



SECTION G
PART 2 OF 2

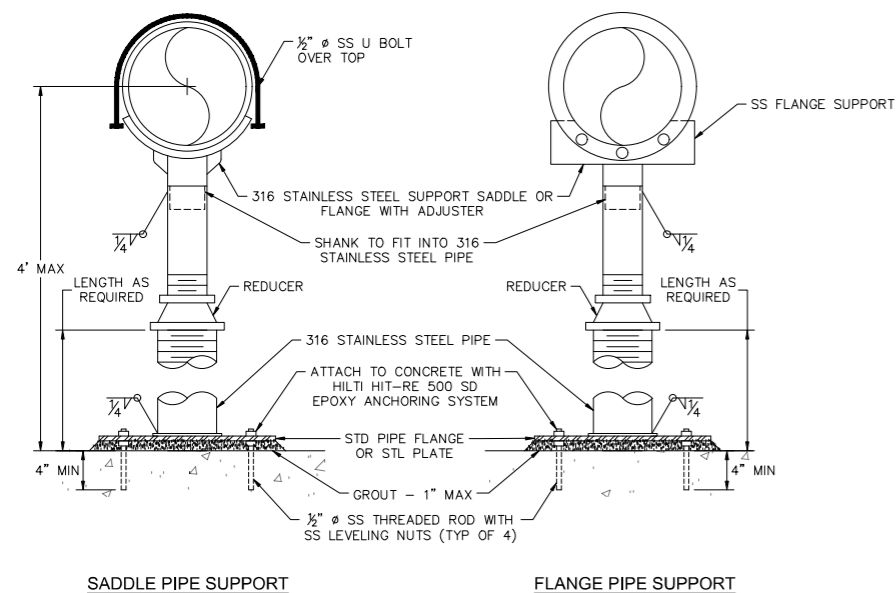
CONTRACT DRAWINGS

**CAMP SWITZERLAND LIFT
STATION PROJECT**

FOR

**LAKE GREGORY REGIONAL PARK
CRESTLINE, CALIFORNIA**

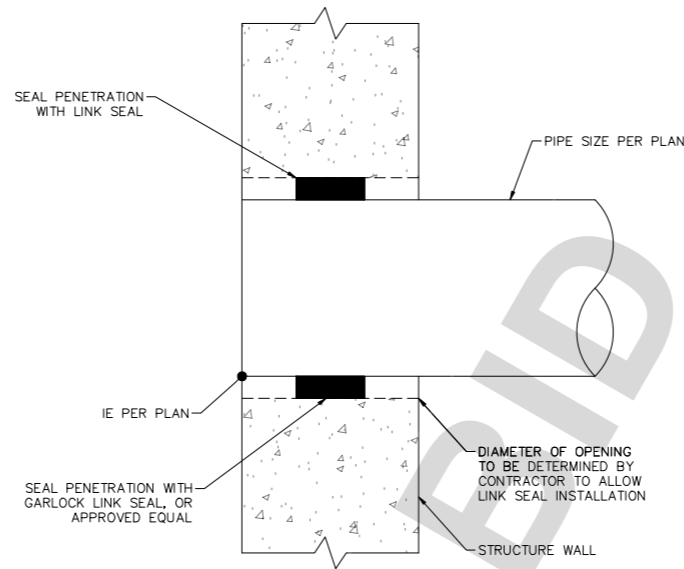
PROJECT NO.: 30.30.0181



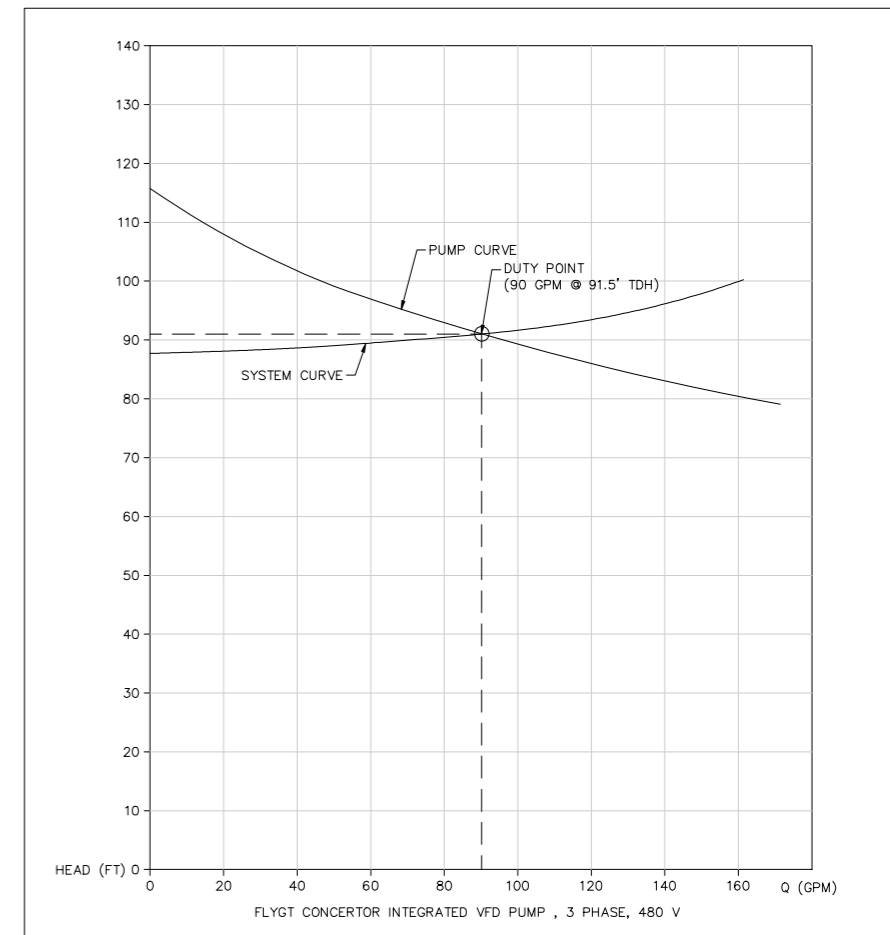
SADDLE PIPE SUPPORT

FLANGE PIPE SUPPORT

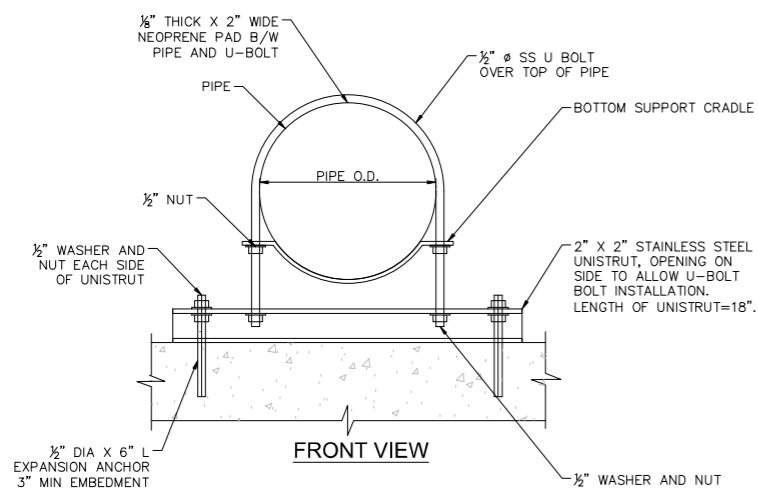
A PIPE SUPPORT
NOT TO SCALE



B PIPE PENETRATION
NOT TO SCALE

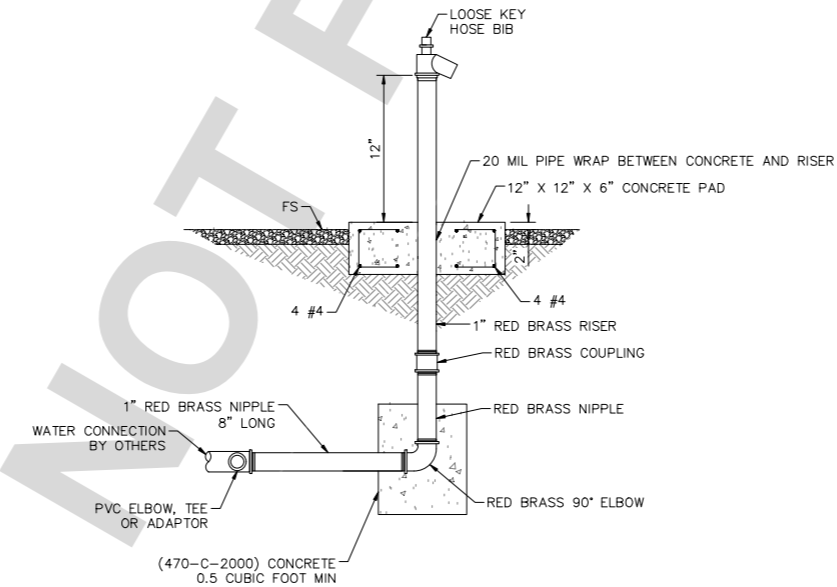


E PUMP CURVE
NOT TO SCALE



FRONT VIEW

C VAULT PIPE SUPPORT
NOT TO SCALE



D 1" HOSE BIB ASSEMBLY
NOT TO SCALE



BENCHMARK:
ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NGVD 29 REFERENCE: CSFB4084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS:
THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 62° 10' 52" E BETWEEN SOPAC CORS STATIONS P612 AND MS0B WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.



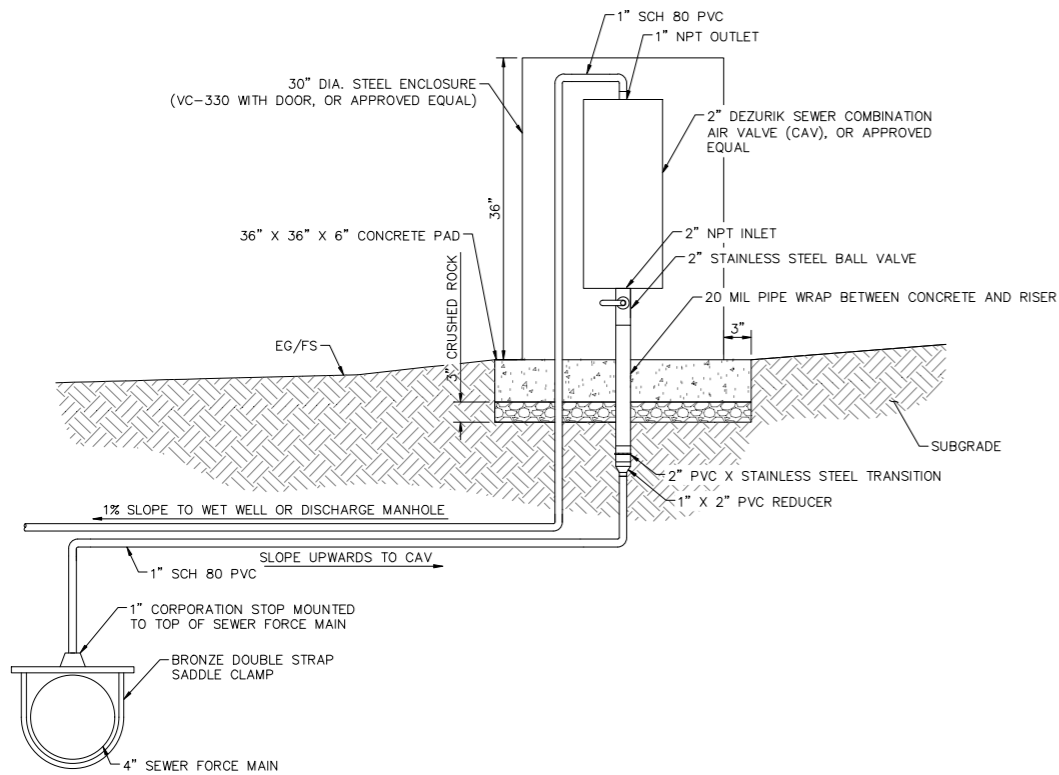
COMPANY ADDRESS AND LOGO
401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9868
WWW.KIMLEY-HORN.COM
Kimley»Horn
PREPARED UNDER THE SUPERVISION OF:
RENEE K. CHUANG 92140 5/14/2024
PROFESSIONAL ENGINEER R.C.E. No. DATE

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

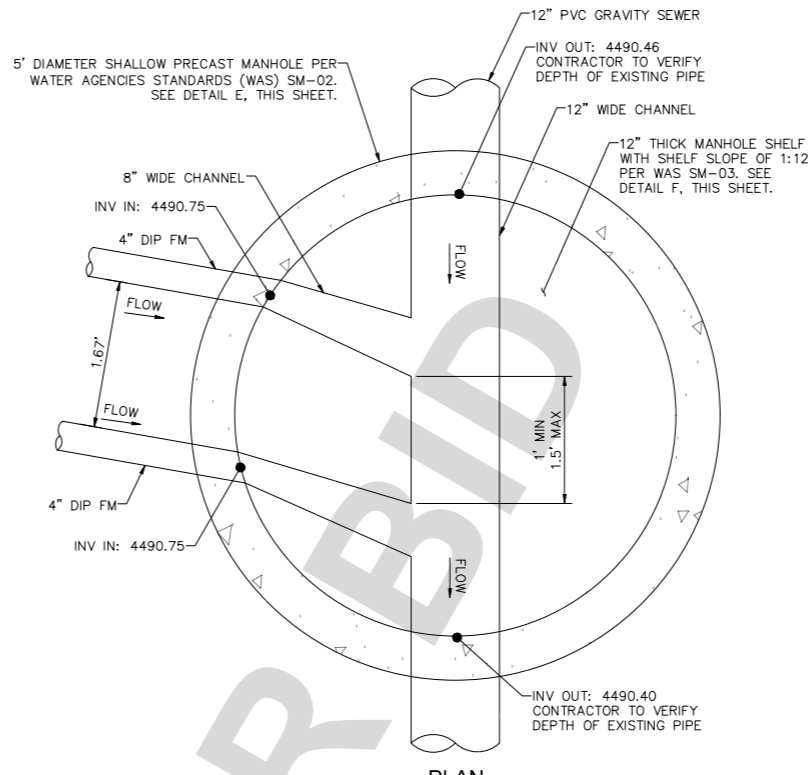
PLANS APPROVED BY: SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS David R. Doublet ASSISTANT DIRECTOR		
PROJECT MANAGER	INITIAL	DATE
WAS, DIVISION MANAGER	Deanna Lestina	
PM, DIVISION MANAGER	Greg Snyder	
	Noel Mondragon	

100% DRAFT IMPROVEMENT PLANS
APN NO. 033714105
CAMP SWITZERLAND
SEWER LIFT STATION
DETAILS

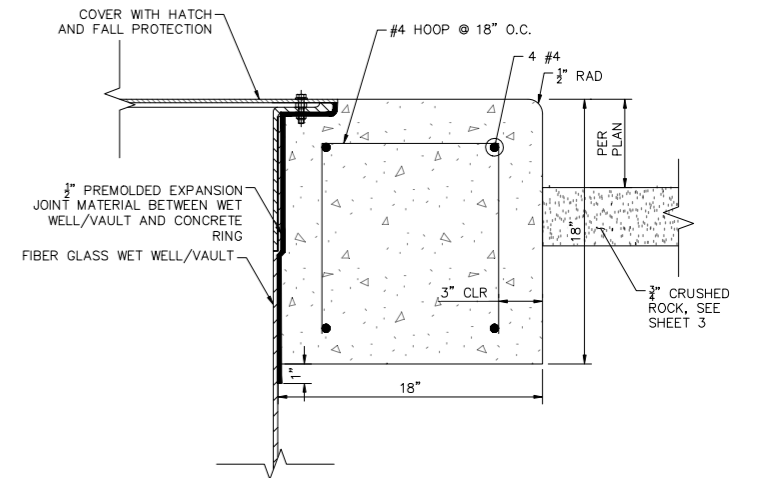
DWG NO.
30.30.XXXX
FILE NO.
SDD-XXX
SHEET 10 OF 20



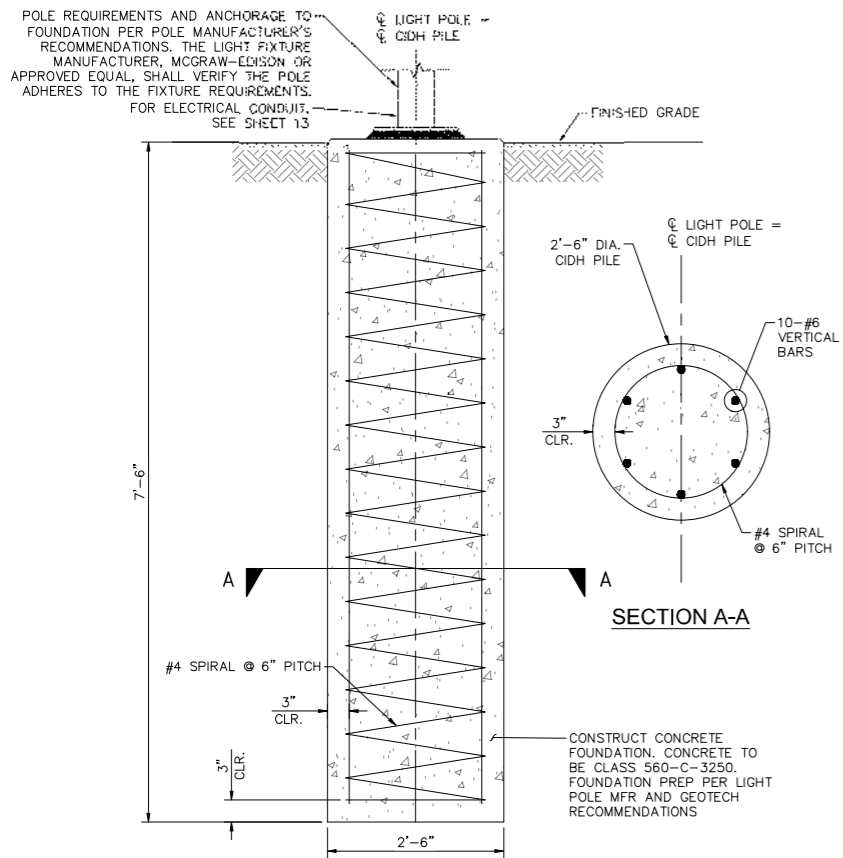
A 2\"/>



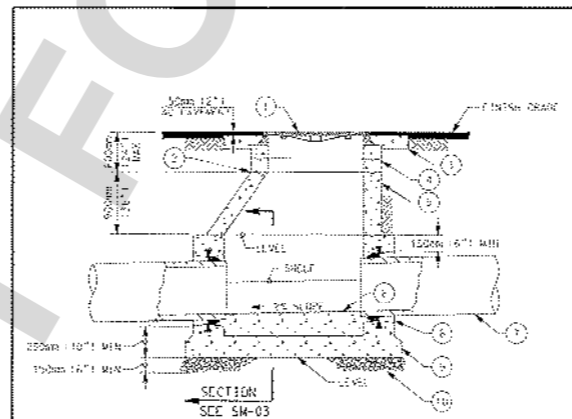
B 5\"/>



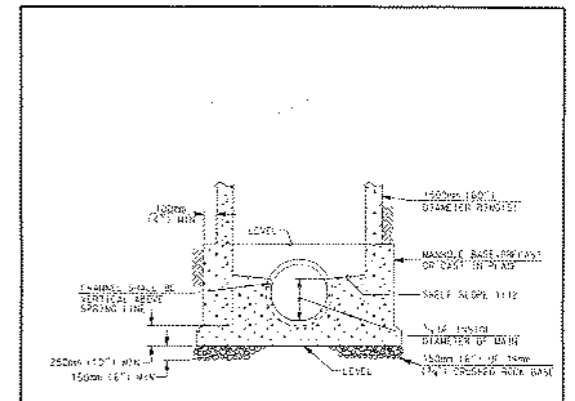
C CONCRETE RING
NOT TO SCALE



D SITE LIGHT FOUNDATION
NOT TO SCALE



E WAS SM-02
NOT TO SCALE



F WAS SM-03
NOT TO SCALE

NOTES:

- REFER TO SECTION 02401 OF THE SPECIFICATIONS.
- VERTICAL WALL OF RING TO BE ON THE UPSTREAM SIDE OF MANHOLE. SEE SM-03 FOR ACCESS LOCATIONS.
- FOR MANHOLE BASES SEE SM-02.
- MANHOLE RINGS SHALL BE 450mm (18") AND CEMENT SHALL BE COATED AND FINISH PER SM-07.
- MANHOLE RINGS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST. REFER TO PLANS.

ITEM NO.	SIZE AND DESCRIPTION	ITEM NO.	SIZE AND DESCRIPTION
1	MANHOLE RING AND TWO CONCENTRIC CONCRETE SEE SM-02 WITH 10mm (3/8") NET ON TOP	2	CONCRETE RING
2	1500mm (60") DIA GRADE RINGS 1500mm (60") DIA GRADE RINGS 1500mm (60") DIA GRADE RINGS	3	1500mm (60") DIA GRADE RINGS 1500mm (60") DIA GRADE RINGS

1500mm (60") DIAMETER SHALLOW PRECAST MANHOLE INSTALLATION

WATER AGENCIES STANDARDS
COMMITTEE APPROVAL: 12/12/2005
DRAWING NUMBER: SM-02

NOTES:

- REFER TO SECTION 02401 OF THE SPECIFICATIONS.
- FOR MANHOLE INSTALLATIONS SEE SM-01 AND SM-02.
- MANHOLE BASES FOR RINGS 450mm (18") AND LARGER SHALL BE COATED PER SM-07.
- MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

1500mm (60") DIAMETER MANHOLE BASES

WATER AGENCIES STANDARDS
COMMITTEE APPROVAL: 12/12/2005
DRAWING NUMBER: SM-03

UNDERGROUND SERVICE ALERT
Call: TOLL FREE 1-800-227-2600 OR 811
TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NGVD 29 REFERENCE: CSFB4084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS:
THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 62° 10' 52" E BETWEEN SOPAC CORN STATIONS P612 AND MS08 WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.



COMPANY ADDRESS AND LOGO
401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9868
WWW.KIMLEY-HORN.COM
PREPARED UNDER THE SUPERVISION OF:
RENEE K. CHUANG 92140 6/14/2024
PROFESSIONAL ENGINEER R.C.E. NO. DATE

MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

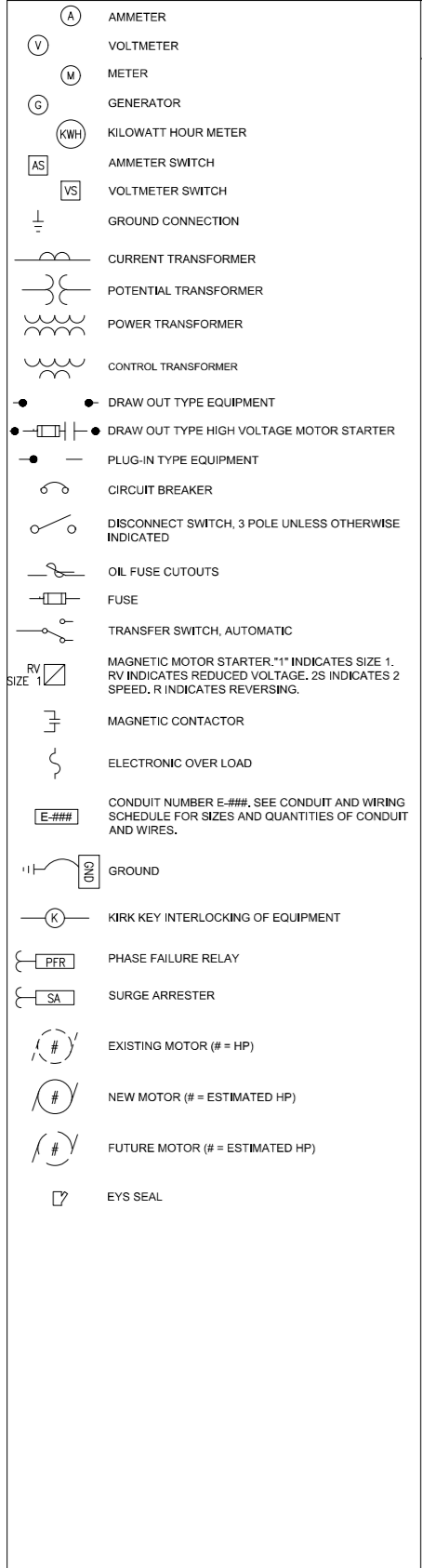
PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS
David R. Doublet
ASSISTANT DIRECTOR

PROJECT MANAGER	INITIAL	DATE
Deanna Lestina		
Greg Snyder		
Noel Mondragon		

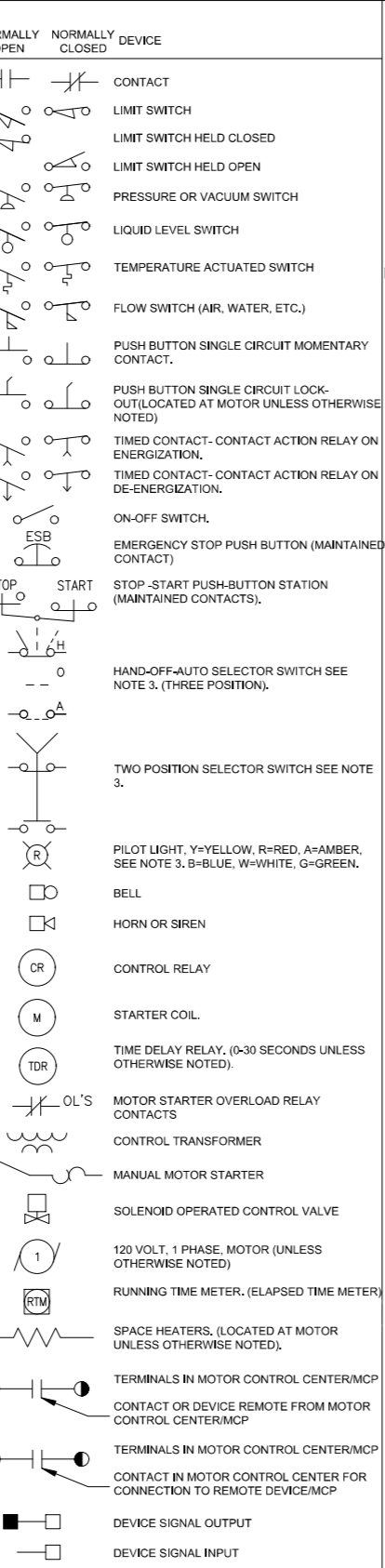
100% DRAFT IMPROVEMENT PLANS
APN NO. 033714105
CAMP SWITZERLAND
SEWER LIFT STATION
DETAILS

DWG NO. 30.30.XXXX
FILE NO. SDD-XXX
SHEET 11 OF 20

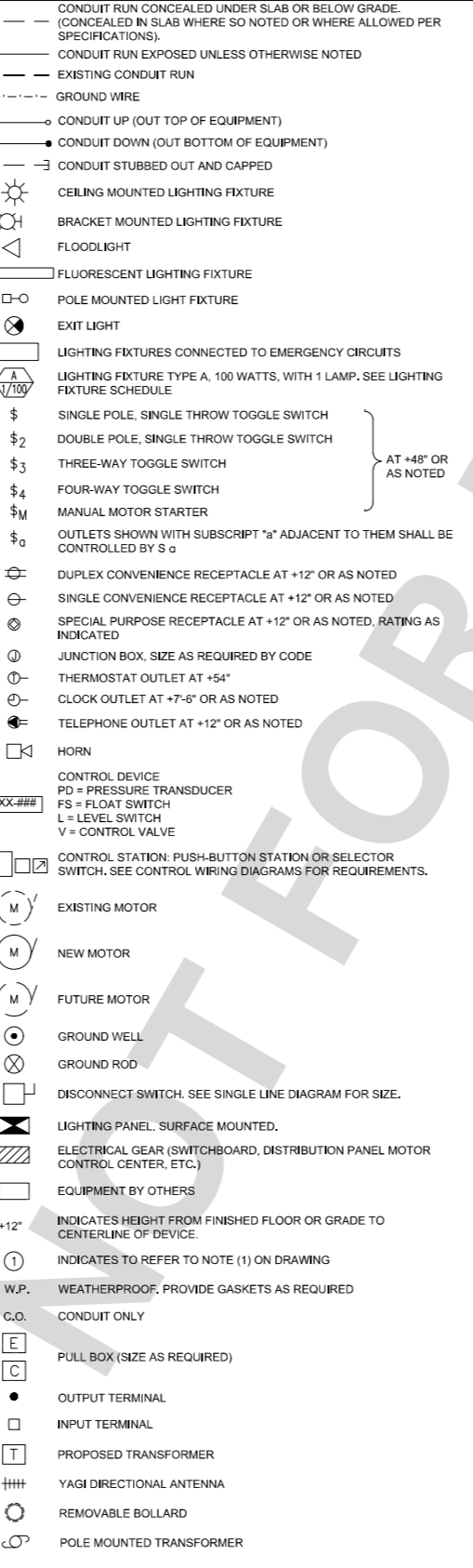
SINGLE LINE DIAGRAMS



CONTROL WIRING DIAGRAMS



PLANS



ELECTRICAL ABBREVIATIONS

AMP	AMPERE	HP	HORSE POWER	PLC	PROGRAMMABLE LOGIC CONTROLLER
AL	ALUMINUM	HZ	HERTZ (CYCLES PER SECOND)	PNL	PANEL
ATS	AUTOMATIC TRANSFER SWITCH	IC	INTERRUPTING CAPACITY	PR	PAIR
AWG	AMERICAN WIRE GAUGE	KV	KILOVOLTS	PVC	POLYVINYL CHLORIDE
BRK	BREAKER	LCL	LONG CONTINUOUS LOAD	REC	RECEPTACLE
CAT	CATALOG	LED	LIGHT EMITTING DIODE	RGS	RIGID GALVANIZED STEEL
CR	CARD READER	LTG	LIGHTING	RTU	REMOTE TERMINAL UNIT
CIRC.	MIL CIRCULAR MILS (AWG)	LS	LEVEL SWITCH	SCE	SOUTHERN CALIFORNIA EDISON
C.O.	CONDUIT ONLY	MAX	MAXIMUM	SCHED	SCHEDULE
CKT	CIRCUIT	MCC	MOTOR CONTROL CENTER	SES	SERVICE ENTRANCE SECTION
CP	CONTROL PANEL	MCP	MAIN CONTROL PANEL	SPECS	SPECIFICATIONS
DIA	DIAMETER	MCM	THOUSAND CIRCULAR MIL (AWG)	SS	SOFT STARTER
DS	DOOR SWITCH	MFR	MANUFACTURER	SSS	SOLID STATE STARTER
DWG	DRAWING	MIN	MINIMUM	TEL	TELEPHONE
EA	EACH	MIS	MISCELLANEOUS	TDR	TIME DELAY RELAY
ELECT	ELECTRICAL	MOV	MOTOR OPERATED VALVE	TTB	TELEPHONE TERMINAL BACKBOARD
ELEV	ELEVATION	MPZ	MINI POWER ZONE	TYP	TYPICAL
EXIST	EXISTING	MTG	MOUNTING	US	ULTRASONIC SENSOR
FLA	FULL LOAD AMPS	MTS	MANUAL TRANSFER SWITCH	UG	UNDER GROUND
FUT	FUTURE	N.C.	NORMALLY CLOSED	UCP	UNIT CONTROL PANEL
FVNR	FULL VOLTAGE, NON-REVERSING	NEC	NATIONAL ELECTRICAL CODE	V	VOLTS
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	N.O.	NORMALLY OPEN	VFD	VARIABLE FREQUENCY DRIVE
GND	GROUND	NO.	NUMBER	WP	WEATHERPROOF
				XFMR	TRANSFORMER

GENERAL ELECTRICAL REQUIREMENTS

- THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODE ORDINANCES AND REGULATIONS. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE, FINISHED AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED N.E.C.A. STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION. INSTALL GROUNDING AS REQUIRED BY THE CODE(S).
- VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
- ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, U.L. OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURER'S NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING AND REVIEWED BY THE ENGINEER BEFORE ORDERING.
- PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED UNDER DIVISION 6 AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS DEFECTIVE.
- LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS. LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
- CIRCUIT CONDUCTORS #2 AWG OR SMALLER TO BE COPPER TYPE "XHHW" FOR BELOW GRADE INSTALLATION OR COPPER TYPE THHN/THWN FOR ABOVE GRADE INSTALLATIONS. #1 AWG OR LARGER SHALL BE COPPER TYPE "XHHW-2" STRANDED COPPER. MINIMUM CONDUCTOR SIZE TO BE #12 AWG WITH #12 GND.
- UNDERGROUND CONDUITS TO BE SCHEDULE 40 PVC. MINIMUM DEPTH 30", MINIMUM SIZE 1". UNLESS OTHERWISE SHOWN ON THE PLANS. CONDUITS AS SHOWN ARE FOR INFORMATION ONLY. EXACT CONDUIT ROUTING SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
- OUTDOOR CONDUITS EXPOSED TO BE PVC COATED RGS, MINIMUM SIZE 3/4", UNLESS OTHERWISE NOTED ON THE PLANS. RGS CONDUIT SHALL EXTEND BELOW GRADE TO THE FIRST ELBOW. ALL RGS CONDUIT EXPOSED TO EARTH SHALL BE HALF LAPPED WRAPPED IN SCOTCHRAP 50 MIL TAPE OR EQUAL, EXTEND WRAP TO A HEIGHT OF 12" ABOVE GRADE. INDOOR CONDUITS SHALL BE IMC OR EMT UNLESS OTHERWISE SHOWN ON PLAN.
- ALL SAFETY SWITCHES AND OTHER DISTRIBUTION AND CONTROL ELECTRICAL EQUIPMENT SHALL BE U.L. LISTED AND RATED FOR HEAVY DUTY SERVICE.
- ALL ELECTRICAL EQUIPMENT, CONDUIT, WIRING, BOXES, ETC. SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING. THE SUBMITTALS SHALL BE NEATLY GROUPED AND ORGANIZED. PERTINENT INFORMATION SHALL BE HIGHLIGHTED, AND THE SPECIFIC PRODUCT SHALL BE IDENTIFIED. ALL SUBMITTALS SHALL BE COMPLETE, AND PRESENTED IN ONE PACKAGE. THE SUBMITTAL SHALL INCLUDE A COMPLETE LIST OF THE EQUIPMENT AND MATERIALS, INCLUDING THE MANUFACTURER'S NAME, PRODUCT SPECIFICATION, DESCRIPTIVE DATA, TECHNICAL LITERATURE, PERFORMANCE CHARTS, CATALOG CUTS, INSTALLATION INSTRUCTIONS, AND SPARE PART RECOMMENDATIONS FOR EACH DIFFERENT ITEM OF THE EQUIPMENT SPECIFIED.
- IT IS THE OBLIGATION OF THE CONTRACTOR TO ORGANIZE HIS WORK, SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION, AND CONTROL SYSTEM FOR THE FACILITY WILL BE PROVIDED, AND WILL BE SUPPORTED BY ACCURATE SHOP AND RECORD DRAWINGS, AND O & M MANUALS.

UNDERGROUND SERVICE ALERT
 Call: TOLL FREE
 1-800-227-2600
 OR
 811
 TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
 ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NGVD 29 REFERENCE: CSFB4084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS:
 THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 62° 10' 52" E BETWEEN SOPAC CORN STATIONS P612 AND M508 WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.



COMPANY ADDRESS AND LOGO
 401 B STREET, SUITE 600
 SAN DIEGO, CA 92101
 (951) 543-9868
 WWW.KIMLEY-HORN.COM
Kimley Horn
 PREPARED UNDER THE SUPERVISION OF:
 RENE K. CHUANG 92140 6/14/2024
 PROFESSIONAL ENGINEER R.C.E. No. DATE

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS
 David R. Doublet
 ASSISTANT DIRECTOR

PROJECT MANAGER	INITIAL	DATE
Deanna Lestina	DL	6/14/2024
WAS, DIVISION MANAGER	Greg Snyder	GS
PM, DIVISION MANAGER	Noel Mondragon	NM

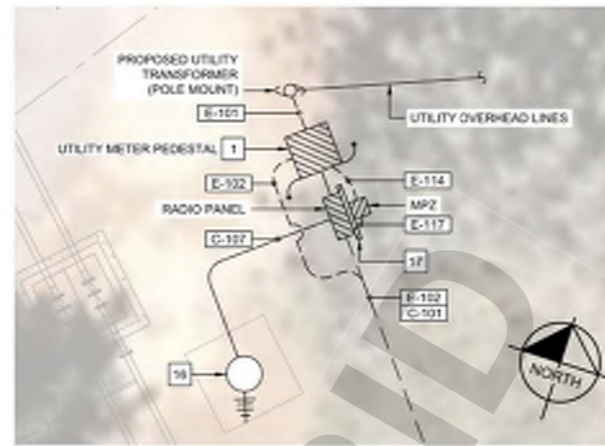
100% DRAFT IMPROVEMENT PLANS

APN NO. 033714105
 CAMP SWITZERLAND
 SEWER LIFT STATION
 ELECTRICAL COVER

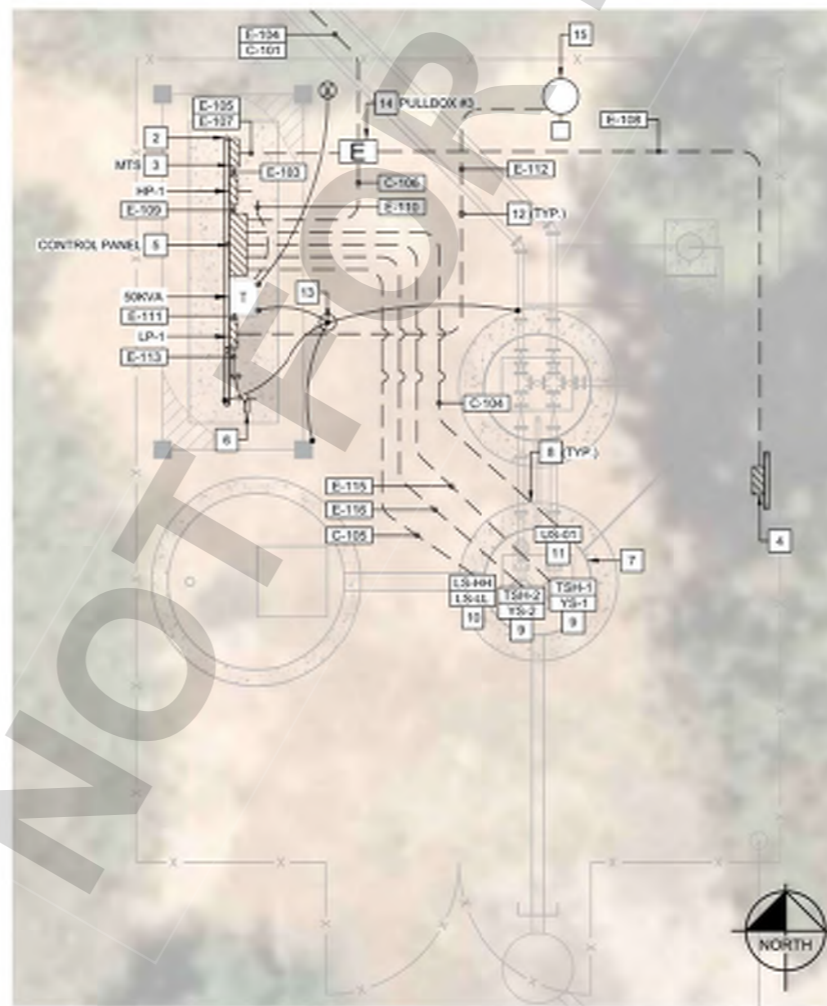
DWG NO. 30.30.XXXX
 FILE NO. SDD-XXX
 SHEET 12 OF 20



OVERALL SITE PLAN
SCALE: 1"=5'



SERVICE ENTRANCE
SCALE: 1"=5'



LIFT STATION ELECTRICAL PLAN
SCALE: 1"=5'

ELECTRICAL NOTES

- 1 MAKE NEW SERVICE CONNECTION TO UTILITY TRANSFORMER. COORDINATE WITH SOUTHERN CALIFORNIA EDISON (SCE).
- 2 FURNISH AND INSTALL UNISTRUT TYPE MOUNTING RACK. SUBMIT RACK TO ENGINEER FOR APPROVAL. SEE DETAIL B, SHEET 16 FOR ELECTRICAL EQUIPMENT RACK DETAILS.
- 3 SEE SINGLE LINE DIAGRAM ON SHEET 14. DETAIL A FOR ELECTRICAL EQUIPMENT INFORMATION. REFER TO PANEL SCHEDULE AND LOAD SUMMARY ON SHEET 14 FOR ADDITIONAL DETAIL.
- 4 FURNISH AND INSTALL 100A, 277/480V, 3P, 4W, NEMA 3R TRYSTAR GENERATOR DOCKING STATION. CONTRACTOR TO PROVIDE 3' WIDE UNISTRUT TYPE MOUNTING RACK.
- 5 FURNISH AND INSTALL LIFT STATION CONTROL PANEL. CONTRACTOR TO STUB POWER FEEDER CONDUIT INTO PANEL, AND MAKE FINAL CONNECTION. CONTRACTOR TO MAKE FINAL CONNECTION FROM IN FIELD PUMPS TO PANEL, AS WELL AS CONTROL CABLE TO APPROPRIATE TERMINAL FOR LEVEL CONTROL, PUMP HIGH TEMP, PUMP LEAK.
- 6 FURNISH AND INSTALL TWO STRIP LED LIGHTING FIXTURES IN WET RATED ENCLOSURE AND CONNECT TO WALL MOUNTED 120V, 20A WET RATED SWITCH FOR CANOPY LIGHTING.
- 7 WET WELL IS CONSIDERED CLASS 1, DIVISION 2 HAZARDOUS LOCATION PER 2024 NFPA 820 TABLE 4.2.2 EXTENDING 5' OUTWARD FROM WELL BOUNDARY. PROVIDE EXPLOSION PROOF EYES SEAL TYPE FITTINGS FOR ALL CONDUITS PENETRATING WET WELL.
- 8 PENETRATE WELL WITH WATER TIGHT CONDUIT SLEEVE. PROVIDE 2-316 SS MOUNTING HOOKS. 1-HOOK FOR PUMP POWER MANUFACTURER CABLE, 1-HOOK FOR FLOAT SWITCH CABLES. SEE UTILITY PLAN FOR WELL PROFILE. SEE DETAIL F, SHEET 15.
- 9 FURNISH AND INSTALL (2) 3" PVC COATED RGS CONDUITS FROM CONTROL PANEL TO WELL PENETRATIONS. PROVIDE 3" ID CONDUIT PENETRATIONS IN WELL. PROVIDE WATERPROOF LINK SEAL FOR WELL PENETRATION. ROUTE MANUFACTURER CABLE TO EACH PUMP IN WELL. SEE DETAIL I ON SHEET 15 FOR PUMP CABLE MOUNTING DETAIL.
- 10 FURNISH AND INSTALL 2" PVC COATED RIGID GALVANIZED STEEL CONDUIT FROM CONTROL PANEL TO WELL PENETRATION. PROVIDE WATERPROOF LINK SEAL FOR WELL PENETRATION. ROUTE MANUFACTURER CABLE TO EACH LEVEL SWITCH IN WELL.
- 11 FURNISH AND INSTALL 2" PVC COATED RIGID GALVANIZED STEEL CONDUIT. EXTEND ULTRASONIC SENSOR MANUFACTURER CABLE FROM ULTRASONIC SENSOR TO LIFT STATION CONTROL PANEL AND MAKE FINAL CONNECTION. PROVIDE WATERPROOF LINK SEAL FOR WELL PENETRATION. MOUNT DEVICE ON 316 STAINLESS STEEL BRACKET.
- 12 SEE DETAIL A ON SHEET 15 FOR TYPICAL TRENCH DETAIL. SEE DETAIL A, SHEET 16 FOR CONDUIT/CONDUCTOR INFORMATION.
- 13 PROVIDE 3/4" x 10' GROUND ROD IN WELL AS SHOWN ON SHEET 15 DETAIL C. CONTRACTOR TO MAKE NECESSARY BONDS AS REQUIRED BY NEC250.
- 14 PROVIDE 2'x1' ELECTRICAL PULLBOX PER DETAIL G, SHEET 15.
- 15 FURNISH AND INSTALL LED LIGHT ON NEW POLE AND FOUNDATION PER DETAIL E, SHEET 15.
- 16 FURNISH AND INSTALL ANTENNA TOWER. SEE SHEETS 17-18 FOR STRUCTURAL AND MOUNTING DETAILS. ANTENNA BEARING 165°.
- 17 CONTRACTOR TO PROVIDE 3' WIDE UNISTRUT TYPE MOUNTING RACK WITH NEMA 3R 7.5KVA MP2 ON BACKSIDE OF RACK, 30" x 30" NEMA 3R RADIO PANEL ENCLOSURE WITH CRADLEPOINT RADIO, ETHERNET / FIBER CONVERTER, AND APPROPRIATE OVERCURRENT PROTECTIVE DEVICES. RADIO PANEL TO INCLUDE 20A, 120V MAIN BREAKER AND (3) INDIVIDUAL MINIATURE CONTROL PANEL 5A, 120V SUBFEED BREAKERS. SUBFEED #1 TO 120VAC-12VDC 30W MINIMUM POWER SUPPLY (ETHERNET / FIBER CONVERTER). SUBFEED #2 TO 120VAC-24VDC 30W MINIMUM POWER SUPPLY (RADIO). SUBFEED #3 TO DUPLEX CONVENIENCE RECEPTACLE MOUNTED INSIDE OF ENCLOSURE.

UNDERGROUND SERVICE ALERT



Call: TOLL FREE
1-800-227-2600
OR
811

TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:

ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NGVD 29 REFERENCE: CSFB4084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS:

THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 62° 10' 52" E BETWEEN SOPAC CORS STATIONS P612 AND MS08 WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.



COMPANY ADDRESS AND LOGO

401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9868
WWW.KIMLEY-HORN.COM



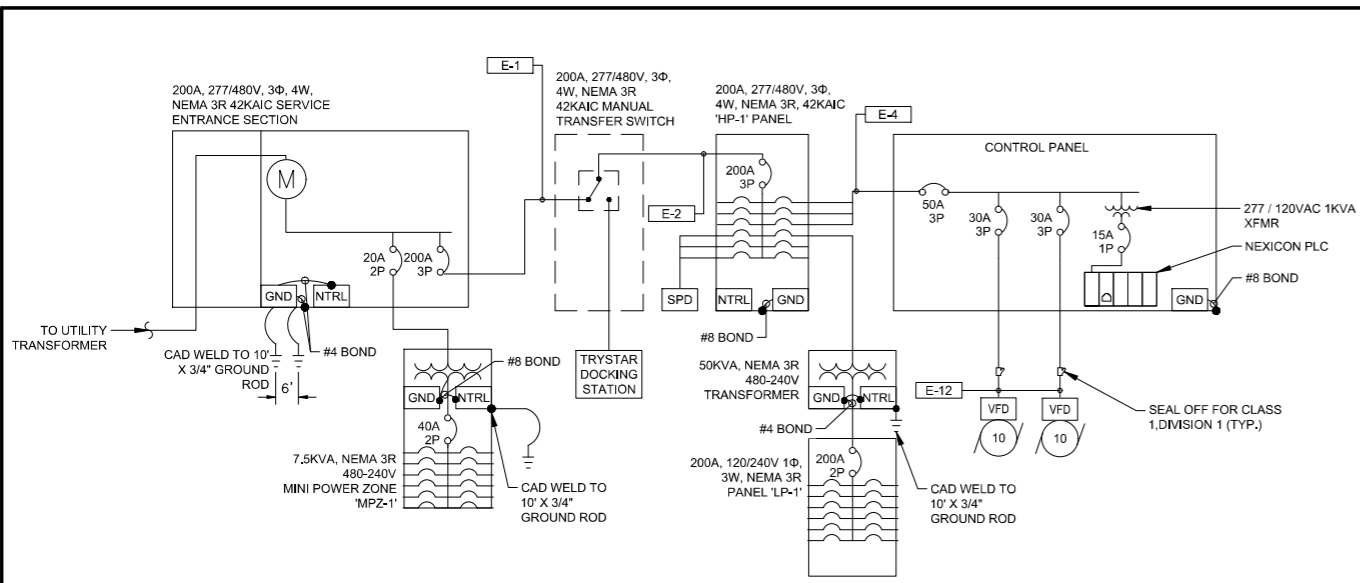
PREPARED UNDER THE SUPERVISION OF:

RENEE K. CHUANG 92140 6/14/2024
PROFESSIONAL ENGINEER R.C.E. No. DATE

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

PLANS APPROVED BY:			
SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS			
ASSISTANT DIRECTOR		INITIAL	DATE
David R. Doublet			
APPROVALS		INITIAL	DATE
PROJECT MANAGER		Deanna Lestina	
WAS. DIVISION MANAGER		Greg Snyder	
PM. DIVISION MANAGER		Noel Mondragon	

100% DRAFT IMPROVEMENT PLANS		DWG NO.
APN NO. 033714105 CAMP SWITZERLAND SEWER LIFT STATION ELECTRICAL SITE PLAN		30.30.XXXX
		FILE NO. SDD-XXX
		SHEET 13 OF 20



A SINGLE LINE DIAGRAM
NOT TO SCALE

SITE LOAD SUMMARY		
LOAD DESCRIPTION		
PROPOSED LOADS	PANEL MPZ-1	1.0 AMPS
	PANEL HP-1	65.8 AMPS
TOTAL LOAD @480V, 3 PHASE		66.8 AMPS
TOTAL KVA		66.8 KVA
SERVICE SIZE		200 AMP
PERCENT LOADED		33 %

B SITE LOAD SUMMARY
NOT TO SCALE

PANEL NAME: HP-1														
LOCATION: UNISTRUT					VOLTS: 277/480V					AIC RATING: 42K				
SUPPLY FROM: M15					PHASES: 3					MAINS TYPE: MCB				
MOUNTING: SURFACE					WIRES: 4					MAINS RATING: 250 A				
ENCLOSURE: NEMA 3R										MCB RATING: 200 A				
CKT	CIRCUIT DESCRIPTION	LOAD TYPE	TRIP	POLES	A (VA)	B (VA)	C (VA)	POLES	TRIP	LOAD TYPE	CIRCUIT DESCRIPTION	CKT		
1	SPD	M		3	8,092	8,092		3	50	M	CONTROL PANEL (2K10HP, 1KVA TRX)	2		
3		M								M		4		
5		M					8,092			M		5		
7	50KVA TRANSFORMER	E	150	2	12,084			1	20	E	SPARE	8		
9	480/208V	E		1		12,084		1	20	E	SPARE	10		
11												12		
13												14		
15												16		
17												18		
19												20		
21												22		
23												24		
25												26		
27												28		
29												30		
31												32		
33												34		
35												35		
37												38		
39												40		
41												42		
TOTAL LOAD:					20,178 VA	20,178 VA	8,092 VA							
TOTAL AMP:					72.8 A	72.8 A	29.2 A							

LOAD CLASSIFICATION	CONNECTED LOAD (VA)	DEMAND FACTOR	EST DEMAND (VA)	PANEL TOTALS
LARGEST MOTOR LOAD (M)	24278	125.00%	30345	TOTAL CONN. LOAD (VA): 48444
HVAC (H) & ALL OTHER MOTORS (M)	0	100.00%	0	TOTAL EST. DEMAND (VA): 54513
RECEPTACLE (R)	0	100.00%	0	TOTAL CONN. (A): 58.3
LIGHTING (L)	0	125.00%	0	TOTAL EST. DEMAND (A): 65.8
EQUIPMENT (E)	24108	100.00%	24108	
OTHER (O) (SEE NOTES)	0	0.00%	0	

C HP-1 PANEL SCHEDULE
NOT TO SCALE

PANEL NAME: LP-1														
LOCATION: UNISTRUT					VOLTS: 120/240V					AIC RATING: 22K				
SUPPLY FROM: 50KVA XFMR					PHASES: 1					MAINS TYPE: MCB				
MOUNTING: SURFACE					WIRES: 3					MAINS RATING: 200 A				
ENCLOSURE: NEMA 3R										MCB RATING: 200 A				
CKT	CIRCUIT DESCRIPTION	LOAD TYPE	TRIP	POLES	A (VA)	B (VA)	C (VA)	POLES	TRIP	LOAD TYPE	CIRCUIT DESCRIPTION	CKT		
1	RESTROOM	E	30	2	3,088	1,800		2	30	O	CABIN #4	2		
3		E	30	2		3,088	1,800	2	30	O	CABIN #5	4		
5	CABIN #1	O	30	2	1,800	1,800		2	30	O	CABIN #6	6		
7		O	30	2		1,800	1,800	2	30	O	CABIN #7	8		
11	CABIN #2	O	30	2	1,800	1,800		2	30	O		10		
13		O	30	2		1,800	1,800	2	30	O		12		
15	CABIN #3	O	30	2	1,800	1,800		2	30	O		14		
17	GROUP TENT CAMPING	E	30	2	300	1,800		2	30	O	RECREATION AREA	16		
19	SITE PANEL	E	30	2		300	1,800	1	20	E	SITE LIGHTING	20		
21	CANOPY LIGHTING	L	20	1	64	125		1	20	E		22		
23												24		
25												26		
27												28		
29												30		
31												32		
33												34		
35												36		
37												38		
39												40		
41												42		
TOTAL LOAD:					17,677 VA	17,788 VA								
TOTAL AMP:					148.8 A	148.2 A								

LOAD CLASSIFICATION	CONNECTED LOAD (VA)	DEMAND FACTOR	EST DEMAND (VA)	PANEL TOTALS
LARGEST MOTOR LOAD (M)	0.0	125.00%	0.0	TOTAL CONN. LOAD (VA): 35795
HVAC (H) & ALL OTHER MOTORS (M)	0.0	100.00%	0.0	TOTAL EST. DEMAND (VA): 24261
RECEPTACLE (R)	0.0	100.00%	0.0	TOTAL CONN. (A): 149
LIGHTING (L)	64.0	125.00%	80.0	TOTAL EST. DEMAND (A): 101.1
EQUIPMENT (E)	6901.0	100.00%	6901.0	PERCENT LOADED: 51%
OTHER (O) (SEE NOTES)	28922.0	80.00%	17280.0	

D LP-1 PANEL SCHEDULE
NOT TO SCALE

PANEL NAME: MPZ-1														
LOCATION: UNISTRUT					VOLTS: 120/240V					AIC RATING: 42K				
SUPPLY FROM: SES					PHASES: 1					MAINS TYPE: MCB				
MOUNTING: SURFACE					WIRES: 3					MAINS RATING: 100 A				
ENCLOSURE: NEMA 3R										MCB RATING: 60 A				
CKT	CIRCUIT DESCRIPTION	LOAD TYPE	TRIP	POLES	A (VA)	B (VA)	C (VA)	POLES	TRIP	LOAD TYPE	CIRCUIT DESCRIPTION	CKT		
1	RADIO PANEL	E	20	1	240			1	20	E	SPARE	2		
3	SPARE	E	20	1				1	20	E	SPARE	4		
5	SPARE	E	20	1				1	20	E	SPARE	6		
TOTAL LOAD:					240 VA	0 VA								
TOTAL AMP:					2 A	0 A								

LOAD CLASSIFICATION	CONNECTED LOAD (VA)	DEMAND FACTOR	EST DEMAND (VA)	PANEL TOTALS
LARGEST MOTOR LOAD (M)	0.0	125.00%	0.0	TOTAL CONN. LOAD (VA): 240
HVAC (H) & ALL OTHER MOTORS (M)	0.0	100.00%	0.0	TOTAL EST. DEMAND (VA): 240
RECEPTACLE (R)	0.0	100.00%	0.0	TOTAL CONN. (A): 1
LIGHTING (L)	0.0	125.00%	0.0	TOTAL EST. DEMAND (A): 1
EQUIPMENT (E)	240.0	100.00%	240.0	PERCENT LOADED: 1%
OTHER (O) (SEE NOTES)	0.0	80.00%	0.0	

E MPZ-1 PANEL SCHEDULE
NOT TO SCALE

CONTROL PANEL LOAD CALCULATION		
LOAD DESCRIPTION		
PROPOSED LOADS		
	13-P PUMP #1	14.0 AMPS
	13-P PUMP #2	14.0 AMPS
	CONTROLLER	0.28 AMPS
	INSTRUMENTATION	0.28 AMPS
	25% (PER NEC)	3.5 AMPS
TOTAL LOAD @480V, 3 PHASE		32.0 AMPS
TOTAL KVA		37 KVA
SERVICE SIZE		50 AMPS
PERCENT LOADED		64 %

F CONTROL PANEL LOAD SUMMARY
NOT TO SCALE

UNDERGROUND SERVICE ALERT
Call: TOLL FREE 1-800-227-2600 OR 811
TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NGVD 29 REFERENCE: CSFB4084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS:
THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 62° 10' 52" E BETWEEN SOPAC CORS STATIONS P612 AND MS08 WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.



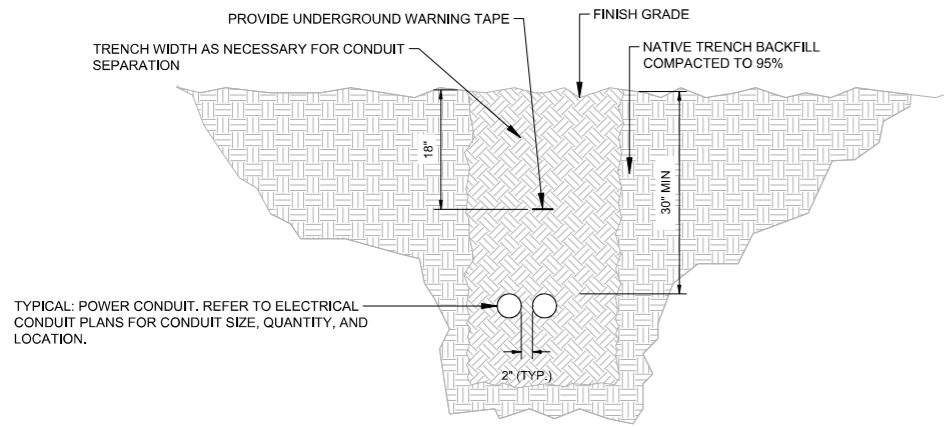
COMPANY ADDRESS AND LOGO
401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9868
WWW.KIMLEY-HORN.COM
Kimley-Horn
PREPARED UNDER THE SUPERVISION OF:
RENEE K. CHUANG 92140 6/14/2024
PROFESSIONAL ENGINEER R.C.E.No. DATE

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

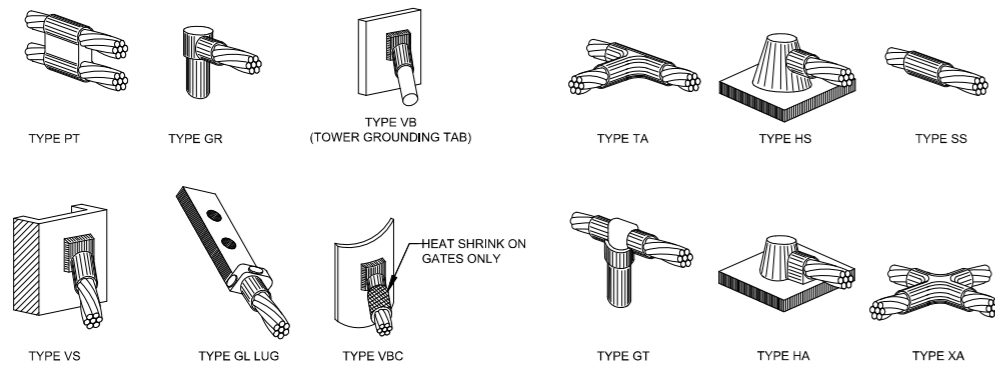
PLANS APPROVED BY:			
SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS			
David R. Doublet		DATE	
ASSISTANT DIRECTOR		DATE	
PROJECT MANAGER	Deanna Lestina	INITIAL	DATE
WAS, DIVISION MANAGER	Greg Snyder		
PM, DIVISION MANAGER	Noel Mondragon		

100% DRAFT IMPROVEMENT PLANS
APN NO. 033714105
CAMP SWITZERLAND
SEWER LIFT STATION
ELECTRICAL DETAILS

DWG NO. 30.30.XXXX
FILE NO. SDD-XXX
SHEET 14 OF 20

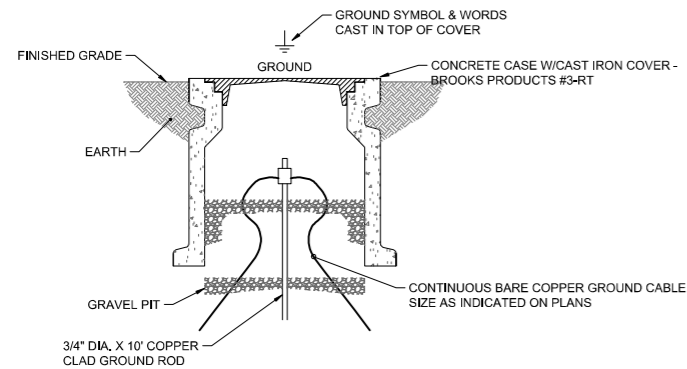


A TRENCH DETAIL
NOT TO SCALE

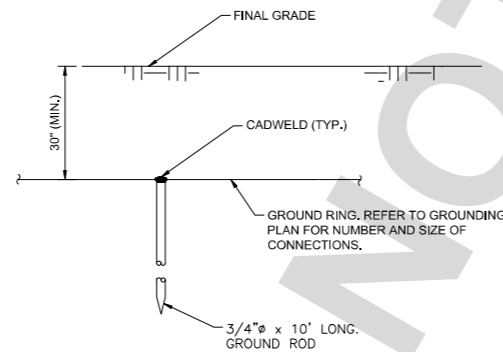


NOTES:
1. CADWELD "TYPES" SHOWN ABOVE ARE EXAMPLES. PROVIDE APPROPRIATE TYPES AS REQUIRED.

B TYPICAL CAD WELDS
NOT TO SCALE

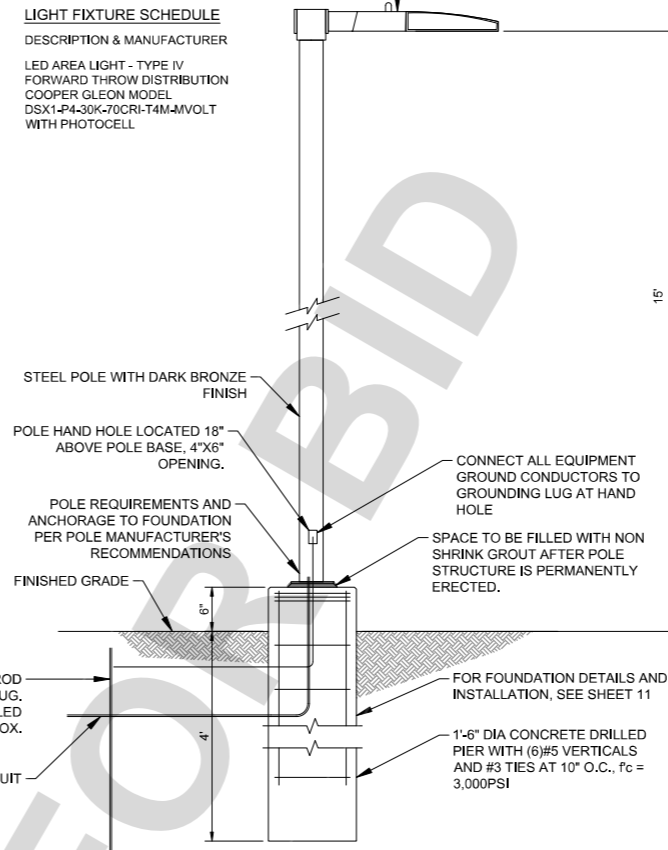


C GROUNDING ROD AND WELL DETAIL
NOT TO SCALE



D GROUND ROD DETAIL
NOT TO SCALE

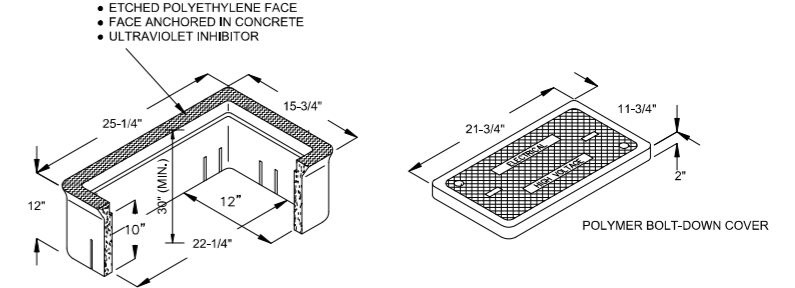
LIGHT FIXTURE SCHEDULE
DESCRIPTION & MANUFACTURER
LED AREA LIGHT - TYPE IV FORWARD THROW DISTRIBUTION COOPER GLEON MODEL DSX1-P4-30K-70CRI-T4M-MVOLT WITH PHOTOCELL



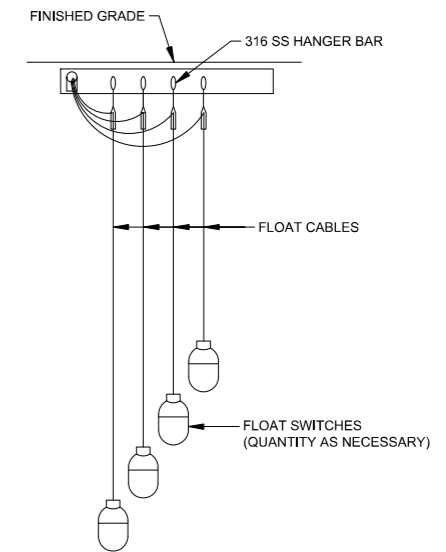
E SITE LIGHT POLE DETAIL
NOT TO SCALE

NOTES:
1. JOINT SEALANT SHALL BE TWO COMPONENT, POLYURETHANE ELASTOMERIC SEALANT, SIKAFLEX-2C NS, AS MANUFACTURED BY SIKA, OR EQUAL. PROVIDE BACKER ROD OR TAPE AT BACK OF JOINT SEALANT.
2. LINK-SEAL SHALL BE LOCATED ON SIDE OF WALL/SLAB THAT WILL BE PERMANENTLY ACCESSIBLE. LINK-SEAL SHALL BE FOR CORROSIVE SERVICE WITH EPDM RUBBER AND STAINLESS STEEL BOLTS AND NUTS, AS MANUFACTURED BY THUNDERLINE CORP., OR EQUAL. SLEEVE DIAMETER SHALL BE PER MANUFACTURERS RECOMMENDATION.

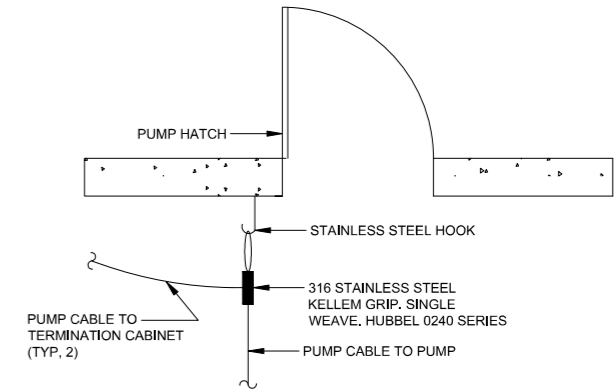
F WELL PENETRATION DETAIL
NOT TO SCALE



G ELECTRICAL PULLBOX DETAIL
NOT TO SCALE



H FLOAT SWITCH MOUNTING DETAIL
NOT TO SCALE



I PUMP CABLE MOUNTING
NOT TO SCALE

UNDERGROUND SERVICE ALERT
Call: TOLL FREE 1-800-227-2600 OR 811
TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NGVD 29 REFERENCE: CSFB4084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS:
THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 62° 10' 52" E BETWEEN SOPAC CORS STATIONS P612 AND MS0B WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.



COMPANY ADDRESS AND LOGO
401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9868
WWW.KIMLEY-HORN.COM
KimleyHorn
PREPARED UNDER THE SUPERVISION OF:
RENEE K. CHUANG 92140 6/14/2024
PROFESSIONAL ENGINEER R.C.E. No. DATE

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

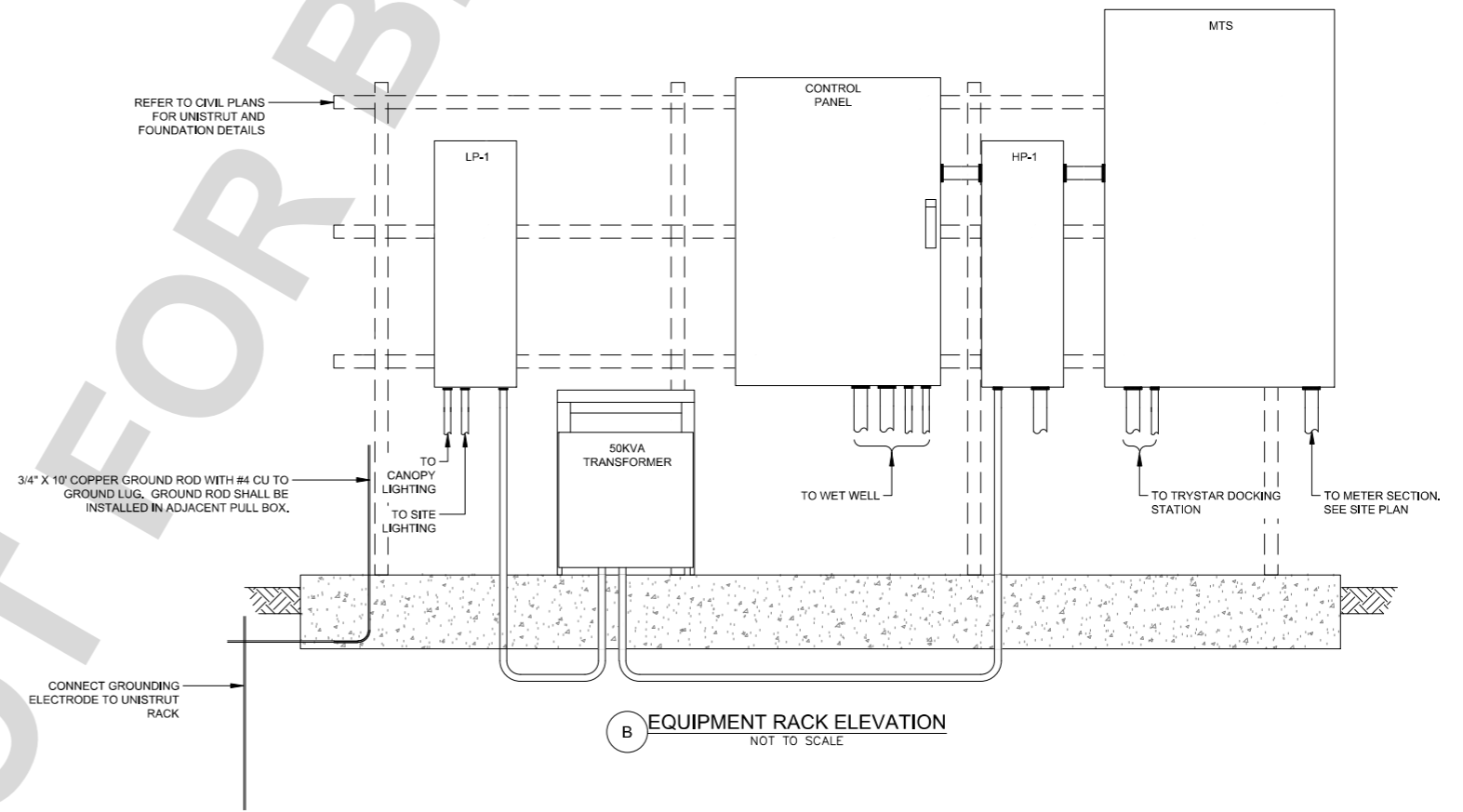
PLANS APPROVED BY:			
SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS			
David R. Doublet		ASSISTANT DIRECTOR	
PROJECT MANAGER	INITIAL	DATE	DATE
WAS, DIVISION MANAGER	Deanna Lestina		
PM, DIVISION MANAGER	Greg Snyder		
	Noel Mondragon		

100% DRAFT IMPROVEMENT PLANS
APN NO. 033714105
CAMP SWITZERLAND
SEWER LIFT STATION
ELECTRICAL DETAILS

DWG NO. 30.30.XXXX
FILE NO. SDD-XXX
SHEET 15 OF 20

CONDUIT SCHEDULE CAMP SWITZERLAND						
CONDUIT TAG	CONDUIT TYPE	CONDUIT SIZE	FROM	TO	CONDUCTOR (EACH CONDUIT)	
E-101	OH PVC COATED	3"	UTILITY TRANSFORMER	METER	PER UTILITY	SITE POWER
E-102	UG SCHED 40 PVC	3"	METER	PULLBOX #1	(4) #3/0 + (1) #6 GND	SITE POWER
E-103	UG SCHED 40 PVC	3"	PULLBOX #1	PULLBOX #2	(4) #3/0 + (1) #6 GND	SITE POWER
E-104	UG SCHED 40 PVC	2"	PULLBOX #2	PULLBOX #3	(4) #3/0 + (1) #6 GND	SITE POWER
E-105	UG SCHED 40 PVC/RGS	2"	PULLBOX #3	MTS	(4) #3/0 + (1) #6 GND	SITE POWER
E-106	RGS	2"	MTS	PANEL 'HP-1'	(4) #3/0 + (1) #6 GND	SITE POWER
E-107	RGS/SCHED 40 UG	2"	MTS	PULLBOX #3	(4) #3/0 + (1) #6 GND	SITE BACK UP POWER
E-108	UG SCHED 40 PVC/RGS	2"	PULLBOX #3	TRYSSTAR DOCKING STATION	(4) #3/0 + (1) #6 GND	SITE BACK UP POWER
E-109	RGS	2"	PANEL 'HP-1'	CONTROL PANEL	(4) #6 AWG + (1) #10 GND	POWER
E-110	RGS/SCHED 40 UG	2"	PANEL 'HP-1'	50KVA TRANSFORMER	(2) #1/0 AWG + (1) #6 GND	POWER
E-111	UG SCHED 40 PVC/RGS	2"	50KVA TRANSFORMER	PANEL 'LP-1'	(3) 250 KCMIL + (1) #2 GND	POWER
E-112	RGS/SCHED 40 UG	1"	PANEL 'LP-1'	SITE LIGHTING	(2) #12 AWG + (1) #12 GND	POWER
E-113	RGS	1"	PANEL 'LP-1'	CANOPY LIGHTING	(2) #12 AWG + (1) #12 GND	POWER
E-114	UG SCHED 80 PVC/RGS	1"	SITE 200A SES	MP2-1	(2) #12 AWG + (1) #12 GND	POWER
E-115	RGS/PVC COATED RGS	3"	CONTROL PANEL	PUMP #1	MANUFACTURER CABLE	PER MANUFACTURER SPECS
E-116	RGS/PVC COATED RGS	3"	CONTROL PANEL	PUMP #2	MANUFACTURER CABLE	PER MANUFACTURER SPECS
E-117	RGS	1"	MP2-1	RADIO PANEL	(2) #8 AWG + (1) #8 GND	POWER
C-101	RGS/SCHED 40 UG	2"	RADIO PANEL	PULLBOX #1	1-5M FIBER CABLE	CONTROL PANEL TO RADIO FIBER CONNECTION
C-102	RGS	2"	PULLBOX #1	PULLBOX #2	1-5M FIBER CABLE	CONTROL PANEL TO RADIO FIBER CONNECTION
C-103	RGS	2"	PULLBOX #2	PULLBOX #3	1-5M FIBER CABLE	CONTROL PANEL TO RADIO FIBER CONNECTION
C-104	RGS/PVC COATED RGS	2"	CONTROL PANEL	ULTRASONIC SENSOR	MANUFACTURER CABLE	PER MANUFACTURER SPECS
C-105	RGS/PVC COATED RGS	2"	CONTROL PANEL	ULTRASONIC SENSOR	4-PAIR #14 AWG	PER MANUFACTURER SPECS
C-106	RGS	2"	PULLBOX #3	CONTROL PANEL	1-5M FIBER CABLE	CONTROL PANEL TO RADIO FIBER CONNECTION
C-107	RGS	2"	RADIO PANEL	ULTRASONIC SENSOR	4-PAIR #14 AWG	RADIO TO ULTRASONIC CONNECTION

A CONDUIT AND CONDUCTOR SCHEDULE
NOT TO SCALE



BENCHMARK:
ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NGVD 29 REFERENCE: CSFB4084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS:
THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 62° 10' 52" E BETWEEN SOPAC CORS STATIONS P612 AND MS08 WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.



COMPANY ADDRESS AND LOGO
401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9868
WWW.KIMLEY-HORN.COM

Kimley Horn

PREPARED UNDER THE SUPERVISION OF:
RENEE K. CHUANG 92140 6/14/2024
PROFESSIONAL ENGINEER R.C.E. No. DATE

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

PLANS APPROVED BY:			
SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS			
David R. Doublet ASSISTANT DIRECTOR			
PROJECT MANAGER	INITIAL	DATE	DATE
WAS, DIVISION MANAGER	Deanna Lestina		
PM, DIVISION MANAGER	Greg Snyder		
	Noel Mondragon		

100% DRAFT IMPROVEMENT PLANS

APN NO. 033714105
CAMP SWITZERLAND
SEWER LIFT STATION
ELECTRICAL DETAILS

DWG NO. 30.30.XXXX
FILE NO. SDD-XXX
SHEET 16 OF 20

1.00 DOCUMENTS AND LIMITATIONS

- 1.01 THESE STRUCTURAL DOCUMENTS, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, ARE INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.
- 1.02 IT IS UNDERSTOOD THAT THE CONSULTANT MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO FINDINGS, DESIGNS, RECOMMENDATIONS, SPECIFICATIONS, OPINION, OR PROFESSIONAL ADVICE, EXCEPT THAT THESE INSTRUMENTS OF SERVICE HAVE BEEN PREPARED IN ACCORDANCE WITH THE CURRENT GENERALLY ACCEPTED PROFESSIONAL ENGINEER PRACTICES.
- 1.03 ALL NON-STRUCTURAL ELEMENTS INDICATED ON THE STRUCTURAL DRAWINGS HAVE BEEN SHOWN IN GENERAL TO THE RELATIONSHIP TO THE STRUCTURAL ELEMENTS ONLY. ACCORDINGLY, THEY SHALL NOT BE ASSUMED TO BE ACCURATE AND REFERENCE MUST BE MADE TO THE APPROPRIATE CONSULTANT(S), PLANS, AND SPECIFICATIONS.
- 1.04 NOTES ON THIS AND THE FOLLOWING SHEETS ARE PART OF THE PROJECT REQUIREMENTS BUT ARE NOT INTENDED TO REPLACE THE PROJECT SPECIFICATIONS. IN CASE OF CONFLICTS BETWEEN THE REQUIREMENTS OF THE SPECIFICATIONS AND THESE NOTES, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

2.00 CONSTRUCTION SAFETY

- 2.01 IT IS UNDERSTOOD THAT THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK ON THE PROJECT. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF THE PERSONS AND PROTECT THEM AGAINST INJURY. LIKEWISE, THE CONTRACTOR SHALL PROTECT ALL PROPERTY AGAINST DAMAGE OR LOSS.
- 2.02 THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS, AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OF PROPERTY.
- 2.03 THE CONTRACTOR'S DUTIES AND RESPONSIBILITIES FOR THE SAFETY AND PROTECTION OF THE WORK SHALL CONTINUE UNTIL SUCH TIME AS THE WORK IS SATISFACTORILY COMPLETED, AND THE ENGINEER OF RECORD HAS ISSUED A NOTICE TO THAT EFFECT TO THE OWNER AND THE CONTRACTOR.

- 3.01 THE CONTRACTOR SHALL EMPLOY, AT THEIR EXPENSE, A FORMWORK/SHORING ENGINEER REGISTERED IN CALIFORNIA TO CONTROL ALL OPERATIONS RELATING TO DESIGN, INSTALLATION AND REMOVAL OF ALL FORMWORK, SHORING AND RESHORING.

4.00 REINFORCED CONCRETE (CAST-IN-PLACE)

- 4.01 DETAILING OF REBAR SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF THE ACI DETAILING MANUAL, AND CONCRETE REINFORCING INSTITUTE'S LATEST EDITION OF "MANUAL OF STANDARD PRACTICE". ALL SHOP DRAWINGS PERTAINING TO REBAR DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR HIS REVIEW.
- 4.02 CONCRETE COMPRESSIVE DESIGN STRENGTH IN 28 DAYS:
DRILLED PIERS 3,000 PSI
- 4.03 REINFORCING STEEL SHALL BE ASTM A615, GRADE 60 UNLESS NOTED OTHERWISE. IF REINFORCEMENT WELDING IS REQUIRED, ASTM A706, GRADE 60 SHALL BE REQUIRED UNLESS MILL TEST REPORTS VERIFY THAT THE ASTM A615 STEEL PROVIDED IS AN ACCEPTABLE A706 EQUIVALENT. WELDED WIRE FABRIC OR WIRE MESH SHALL BE ASTM A185.
- 4.04 TOLERANCES FOR REINFORCEMENT FABRICATION, REINFORCEMENT PLACEMENT AND CONCRETE CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS."
- 4.05 BAR DETAILS AND SUPPORTS: ACI DETAILING MANUAL AND BUILDING CODE. LAP ALL SPLICES AS SHOWN ON THE STRUCTURAL DRAWINGS.
- 4.06 CLEAR DISTANCE FROM FACE OF CONCRETE TO MAIN STEEL SHALL BE AS SHOWN ON THE STRUCTURAL DRAWINGS. WHERE CLEAR DISTANCE IS NOT SHOWN, ACI 301 SHALL CONTROL. ACI 302 "GUIDE FOR THE DESIGN OF DURABLE PARKING STRUCTURES" SHALL CONTROL FOR SLABS EXPOSED TO WEATHER, WHICH INCLUDES ALL PARKING LEVEL SLABS.
- 4.07 ALL REINFORCEMENT SHOWN IS INTENDED TO BE CONTINUOUS UNLESS NOTED OTHERWISE. REFER TO REINFORCEMENT STEEL CHART FOR TENSION LAP SPLICES.
- 4.08 PROVIDE 3/4 INCH CHAMFERS AT ALL EXPOSED EDGES UNO.
- 4.09 CORE DRILLING SHALL NOT BE ALLOWED THROUGH IN-PLACE CONCRETE ELEMENTS UNLESS SPECIFICALLY APPROVED BY THE ENGINEER. PENETRATIONS THROUGH CONCRETE ELEMENTS SHALL BE ILLUSTRATED ON SHOP DRAWINGS AND SHALL UTILIZE SCHEDULE 40 STEEL PIPE. CLEARANCE REQUIRED WITHIN PIPE SLEEVE SHALL BE CONFIRMED BY SUBCONTRACTOR RESPONSIBLE FOR THE MATERIAL PASSING THROUGH THE SLEEVE. REINFORCEMENT CLEAR COVER SHALL BE MAINTAINED AROUND THE SLEEVE PENETRATION.
- 4.10 EMBEDDED ITEMS THAT WILL SUPPORT STRUCTURAL STEEL CONSTRUCTION SHALL BE PLACED WITHIN THE TOLERANCES PRESCRIBED IN THE LATEST EDITION OF THE AISC "CODE OF STANDARD PRACTICE". GENERAL CONTRACTOR SHALL FIELD VERIFY LOCATION OF EMBEDDED ITEMS PRIOR TO FABRICATION AND DELIVERY OF STRUCTURAL STEEL TO THE PROJECT SITE.

5.00 ALUMINUM

- 5.01 ALUMINUM CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE ALUMINUM CONSTRUCTION MANUAL OF THE ALUMINUM ASSOCIATION.
- 5.02 UNLESS OTHERWISE INDICATED, STRUCTURAL ALUMINUM SHALL BE ALLOY 6061-T6 AS SPECIFIED IN ASTM B308.
- 5.03 CONTACT SURFACES SHALL BE COATED WITH HEAVY ALKALI-RESISTANT BITUMINOUS PAINT.

6.00 DESIGN LOADS

- 6.01 2022 CALIFORNIA BUILDING CODE
- 6.02 BUILDING CATEGORY = II
- 6.03 ANTENNA TOWER LOADING:
 - A. DEAD: SELF WEIGHT OF MEMBERS
 - B. LIVE: N/A
 - C. SNOW: 172 LB/SQ FT
- 6.04 WIND: DESIGN LOAD BASED ON ASCE 7-22 CHAPTER 29 PART 4
 - WIND SPEED = 106 MPH (3 SEC GUST)
 - EXPOSURE CATEGORY = C
- 6.05 SEISMIC: DESIGN LOAD BASED ON ASCE 7-22 CHAPTER 15
 - WIND SPEED = 106 MPH
 - SEISMIC DESIGN CATEGORY = II
 - NON-BUILDING STRUCTURE TYPE: TRUSSED TOWERS
 - R = 3.0
 - D_s = 2.24
 - S₁ = 1.79
 - S₂ = 0.76
 - S₃ = 0.71
 - ANALYSIS METHOD = EQUIVALENT LATERAL FORCE PROCEDURE
- 6.06 SOIL: ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
LATERAL BEARING PRESSURE = 150 PSF/FT
COEFFICIENT OF SOIL FRICTION = 0.36

90 DEG STD HOOKS

	Fc = 4 KSI	Fc = 5 KSI	Fc = 7 KSI	Fc = 9 KSI
BAR SIZE	IN	IN	IN	IN
#3	8	7	8	8
#4	10	9	10	10
#5	12	11	12	12
#6	15	13	15	15
#7	17	15	17	17
#8	19	17	19	19
#9	22	20	22	22
#10	25	22	25	25
#11	27	24	27	27

- NOTES:**
- 1. VALUES ASSUME NO EPOXY COATING IS USED AND NORMAL WEIGHT AGGREGATE CONCRETE.
 - 2. NO REDUCTION FACTORS IN ACI 318, SECTION 12.5.3 ARE APPLIED TO THESE VALUES.
 - 3. THE HOOK DEVELOPMENT LENGTH SHALL NOT BE LESS THAN #BAR DIA.
 - 4. 90° STD HOOK SHALL BE BEND PLUS 12" BAR DIA EXTENSION AT FREE END.

UNDERGROUND SERVICE ALERT
Call: TOLL FREE
1-800-227-2600
OR
811
TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NGVD 29 REFERENCE: CSFB4084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS:
THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 62° 10' 52" E BETWEEN SOPAC CORS STATIONS P612 AND MS08 WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.



COMPANY ADDRESS AND LOGO
401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9868
WWW.KIMLEY-HORN.COM
Kimley»Horn
PREPARED UNDER THE SUPERVISION OF:
RENEE K. CHUANG 92140 6/14/2024
PROFESSIONAL ENGINEER R.C.E. No. DATE

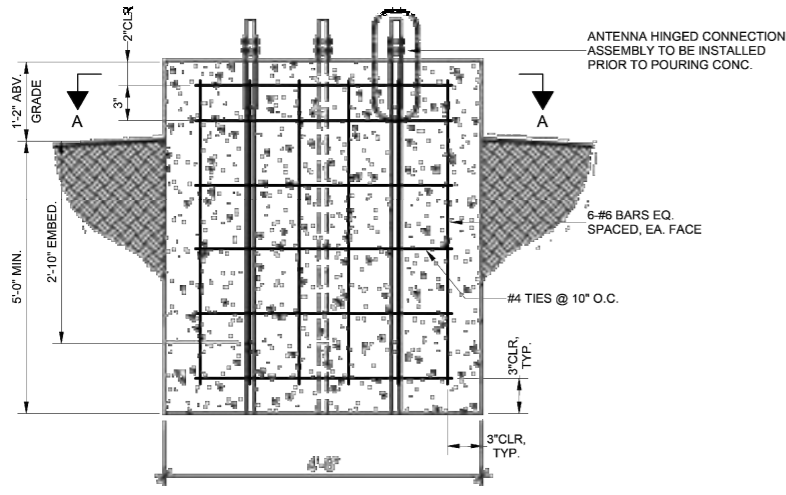
REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS
David R. Doublet
ASSISTANT DIRECTOR

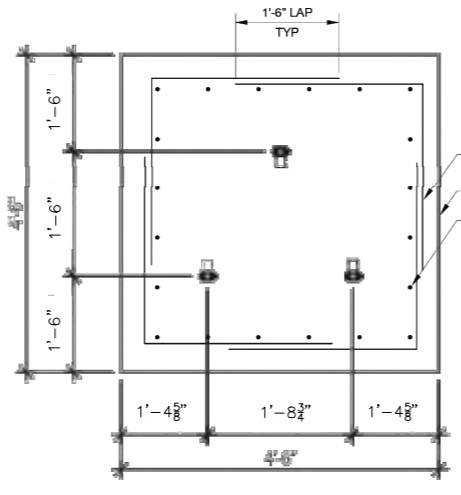
APPROVALS	PROJECT MANAGER	INITIAL	DATE
	Deanna Lestina		
	WAS, DIVISION MANAGER	Greg Snyder	
	PM, DIVISION MANAGER	Noel Mondragon	

100% DRAFT IMPROVEMENT PLANS
APN NO. 033714105
CAMP SWITZERLAND
SEWER LIFT STATION
ANTENNA DETAILS

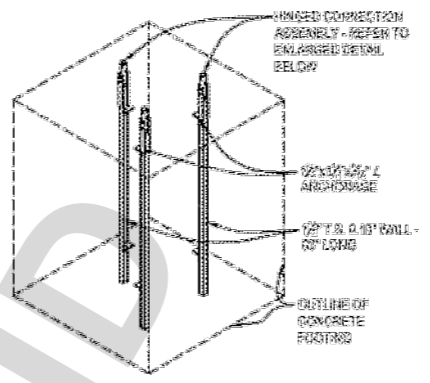
DWG NO. 30.30.XXXX
FILE NO. SDD-XXX
SHEET 17 OF 20



1 ANTENNA FOUNDATION DETAIL
NOT TO SCALE



A PLAN
NOT TO SCALE



B ISOMETRIC
NOT TO SCALE

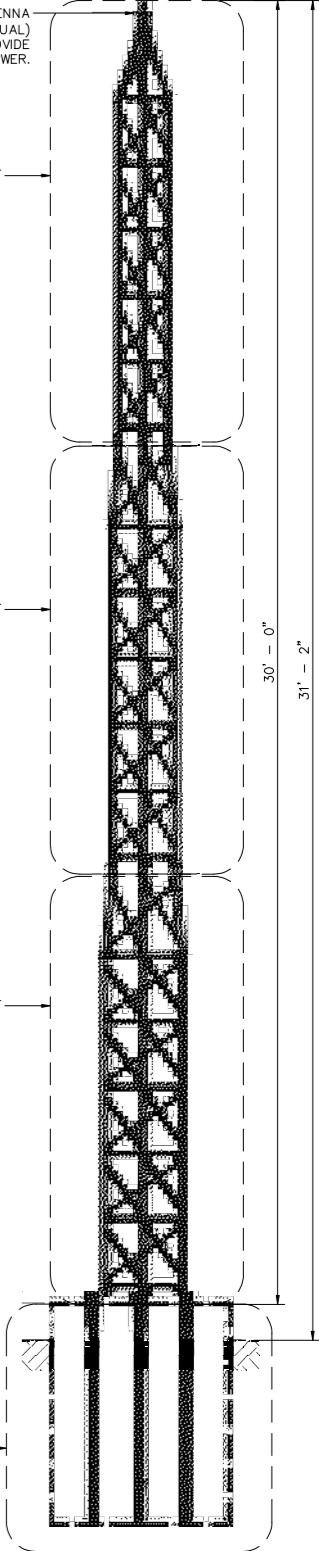
INSTALL ANTENNA MOUNTING KIT PER ANTENNA MFR (UNIVERSAL TOWERS, OR APPROVED EQUAL) RECOMMENDATION. CONTRACTOR SHALL PROVIDE SUBMITTAL FOR ANTENNA ATTACHMENT TO TOWER.

SEE DETAIL 3, THIS SHEET

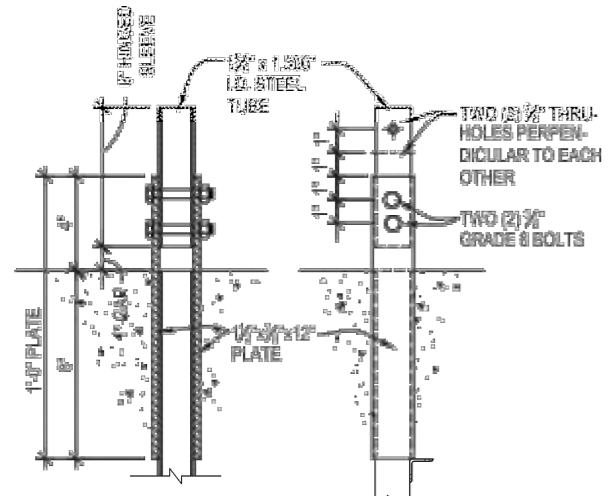
SEE DETAIL 4, THIS SHEET

SEE DETAIL 5, THIS SHEET

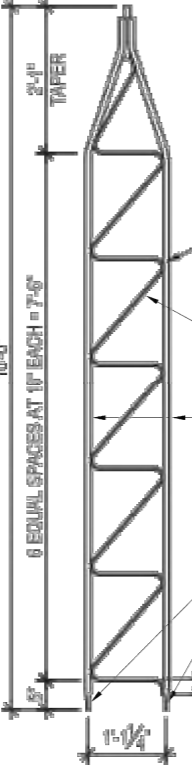
SEE DETAIL 1, THIS SHEET



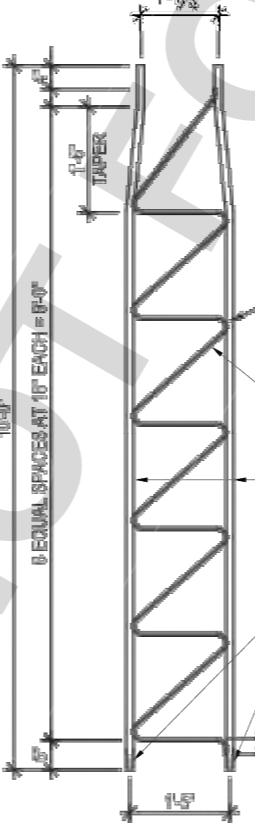
6 TOWER SECTION
NOT TO SCALE



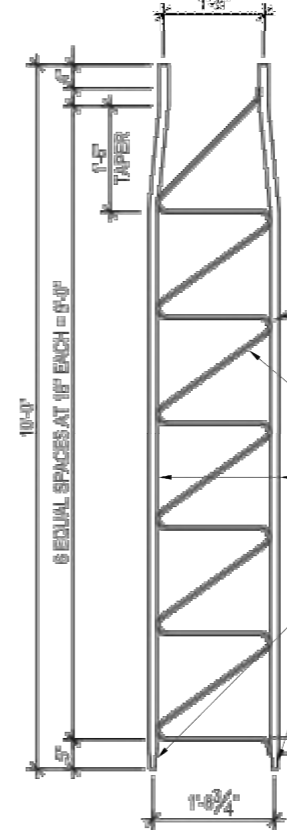
2 BASE CONNECTION DETAIL
NOT TO SCALE



3 ENLARGED TOWER SECTION - LEVEL 3
NOT TO SCALE



4 ENLARGED TOWER SECTION - LEVEL 2
NOT TO SCALE



5 ENLARGED TOWER SECTION - LEVEL 1
NOT TO SCALE

UNDERGROUND SERVICE ALERT
Call: TOLL FREE
1-800-227-2600
OR
811
TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NGVD 29 REFERENCE: CSFB4084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS:
THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 62° 10' 52" E BETWEEN SOPAC CORS STATIONS P612 AND MS08 WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.



COMPANY ADDRESS AND LOGO
401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9868
WWW.KIMLEY-HORN.COM
KimleyHorn
PREPARED UNDER THE SUPERVISION OF:
RENEE K. CHUANG 92140 6/14/2024
PROFESSIONAL ENGINEER R.C.E. No. DATE

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS
SPECIAL DISTRICTS
David R. Doublet
ASSISTANT DIRECTOR
APPROVALS:
PROJECT MANAGER: Deanna Lesina
WAS. DIVISION MANAGER: Greg Snyder
PM. DIVISION MANAGER: Neel Mondragon

100% DRAFT IMPROVEMENT PLANS
APN NO. 033714105
CAMP SWITZERLAND
SEWER LIFT STATION
ANTENNA DETAILS

DWG NO.
30.30.XXXX
FILE NO.
SDD-XXX
SHEET 18 OF 20

INSTRUMENT TAG IDENTIFICATION

	PRIMARY LOCATION (b)NORMALLY ACCESSIBLE TO OPERATOR	FIELD MOUNT	AUXILIARY LOCATION (b)NORMALLY ACCESSIBLE TO OPERATOR
DISCRETE INSTRUMENTS			
SHARED DISPLAY, SHARED CONTROL			
COMPUTER FUNCTION			
PROGRAMMABLE LOGIC CONTROL			

(a) DESIGNATIONS SUCH AS 100 (LOCAL CONTROL BOARD NO. 100), 200 (LOCAL CONTROL BOARD NO.200), ETC., ARE USED WHEN NECESSARY TO SPECIFY INSTRUMENT OR FUNCTION LOCATION.

(b) NORMALLY INACCESSIBLE OR BEHIND-THE-PANEL DEVICES OR FUNCTIONS ARE DEPICTED BY USING THE SAME SYMBOLS BUT WITH DASHED HORIZONTAL BARS, I.E.



SINGLE INSTRUMENT OR OTHER COMPONENT HAVING MULTIPLE FUNCTIONS

SOFTWARE OR LOGIC RESIDENT IN DISTRIBUTED CONTROL SYSTEM (DCS) AT PROGRAMMABLE LOGIC CONTROLLER (PLC) XXX. SEE ASSOCIATED LOGIC DIAGRAMS.

PANEL MOUNTED PILOT LIGHT WITH PANEL NUMBER DESIGNATION (i.e. XXX = 100, 200, ETC.).

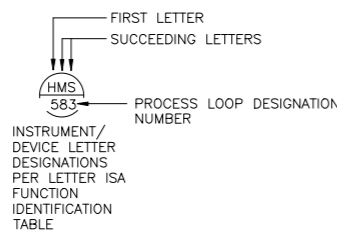
INSTRUMENT PANEL MOUNTED WITH COMPUTING OR CONVERTING FUNCTION

CONVERT E - VOLTAGE
I - CURRENT
P - PNEUMATIC
A - ANALOG
B - BINARY

COMPUTE SUMMING
SUBTRACTOR
MULTIPLYING
DIVIDING
ROOT EXTRACTION
PROPORTIONAL
DERIVATIVE
H - HYDRAULIC
O - ELECTROMAGNETIC, SONIC
R - RESISTANCE (ELECT.)
D - DIGITAL
PF - PULSE FREQUENCY

AC - AUTO/CLOSE
AHC -
AM - AUTO/MANUAL
DEV - DEVIATION
E-STOP - EMERGENCY STOP
HOA - HAND/OFF/AUTO
HOR - HAND/OFF/REMOTE
LOS - LOCKOUT STOP
LR - LOCAL/REMOTE
MOA - MANUAL/OFF/AUTO
OC - OPEN/CLOSE
OO - ON/OFF
OCA - OPEN/CLOSE/AUTO
OSC - OPEN/STOP/CLOSED
OOR - OUT OF RANGE
POT - POTENTIOMETER
RST - RESET
RL - RAISE/LOWER
RSL - RAISE/STOP/LOWER
SD - SHUTDOWN
SEL - SELECT
SP - SET POINT
SR - START/RESET
S/S - STOP/START
WA - WARNING ALARM

INSTRUMENT/DEVICE TAG NAME DESIGNATIONS



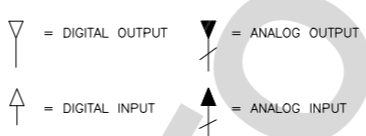
ISA FUNCTION IDENTIFICATION TABLE				
FIRST-LETTER	SUCCEEDING-LETTERS			
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION
A	ANALYSIS		ALARM	
B	BURNER, COMBUSTION, BATTERY			
C	CONDUCTIVITY			CONTROL, COMMAND, CLOSE
D	DENSITY	DIFFERENTIAL, DISPLACE		
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)	EQUIPMENT
F	FLOW RATE	RATIO (FRACTION)	FAIL	
G	GAGE		GLASS, VIEWING DEVICE	
H	HAND			HIGH
I	CURRENT (ELECTRICAL)		INDICATE	
J	POWER	SCAN		
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION
L	LEVEL		LIGHT	LOW MIDDLE, INTERMEDIATE
M	MOTOR, MOISTURE	MOMENTARY	MONITOR	
N	TORQUE		ISOLATE	ISOLATOR
O	OPERATOR		OPERATION	OPEN
P	PRESSURE, VACUUM, PRINTER	PRINTER	POINT (TEST) CONNECTION	
Q	QUANTITY	INTEGRATE, TOTALIZE		
R	RADIATION, HEATER		RECORD	RECEIPT
S	SPEED, FREQUENCY, SOLENOID	SAMPLE		SWITCH
T	TEMPERATURE		MULTIFUNCTION	MULTIFUNCTION
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS		VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL	
X	RUN	X AXIS		COMPUTE, CONVERT
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, DRIVER, ACTUATOR,
Z	POSITION, DIMENSION	Z AXIS		CONTROL ELEMENT

TYPICAL: TIC-1 - INSTRUMENT IDENTIFICATION OR TAG NUMBER
FORMAT TIC - FUNCTIONAL IDENTIFICATION
T - FIRST-LETTER
IC - SUCCEEDING-LETTER(S)
1 - LOOP NUMBER

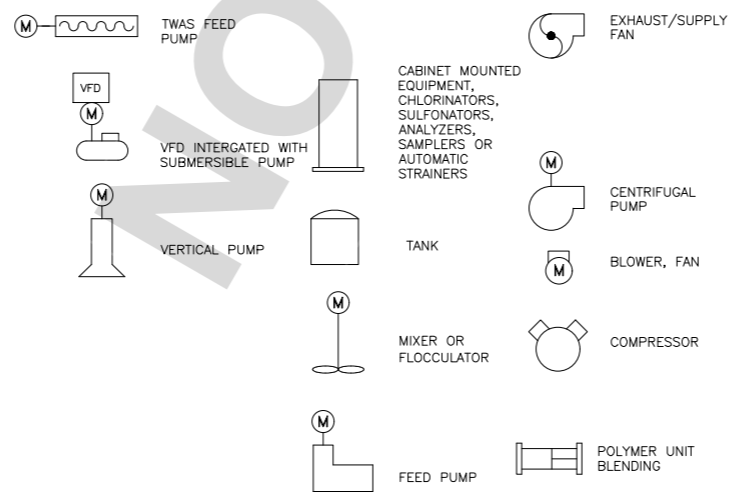
EXPANDED: 10-PAH-1A - TAG NUMBER
FORMAT 10 - OPTIONAL PREFIX
A - OPTIONAL SUFFIX

HARDWIRED INTERLOCK LOGIC
 ETHERNET SWITCH
 ETHERNET SWITCH #1

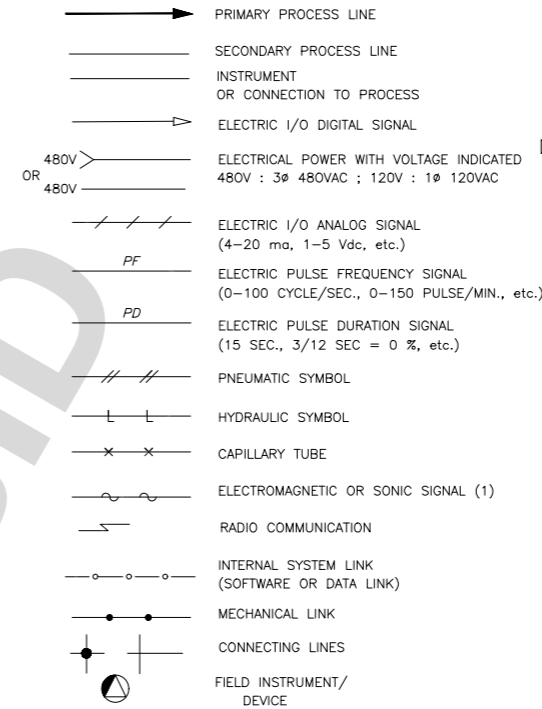
INPUT/OUTPUT INTERFACE SYMBOLS



MECHANICAL EQUIPMENT SYMBOLS



PROCESS AND SIGNAL LINE SYMBOLS

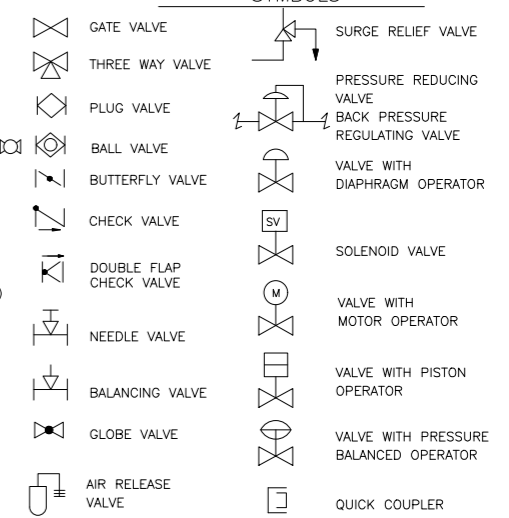


(1) ELECTROMAGNETIC PHENOMENA INCLUDE HEAT, RADIO WAVES, NUCLEAR RADIATION, AND LIGHT.

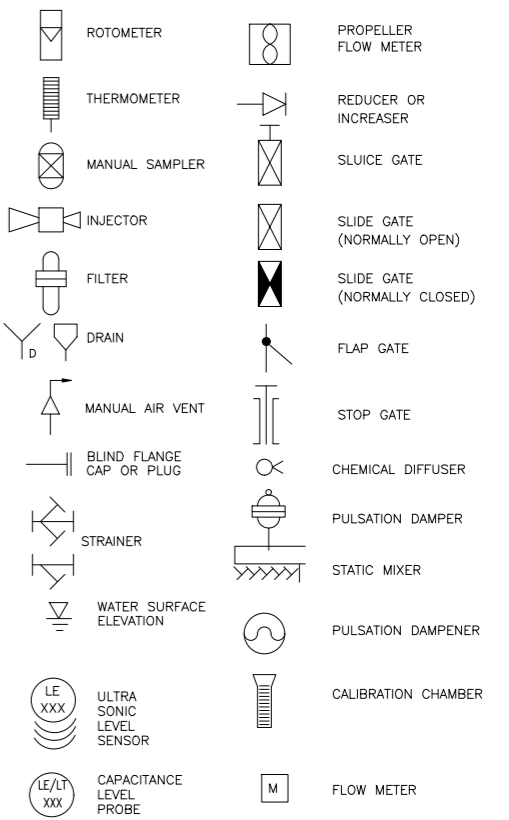
GENERAL NOTES

- ADDITIONAL INSTRUMENTATION AND CONTROL SYMBOLS MAY BE USED AS REQUIRED. SYMBOLS AND NOMENCLATURE ARE BASED ON ISA STANDARDS S5.1, S5.2, S5.4. SEE ASSOCIATED ELECTRICAL AND MECHANICAL SYMBOL SHEETS FOR ADDITIONAL SYMBOLS AND ABBREVIATIONS.
- FOR PIPE SIZES, MATERIAL, AS WELL AS DETAILS OF METER COUPLING AND OTHER MECHANICAL EQUIPMENT (E.G. VALVE, PUMP ETC.) SEE PROCESS AND INSTRUMENTATION DIAGRAMS, MECHANICAL DRAWINGS AND SPECIFICATIONS. POWER SUPPLIES FOR LOOPS OR SYSTEMS SHALL BE FURNISHED BY THE INSTRUMENTATION MANUFACTURER TO MEET THE PARTICULAR CHARACTERISTICS (E.G. VOLTAGE AND CURRENT REQUIREMENTS) OF COMPONENTS IN EACH LOOP OR SYSTEM.
- THOSE ITEMS IDENTIFIED BY AN ASTERISK SHALL BE PROVIDED BY THE SYSTEM PROCESS EQUIPMENT SUPPLIER.
- THE LOOP TAG IDS ON DRAWINGS ARE GENERIC. CONTRACTOR SHALL COORDINATE WITH UEM (UTILITY ENERGY MANAGEMENT) TO HAVE ALL THE EXISTING LOOP IDS TO PROGRAM THE UNIQUE TAG IDS FOR EACH LOOP.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PLC INTEGRATION AND PROGRAMMING. PRIOR TO IMPLEMENTATION OF NEW PLC PROGRAM, LADDER DIAGRAMS AND PROGRAM CODE SHALL BE SUBMITTED TO PUBLIC WORKS DEPARTMENT FOR REVIEW AND APPROVAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SCADA INTEGRATION AND PROGRAMMING OF EXISTING "LOOK-OUT" SOFTWARE PLATFORM.

VALVE AND ACTUATOR SYMBOLS



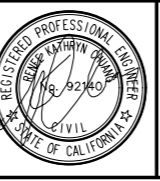
DEVICE SYMBOLS



UNDERGROUND SERVICE ALERT
Call: TOLL FREE 1-800-227-2600 OR 811
TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NGVD 29 REFERENCE: CSFB4084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS:
THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 62° 10' 52" E BETWEEN SOPAC CORS STATIONS P612 AND MS08 WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.



COMPANY ADDRESS AND LOGO
401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9868
WWW.KIMLEY-HORN.COM
KimleyHorn
PREPARED UNDER THE SUPERVISION OF:
RENEE K. CHUANG 92140 6/14/2024
PROFESSIONAL ENGINEER R.C.E.No. DATE

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

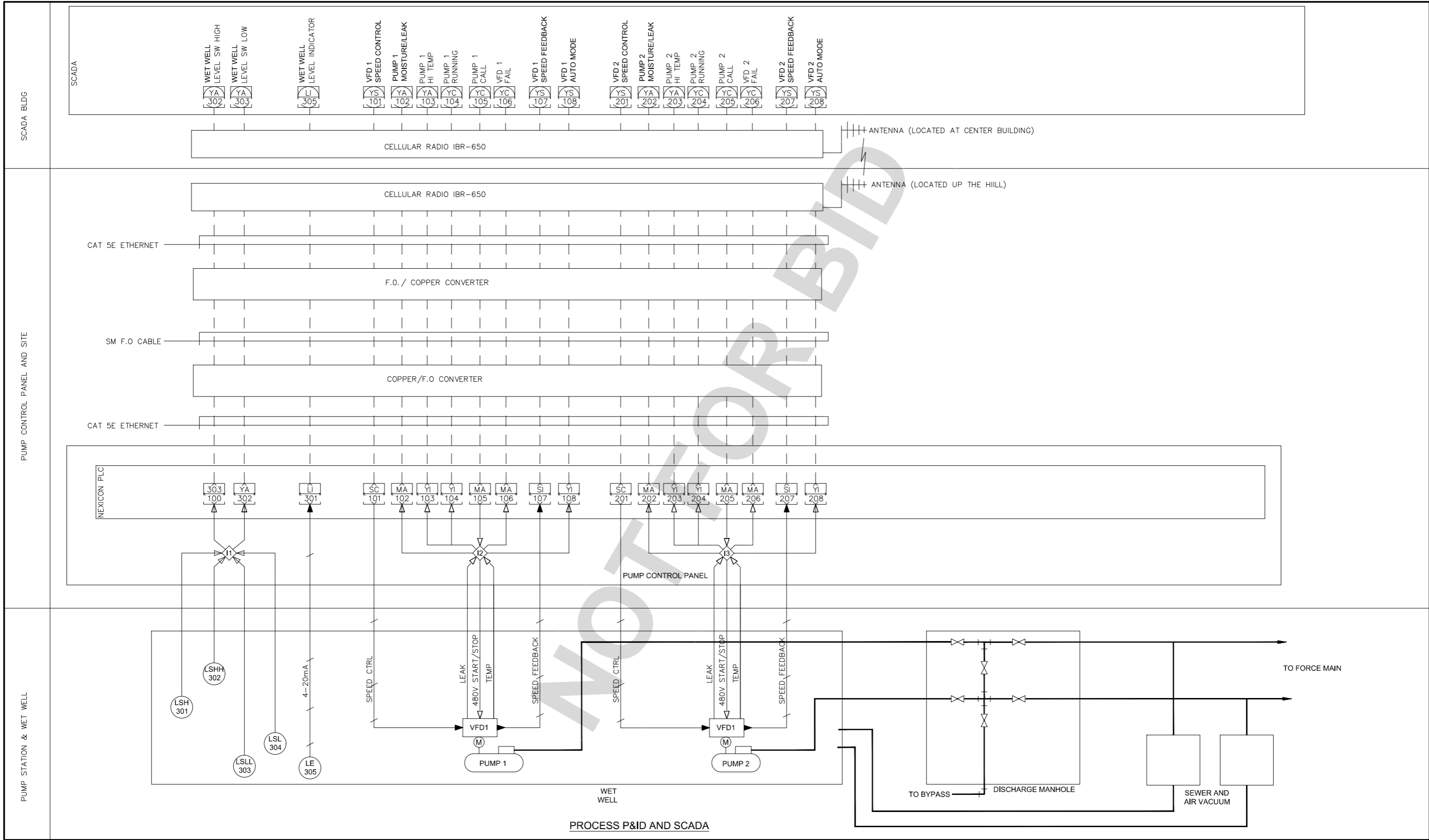
PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS

David R. Doublet
ASSISTANT DIRECTOR

PROJECT MANAGER	INITIAL	DATE
Deanna Lestina		
WAS, DIVISION MANAGER	Greg Snyder	
PM, DIVISION MANAGER	Noel Mondragon	

100% DRAFT IMPROVEMENT PLANS
APN NO. 033714105
CAMP SWITZERLAND
SEWER LIFT STATION
P&ID SYMBOLS AND ABBREVIATIONS

DWG NO. 30.30.XXXX
FILE NO. SDD-XXX
SHEET 19 OF 20



UNDERGROUND SERVICE ALERT
 Call: TOLL FREE
 1-800-227-2600
 OR
 811
 TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK:
 ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NGVD 29 REFERENCE: CSFB4084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS:
 THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 62° 10' 52" E BETWEEN SOPAC CORRS STATIONS P612 AND MS08 WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.



COMPANY ADDRESS AND LOGO
 401 B STREET, SUITE 600
 SAN DIEGO, CA 92101
 (951) 543-9868
 WWW.KIMLEY-HORN.COM
Kimley»Horn
 PREPARED UNDER THE SUPERVISION OF:
 RENE K. CHUANG 92140 6/14/2024
 PROFESSIONAL ENGINEER R.C.E. No. DATE

REVISIONS					
MARK	DATE	INITIAL	DESCRIPTION	APPR.	DATE

PLANS APPROVED BY:
SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS
David R. Doublet
 ASSISTANT DIRECTOR
 APPROVALS:
 PROJECT MANAGER: Deanna Lestina
 W.A.S. DIVISION MANAGER: Greg Snyder
 P.M. DIVISION MANAGER: Noel Mondragon

100% DRAFT IMPROVEMENT PLANS
 APN NO. 033714105
 CAMP SWITZERLAND
 SEWER LIFT STATION
 P&ID

DWG NO. 30.30.XXXX
 FILE NO. SDD-XXX
 SHEET 20 OF 20