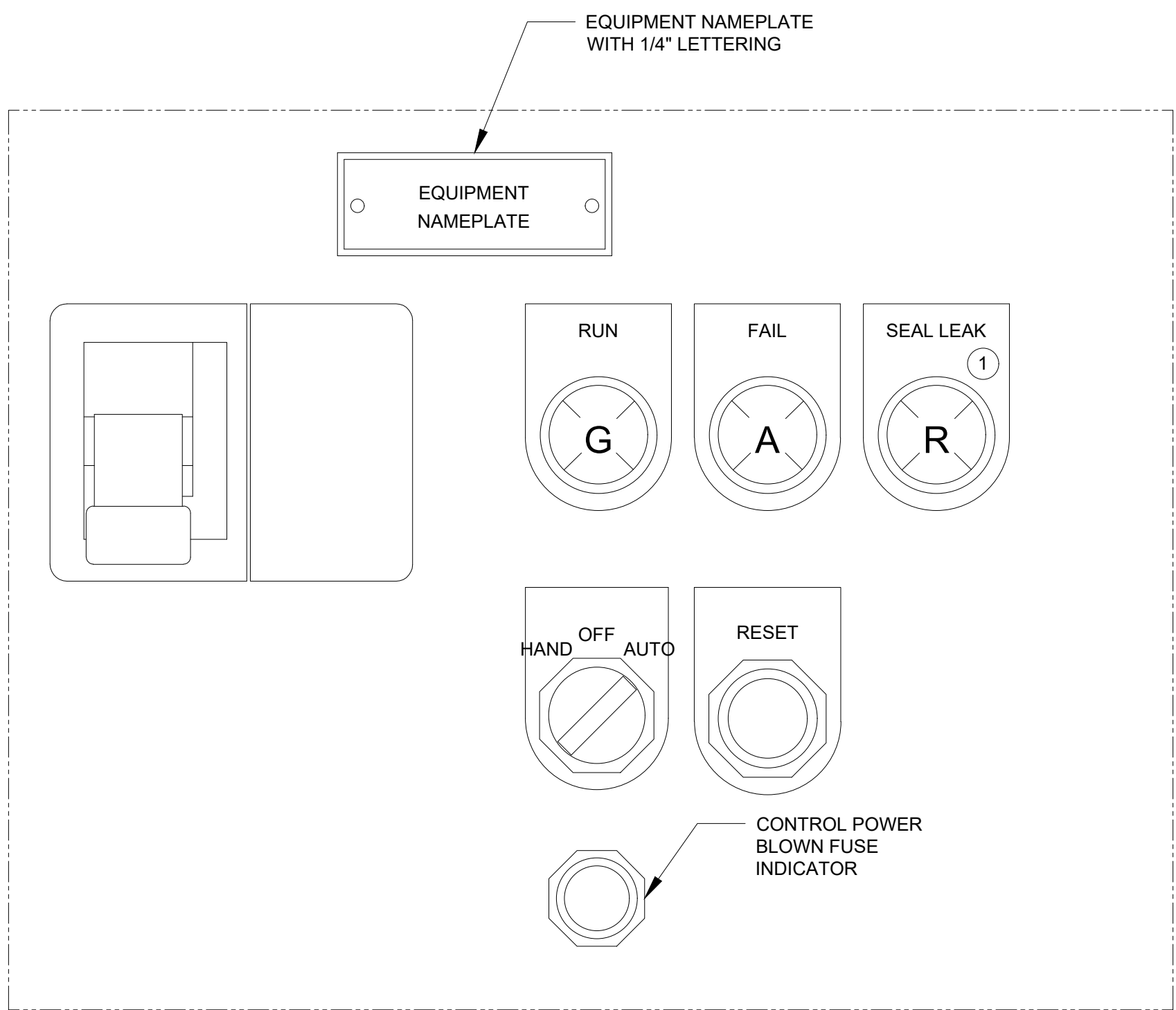
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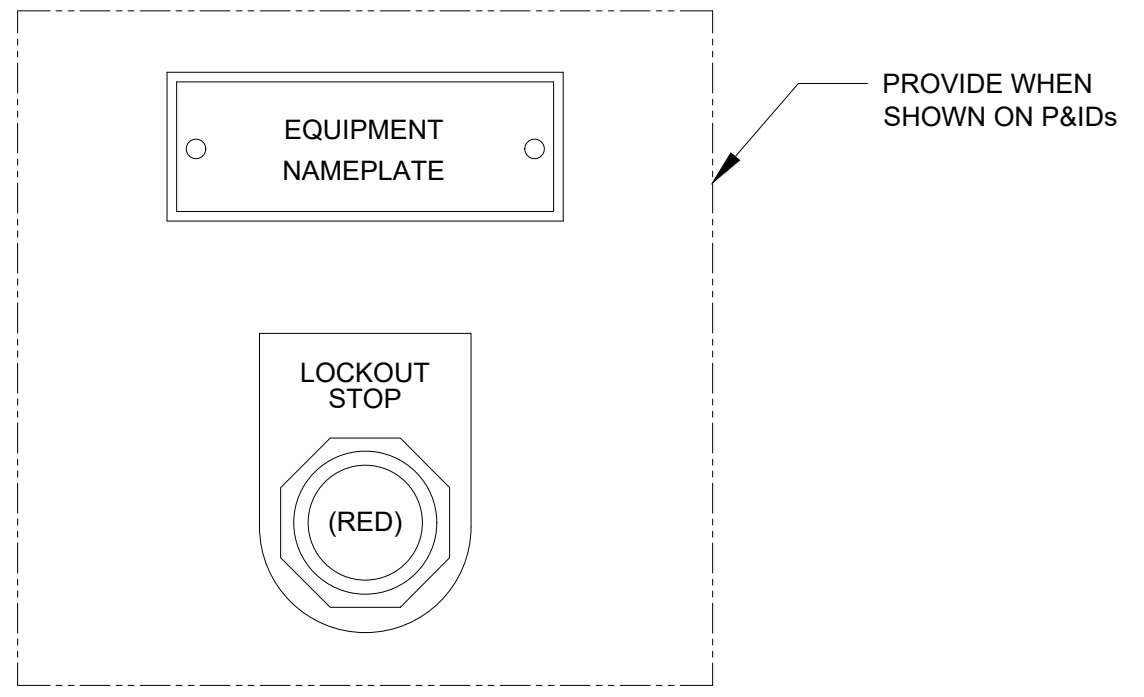
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**DETAIL 1** FVNR MOTOR CONTROL DIAGRAM  
(CONTROLLED FROM MCC)  
SCALE: NONE



**DETAIL 2** MCC CUBICAL  
ELEVATION  
SCALE: NONE



**DETAIL 3** FIELD CONTROL STATION  
ELEVATION  
SCALE: NONE

**GENERAL NOTES**

A. THESE DRAWINGS SHOW GENERAL CONTROL PHILOSOPHY AND DEVICES. NOT ALL REQUIRED CONTROL COMPONENTS AND DEVICES ARE SHOWN. CONTRACTOR IS RESPONSIBLE TO PROVIDE COMPLETE AND FUNCTIONAL SYSTEM.

**SHEET NOTES**

1. PUMP PROTECTION RELAY PROVIDED BY PUMP SUPPLIER INSTALLED BY MCC SUPPLIER WHEN SHOWN ON P&ID'S.



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IDYLLWILD TREATMENT PLANT  
FVNR DIAGRAM  
(CONTROLLED FROM MCC)  
IDYLLWILD, CA

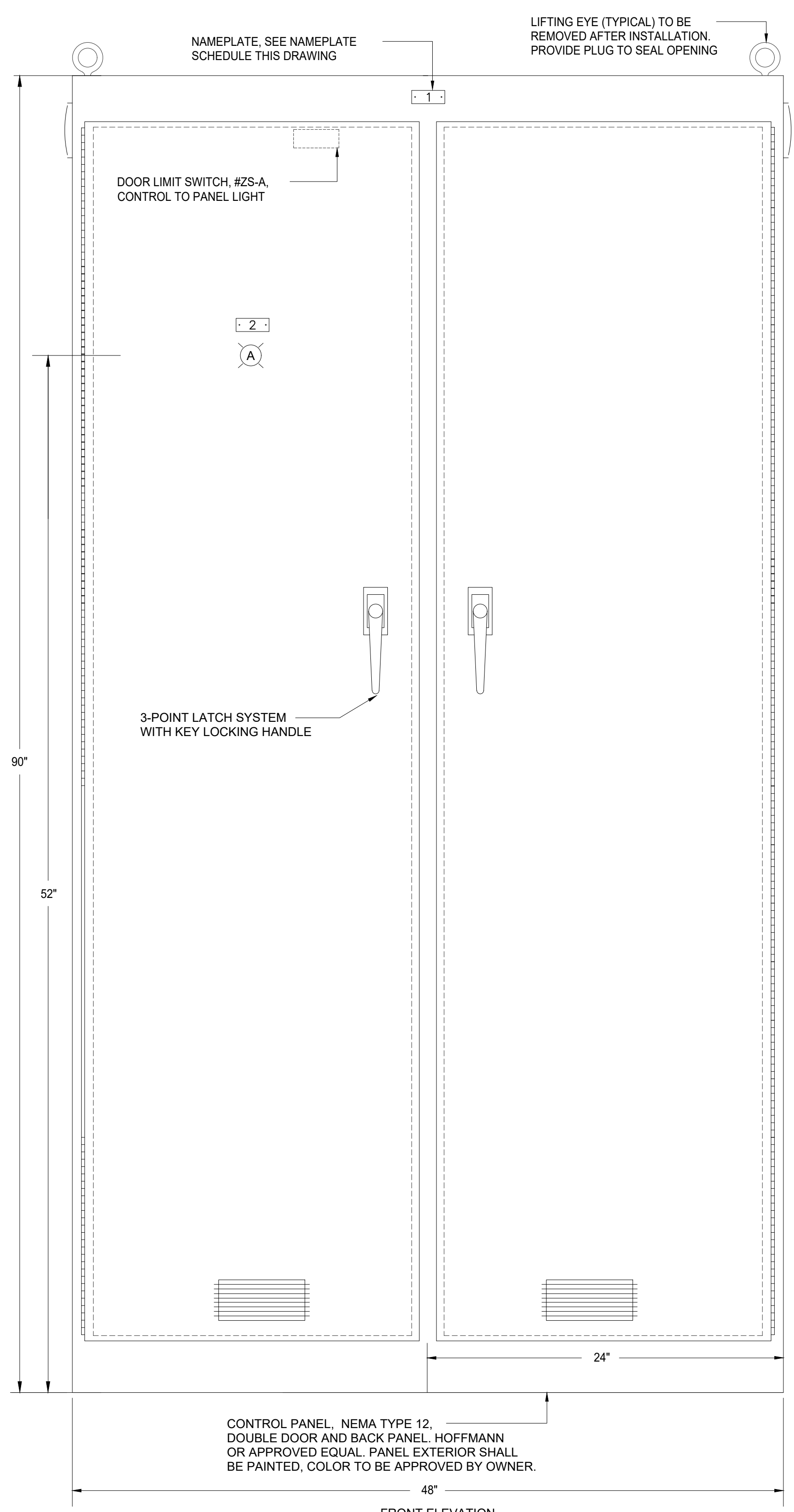
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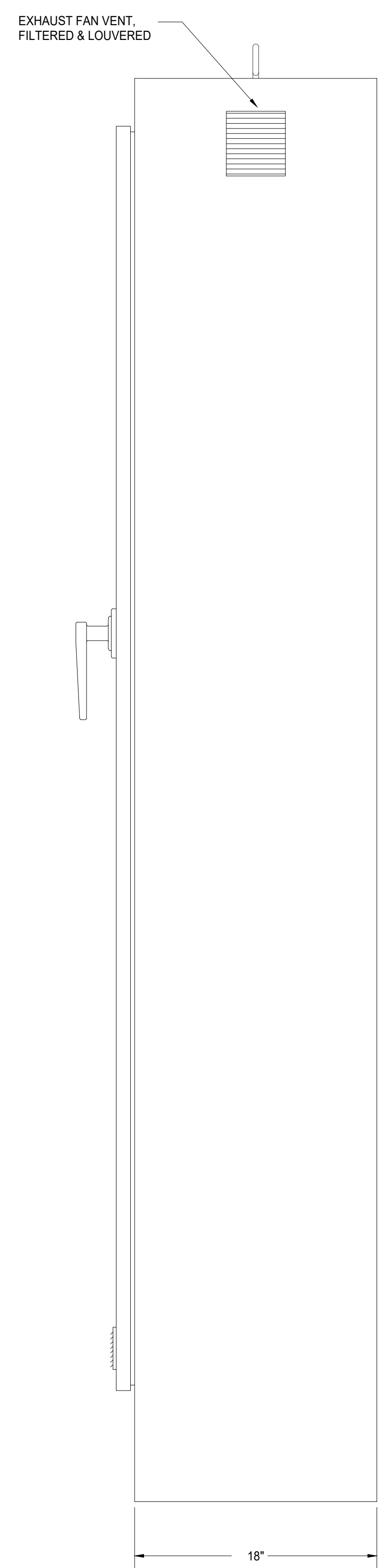
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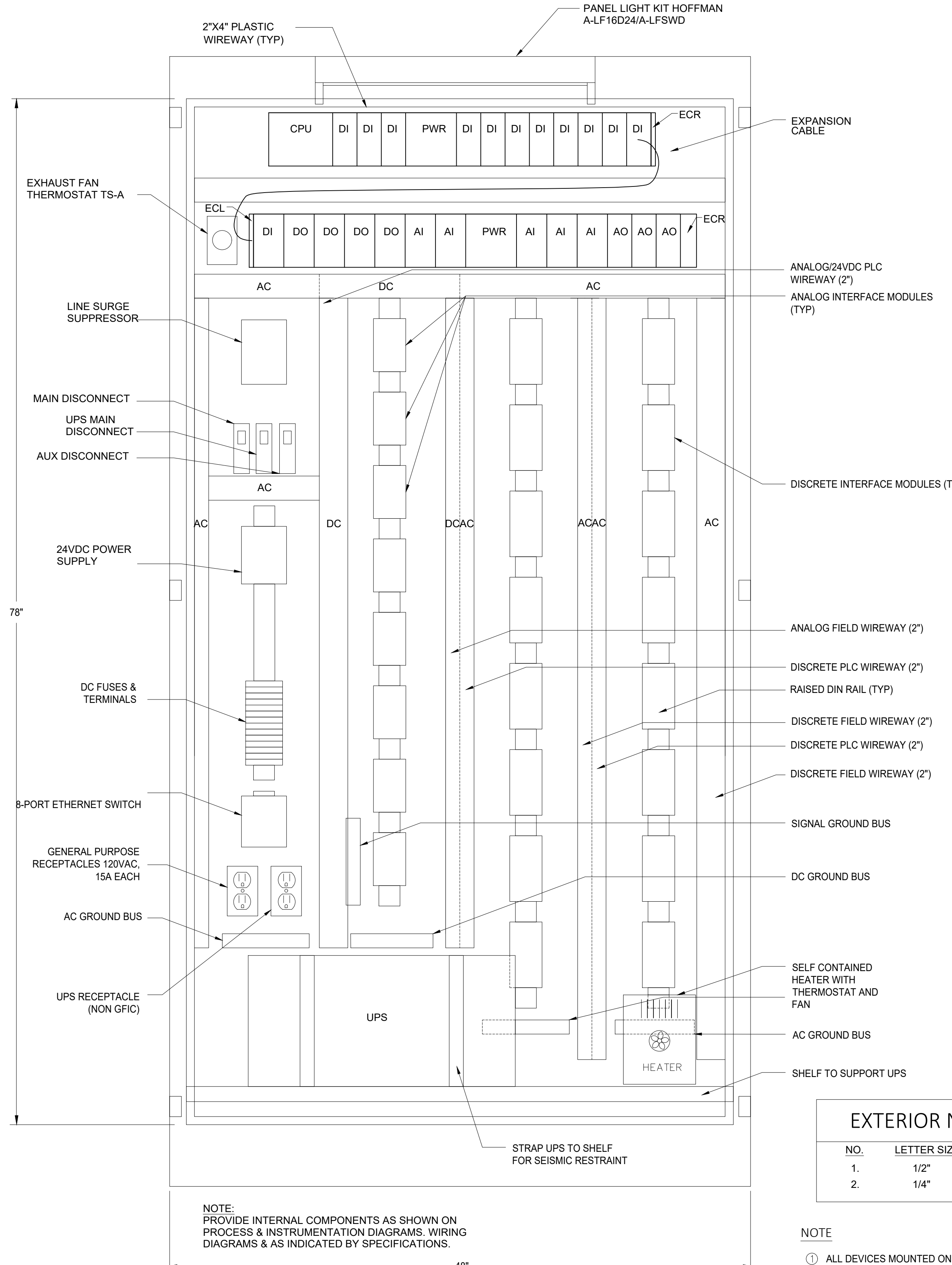
D:\Projects\active\IWDx21-001 - Idyllwild WTP Modernization\PreDesign\AutoCAD\ACT\IWDx21-001 - I010 - TYPICAL CONTROL PANEL ELEVATION.dwg 8-30-24 03:31:47 PM JosephDonati



**TYPICAL CONTROL PANEL EXTERIOR ELEVATION**  
NO SCALE



**RIGHT SIDE ELEVATION**




**TYPICAL CONTROL PANEL INTERIOR ELEVATION**  
NO SCALE

- GENERAL NOTES**
- A. ALL DEVICES MOUNTED ON CONTROL PANEL AND BACK PANEL SHALL HAVE NAME PLATES.
  - B. THIS DRAWING REPRESENTS A TYPICAL PANEL SIZE AND A GENERAL LAYOUT OF COMPONENTS AND DEVICES. THE ACTUAL ARRANGEMENT OF COMPONENTS AND DEVICES IS THE RESPONSIBILITY OF THE CONTRACTOR. THE ALLOWABLE SIZE FOR THE PANEL IS SHOWN ON THE "E" SERIES DRAWINGS.
  - C. CONTROL PANEL NEMA RATING PER ELECTRICAL DRAWING REQUIREMENTS.
- SHEET NOTES**
- 1. WIRE ALL I/O FROM PLC TO TERMINAL BLOCKS.
  - 2. PROVIDE 6" OF EXTRA DIN RAIL ON EACH DIN RAIL FOR FUTURE TERMINAL BLOCKS AND RELAYS.
  - 3. THE REMOTE I/O CONTROL PANEL FOR THE SLY PARK HILLS BOOSTER PUMPS IN THE FILTER CONTROL BUILDING CAN BE SMALLER THAN 72 INCHES IN WIDTH.

**EXTERIOR NAMEPLATE SCHEDULE**

NO.	LETTER SIZE	INSCRIPTION
1.	1/2"	CONTROL PANEL CP XXX
2.	1/4"	PLC FAULT/FAIL TO ACKNOWLEDGE

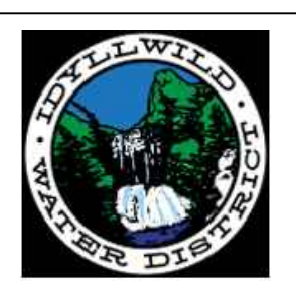
**NOTE**  
① ALL DEVICES MOUNTED ON CONTROL PANEL AND BACK PANEL SHALL HAVE NAME PLATES.

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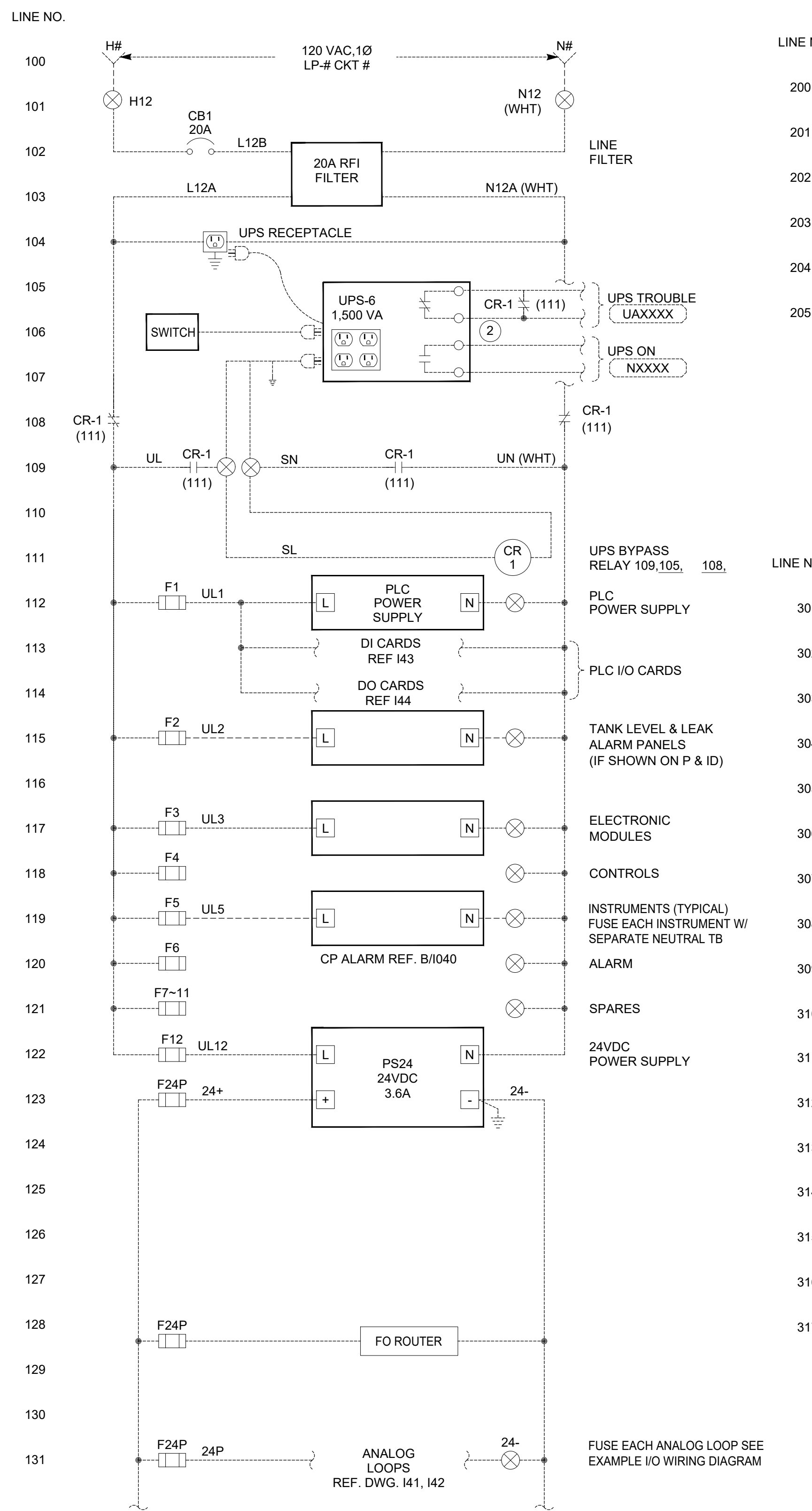


IDYLLWILD TREATMENT PLANT  
**TYPICAL CONTROL PANEL ELEVATIONS**  
IDYLLWILD, CA

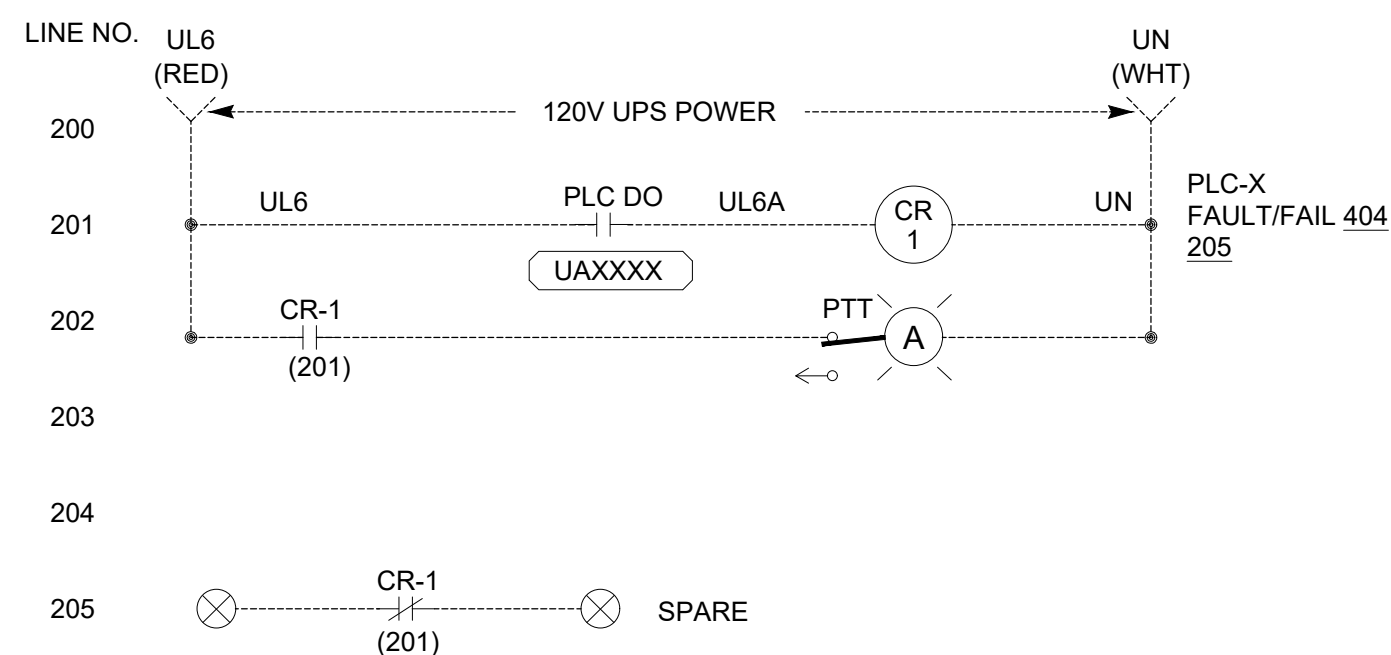
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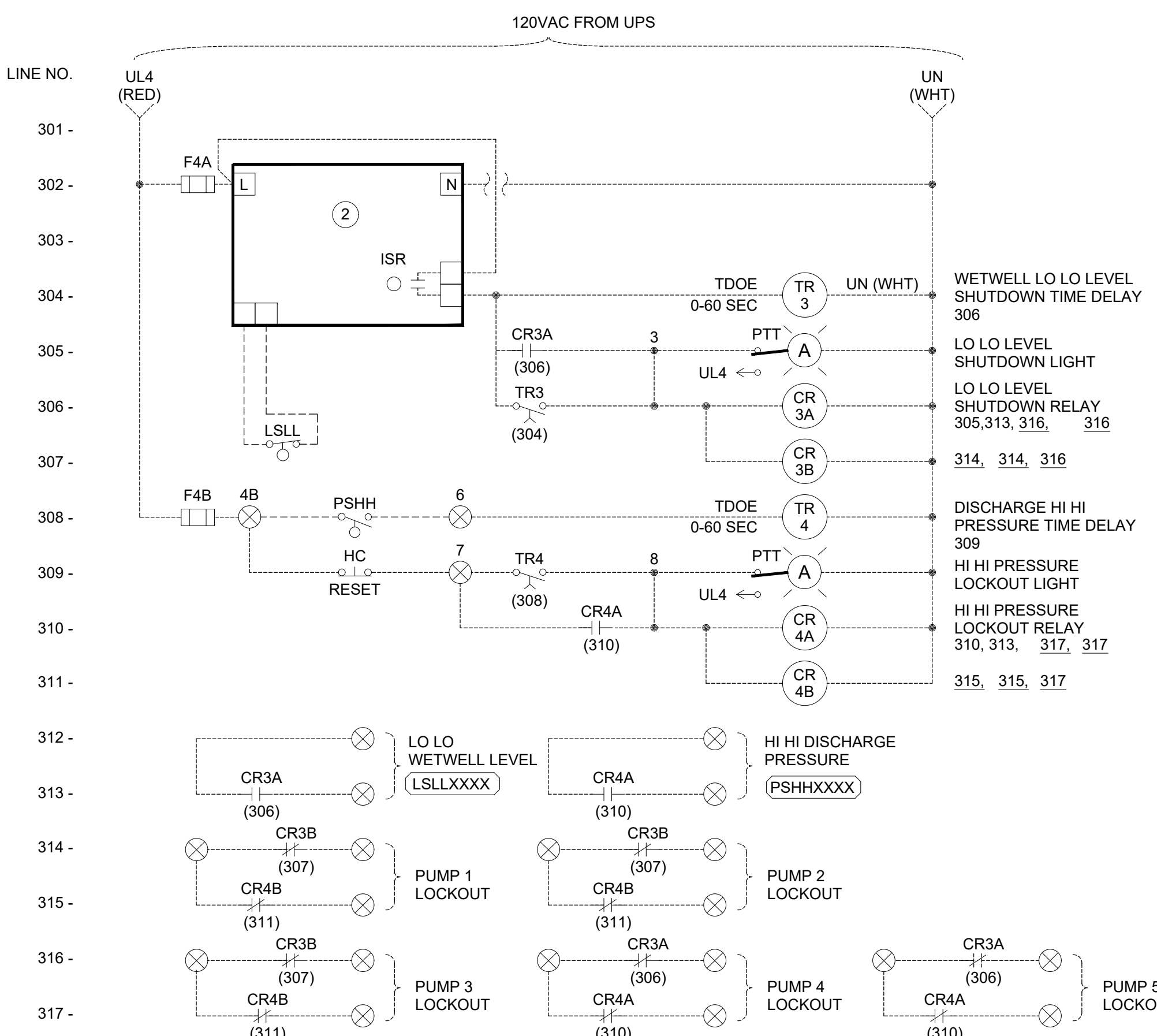


**120 VAC TYPICAL POWER DISTRIBUTION DIAGRAM (A)**



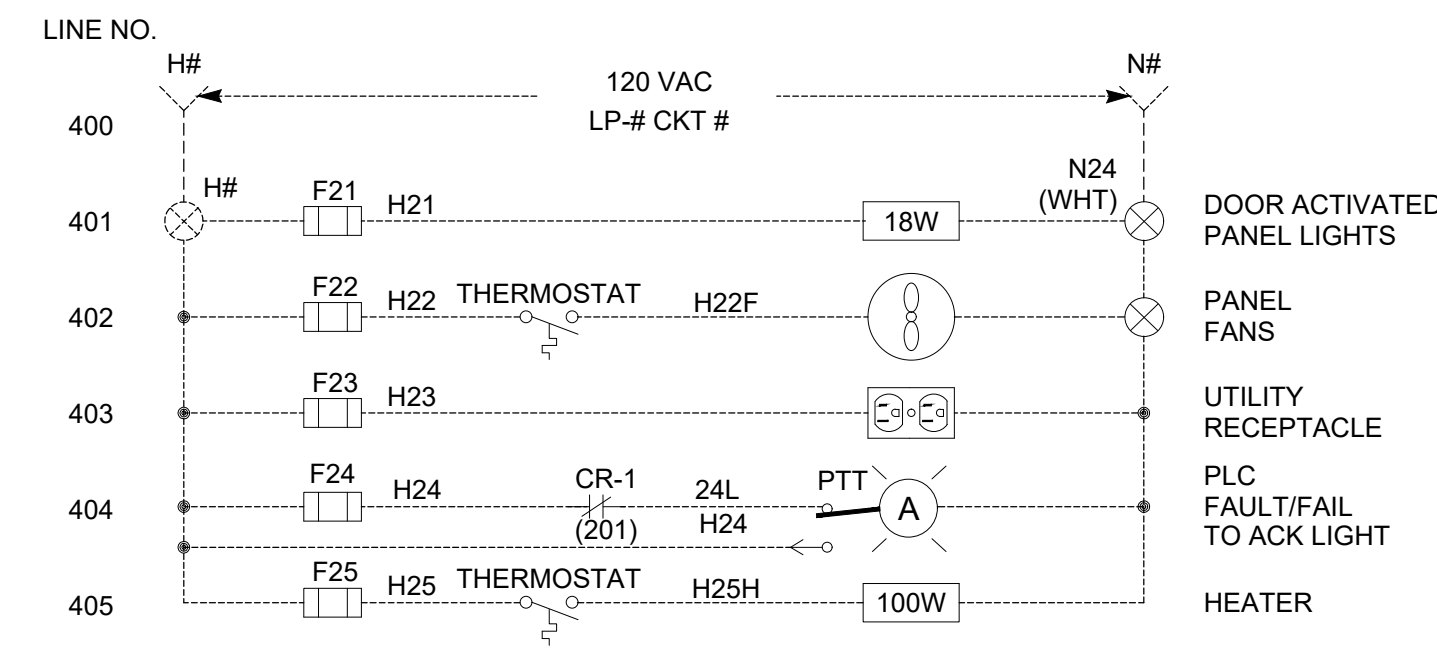
**CP ALARM ELEMENTARY DIAGRAM (B)**

NOTES: ① WIRES & TERMINALS LABELED PER LOOP DIAGRAMS.  
② ALARMS PER P & ID FOR EACH CONTROL PANEL



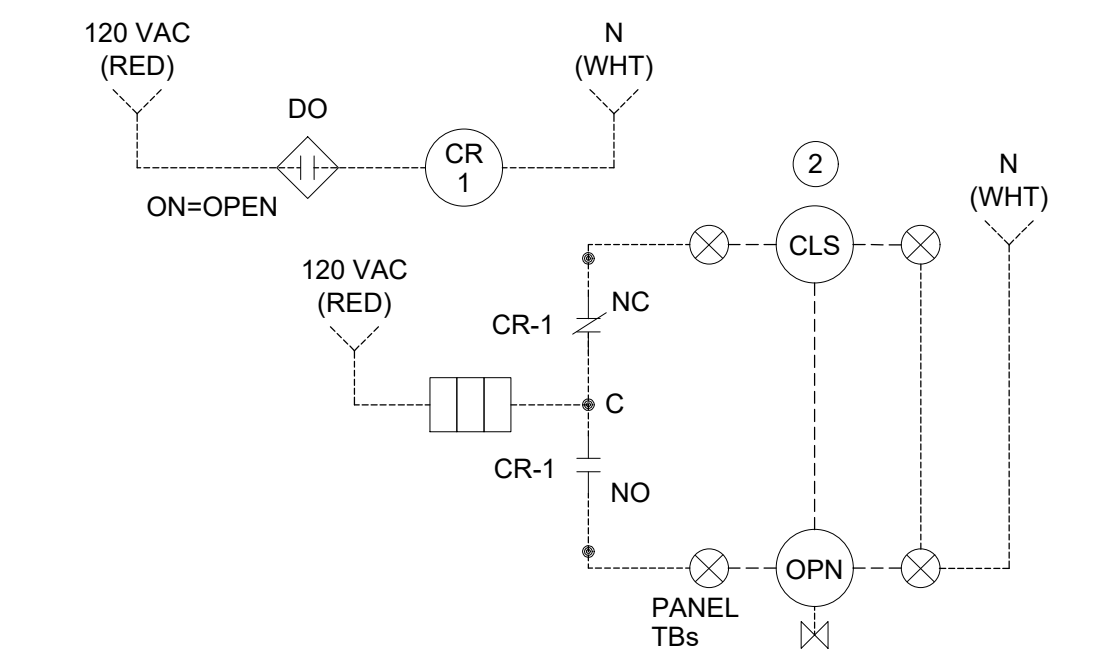
**TYPICAL PUMP LOCKOUT ELEMENTARY DIAGRAM (C)**

NOTES: ① WIRES & TERMINALS LABELED PER LOOP DIAGRAMS.  
② IF ISR IS REQUIRED PER P & ID, WIRE ALARM, WIRE TO THIS INPUT.  
③ PUMP LOCKED TO BE PROVIDED IF SHOWN ON P & ID.  
④ DIAGRAM SHOWN IS FOR TYPICAL PUMP CONTROLS. ADD HIGH LEVEL OR LO LO ALARMS AS SHOWN IN P & ID AND BASED ON THIS TEMPLATE.



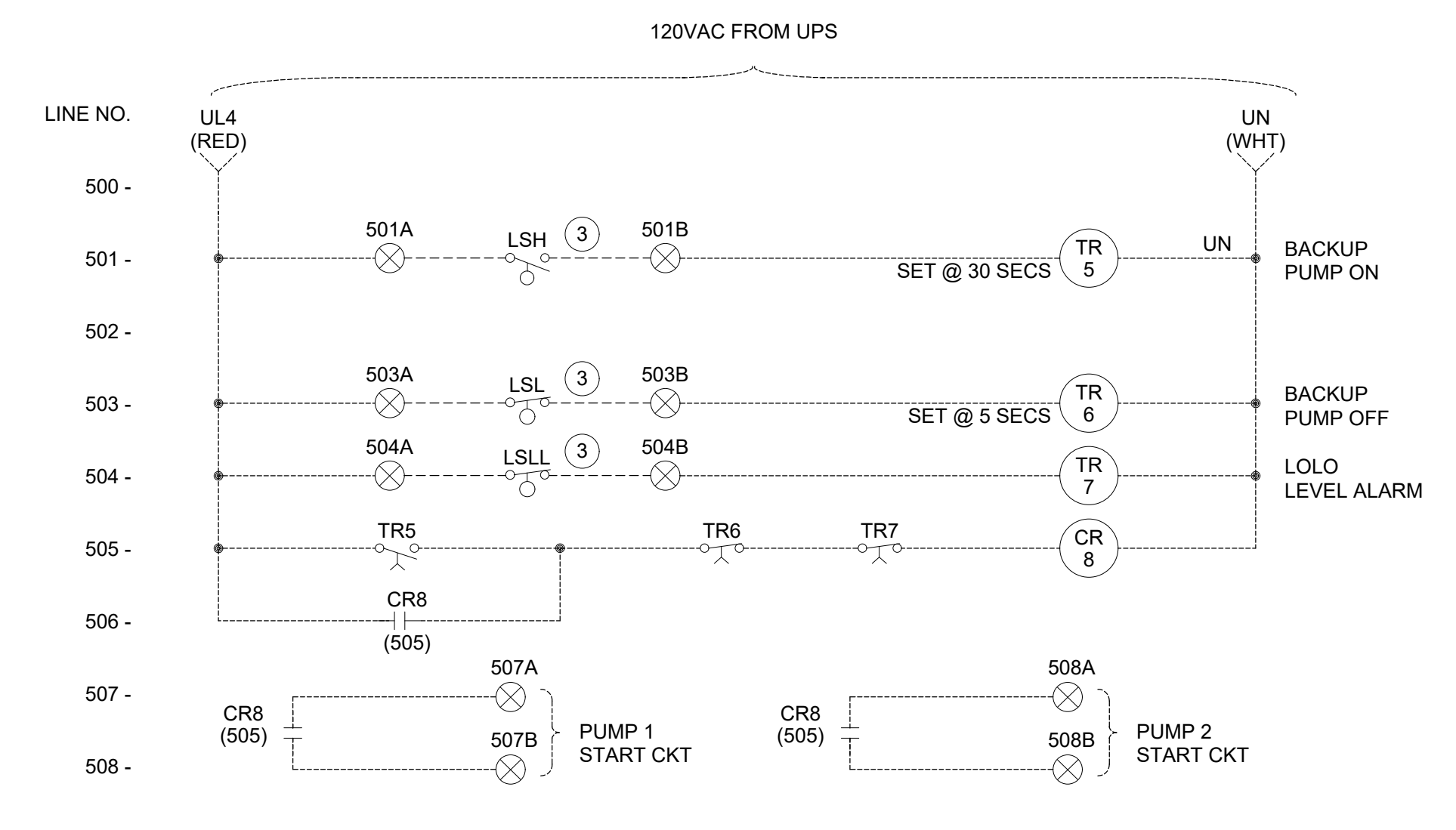
**CP-TYPICAL UTILITY ELEMENTARY DIAGRAM (D)**

NOTES: ① SHOWN FOR ALL CONTROL PANELS SUPPLIED UNDER THIS CONTRACT



**TYPICAL VALVE DIAGRAM (F)**

NOTES: ① CIRCUIT IS DIAGRAMMATIC & MEANT TO SHOW BASIC CIRCUIT FUNCTIONALITY'S.  
② IF REQUIRED BY THE P & IDS ADD THIS TYPE OF CIRCUIT TO THE CP.



**BACKUP LEVEL FLOAT CONTROL (E)**

NOTES: ① CIRCUIT IS DIAGRAMMATIC & MEANT TO SHOW BASIC CIRCUIT FUNCTIONALITY'S  
② IF REQUIRED BY THE P & IDS ADD THIS TYPE OF CIRCUIT TO THE CP.  
③ IF ISR IS SHOWN ON P&ID ADD ISR RELAY TO CIRCUIT.

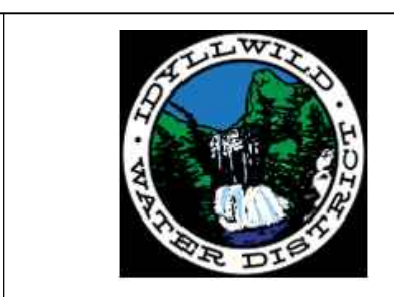
**TYPICAL CONTROL PANEL ELEMENTARY DIAGRAMS-ALL (E)**

NOTES: ① DISTRIBUTION DIAGRAM REPRESENTATIVE OF MAJOR COMPONENTS ONLY. ADDITION FUSES, CIRCUITS AND COMPONENT CONNECTIONS MAY BE REQUIRED FOR A FUNCTIONAL SYSTEM.  
② PROVIDE & INSTALL INTERFACE RELAYS IF REQUIRED  
③ #-CKT # FROM LP PANEL (&). REFERENCE LP SCHEDULE FOR CIRCUIT NUMBERS.  
④ XXXX - TAGS PER P & ID DRAWINGS.  
⑤ WIRE NUMBERS SHOWN ARE AN EXAMPLE, ACTUAL WIRE NUMBERS SHALL BE DETERMINED BY THE SUPPLIER.



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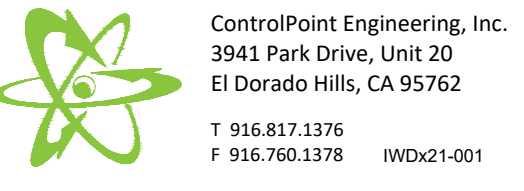
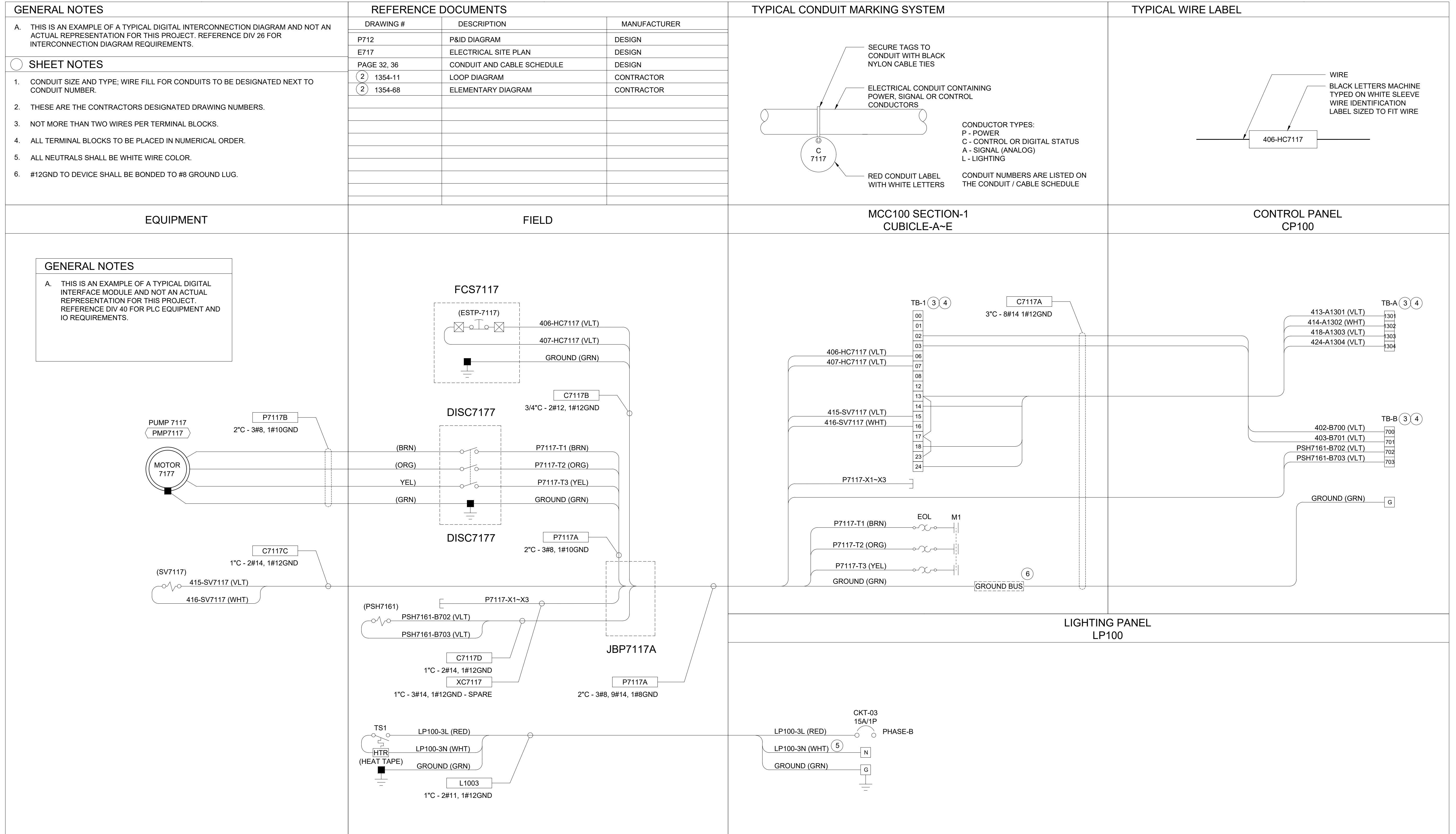
IDYLLWILD TREATMENT PLANT  
**TYPICAL CONTROL PANEL ELEMENTARY DIAGRAM**  
IDYLLWILD, CA

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D:\Projects\active\WDX21-001 - Idyllwild WTP Modernization\PreDesign\AutoCAD\ACT\WDX21-001 - 1020 - EXAMPLE INTERCONNECT DRAWING.dwg 8-30-24 03:33:34 PM JosephDonati



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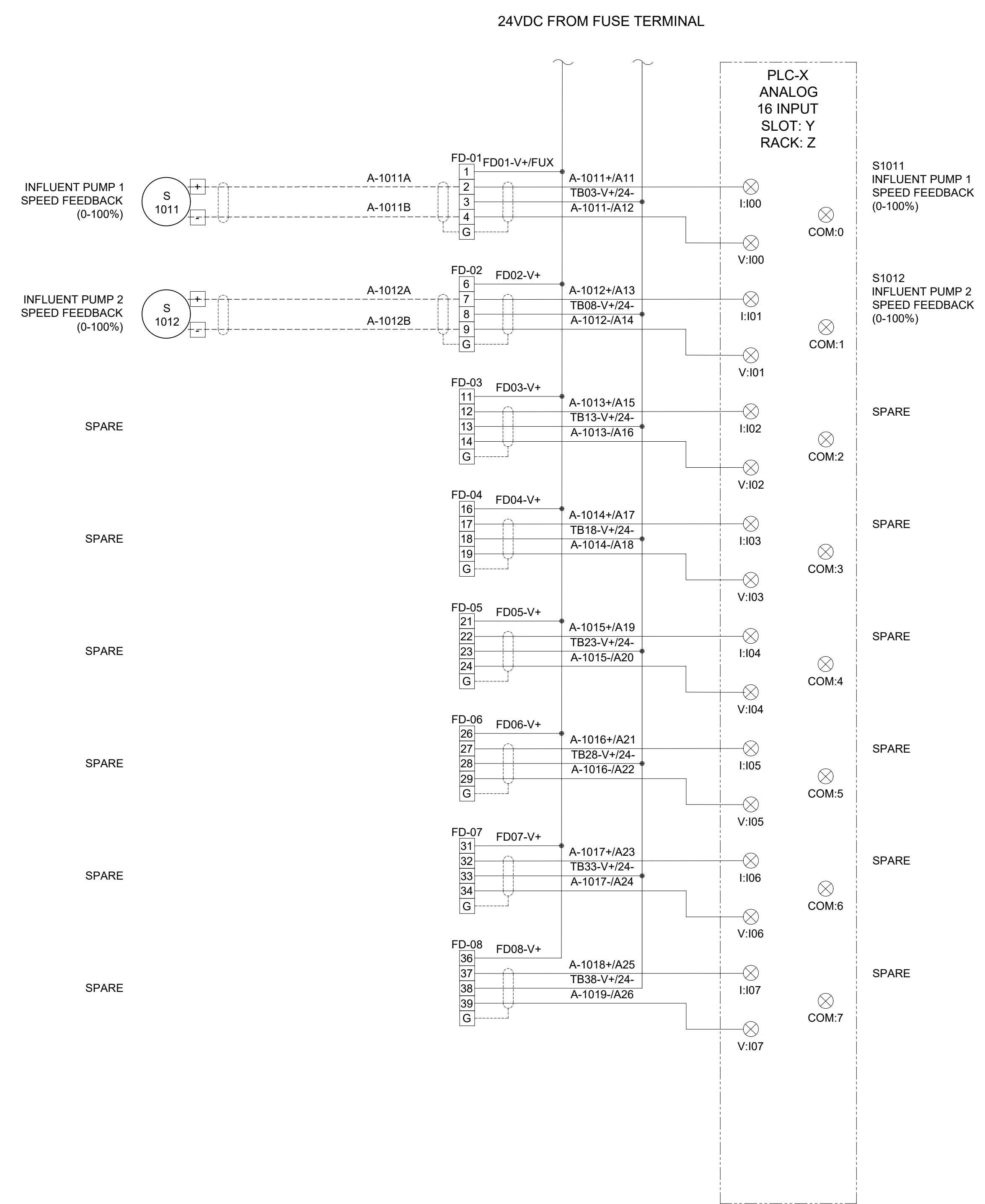
IDYLLWILD TREATMENT PLANT  
EXAMPLE INTERCONNECT DRAWING  
IDYLLWILD, CA

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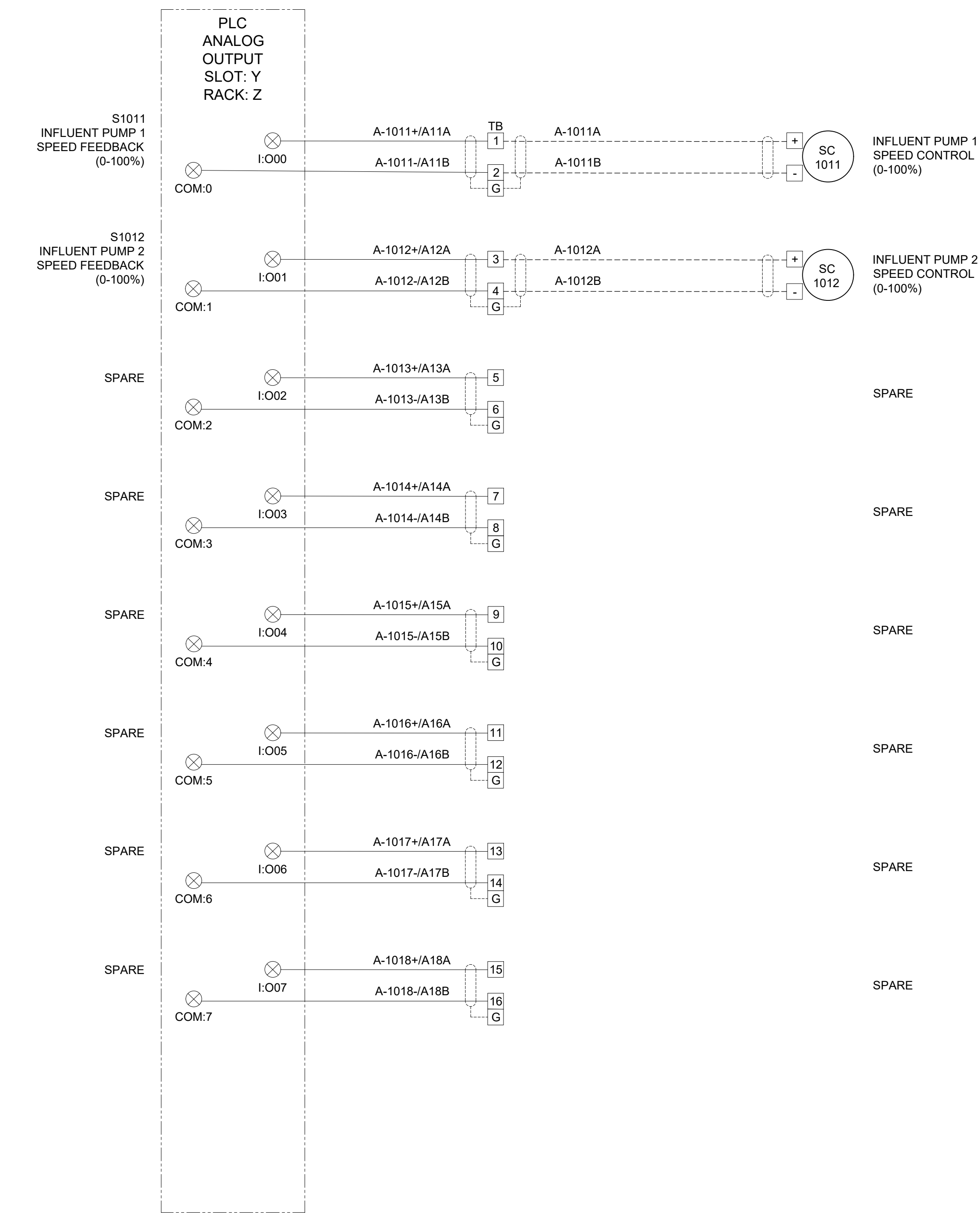
DATE:	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
6/13/24						1020
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**GENERAL NOTES**

A. THIS IS AN EXAMPLE OF A TYPICAL ANALOG INTERFACE MODULE AND NOT AN ACTUAL REPRESENTATION FOR THIS PROJECT. REFERENCE DIV 17 FOR PLC EQUIPMENT AND IO REQUIREMENTS.



EXAMPLE AI WIRING DIAGRAM



EXAMPLE AO WIRING DIAGRAM

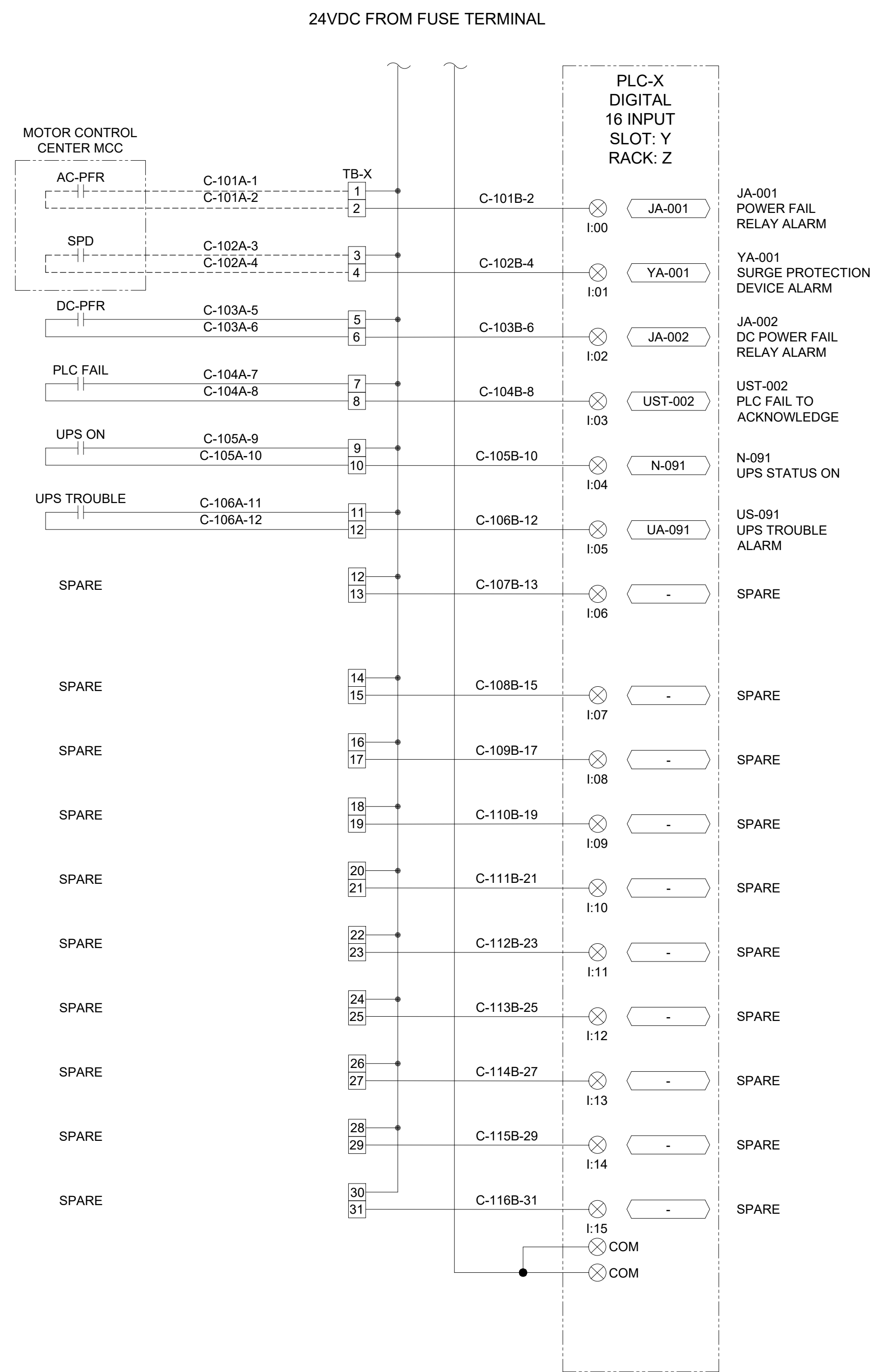
D:\Projects\active\IWDx21-001 - Idyllwild WTP Modernization\Redesign\AutoCAD\IWDx21-001 - I021 - EXAMPLE ANALOG IO MODULE LOOP DIAGRAMS.dwg 8-30-24 03:33:55 PM JosephDonati

	<b>California</b> Rural Water Association C R W A 1234 N MARKET BLVD SACRAMENTO, CA 95834 (916) 553-4900	AS NOTED 	CALL AT LEAST TWO WORKING DAYS BEFORE YOU DIG		IDYLLWILD TREATMENT PLANT EXAMPLE ANALOG IO MODULE LOOP DIAGRAMS IDYLLWILD, CA	DRAFT -- NOT FOR CONSTRUCTION	DATE: 6/13/24	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
							DESIGN: MB						
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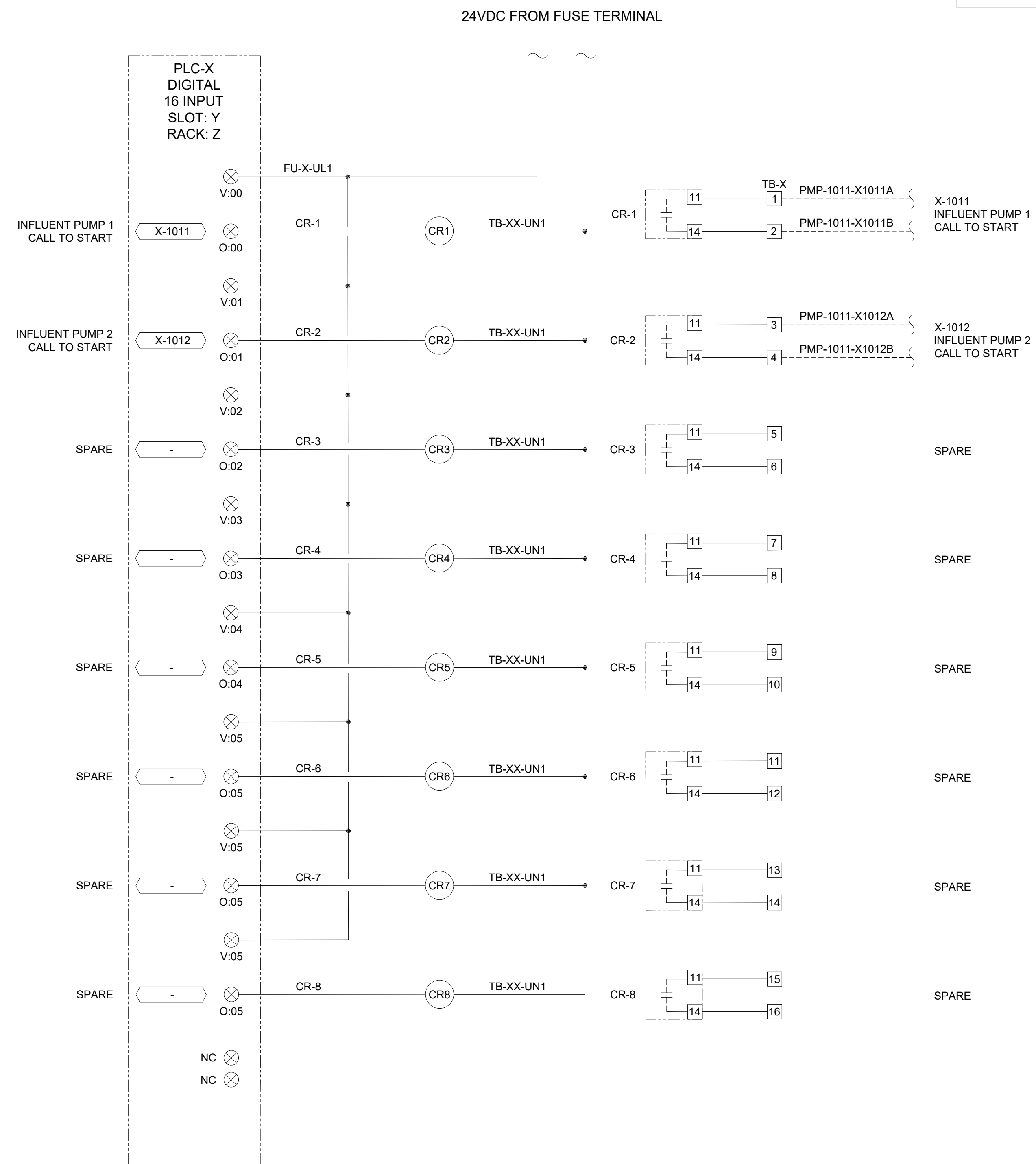
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**GENERAL NOTES**

A. THIS IS AN EXAMPLE OF A TYPICAL DIGITAL INTERFACE MODULE AND NOT AN ACTUAL REPRESENTATION FOR THIS PROJECT. REFERENCE DIV 17 FOR PLC EQUIPMENT AND IO REQUIREMENTS.



EXAMPLE DI WIRING DIAGRAM



EXAMPLE DO WIRING DIAGRAM

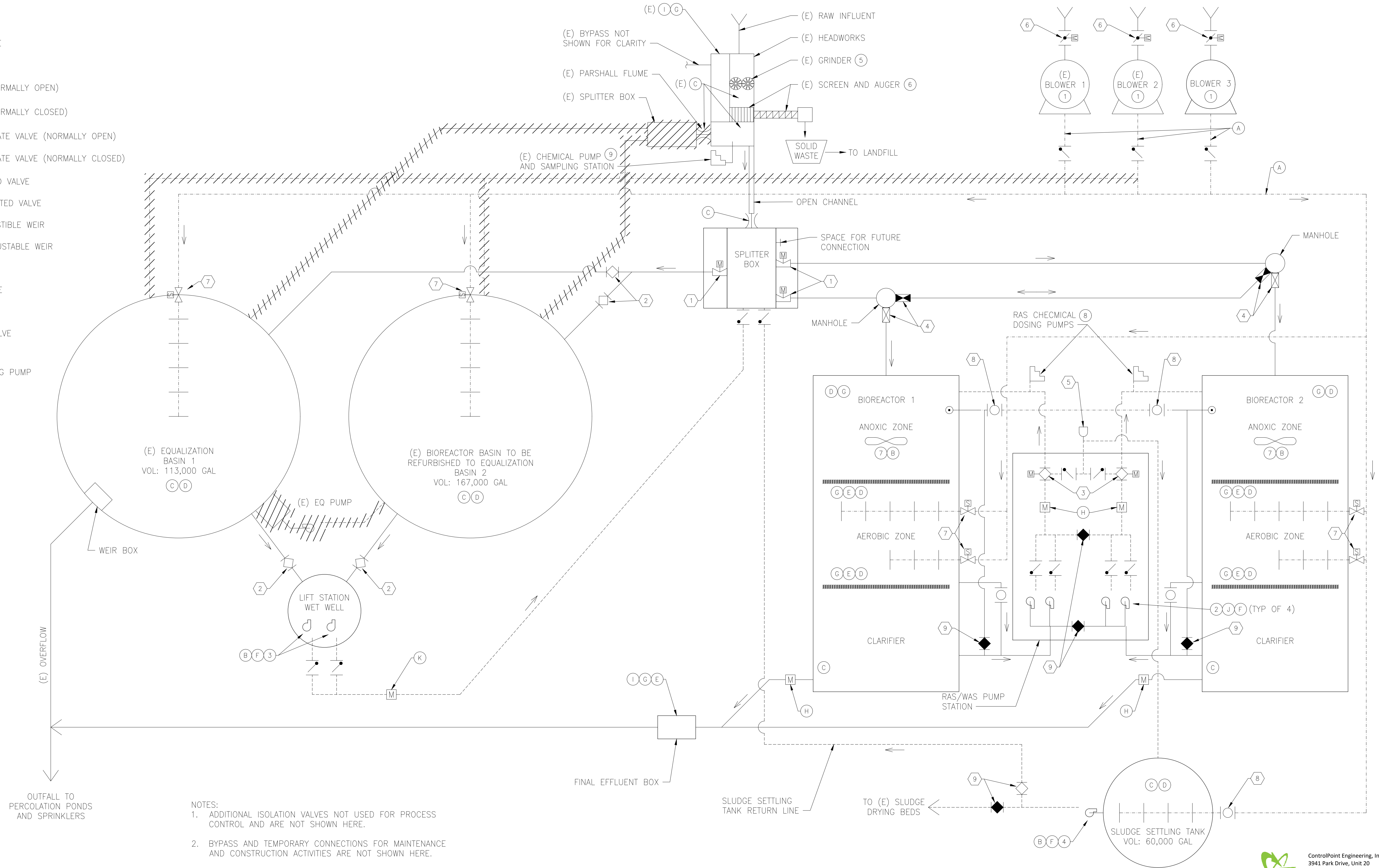
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LEGEND

- PUMP
- PARSHALL FLUME
- FLOW METER
- PLUG VALVE (NORMALLY OPEN)
- PLUG VALVE (NORMALLY CLOSED)
- SLUICE/SLIDE GATE VALVE (NORMALLY OPEN)
- SLUICE/SLIDE GATE VALVE (NORMALLY CLOSED)
- MOTOR ACTUATED VALVE
- SOLENOID ACTUATED VALVE
- MANUALLY ADJUSTABLE WEIR
- AUTOMATED ADJUSTABLE WEIR
- CHECK VALVE
- BUTTERFLY VALVE
- BALL VALVE
- AIR RELEASE VALVE
- AIR LIFT PUMP
- CHEMICAL DOSING PUMP
- AIR LINE
- GRAVITY FLOW
- FORCEMAIN



- NOTES:
1. ADDITIONAL ISOLATION VALVES NOT USED FOR PROCESS CONTROL AND ARE NOT SHOWN HERE.
  2. BYPASS AND TEMPORARY CONNECTIONS FOR MAINTENANCE AND CONSTRUCTION ACTIVITIES ARE NOT SHOWN HERE.
  3. VALVES SHOWN ARE MANUALLY OPERATED UNLESS NOTED OTHERWISE.



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IDYLLWILD TREATMENT PLANT  
PROCESS FLOW DIAGRAM  
IDYLLWILD, CA

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### INSTRUMENT SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	FIELD MOUNTED INSTRUMENT		ELECTRICAL - MSC		VALVE ACTUATOR
	FACE MOUNTED INSTRUMENT ON LOCAL PANEL, OPERATOR ACCESSIBLE		ELECTRICAL - SIGNAL		DIAPHRAGM OPERATOR
	INSTRUMENT MOUNTED IN LOCAL PANEL, OPERATOR INACCESSIBLE		ETHERNET		DIAPHRAGM VALVE
	FACE MOUNTED INSTRUMENT ON FIELD PANEL, OPERATOR ACCESSIBLE		PNEUMATIC		GATE VALVE OR PINCH VALVE (NORMALLY OPEN)
	INSTRUMENT MOUNTED IN FIELD PANEL, OPERATOR INACCESSIBLE		CAPILLARY		GATE VALVE OR PINCH VALVE (NORMALLY CLOSED)
	OPERATION PERFORMED WITH LOGIC OR HARDWIRED DEVICES - REFERENCE ELEMENTARY DWG. #		ELECTRICAL (PULSE)		PLUG VALVE (NORMALLY OPEN)
	LAMP INDICATION (STATUS OR ALARM)		HYDRAULIC SIGNAL		PLUG VALVE (NORMALLY CLOSED)
	ANNUNCIATOR WINDOW R - ROW # C - COLUMN #		VENDOR PROVIDED LIMITS		BALL VALVE (NORMALLY OPEN)
	COMMUNICATIONS POINT		PANEL LIMITS		BALL VALVE (NORMALLY CLOSED)
	DISCRETE INPUT		PRIMARY PROCESS		BALL VALVE (NORMALLY CLOSED)
	DISCRETE OUTPUT		SECONDARY PROCESS		BUTTERFLY VALVE
	ANALOG INPUT		EXISTING PRIMARY PROCESS		CHECK VALVE
	ANALOG OUTPUT		EXISTING SECONDARY PROCESS		SILENT CHECK VALVE
	INSTRUMENT PANEL MOUNTED WITH COMPUTING, CONVERTING FUNCTION		FUTURE PROCESS		SLUICE GATE
	CONVERT		ELECTRICAL SUPPLY		SLIDE GATE
	COMPUTE		MOTOR		SLIDE GATE
	E - VOLTAGE		CENTRIFUGAL PUMP		SLUICE GATE
	I - CURRENT		BLOWER OR FAN		SLIDE GATE
	P - PNEUMATIC		SUBMERSIBLE PUMP		SLIDE GATE
	A - ANALOG		VERTICAL PUMP		SLUICE GATE
	B - BINARY		ROTARY LOBE OR GEAR PUMP		SLIDE GATE
	SUMMING		METERING PUMP		SLUICE GATE
	SUBTRACTOR		MIXER		SLUICE GATE
	MULTIPLYING		PROGRESSIVE CAVITY PUMP		SLUICE GATE
	DIVIDING		PAGE THAT LINE IS CONTINUED ON		SLUICE GATE
	ROOT EXTRACTION		AUDIBLE ALARM (BUZZER OR HORN)		SLUICE GATE
	PROPORTIONAL		BLIND FLANGE		SLUICE GATE
	DERIVATIVE		CHEMICAL DIFFUSER		SLUICE GATE
	VALVE/GATE NUMBER		CONTINUED PIPE		SLUICE GATE
	EQUIPMENT NUMBER		DRAIN		SLUICE GATE
	PLC OR COMPUTER FUNCTION PERFORMING OPERATION WITH VISUAL INDICATION		DIFFUSER		SLUICE GATE
	PLC OR COMPUTER FUNCTION PERFORMING OPERATION WITH VISUAL ALARM INDICATION		DOUBLE CONTAINED PIPE		SLUICE GATE
	PLC OR COMPUTER PERFORMING INTERNAL OPERATION		FLEXIBLE HOSE		SLUICE GATE
	AUTODIALER PRIORITY #		FLEXIBLE PIPE CONNECTOR		SLUICE GATE
	PC BASED SOFTWARE		HOSE BIB		SLUICE GATE
			QUICK CONNECTION COUPLING		SLUICE GATE
			REDUCER/INCREASER		SLUICE GATE
			STATIC MIXER		SLUICE GATE
			Y-STRAINER		SLUICE GATE

### ABBREVIATIONS

A	AMPERES, AMBER	mA	MILLIAMPERES
AC	ALTERNATING CURRENT	MIN	MINIMUM
ACU	AIR CONDITIONING UNIT	MOA	MANUAL-OFF-AUTO
ADR	AIR DRYER	MOT	MOTOR OVERTEMP SENSOR
AER	AERATOR	MOV	MOTOR OPERATED VALVE
AGR	AGITATOR	MTU	MODULAR TREATMENT UNIT
AI	ANALOG INPUT	MUX	MULTIPLEXER
AO	ANALOG OUTPUT	MWR	MOTORIZED WEIR
B	BLUE	MXR	MIXER
BLR	BLOWER	N	NEUTRAL
C	CLOSE, CONTROL	NC	NORMALLY CLOSED
CFE	CLEARWELL FILTER EFFLUENT	NO	NORMALLY OPEN
CLR	CLARIFIER	O	OPEN
CMP	COMPRESSOR	OAC	OPEN-AUTO-CLOSE
CR	CONTROL RELAY	OCA	OPEN-CLOSE-AUTO
CTF	CENTRIFUGE	PB	PUSHBUTTON
d	DIFFERENTIAL	pH	HYDROGEN ION CONCENTRATION
DC	DIRECT CURRENT	PID	PROPORTIONAL/INTEGRAL/DERIVATIVE
(DDM)	DIGITAL DISPLAY MODULE	PLC	PROGRAMMABLE LOGIC CONTROLLER
DI	DIGITAL INPUT	PMP	PUMP
DO	DIGITAL OUTPUT	PNL	PANEL
DPDT	DOUBLE POLE DOUBLE THROW	POT	POTENTIOMETER
DRV	DRIVE	POV	PNEUMATIC OPERATED VALVE
(E)	EXISTING	PS	PRESSURE SWITCH
(F)	FUTURE	PRV	PRESSURE RELIEF VALVE
FAN	FAN	PTT	PUSH TO TEST
FC	FAIL CLOSED	PV	PROCESS VARIABLE
FE	FLOW METER ELEMENT	R	RED
FLC	FLOCCULATOR	(R)	EXISTING TO BE REMOVED OR RELOCATED
FLP	FAIL LAST POSITION	REF	REFERENCE
FLT	FILTER	RVSS	REDUCED VOLTAGE SOLID STATE
FO	FAIL OPEN	S	SWITCH
FS	FLOAT SWITCH	(SIM)	SIGNAL INPUT MODULE
FVNR	FULL VOLTAGE NON REVERSING	SCR	SILICON CONTROLLED RECTIFIER
G	GREEN	(SOM)	SIGNAL OUTPUT MODULE
G, GND	GROUND	SMP	TYPICAL
GNR	MACERATOR/GRINDER	SP	SET POINT
HMI	HUMAN MACHINE INTERFACE	SS	SURGE SUPPRESSOR
HP AIR	HIGH PRESSURE AIR	TDD, TDE	TIME DELAY RELAY
HOA	HAND-OFF-AUTO	TWP	TWISTED PAIR
HOG	HYDRAULIC OPERATED GATE	TWSP	TWISTED SHIELDED PAIR
I	INTERLOCK	TYP	TYPICAL
I/O	INPUT/OUTPUT	UVC	ULTRAVIOLET CHANNEL
ISR	INTRINSICALLY SAFE RELAY	V	VOLTS, VOLTAGE
LOR	LOCAL/OFF/REMOTE	VFD	VARIABLE FREQUENCY DRIVE
LOS	LOCK-OUT STOP	VLV	VALVE
LP AIR	LOW PRESSURE AIR		

### P & I DIAGRAM INSTRUMENT FUNCTIONAL IDENTIFICATION

CODE LETTER	FIRST LETTER(S)		SUCCEEDING LETTER(S)		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		AUTO
B	BURNER FLAME			CONTROL	CLOSE
C	CHLORINE				
D	DENSITY	DIFFERENTIAL	DIRECTION		
E	VOLTAGE		ELEMENT, SENSOR		
F	FLOW	RATIO	FUEL		FAILURE
G	GAUGING		VIEWING DEVICE		
H	HAND				HIGH/HAND
I	CURRENT		INDICATE		
J	POWER	SCAN		CONTROL STATION	
K	TIME	TIME RATE OF CHANGE			
L	LEVEL		PILOT LIGHT		LOW/LOCAL
M	MOISTURE/MOTOR	MOMENTARY	MOTOR		MIDDLE/MANUAL
N	STATUS				
O	OPERATOR		ORIFICE		OPEN/OVERLOAD
P	PRESSURE		POINT		
Q	EVENT	TOTALIZE	TOTAL		
R	RESET		RECORD		RUNNING/REMOTE
S	SPEED	SAFETY		SWITCH	STOP/SPEED
T	TEMPERATURE		TEST	TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION		
V	VIBRATION/VALVE			VALVE	
W	FORCE, WEIGHT		WELL		
X	TELEMETRY INTERFACE				
Y	COMPUTER INTERFACE			COMPUTE/RELAY/ CONVERTER	
Z	POSITION			ACTUATE	POSITION



C R W A  
1234 N MARKET BLVD  
SACRAMENTO, CA 95834  
(916) 553-4900

AS NOTED  
ONE INCH  
AT FULL SCALE



IDYLLWILD TREATMENT PLANT  
INSTRUMENT SYMBOLS & ABBREVIATIONS  
IDYLLWILD, CA

DRAFT --  
NOT FOR  
CONSTRUCTION

DATE:	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
6/13/24						1001
DESIGN:	MB					
DRAWN:	JD					
CHECKED:	JP					

ControlPoint Engineering, Inc.  
3941 Park Drive, Unit 20  
El Dorado Hills, CA 95762  
T 916.817.1376  
F 916.760.1378 IWDx21-001

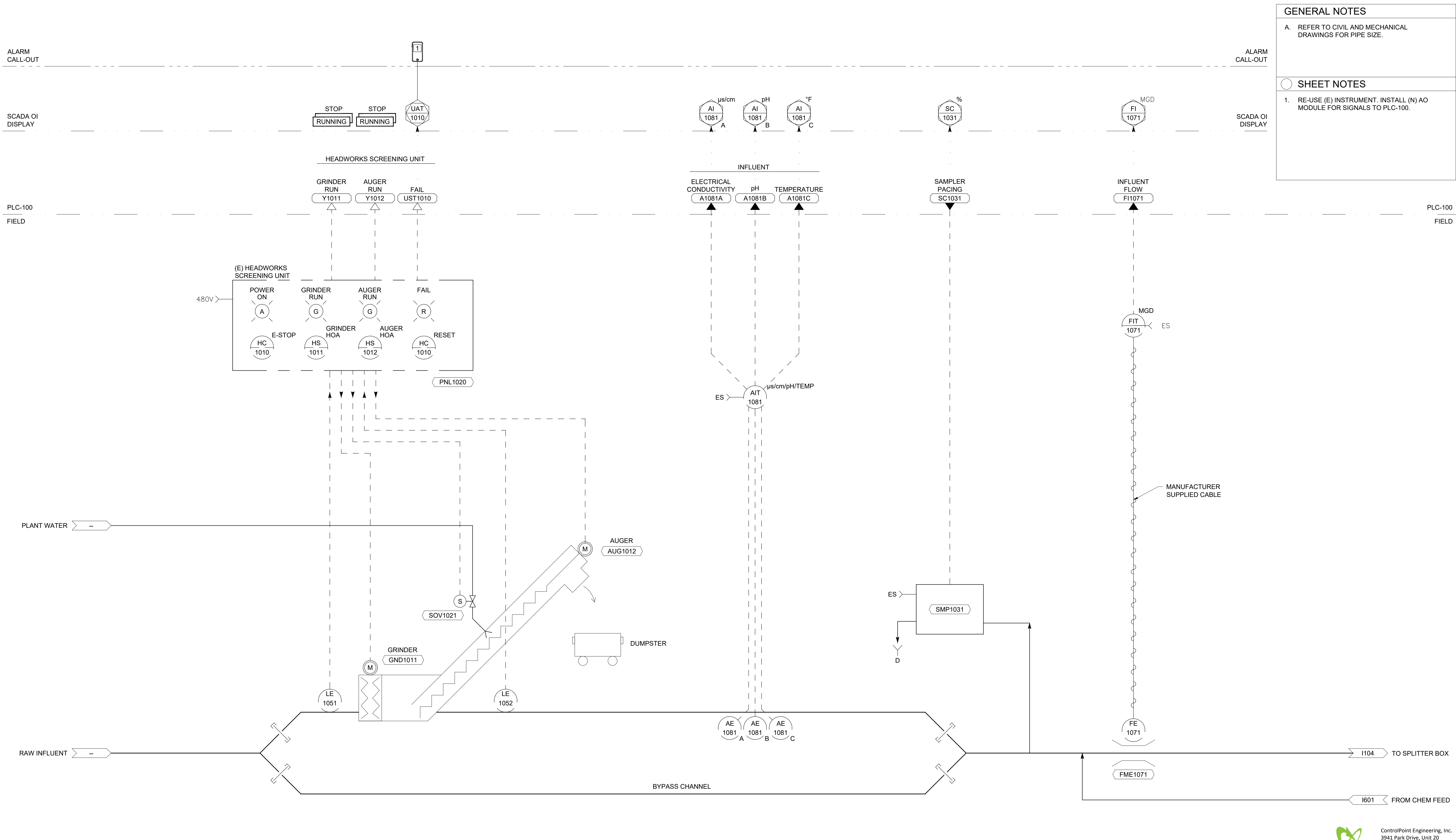
**GENERAL NOTES**

A. REFER TO CIVIL AND MECHANICAL DRAWINGS FOR PIPE SIZE.

---

**SHEET NOTES**

1. RE-USE (E) INSTRUMENT. INSTALL (N) AO MODULE FOR SIGNALS TO PLC-100.



**HEADWORKS**



C R W A  
1234 N MARKET BLVD  
SACRAMENTO, CA 95834  
(916) 553-4900

AS NOTED  
ONE INCH  
AT FULL SCALE



IDYLLWILD TREATMENT PLANT  
**HEADWORKS P&ID**  
IDYLLWILD, CA

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DATE:	6/13/24	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
DESIGN:	MB						1101
DRAWN:	JD						
CHECKED:	JP						

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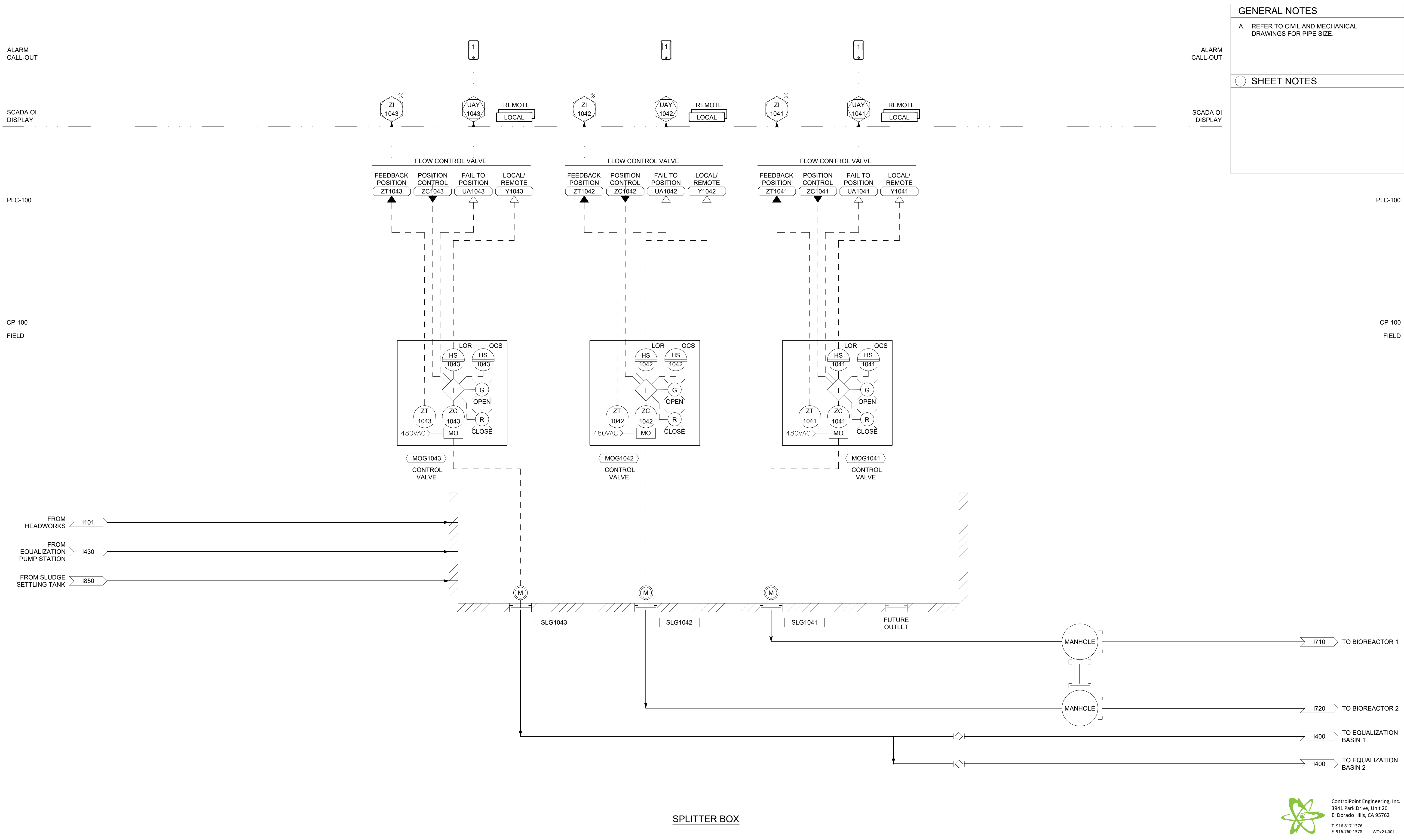
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**GENERAL NOTES**

A. REFER TO CIVIL AND MECHANICAL DRAWINGS FOR PIPE SIZE.

**SHEET NOTES**



**SPLITTER BOX**

ControlPoint Engineering, Inc.  
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 El Dorado Hills, CA 95762  
 T 916.817.1376  
 F 916.760.1378 IWDx21-001

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C R W A  
 1234 N MARKET BLVD  
 SACRAMENTO, CA 95834  
 (916) 553-4900

AS NOTED  
 ONE INCH  
 AT FULL SCALE



IDYLLWILD TREATMENT PLANT  
**SPLITTER BOX P&ID**  
 IDYLLWILD, CA

DRAFT --  
 NOT FOR  
 CONSTRUCTION

DATE:	6/13/24	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
DESIGN:	MB						1104
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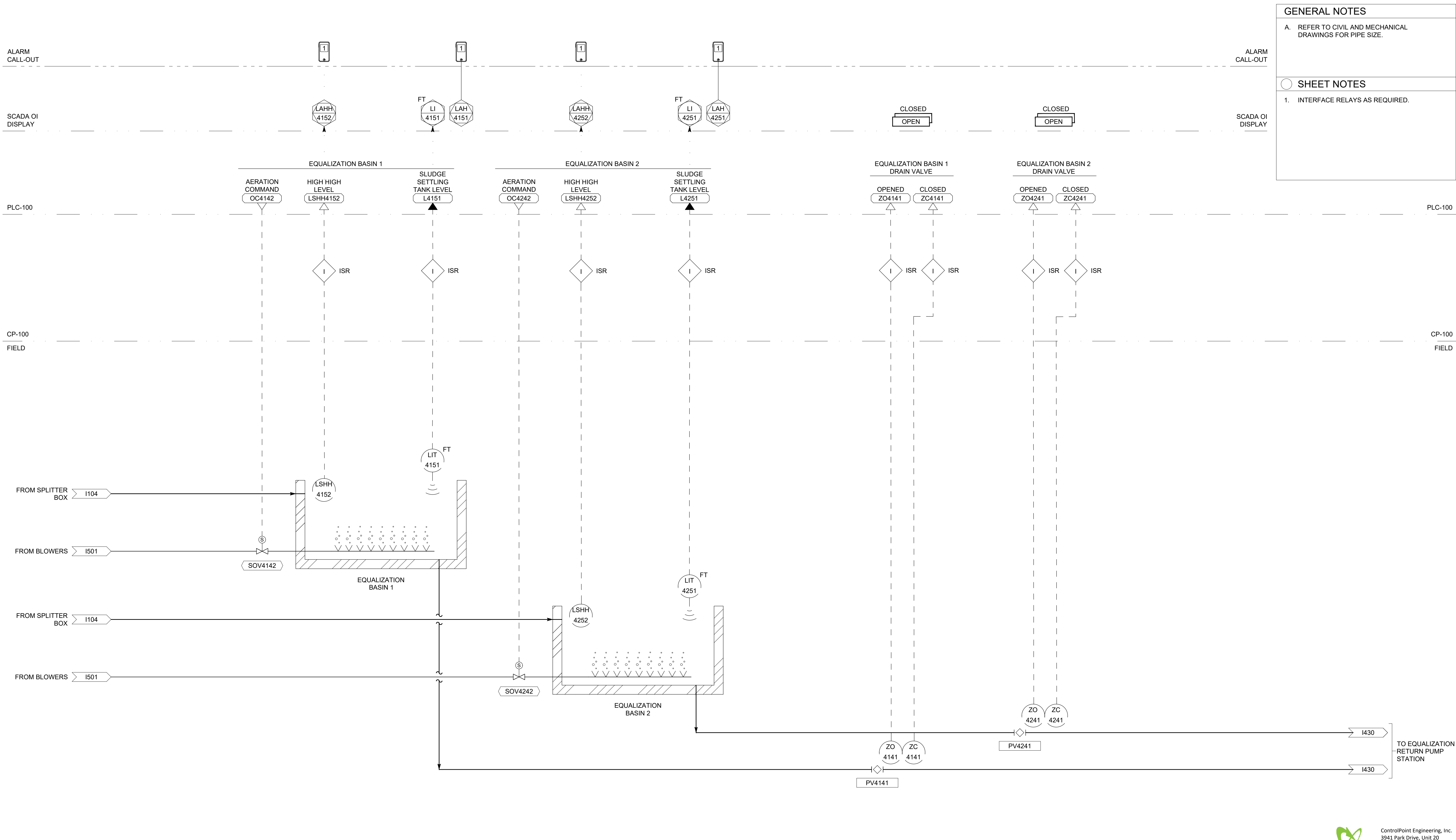
**GENERAL NOTES**

A. REFER TO CIVIL AND MECHANICAL DRAWINGS FOR PIPE SIZE.

---

**SHEET NOTES**

1. INTERFACE RELAYS AS REQUIRED.



**EQUALIZATION BASINS**

IDYLLWILD TREATMENT PLANT  
**EQUALIZATION BASINS P&ID**  
 IDYLLWILD, CA

DRAFT --  
 NOT FOR  
 CONSTRUCTION

DATE:	6/13/24	NO.		REVISIONS	BY	APP	DATE	SHEET X OF X
DESIGN:	MB							1400
DRAWN:	JD							
CHECKED:	JP							

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C R W A  
 1234 N MARKET BLVD  
 SACRAMENTO, CA 95834  
 (916) 553-4900

AS NOTED  
 ONE INCH  
 AT FULL SCALE



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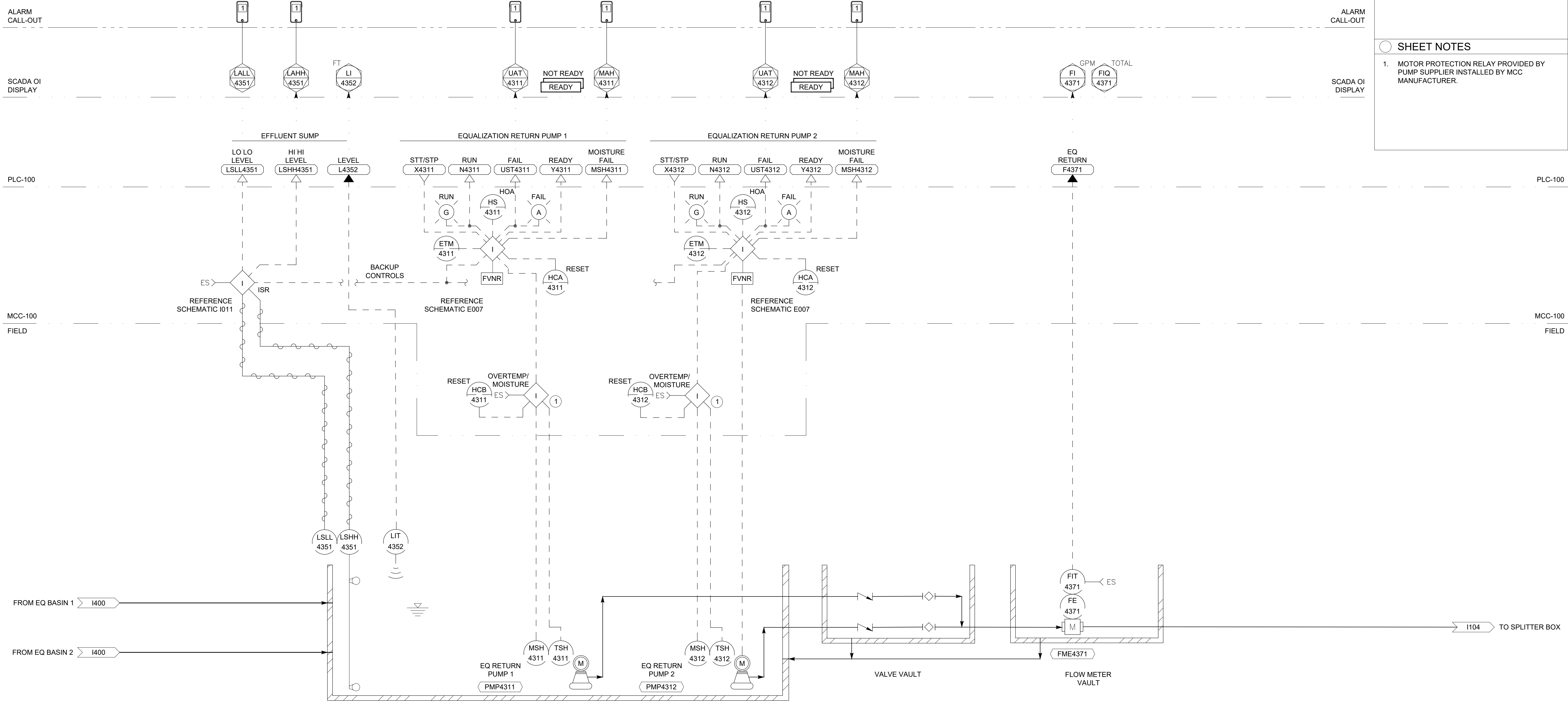
**GENERAL NOTES**

A. REFER TO CIVIL AND MECHANICAL DRAWINGS FOR PIPE SIZE.

---

**SHEET NOTES**

1. MOTOR PROTECTION RELAY PROVIDED BY PUMP SUPPLIER INSTALLED BY MCC MANUFACTURER.



EQUALIZATION BASINS RETURN PUMP STATION

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C R W A  
 1234 N MARKET BLVD  
 SACRAMENTO, CA 95834  
 (916) 553-4900

AS NOTED  
 ONE INCH  
 AT FULL SCALE



IDYLLWILD TREATMENT PLANT  
 EQUALIZATION BASINS RETURN PUMP STATION P&ID  
 IDYLLWILD, CA

DRAFT --  
 NOT FOR  
 CONSTRUCTION

DATE:	6/13/24	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
DESIGN:	MB						1430
DRAWN:	JD						
CHECKED:	JP						

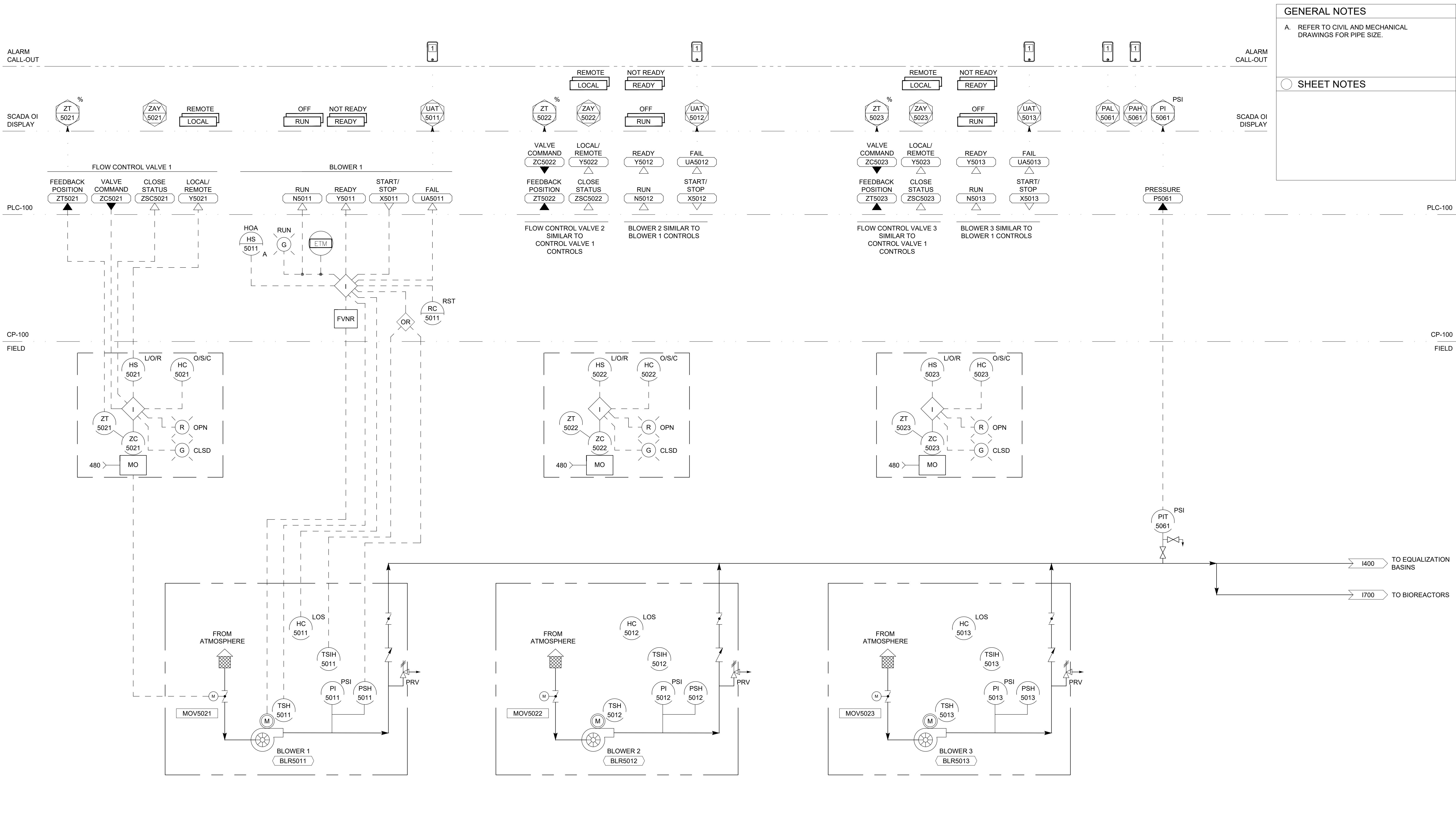
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**GENERAL NOTES**

A. REFER TO CIVIL AND MECHANICAL DRAWINGS FOR PIPE SIZE.

---

**SHEET NOTES**



**BLOWERS**

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C R W A  
 1234 N MARKET BLVD  
 SACRAMENTO, CA 95834  
 (916) 553-4900

AS NOTED  
 ONE INCH  
 AT FULL SCALE



IDYLLWILD TREATMENT PLANT  
**BLOWER P&ID**  
 IDYLLWILD, CA

DRAFT --  
 NOT FOR  
 CONSTRUCTION

DATE:	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
6/13/24						1501
DESIGN:	MB					
DRAWN:	JD					
CHECKED:	JP					

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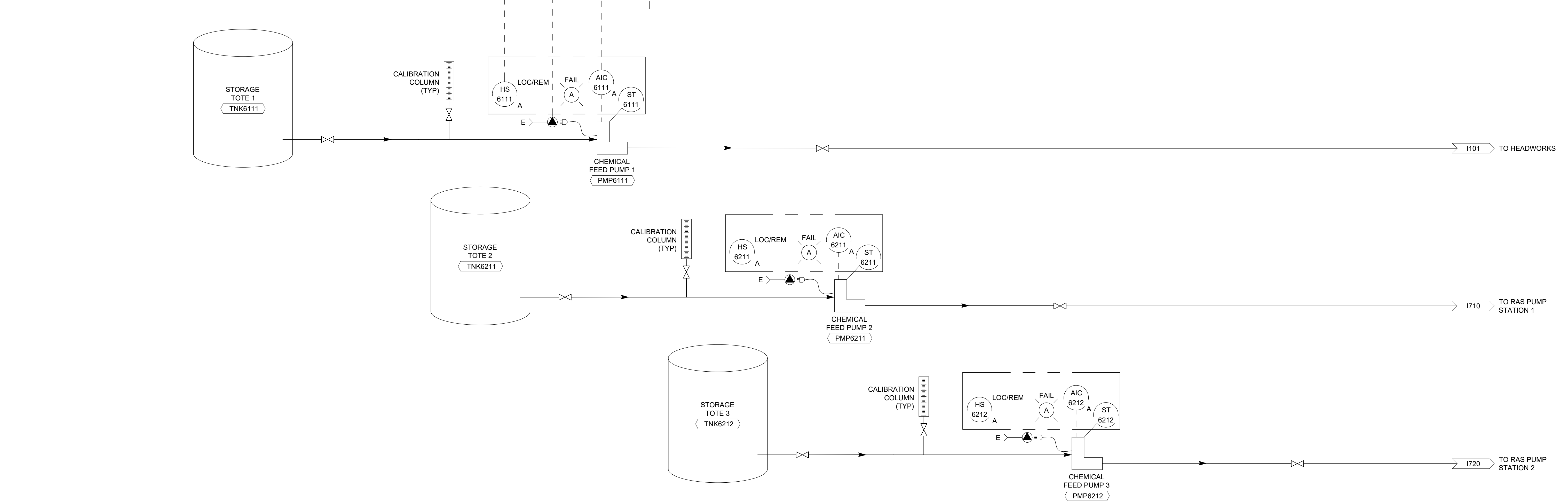
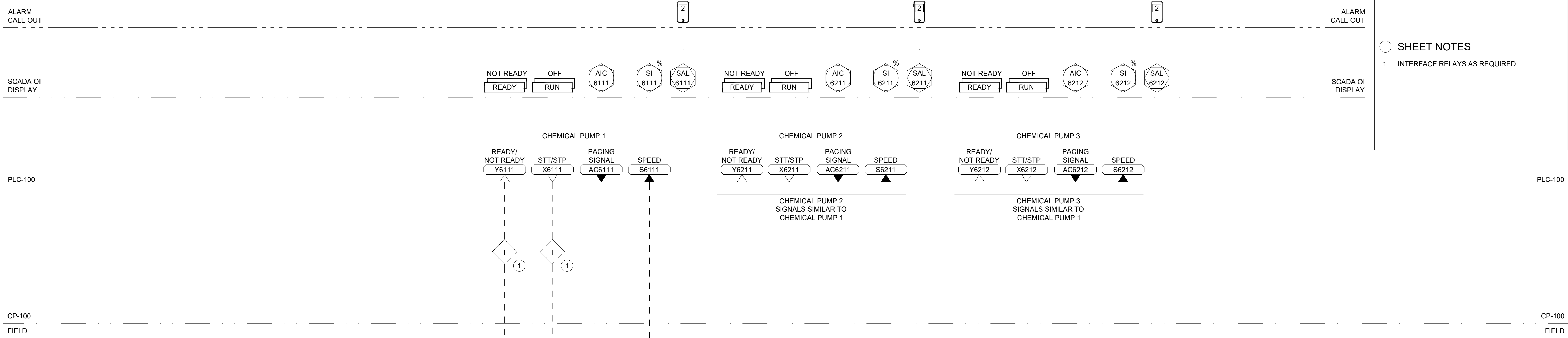
**GENERAL NOTES**

A. REFER TO CIVIL AND MECHANICAL DRAWINGS FOR PIPE SIZE.

---

**SHEET NOTES**

1. INTERFACE RELAYS AS REQUIRED.



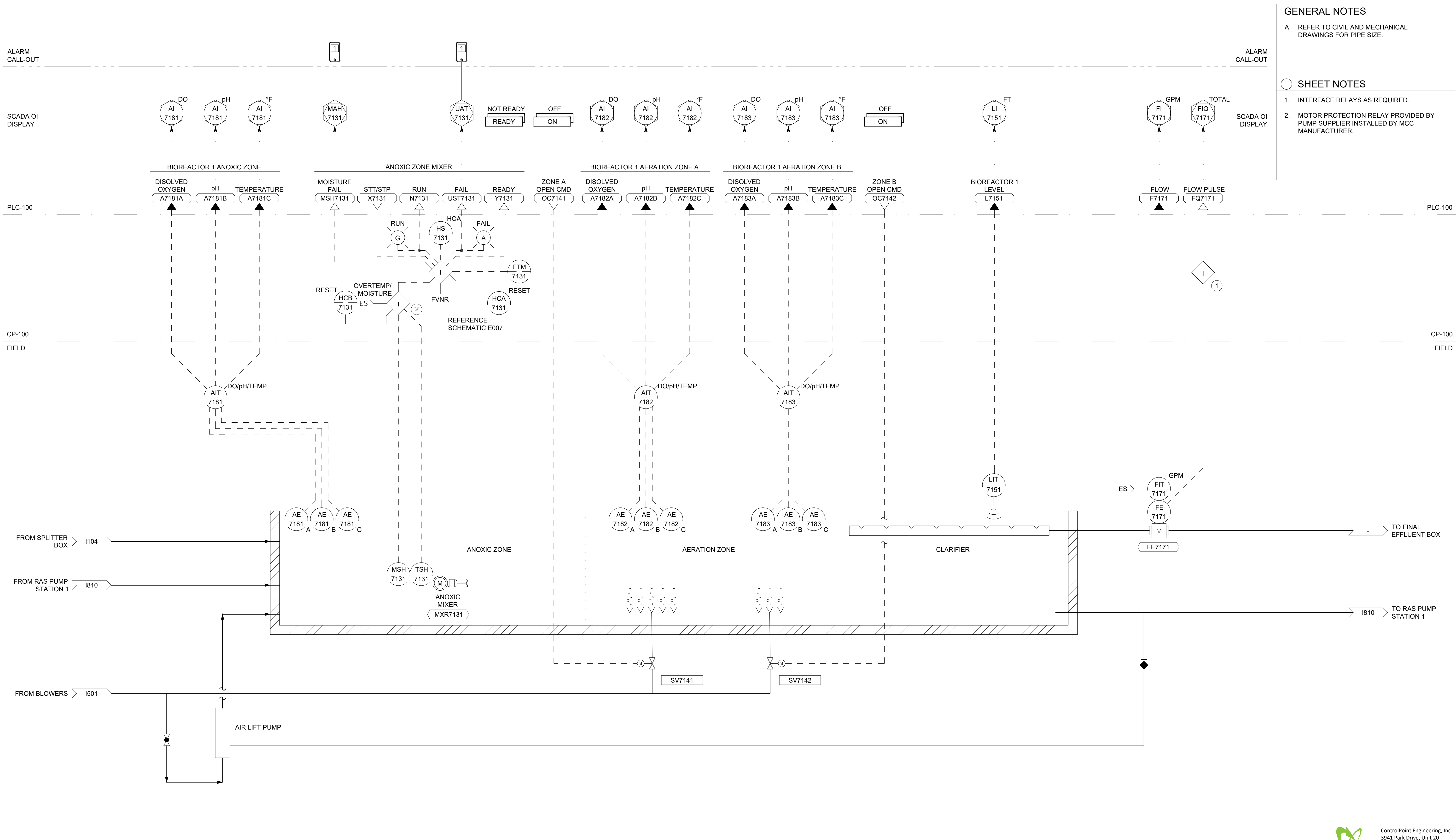
**CHEMICAL FEED SYSTEM**

ControlPoint Engineering, Inc.  
3941 Park Drive, Unit 20  
El Dorado Hills, CA 95762  
T 916.817.1376  
F 916.760.1378 IWDx21-001

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<p><b>California Rural Water Association</b></p>	<p>C R W A 1234 N MARKET BLVD SACRAMENTO, CA 95834 (916) 553-4900</p>	<p>AS NOTED ONE INCH AT FULL SCALE</p>	<p>CALL AT LEAST TWO WORKING DAYS BEFORE YOU DIG</p>		<p>IDYLLWILD TREATMENT PLANT <b>CHEMICAL FEED SYSTEM P&amp;ID</b> IDYLLWILD, CA</p>	<p>DRAFT -- NOT FOR CONSTRUCTION</p>	DATE: 6/13/24	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
							DESIGN: MB						
							DRAWN: JD						
							CHECKED: JP						

- GENERAL NOTES**
- A. REFER TO CIVIL AND MECHANICAL DRAWINGS FOR PIPE SIZE.
- 
- SHEET NOTES**
1. INTERFACE RELAYS AS REQUIRED.
  2. MOTOR PROTECTION RELAY PROVIDED BY PUMP SUPPLIER INSTALLED BY MCC MANUFACTURER.



**BIOREACTOR 1**

ControlPoint Engineering, Inc.  
 3941 Park Drive, Unit 20  
 El Dorado Hills, CA 95762  
 T 916.817.1376  
 F 916.760.1378 IWDx21-001



C R W A  
 1234 N MARKET BLVD  
 SACRAMENTO, CA 95834  
 (916) 553-4900

AS NOTED  
 ONE INCH  
 AT FULL SCALE



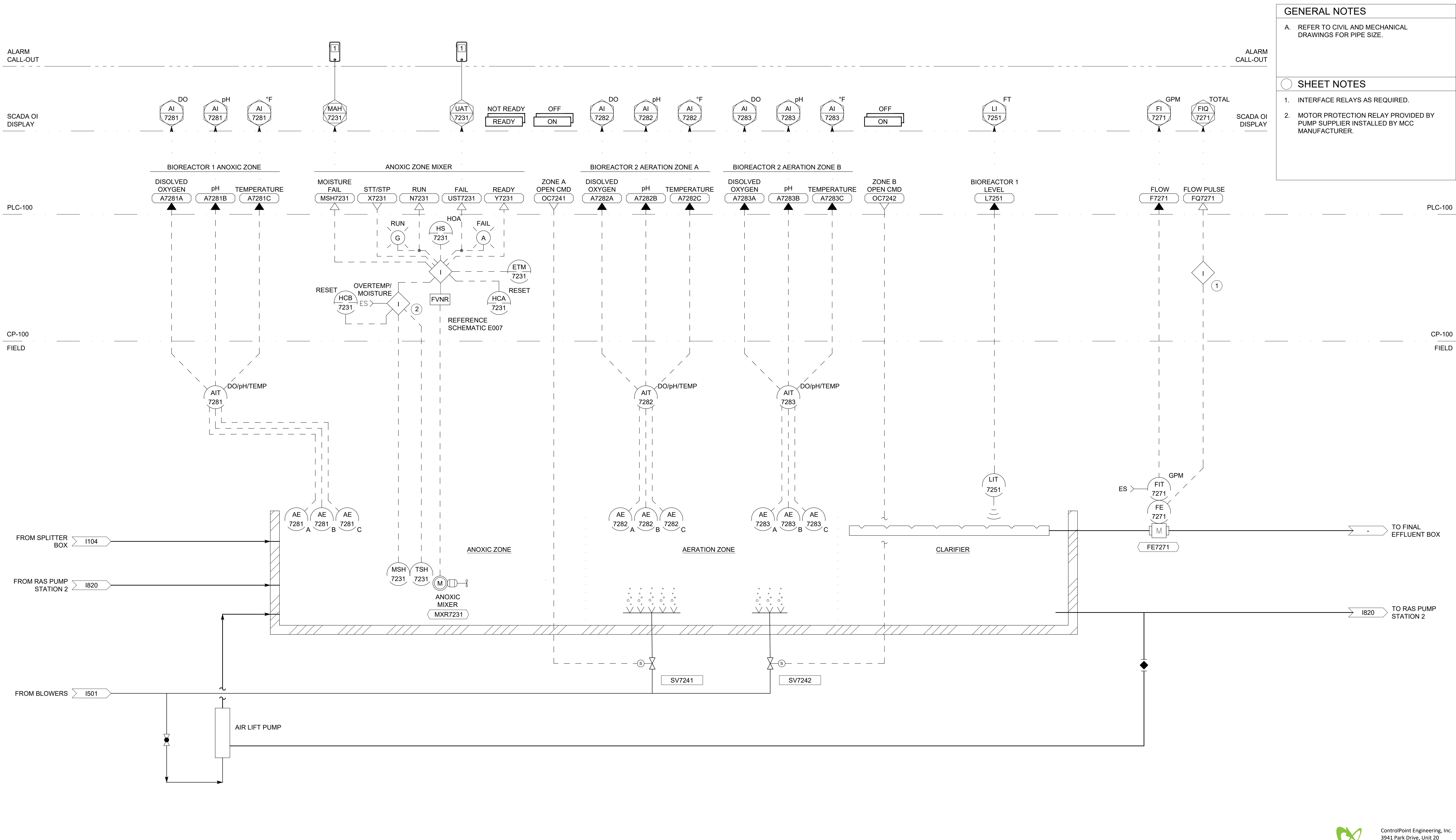
IDYLLWILD TREATMENT PLANT  
**REACTOR 1 P&ID**  
 IDYLLWILD, CA

DRAFT --  
 NOT FOR  
 CONSTRUCTION

DATE:	6/13/24	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
DESIGN:	MB						1710
DRAWN:	JD						
CHECKED:	JP						

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- GENERAL NOTES**
- A. REFER TO CIVIL AND MECHANICAL DRAWINGS FOR PIPE SIZE.
- 
- SHEET NOTES**
1. INTERFACE RELAYS AS REQUIRED.
2. MOTOR PROTECTION RELAY PROVIDED BY PUMP SUPPLIER INSTALLED BY MCC MANUFACTURER.



**BIOREACTOR 2**



C R W A  
1234 N MARKET BLVD  
SACRAMENTO, CA 95834  
(916) 553-4900

AS NOTED  
ONE INCH  
AT FULL SCALE



IDYLLWILD TREATMENT PLANT  
**REACTOR 2 P&ID**  
IDYLLWILD, CA

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NOT FOR  
CONSTRUCTION

DATE: 6/13/24	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
DESIGN: MB						1720
DRAWN: JD						
CHECKED: JP						

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3941 Park Drive, Unit 20  
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F 916.760.1378 IWDx21-001

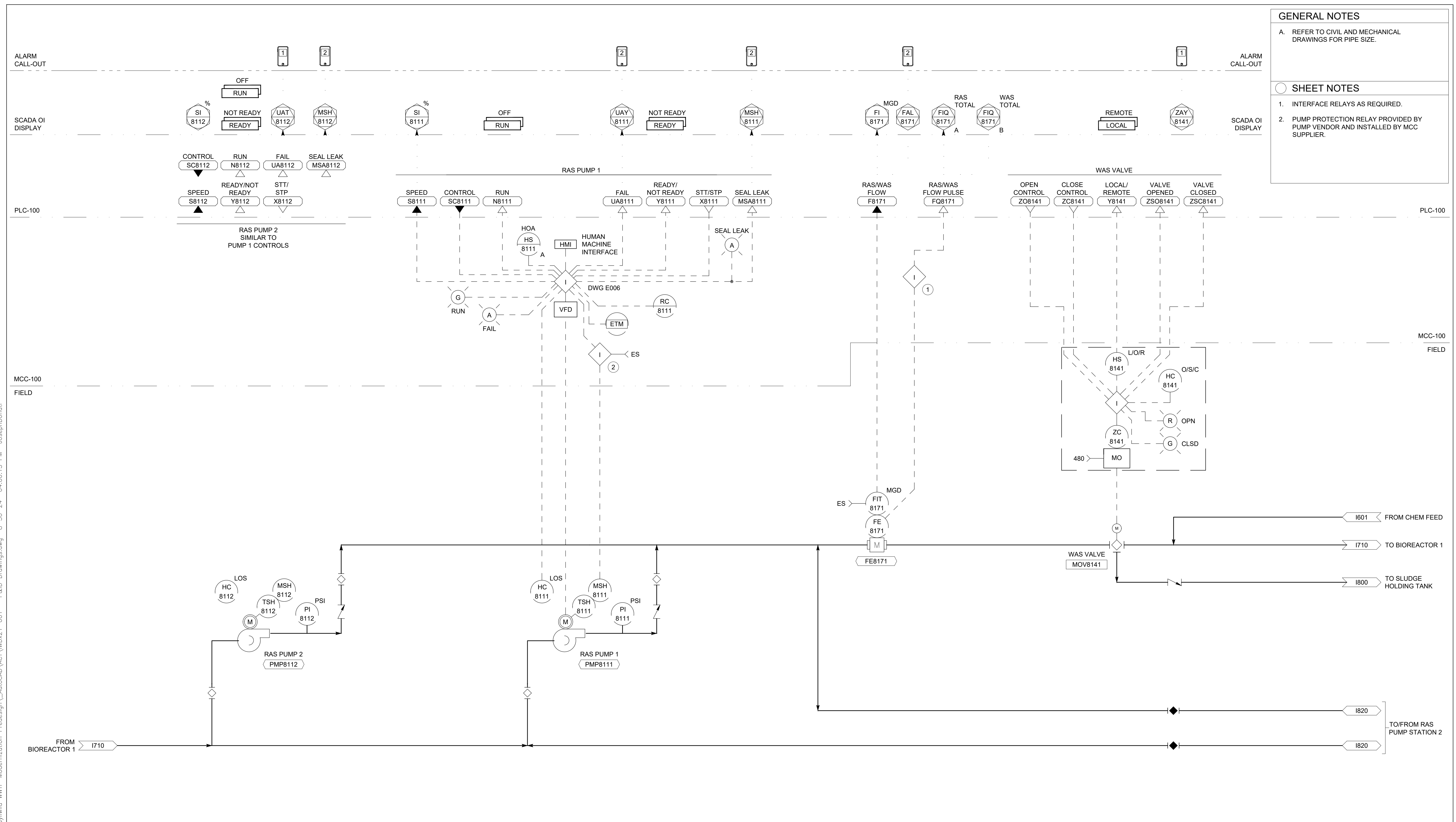
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**GENERAL NOTES**

A. REFER TO CIVIL AND MECHANICAL DRAWINGS FOR PIPE SIZE.

**SHEET NOTES**

1. INTERFACE RELAYS AS REQUIRED.
2. PUMP PROTECTION RELAY PROVIDED BY PUMP VENDOR AND INSTALLED BY MCC SUPPLIER.



**RAS PUMP STATION 1**

ControlPoint Engineering, Inc.  
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El Dorado Hills, CA 95762  
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C R W A  
1234 N MARKET BLVD  
SACRAMENTO, CA 95834  
(916) 553-4900

AS NOTED  
ONE INCH  
AT FULL SCALE



IDYLLWILD TREATMENT PLANT  
**RAS PUMP STATION 1 P&ID**  
IDYLLWILD, CA

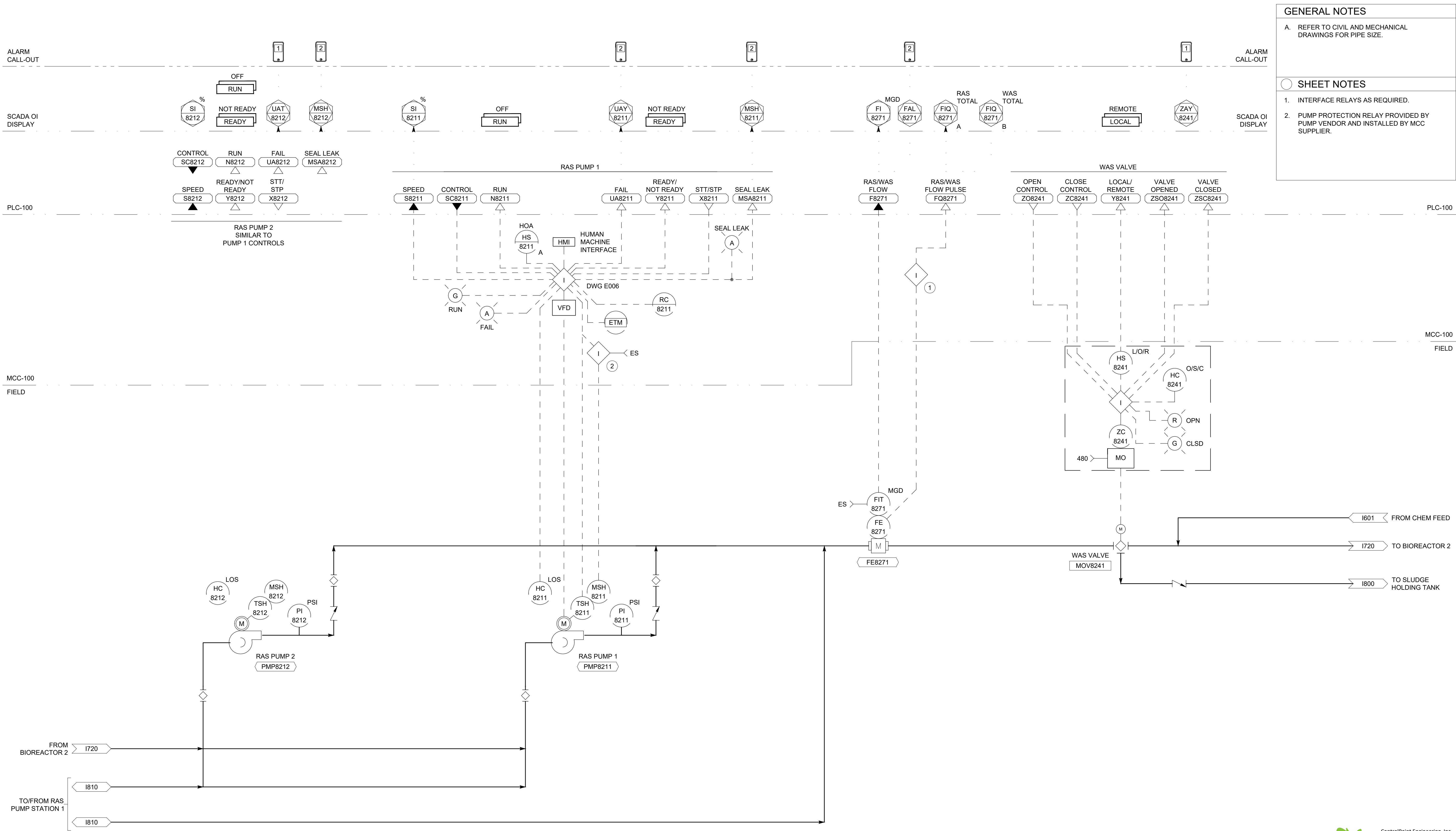
DRAFT -- NOT FOR CONSTRUCTION

DATE:	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
6/13/24						1810
DESIGN:	MB					
DRAWN:	JD					
CHECKED:	JP					

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- GENERAL NOTES**
- A. REFER TO CIVIL AND MECHANICAL DRAWINGS FOR PIPE SIZE.
- 
- SHEET NOTES**
- 1. INTERFACE RELAYS AS REQUIRED.
  - 2. PUMP PROTECTION RELAY PROVIDED BY PUMP VENDOR AND INSTALLED BY MCC SUPPLIER.



**RAS PUMP STATION 2**

ControlPoint Engineering, Inc.  
 3941 Park Drive, Unit 20  
 El Dorado Hills, CA 95762  
 T 916.817.1376  
 F 916.760.1378 IWDx21-001

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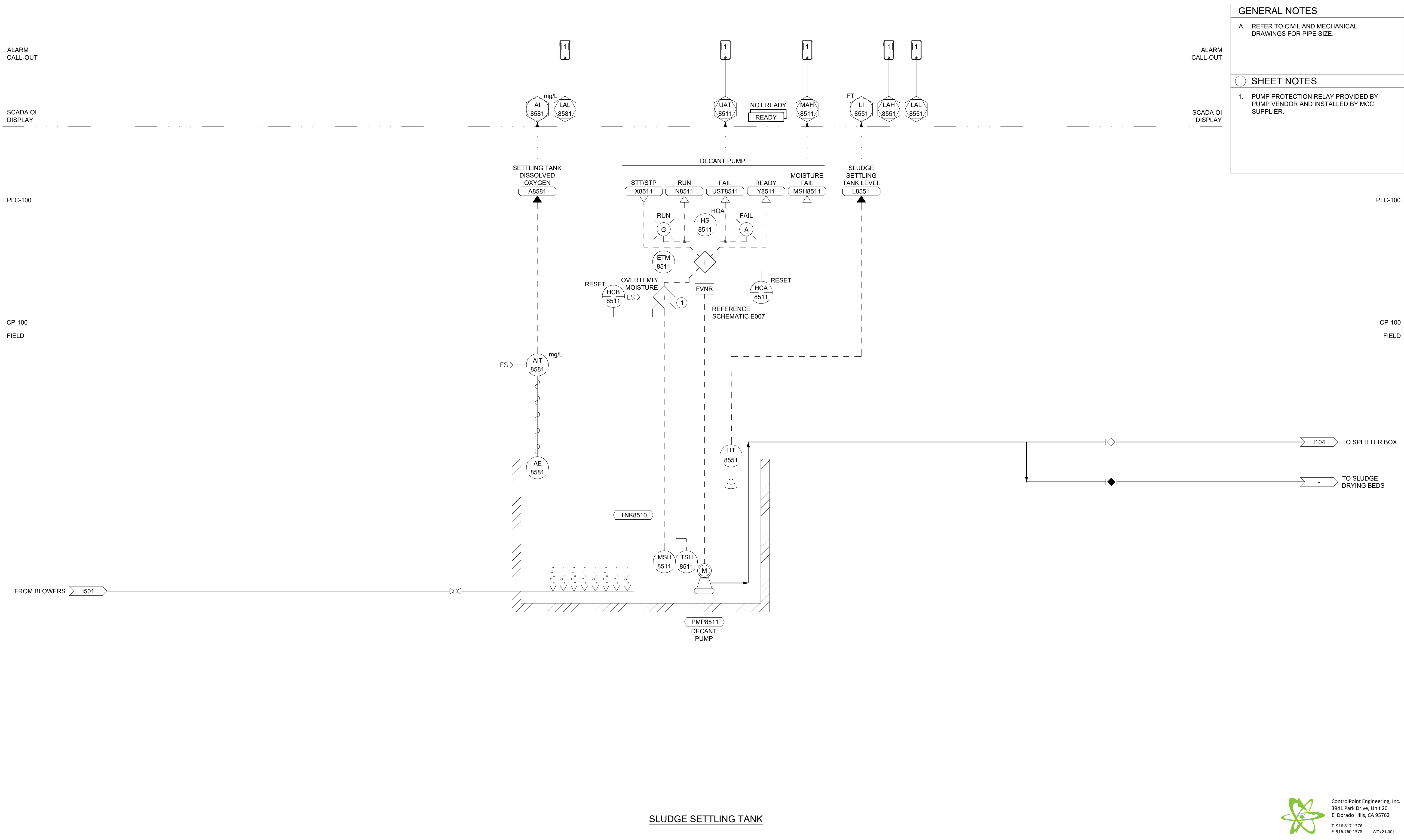
	<b>California</b> Rural Water Association	C R W A 1234 N MARKET BLVD SACRAMENTO, CA 95834 (916) 553-4900	AS NOTED <hr style="width: 50px; margin: 0 auto;"/> ONE INCH AT FULL SCALE	<p>CALL AT LEAST TWO WORKING DAYS BEFORE YOU DIG</p>		IDYLLWILD TREATMENT PLANT <b>RAS PUMP STATION 2 P&amp;ID</b> IDYLLWILD, CA	DRAFT -- NOT FOR CONSTRUCTION	DATE: 6/13/24 DESIGN: MB DRAWN: JD CHECKED: JP	NO.      REVISIONS      BY      APP      DATE	SHEET X OF X  <h1 style="margin: 0;">1820</h1>

**GENERAL NOTES**

A. REFER TO CIVIL AND MECHANICAL DRAWINGS FOR PIPE SIZE.

**SHEET NOTES**

1. PUMP PROTECTION RELAY PROVIDED BY PUMP VENDOR AND INSTALLED BY MCC SUPPLIER.



**SLUDGE SETTLING TANK**

ControlPoint Engineering, Inc.  
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El Dorado Hills, CA 95762  
T 916.817.1376  
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C R W A  
1234 N MARKET BLVD  
SACRAMENTO, CA 95834  
(916) 553-4900

AS NOTED  
ONE INCH  
AT FULL SCALE

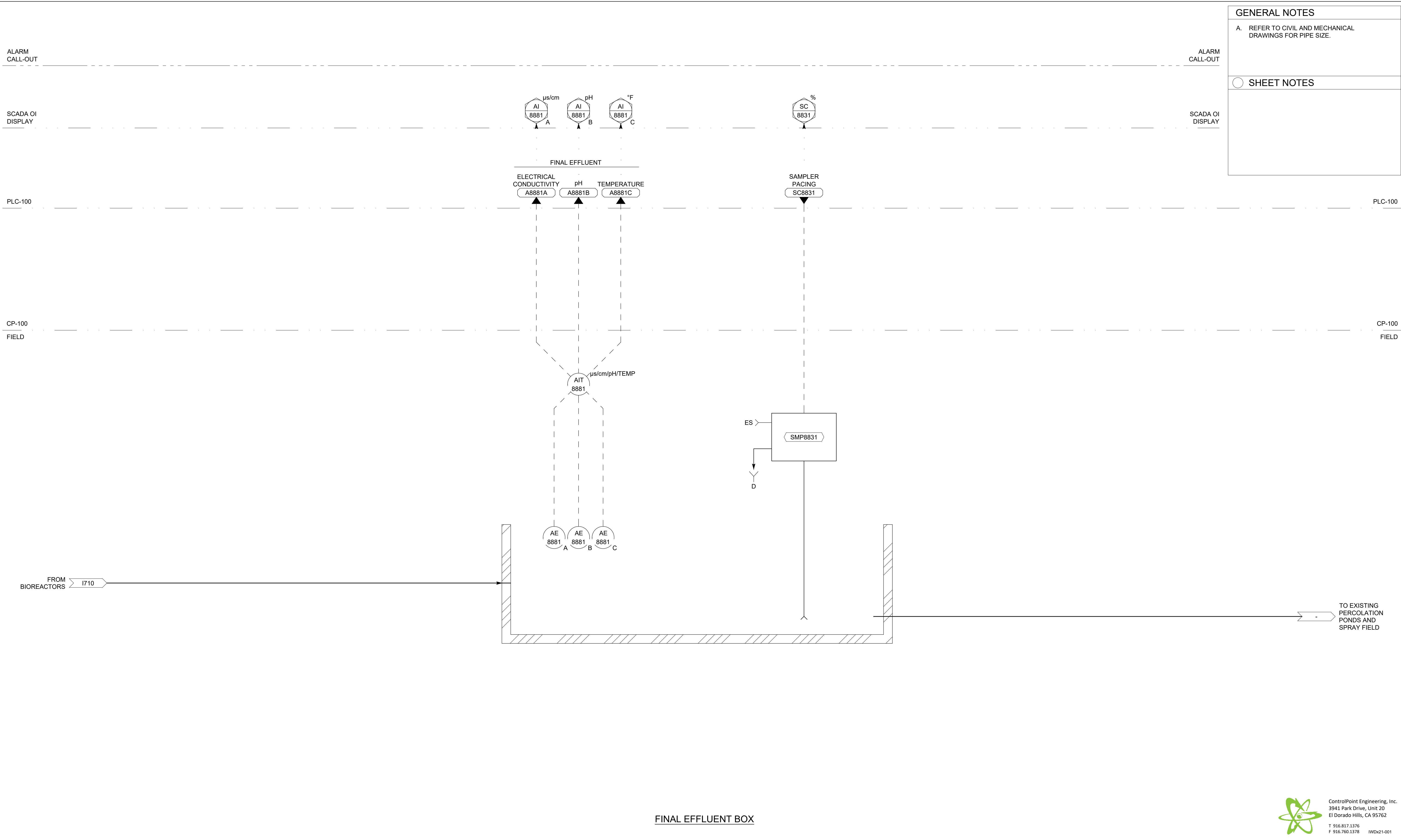


IDYLLWILD TREATMENT PLANT  
**SLUDGE SETTLING P&ID**  
IDYLLWILD, CA

DRAFT --  
NOT FOR  
CONSTRUCTION

DATE:	6/13/24	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
DESIGN:	MB						1850
DRAWN:	JD						
CHECKED:	JP						

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**GENERAL NOTES**

A. REFER TO CIVIL AND MECHANICAL DRAWINGS FOR PIPE SIZE.

---

**SHEET NOTES**

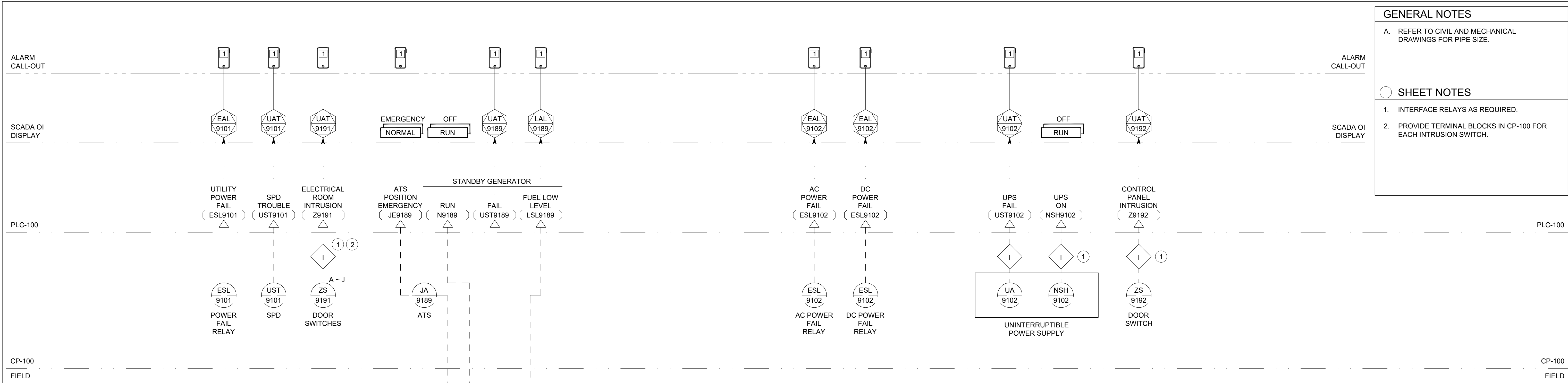
**FINAL EFFLUENT BOX**

ControlPoint Engineering, Inc.  
 3941 Park Drive, Unit 20  
 El Dorado Hills, CA 95762  
 T 916.817.1376  
 F 916.760.1378 IWDx21-001

<p><b>California Rural Water Association</b></p> <p>C R W A          1234 N MARKET BLVD          SACRAMENTO, CA 95834          (916) 553-4900</p>	<p>AS NOTED</p> <p>ONE INCH AT FULL SCALE</p>	<p>CALL AT LEAST TWO WORKING DAYS BEFORE YOU DIG</p>		<p>IDYLLWILD TREATMENT PLANT</p> <p><b>FINAL EFFLUENT BOX P&amp;ID</b></p> <p>IDYLLWILD, CA</p>	<p>DRAFT -- NOT FOR CONSTRUCTION</p>	DATE: 6/13/24	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
						DESIGN: MB						
						DRAWN: JD						
						CHECKED: JP						

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- GENERAL NOTES**
- A. REFER TO CIVIL AND MECHANICAL DRAWINGS FOR PIPE SIZE.
- 
- SHEET NOTES**
1. INTERFACE RELAYS AS REQUIRED.
2. PROVIDE TERMINAL BLOCKS IN CP-100 FOR EACH INTRUSION SWITCH.



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<p><b>California Rural Water Association</b></p> <p>C R W A          1234 N MARKET BLVD          SACRAMENTO, CA 95834          (916) 553-4900</p>	<p>AS NOTED</p> <p>ONE INCH AT FULL SCALE</p>	<p>CALL AT LEAST TWO WORKING DAYS BEFORE YOU DIG</p>		<p>IDYLLWILD TREATMENT PLANT</p> <p>MISCELLANEOUS P&amp;ID</p> <p>IDYLLWILD, CA</p>	<p>DRAFT -- NOT FOR CONSTRUCTION</p>	DATE: 6/13/24	NO.	REVISIONS	BY	APP	DATE	SHEET X OF X
						DESIGN: MB						
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						CHECKED: JP						