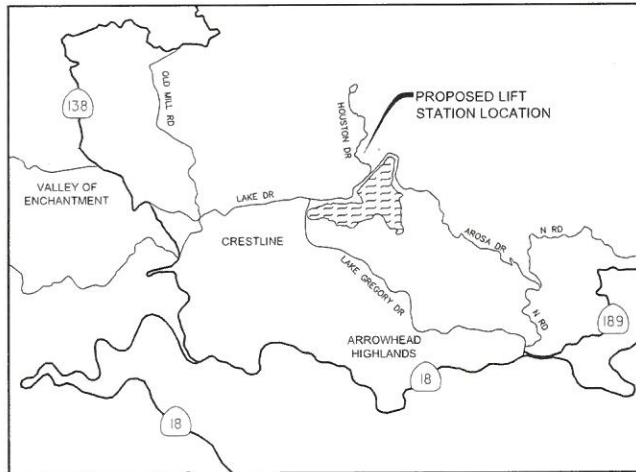




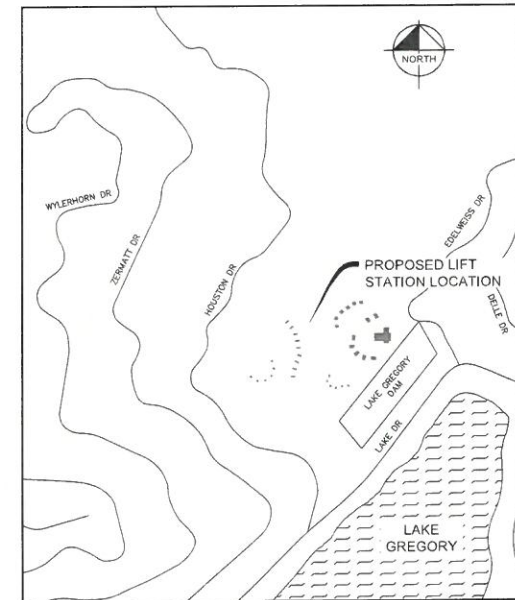
SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS SPECIAL DISTRICTS

CAMP SWITZERLAND SEWER LIFT STATION
APN: 033714105



PROJECT VICINITY MAP
NOT TO SCALE

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
1	COVER
2	GENERAL NOTES
3	SITE PLAN
4	MECHANICAL PLAN
5	SECTIONS
6	SECTIONS
7	FORCE MAIN PLAN AND PROFILE
8	EROSION CONTROL
9	DETAILS
10	DETAILS
11	DETAILS
12	ELECTRICAL COVER
13	ELECTRICAL SITE PLAN
14	ELECTRICAL DETAILS
15	ELECTRICAL DETAILS
16	ELECTRICAL DETAILS
17	ANTENNA DETAILS
18	ANTENNA DETAILS
19	PAID SYMBOLS AND ABBREVIATIONS
20	P&ID



PROJECT LOCATION MAP
NOT TO SCALE

UNDERGROUND SERVICE ALERT CALL TOLL FREE 1-800-227-2030 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 = NVD 29 REFERENCE: CSF84084 - 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.	 RENEE K. CHUANG PROFESSIONAL ENGINEER 92140 5/14/2024 R.C.E. NO. DATE	COMPANY ADDRESS AND LOGO 4011 B STREET, SUITE 400 SAN DIEGO, CA 92101 (951) 543-9868 WWW.KIMLEY-HORN.COM Kimley»Horn PREPARED UNDER THE SUPERVISION OF: RENEE K. CHUANG PROFESSIONAL ENGINEER 92140 5/14/2024 R.C.E. NO. DATE	REVISIONS MARK DATE INITIAL DESCRIPTION APPROV DATE	PLANS APPROVED BY: SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS ASSISTANT DIRECTOR DATE APPROVALS PROJECT MANAGER WAS DIVISION MANAGER P.M. DIVISION MANAGER	100% DRAFT IMPROVEMENT PLANS APN NO. 033714105 CAMP SWITZERLAND SEWER LIFT STATION COVER DWG NO. 30.30.XXXX FILE NO. SDD-XXX SHEET 1 OF 20
--	--	---	--	---	---	--	--

GENERAL NOTES

1. EXISTING UTILITIES AND STRUCTURES (UNDERGROUND, SURFACE, AND OVERHEAD) ARE INDICATED ONLY TO THE EXTENT THAT SUCH INFORMATION WAS KNOWN BY THE ENGINEER IN PREPARING THE DRAWINGS. THE LOCATIONS, CONFIGURATIONS, AND ELEVATIONS OF SUBSURFACE UTILITIES ARE APPROXIMATE AND ALL UTILITIES MAY NOT BE SHOWN. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, THE ENGINEERING INVESTIGATIONS, LOCATION, AND DESTRUCTION OF SUBSURFACE UTILITIES SHOWN ON THESE PLANS HAVE BEEN PERFORMED TO QUALITY LEVEL C IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRINCIPLES AND PRACTICES AS OUTLINED IN ASCE STANDARD GUIDELINE C/ASCE 38-02. THE UNDERGROUND UTILITIES SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. ADDITIONAL UTILITY LINES MAY BE PRESENT ON SITE. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING, IDENTIFYING, AND PROTECTING ALL BURIED UTILITIES AND UNDERGROUND STRUCTURES. EXISTING UTILITIES DAMAGED DURING CONSTRUCTION ACTIVITIES SHALL BE REPAIRED TO AS GOOD OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY CONFLICT OR UTILITIES NOT SHOWN ON THE PLANS.
2. PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, CONTRACTOR SHALL VERIFY THE LOCATION, MATERIAL, SIZE, AND DEPTH OF ALL CROSSINGS AND CONNECTING UTILITIES REQUIRED TO COMPLETE THE WORK. UTILITY INVESTIGATION SHALL BE COMPLETED BY HAND OR HYDRO-VAC METHODS. CONTRACTOR TO PROVIDE SCALED, DETAILED, UTILITY CONFLICT FIELD NOTES AS CONDITION PRECEDENT TO PAYMENT FOR MOBILIZATION ACTIVITIES. PAY ITEMS FOR PIPELINE ADJUSTMENTS ARE INCLUDED IN THE BID FORMS IF REQUIRED IN THE ENGINEER'S SOLE OPINION.
3. CONTRACTOR SHALL LOCATE AND PROTECT ALL SURVEY POINTS AND POT HOLE ALL SUBSURFACE UTILITIES AND POINTS OF CONNECTION NOTED ON THE PLANS. BEFORE STARTING WORK, SUBMIT A RECORD OF FIELD VERIFICATION PRIOR TO SUBMITTAL OF MAJOR EQUIPMENT SHOP DRAWINGS AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR SHALL FIELD VERIFY THE CONDITION AND DIMENSIONS OF EXISTING STRUCTURES AND UTILITIES TO BE MAINTAINED. CONTRACTOR SHALL NOTIFY ENGINEER IF THERE IS A CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND EXISTING CONSTRUCTION BEFORE PROCEEDING WITH WORK.
4. ACCESS CONTROL: ALL CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS ARE SUBJECT TO SAN BERNARDINO COUNTY'S SECURITY POLICY REFER TO CONTRACT GENERAL CONDITION 3.13.3. SEE SUPPLEMENTAL GENERAL PROVISIONS. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF PARKING AND STORAGE AREAS WITH THE OWNER'S REPRESENTATIVE. CONTRACTOR PARKING AND STORAGE OF EQUIPMENT AND MATERIALS SHALL BE RESTRICTED TO AGREED UPON AREAS.
5. CONTRACTOR SHALL REESTABLISH PRE-CONSTRUCTION GROUND ELEVATIONS IN AREAS WHERE GRADING IS NOT DEFINED.
6. UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR SPECIFIED, CIVIL CONSTRUCTION SHALL BE PER COUNTY STANDARD DETAILS AND SPECIFICATIONS. TYPICAL DETAILS SHALL APPLY EVEN THOUGH NOT REFERENCED AT SPECIFIC LOCATIONS ON DRAWINGS.
7. CONTRACTOR SHALL COMPLY WITH LOCAL CONSTRUCTION STORM WATER DISCHARGE REGULATIONS AND REQUIREMENTS.
8. PIPES SMALLER THAN 12" SHALL HAVE A MINIMUM COVER OF 30" UNLESS OTHERWISE NOTED. PIPES SHALL BE ROUTED AS SHOWN UNLESS ADJUSTMENTS ARE NECESSARY TO AVOID EXISTING PIPES, CONDUITS, BURIED STRUCTURES, ETC. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL FITTINGS AND ADAPTERS REQUIRED TO MAKE THE ADJUSTMENTS AT THE UNIT BID PER ADJUSTMENT AS DESCRIBED IN THE BIDDING DOCUMENTS.
9. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT FROM DAMAGE EXISTING FACILITIES AND UTILITIES SHOWN OR NOT SHOWN THAT ARE TO REMAIN IN PLACE. ALL FACILITIES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE EXPEDITIOUSLY REPAIRED OR RECONSTRUCTED TO THE ORIGINAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE WITHOUT ADDITIONAL COMPENSATION.
10. CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING PIPE, EQUIPMENT, ETC. AS REQUIRED AND SHALL PROVIDE ALL FITTINGS, ADAPTERS, AND APPURTENANCES REQUIRED TO MAKE THE CONNECTIONS. PROVIDE ALL SUPPORTS REQUIRED FOR A RIGIDLY SUPPORTED COMPLETE AND WORKING SYSTEM.
11. ADJUST ALL VALVE BOXES, VAULTS, PULL BOXES, AND MANHOLES TO FINISHED GRADE UNLESS OTHERWISE SHOWN OR DIRECTED. MANHOLES IN OPEN FIELDS SHALL BE SET TWELVE INCHES ABOVE FINISHED GRADE AND VAULTS SHALL BE SIX INCHES ABOVE FINISHED GRADE.
12. CONTRACTOR SHALL VERIFY THAT PIPING SHOWN TO BE ABANDONED OR AS ABANDONED PREVIOUSLY IS NO LONGER IN SERVICE. LINES IN SERVICE SHALL BE MAINTAINED UNTIL NO LONGER REQUIRED BY THE OWNER.
13. THE CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS IN THE VICINITY OF ANY UNDERGROUND OR OVERHEAD ELECTRIC LINES. CONTRACTOR SHALL ABIDE BY THE NATIONAL ELECTRIC CODE AND ANY REQUIREMENT BY THE OWNER OF THE ELECTRIC LINES.
14. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF
A. SAN BERNARDINO COUNTY GRADING & EXCAVATION REGULATIONS AND GRADING MANUAL
B. SAN BERNARDINO COUNTY STANDARD PLANS
C. SAN BERNARDINO COUNTY - SPECIAL DISTRICTS STANDARD SEWER SPECIFICATIONS AND DRAWINGS
D. SPECIAL REQUIREMENTS OF THE GRADING PERMIT
E. THE CALIFORNIA BUILDING CODE (2022)
F. STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK, 2021)
G. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2003 CALIFORNIA SUPPLEMENT WHENEVER SPECIAL REQUIREMENTS CONFLICT ON ANY SUBJECT MATTER, THE OWNERS REPRESENTATIVE WILL DETERMINE WHICH SPECIAL REQUIREMENTS AND/OR CODE WILL GOVERN.
17. EXPORT SOIL MUST GO TO A LEGAL DUMP SITE OR TO A LEGAL PERMITTED SITE APPROVED BY THE OWNERS REPRESENTATIVE.
18. NO DIRT, ROCK OR CONSTRUCTION MATERIAL MAY BE TRACKED OR DROPPED WITHIN THE PUBLIC RIGHTS-OF-WAY DURING THE PROJECT. ANY DEBRIS IN THE PUBLIC RIGHT-OF-WAY SHALL BE REMOVED IMMEDIATELY AND/OR AS DEEMED NECESSARY BY THE GRADING INSPECTOR.
19. CONTRACTOR SHALL TAKE CARE TO PROVIDE ODOR CONTROL MEASURES AS NECESSARY AT THE SOLE COST OF THE CONTRACTOR.
20. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS AND TO THE LATEST EDITION OF THE STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION.
21. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN A CURRENT AND APPROVED SET OF PLANS AND SPECIFICATIONS ON THE JOB SITE AT ALL TIMES.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ARRANGEMENTS FOR CONSTRUCTION INSPECTION AT LEAST 48 HOURS PRIOR TO BEGINNING WORK.
23. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE THEMSELVES WITH THE JOB SITE AND THE LOCATION OF ALL UNDERGROUND FACILITIES SHOWN OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR ALL DIG ALERT REQUESTS AND EXPLORATORY EFFORTS NECESSARY TO VERIFY ANY UNDERGROUND OBSTRUCTIONS. THE CONTRACTOR WILL BE UNILATERALLY RESPONSIBLE FOR ANY DAMAGE DONE TO EXISTING UTILITIES THAT ARE SHOWN OR NOT SHOWN ON THESE PLANS.
24. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY STATE, COUNTY OR LOCAL PERMITS.
25. CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT AND ENCROACHMENT PERMIT OR OTHER REQUIRED PERMITS FROM THE SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS TRANSPORTATION, PRIOR TO ANY WORK WITHIN THE COUNTY RIGHT OF WAY BY CALLING (909) 382-7910.
26. THE CONTRACTOR SHALL NOTIFY ALL SERVING UTILITY COMPANIES 48 HOURS PRIOR WHEN WORK IS TO BE PERFORMED NEAR THEIR FACILITIES BY CALLING 811.
27. CONTRACTOR SHALL ENSURE THAT EASEMENTS HAVE BEEN RECORDED PRIOR TO START OF WORK.
28. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ~~FIELD-QUANIFIED~~ ~~MADE~~ ~~WITHOUT~~ ~~PRIOR~~ ~~WRITTEN~~ AUTHORIZATION FROM THE ~~UNDERGROUND~~ ENGINEER AND SAN BERNARDINO COUNTY SPECIAL DISTRICTS.
29. THE CONTRACTOR AGREES THAT IT SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUALLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
30. ALL EXCAVATIONS SHALL BE BACKFILLED AT THE END OF EACH WORKING DAY AND ROADS OPEN TO VEHICULAR TRAFFIC UNLESS OTHERWISE APPROVED BY SPECIAL DISTRICTS.
31. ALL WORK SHALL BE CONSTRUCTED ACCORDING TO THE VERTICAL AND HORIZONTAL MEASUREMENTS OF THESE PLANS AND EXISTING DESIGN STANDARDS. ADEQUATE STAKES SHALL BE SET UNDER THE DIRECTION OF A LICENSED SURVEYOR/ENGINEER FOR THE CONSTRUCTOR. ALL CONSTRUCTION SURVEYING SHALL BE PERFORMED IN ACCORDANCE TO THE SURVEYING PROCEDURES OF THE SURVEYOR/ENGINEER OF RECORD. IF THIRD PARTY SUBCONTRACTORS PERFORM THE CONSTRUCTION LAYOUT AND SURVEYING FOR THIS PROJECT WITHOUT THE COORDINATION OF THE SURVEYOR/ENGINEER OF RECORD, THEY HAVE ASSUMED THE POSITION OF SURVEYOR/ENGINEER OF RECORD. THE FINAL CHECK OF THIS DESIGN IS TO BE THE CONSTRUCTION STAKING AS THE DESIGN MEETS THE EXISTING CONTROL AND ELEVATIONS. ALL EXISTING DISCREPANCIES TO THE STANDARD DESIGN CRITERIA SHALL BE BROUGHT TO THE SURVEYOR/ENGINEER OF RECORD'S ATTENTION PRIOR TO PROCEEDING WITH CONSTRUCTION. IF CONSTRUCTION CONTINUES WITHOUT VERIFICATION THE CONSTRUCTOR ASSUMES THE RESPONSIBILITY OF THE CORRECTNESS OF THE INTENDED DESIGN.
32. THE PROJECT AREA HAS THE POTENTIAL TO ENCOUNTER BEDROCK. CONTRACTOR ADVISED TO REFER TO GEOTECHNICAL REPORT AND FINDINGS FOR INFORMATION ON BEDROCK.

PRIVATE ENGINEER'S NOTE TO CONTRACTOR

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN ON THESE DRAWINGS AND TO VERIFY ALL DIMENSIONS, PIPE SIZES, PIPE MATERIALS, FLANGE SIZES, AND BOLT CONFIGURATIONS PRIOR TO ORDERING PARTS AND BEGINNING WORK. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN ON THESE DRAWINGS.

CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD SAN BERNARDINO COUNTY, SPECIAL DISTRICTS, THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

NOTIFICATIONS

AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION, CONTRACTOR SHALL NOTIFY:

1. SPECIAL DISTRICTS - (909) 386-8800
2. PERMIT AGENCY: SAN BERNARDINO COUNTY, SPECIAL DISTRICTS
3. CRESTLINE SANITATION DISTRICT - (919) 338-1751
4. UNDERGROUND SERVICE ALERT (USA), 811
5. ALL OTHER AFFECTED AGENCIES THAT ARE NOT MEMBERS OF USA ALERT

LEGEND/ABBREVIATIONS

AC	ASPHALT CONCRETE
ARV	AIR RELEASE VALVE
BFV	BUTTERFLY VALVE
COH	CAST-IN-DRILLED HOLE
CEN	CENTERLINE
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CSA	COUNTY SERVICE AREA
DET	DETAIL
DI	DUCTILE IRON
DP	DUCTILE IRON PIPE
EG	EXISTING GRADE
EXIST	EXISTING
FG	FINISHED GRADE
FLG	FLANGE
FS	FINISHED SURFACE
GE	GROOVE END
GPM	GALLONS PER MINUTE
HDPE	HIGH-DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HP	HORSEPOWER
HWN	HIGHWAY
I.D.	INSIDE DIAMETER
INVERT	INVERT
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
PCC	PORTLAND CEMENT CONCRETE
PE	PLAIN END
PIP	PROTECT IN PLACE
PROP	PROPOSED
PRV	PRESSURE RELEASE VALVE
PVC	POLYVINYL CHLORIDE
PWD	PIPING AND INSTRUMENTATION DRAWING
RD	ROAD
RPM	REVOLUTIONS PER MINUTE
S&SD	SAN BERNARDINO COUNTY STANDARD DRAWINGS
SCH	SCHEDULE
SS	STAINLESS STEEL
SSPNC	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION
STD	STANDARD
STM	STEEL
TDM	TOTAL DYNAMIC HEAD
VOL	VOLUME
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
WAS	WATER AGENCIES' STANDARDS



BENCHMARK
ON CHS MARK AT NORTH WESTERN CORNER OF INTERSECTION OF HUNTER STREET AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR RECORD DATA - NOV 29 2018
REFERENCE: C094048 - PAGES 1306, 1540 & 2202

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



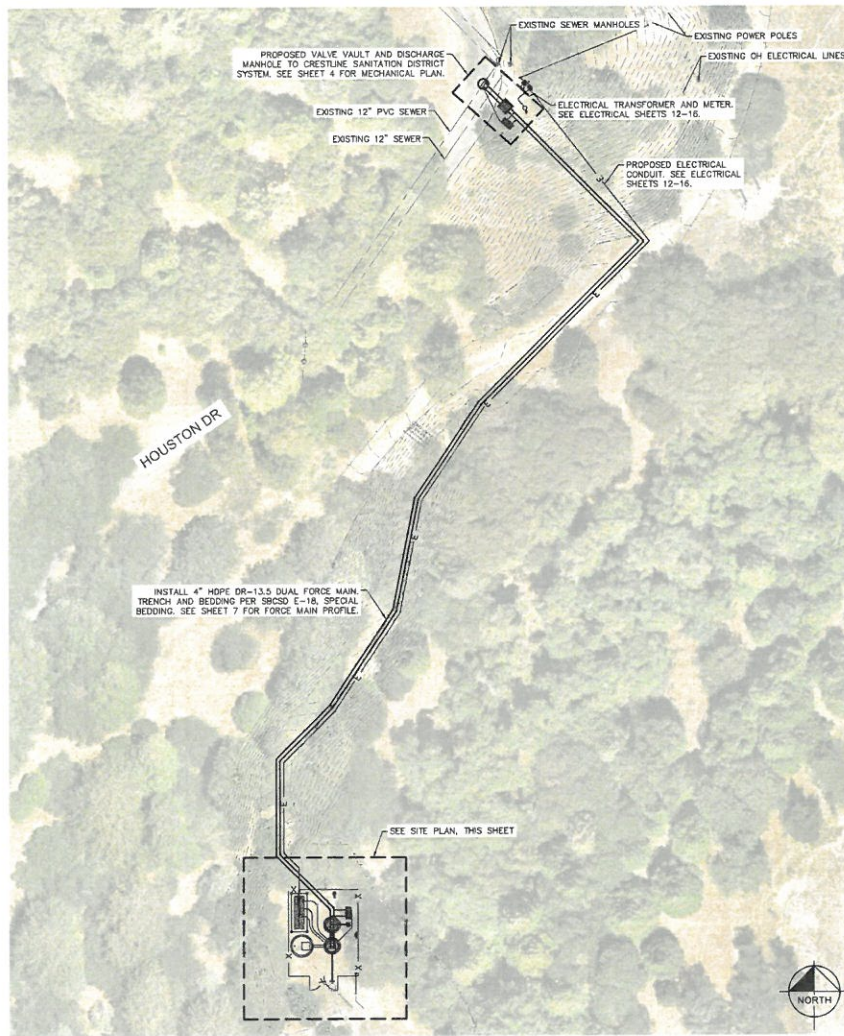
COMPANY ADDRESS AND LOGO
401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9868
WWW.KIMLEY-HORN.COM

KimleyHorn
PREPARED UNDER THE SUPERVISION OF
RONET K. CHIANG
PROFESSIONAL ENGINEER
92140
R.C.E. No. DATE 5/14/2024

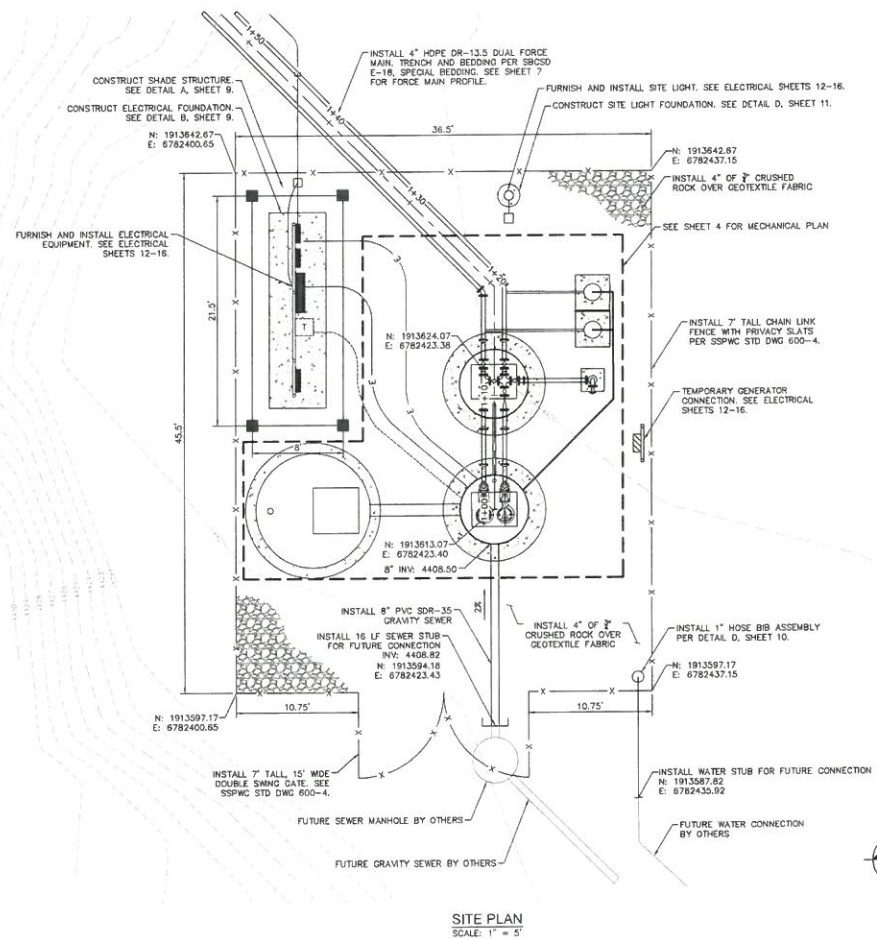
REVISIONS			

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

100% DRAFT IMPROVEMENT PLANS		DWG NO.
APN NO. 033714105 CAMP SWITZERLAND SEWER LIFT STATION GENERAL NOTES		30.30.XXXX
		FILE NO.
		SDD-XXX
		SHEET 2 OF 20

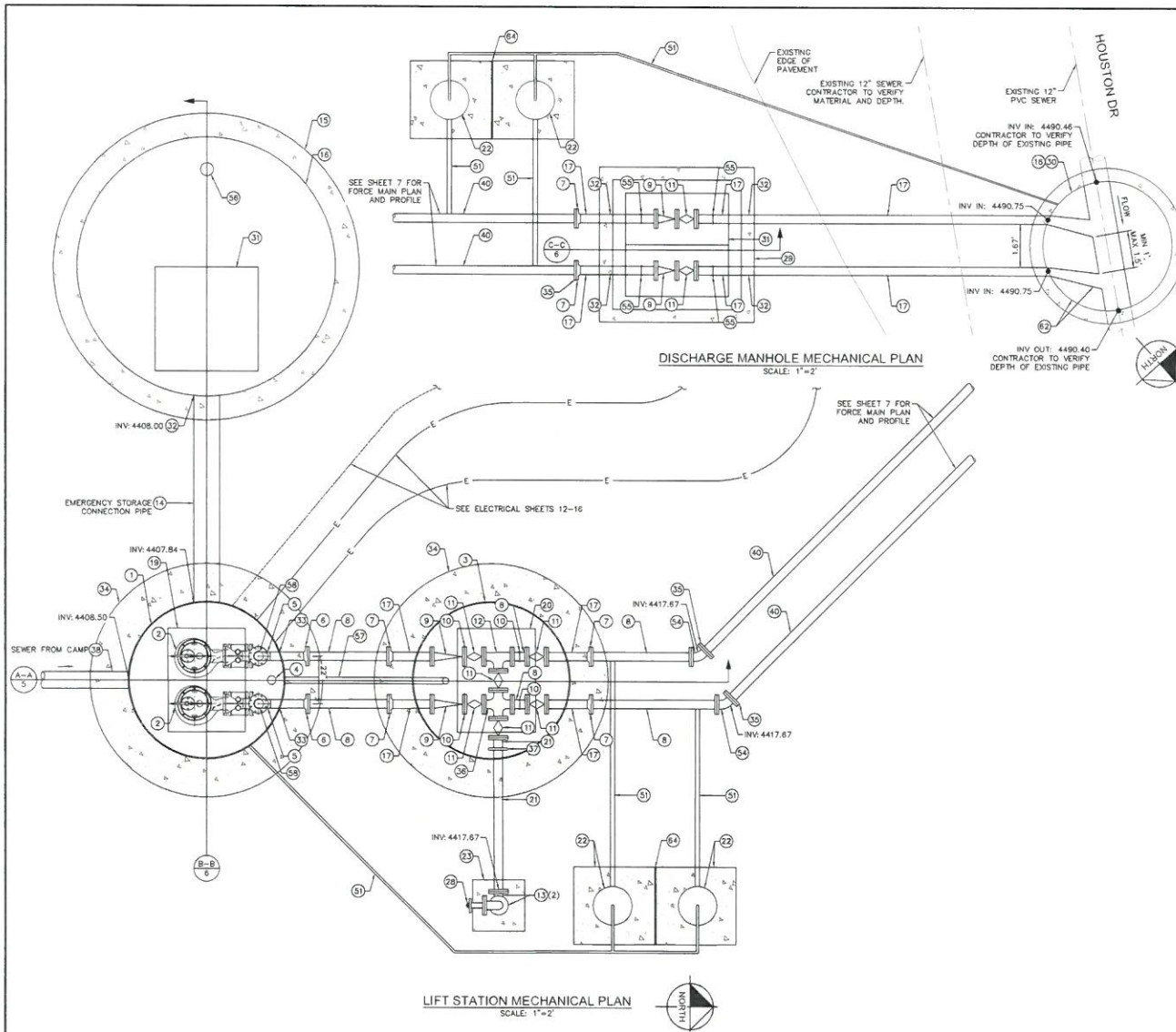


PROJECT VICINITY
SCALE: 1" = 30'



SITE PLAN
SCALE: 1" = 5'

UNDERGROUND SERVICE ALERT  CALL TOLL FREE 1-800-227-2600 OR 811 TWO WORKING DAYS BEFORE YOU DIG		BENCHMARKS ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NVD 20 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 CORP STATIONS 1912 AND 1408 WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.		COMPANY ADDRESS AND LOGO 401 B STREET, SUITE 800 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.E.E. NO. DATE	REVISIONS <table><thead><tr><th>NO.</th><th>DATE</th><th>INITIAL</th><th>DESCRIPTION</th><th>APPRO. DATE</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></tbody></table>	NO.	DATE	INITIAL	DESCRIPTION	APPRO. DATE																										PLANS APPROVED BY SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS ASSISTANT DIRECTOR <table><thead><tr><th> </th><th>DATE</th></tr></thead><tbody><tr><td> </td><td> </td></tr></tbody></table> APPROVALS <table><thead><tr><th>PROJECT MANAGER</th><th>WAS DIVISION MANAGER</th><th>HW DIVISION MANAGER</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr></tbody></table>		DATE			PROJECT MANAGER	WAS DIVISION MANAGER	HW DIVISION MANAGER				100% DRAFT IMPROVEMENT PLANS APN NO. 033714105 CAMP SWITZERLAND SEWER LIFT STATION SITE PLAN	DWG NO. 30.30.XXXX FILE NO. SDD-XXX SHEET 3 OF 20
NO.	DATE	INITIAL	DESCRIPTION	APPRO. DATE																																													
	DATE																																																
PROJECT MANAGER	WAS DIVISION MANAGER	HW DIVISION MANAGER																																															



CONSTRUCTION NOTES

- 1 FURNISH AND INSTALL 6" DIAMETER FLYGT PRE-PACKAGED FIBERGLASS LIFT STATION, OR APPROVED EQUAL.
- 2 FURNISH AND INSTALL FLYGT SUBMERISABLE PUMP, Q = 90 GPM AT 31.5' TDH, CONCENTRIC INTEGRATED VFD PUMP, 3 PHASE, 480 V. SEE DETAIL E, SHEET 10 FOR PUMP CURVE.
- 3 FURNISH AND INSTALL 6" DIAMETER FLYGT PRE-PACKAGED VALVE VAULT, OR APPROVED EQUAL.
- 4 FURNISH AND INSTALL 4" VENT - MUSHROOM STYLE PER MFR.
- 5 FURNISH AND INSTALL 4" SCH 10, 316 STAINLESS STEEL PIPE.
- 6 FURNISH AND INSTALL 4" INSULATING FLANGE COUPLING ADAPTER.
- 7 FURNISH AND INSTALL 4" DI RESTRAINED FLANGE COUPLING ADAPTER.
- 8 FURNISH AND INSTALL 4" DIP (FLG X FLG).
- 9 FURNISH AND INSTALL 4" SWING CHECK VALVE.
- 10 FURNISH AND INSTALL PIPE SUPPORT. SEE DETAIL A, SHEET 10.
- 11 FURNISH AND INSTALL 4" ECCENTRIC FLUG VALVE.
- 12 FURNISH AND INSTALL 4" DI TEE.
- 13 FURNISH AND INSTALL 4" 90° DI BEND.
- 14 FURNISH AND INSTALL 12" SDR-35 PVC TRENCH AND BEDDING PER SBSCD E-18, NORMAL BEDDING.
- 15 FURNISH AND INSTALL 10" DIAMETER JENSEN PRECAST EMERGENCY STORAGE MANHOLE, OR APPROVED EQUAL.
- 16 FURNISH AND INSTALL SINGLE APPLICATION SPRAY-APPLIED EPOXY LINER (200 MILS) ON ALL INTERIOR WALL SURFACES.
- 17 FURNISH AND INSTALL 4" DIP (FLG X PE).
- 18 FURNISH AND INSTALL WET WELL HATCH WITH FALL PROTECTION PER MFR.
- 19 FURNISH AND INSTALL VALVE VAULT HATCH PER MFR.
- 20 FURNISH AND INSTALL 4" DIP (FLG X GE).
- 21 FURNISH AND INSTALL SEWER AIR AND VACUUM COMBINATION RELEASE VALVE ASSEMBLY AND ENCLOSURE. SEE DETAIL A, SHEET 11.
- 22 CONSTRUCT 2' X 2' X 12" CONCRETE PAD, SET PAD 2" ABOVE SURROUNDING F.S.
- 23 FURNISH AND INSTALL SEWER BYPASS WITH FLANGE NIPPLE ADAPTER AND 4" DIKON CAM AND GROOVE TYPE D COUPLER, FEMALE NOT PART #400-D-AL WITH DASH PLUG AND T-HANDLE 400-DP-ALPHA, OR APPROVED EQUAL. SEE DETAIL C, SHEET 9.
- 24 FURNISH AND INSTALL 60" X 60" JENSEN PRECAST VALVE VAULT, OR APPROVED EQUAL.
- 25 FURNISH AND INSTALL 5" DIAMETER DISCHARGE MANHOLE PER WAS STD DET SM-02 AND SM-03. SEE DETAIL B, SHEET 11.
- 26 FURNISH AND INSTALL 48" X 48" USF FABRICATION VALVE VAULT HATCH WITH FALL PROTECTION, OR APPROVED EQUAL.
- 27 FURNISH AND INSTALL PIPE PENETRATION. SEE DETAIL B, SHEET 10.
- 28 FURNISH AND INSTALL PIPING KIT PER LIFT STATION MFR.
- 29 CONSTRUCT CONCRETE RING. SEE DETAIL C, SHEET 11.
- 30 FURNISH AND INSTALL 4" FLANGED HOPE WITH RETAINER RING.
- 31 FURNISH AND INSTALL 4" DI CROSS.
- 32 FURNISH AND INSTALL 4" VICTAULIC COUPLING.
- 33 FURNISH AND INSTALL 8" SDR-35 PVC TRENCH AND BEDDING PER SBSCD E-18, NORMAL BEDDING.
- 34 FURNISH AND INSTALL 4" HOPE DR-13.5 DUAL FORCE MAIN TRENCH AND BEDDING PER SBSCD E-18, SPECIAL BEDDING.
- 35 FURNISH AND INSTALL 1" SCH 80 PVC COMBINATION AIR RELEASE PIPING. SEE DETAIL A, SHEET 11.
- 36 FURNISH AND INSTALL 4" 45° DI BEND.
- 37 FURNISH AND INSTALL VAULT PIPE SUPPORT. SEE DETAIL C, SHEET 10.
- 38 FURNISH AND INSTALL 4" STAINLESS STEEL GOOSENECK VAULT VENT WITH STAINLESS STEEL SCREEN, INSERT AND CLAMP IN PLACE. SET VENT 12" ABOVE RIM.
- 39 FURNISH AND INSTALL 3" SCH 80 PVC VALVE VAULT DRAIN WITH P-TRAP TRENCH AND BEDDING PER SBSCD E-18, NORMAL BEDDING.
- 40 FURNISH AND INSTALL 4" SCH 10, 316 STAINLESS STEEL 90° BEND.
- 41 CONTRACTOR TO INSTALL PRECAST MANHOLE PER WAS SM-02 AND CAST-IN-PLACE BASE PER WAS SM-03 AROUND EXISTING 12" PIPE. CONTRACTOR TO REMOVE EXISTING 12" PIPE WITHIN BASE AFTER FORMATION.
- 42 FURNISH AND INSTALL EXPANSION JOINT.

UNDERGROUND SERVICE ALERT

Call TOLL FREE
1-800-221-2000
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 = NOV 29 REFERENCE: CSB4084 - PAGES 1306, 1540 & 2202

BASIS OF BEARINGS

THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING IN 67° 10' 34" E BETWEEN SDPAC 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
(615) 543-1868
WWW.KIMLEY-HORN.COM
PREPARED UNDER THE SUPERVISION OF
RONET K. CHUANG
PROFESSIONAL ENGINEER
R.C.E. No. 92140
DATE 5/14/2024

KimleyHorn

REVISIONS

NO.	DATE	INITIAL	DESCRIPTION	APPROVAL	DATE

PLANS APPROVED BY

SAN BERNARDINO COUNTY - PUBLIC WORKS
SPECIAL DISTRICTS

DATE

APPROVALS

PROJECT MANAGER

WAS DIVISION MANAGER

PLN DIVISION MANAGER

100% DRAFT IMPROVEMENT PLANS

APN NO. 033714105

CAMP SWITZERLAND

SEWER LIFT STATION

MECHANICAL PLAN

FILE NO.

SDD-XXX

DWG NO.

30.30.XXXX

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

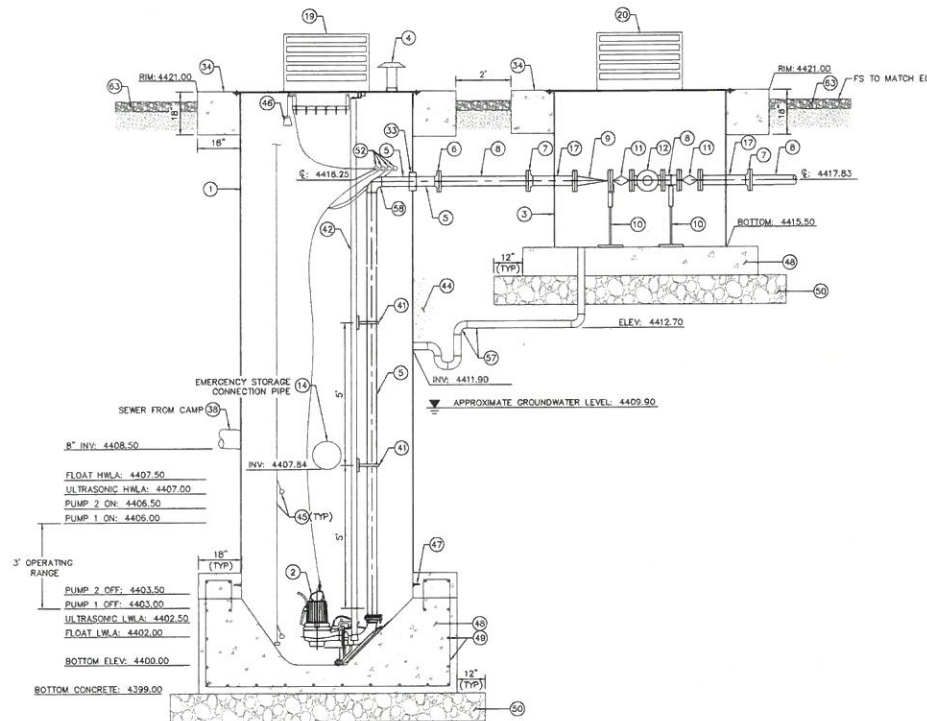
DATE

DATE

DATE

DATE

DATE



SECTION A-A
SCALE: 1" = 2'

CONSTRUCTION NOTES

- ① FURNISH AND INSTALL 6" DIAMETER FLYGT PRE-PACKAGED FIBERGLASS LIFT STATION, OR APPROVED EQUAL.
- ② FURNISH AND INSTALL FLYGT SUBMERSIBLE PUMP, Q = 90 GPM AT 91.5' TDH, CONCENTOR INTEGRATED VFD PUMP, 3 PHASE, 480 V, SEE DETAIL E, SHEET 10 FOR PUMP CURVE.
- ③ FURNISH AND INSTALL 6" DIAMETER FLYGT PRE-PACKAGED VALVE VAULT, OR APPROVED EQUAL.
- ④ FURNISH AND INSTALL 4" VENT - MUSHROOM STYLE PER MFR.
- ⑤ FURNISH AND INSTALL 4" SCH 10, 316 STAINLESS STEEL PIPE.
- ⑥ FURNISH AND INSTALL 4" INSULATING FLANGE COUPLING ADAPTER.
- ⑦ FURNISH AND INSTALL 4" DI RESTRAINED FLANGE COUPLING ADAPTER.
- ⑧ FURNISH AND INSTALL 4" DIP (FLG X FLG).
- ⑨ FURNISH AND INSTALL 4" SWING CHECK VALVE.
- ⑩ FURNISH AND INSTALL PIPE SUPPORT. SEE DETAIL A, SHEET 10.
- ⑪ FURNISH AND INSTALL 4" ECCENTRIC PLUG VALVE.
- ⑫ FURNISH AND INSTALL 4" DI TEE.
- ⑬ FURNISH AND INSTALL 12" SDR-35 PVC TRENCH AND BEDDING PER SBCCSD E-18, NORMAL BEDDING.
- ⑭ FURNISH AND INSTALL 4" DIP (FLG X PE).
- ⑮ FURNISH AND INSTALL WET WELL HATCH WITH FALL PROTECTION PER MFR.
- ⑯ FURNISH AND INSTALL VALVE VAULT HATCH PER MFR.
- ⑰ FURNISH AND INSTALL PIPING KIT PER LIFT STATION MFR.
- ⑱ CONSTRUCT CONCRETE RING. SEE DETAIL C, SHEET 11.
- ⑳ FURNISH AND INSTALL 8" SDR-35 PVC TRENCH AND BEDDING PER SBCCSD E-18, NORMAL BEDDING.
- ㉑ FURNISH AND INSTALL U-BOLT PER LIFT STATION MFR.
- ㉒ FURNISH AND INSTALL PUMP GUIDERAILS PER LIFT STATION MFR.
- ㉓ FURNISH AND INSTALL GRANULAR BACKFILL PER LIFT STATION MFR.
- ㉔ FURNISH AND INSTALL CABLE AND BACKUP FLOATS.
- ㉕ FURNISH AND INSTALL LEVEL TRANSDUCER.
- ㉖ FURNISH AND INSTALL ANTI-FLOTATION FLANGE PER LIFT STATION MFR.
- ㉗ CONSTRUCT CONCRETE FOUNDATION. CONCRETE TO BE CLASS 5000-C-3250. FOUNDATION PREP PER MFR AND GEOTECH RECOMMENDATIONS.
- ㉘ FURNISH AND INSTALL #6 @ 12" O.C. EACH WAY.
- ㉙ FURNISH AND INSTALL 12" DEPTH OF 3/4" CRUSHED ROCK BEDDING.
- ㉚ FURNISH AND INSTALL FOUR (4) 3" ELECTRICAL CONDUIT PENETRATIONS.
- ㉛ FURNISH AND INSTALL 3" SCH 80 PVC VALVE VAULT DRAIN WITH P-TRAP. TRENCH AND BEDDING PER SBCCSD E-18, NORMAL BEDDING.
- ㉜ FURNISH AND INSTALL 4" SCH 10, 316 STAINLESS STEEL 90° BEND.
- ㉝ INSTALL 4" OF 3/4" CRUSHED ROCK OVER GEOTEXTILE FABRIC.



BENCHMARK:
ON C&S MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = MDD 29
REFERENCE: CSFB4064 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS:
THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 67° 10' 52" E BETWEEN SOPAC CORN STATIONS PA12 AND M408 WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.



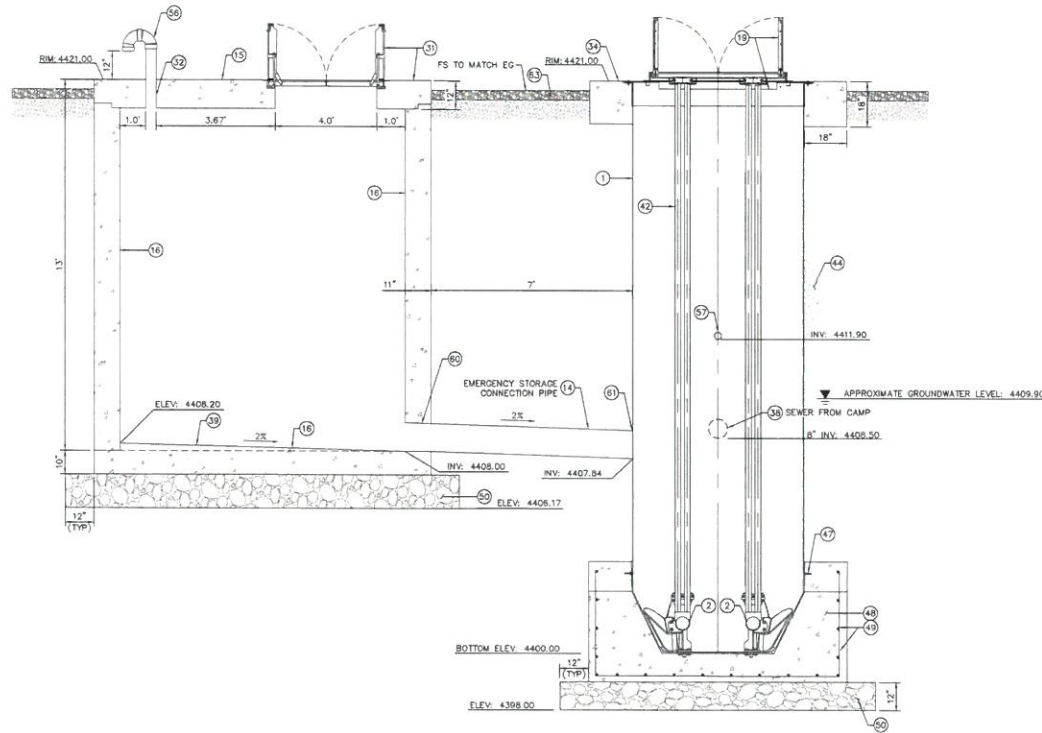
COMPANY ADDRESS AND LOGO
401 B STREET, SUITE 800
SAN DIEGO, CA 92101
(951) 543-9068
WWW.KIMLEY-HORN.COM
Kimley-Horn
PREPARED UNDER THE SUPERVISION OF:
RENEE K. CHIANG
PROFESSIONAL ENGINEER

92140 5/14/2024
R.C.E. NO. DATE

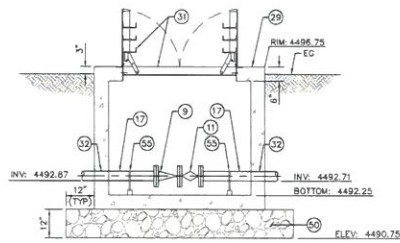
REVISIONS	DATE	DESCRIPTION	APPROVALS

PLANS APPROVED BY			
SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS			
ASSISTANT DIRECTOR	DATE	INITIAL	DATE
PROJECT MANAGER			
WAS DIVISION MANAGER			
PAW DIVISION MANAGER			

100% DRAFT IMPROVEMENT PLANS		DWG NO
APN NO. 033714105 CAMP SWITZERLAND SEWER LIFT STATION SECTIONS		30.30.XXXX
		FILE NO
		SDD-XXX
		SHEET 5 OF 20



SECTION B-B
SCALE: 1" = 2'



SECTION C-C
SCALE: 1" = 2'

CONSTRUCTION NOTES

- FURNISH AND INSTALL 6" DIAMETER FLYGT PRE-PACKAGED FIBERGLASS LIFT STATION, OR APPROVED EQUAL.
- FURNISH AND INSTALL FLYGT SUBMERISBLE PUMP, Q = 90 GPM AT 91.5' TDH, CONCENTOR INTEGRATED VFD PUMP, 3 PHASE, 480 V. SEE DETAIL E, SHEET 10 FOR PUMP CURVE.
- FURNISH AND INSTALL 4" SWING CHECK VALVE.
- FURNISH AND INSTALL 4" ECCENTRIC PLUG VALVE.
- FURNISH AND INSTALL 12" SDR-35 PVC TRENCH AND BEDDING PER SBSCD E-18, NORMAL BEDDING.
- FURNISH AND INSTALL 10" DIAMETER JENSEN PRECAST EMERGENCY STORAGE MANHOLE, OR APPROVED EQUAL.
- FURNISH AND INSTALL SINGLE APPLICATION SPRAY-APPLIED EPOXY LINER (200 MILS) ON ALL INTERIOR WALL SURFACES.
- FURNISH AND INSTALL 4" DIP (FLG X PE).
- FURNISH AND INSTALL WET WELL HATCH WITH FALL PROTECTION PER MFR.
- FURNISH AND INSTALL 60" X 60" JENSEN PRECAST VALVE VAULT, OR APPROVED EQUAL.
- FURNISH AND INSTALL 48" X 48" USF FABRICATION VALVE VAULT HATCH WITH FALL PROTECTION, OR APPROVED EQUAL.
- FURNISH AND INSTALL PIPE PENETRATION. SEE DETAIL B, SHEET 10.
- CONSTRUCT CONCRETE RING. SEE DETAIL C, SHEET 11.
- FURNISH AND INSTALL 8" SDR-35 PVC TRENCH AND BEDDING PER SBSCD E-18, NORMAL BEDDING.
- CONSTRUCT GROUT STRUCTURE BASE AT 2% TOWARDS OUTLET.
- FURNISH AND INSTALL PUMP GUIDERAILS PER LIFT STATION MFR.
- FURNISH AND INSTALL GRANULAR BACKFILL PER LIFT STATION MFR.
- FURNISH AND INSTALL ANTI-FLOTATION FLANGE PER LIFT STATION MFR.
- CONSTRUCT CONCRETE FOUNDATION. CONCRETE TO BE CLASS 3600-C-3250. FOUNDATION PREP PER MFR AND GEOTECH RECOMMENDATIONS.
- FURNISH AND INSTALL #6 @ 12" O.C. EACH WAY.
- FURNISH AND INSTALL 12" DEPTH OF 3/4" CRUSHED ROCK BEDDING.
- FURNISH AND INSTALL VAULT PIPE SUPPORT. SEE DETAIL C, SHEET 10.
- FURNISH AND INSTALL 4" STAINLESS STEEL GOOSENECK VAULT VENT WITH STAINLESS STEEL SCREEN. INSERT AND CLAMP IN PLACE. SET VENT 12" ABOVE RIM.
- FURNISH AND INSTALL 3" SCH 80 PVC VALVE VAULT DRAIN WITH P-TRAP. TRENCH AND BEDDING PER SBSCD E-18, NORMAL BEDDING.
- FURNISH AND INSTALL 12" A-LOK BOOT CONNECTOR, OR APPROVED EQUAL.
- FURNISH AND INSTALL 12" INSERT-A-TEE TYPE FITTING PER LIFT STATION MFR RECOMMENDATIONS, OR APPROVED EQUAL.
- INSTALL 4" OF 3/4" CRUSHED ROCK OVER GEOTEXTILE FABRIC.



BENCHMARK:
ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NOV 29
REFERENCE: CSFB4084 - PAGES 1306, 1540 & 2202

BASIS OF BEARINGS:
THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 42° 10' 12" E BETWEEN SOPAC CORN STATIONS P612 AND M508 WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.

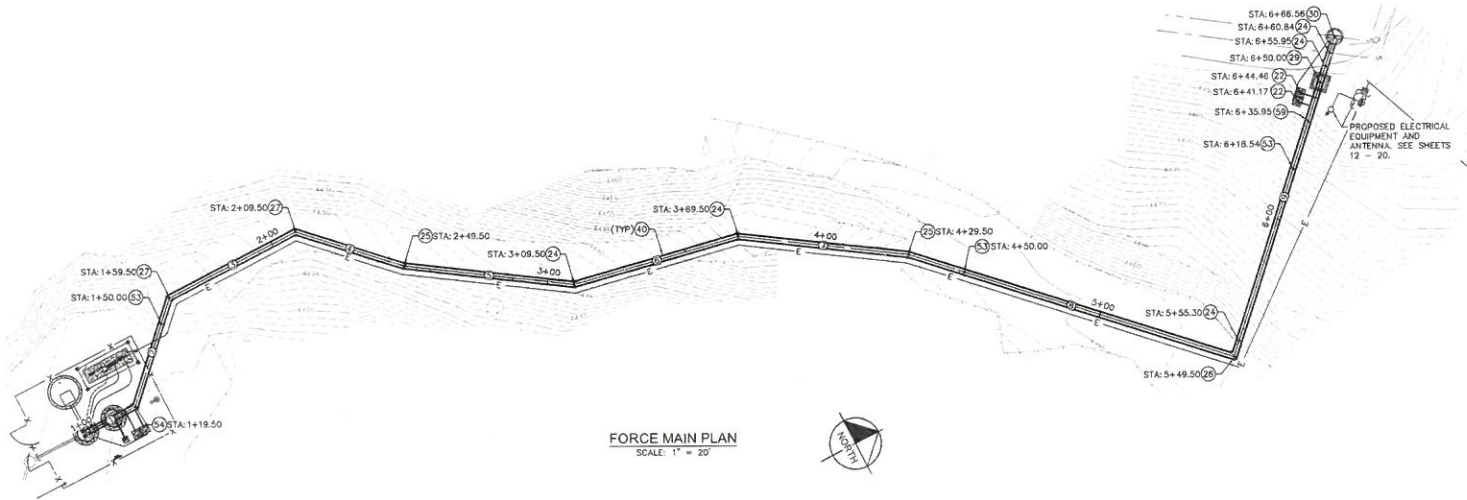


COMPANY ADDRESS AND LOGO
401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(619) 543-9888
WWW.KIMLEY-HORN.COM
Kimley»Horn
PREPARED UNDER THE SUPERVISION OF
RENE K. CHANG, 92140, 6/14/2024
PROFESSIONAL ENGINEER, R.C.E. NO., DATE

REVISIONS	DATE	DESCRIPTION

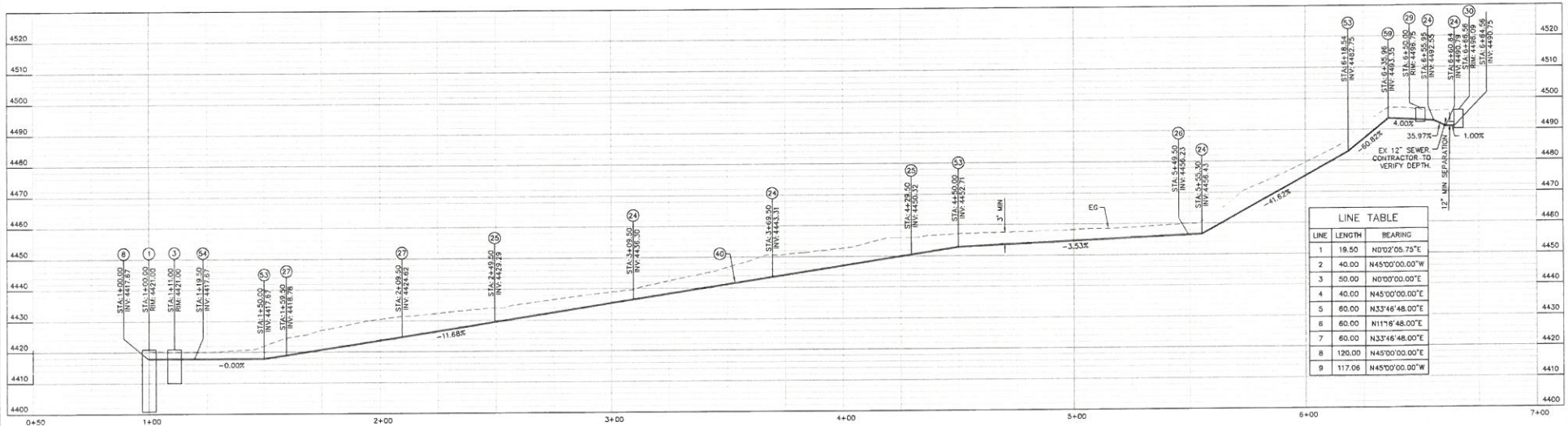
APPROVALS	DATE
PROJECT MANAGER	
DIVISION MANAGER	
PM DIVISION MANAGER	

100% DRAFT IMPROVEMENT PLANS	DWG NO.
APN NO. 033714105 CAMP SWITZERLAND SEWER LIFT STATION SECTIONS	30.30.XXXX
	FILE NO.
	SDD-XXX
	SHEET 6 OF 20



CONSTRUCTION NOTES

- 1 FURNISH AND INSTALL 6" DIAMETER FLYGT PRE-PACKAGED FIBERGLASS LIFT STATION, OR APPROVED EQUAL.
- 3 FURNISH AND INSTALL 6" DIAMETER FLYGT PRE-PACKAGED VALVE VAULT, OR APPROVED EQUAL.
- 6 FURNISH AND INSTALL 4" DP (FLG x FLG).
- 22 FURNISH AND INSTALL SEWER AIR AND VACUUM COMBINATION RELEASE VALVE ASSEMBLY AND ENCLOSURE. SEE DETAIL A, SHEET 11.
- 24 FURNISH AND INSTALL 4" 22.5' HOPE DR-13.5 BUTT-FUSION BONDED BEND PER PIPE MFR.
- 25 FURNISH AND INSTALL 4" 11.25' HOPE DR-13.5 BUTT-FUSION BONDED BEND PER PIPE MFR.
- 26 FURNISH AND INSTALL 4" 90' HOPE DR-13.5 BUTT-FUSION BONDED BEND PER PIPE MFR.
- 27 FURNISH AND INSTALL 4" 45' HOPE DR-13.5 BUTT-FUSION BONDED BEND PER PIPE MFR.
- 29 FURNISH AND INSTALL 60" X 80" JENSEN PRECAST VALVE VAULT, OR APPROVED EQUAL.
- 30 FURNISH AND INSTALL 5" DIAMETER DISCHARGE MANHOLE PER WAS STD DET 3M-02 AND 3M-03. SEE DETAIL B, SHEET 11.
- 40 FURNISH AND INSTALL 4" HOPE DR-13.5 DUAL FORCE MAIN TRENCH AND BEDDING PER SBCCO E-18, SPECIAL BEDDING.
- 53 CONSTRUCT HOPE BUTT-FUSION DEFLECTION ANGLE PER PROFILE.
- 54 FURNISH AND INSTALL 4" 45" DI BEND.
- 59 FURNISH AND INSTALL 4" 33.5' HOPE DR-13.5 BUTT-FUSION BONDED BEND PER MFR.



FORCE MAIN PROFILE
VERTICAL: 1" = 13'
HORIZONTAL: 1" = 20'

LINE	LENGTH	BEARING
1	19.50	N02°05.75'E
2	40.00	N45°00'00.00"W
3	50.00	N0°00'00.00"E
4	40.00	N45°00'00.00"E
5	80.00	N33°46'48.00"E
6	80.00	N11°16'48.00"E
7	80.00	N33°46'48.00"E
8	120.00	N45°00'00.00"E
9	117.06	N45°00'00.00"W

UNDERGROUND SERVICE ALERT

CALL TOLL FREE
1-800-227-2820
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 BDTM = NOD 29 REFERENCE: CSFB4084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS

THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 67° 10' 52" E BETWEEN SOPAC CORN STATIONS P612 AND H008 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:

RONET K. CHIONG
PROFESSIONAL ENGINEER

92140 5/14/2024
R.E. NO. DATE

REVISIONS

NO.	DATE	INITIAL	DESCRIPTION	APPR.	DATE

PLANS APPROVED BY
SAN BERNARDINO COUNTY - PUBLIC WORKS
SPECIAL DISTRICTS

APPROVALS	DATE
ASSISTANT DIRECTOR	
PROJECT MANAGER	
WAS DIVISION MANAGER	
PH DIVISION MANAGER	

100% DRAFT IMPROVEMENT PLANS

APN NO. 033714105
CAMP SWITZERLAND
SEWER LIFT STATION
FORCE MAIN PLAN AND PROFILE

DWG NO.

30.30.XXXX

FILE NO.

SDD-XXX

SHEET 7 OF 20



1. IN CASE OF EMERGENCY, CALL THE COUNTY'S EMERGENCY CONTACT AT (760) 995 9885. PRESS 1.
2. POLLUTION AND EROSION PREVENTION MEASURES, ALSO KNOWN AS BEST MANAGEMENT PRACTICES (BMPs), MUST BE INSTALLED PRIOR TO ANY CONSTRUCTION OF THESE MEASURES, INCLUDING THE PREVENTION OF CONTAMINATION OR FLOODING. THE SITE MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE VIA SHEET FLOOD, CREEKS, AREA DRAINS, NATURAL DRAINAGE COURSES, OR WIND.
3. EROSION CONTROL DEVICES SHALL BE FUNCTIONING AT ALL TIMES. IN CASE OF AN EMERGENCY, EMERGENCY DEVICES SHALL BE IMPLEMENTED.
4. STOCKPILES OF EARTH AND OTHER CONSTRUCTION-RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
5. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOILS AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
6. EXCESS OR WASTE CONCRETE MUST BE CONTAINED ONSITE. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ONSITE UNTIL THEY ARE DISPOSED OF AS SOLID WASTE.
7. CONTRACTORS ARE RESPONSIBLE TO ENSURE ALL EROSION CONTROL DEVICES AND BMPs ARE INSTALLED AND FUNCTIONING PROPERLY PER PLAN. PREVENTION SHALL BE CONSIDERED WHEN SOIL OR GREATER PROBABILITY OF PREDICTED PRECIPITATION, AND AFTER ACTUAL PRECIPITATION, A CONSTRUCTION SITE INSPECTION CHECKLIST AND INSPECTION LOG SHALL BE MAINTAINED AT THE PROJECT SITE TO TRACK:
8. TRASH AND CONSTRUCTION-RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
9. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED 50:50 TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ADDITIONAL DEPOSITIONS MUST BE SHEPPED UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
10. ANY SLOPES WITH DISTURBED SOILS OR DENUED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
11. ALL SILT AND DEBRIS SHALL BE REMOVED FROM ALL DEVICES WITHIN 24 HOURS AFTER EACH RAINFALL AND IMMEDIATELY UPON THE ONSET OF PRECIPITATION.
12. ALL STORM WATER CAPTURE DEVICES SHALL BE PROTECTED AT ALL TIMES.

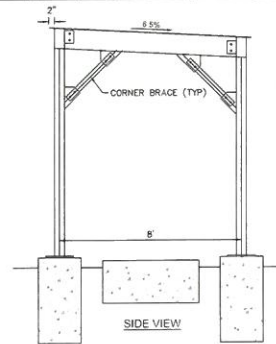
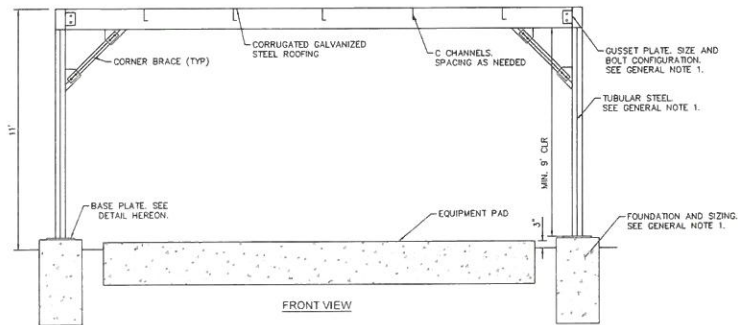
AVAILABLE FOR REVIEW BY THE COUNTY

BMP FACT SHEET*	NAME	SYMBOL
SC-1	STANDARD SILT FENCE	— SF
SC-2	TYPE 1 TEMPORARY FIBER ROLLS	— FR
MS-1	MATERIALS STORAGE AND STAGING AREA	
N/A	APPROX ACCESS AND BUILDING ENVELOPE LINE	— — — —
N/A	DIRECTION OF FLOW	57.6%
N/A	CONSTRUCTION ACCESS/EXIT	—
N/A	CONCRETE WASH OUT STATION	

*NOTE: BMP FACT SHEETS PER "CALIFORNIA STORMWATER BEST MANAGEMENT PRACTICE HANDBOOK" (CASQA)

CC-1	SCHEDULING
CC-2	PRESERVATION OF EXISTING VEGETATION
1.	CONTRACTOR TO PRESERVE ALL VEGETATION OUTSIDE OF ACCESS AND BUILDING DEVELOPE LINE
CC-3	HYDROSEEDING
1.	CONTRACTOR TO SUBMIT REVEGETATION PROPOSAL TO COUNTY PRIOR TO REVEGETATION SPECIFYING TYPES OF PLANTS FOR ALL SURFACE TO BE EXPOSED DURING DEVELOPMENT ACTIVITIES
SC-1	SILT FENCE
SC-2	FIBER ROLLS
SC-3	STREET SWEEPING AND VACUUMING
WE-1	WIND EROSION CONTROL
WM-1	MATERIAL DELIVERY AND STORAGE
WM-2	SOLID WASTE MANAGEMENT
1.	WHEN CONIFERS ARE CUT DOWN, THE STUMP SHALL BE TREATED WITH GRANULAR BORAX WITHIN ONE (1) HOUR OF CUTTING. ALL FRESHLY CUT LOGS USED ON SITE SHALL BE COVERED WITH AN HERBICIDE OR THE BARK REMOVED. SLASH SHALL BE TREATED IN A METHOD APPROVED BY THE AGRICULTURE COMMISSIONER
1.	ALL EXCESS SPOILS SHALL BE REMOVED TO A SITE WHICH HAS APPROVED EROSION CONTROL.
WM-3	CONCRETE WASTE MANAGEMENT

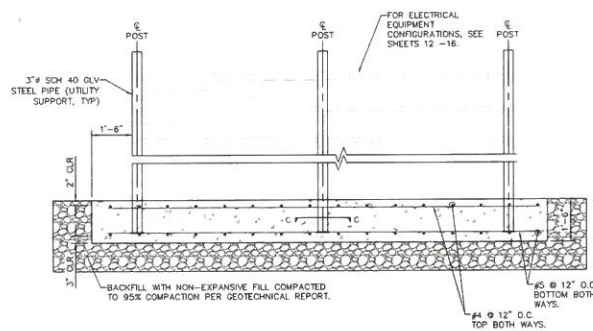
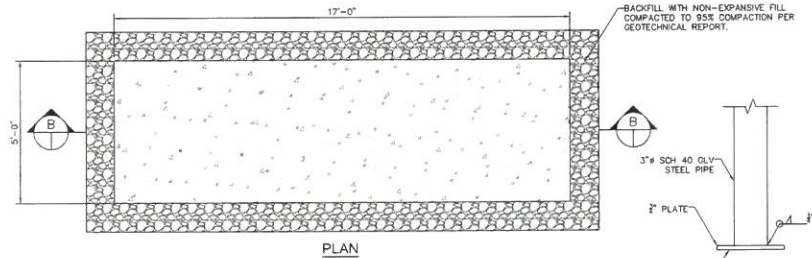
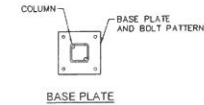
 UNDERGROUND SERVICE ALERT CALL TOLL FREE 1-800-227-2620 OR 811 TWO WORKING DAYS BEFORE YOU DIG	BENCHMARK ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NODS 19 REFERENCE: CSFBA084 - PAGES 1308, 1548 & 2202	BASIS OF BEARINGS THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 62° 10' 52" E BETWEEN SOPAC CORP STATIONS 19173 AND 19028 WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.		COMPANY ADDRESS AND LOGO 411 E B STREET, SUITE 600 SAN DIEGO, CA 92101 (951) 543-9858 WWW.KIMLEY-HORN.COM Kimley»Horn	REVISIONS <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>INITIAL</th> <th>DESCRIPTION</th> <th>APPRO. DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DATE	INITIAL	DESCRIPTION	APPRO. DATE																																																			PLANS APPROVED BY: SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS 100% DRAFT IMPROVEMENT PLANS APN NO. 033714105 CAMP SWITZERLAND SEWER LIFT STATION EROSION CONTROL	DWG NO. 30.30 XXXX FILE NO. SDD-XXX SHEET 8 OF 20
NO.	DATE	INITIAL	DESCRIPTION	APPRO. DATE																																																										
PREPARED UNDER THE SUPERVISION OF					RENEE K. CHIANG PROFESSIONAL ENGINEER	92140 R.C.E. NO. 6/14/2024 DATE	APPROVALS <table border="1"> <thead> <tr> <th>PROJECT MANAGER</th> <th>WAS DIVISION MANAGER</th> <th>PM DIVISION MANAGER</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		PROJECT MANAGER	WAS DIVISION MANAGER	PM DIVISION MANAGER				DATE <table border="1"> <thead> <tr> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> </tr> </tbody> </table>	DATE																																														
PROJECT MANAGER	WAS DIVISION MANAGER	PM DIVISION MANAGER																																																												
DATE																																																														



A SHADE STRUCTURE FOUNDATION
NOT TO SCALE

GENERAL NOTES

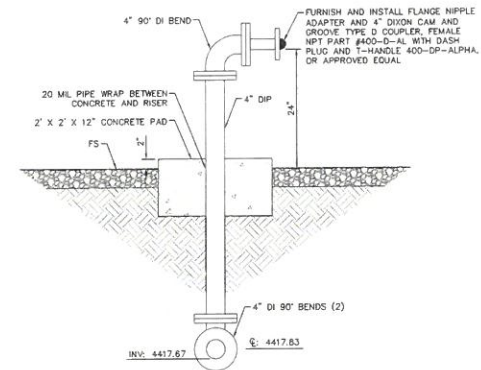
1. CONTRACTOR IS RESPONSIBLE FOR PREPARING, SUBMITTING, AND PROCESSING SHADE STRUCTURE PLANS AND CALCULATIONS THROUGH THE SAN BERNARDINO COUNTY BUILDING DEPARTMENT FOR PERMIT AND APPROVAL PRIOR TO CONSTRUCTION. SHADE STRUCTURE SHALL BE UNITED DURALUME PRODUCTS, OR APPROVED EQUAL.
2. SHADE STRUCTURE DESIGN SHALL BE BASED ON A WIND SPEED OF 106 MPH AND SEISMIC RECOMMENDATIONS CONTAINED IN THE PROJECT GEOTECHNICAL REPORT.
3. CONTRACTOR TO DESIGN SHADE STRUCTURE FOR LOCAL WEATHER CONDITIONS AND SNOW LOADINGS. PROVIDE CALCULATIONS TO ENGINEER FOR REVIEW.



NOTE

1. FOR CABINET ANCHORAGE TO FOUNDATION USE 4, 3/8 HILTI BOLT TZ EXPANSION ANCHORS WITH 3-1/2" MINIMUM EMBEDMENT AT EACH LOCATION.
2. FOLLOW MANUFACTURERS RECOMMENDATION FOR INSTALLATION.
3. DESIGN SPECIFICATIONS:
REINFORCED CONCRETE
 $F_c = 4,000 \text{ PSI}$
 $F_y = 60,000 \text{ PSI}$
SOIL
 $K_p = 2.08 \text{ PSF/FT}$
COEFFICIENT OF FRICTION = 0.36
ALLOWABLE PRESSURE = 2,000 PSF
GEOTECHNICAL REPORT PREPARED BY GEOTECHNICALS (AUGUST 8, 2023). REFER TO REPORT FOR FINDINGS AND RECOMMENDATIONS.

B ELECTRICAL EQUIPMENT FOUNDATION
NOT TO SCALE



C SEWER BYPASS
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 HOUTSON SPLINWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NAVD 29
REFERENCE: CSFB4084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS

THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 82° 10' 52" E BETWEEN SOPAC CORNERS BENCH MARK DATUM = NAVD 29
REFERENCE: CSFB4084 - PAGES 1308, 1540 & 2202



COMPANY ADDRESS AND LOGO

401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9888
WWW.KIMLEY-HORN.COM

Kimley-Horn

PREPARED UNDER THE SUPERVISION OF:

RENEE K. CHANG 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

APPROVALS

PROJECT MANAGER

WIAL DIVISION MANAGER

PM DIVISION MANAGER

100% DRAFT IMPROVEMENT PLANS

APN NO. 033714105
CAMP SWITZERLAND
SEWER LIFT STATION
DETAILS

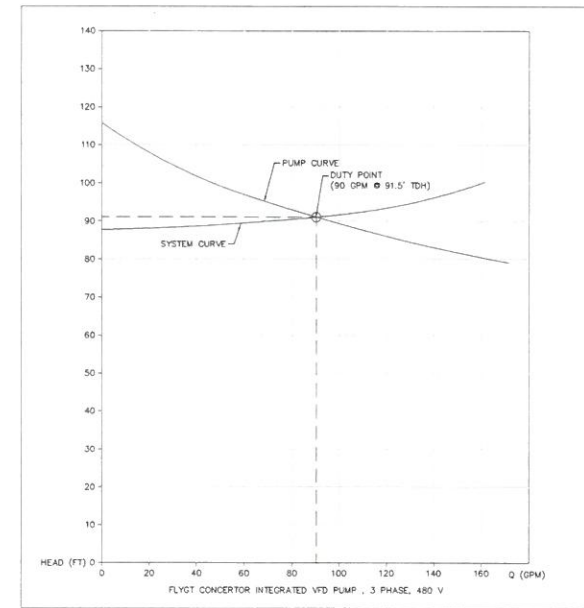
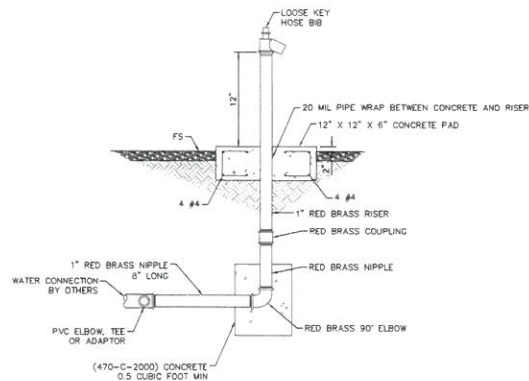
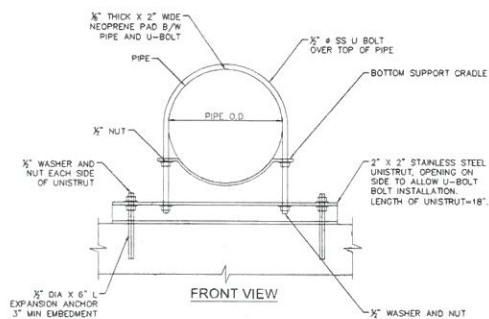
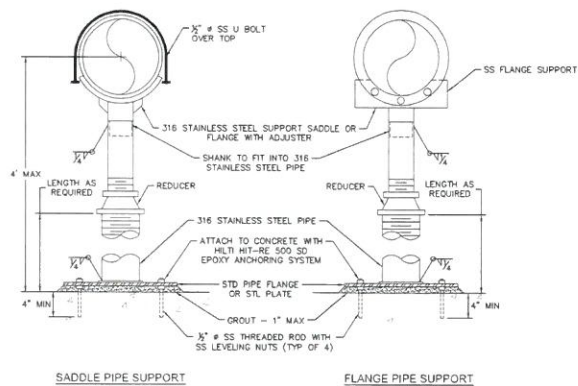
DWG NO.

30.30.XXXX

FILE NO.

SDD-XXX

SHEET 9 OF 20



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: CFB4684 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS
THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 67° 10' 52" E BETWEEN SOPAC CORRS STATIONS P612 AND W608 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

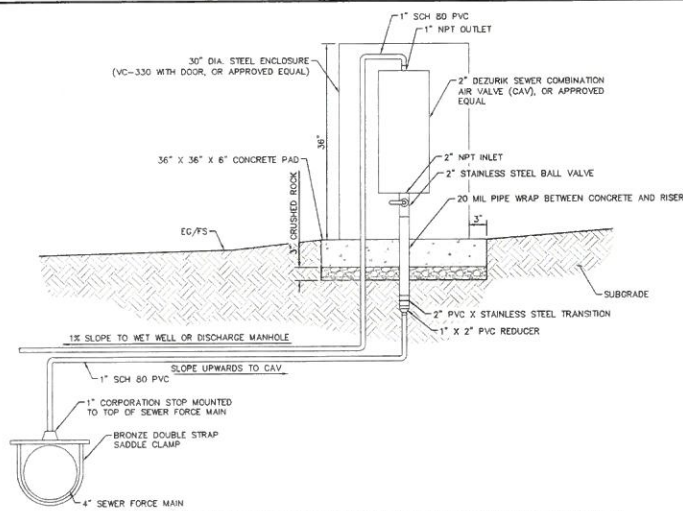
PREPARED UNDER THE SUPERVISION OF

RON K. CHUANG 92140 5/14/2024
PROFESSIONAL ENGINEER R.C.E. No. DATE

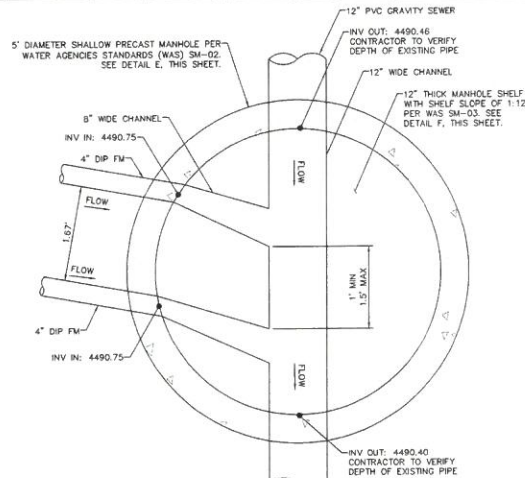
REVISIONS	DATE	DESCRIPTION

APPROVED BY: SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS	DATE
ASSISTANT DIRECTOR	DATE
APPROVALS	DATE
PROJECT MANAGER	DATE
WIDE DIVISION MANAGER	DATE
PW DIVISION MANAGER	DATE

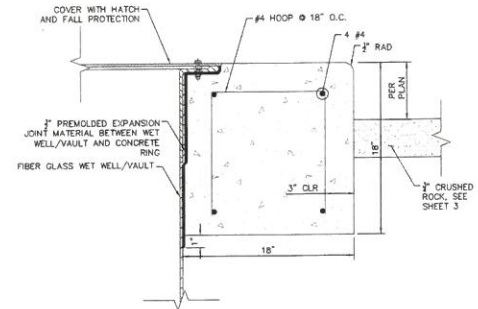
100% DRAFT IMPROVEMENT PLANS	DWG NO. 30.30.XXXX
APN NO. 033714105 CAMP SWITZERLAND SEWER LIFT STATION DETAILS	FILE NO. SDD-XXX
	SHEET 10 OF 20



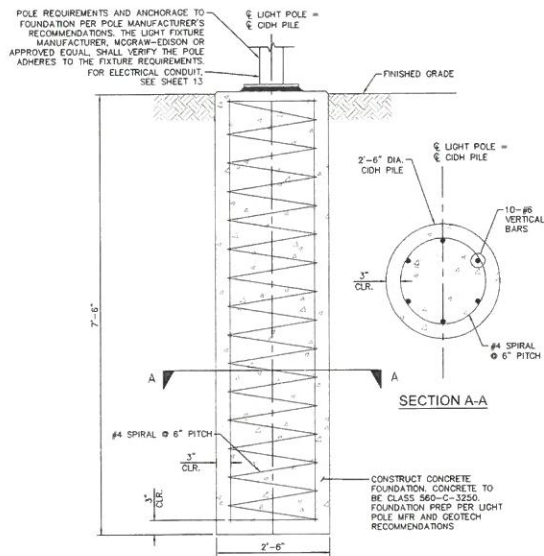
A 2\"/>



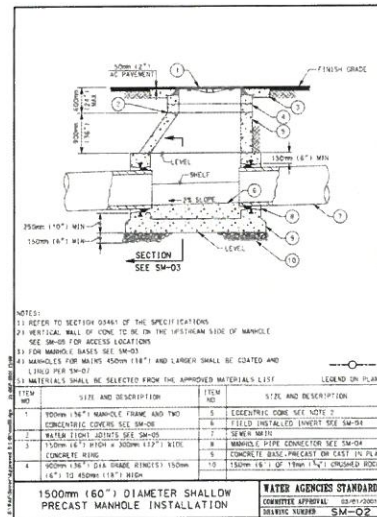
B 5\"/>



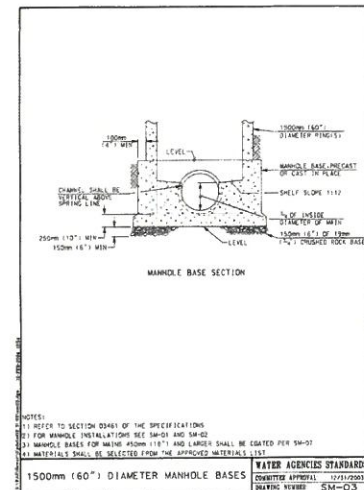
C CONCRETE RING
NOT TO SCALE



D SITE LIGHT FOUNDATION
NOT TO SCALE



E WAS SM-02
NOT TO SCALE



F WAS SM-03
NOT TO SCALE



BENCHMARK
ON CHS MARK AT NORTH WESTERLY CORNER
OF BRIDGE AT HOUSTON SPILLWAY AND LAKE
DRIVE SAN BERNARDINO COUNTY SURVEYOR
BENCH MARK DATUM = NAVD 83
REFERENCE: CSFB4084 - PAGES 1308, 1540
& 2202

BASIS OF BEARINGS
THE BEARINGS ARE BASED ON CALIFORNIA
COORDINATE SYSTEM ZONE 3. THE BEARING N
82° 10' 52" E BETWEEN SOPAC CORP
STATIONS P612 AND W008 WAS USED AS THE
BASIS OF BEARINGS FOR THIS SURVEY.



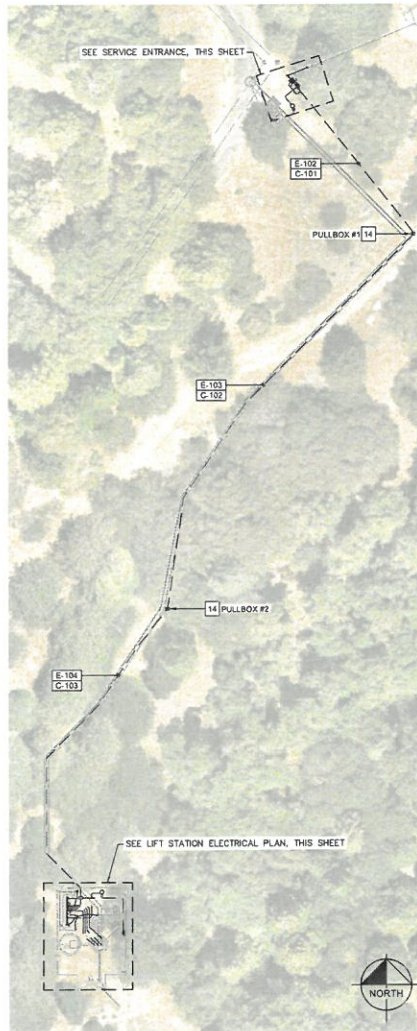
COMPANY ADDRESS AND LOGO
401 G STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9868
WWW.KIMLEY-HORN.COM
Kimley-Horn
PREPARED UNDER THE SUPERVISION OF
RENEE K. CHUANG 92140 6/14/2024
PROFESSIONAL ENGINEER R.C.E. NO. DATE

MARK	DATE	INITIAL	DESCRIPTION	APPROV	DATE

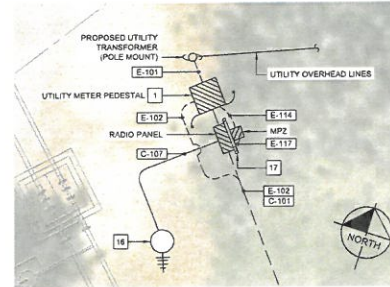
APPROVALS	
PROJECT MANAGER	DATE
WAS DIVISION MANAGER	DATE
PW DIVISION MANAGER	DATE

100% DRAFT IMPROVEMENT PLANS	DWG NO. 30.30.XXXX
APN NO. 033714105 CAMP SWITZERLAND SEWER LIFT STATION DETAILS	FILE NO. SDD-XXX
	SHEET 11 OF 20

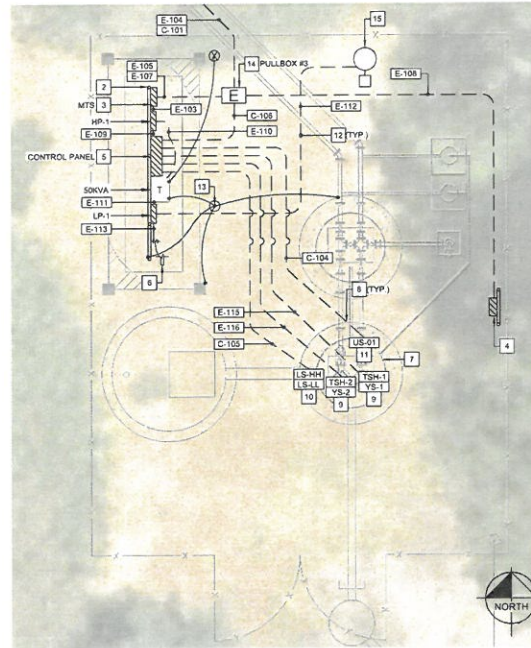
SINGLE LINE DIAGRAMS		CONTROL WIRING DIAGRAMS		PLANS		ELECTRICAL ABBREVIATIONS					
	AMMETER		NORMALLY OPEN	---	CONDUIT RUN CONCEALED UNDER SLAB OR BELOW GRADE (CONCEALED IN SLAB WHERE SO NOTED OR WHERE ALLOWED PER SPECIFICATIONS)	AMP	AMPERE	HP	HORSE POWER	PLC	PROGRAMMABLE LOGIC CONTROLLER
	VOLTMETER		NORMALLY CLOSED	---	CONDUIT RUN EXPOSED UNLESS OTHERWISE NOTED	AL	ALUMINUM	HZ	HERTZ (CYCLES PER SECOND)	PNL	PANEL
	METER		CONTACT	---	EXISTING CONDUIT RUN	ATS	AUTOMATIC TRANSFER SWITCH	IC	INTERRUPTING CAPACITY	PR	PAIR
	GENERATOR		LIMIT SWITCH	---	GROUND WIRE	AWG	AMERICAN WIRE GAUGE	KV	KILOVOLTS	PVC	POLYVINYL CHLORIDE
	KILOWATT HOUR METER		LIMIT SWITCH HELD CLOSED	---	CONDUIT UP (OUT TOP OF EQUIPMENT)	BRK	BREAKER	LCL	LONG CONTINUOUS LOAD	REC	RECEPTACLE
	AMMETER SWITCH		LIMIT SWITCH HELD OPEN	---	CONDUIT DOWN (OUT BOTTOM OF EQUIPMENT)	CAT	CATALOG	LED	LIGHT EMITTING DIODE	WGS	RIGID GALVANIZED STEEL
	VOLTMETER SWITCH		PRESSURE OR VACUUM SWITCH	---	CONDUIT STUBBED OUT AND CAPPED	CR	CARD READER	LTG	LIGHTING	RTU	REMOTE TERMINAL UNIT
	GROUND CONNECTION		LIQUID LEVEL SWITCH		CEILING MOUNTED LIGHTING FIXTURE	CIRC	ML CIRCULAR MILS (AWG)	LS	LEVEL SWITCH	SCE	SOUTHERN CALIFORNIA EDISON
	CURRENT TRANSFORMER		TEMPERATURE ACTUATED SWITCH		BRACKET MOUNTED LIGHTING FIXTURE	C.O	CONDUIT ONLY	MAX	MAXIMUM	SCHED	SCHEDULE
	POTENTIAL TRANSFORMER		FLOW SWITCH (AIR, WATER, ETC.)		FLOODLIGHT	CKT	CIRCUIT	MCC	MOTOR CONTROL CENTER	SES	SERVICE ENTRANCE SECTION
	POWER TRANSFORMER		PUSH BUTTON SINGLE CIRCUIT MOMENTARY CONTACT		FLUORESCENT LIGHTING FIXTURE	CP	CONTROL PANEL	MCP	MAIN CONTROL PANEL	SPECS	SPECIFICATIONS
	CONTROL TRANSFORMER		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EXT LIGHT	DM	DIAMETER	MCM	THOUSAND CIRCULAR MIL (AWG)	SS	SOFT STARTER
	DRAW OUT TYPE EQUIPMENT		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		LIGHTING FIXTURES CONNECTED TO EMERGENCY CIRCUITS	DS	DOOR SWITCH	MFR	MANUFACTURER	SSS	SOLID STATE STARTER
	DRAW OUT TYPE HIGH VOLTAGE MOTOR STARTER		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		LIGHTING FIXTURE TYPE A, 150 WATTS, WITH 1 LAMP, SEE LIGHTING FIXTURE SCHEDULE	DWG	DRAWING	MN	MINIMUM	TEL	TELEPHONE
	PLUG-IN TYPE EQUIPMENT		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		SINGLE POLE, SINGLE THROW TOGGLE SWITCH	EA	EACH	MS	MISCELLANEOUS	TDR	TIME DELAY RELAY
	CIRCUIT BREAKER		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		DOUBLE POLE, SINGLE THROW TOGGLE SWITCH	ELECT	ELECTRICAL	MOV	MOTOR OPERATED VALVE	TTB	TELEPHONE TERMINAL BACKBOARD
	DISCONNECT SWITCH, 3 POLE UNLESS OTHERWISE INDICATED		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		THREE-WAY TOGGLE SWITCH	ELEV	ELEVATION	MPZ	MHI POWER ZONE	TYP	TYPICAL
	OIL FUSE CUTOUTS		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		FOUR-WAY TOGGLE SWITCH	EXIST	EXISTING	MTG	MOUNTING	US	ULTRASONIC SENSOR
	FUSE		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		MANUAL MOTOR STARTER	FLA	FULL LOAD AMPS	MTS	MANUAL TRANSFER SWITCH	UG	UNDER GROUND
	TRANSFER SWITCH, AUTOMATIC		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		OUTLETS SHOWN WITH SUBSCRIPT "n" ADJACENT TO THEM SHALL BE CONTROLLED BY S n	FUT	FUTURE	N.C	NORMALLY CLOSED	UCP	UNIT CONTROL PANEL
	MAGNETIC MOTOR STARTER, 1 INDICATES SIZE 1, 2 INDICATES REDUCED VOLTAGE, 25 INDICATES SPEED, R INDICATES REVERSING		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		DUPLEX CONVENIENCE RECEPTACLE AT +12" OR AS NOTED	FVR	FULL VOLTAGE, NON-REVERSING	NEC	NATIONAL ELECTRICAL CODE	V	VOLTS
	MAGNETIC CONTACTOR		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		SINGLE CONVENIENCE RECEPTACLE AT +12" OR AS NOTED, RATING AS INDICATED	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	N.O	NORMALLY OPEN	VFD	VARIABLE FREQUENCY DRIVE
	ELECTRONIC OVER LOAD		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		SPECIAL PURPOSE RECEPTACLE AT +12" OR AS NOTED, RATING AS INDICATED	GND	GROUND	NO	NUMBER	WP	WEATHERPROOF
	CONDUIT NUMBER 8 mm, SEE CONDUIT AND WIRING SCHEDULE FOR SIZES AND QUANTITIES OF CONDUIT AND WIRES		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		JUNCTION BOX, SIZE AS REQUIRED BY CODE					XFMR	TRANSFORMER
	GROUND		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		THERMOSTAT OUTLET AT +54"						
	KIRK KEY INTERLOCKING OF EQUIPMENT		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		CLOCK OUTLET AT +7-8" OR AS NOTED						
	PHASE FAILURE RELAY		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		TELEPHONE OUTLET AT +12" OR AS NOTED						
	SURGE ARRESTER		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		HORN						
	EXISTING MOTOR (H = HP)		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		CONTROL DEVICE						
	NEW MOTOR (H = ESTIMATED HP)		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		PD = PRESSURE TRANSDUCER, FS = FLOAT SWITCH, L = LEVEL SWITCH, V = CONTROL VALVE						
	FUTURE MOTOR (H = ESTIMATED HP)		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		CONTROL STATION, PUSH-BUTTON STATION OR SELECTOR SWITCH, SEE CONTROL WIRING DIAGRAMS FOR REQUIREMENTS						
	EYS SEAL		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EXISTING MOTOR						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		NEW MOTOR						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		FUTURE MOTOR						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		GROUND WELL						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		GROUND ROD						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		DISCONNECT SWITCH, SEE SINGLE LINE DIAGRAM FOR SIZE						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		LIGHTING PANEL, SURFACE MOUNTED						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		ELECTRICAL GEAR (SWITCHBOARD, DISTRIBUTION PANEL, MOTOR CONTROL CENTER, ETC.)						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
			PUSH BUTTON SINGLE CIRCUIT LOCK-OUT/LOCATED AT MOTOR UNLESS OTHERWISE NOTED		EQUIPMENT BY OTHERS						
		<									



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 TRISTAR 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 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 2-3/16 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 RIGID 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 MINATURE CONTROL PANEL SA, 120V SUBFED BREAKERS. SUBFED #1 TO 120VAC-12VDC 30W MINIMUM POWER SUPPLY (ETHERNET / FIBER CONVERTER). SUBFED #2 TO 120VAC-24VDC 30W MINIMUM POWER SUPPLY (RADIO). SUBFED #3 TO DUPLEX CONVENIENCE RECEPTACLE MOUNTED INSIDE OF ENCLOSURE.

UNDERGROUND SERVICE ALERT
Call TOL FREE
1-800-227-2000
OR
811
TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK
ON CHS MARK AT NORTH WESTERLY CORNER
OF BRIDGE AT HOUSTON SPURWAY AND LAKE
DRIVE SAN BERNARDINO COUNTY SURVEYOR
BENCH MARK DATUM = NAVD 29
REFERENCE: CSFBA084 - PAGES 1308, 1540
& 2202

BASIS OF BEARINGS
THE BEARINGS ARE BASED ON CALIFORNIA
COORDINATE SYSTEM ZONE 5. THE BEARING IN
82° 10' 52" E BETWEEN SOPAC CORRS
STATIONS P612 AND K508 WAS USED AS THE
BASIS OF BEARINGS FOR THIS SURVEY.



COMPANY ADDRESS AND LOGO
401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9888
WWW.KIMLEY-HORN.COM

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

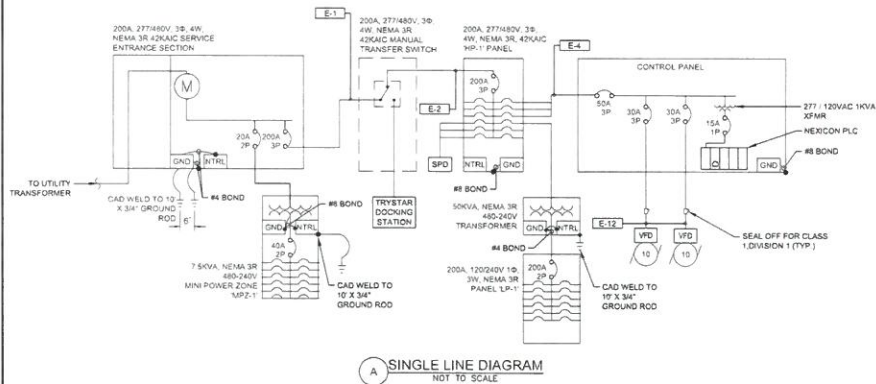
KimleyHorn

REVISIONS	DATE	INITIALS	DESCRIPTION

PLANS APPROVED BY SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS			
ASSISTANT DIRECTOR		DATE	

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

DWG NO.
30.30.XXXX
FILE NO.
SDD-XXX
SHEET 13 OF 20



SITE LOAD SUMMARY			
LOAD DESCRIPTION			
PROPOSED LOADS			
	PANEL MPZ-1	1.0 AMPS	
	PANEL HP-1	65.8 AMPS	
TOTAL LOAD (480V, 3 PHASE)			
TOTAL KVA			
SERVICE SIZE			
PERCENT LOADED			

B SITE LOAD SUMMARY
NOT TO SCALE

PANEL NAME: HP-1													
LOCATION: UNISTRUT				VOLTS: 277/480V				AIC RATING: 42K		MOUNTING SURFACE: MCB			
SUPPLY FROM: MTR				PHASES: 3				MAINS TYPE: MCB		ENCLOSURE: NEMA 3R			
MOUNTING SURFACE: MCB				WIRES: 4				MAINS RATING: 200 A		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		M			8,092					M	CONTROL PANEL (277/480V, 1-10KVA TRD)	2	
3	SPD	M		3		8,092			3	50	M		4
5		M					8,092			M		6	
7	50KVA TRANSFORMER	E	150	2	12,004			1	20	E	SPARE	8	
9	480-208V	E						1	20	E	SPARE	10	
11						12,004						12	
13												14	
15												16	
17												18	
19												20	
21												22	
23												24	
25												26	
27												28	
29												30	
31												32	
33												34	
35												36	
37												38	
39												40	
41												42	
TOTAL LOAD					20,176 VA	20,176 VA	8,092 VA						
TOTAL AMPS					72.8 A	72.8 A	28.2 A						
LOAD CLASSIFICATION													
LARGEST MOTOR LOAD (M)					24275	100.00%		30545		TOTAL CONN. LOAD (VA)			
HWAC (H & ALL OTHER MOTORS) (M)					0	100.00%		0		TOTAL EST. DEMAND (VA)			
RECEPTACLE (R)					0	100.00%		0		TOTAL CONN. (A)			
LIGHTING (L)					0	100.00%		0		TOTAL EST. DEMAND (A)			
EQUIPMENT (E)					24188	100.00%		24188		PERCENT LOADED			
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					
SPLIT FROM: SURVA SPWR				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)	POLES	TRIP	LOAD TYPE	CIRCUIT DESCRIPTION	CKT		
1	RESTROOM	E	30	2	3,088	1,800		2	30	O	CABIN #4	2	
3		O	30	2	1,800	1,800		2	30	O	CABIN #4	4	
5	CABIN #1	O	30	2	1,800	1,800		2	30	O	CABIN #5	6	
7		O	30	2	1,800	1,800		2	30	O	CABIN #5	8	
9	CABIN #2	O	30	2	1,800	1,800		2	30	O	CABIN #6	10	
11		O	30	2	1,800	1,800		2	30	O	CABIN #6	12	
13	CABIN #3	O	30	2	1,800	1,800		2	30	O	CABIN #7	14	
15		O	30	2	1,800	1,800		2	30	O	CABIN #7	16	
17	GROUP TENT CAMPING	E	30	2	300	1,800		2	30	O	RECREATION AREA	18	
19	SITE PANEL	E	30	2	300	1,800		2	30	O		20	
21	CANOPY LIGHTING	L	20	1	64	125	300	1	20	E	SITE LIGHTING	22	
23												24	
25												26	
27												28	
29												30	
31												32	
33												34	
35												36	
37												38	
39												40	
41												42	
TOTAL LOAD					17,877 VA	17,788 VA							
TOTAL AMPS					148.8 A	148.2 A							
LOAD CLASSIFICATION				CONNECTED LOAD (VA)		DEMAND FACTOR		EST. DEMAND (VA)		PANEL TOTALS			
LARGEST MOTOR LOAD (M)				0.0		100.00%		0.0		TOTAL CONN. LOAD (VA)			
HWAC (H & ALL OTHER MOTORS) (M)				0.0		100.00%		0.0		TOTAL EST. DEMAND (VA)			
RECEPTACLE (R)				0.0		100.00%		0.0		TOTAL CONN. (A)			
LIGHTING (L)				64.0		100.00%		64.0		TOTAL EST. DEMAND (A)			
EQUIPMENT (E)				1801.0		100.00%		1801.0		PERCENT LOADED			
OTHER (O) (SEE NOTES)				20868.0		69.00%		14260.0					

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				MAIN 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)	POLES	TRIP	LOAD TYPE	CIRCUIT DESCRIPTION	CKT		
1	RADIO PANEL	E	20	1	240			20	E	SPARE	2		
3	SPARE	E	20	1				20	E	SPARE	4		
5	SPARE	E	20	1				20	E	SPARE	6		
TOTAL LOAD					240 VA	0 VA							
TOTAL AMPS					2 A	0 A							
LOAD CLASSIFICATION				CONNECTED LOAD (VA)		DEMAND FACTOR		EST. DEMAND (VA)		PANEL TOTALS			
LARGEST MOTOR LOAD (M)				0.0		100.00%		0.0		TOTAL CONN. LOAD (VA)			
HWAC (H & ALL OTHER MOTORS) (M)				0.0		100.00%		0.0		TOTAL EST. DEMAND (VA)			
RECEPTACLE (R)				0.0		100.00%		0.0		TOTAL CONN. (A)			
LIGHTING (L)				0.0		100.00%		0.0		TOTAL EST. DEMAND (A)			
EQUIPMENT (E)				240.0		100.00%		240.0		PERCENT LOADED			
OTHER (O) (SEE NOTES)				0.0		0.00%		0.0					

E MPZ-1 PANEL SCHEDULE
NOT TO SCALE

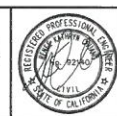
CONTROL PANEL LOAD CALCULATION			
LOAD DESCRIPTION			
PROPOSED LOADS			
	10HP PUMP #1	14.0 AMPS	
	10HP PUMP #2	14.0 AMPS	
	CONTROLLER	0.34 AMPS	
	INSTRUMENTATION	0.24 AMPS	
20% (V/F NEC)			
TOTAL LOAD (480V, 3 PHASE)			
TOTAL KVA			
SERVICE SIZE			
PERCENT LOADED			

F CONTROL PANEL LOAD SUMMARY
NOT TO SCALE



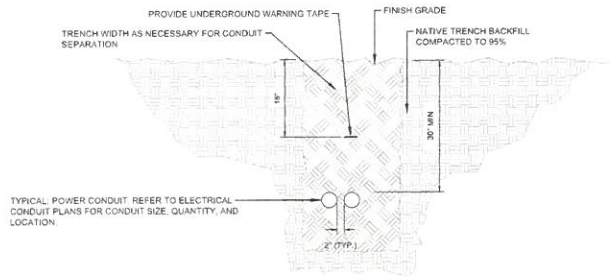
BENCHMARK
ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE SAN BERNARDINO COUNTY SUPERVISOR BENCH MARK DATUM = NVD 20
REFERENCE: CSF84084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS
THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 62° 10' 52" E BETWEEN SOME CODES STATIONS P612 AND M008 WAS USED AS THE BASIS OF BEARINGS FOR THIS SURVEY.

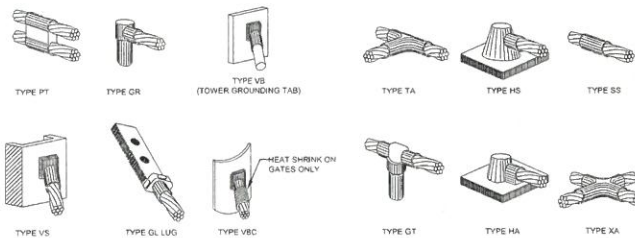


COMPANY ADDRESS AND LOGO
401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9868
WWW.KIMLEY-HORN.COM
Kimley-Horn
PREPARED UNDER THE SUPERVISION OF
RENEE K. CHUANG 92140 6/14/2024
PROFESSIONAL ENGINEER R.C.E. NO. DATE

REVISIONS		
-----------	--	--

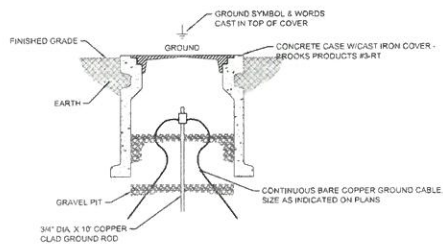


A TRENCH DETAIL
NOT TO SCALE

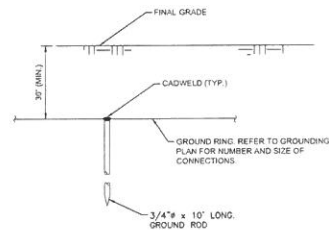


NOTES
1. CADWELD TYPES SHOWN ABOVE ARE EXAMPLES. PROVIDE APPROPRIATE TYPES AS REQUIRED.

B TYPICAL CAD WELDS
NOT TO SCALE

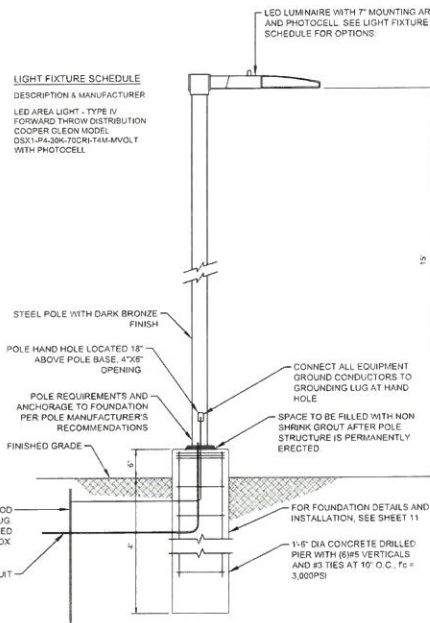


C GROUNDING ROD AND WELL DETAIL
NOT TO SCALE

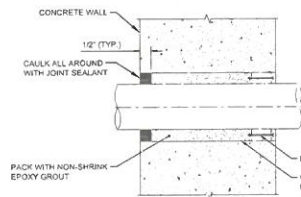


D GROUND ROD DETAIL
NOT TO SCALE

LIGHT FIXTURE SCHEDULE
DESCRIPTION & MANUFACTURER
LED AREA LIGHT - TYPE IV
FORWARD THROW DISTRIBUTION
COOPER CLEON MODEL
D3SL-URA-30K-70CR-1TAB-MVOLT
WITH PHOTOCELL

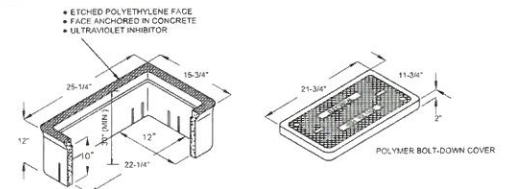


E SITE LIGHT POLE DETAIL
NOT TO SCALE

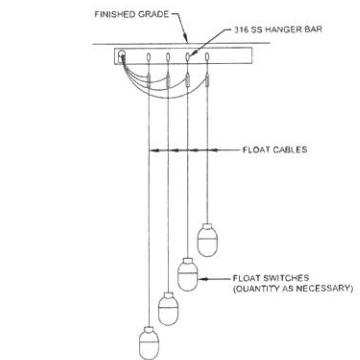


NOTES
1. JOINT SEALANT SHALL BE TWO COMPONENT, POLYURETHANE ELASTOMERIC SEALANT, SIKAFLEX-2C NS, AS MANUFACTURED BY SIKI, OR EQUAL. PROVIDE BACKER ROD OR TAPE AT BACK OF JOINT SEALANT.
2. LINK-SEAL SHALL BE LOCATED ON SIDE OF WALL/SLAB THAT WILL BE PERMANENTLY ACCESSIBLE. LINK-SEAL SHALL BE FOR CORROSION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

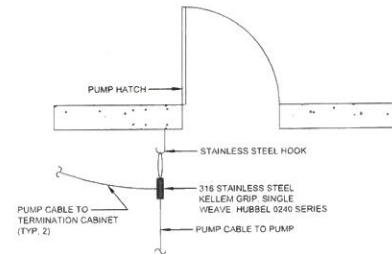
F WELL PENETRATION DETAIL
NOT TO SCALE



G ELECTRICAL PULLBOX DETAIL
NOT TO SCALE



H FLOAT SWITCH MOUNTING DETAIL
NOT TO SCALE



I PUMP CABLE MOUNTING
NOT TO SCALE



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

BASIS OF BEARINGS
THE BEARINGS ARE BASED ON CALIFORNIA
COORDINATE SYSTEM ZONE 5. THE BEARING N
67° 10' 52" E BETWEEN SOPAC CORNERS
STATIONS PM12 AND MS03 WAS USED AS THE
BASIS OF BEARINGS FOR THIS SURVEY.



COMPANY ADDRESS AND LOGO
401 B STREET, SUITE 600
SAN DIEGO, CA 92101
(951) 543-9888
WWW.KIMLEY-HORN.COM

PREPARED UNDER THE SUPERVISION OF
RENET K. CHUANG 92140 6/14/2024
PROFESSIONAL ENGINEER R.C.E. NO. DATE

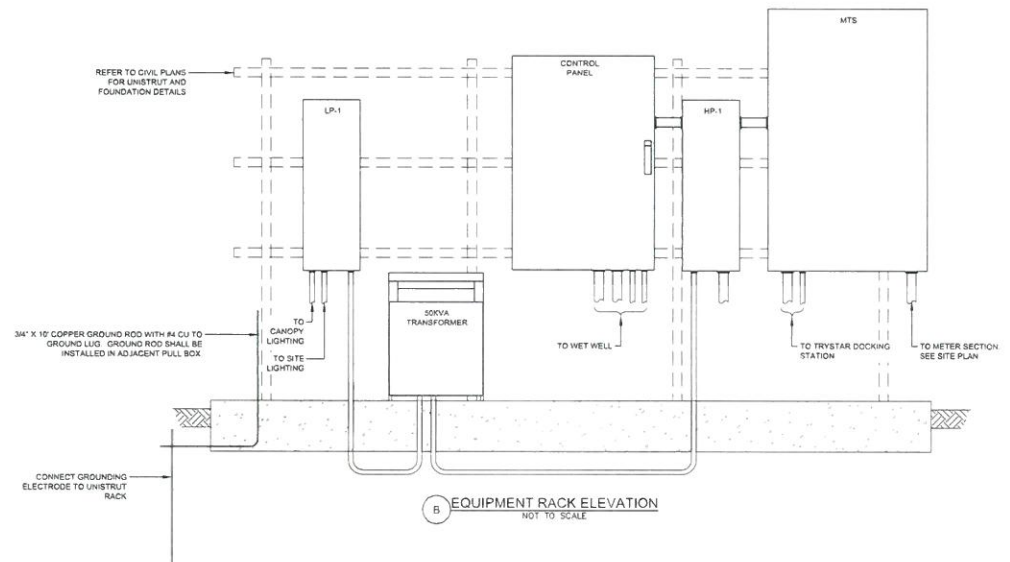
REVISIONS	DATE	DESCRIPTION

APPROVALS	DATE
PROJECT MANAGER	
WHS DIVISION MANAGER	
PM DIVISION MANAGER	

100% DRAFT IMPROVEMENT PLANS	DWG NO.
APN NO. 033714105 CAMP SWITZERLAND SEWER LIFT STATION ELECTRICAL DETAILS	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) #5/8" (1) #6 GND	SITE POWER
E-103	UG SCHED 40 PVC	3"	PULLBOX #1	PULLBOX #2	(4) #5/8" (1) #6 GND	SITE POWER
E-104	UG SCHED 40 PVC	2"	PULLBOX #2	PULLBOX #3	(4) #5/8" (1) #6 GND	SITE POWER
E-105	UG SCHED 40 PVC/RGS	2"	PULLBOX #3	MTS	(4) #5/8" (1) #6 GND	SITE POWER
E-106	RGS	2"	MTS	PANEL 'WP-1'	(4) #5/8" (1) #6 GND	SITE POWER
E-107	RGS/SCHED 40 UG	2"	MTS	PULLBOX #3	(4) #5/8" (1) #6 GND	SITE BACK UP POWER
E-108	UG SCHED 40 PVC/RGS	2"	PULLBOX #3	TRISTAR DOCKING STATION	(4) #5/8" (1) #6 GND	SITE BACK UP POWER
E-109	RGS	2"	PANEL 'WP-1'	CONTROL PANEL	(4) #6 AWG (1) #10 GND	POWER
E-110	RGS/SCHED 40 UG	2"	PANEL 'WP-1'	SOKVA TRANSFORMER	(2) #10 AWG (1) #6 GND	POWER
E-111	UG SCHED 40 PVC/RGS	2"	SOKVA TRANSFORMER	PANEL 'LP-1'	(3) 200 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	MPZ-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"	MPZ-1	PANEL #1	(2) #6 AWG (1) #6 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	FLOAT	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	SITE ANTENNA	ANTENNA COAX CABLE	RADIO TO ANTENNA 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 3. THE BEARING N
62° 10' 52" E BETWEEN SOKVA CORP
STATIONING #152 AND #158 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. CHUNG 92140 6/14/2024
PROFESSIONAL ENGINEER R.C.E. NO. DATE

Kimley-Horn

REVISIONS			
MARK	DATE	INITIAL	DESCRIPTION

PLANS APPROVED BY			
SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS			
ASSISTANT DIRECTOR		DATE	
APPROVALS		INITIAL	DATE
PROJECT MANAGER			
WAS. DIVISION MANAGER			
PW. DIVISION MANAGER			

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 FIDUCIARY, DESIGN, RECOMMENDATIONS, SPECIFICATIONS, OPINION, OR PROFESSIONAL ADVICE, EXCEPT THAT THESE INSTRUMENTS OF SERVICE HAVE BEEN PREPARED IN ACCORDANCE WITH THE CURRENT GENERALLY ACCEPTED PROFESSIONAL ENGINEERING 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 OR 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.

3.00 FORMWORK, SHORING AND RESHORING

- 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:
GRILLED 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
- D. WIND: DESIGN LOAD BASED ON ASCE 7-22 CHAPTER 29 PART 4
1st = 1.0
WIND SPEED = 105 MPH (1 SEC GUST)
EXPOSURE CATEGORY = C
- E. SEISMIC: DESIGN LOAD BASED ON ASCE 7-16 CHAPTER 15
1st = 1.00
SITE CLASS = D (DEFAULT)
S_s = 2.24 S₁ = 0.75
S_{0.5} = 1.19 S_{0.1} = 0.71
SEISMIC DESIGN CATEGORY = D
NON-BUILDING STRUCTURE TYPE: TRUSSED TOWERS
R = 3.0
Q = 2.0
G = 2.5
BASE SHEAR: V = 0.054 KIPS
ANALYSIS METHOD = EQUIVALENT LATERAL FORCE PROCEDURE
- F. SOIL: ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
LATERAL BEARING PRESSURE = 100 PSF/FT
COEFFICIENT OF SOIL FRICTION = 0.30

90 DEG STD HOOKS

	F _c = 4 KSI	F _c = 5 KSI	F _c = 7 KSI	F _c = 9 KSI
BAR SIZE	(IN)	(IN)	(IN)	(IN)
#3	9	7	6	6
#4	10	9	8	7
#5	12	11	9	8
#6	15	13	11	10
#7	17	15	13	12
#8	19	17	15	13
#9	22	20	17	15
#10	25	22	19	17
#11	27	24	21	18

NOTES:

- VALUES ASSUME NO EPOXY-COATING IS USED AND NORMAL WEIGHT AGGREGATE CONCRETE.
- NO REDUCTION FACTORS IN ACI 318, SECTION 12.3.3 ARE APPLIED TO THESE VALUES.
- THE HOOK DEVELOPMENT LENGTH SHALL NOT BE LESS THAN 12BAR DIA.
- 90° STD HOOK SHALL BE BEND PLUS 12" BAR DIA EXTENSION AT FREE END.

UNDERGROUND SERVICE ALERT



CALL TOLL FREE
1-800-227-2670
OR
811

TWO WORKING DAYS BEFORE YOU DIG

BENCHMARK

ON DHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPILLWAY AND LAKE DRIVE, SAN BERNARDINO COUNTY SURVEYOR BENCH MARK DATUM = NVD 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 CORDS STATION 9512 AND 9508 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:

POWEE K. CHUNG 92140 6/14/2024
PROFESSIONAL ENGINEER R.C.E. NO. DATE

REVISIONS

MARK	DATE	INITIALS	DESCRIPTION	UPPER	DATE

PLANS APPROVED BY SAN BERNARDINO COUNTY - PUBLIC WORKS SPECIAL DISTRICTS

APPROVALS	DATE
ASSISTANT DIRECTOR	
PROJECT MANAGER	
MAIL DIVISION MANAGER	
PLN DIVISION MANAGER	

100% DRAFT IMPROVEMENT PLANS

APN NO. 033714105
CAMP SWITZERLAND
SEWER LIFT STATION
ANTENNA DETAILS

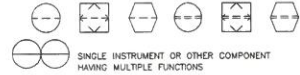
DWG NO.
30.30.XXXX
FILE NO.
SDD-XXX
SHEET 17 OF 20

INSTRUMENT TAG IDENTIFICATION

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

(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.



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

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

(PY) 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

(0000) AC - AUTO/CLOSE
AMC - AUTO/MANUAL
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

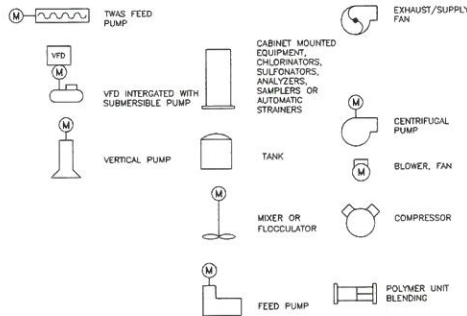
FIRST LETTER
SUCCEEDING LETTERS
PROCESS LOOP DESIGNATION NUMBER
INSTRUMENT/DEVICE LETTER DESIGNATIONS PER LETTER ISA FUNCTION IDENTIFICATION TABLE

ISA FUNCTION IDENTIFICATION TABLE				
FIRST-LETTER		SUCCEEDING-LETTERS		
MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A ANALYSIS		ALARM		
B BURNER, COMBUSTION, BATTERY			CONTROL, COMMAND, CLOSE	
C CONDUCTIVITY				
D DENSITY				
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 MONITOR		LOW MIDDLE INTERMEDIATE
M MOTOR, MOISTURE	MOMENTARY	ISOLATE	ISOLATOR	
N TORQUE		OPERATION		OPEN
O OPERATOR		POINT (TEST) CONNECTION		
P PRESSURE, VACUUM, PRINTER		PRINT		
Q QUANTITY		INTEGRATE, TOTALIZE		
R RADIATION, HEATER		RECORD		RECEIPT
S SPEED, FREQUENCY, SOLENOID	SAMPLE		SWITCH	
T TEMPERATURE			TRANSMIT	
U MULTIVARIABLE		MULTIFUNCTION	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	

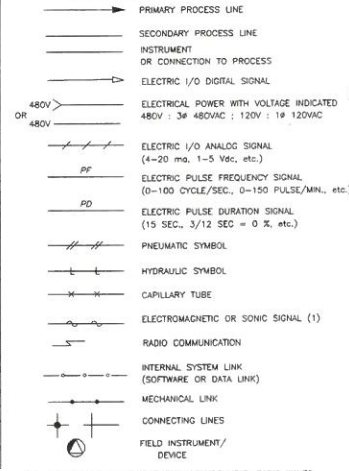
TYPICAL: TIC-1 - INSTRUMENT IDENTIFICATION OR TAG NUMBER
TIC - FUNCTIONAL IDENTIFICATION
T - FIRST-LETTER
I - SUCCEEDING-LETTER(S)
1 - LOOP NUMBER

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

MECHANICAL EQUIPMENT SYMBOLS

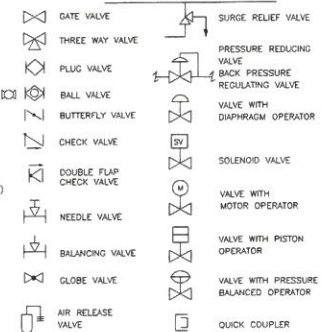


PROCESS AND SIGNAL LINE SYMBOLS

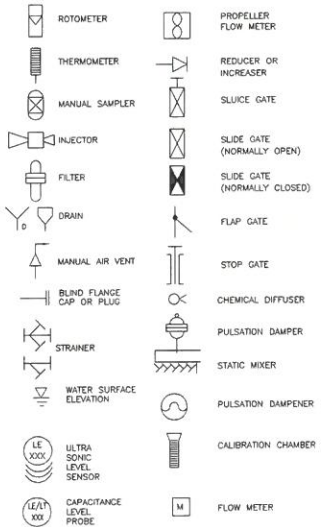


(1) ELECTROMAGNETIC PHENOMENA INCLUDE HEAT, RADIO WAVES, NUCLEAR RADIATION, AND LIGHT.

VALVE AND ACTUATOR SYMBOLS



DEVICE SYMBOLS



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 ID# ON DRAWINGS ARE GENERIC. CONTRACTOR SHALL COORDINATE WITH UEM (UTILITY ENERGY MANAGEMENT) TO HAVE ALL THE EXISTING LOOP ID#s TO PROGRAM THE UNIQUE TAG ID#s 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.

UNDERGROUND SERVICE ALERT



Call TOLL FREE
1-800-221-2600
OR
811

BENCHMARK

ON CHS MARK AT NORTH WESTERLY CORNER OF BRIDGE AT HOUSTON SPRING AND LAKE DRIVE SAN BERNARDINO COUNTY SURVEYOR
BENCH MARK DATUM = NAD 83
REFERENCE: CSPR4084 - PAGES 1308, 1540 & 2202

BASIS OF BEARINGS

THE BEARINGS ARE BASED ON CALIFORNIA COORDINATE SYSTEM ZONE 5. THE BEARING N 82° 10' 52" E BETWEEN SOPAC CORNERS STATION P612 AND M208 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

RENÉE K. CHUNG
PROFESSIONAL ENGINEER

92140
R.C.E. No.

6/14/2024
DATE

Kimley-Horn

REVISIONS

MARK	DATE	INITIAL	DESCRIPTION	APPROV	DATE

PLANS APPROVED BY
SAN BERNARDINO COUNTY - PUBLIC WORKS
SPECIAL DISTRICTS

ASSISTANT DIRECTOR		DATE	
PROJECT MANAGER	INITIAL	DATE	
WAS DIVISION MANAGER			
PAV DIVISION MANAGER			

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

