

GARBERVILLE TANKS REPLACEMENT PROJECT

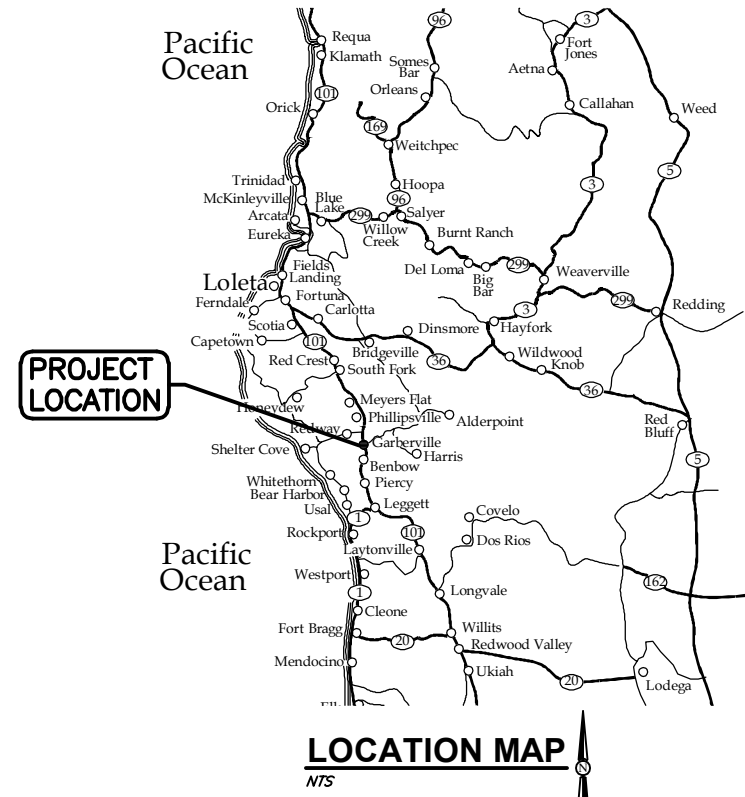
ROBERTSON AND WALLAN TANKS

PROGRAM: SMALL COMMUNITY DROUGHT RELIEF PROGRAM

NUMBER: 4600015036

AGENCY: CALIFORNIA DEPARTMENT OF WATER RESOURCES

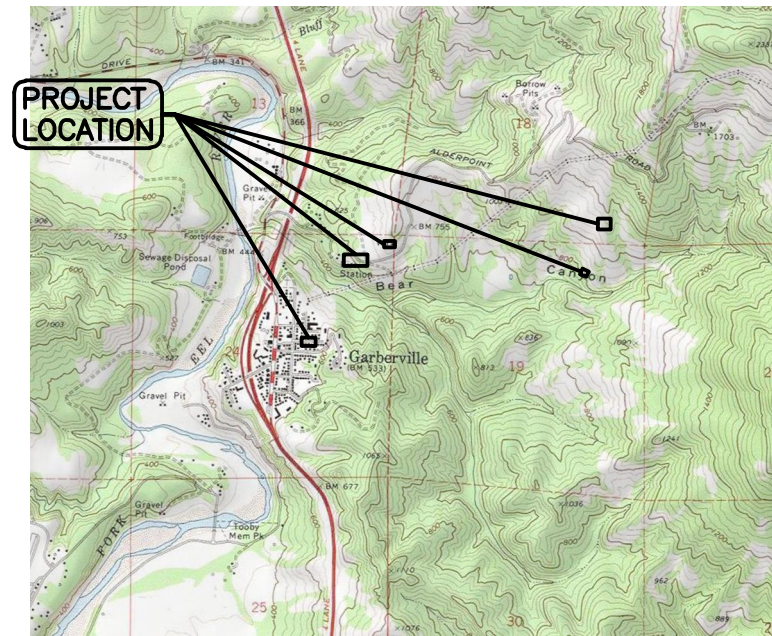
GARBERVILLE, CALIFORNIA



PREPARED BY:



APRIL 2024



SAVED: 4/19/2024 11:13 AM CNEWELL, PLOTTED: 4/19/2024 11:14 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-COVER-DWR.dwg

FUNDING PROVIDED BY:
CALIFORNIA DEPARTMENT OF WATER RESOURCES (DWR)



VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON SCALES ACCORDINGLY	
812 W. WABASH AVE. CALIFORNIA WASHINGTON WWW.SN-ENR.COM 707-441-8855	
BY	
REVISION	
DATE	
NO.	
DSGN JSO DR CDN/JWF CHK PEG APVD	
GARBERVILLE SANITARY DISTRICT GARBERVILLE TANKS REPLACEMENT PROJECT GARBERVILLE, CALIFORNIA COVER	
SHEET	G1.0
SEQ	
DATE	04/2024
PROJ. NO.	022067

4/19/24

SAVED: 4/19/2024 8:40 AM CNEWELL, PLOTTED: 4/19/2024 11:14 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Drawings\022067-CIVIL-SHT-INDX-DWR.dwg

INDEX OF SHEETS

SHEET	TITLE
GENERAL	
G1.0	COVER
G2.0	INDEX OF SHEETS
G3.0	GENERAL NOTES
G4.0	PROJECT OVERVIEW
G5.0	SITE ACCESS PLAN
CIVIL	
C1.0	NOT USED
C2.0	NOT USED
C3.0	WALLAN TANK AND PUMP STATION OVERVIEW
C3.1	WALLAN TANK CLEARING, GRUBBING, AND DEMOLITION PLAN
C3.2	WALLAN TANK SITE PLAN & YARD PIPING
C3.3	WALLAN BOLTED STEEL TANK LAYOUT
C4.0	WALLAN PUMP STATION UPGRADES
C4.1	WALLAN PUMP STATION MECHANICAL PLAN
C5.0	ALDERPOINT PUMP STATION OVERVIEW
C5.1	ALDERPOINT PUMP STATION SITE PREPARATION AND DEMOLITION
C5.2	ALDERPOINT PUMP STATION SITE PLAN & YARD PIPING
C5.3	ALDERPOINT PUMP STATION GRADING PLAN
C5.4	ALDERPOINT PUMP STATION MECHANICAL PLAN
C5.5	ALDERPOINT PUMP STATION HVAC PLAN
C6.0	ALDERPOINT ROAD WATER MAIN OVERVIEW
C6.1	ALDERPOINT ROAD WATER MAIN PLAN AND PROFILE
C6.2	ALDERPOINT ROAD WATER MAIN PLAN AND PROFILE
C6.3	ALDERPOINT ROAD WATER MAIN PLAN AND PROFILE
C6.4	ALDERPOINT ROAD WATER MAIN PLAN AND PROFILE
C6.5	ALDERPOINT ROAD WATER MAIN PLAN AND PROFILE
C7.0	TOBIN WELL GENERATOR SITE PLAN
C8.0	CIVIL DETAILS
C8.1	CIVIL DETAILS
C8.2	CIVIL DETAILS
C8.3	CIVIL DETAILS
C8.4	CIVIL DETAILS
C8.5	CIVIL DETAILS
C8.6	CIVIL DETAILS
C9.0	TRAFFIC CONTROL PLAN
C9.1	ENLARGED TRAFFIC CONTROL PLAN
C9.2	ENLARGED TRAFFIC CONTROL PLAN
C10.0	ROBERTSON TANK DEMOLITION PLAN

INDEX OF SHEETS

SHEET	TITLE
STRUCTURAL - GENERAL	
S0.1	STRUCTURAL NOTES AND LEGEND
S1.0	NOT USED
S2.0	ALDERPOINT PUMP STATION PLAN AND SECTIONS
S2.1	ALDERPOINT PUMP STATION REINFORCING DETAILS
S3.0	STRUCTURAL DETAILS
S3.1	STRUCTURAL DETAILS
ELECTRICAL	
E1	ELECTRICAL SYMBOLS & ABBREVIATIONS
E2	OVERALL SITE MAP
E3	FULL SPEED ELEMENTARY DIAGRAM
E4	VFD ELEMENTARY DIAGRAM
E5	CONTROL PANEL ELEVATION & BACKPAN LAYOUT
E6	CONTROL PANEL ELEMENTARY DIAGRAMS
E7	SOLAR/RADIO PANEL
E8	NOT USED
E9	LIGHTING FIXTURE SCHEDULE & GENERAL NOTES
E10	EXAMPLE INTERCONNECT DIAGRAM
E11	TYPICAL ELECTRICAL DETAILS NO 1
E12	TYPICAL ELECTRICAL DETAILS NO 2
E13	TYPICAL ELECTRICAL DETAILS NO 3
E300	WALLAN TANK ELECTRICAL SITE PLAN
E400	WALLAN PUMP STATION ELECTRICAL PLAN
E401	WALLAN PUMP STATION ONE LINE DIAGRAM
E402	WALLAN PUMP STATION PEDESTAL ELEVATION
E500	ALDERPOINT PUMP STATION ELECTRICAL SITE PLAN
E501	ALDERPOINT PUMP STATION ONE LINE DIAGRAM
E502	ALDERPOINT PUMP STATION ATS & MCC ELEVATION
E510A	ALDERPOINT PUMP STATION BLDG ELECTRICAL REFLECTIVE PLAN
E510B	ALDERPOINT PUMP STATION BLDG ELECTRICAL BASE PLAN
E510C	ALDERPOINT PUMP STATION BLDG ELECTRICAL POWER PLAN
E700	TOBIN WELL GENERATOR ELECTRICAL SITE PLAN
E701	TOBIN WELL ONE LINE DIAGRAM
INSTRUMENTATION	
I1	INSTRUMENTATION SYMBOLS & ABBREVIATIONS
I2	SCADA BLOCK DIAGRAM
I301	WALLAN TANK P&ID
I401	WALLAN PUMP STATION P&ID
I501	ALDERPOINT PUMP STATION P&ID
I502	ALDERPOINT PS AUXILIARY SYSTEMS P&ID



VERIFIED SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 200
 WILSON, CA 95751
 WWW.SQW.COM
 707-441-8885

NO.	DATE	REVISION	BY

DSGN JSO
 DR CDN/JWF
 CHK PEG
 APVD

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA

INDEX OF SHEETS

SHEET
G2.0

SEQ
 DATE **04/2024**
 PROJ. NO. **022067**

4/19/24

SAVED: 4/19/2024 8:41 AM NEWELL, PLOTTED: 4/19/2024 11:14 AM NEWELL, CHRIS
P:\Eureka\2022\022067-GSD-Water\Draws\022067-NOIES-DWR.dwg

ABBREVIATIONS

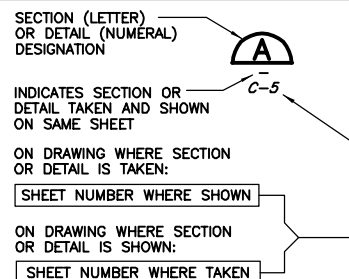
A	ASBESTOS-CEMENT	T	TOTAL DYNAMIC HEAD
AC	AGGREGATE	TYP	TYPICAL
AGGR	APPROXIMATELY	U	UTILITY
APPROX	AT	V	VARIES
B	BUTTERFLY VALVE BUILDING	VERT	VERTICAL
BFV	BLDG	VG	VALLEY GUTTER
C	COMBINATION AIR VALVE CLEAR	W	WATER OR WIDE FLANGE
CAV	CENTERLINE	W/	WITH
CLR	CONCRETE MASONRY UNIT		
CMU	CLEANOUT		
CO	CONCRETE		
CONC	CONTINUOUS OR CONTINUED		
CONT	CENTER		
D	DEGREE (ANGLE)		
DI	DROP INLET OR DUCTILE IRON		
DIA	DIAMETER		
DIM	DIMENSION		
DET	DETAIL		
DWG	EXISTING		
E	EACH		
(E)	EXISTING GRADE/GROUND		
EA	ELBOW		
EG	ELECTRIC OR ELECTRICAL		
ELEC	ELEVATION		
ELEV	EQUAL		
EQ	EASEMENT		
ESMNT	EACH WAY		
EW	EXISTING		
EXST	FOUNDATION		
F	FINISHED GRADE		
FDN	FIRE HYDRANT		
FG	FLOW LINE		
FH	FLOOR		
FL	FLOOR		
FLR	FOOT OR FEET		
FT	GAGE		
G	GALLON		
GA	GALLONS PER MINUTE		
GAL	GRADE OR GROUND		
GPM	GATE VALVE		
GRD	HIGH DENSITY POLYETHYLENE		
GV	HORIZONTAL		
H	HEIGHT		
HDPE	INSIDE DIAMETER		
HOR	INVERT		
HT	INVERT		
I	INSIDE DIAMETER		
ID	INVERT		
INV	POUND		
L	LINEAR FEET		
LB	LEFT		
LF	LEFT		
LT	MATERIAL		
M	MAXIMUM		
MATL	MECHANICAL		
MAX	MECHANICAL JOINT		
MECH	MANUFACTURER		
MFR	MINIMUM OR MINUTE		
MIN	MECHANICAL JOINT		
MJ	NEW		
N	NUMBER OR NORMALLY OPEN		
(N)	NOT TO SCALE		
NO	NUMBER		
NTS	ON CENTER		
#	OUTSIDE DIAMETER		
O	OVERHEAD		
OC	PERFORATED		
OD	PLATE		
OH	PRESSURE REDUCING VALVE		
P	POUNDS PER SQUARE INCH		
PERF	PRESSURE TREATED		
PL	POLYVINYL CHLORIDE PLASTIC		
PRV	PUBLIC UTILITY EASEMENT		
PSI	QUANTITY		
PT	RADIUS		
PVC	RELATIVE COMPACTION		
PUE	ROAD		
Q	REQUIRED		
QTY	REINFORCING		
R	RESTRAINED FLANGE COUPLING ADAPTER		
R	ROCK SLOPE PROTECTION		
RC	RIGHT OF BING TIGHT		
RD	RIGHT OF WAY		
REQD	SLOPE		
REINF	SCHEDULE		
RFC	STORM DRAIN		
RFP	SQUARE FOOT/FEET		
R/W	SHEET		
S	SIMILAR		
SL	SQUARE		
SCHED	STAINLESS STEEL		
SD	STATION		
SF	STORM WATER POLLUTION PREVENTION PLAN		
SHT			
SIM			
SQ			
SST			
STA			
SWPPP			

UTILITIES LEGEND

PROPOSED

- GATE VALVE
- CHECK VALVE
- DROP INLET
- POWER POLE
- STORM DRAIN LINE
- WATER LINE

DETAIL AND SECTION DESIGNATION



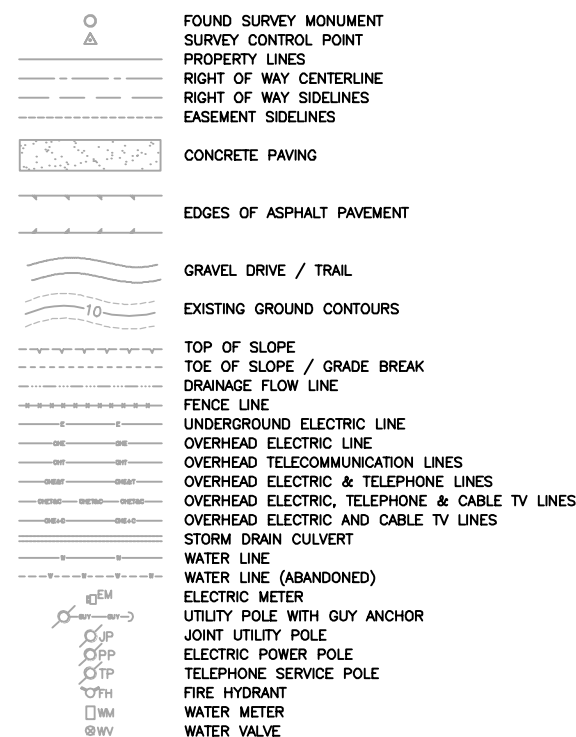
CURVE DATA

- R (RADIUS)
- L (LENGTH)
- Δ (DELTA)
- T (TANGENT)

NOTES:

- CONTACT THE ENGINEER FOR SYMBOLS NOT LISTED.
- THIS IS A STANDARD SHEET, THEREFORE, SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET WHICH DO NOT APPEAR ON THE PLANS.
- SITE AND UTILITY SYMBOLS SHOWN ON THIS SHEET ARE NOT INTENDED TO REPRESENT THE PHYSICAL SCALE OR SHAPE OF ANY ITEMS. WHERE LARGE-SCALE PLANS ARE PRESENTED, THE SYMBOLS SHOWN HEREON MAY BE REPLACED BY DETAILS MORE SUITED TO THE DRAWING SCALE.

EXISTING TOPOGRAPHIC LEGEND



GENERAL NOTES:

- ALL WORK SHALL CONFORM TO CURRENT CALIFORNIA BUILDING CODE.
- THE WORKING DRAWINGS ARE GENERALLY DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW REQUIRED FOR INSTALLATION IN THE SPACE PROVIDED. THEY DO NOT SHOW EVERY DIMENSION, COMPONENT PIECE, SECTION, JOINT OR FITTING REQUIRED TO COMPLETE THE PROJECT. ALL LOCATIONS FOR WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION. EXISTING UNDERGROUND UTILITIES WITHIN THE LIMITS OF EXCAVATION SHALL BE VERIFIED AS TO LOCATION, SIZE AND LOCATION BY UNCOVERING, PROVIDED SUCH IS PERMITTED BY LOCAL PUBLIC AUTHORITIES WITH JURISDICTION, BEFORE BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL SECURE NECESSARY PERMITS, INCLUDING BUT NOT LIMITED TO ENCROACHMENT PERMITS FROM HUMBOLDT COUNTY AND DEMOLITION PERMIT FROM NCUAQMD, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- CONTRACTOR SHALL PERFORM TRENCH WORK IN CONFORMANCE WITH CAL/OSHA REQUIREMENTS.
- CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, GENERAL CONTRACTOR WILL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. ALL WORK AND EQUIPMENT SHALL COMPLY WITH CAL/OSHA REQUIREMENTS. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY, AND NOT BE LIMITED TO NORMAL WORKING HOURS.
- THE CONTRACTOR SHALL INDEPENDENTLY REVIEW GROUND, TOPOGRAPHY AND TREE CONDITIONS THROUGHOUT THE SITE, AND ASSUME THE RISK OF COMPLETING THE WORK SET OUT ON THESE PLANS, REGARDLESS OF ROCK, WATER TABLE OR OTHER CONDITIONS WHICH MAY BE ENCOUNTERED IN THE COURSE OF THE WORK.
- ANY DISCREPANCY DISCOVERED BY THE CONTRACTOR IN THESE PLANS, OR ANY FIELD CONDITIONS DISCOVERED BY THE CONTRACTOR THAT MAY DELAY OR OBSTRUCT THE PROPER COMPLETION OF THE WORK SHOWN HEREIN SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND THE ENGINEER IMMEDIATELY UPON DISCOVERY. SAID NOTIFICATION SHALL BE IN WRITING.
- ALL UNDERGROUND IMPROVEMENTS SHALL BE INSTALLED, TESTED, AND APPROVED PRIOR TO PAVING.
- THE CONTRACTOR SHALL NOT BEGIN EXCAVATING UNTIL ALL EXISTING UTILITIES HAVE BEEN MARKED IN THE FIELD. THE CONTRACTOR SHALL NOTIFY EACH APPLICABLE ENTITY AT LEAST 48 HOURS PRIOR TO COMMENCING WORK. CALL UNDERGROUND SERVICE ALERT (USA) TWO WORKING DAYS BEFORE DIGGING AT (800) 227-2600 FOR LOCATES.
- GRADING AND CONSTRUCTION CONTRACTORS SHALL STOP WORK, REFER TO PROJECT MMRP FOR PROCEDURES, AND NOTIFY THE OWNER AND THE ENGINEER IF CULTURAL RESOURCES ARE DISCOVERED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL GIVE THE INSPECTOR 48 HOURS ADVANCE NOTICE OF ANY CONSTRUCTION OR REQUIRED TESTING.
- SHOULD THE CONTRACTOR OR ANY OF THEIR AGENTS OR EMPLOYEES ENCOUNTER OR DISCOVER MATERIALS WHICH APPEAR TO BE HAZARDOUS DURING THE PERFORMANCE OF THE WORK, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY AND SUSPEND WORK IN THE AFFECTED AREA UNTIL THE ENGINEER HAS INSPECTED THE LOCATION AND MATERIALS IN QUESTION. SHOULD IT BE NECESSARY TO UNDERTAKE REMEDIATION, THE ENGINEER WILL GIVE WRITTEN NOTICE TO SUSPEND WORK IN THE AFFECTED AREA UNTIL THE PROPER COURSE OF ACTION HAS BEEN DETERMINED. OPERATIONS IN THE AFFECTED AREA SHALL BE RESUMED ONLY UPON WRITTEN NOTICE BY THE ENGINEER.
- ALL SITE GRADING WILL BE INSPECTED BY THE ENGINEER. COMPACTION TESTING WILL BE CONDUCTED AFTER SUFFICIENT DENSITIES HAVE BEEN ACHIEVED IN THE CONTRACTOR'S OPINION. THE CONTRACTOR SHALL MAKE ALL REQUESTS FOR MATERIALS TESTING AT LEAST 48 HOURS IN ADVANCE. ANY SOILS THAT FAIL TO MEET THE REQUIRED COMPACTION LEVELS SHALL BE REMOVED, AND RECOMPACTED. ALL COSTS ASSOCIATED WITH ACHIEVING COMPACTION STANDARDS SHALL BE INCLUDED IN THE CONTRACTOR'S ORIGINAL BID. COSTS ASSOCIATED WITH RE-TESTING DUE TO FAILED COMPACTION TESTS WILL BE PAID BY OWNER AND BACK-CHARGED TO THE CONTRACTOR.
- THE TOPSOIL SHALL BE REMOVED FROM CUT AND FILL AREAS AND SHALL NOT BE USED FOR ENGINEERED FILL. TOPSOIL SHALL BE STOCKPILED SEPARATELY AND REPLACED OVER AREAS OF EXPOSED SUBGRADE TO A MINIMUM DEPTH OF 6 INCHES.
- NO CHANGES OR MODIFICATIONS SHALL BE MADE TO THESE PLANS WITHOUT WRITTEN APPROVAL BY THE ENGINEER.
- REFER TO THE PROJECT SWPPP FOR THE NECESSARY EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.
- REFER TO THE ASBESTOS SURVEY AND LEAD PAINT SAMPLING REPORT BY BURNELLE & CLARK CONSULTING, LLC, DATED 12/14/2023 PRIOR TO DEMOLITION EFFORTS.
- REFER TO THE PG&E GREENBOOK MANUAL FOR GENERAL GUIDANCE RELATED TO CONSTRUCTION ADJACENT TO PG&E FACILITIES.

RECORD SURVEY MONUMENTS

Point#	Northing	Easting	Elevation	Description
201	1927578.09	6066548.11	1149.51	FD_5/8"RBR_PP_BUSHNELL_LS2786
202	1927478.73	6066538.34	1139.15	FD_5/8"RBR_NO_CAP
203	1927488.47	6066438.61	1142.99	FD_5/8"RBR_PP_BUSHNELL_LS2786

RECORD SURVEY MONUMENTS

Point#	Northing	Easting	Elevation	Description
253	1927303.94	6062261.50	741.44	FD_5IP_NOID_TD_POR_LEANS_W
255	1927182.23	6061896.34	761.53	FD_5IP_NOID
256	1927051.67	6061930.92	757.74	FD_5IP_NOID
257	1927034.74	6061949.25	759.06	FD_5RBR_LS2786
259	1927110.50	6062275.83	724.88	FD_5IP_NOID_BENT_TIED_POV
279	1926914.09	6061522.98	663.96	FD_BRASS_PIN_IN_WELL
298	1927303.98	6062261.19	742.03	FD_5IP_NOID_LEANS_W
360	1926767.89	6061613.48	666.72	FD_5IP_PP_LS37XX

SURVEY CONTROL POINTS

Point#	Northing	Easting	Elevation	Description
81	1927494.19	6066474.58	1154.55	CP_SPK
82	1927624.66	6066497.32	1173.13	CP_SPK
83	1927526.15	6066525.44	1155.24	CP_SPK

SURVEY CONTROL POINTS

Point#	Northing	Easting	Elevation	Description
86	1927541.47	6062440.15	764.81	CP_SPK
87	1927446.63	6062579.54	748.20	CP_SPK
88	1927473.78	6062450.70	757.93	3.5BRD_USGS_A633_1942_IN-ROCK
89	1927312.73	6061349.02	648.24	CP_MAG_IN_CL
90	1927336.13	6061255.53	643.61	CP_SPK
91	1927360.59	6061154.04	639.59	CP_SPK
94	1926745.55	6061822.42	683.75	CP_MAG
95	1927288.08	6062259.83	739.32	CP_SPK
96	1927190.83	6062156.66	750.50	CP_SPK
99	1927150.54	6061920.87	763.29	CP_60D
100	1928716.08	6063426.56	915.56	CP_SPK
101	1926779.52	6061566.93	665.35	CP_MAG
102	1926689.62	6061501.44	659.54	CP_MAG
103	1926739.35	6061719.82	674.39	CP_60D



VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
SUNNYVALE, CA 94086
WWW.SQW.COM
707-441-8855



BY	REVISION

DATE	NO.

APVD	CHK	CDN/JWF	DSGN

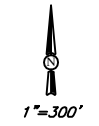
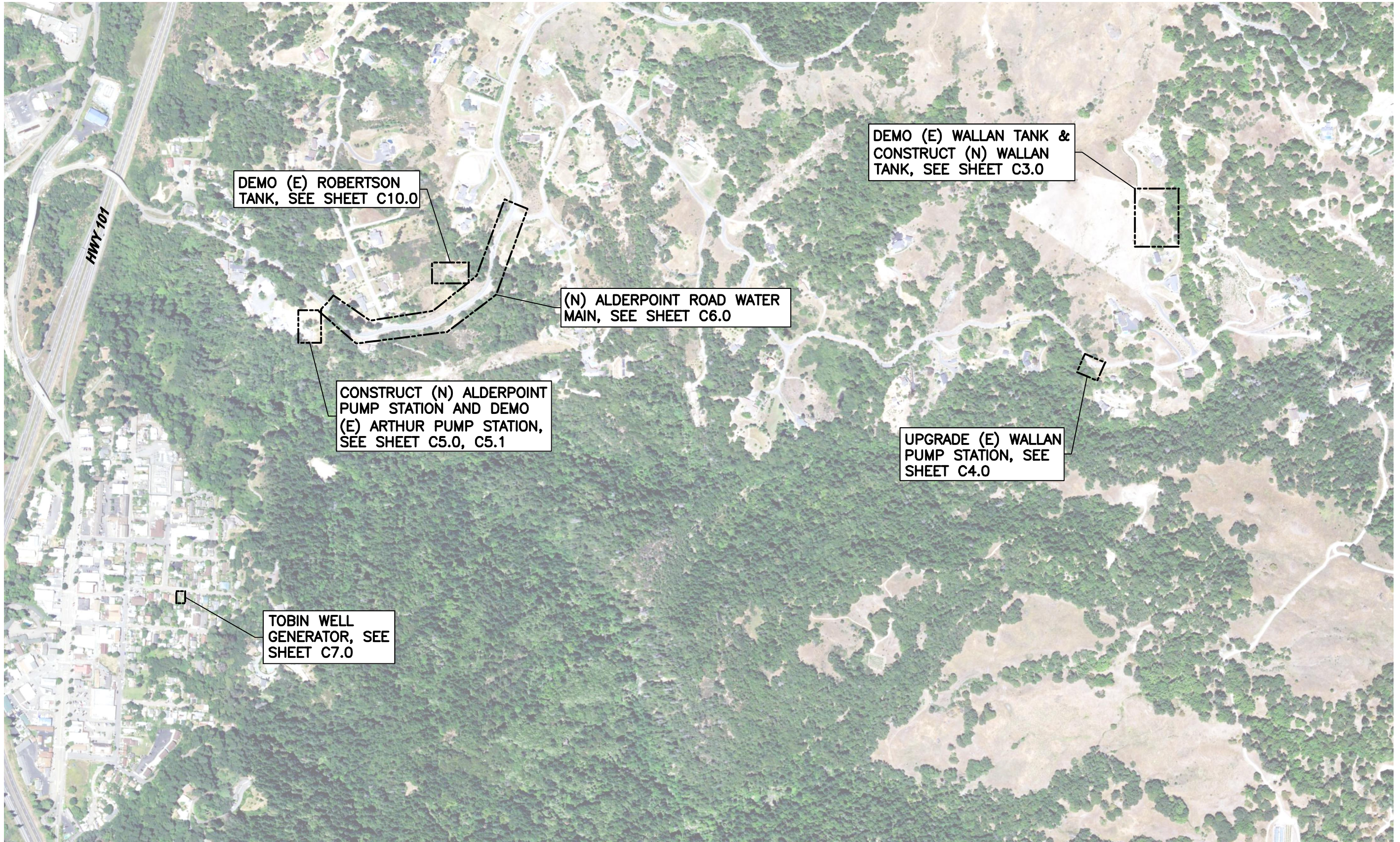
GENERAL NOTES

GARBERVILLE SANITARY DISTRICT
GARBERVILLE TANKS REPLACEMENT PROJECT
GARBERVILLE, CALIFORNIA

SHEET
G3.0
SEQ
DATE **04/2024**
PROJ. NO.
022067

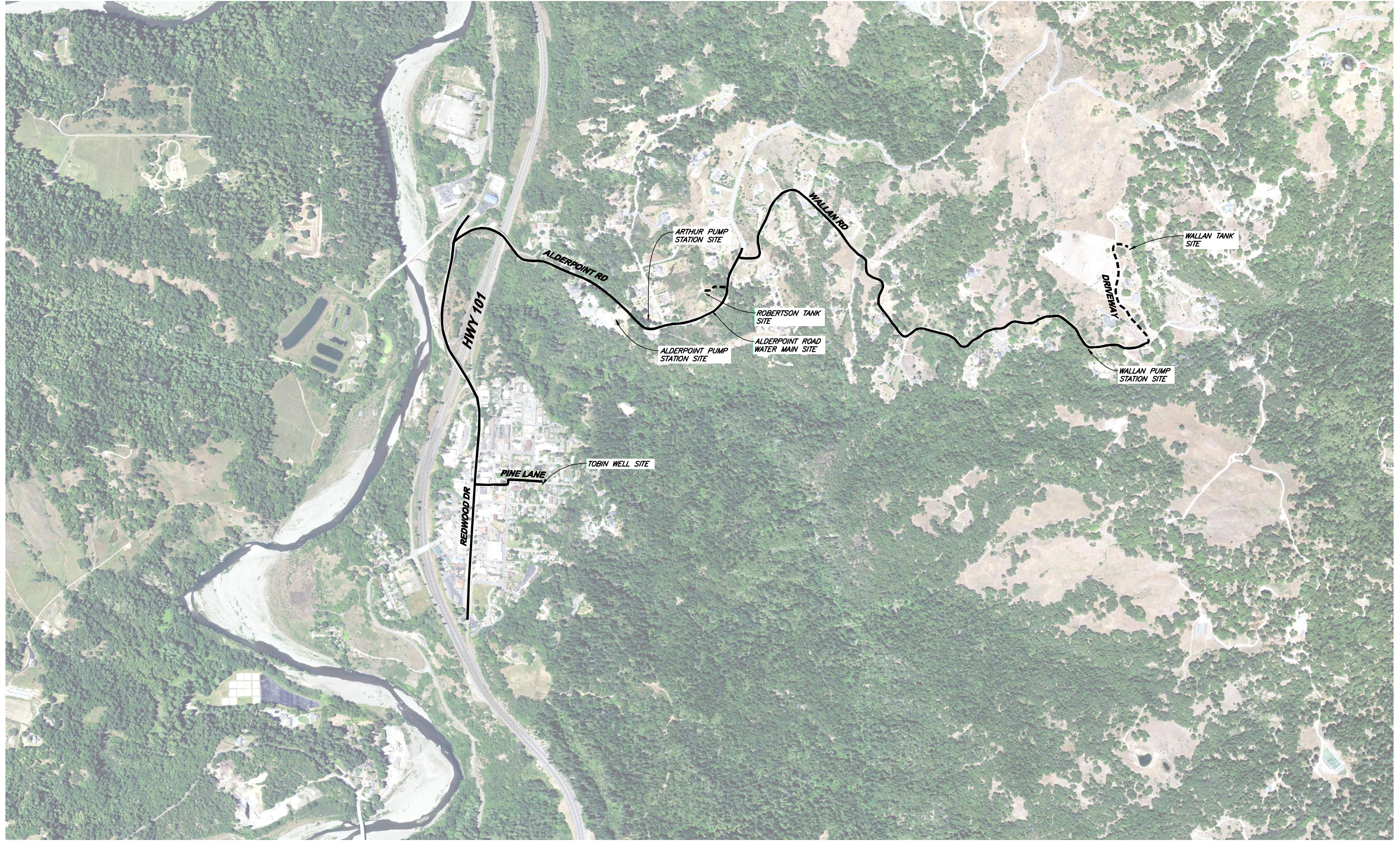
4/19/24

SAVED: 4/19/2024 8:41 AM CNEWELL, PLOTTED: 4/19/2024 11:14 AM NEWELL, CHRIS
P:\Eureka\2022\022067-GSD-Water\Draws\022067-PROJ-OVER-DWR.dwg



VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON SCALES ACCORDINGLY	
812 W. WABASH AVE. WARRICK, IN 46783 WWW.S&W.COM 707-441-8855	
BY	
REVISION	
DATE	
NO.	
DSGN	JSO
DR	CDN/JWF
CHK	PEG
APVD	
GARBERVILLE SANITARY DISTRICT GARBERVILLE TANKS REPLACEMENT PROJECT GARBERVILLE, CALIFORNIA	
PROJECT OVERVIEW	
SHEET	G4.0
SEQ	
DATE	04/2024
PROJ. NO.	022067

SAVED: 4/19/2024 8:41 AM CNEWELL, PLOTTED: 4/19/2024 11:14 AM NEWELL, CHRIS
 P:\Eureka\2022\GSD-Water\Draws\022067-SITE-ACCS-DWR.dwg




LEGEND

-  STREET
-  DRIVEWAY



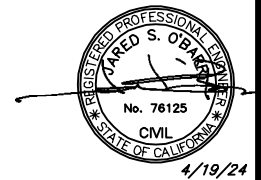
4/19/24

VERIFICATION SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON SCALES ACCORDINGLY			
812 W. WABASH AVE. SUITE 100 WUBREKA, CA 95501 WWW.SJW-ENR.COM 707-441-8855			
			
NO.	DATE	REVISION	BY
DSGN JSO DR CDN/JWF CHK PEG APVD	GARBERVILLE SANITARY DISTRICT GARBERVILLE TANKS REPLACEMENT PROJECT GARBERVILLE, CALIFORNIA SITE ACCESS PLAN		
SHEET	G5.0		
DATE	04/2024		
PROJ. NO.	022067		

SAVED: 4/19/2024 8:43 AM CNEWELL, PLOTTED: 4/19/2024 11:14 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-WALL-TANK-OVER.dwg



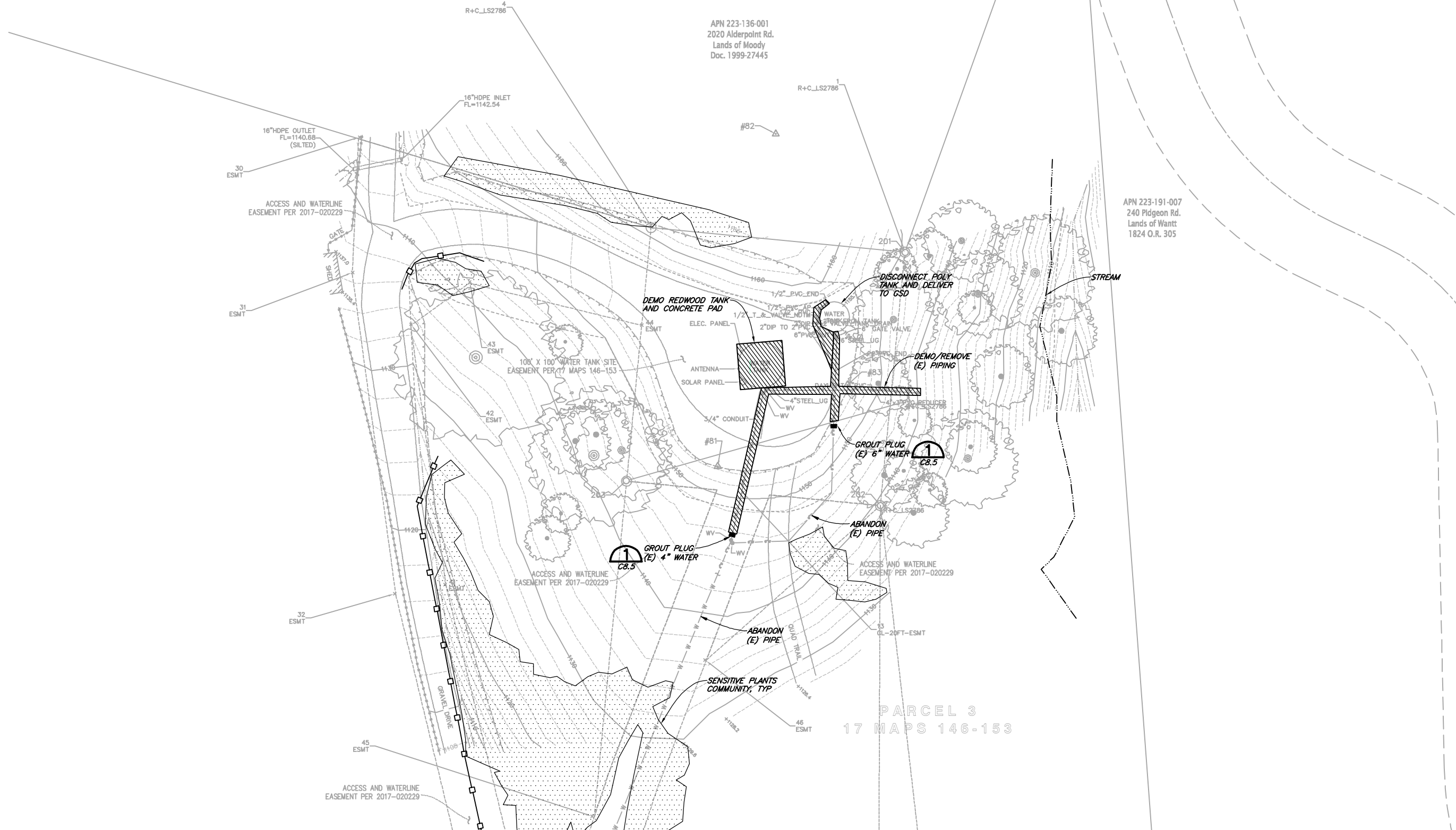
PLAN
 1"=80'



VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON SCALES ACCORDINGLY			
812 W. WABASH AVE. FRESNO, CA 93801 WWW.S2H-ENR.COM 707-441-8855			
NO.	DATE	REVISION	BY
DSSN JSO DR CDN/JWF CHK PEG APVD	GARBERVILLE SANITARY DISTRICT GARBERVILLE TANKS REPLACEMENT PROJECT GARBERVILLE, CALIFORNIA WALLAN TANK AND PUMP STATION OVERVIEW		
SHEET	C3.0		
DATE	04/2024		
PROJ. NO.	022067		

4/19/24

SAVED: 4/19/2024 8:43 AM CNEWELL, PLOTTED: 4/19/2024 11:15 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-WALL-TNK-DEMO.dwg



APN 223-136-001
 2020 Alderpoint Rd.
 Lands of Moody
 Doc. 1999-27445

APN 223-191-007
 240 Pidgeon Rd.
 Lands of Wantt
 1824 O.R. 305




PARCEL 3
 17 MAPS 146-153

DEMOLITION NOTES:

1. EXISTING POLY TANK SHALL REMAIN FULLY OPERATIONAL UNTIL NEW TANK IS CONSTRUCTED AND APPROVED FOR USE BY THE OWNER AND ENGINEER.
2. CONTRACTOR SHALL DEMOLISH AND PROPERLY DISPOSE OF ALL ITEMS SHOWN TO BE DEMOLISHED.

PLAN
 1"=20'

LEGEND

-  DEMOLITION/REMOVE
-  SENSITIVE PLANTS COMMUNITY
-  CONSTRUCTION FENCING



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 CA 95801
 WWW.S&W.COM
 707-441-8855



NO.	DATE	REVISION	BY

DESIGN: JSO
 DR: CDM/JWF
 CHK: PEG
 APVD: [Signature]

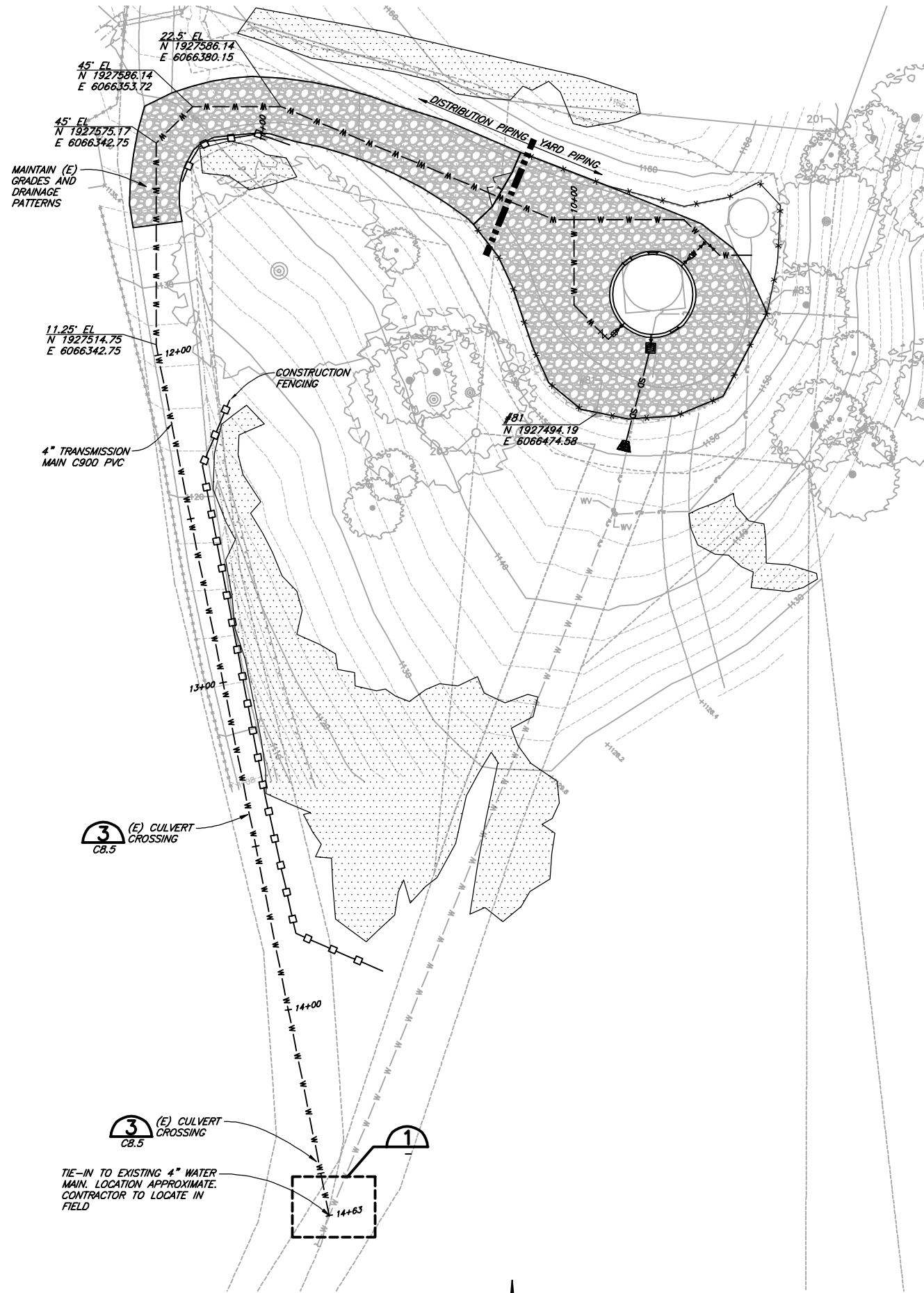
GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA

**WALLAN TANK CLEARING, GRUBBING,
 AND DEMOLITION PLAN**

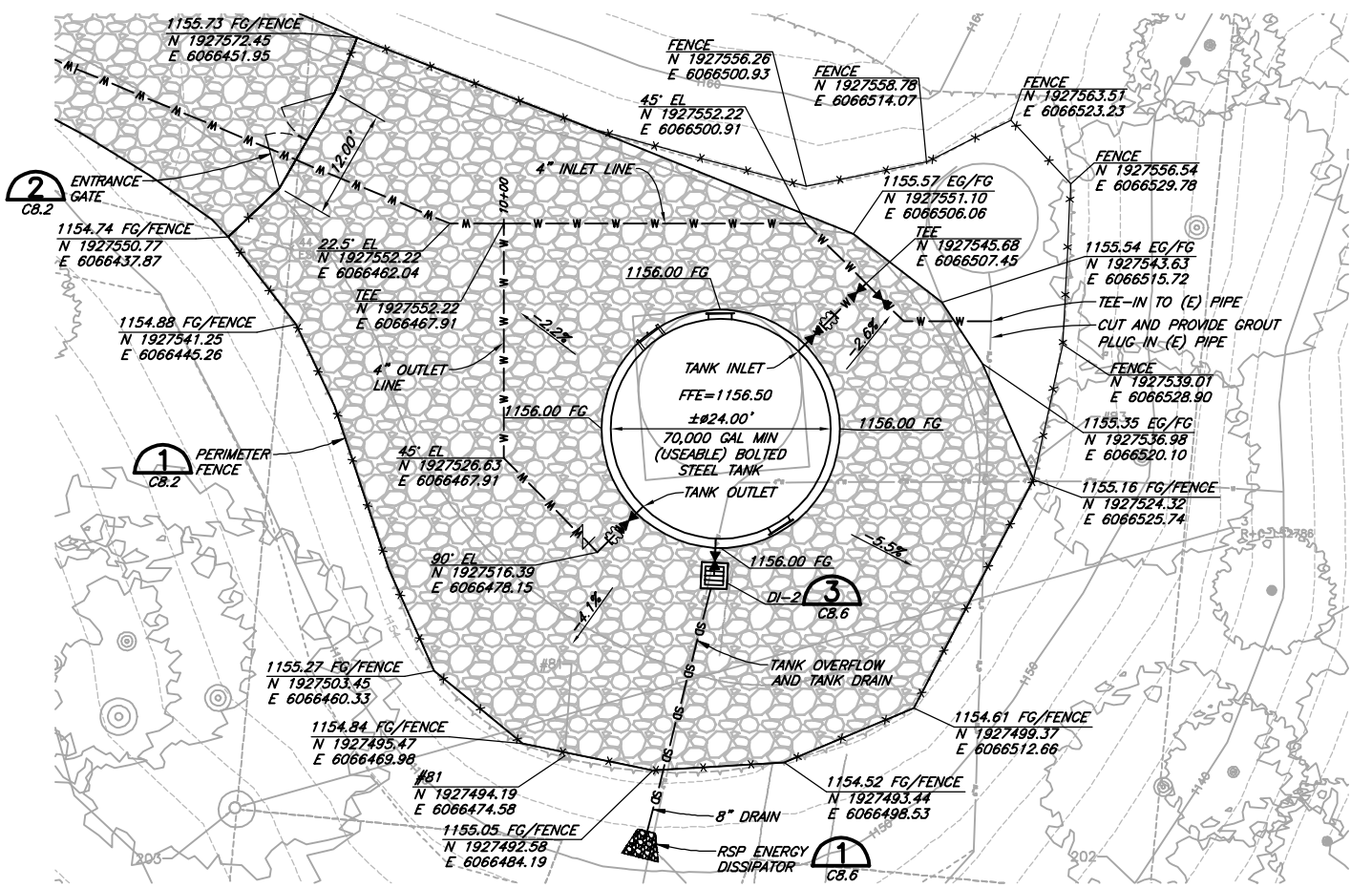
SHEET
C3.1
 SEQ
 DATE 04/2024
 PROJ. NO. 022067

4/19/24

SAVED: 4/19/2024 10:38 AM CNEWELL, PLOTTED: 4/19/2024 11:15 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-WALL-TNK-SITE.dwg



PLAN
 1"=20'



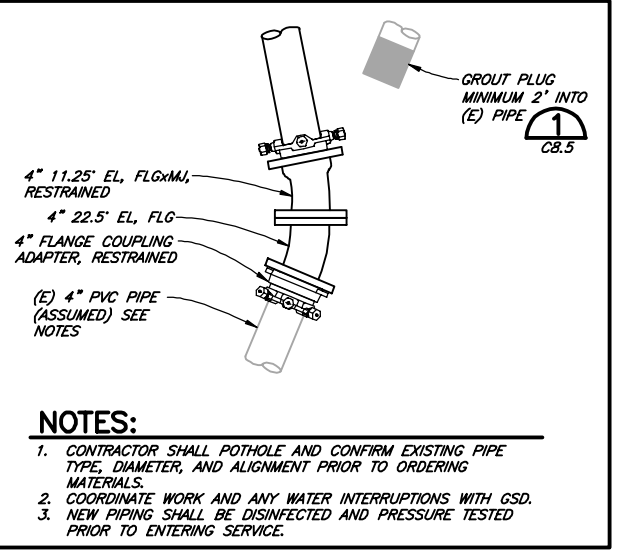
LEGEND

- 4" DEPTH CLASS 2 AB AT 90% RC
- SENSITIVE PLANT COMMUNITY
- CONSTRUCTION FENCE
- PERIMETER FENCE

PLAN
 1"=10'

NOTES:

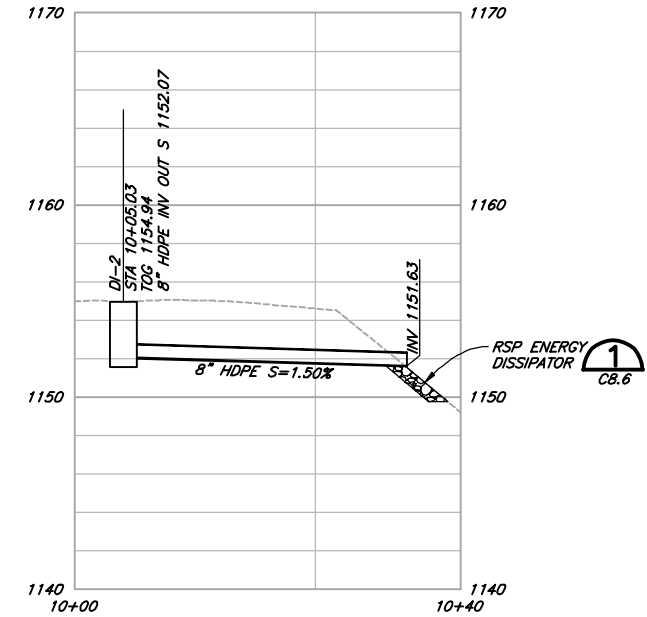
1. FITTINGS REQUIRED FOR VERTICAL ANGLES ARE NOT SHOWN ON THESE PLANS. CONTRACTOR TO DETERMINE IN THE FIELD.
2. FITTINGS AND PIPING TO BE RESTRAINED IN ACCORDANCE WITH RESTRAINED JOINT DETAIL.



NOTES:

1. CONTRACTOR SHALL POTHOLE AND CONFIRM EXISTING PIPE TYPE, DIAMETER, AND ALIGNMENT PRIOR TO ORDERING MATERIALS.
2. COORDINATE WORK AND ANY WATER INTERRUPTIONS WITH GSD.
3. NEW PIPING SHALL BE DISINFECTED AND PRESSURE TESTED PRIOR TO ENTERING SERVICE.

DETAIL 1
 NTS



TANK DRAIN PROFILE
 SCALE: 1"=10' H
 1"=5' H



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 FURRESEN, CALIFORNIA
 WWW.SJW.COM
 707-441-8885

NO.	DATE	BY	REVISION

DSGN: JSO
 DR: CDN/JWF
 CHK: PEG
 APVD: [Signature]

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA

WALLAN TANK SITE PLAN & YARD PIPING

SHEET **C3.2**

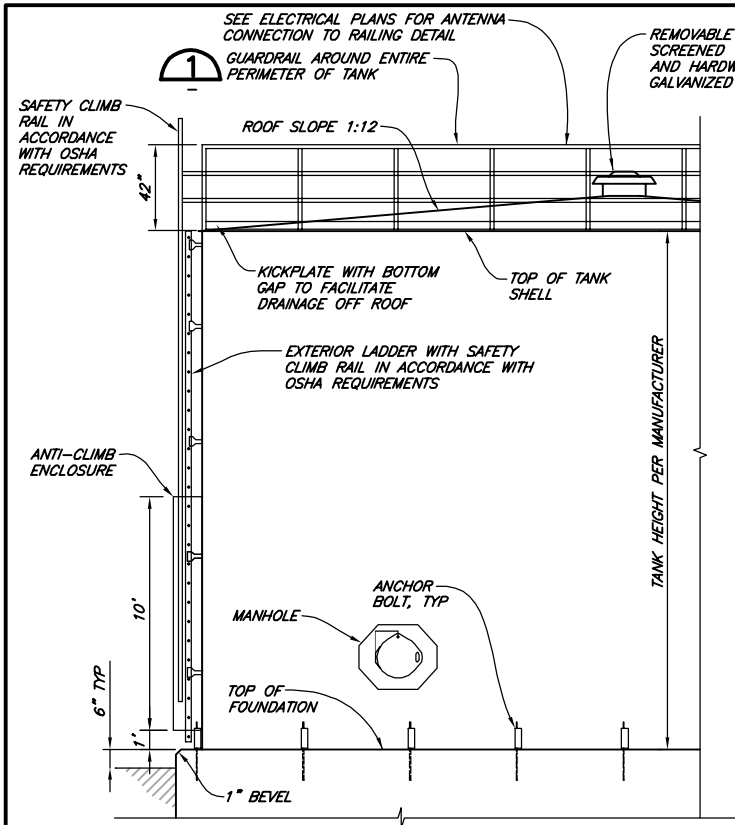
SEQ

DATE **04/2024**

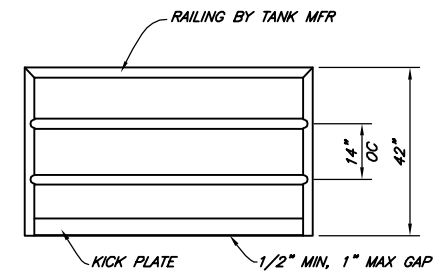
PROJ. NO. **022067**

4/19/24

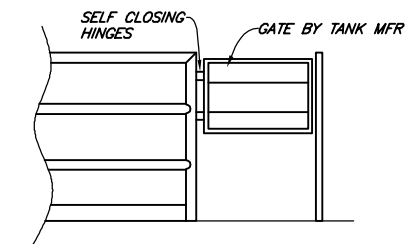
SAVED: 4/19/2024 11:01 AM CNEWELL, PLOTTED: 4/19/2024 11:15 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-WALL-TANK-LAYOUT.dwg



TANK ELEVATION
NTS

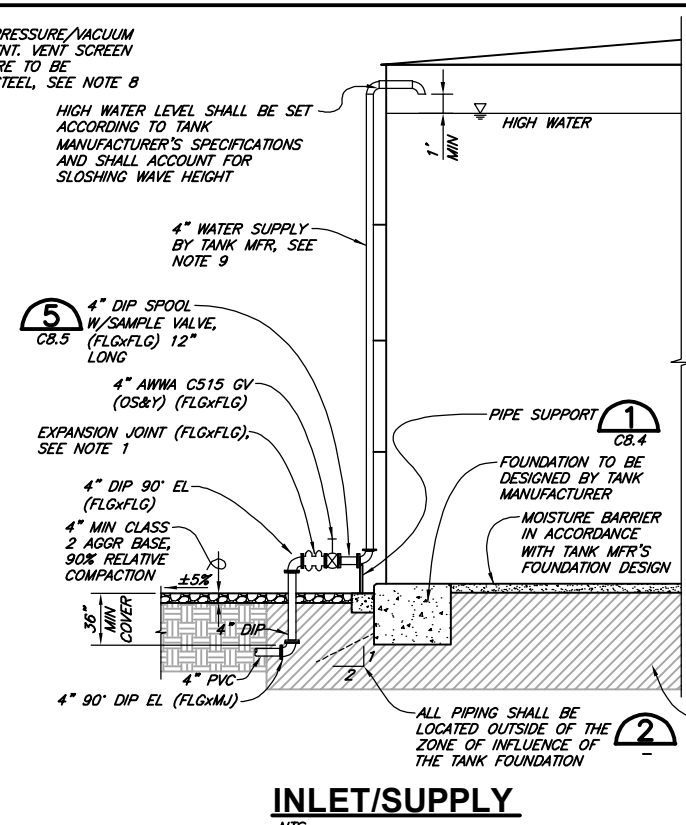


RAIL ELEVATION

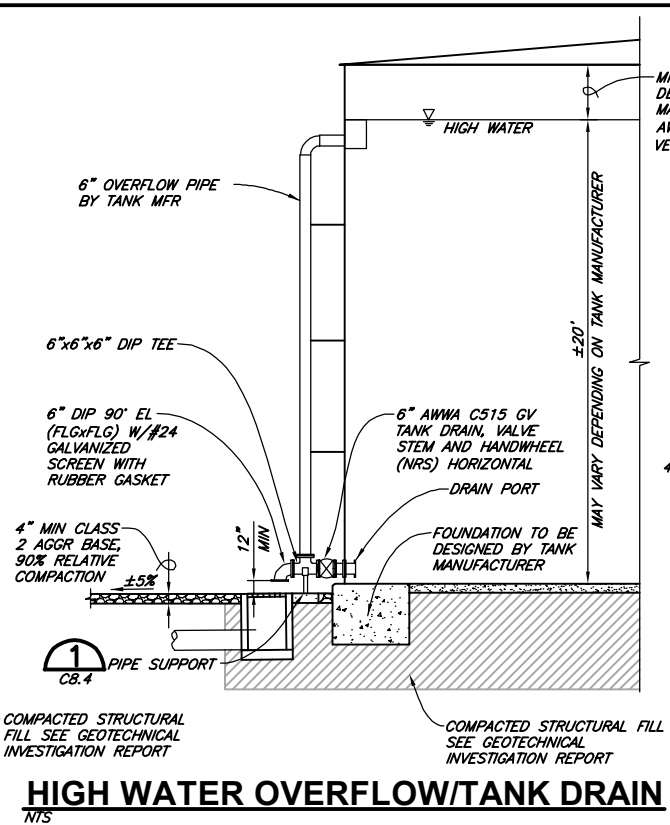


GATE ELEVATION

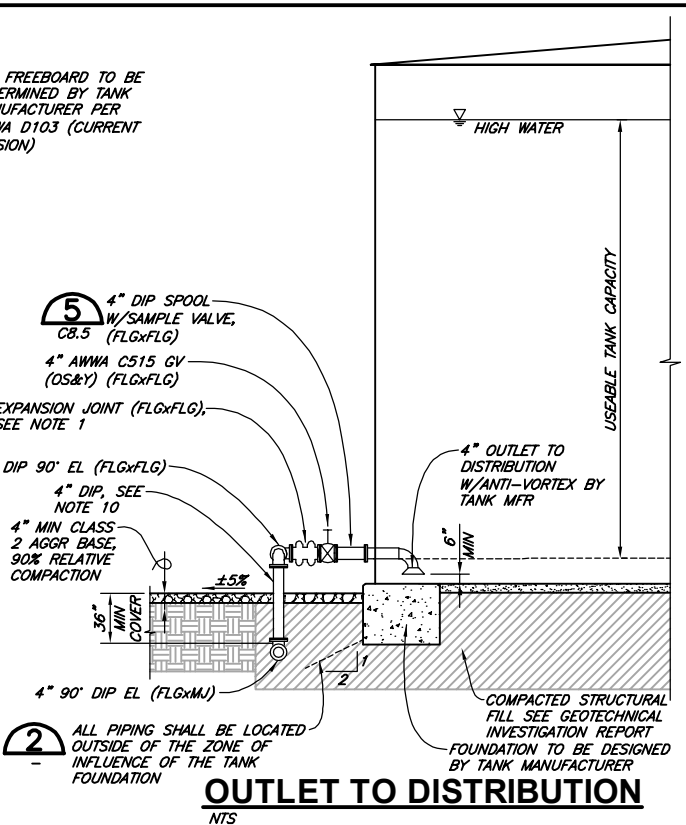
DETAIL 1
NTS
(GUARDRAILING)



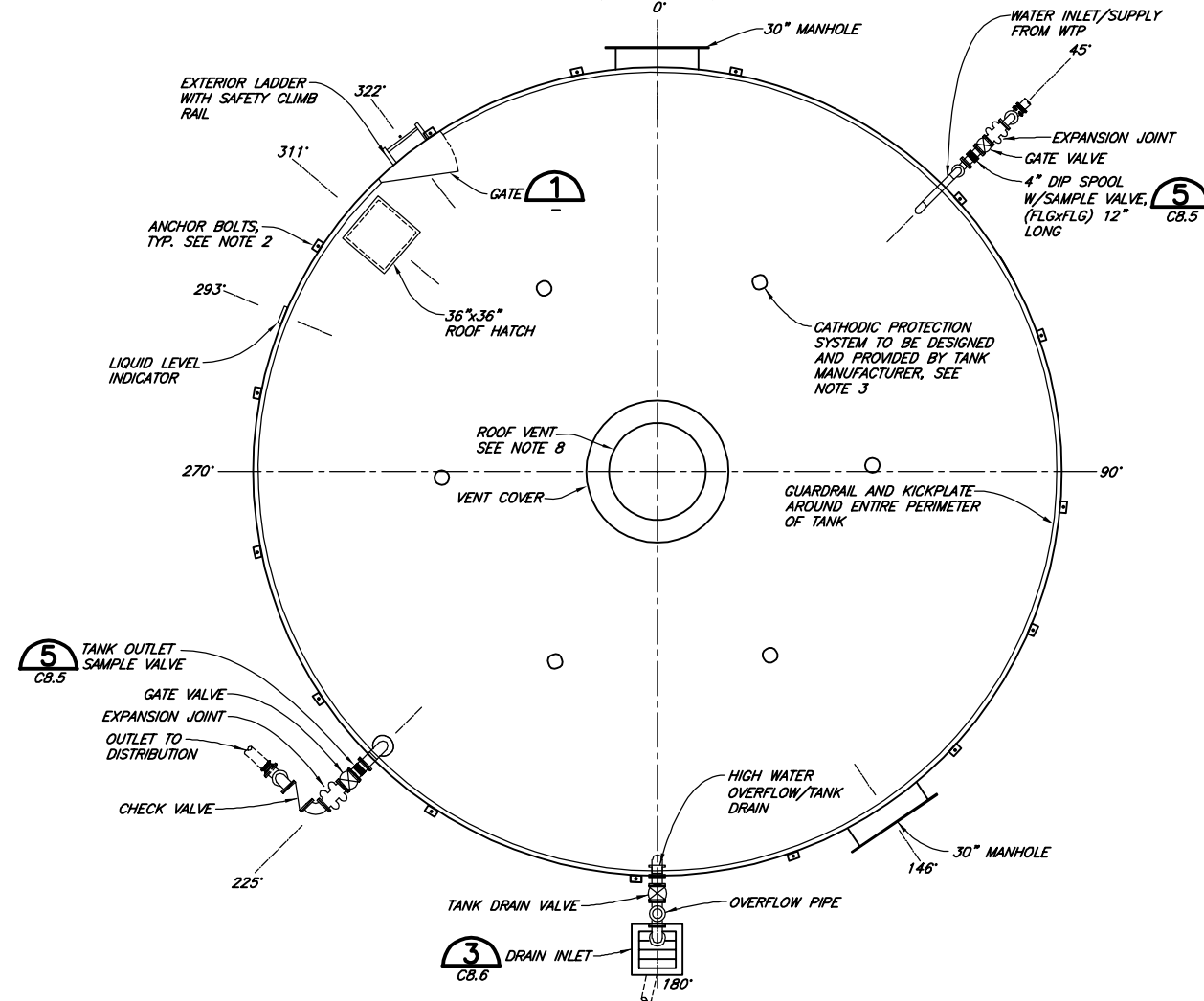
INLET/SUPPLY
NTS



HIGH WATER OVERFLOW/TANK DRAIN
NTS
(APPROX NORTH)



OUTLET TO DISTRIBUTION
NTS



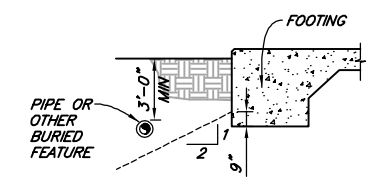
TANK PLAN
NTS

NOTES:

- ALL PIPING CONNECTIONS SHALL HAVE ADEQUATE CAPACITY TO ACCOMMODATE CALCULATED DISPLACEMENTS DUE TO SEISMIC LOADS, IN ACCORDANCE WITH ANWWA D100 OR D103 AS APPROPRIATE (CURRENT VERSION). PIPING CONNECTIONS SHOWN ON THESE PLANS REPRESENT MINIMUM REQUIREMENTS AND SHOULD BE MODIFIED IN COORDINATION WITH THE ENGINEER IF IT IS DETERMINED BY THE TANK MANUFACTURER THAT ADDITIONAL DISPLACEMENT CAPACITY IS NEEDED.
- THE SIZE AND NUMBER OF ANCHOR BOLTS SHALL BE DETERMINED BY TANK MANUFACTURER'S ENGINEER.
- TANK MANUFACTURER SHALL COORDINATE THE DESIGN AND INSTALLATION OF THE CATHODIC PROTECTION SYSTEM.
- FINAL LOCATION OF TANK APPURTENANCES AND PIPING CONNECTIONS TO BE DETERMINED IN COORDINATION WITH THE OWNER IN THE FIELD. PROVIDE AS CLOSE TO 180° SEPARATION BETWEEN TANK INLET AND OUTLET AS POSSIBLE.
- ALL EXTERIOR PIPES AND PIPE SUPPORTS SHALL BE COATED WITH TANK EXTERIOR COATING SYSTEM.
- TANK BOTTOM AND TANK SHELL TO BOTTOM CONNECTION SHALL ALL BE VACUUM OR AIR-PRESSURE TESTED FOR WATER-TIGHTNESS.
- ALL SAFETY RELATED COMPONENTS SHALL COMPLY WITH OSHA REQUIREMENTS.
- TANK VENTS SHALL PREVENT ENTRY OF RAIN WATER OR RUNOFF, BIRDS, INSECTS, RODENTS, AND OTHER ANIMALS, PROVIDE SUFFICIENT AIRFLOW IF 50% BLOCKED, AND COVERED BY GALVANIZED #24 MESH.
- PROVIDE 1" THICK RIGID INSULATION, UV RESISTANT AND RATED FOR EXTERIOR USE ON ALL EXPOSED PIPING AND VALVES.
- SEE ELECTRICAL PLANS FOR INSTRUMENTATION AND ASSOCIATED MOUNTING.

FLANGE NOTE:

DIELECTRIC ISOLATION KITS SHALL BE USED WHEN TRANSITIONING BETWEEN DISSIMILAR PIPING MATERIAL SUCH AS STEEL TO DUCTILE IRON. APPLICATIONS INCLUDE BUT ARE NOT LIMITED TO TANK INLET, OUTLET AND DRAIN CONNECTIONS TO APPURTENANT PIPING OR VALVES. SEE DETAIL 3 ON CB.4.



DETAIL 2
NTS

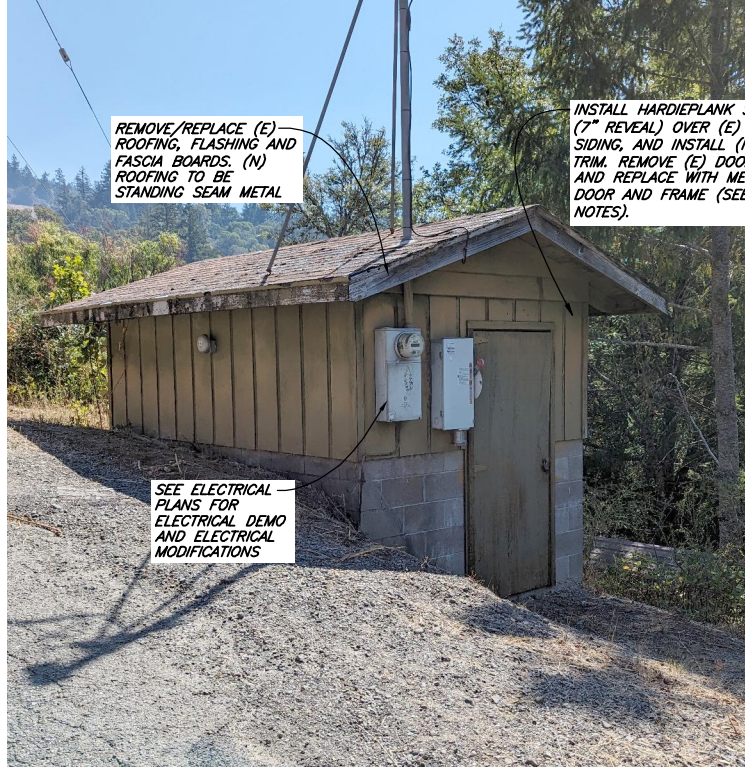


VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON SCALES ACCORDINGLY	
812 W. WABASH AVE. OUREN, CA 95901 WWW.S&W-ENR.COM 707-441-8855	
DESIGN	JSO
DR	JWF/CON
CHK	PEG
APVD	
WALLAN BOLTED STEEL TANK LAYOUT	
GARBERVILLE SANITARY DISTRICT GARBERVILLE TANKS REPLACEMENT PROJECT GARBERVILLE, CALIFORNIA	
SHEET	C3.3
DATE	04/2024
PROJ. NO.	022067
DATE	4/19/24

SAVED: 4/19/2024 11:01 AM CNEWELL, PLOTTED: 4/19/2024 11:15 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-WALL-PUMP-STAT-EXIST-COND.dwg



PLAN
 1" = 20'

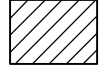


PUMP STATION EXTERIOR

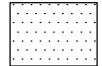
NOTES:

1. DOOR SHALL BE 1-3/4" THICK 16 GAUGE. PROVIDE COMMERCIAL GRADE SST HARDWARE WITH GRADE 1 LEVER LOCK AND DEAD BOLT. COORDINATE LOCK KEYING WITH OWNER
2. FRAME SHALL BE WRAP-AROUND STYLE AND ANCHORED TO WALL PER MANUFACTURER'S INSTRUCTIONS
3. DOOR AND FRAME SHALL BE GALVANNEALED, RUST-INHIBITIVE PRIMER, AND ENAMEL TOPCOAT. COORDINATE DOOR COLOR WITH OWNER.
4. INSTALL ROOFING AND HARDIEPLANK SIDING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
5. PREPARE, PRIME, CAULK, AND PAINT SIDING, EAVES, AND TRIM WITH 2 COATS EXTERIOR LATEX, COORDINATE COLORS WITH OWNER.
6. PROVIDE WALL STANDOFF FRAME FOR METER AND MTS PANELS, COORDINATE TEMPORARY PANEL DISCONNECT WITH ELECTRICAL AND PG&E TO ACCOMMODATE SIDING PLACEMENT AND ROOFING WEATHER SEAL. SEE DEMO NOTE 3.

LEGEND



DEMOLITION/REMOVE



SENSITIVE PLANTS COMMUNITY



PUMP STATION INTERIOR

DEMO NOTES:

1. DEMO ALL PUMPS, VALVES, APPURTENANCES. DEMO PIPING UP TO NEAREST FLANGE AT THE WALL.
2. CHIP OUT CONCRETE PUMP BASES AND ROUGHEN FLOOR PRIOR TO PLACING NEW EQUIPMENT PADS.
3. CONTRACTOR TO PROVIDE TEMPORARY PUMP SYSTEM UNTIL NEW SYSTEM IS DISINFECTED, COMMISSIONED AND APPROVED FOR USE. COORDINATE WITH OWNER IF PROPOSING PHASED REPLACEMENT OF SYSTEM. AT NO TIME SHOULD THE PUMPING BE OFFLINE FOR MORE THAN 8 HOURS. NOTIFY OWNER 14 DAYS IN ADVANCE OF ANY PLANNED OUTAGE.

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA 95501
 WWW.S&W-ENG.COM
 707-441-8855



NO.	DATE	REVISION	BY

DESIGN	JSO
DR	CDN/JWF
CHK	PEG
APVD	

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
WALLAN PUMP STATION UPGRADES

SHEET
C4.0
 SEQ
 DATE 04/2024
 PROJ. NO.
 022067



4/19/24

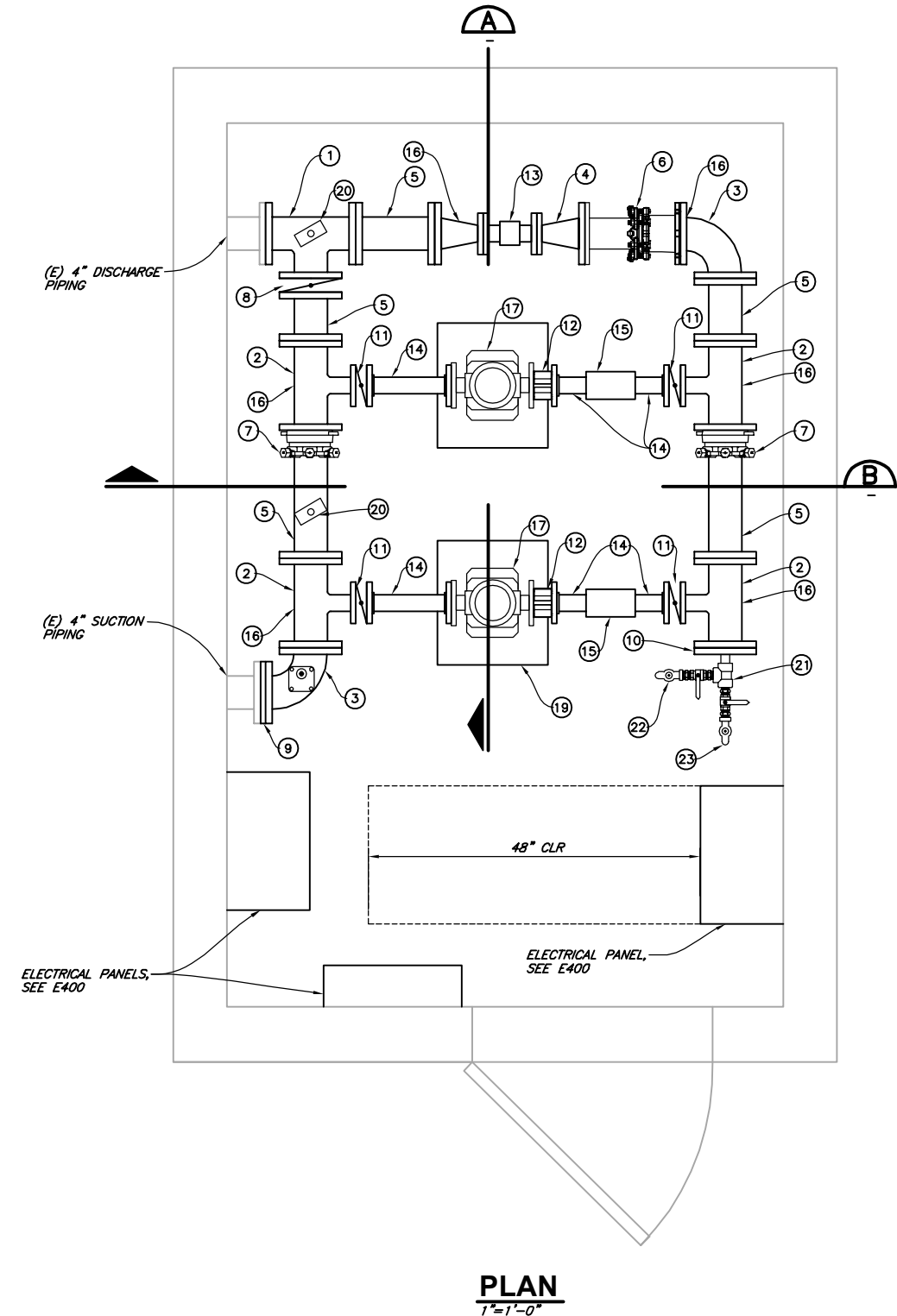
SAVED: 4/19/2024 8:51 AM CNEWELL, PLOTTED: 4/19/2024 11:16 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-WALL-PUMP-STAT-MECH.dwg

KEY NOTES:

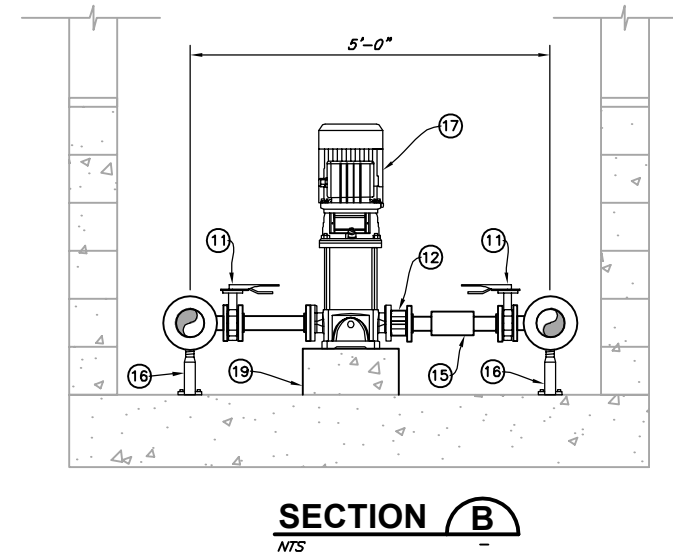
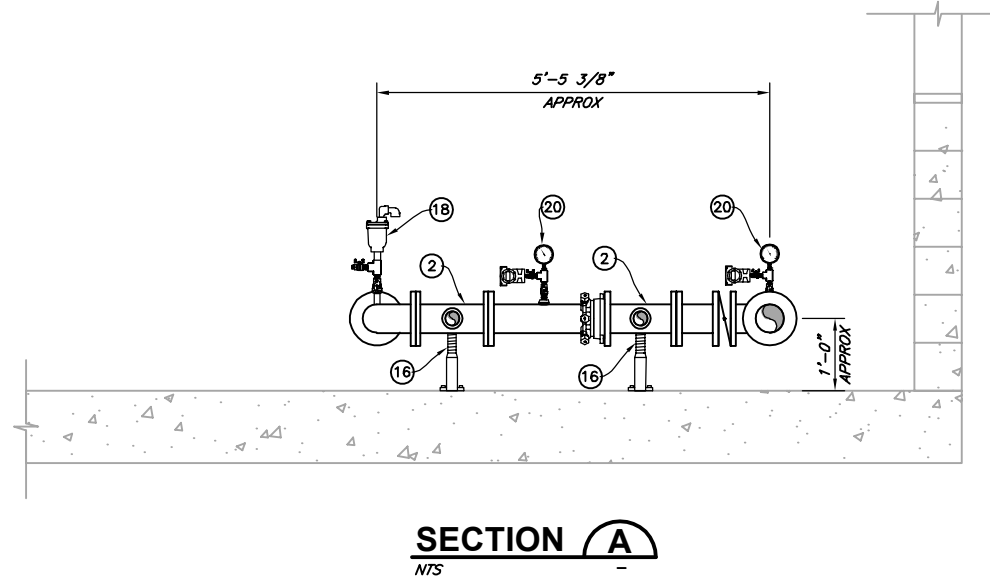
- | | | |
|---|--|---|
| ① 4" DIP TEE | ⑩ 4" BLIND FLANGE WITH 1" NPT TAP | ⑲ EQUIPMENT PAD, SEE DET 5 ON SHT C8.4. PAD HEIGHT AS REQUIRED FOR PUMP CONNECTION HEIGHTS AND EXISTING PIPING DIMENSIONS |
| ② 4"x4"x2" DIP TEE | ⑪ 2" BFL, LUG, GEAR OPERATOR | PRESSURE INSTRUMENTS, SEE ELECTRICAL AND CONTROLS PLANS FOR DETAILS. PROVIDE SADDLE TAP ON PIPE, OR MANUFACTURER TAP IF ON FITTING, INCLUDE MECHANICAL GAUGE 0-100 PSI DET 6 SHT C8.5 |
| ③ 4" DIP EL | ⑫ 2" WAFER CHECK | ⑳ 3/4" TEE WITH 2x 3/4" SST BALL VALVES AND THREADED NIPPLES |
| ④ 4"x2" DIP RDCR | ⑬ 2" MAGNETIC FLOW METER, SEE ELECTRICAL PLANS FOR DETAILS | ㉑ 1/2" SAMPLE VALVE, SMOOTH OUTLET, SEE DTL 5 SHT C8.5 FOR SIMILAR. PROVIDE FITTINGS AND NIPPLES TO PLACE AT HEIGHT SUITABLE FOR SAMPLING |
| ⑤ 4" DIP SPOOL, FLGxPE OR FLGxFLG BY LOCATION, LENGTH AS REQUIRED | ⑭ 2" GALV SPOOL, FLGxPE OR FLGxFLG BY LOCATION, LENGTH AS REQUIRED | ㉒ 3/4" HOSE BIBB WITH THREADED OUTLET |
| ⑥ 4" DISMANTLING JOINT, ROMAC DJ405 OR APPROVED EQUAL | ⑮ 2" COUPLER | |
| ⑦ 4" RFCA | ⑯ FLANGE OR SADDLE SUPPORT, SEE DTL 1 SHT C8.4 | |
| ⑧ 4" BFL, LUG, GEAR OPERATOR | ⑰ BOOSTER PUMP, SEE SPECIFICATIONS | |
| ⑨ 4" MAKEUP FLANGE AS REQUIRED, SST | ⑱ CARV, SEE DTL 4 SHT C8.5 | |

NOTES:

- ALL PIPING, VALVES, FITTINGS, INSTRUMENTATION AND APPURTENANCES SHALL HAVE A 200 PSI PRESSURE RATING.
- ALL DIMENSIONS TO PIPE OR EQUIPMENT CENTERLINE UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL COORDINATE FLANGE CLASS OF CONNECTED EQUIPMENT, VALVES, AND PIPING TO ENSURE COMPATIBILITY AND PRESSURE RATING.



PLAN
1"=1'-0"



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 200
 BUREAU, CA 95020
 WWW.S&W.COM
 707-441-8855



NO.	DATE	REVISION	BY

DSGN JSO
 DR CDN/JWF
 CHK PEG
 APVD
 GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
**WALLAN PUMP STATION
 MECHANICAL PLAN**



SHEET **C4.1**
 SEQ
 DATE **04/2024**
 PROJ. NO. **022067**
 4/19/24

SAVED: 4/19/2024 11:56 AM CNEWELL, PLOTTED: 4/19/2024 11:59 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Drawgs\022067-ALDRPNT-WATER-MAIN-OVER.dwg



PLAN
 1"=20'



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 100
 WILMINGTON, CA 94094
 WWW.S&W.COM
 707-441-8855



NO.	DATE	REVISION	BY

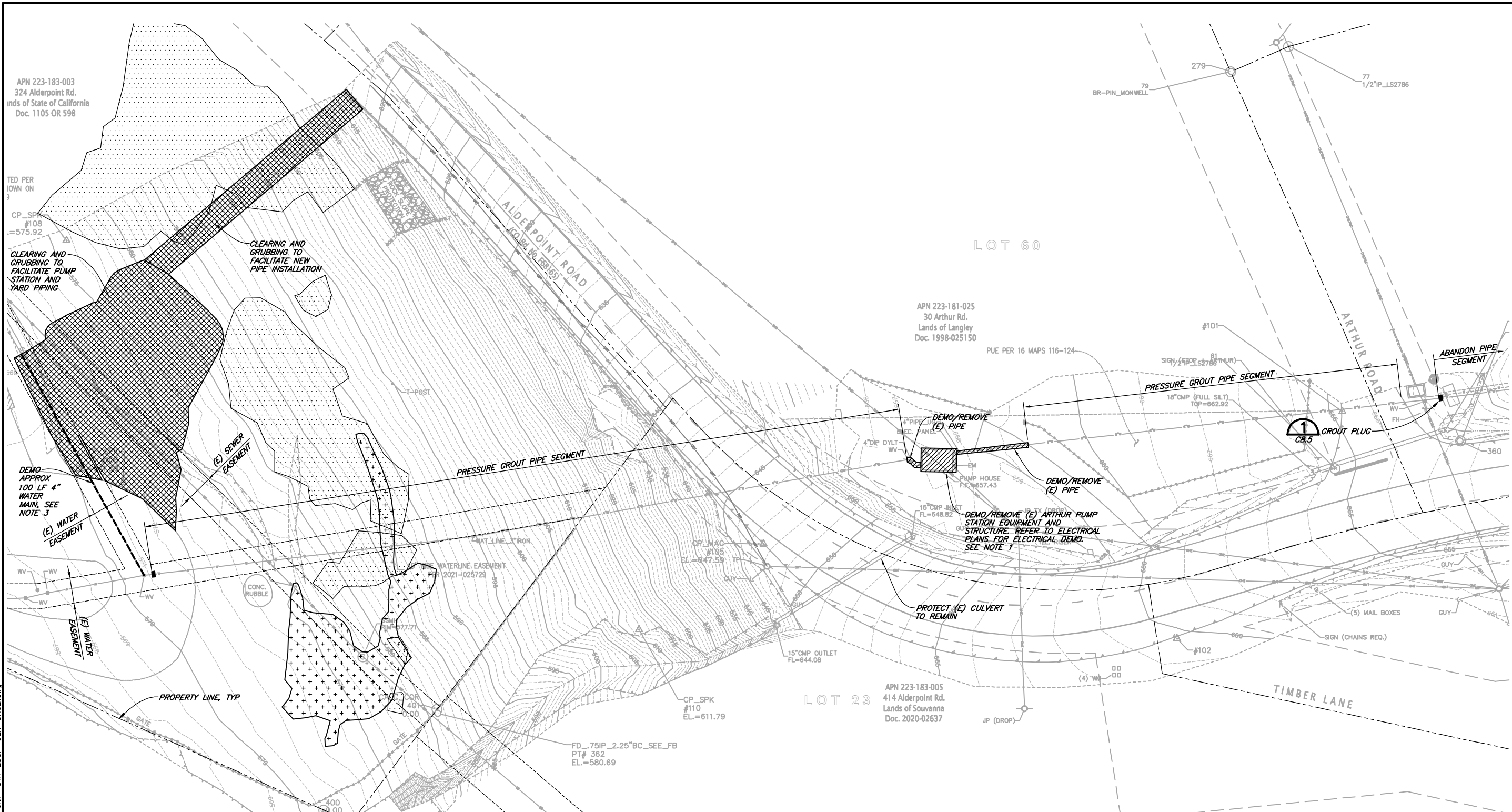
DESIGN	JSO
DR	CDN/JWF
CHK	PEG
APVD	

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
ALDERPOINT PUMP STATION OVERVIEW

SHEET	C5.0
SEQ	
DATE	04/2024
PROJ. NO.	022067

4/19/24

SAVED: 4/19/2024 8:52 AM CNEWELL, PLOTTED: 4/19/2024 11:16 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-ART-PUMP-STA-ESCP-CLR-GRUB-ANG



APN 223-183-003
 324 Alderpoint Rd.
 Lands of State of California
 Doc. 1105 OR 598

APN 223-181-025
 30 Arthur Rd.
 Lands of Langley
 Doc. 1998-025150

APN 223-183-005
 414 Alderpoint Rd.
 Lands of Souvanna
 Doc. 2020-02637

PLAN
 1"=20'

LEGEND

- WETLAND AREA
- SENSITIVE PLANTS COMMUNITY
- CLEARING AND GRUBBING
- DEMO

DEMOLITION NOTES:

1. EXISTING FACILITIES SHALL REMAIN FULLY OPERATIONAL UNTIL NEW FACILITIES ARE FULLY OPERATIONAL. DEMOLITION OF EXISTING FACILITIES SHALL NOT BEGIN UNTIL APPROVED BY THE OWNER AND THE ENGINEER.
2. SEE ELECTRICAL PLANS FOR ADDITIONAL DEMOLITION INFORMATION.
3. DEMO (E) 4" WATER MAIN TO ACCOMMODATE NEW INSTALLATION. COORDINATE WITH GSD FOR WATER OUTAGES AND RESTORATION. PROVIDE TEMPORARY PIPING IF INSTALLATION, PRESSURE TESTING, AND DISINFECTION WILL RESULT IN AN OUTAGE LONGER THAN 8 HOURS



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 100
 WUBURN, CA 95686
 WWW.S&W-ENR.COM
 707-441-8855

NO.	DATE	BY	REVISION

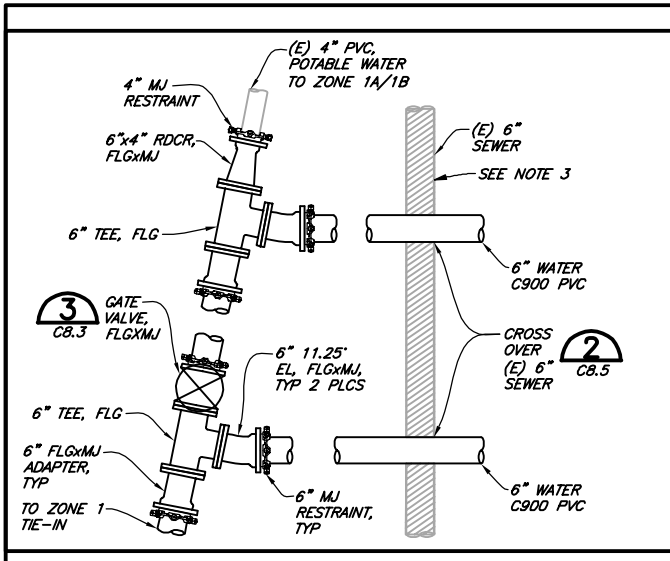
DSGN	JSD	CHK	PEG
DR	CDN/JWF	APVD	

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
ALDERPOINT PUMP STATION SITE PREPARATION AND DEMOLITION

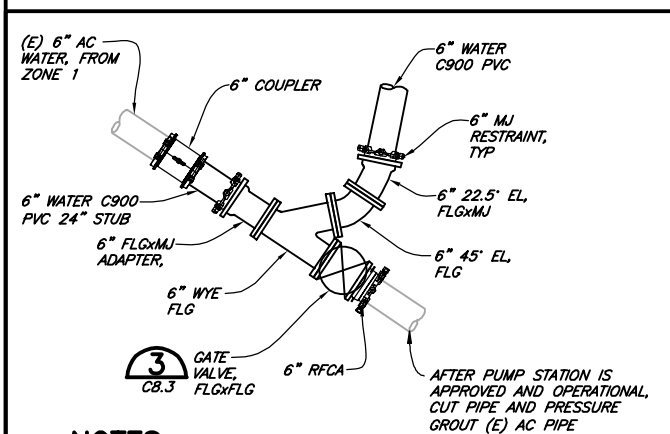
SHEET **C5.1**
 SEQ
 DATE **04/2024**
 PROJ. NO. **022067**

4/19/24

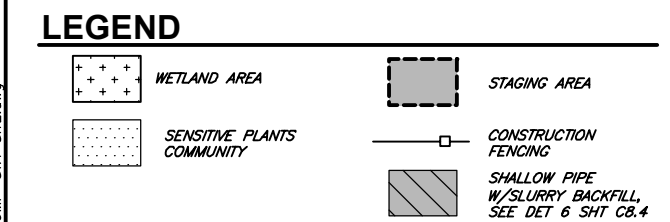
SAVED: 4/19/2024 11:01 AM CNEWELL, PLOTTED: 4/19/2024 11:16 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-ALDRPOINT-PUMP-SITE.dwg



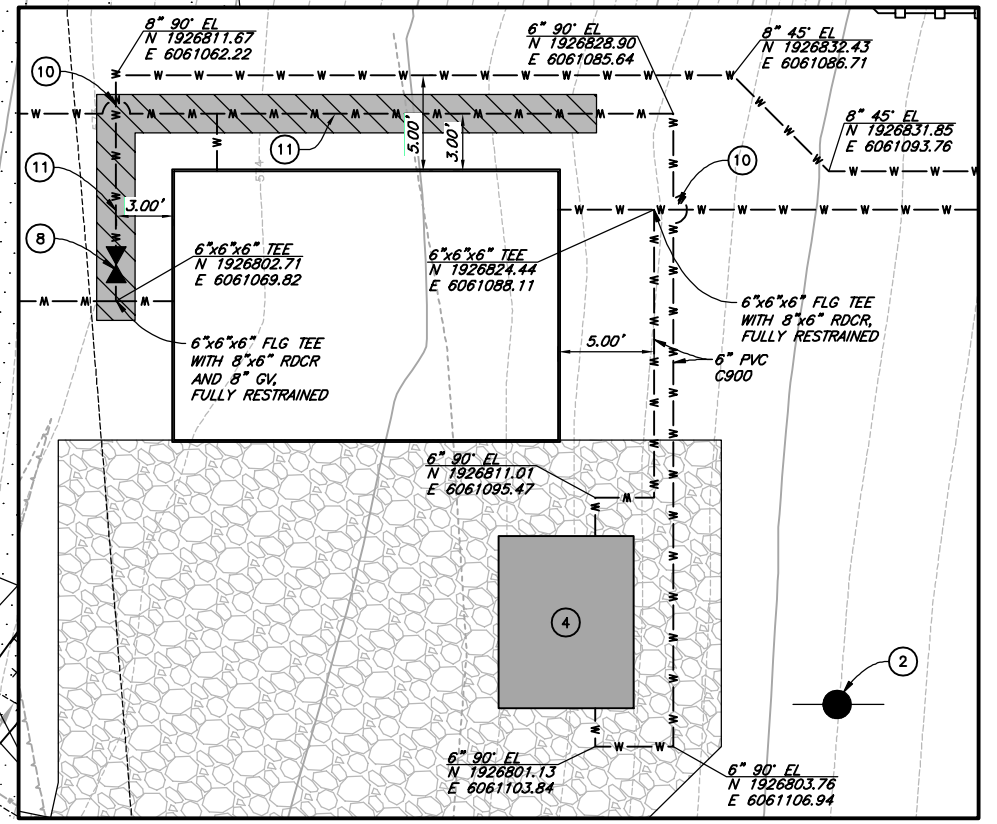
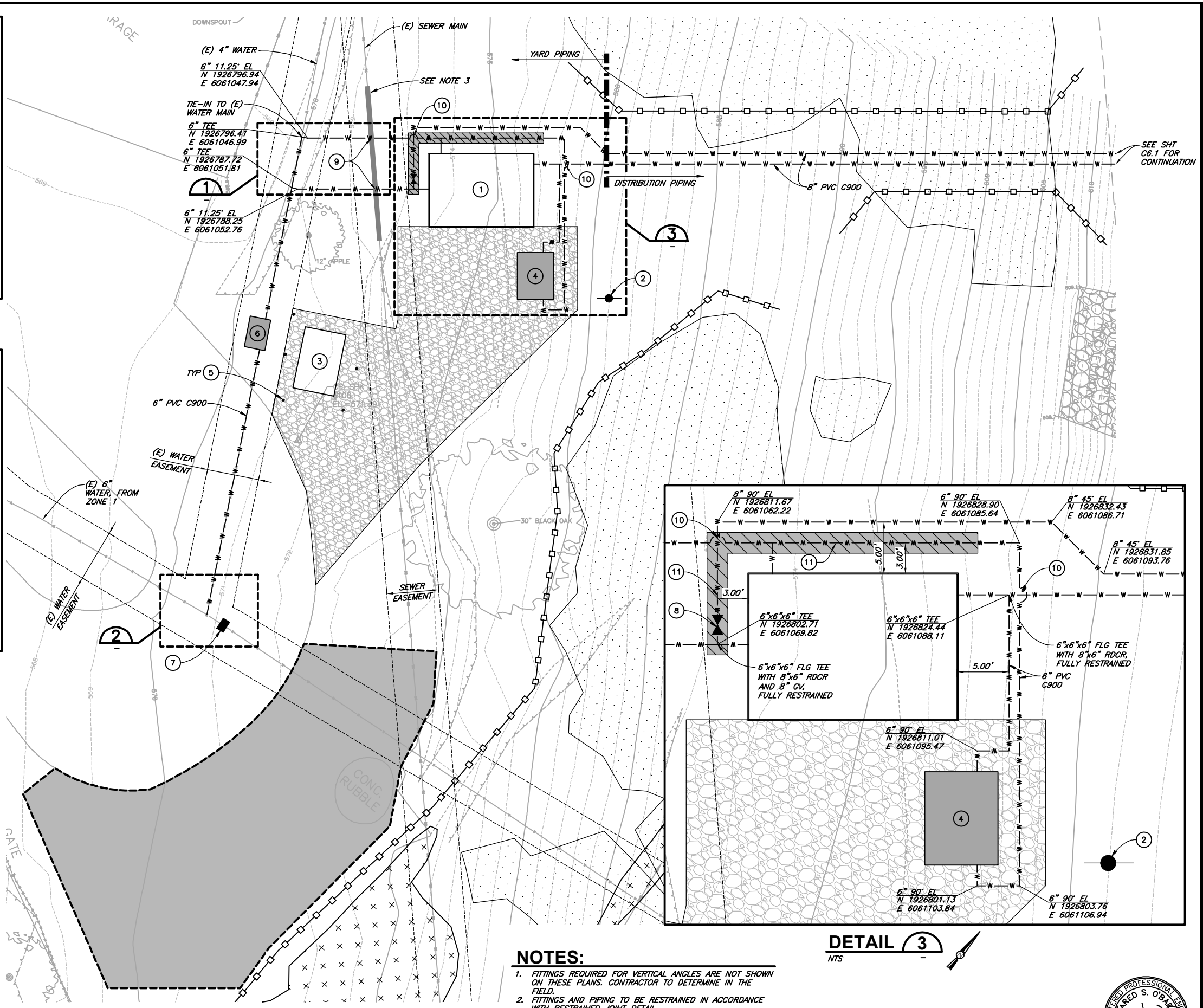
DETAIL 1
NTS



DETAIL 2
NTS



- KEY NOTES:**
- ALDERPOINT PUMP STATION, SEE SHT C5.4
 - NEW POWER POLE, SEE ELECTRICAL PLANS
 - GENERATOR ON CONC PAD, SEE ELECTRICAL PLANS
 - PRESSURE REDUCING VALVES IN VAULT, SEE DET 2 ON SHT C8.0
 - BOLLARDS, SEE DET 3 ON SHT C8.2
 - ZONE 1 CHECK VALVE VAULT, SEE DET 1 ON SHT C8.0
 - PRESSURE GROUT (E) PIPE, SEE C5.1 FOR EXTENT
 - GATE VALVE, SEE DET 3 ON SHT C8.3
 - CROSSING OVER (E) SEWER, MAINTAIN MIN 1 FOOT VERTICAL SEPARATION, SEE DET 2 ON SHT C8.5
 - NEW PIPE CROSSING, SEE DET 3 ON SHT C8.5
 - PIPE PARALLEL TO FOOTING SEE DET 6 ON SHT C8.4



DETAIL 3
NTS

- NOTES:**
- FITTINGS REQUIRED FOR VERTICAL ANGLES ARE NOT SHOWN ON THESE PLANS. CONTRACTOR TO DETERMINE IN THE FIELD.
 - FITTINGS AND PIPING TO BE RESTRAINED IN ACCORDANCE WITH RESTRAINED JOINT DETAIL.
 - EXPOSE EXISTING SEWER PIPE SEGMENT A MINIMUM OF 10' BEYOND NEW WATER PIPE CROSSINGS. ALL SEWER PIPE JOINTS WITHIN THE BOUNDS SHALL RECEIVE HEAVY DUTY PE TAPE PIPE WRAP. SEWER PIPE SHALL BE BACKFILLED WITH CEMENT SLURRY.

PLAN
1"=10'



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 200
 WUBRENS, CA 95001
 WWW.S&W.COM
 707-441-8855

NO.	DATE	REVISION	BY

DSGN: JSO
 DR: CDN/JWF
 CHK: PEG
 APVD: [Signature]

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA

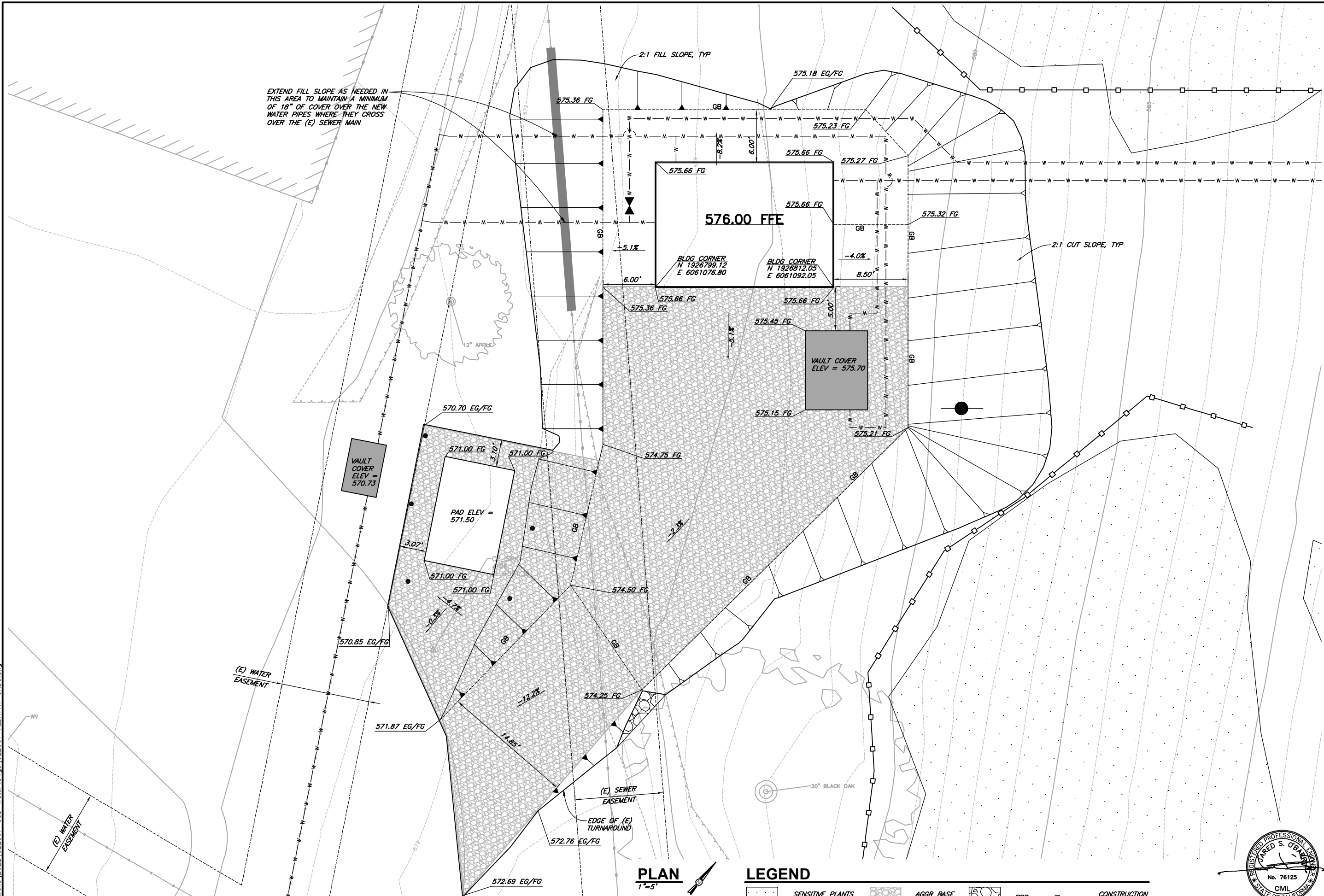
**ALDERPOINT PUMP STATION SITE
 PLAN & YARD PIPING**

SHEET
C5.2

SEQ
 DATE: 04/2024
 PROJ. NO.
 022067

4/19/24

SAVED: 4/19/2024 11:01 AM CNEWELL, PLOTTED: 4/19/2024 11:17 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-ALDRPNT-GRDG.dwg



EXTEND FILL SLOPE AS NEEDED IN THIS AREA TO MAINTAIN A MINIMUM OF 18" OF COVER OVER THE NEW WATER PIPES WHERE THEY CROSS OVER THE (E) SEWER MAIN

PLAN
 1"=5'

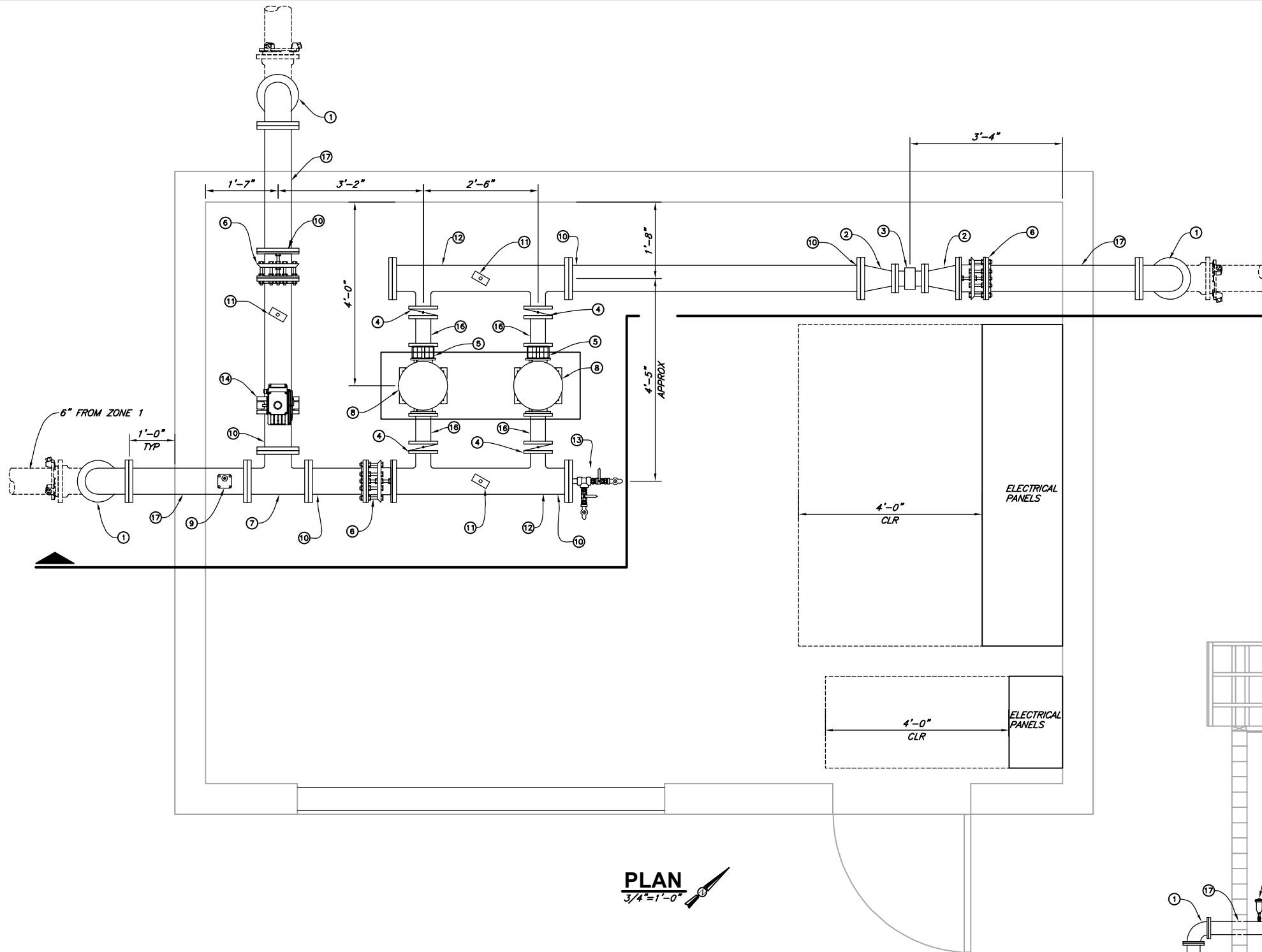
LEGEND

	SENSITIVE PLANTS COMMUNITY		AGGR BASE SURFACING		RSP		CONSTRUCTION FENCING
--	----------------------------	--	---------------------	--	-----	--	----------------------



VERIFIED SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON SCALES ACCORDINGLY	
812 W. WABASH AVE. SUITE 100 BUREN, CA 95901 WWW.SJW-ENR.COM 707-441-8855	
DSGN JSO DR CDN/JWF CHK PEG APVD	NO. _____ DATE _____ REVISION _____ BY _____
GARBERVILLE SANITARY DISTRICT GARBERVILLE TANKS REPLACEMENT PROJECT GARBERVILLE, CALIFORNIA ALDERPOINT PUMP STATION GRADING PLAN	
SHEET C5.3	
SEQ _____ DATE 04/2024 PROJ. NO. 022067	
4/19/24	

SAVED: 4/19/2024 8:55 AM CNEWELL, PLOTTED: 4/19/2024 11:17 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Drawings\022067-ART-PUMP-STA-MECH.dwg



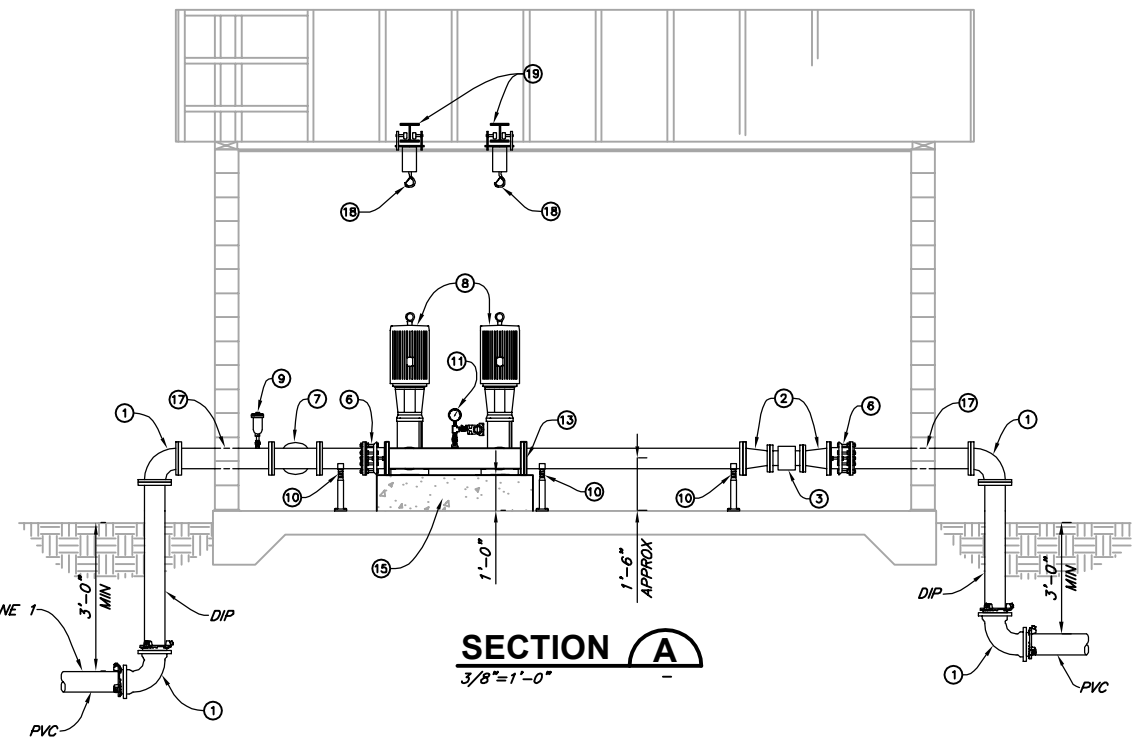
PLAN
 3/4" = 1'-0"

KEY NOTES:

- ① 6" DIP EL
- ② 6"x3" DIP REDUCER
- ③ 3" MAG FLOW METER, SEE ELECTRICAL PLANS FOR DETAILS
- ④ 3" BUTTERFLY VALVE, LUG
- ⑤ 3" WAFER SILENT CHECK VALVE
- ⑥ 6" DISMANTLING JOINT
- ⑦ 6" DIP TEE
- ⑧ VERTICAL MULTI-STAGE PUMP
- ⑨ AIR RELEASE VALVE, SEE DET 4 ON SHT C8.5
- ⑩ PIPE SUPPORT, FLOOR, SEE DET 1 ON SHT C8.4
- ⑪ PRESSURE INSTRUMENTS, SEE ELECTRICAL AND CONTROLS PLANS FOR DETAILS. INCLUDE MECHANICAL GAUGE 0-100 PSI DET 6 SHT C8.5
- ⑫ FABRICATED STEEL OR DUCTILE IRON PIPE HEADER, FLANGED, SEE NOTE 5
- ⑬ 3/4" TEE WITH 3/4" SST BALL VALVES AND THREADED NIPPLES. 1/2" SAMPLE VALVE, SMOOTH OUTLET & 3/4" HOSE BIBB WITH THREADED OUTLET SEE DTL 5 SHT C8.5 FOR SIMILAR. PROVIDE FITTINGS AND NIPPLES.
- ⑭ 6" BUTTERFLY VALVE WITH ELECTRIC OPERATOR, 200PSI RATING MINIMUM, SEE NOTE 4 BELOW
- ⑮ EQUIPMENT PAD, SEE DET 5 ON SHT C8.4
- ⑯ 3" FLANGED SPOOL, 8" MIN
- ⑰ CMU WALL PIPE PENETRATION, SEE DET 4 ON SHT C8.4
- ⑱ 2 TON CHAIN HOIST WITH TROLLEY
- ⑲ HOIST BEAM, SEE STRUCTURAL PLANS


NOTES:

- 1. ALL PIPING, VALVES, FITTINGS, INSTRUMENTATION AND APPURTENANCES SHALL HAVE A 200 PSI PRESSURE RATING.
- 2. ALL DIMENSIONS TO PIPE OR EQUIPMENT CENTERLINE UNLESS OTHERWISE NOTED.
- 3. CONTRACTOR SHALL COORDINATE FLANGE CLASS OF CONNECTED EQUIPMENT, VALVES, AND PIPING TO ENSURE COMPATIBILITY AND PRESSURE RATING.
- 4. MOTOR OPERATED VALVE SHALL BE CLOSED WHENEVER A PUMP CYCLES ON, AND OPEN AT ALL OTHER TIMES. THE INTENT IS FOR ZONE 1A/1B TO BE SUPPLIED FROM ZONE 1 EXCEPT WHEN PUMPS ARE RUNNING. WHEN PUMPS ARE RUNNING, ZONE 1A/1B WILL BE SUPPLIED FROM ZONE 4 THROUGH THE 4" AND 6" PRYS LOCATED IN THE EXTERNAL VAULT ADJACENT TO THE PUMP BUILDING.
- 5. IF CONTRACTOR UTILIZES STEEL HEADER OPTION, USE DIELECTRIC FLANGE ISOLATION KIT WHEN TRANSITIONING BETWEEN DISSIMILAR PIPING MATERIAL SUCH AS STEEL TO DUCTILE IRON. SEE DET 3 SHT C8.4.

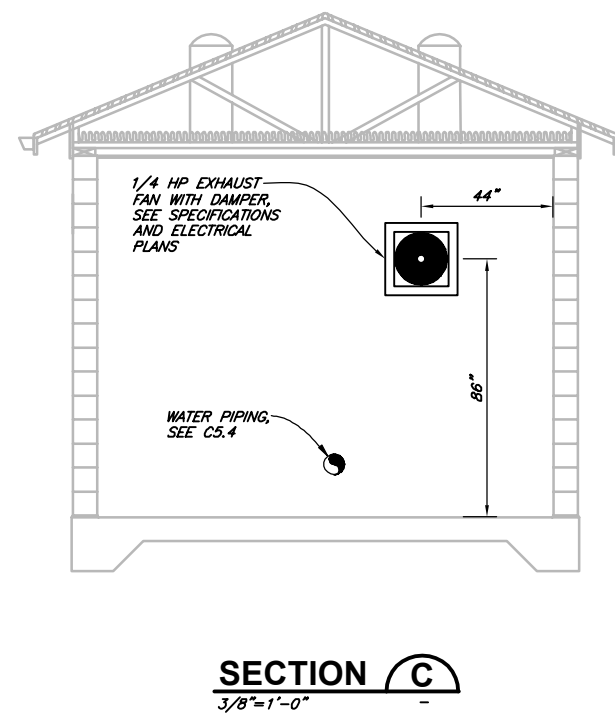
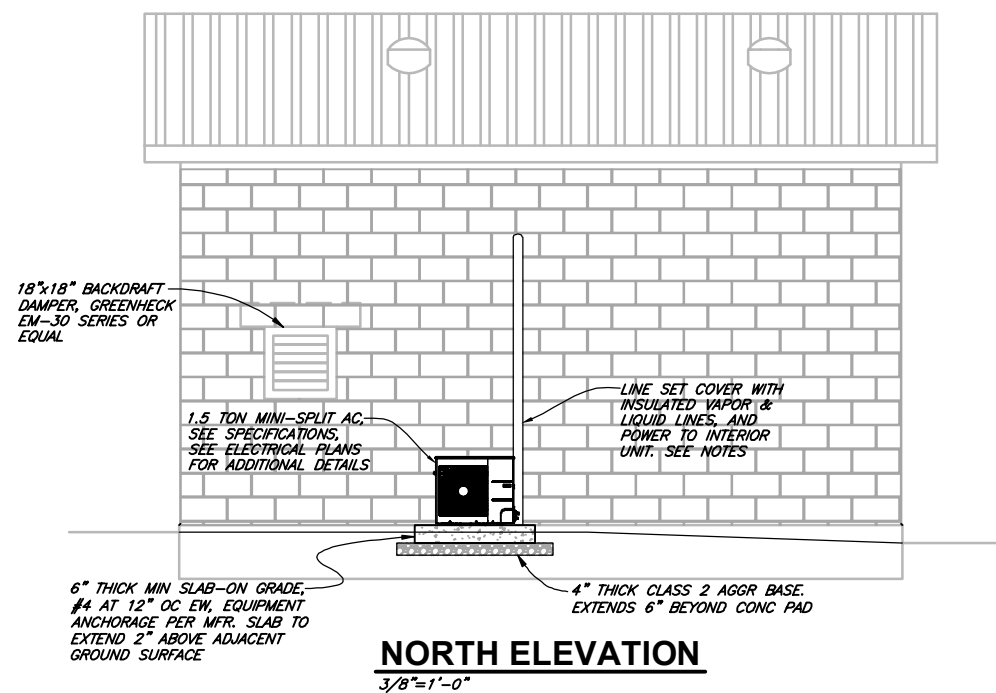
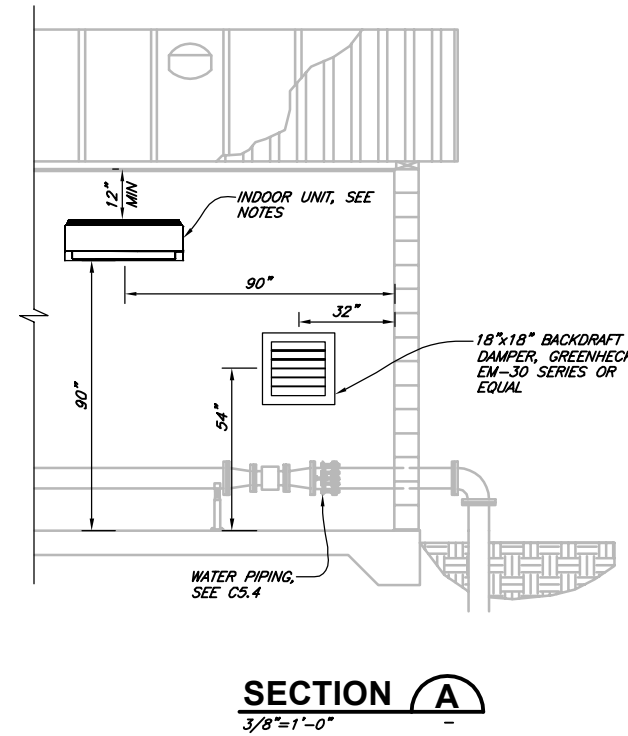
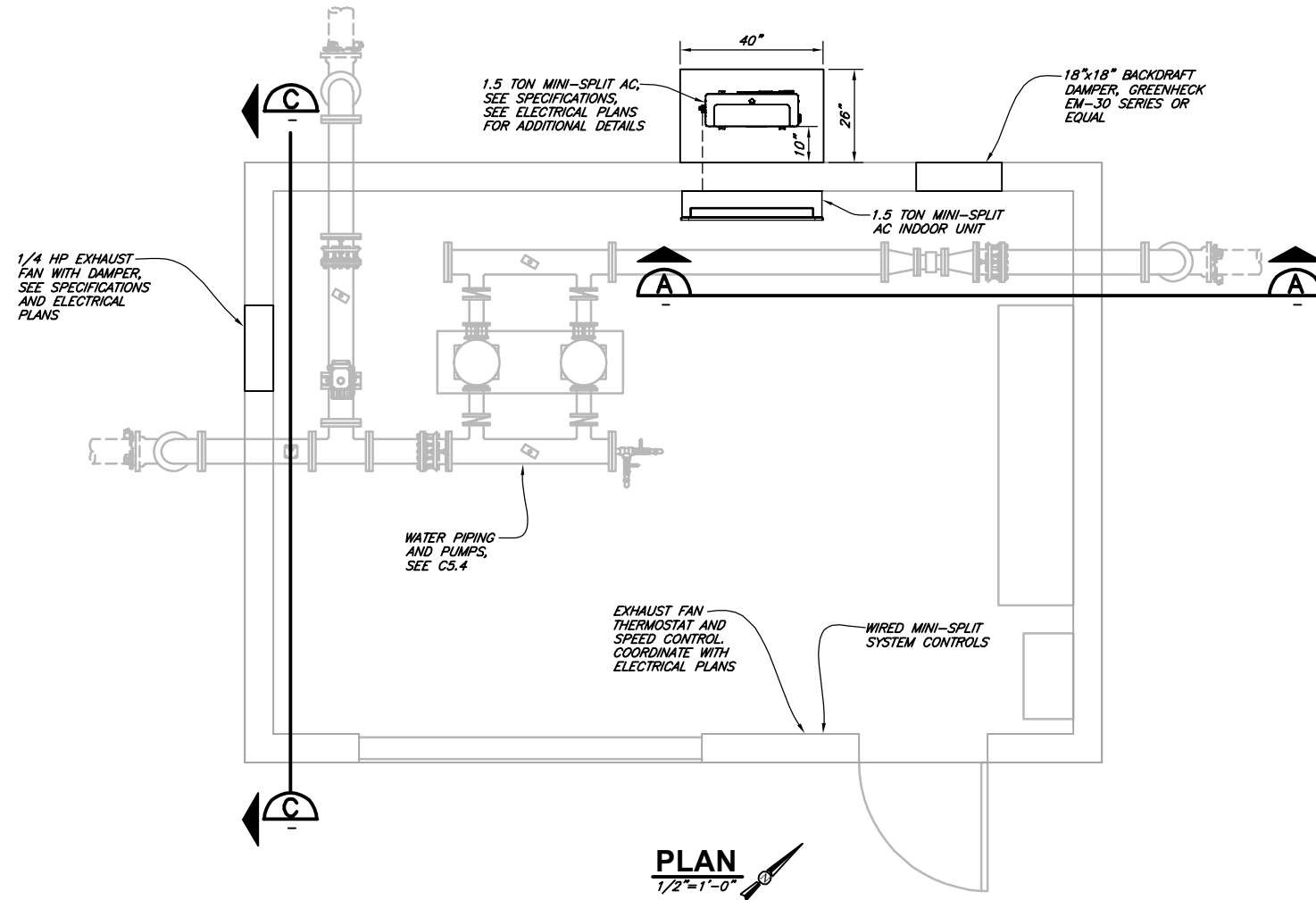


SECTION A
 3/8" = 1'-0"



 W&S ENGINEERING, INC. 812 W. WABASH AVE. BUREN, CA 95901 WWW.WS-ENR.COM 707-441-8855		VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON SCALES ACCORDINGLY
DSGN JSO DR CDN/JWF CHK PEG APVD	REVISION NO. DATE BY	
GARBERVILLE SANITARY DISTRICT GARBERVILLE TANKS REPLACEMENT PROJECT GARBERVILLE, CALIFORNIA ALDERPOINT PUMP STATION MECHANICAL PLAN		
SHEET C5.4 SEQ DATE 04/2024 PROJ. NO. 022067		

SAVED: 4/19/2024 8:56 AM CNEWELL, PLOTTED: 4/19/2024 11:17 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-ALDRPNT-PUMP-STA-HVAC.dwg



NOTES:

1. INSTALLATION OF MINI-SPLIT SYSTEM SHALL BE IN ACCORDANCE WITH MANUFACTURERS PUBLISHED MANUALS. THE SYSTEM IS SHOWN IN A DIAGRAMMATIC MANNER AND THE CONTRACTOR IS RESPONSIBLE FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM. NO OMISSION ON THESE PLANS SHALL RELIEVE THE CONTRACTOR OF THIS REQUIREMENT.
2. CONTRACTOR TO PROVIDE ALL NECESSARY PIPING, FITTINGS, AND SHALL ENSURE THAT PIPING ALLOWS EXPANSION AND CONTRACTION VIA PURPOSE-BUILT LOOPS OR OFFSETS. PROVIDE WALL PENETRATION SEALING PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE DRAIN HOSE FOR INDOOR AND OUTDOOR UNITS ROUTED AWAY FROM THE BUILDING. PROVIDE LIQUID AND VAPOR PIPE INSULATION PER MANUFACTURER GUIDANCE. SUPPORT PIPING PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE LINE SET COVER WITH ALL NECESSARY PENETRATIONS AND BENDS FOR A CLEAN AND COMPLETE INSTALLATION.
3. CONTRACTOR SHALL PROVIDE SLAB AND WALL MOUNTING PER THE MANUFACTURER'S REQUIREMENTS.

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 100
 WUBRENSH, CALIFORNIA
 WWW.SJW-ENR.COM
 707-441-8855

SJW

NO.	DATE	REVISION	BY

DSGN: JSO
 DR: CDN/JWF
 CHK: PEG
 APVD: [Signature]

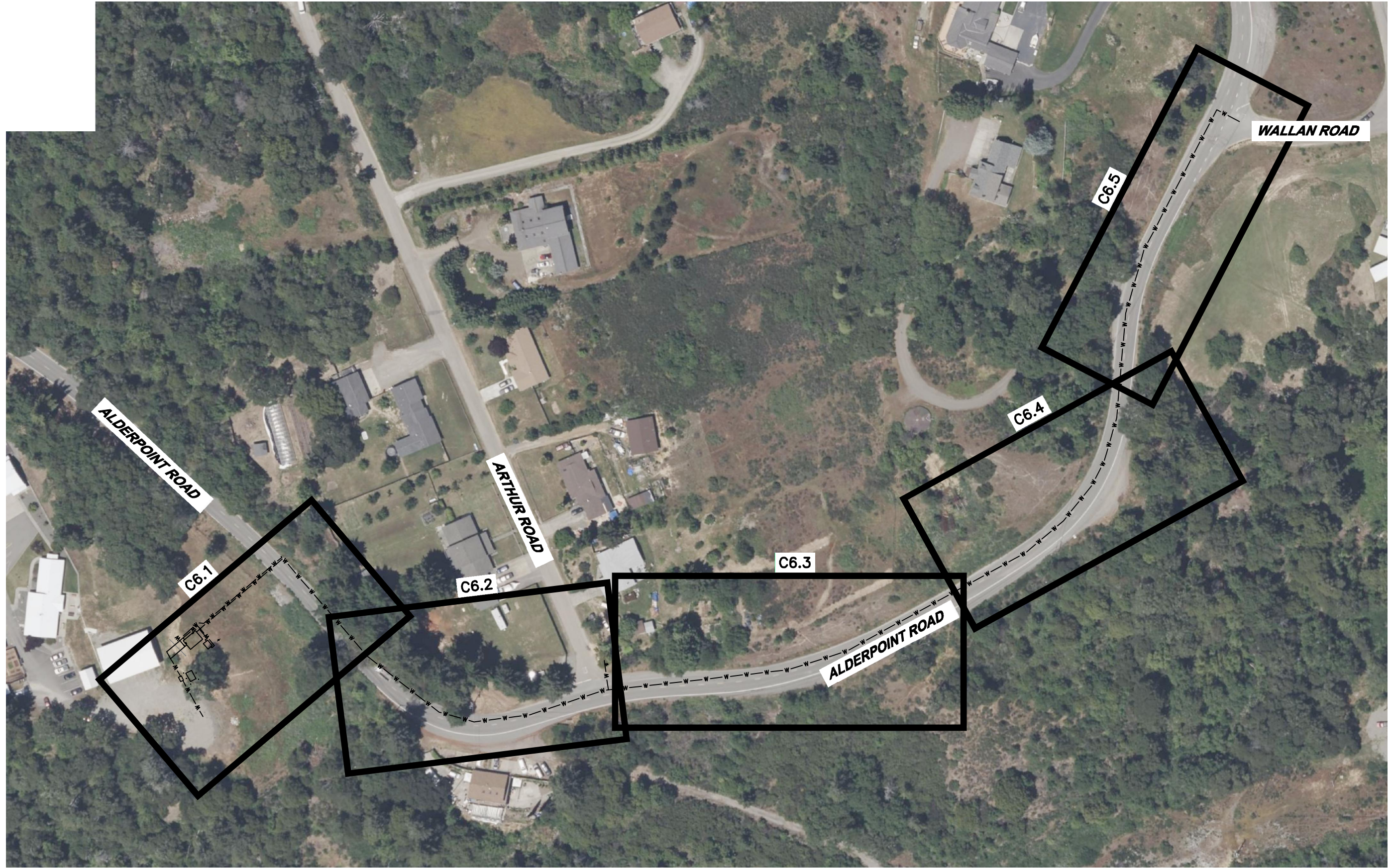
GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
**ALDERPOINT PUMP STATION
 HVAC PLAN**

SHEET
C5.5
 SEQ
 DATE 04/2024
 PROJ. NO. 022067

REGISTERED PROFESSIONAL ENGINEER
 PARED S. O'BRYEN
 No. 76125
 CIVIL
 STATE OF CALIFORNIA

4/19/24

SAVED: 4/19/2024 8:56 AM CNEWELL, PLOTTED: 4/19/2024 11:17 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Drawgs\022067-ALDRPNT-RD-WTR-MAIN-OVER.dwg



PLAN
 1"=60'



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 100
 WUBURN, CA 95981
 WWW.SJW-ENR.COM
 707-441-8855



NO.	DATE	REVISION	BY

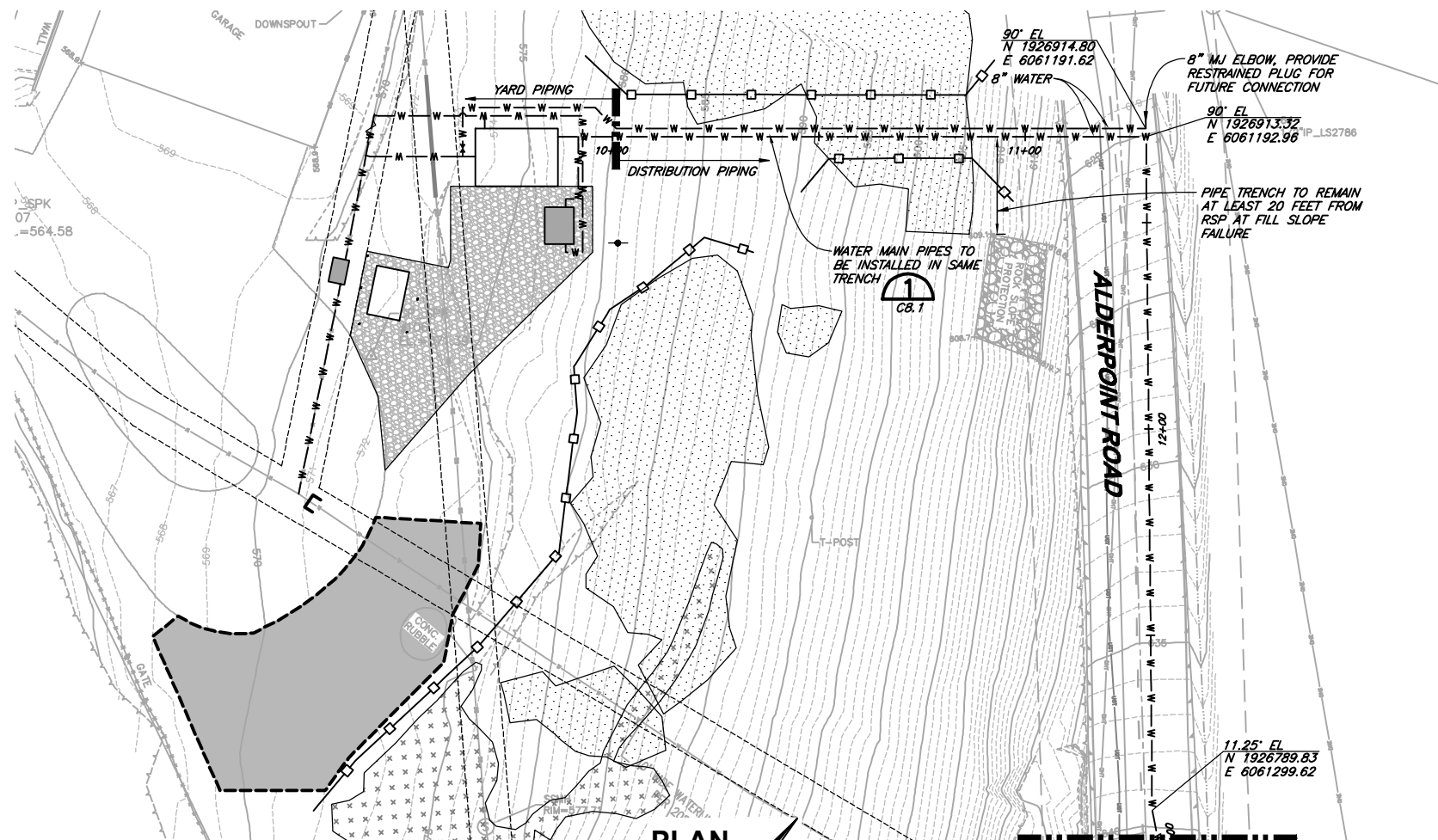
DESIGN	JSO
DR	CDN/JWF
CHK	PEG
APVD	

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
**ALDERPOINT ROAD WATER MAIN
 OVERVIEW**

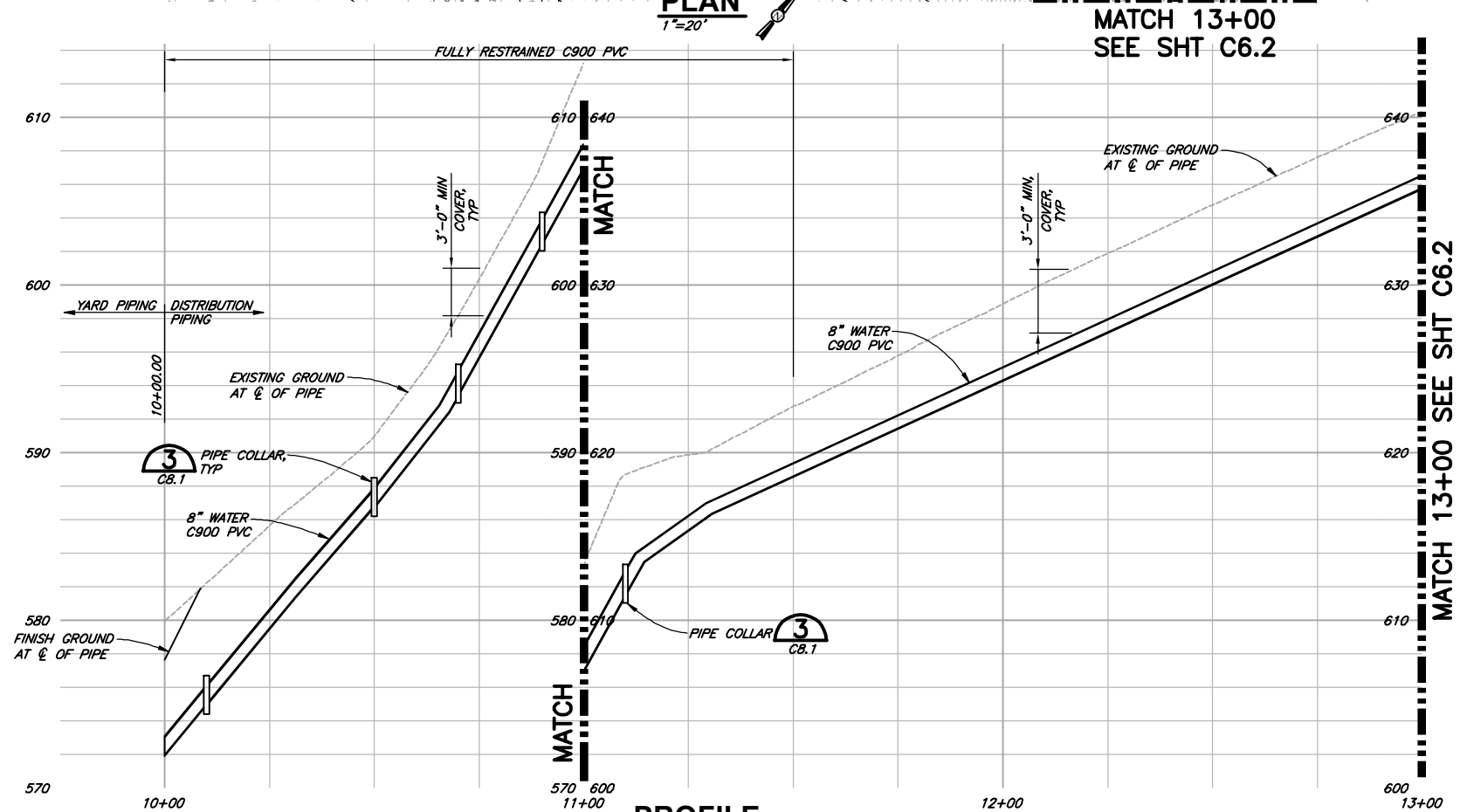
SHEET	C6.0
SEQ	
DATE	04/2024
PROJ. NO.	022067

4/19/24

SAVED: 4/19/2024 11:01 AM CNEWELL, PLOTTED: 4/19/2024 11:18 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-ALDRPOINT-WATER-MAIN-PWP.dwg



PLAN
1"=20'



PROFILE
SCALE: 1"=20' H
1"=5' V

LEGEND

- WETLAND AREA
- SENSITIVE PLANTS COMMUNITY
- STAGING AREA
- AGGR BASE SURFACING
- RSP
- CONSTRUCTION FENCING

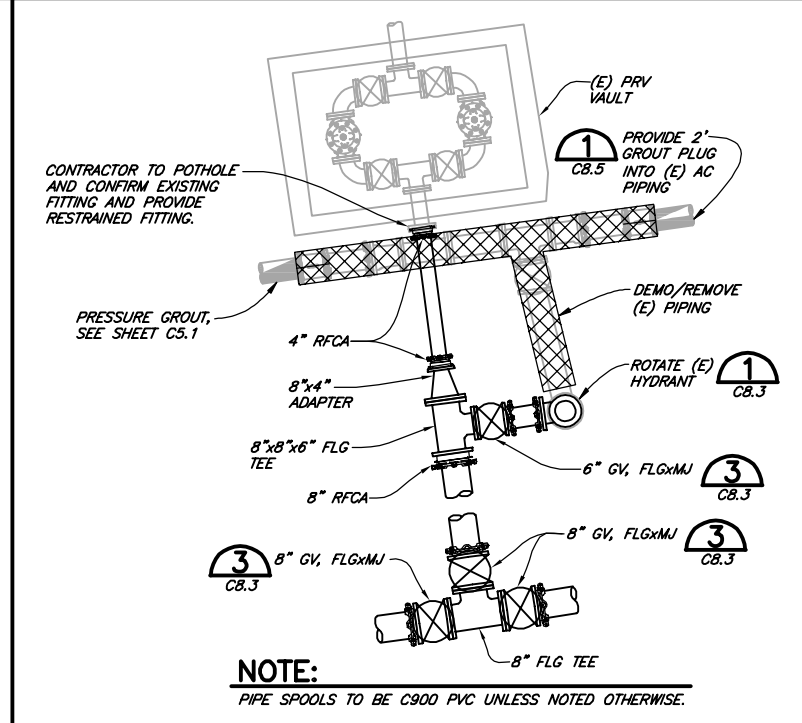
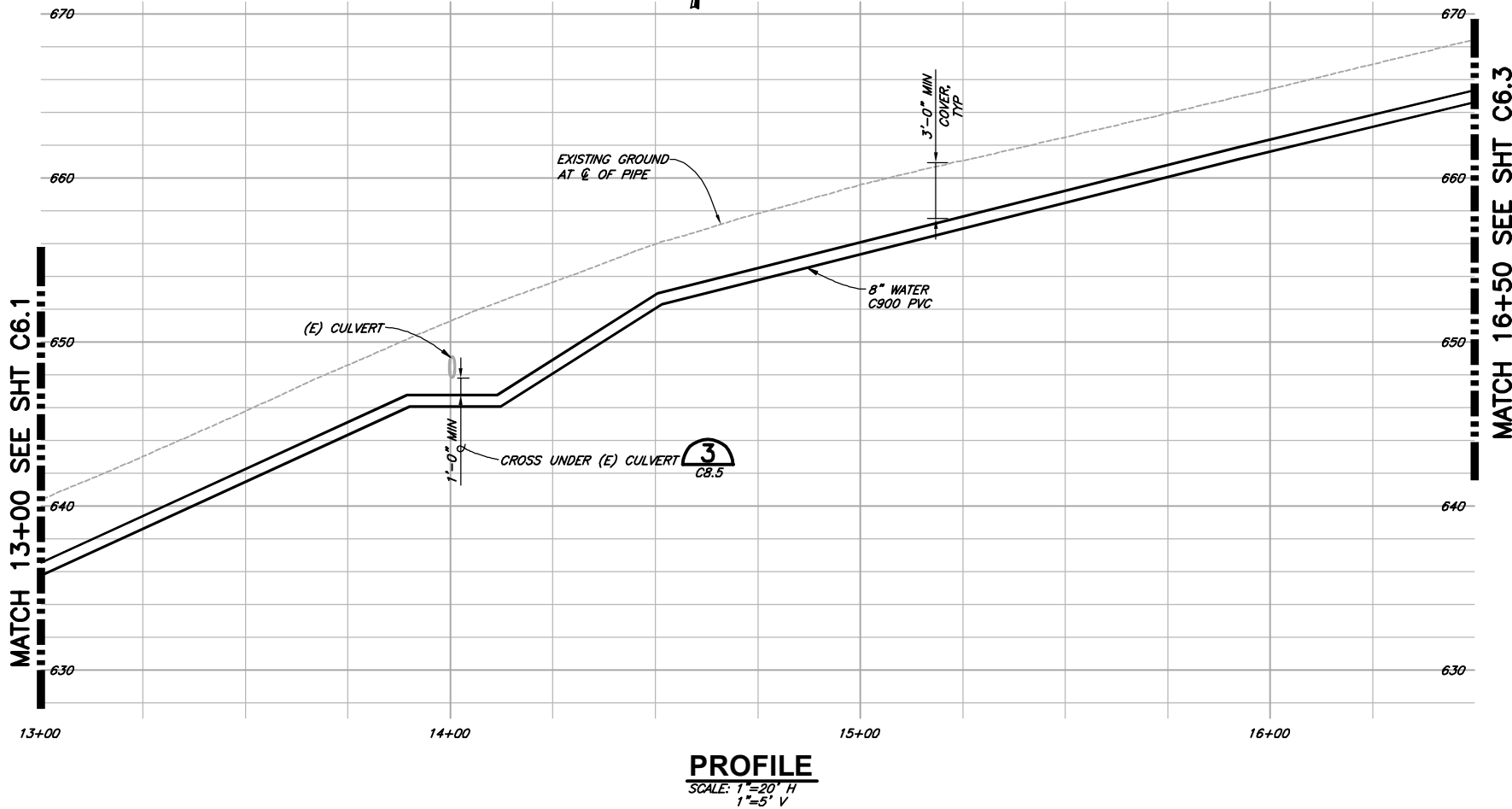
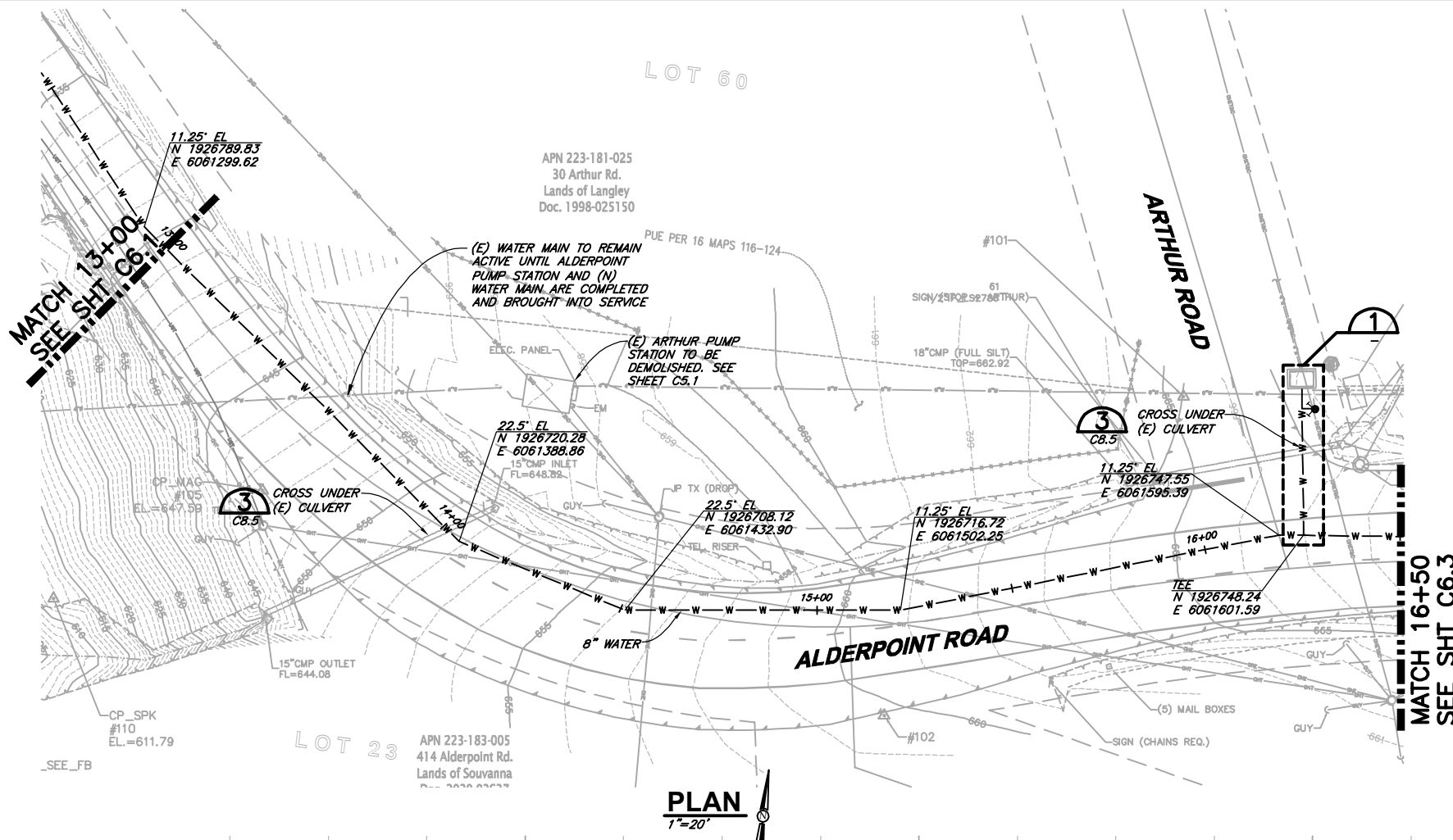
NOTES:

1. FITTINGS REQUIRED FOR VERTICAL ANGLES ARE NOT SHOWN ON THESE PLANS. CONTRACTOR TO DETERMINE IN THE FIELD.
2. FITTINGS AND PIPING TO BE RESTRAINED IN ACCORDANCE WITH RESTRAINED JOINT DETAIL.



 812 W. WABASH AVE. SUITE 201 WUBRENS, CA 95001 WWW.S&W.COM 707-441-8855		VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON SCALES ACCORDINGLY
DSGN JSO DR CDN/JWF CHK PEG APVD	REVISION NO. DATE BY	
GARBERVILLE SANITARY DISTRICT GARBERVILLE TANKS REPLACEMENT PROJECT GARBERVILLE, CALIFORNIA ALDERPOINT ROAD WATER MAIN PLAN AND PROFILE		
SHEET C6.1		PROJ. NO. 022067
DATE 04/2024		4/19/24

SAVED: 4/19/2024 11:01 AM NEWELL, PLOTTED: 4/19/2024 11:18 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Drawgs\022067-ALDRPNT-WATER-MAIN-PWP.dwg

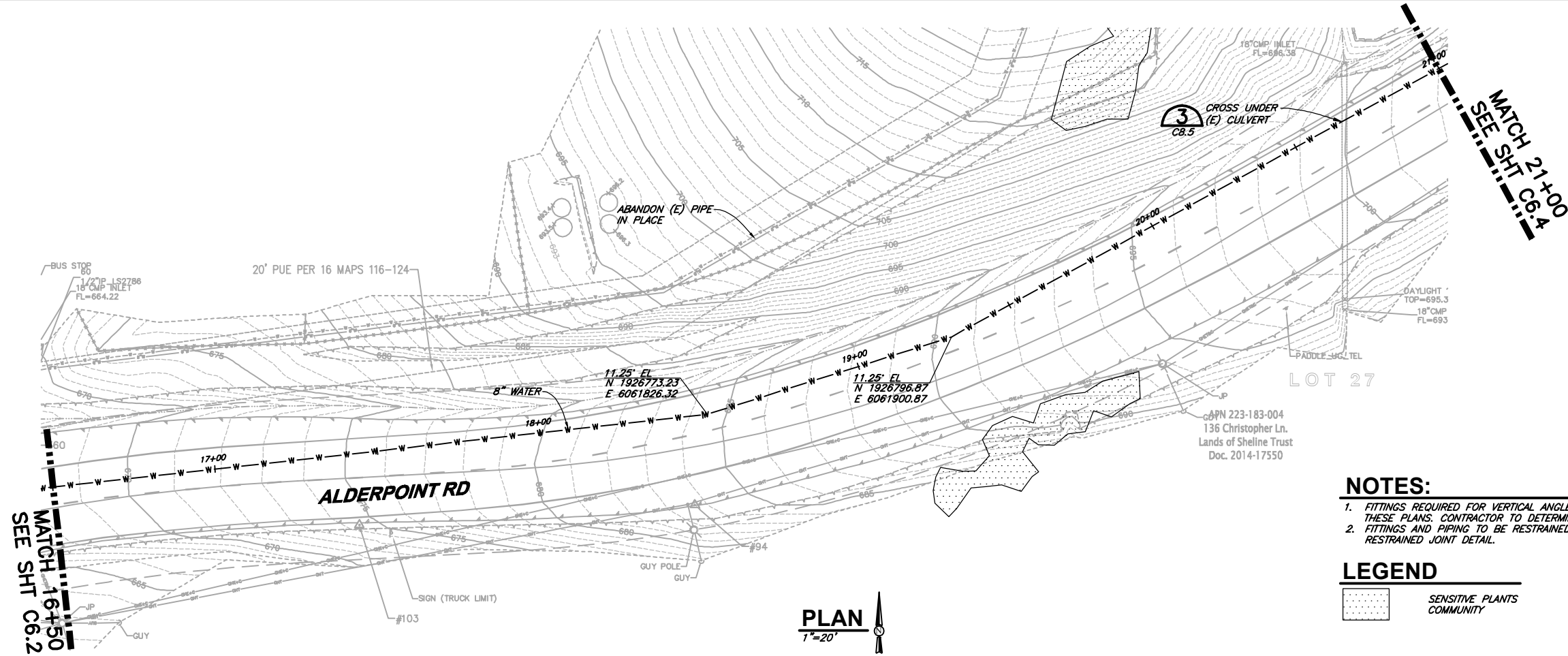


- NOTES:**
- FITTINGS REQUIRED FOR VERTICAL ANGLES ARE NOT SHOWN ON THESE PLANS. CONTRACTOR TO DETERMINE IN THE FIELD.
 - FITTINGS AND PIPING TO BE RESTRAINED IN ACCORDANCE WITH RESTRAINED JOINT DETAIL.



VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON SCALES ACCORDINGLY	
812 W. WABASH AVE. SUITE 200 WAREHOUSES WILMINGTON, CA 95791 WWW.S&W-USA.COM 707-441-8855	
DSGN JSO DR CDN/JWF CHK PEG APVD	BY REVISION DATE NO.
GARBERVILLE SANITARY DISTRICT GARBERVILLE TANKS REPLACEMENT PROJECT GARBERVILLE, CALIFORNIA ALDERPOINT ROAD WATER MAIN PLAN AND PROFILE	
SHEET C6.2	
SEQ DATE 04/2024 PROJ. NO. 022067	
4/19/24	

SAVED: 4/19/2024 11:01 AM CNEWELL, PLOTTED: 4/19/2024 11:19 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-ALDRPNT-WATER-MAIN-PWP.dwg

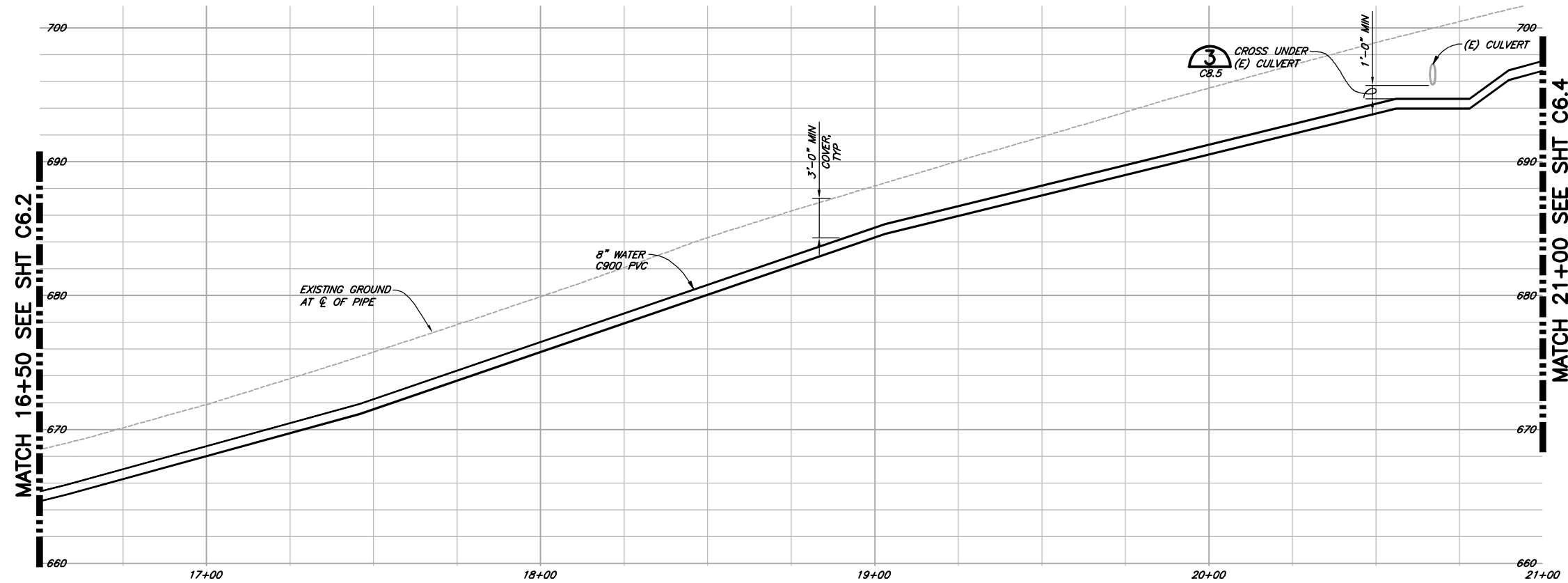


NOTES:

1. FITTINGS REQUIRED FOR VERTICAL ANGLES ARE NOT SHOWN ON THESE PLANS. CONTRACTOR TO DETERMINE IN THE FIELD.
2. FITTINGS AND PIPING TO BE RESTRAINED IN ACCORDANCE WITH RESTRAINED JOINT DETAIL.

LEGEND

SENSITIVE PLANTS COMMUNITY



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 200
 WILMINGTON, CA 95791
 WWW.S&H-ENR.COM
 707-441-8855

S&H

NO.	DATE	REVISION	BY

DSGN	JSO
DR	CDN/JWF
CHK	PEG
APVD	

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA

**ALDERPOINT ROAD WATER MAIN
 PLAN AND PROFILE**

SHEET
C6.3

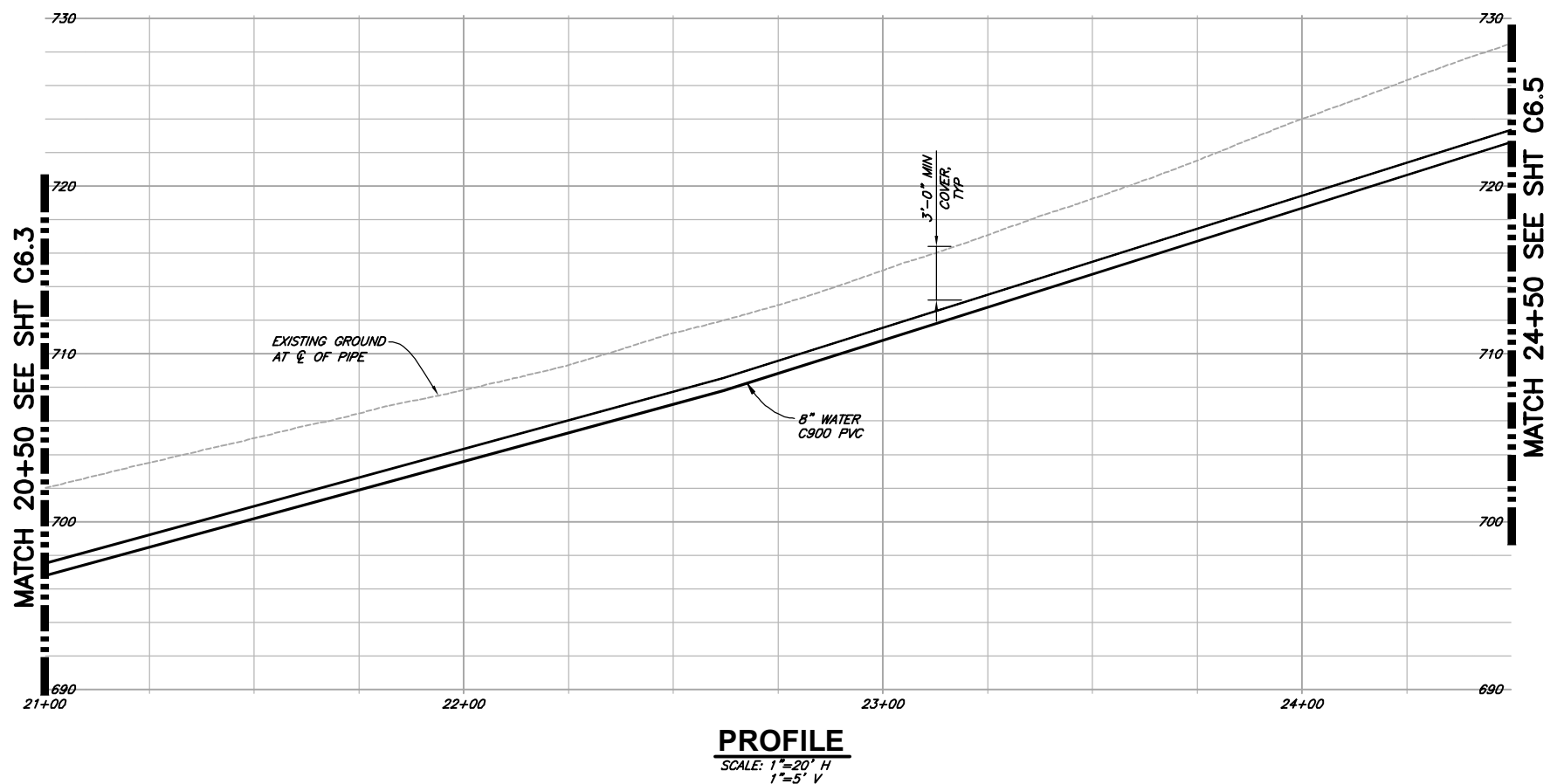
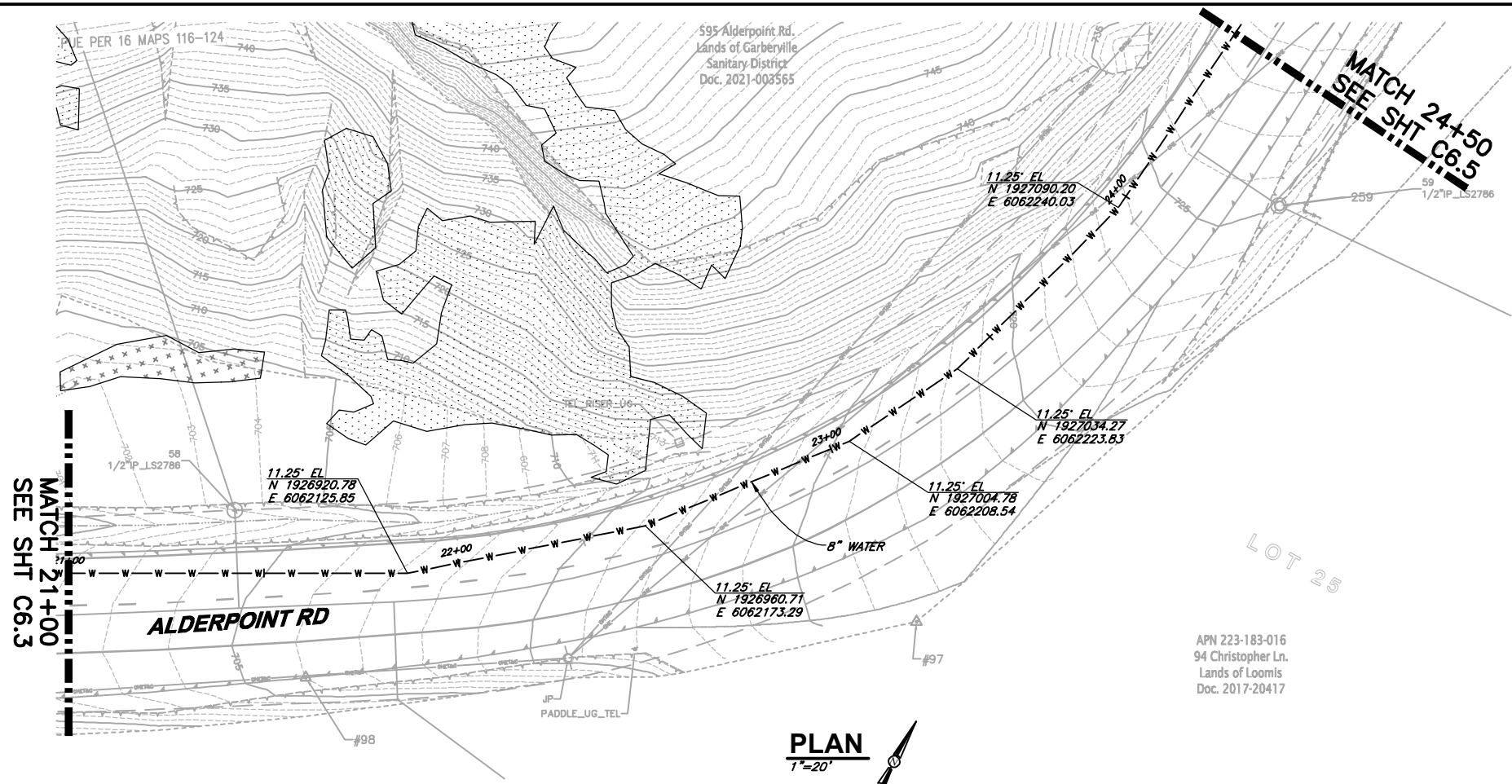
SEQ

DATE 04/2024

PROJ. NO.
 022067

4/19/24

4/19/2024 11:01 AM CNEWELL, PLOTTED: 4/19/2024 11:19 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Drawgs\022067-ALDRPNT-WATER-MAIN-PWP.dwg



NOTES:

1. FITTINGS REQUIRED FOR VERTICAL ANGLES ARE NOT SHOWN ON THESE PLANS. CONTRACTOR TO DETERMINE IN THE FIELD.
2. FITTINGS AND PIPING TO BE RESTRAINED IN ACCORDANCE WITH RESTRAINED JOINT DETAIL.

LEGEND

- WETLAND AREA
- SENSITIVE PLANTS COMMUNITY



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 200
 WAREHOUSING
 WASHINGTON, CA 95973
 WWW.S&W.COM
 707-441-8885

S&W

DESIGN	JSO	BY	
DR	CDN/JWF	REVISION	
CHK	PEG	DATE	
APVD		NO.	

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA

**ALDERPOINT ROAD WATER MAIN
 PLAN AND PROFILE**

SHEET
C6.4

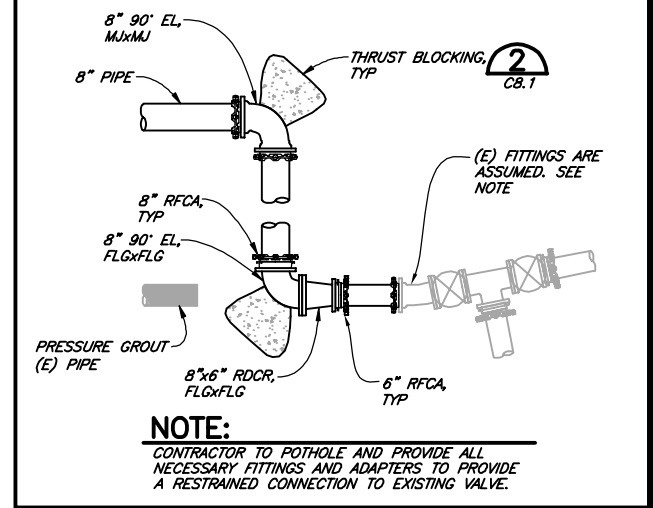
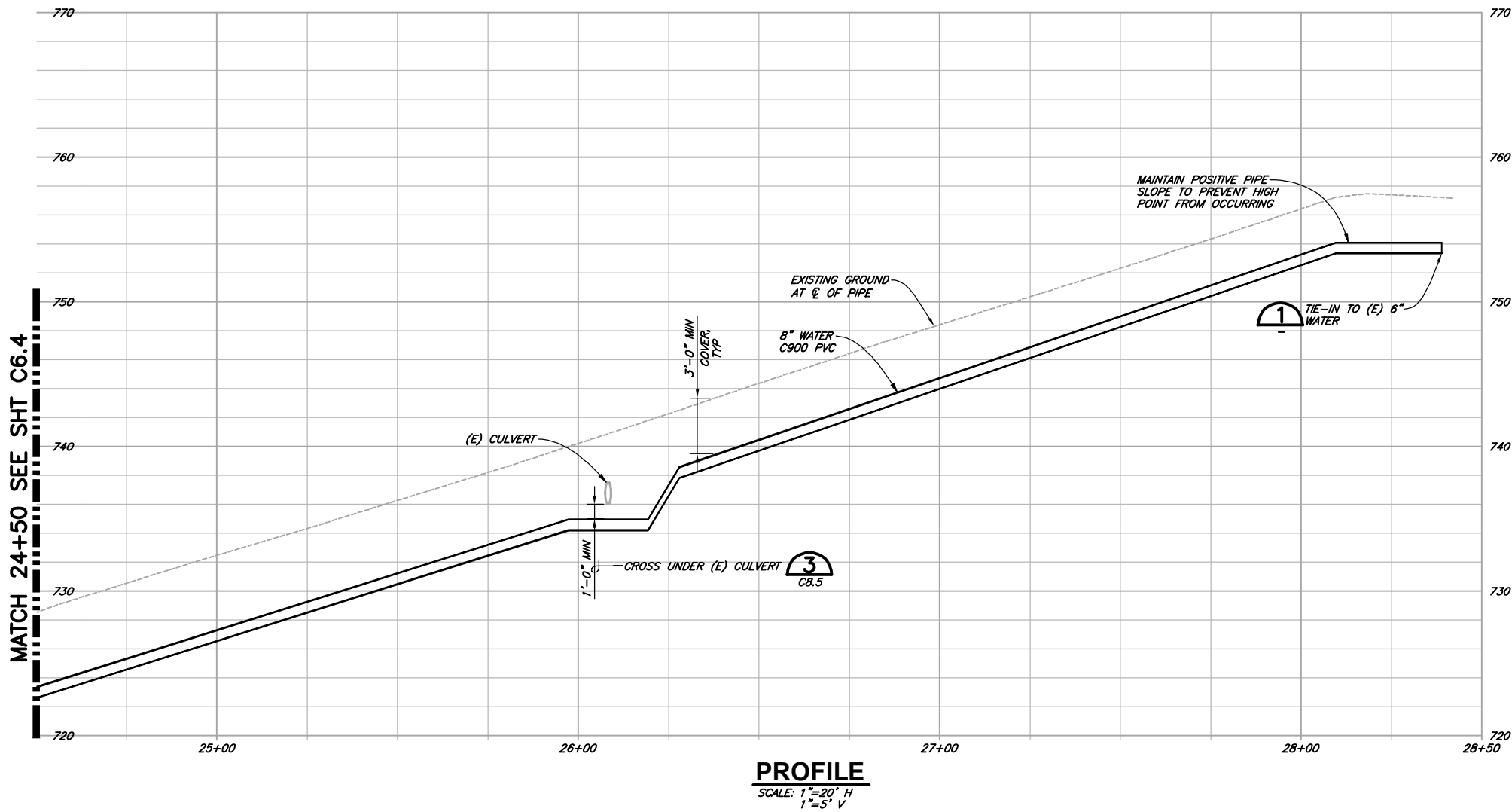
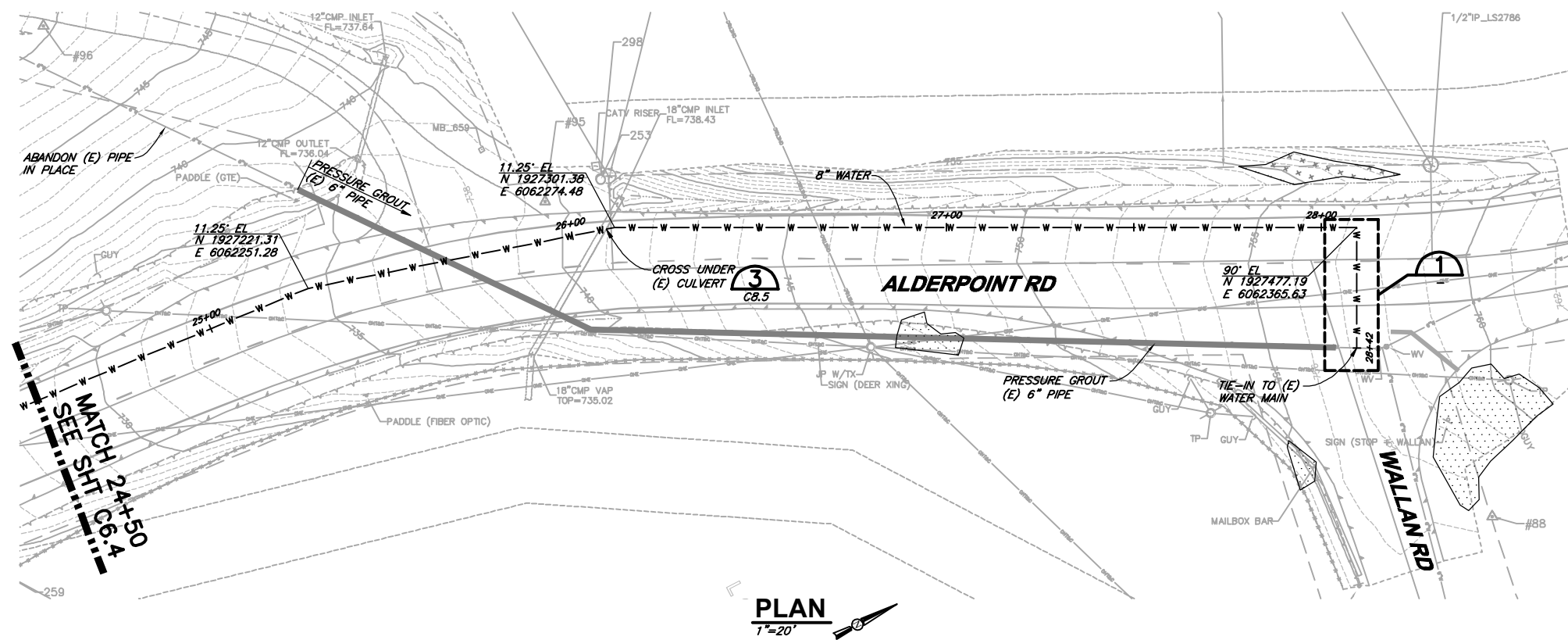
SEQ

DATE
 04/2024

PROJ. NO.
 022067

4/19/24



SAVED: 4/19/2024 11:01 AM CNEWELL, PLOTTED: 4/19/2024 11:19 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-ALDRPNT-WATER-MAIN-PWP.dwg




DETAIL 1
NTS

- NOTES:**
- FITTINGS REQUIRED FOR VERTICAL ANGLES ARE NOT SHOWN ON THESE PLANS. CONTRACTOR TO DETERMINE IN THE FIELD.
 - FITTINGS AND PIPING TO BE RESTRAINED IN ACCORDANCE WITH RESTRAINED JOINT DETAIL.

LEGEND

	WETLAND AREA
	SENSITIVE PLANTS COMMUNITY

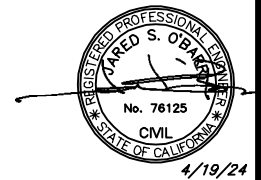


 812 W. WABASH AVE. SUITE 100 WILMINGTON, CA 95791 WWW.S&W.COM 707-441-8885	
SHEET C6.5	PROJECT NO. 022067
DATE 04/2024	PROJECT ALDERPOINT ROAD WATER MAIN PLAN AND PROFILE
DESIGNER JSO	CHECKER PEG
DATE DATE	REVISION REVISION
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON SCALES ACCORDINGLY	

SAVED: 4/19/2024 9:00 AM CNEWELL, PLOTTED: 4/19/2024 11:19 AM NEWELL, CHRIS
F:\Eureka\2022\022067-GSD-Water\Draws\022067-TOB-WELL-GEN-SITE-DWR.dwg



PLAN
1"=10'



VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
SPOKANE, WA 99201
WWW.S&W.COM
707-441-8855



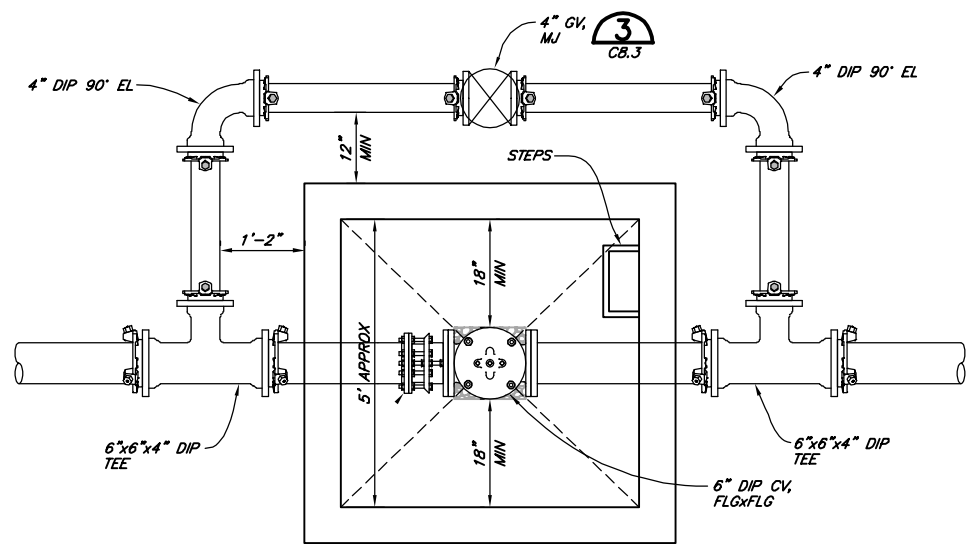
NO.	DATE	REVISION	BY

DSGN JSO
DR CDN/JWF
CHK PEG
APVD

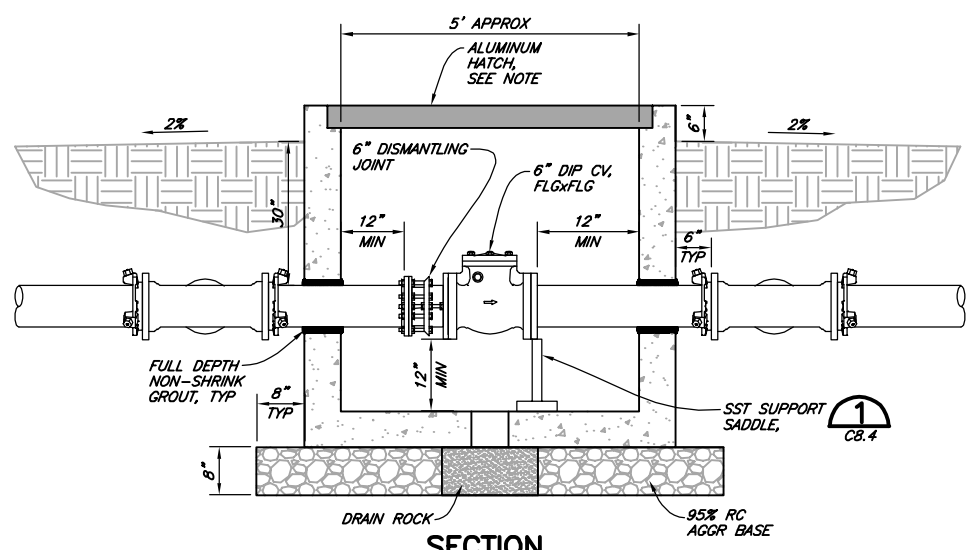
GARBERVILLE SANITARY DISTRICT
GARBERVILLE TANKS REPLACEMENT PROJECT
GARBERVILLE, CALIFORNIA
TOBIN WELL GENERATOR SITE PLAN

SHEET **C7.0**
SEQ
DATE **04/2024**
PROJ. NO. **022067**

SAVED: 4/19/2024 11:00 AM CNEWELL, PLOTTED: 4/19/2024 11:20 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Drawings\DETAILS-DWR.dwg



PLAN



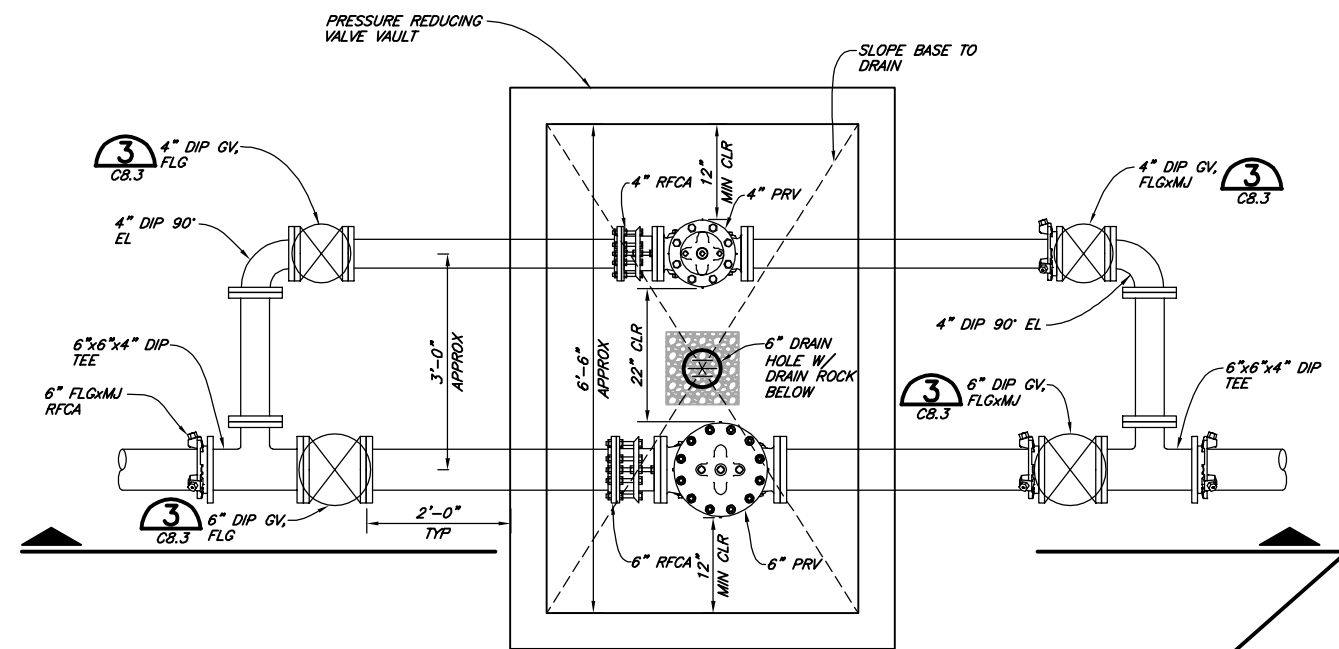
SECTION

NOTES:

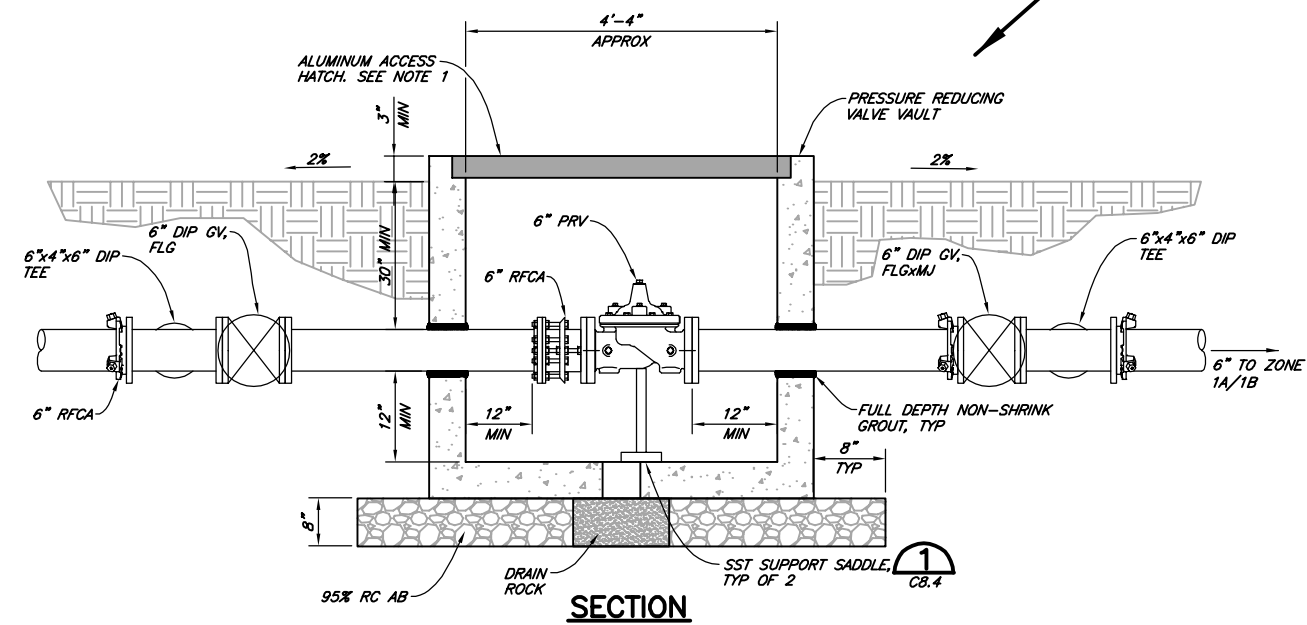
- HATCH SHALL BE PRECAST INTO THE VAULT, ANGLE FRAME, SINGLE LEAF, HORIZONTAL SPRING ASSISTED. H-20 LOAD RATING, RECESSED LOCK STAPLE, DIAMOND PLATE FINISH.
- ALL PIPING WITHIN VAULT SHALL BE DIP.

DETAIL 1
NTS C5.2

(ZONE 1 CHECK VALVE VAULT)



PLAN



SECTION

NOTES:

- HATCH SHALL BE PRECAST INTO THE VAULT, ANGLE FRAME, DOUBLE LEAF, HORIZONTAL SPRING ASSISTED. H-20 LOAD RATING, RECESSED LOCK STAPLE, DIAMOND PLATE FINISH.
- EACH PRV SHALL BE PROVIDED WITH MECHANICAL GAUGES ON INLET AND OUTLET.
- ALL PIPING WITHIN VAULT SHALL BE DIP.

DETAIL 2
NTS C5.2

(PRESSURE REDUCING VALVE VAULT)

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 200
 WAREHOUSES
 WILSON, CA 94593
 WWW.SUN-8885.COM
 707-441-8885



NO.	DATE	REVISION	BY

DESIGN	JSO
DR	JWF/CDN
CHK	PEG
APVD	

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA

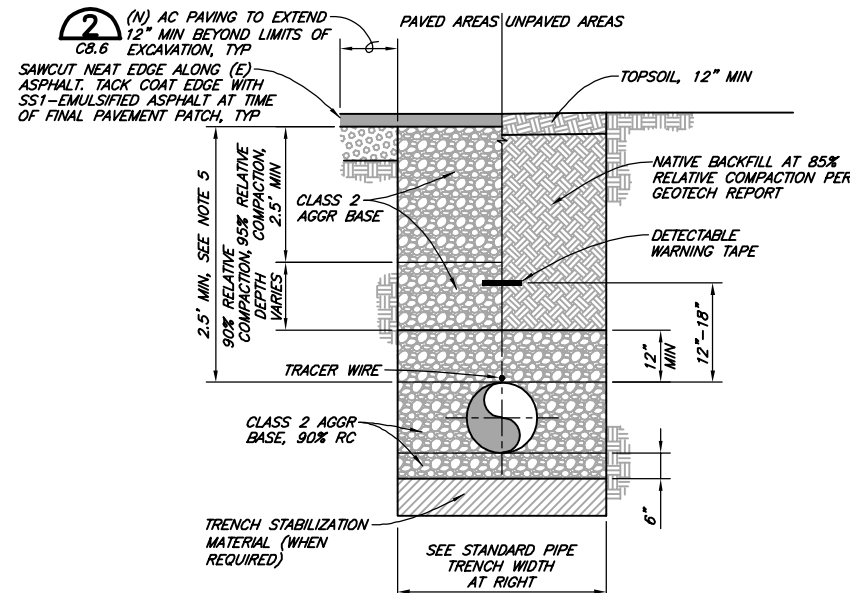
SHEET	C8.0
SEQ	
DATE	04/2024
PROJ. NO.	022067



4/19/24

CIVIL DETAILS

SAVED: 4/19/2024 11:00 AM CNEWELL, PLOTTED: 4/19/2024 11:20 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Drawgs\022067-DETAILS-DWR.dwg

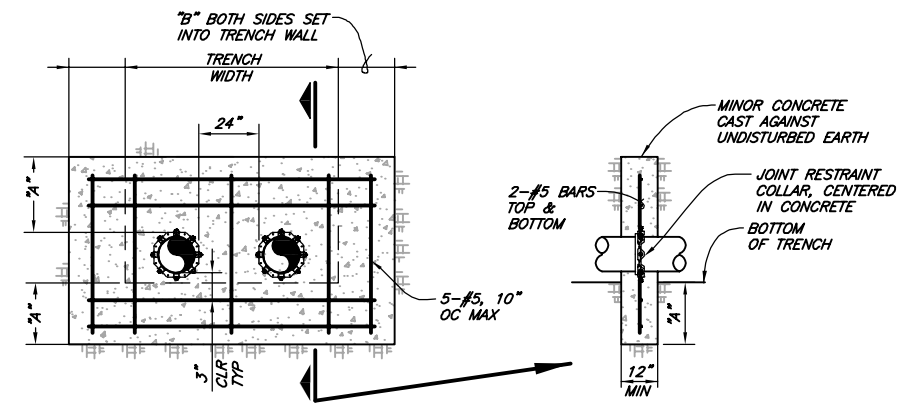


PIPE DIA "D"	MINIMUM "A"	MAXIMUM "A"
<4"	3"	6"
4" TO 6"	6"	12"
6" TO 15"	8"	14"
16" TO 21"	10"	16"
24" TO 30"	12"	18"
33" TO 42"	15"	21"
48" & LARGER	18"	24"

NOTES:

1. WIDER TRENCHES MAY REQUIRE HIGHER STRENGTH PIPE AND/OR SPECIAL BEDDING.
2. DIFFERING TRENCH WIDTHS REQUIRE PRIOR APPROVAL OF ENGINEER.
3. IN MAKING EXCAVATIONS FOR THIS PROJECT, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROVIDING AND INSTALLING ADEQUATE SHEETING, SHORING AND BRACING AS MAY BE NECESSARY AS A PRECAUTION AGAINST SLIDES OR CAVE-INS, AND TO PROTECT ALL EXISTING IMPROVEMENTS OF ANY KIND, EITHER ON PUBLIC OR PRIVATE PROPERTY, FULLY FROM DAMAGE.
4. SATISFACTORY NATIVE BACKFILL MATERIAL USED AS UTILITY TRENCH BACKFILL BELOW UNPAVED AREAS SHALL BE APPROVED BY THE ENGINEER PRIOR TO USE.
5. 2-SACK SLURRY BACKFILL MAY BE USED IN TRENCH WHEN MINIMUM PIPE COVER NOT POSSIBLE, WHEN APPROVED BY OWNER'S REPRESENTATIVE.
6. DETECTABLE WARNING TAPE SHALL BE BRIGHT COLORED, CONTINUOUSLY PRINTED, MINIMUM 6" WIDE BY 4 MIL THICK, MANUFACTURED FOR DIRECT BURIAL.
7. DETECTABLE WARNING TAPE NOT REQUIRED FOR IRRIGATION LINES.
8. GRAVEL ROADS SHALL USE PAVED AREA TRENCH SECTION BUT WITH AGGREGATE BASE TO SURFACE, UNLESS NOTED OTHERWISE.
9. MAINTAIN A MINIMUM OF 2'-0" SEPARATION WHERE PIPES ARE INSTALLED WITHIN THE SAME TRENCH.

DETAIL 1
 NTS C6.1
 (TYPICAL TRENCH)

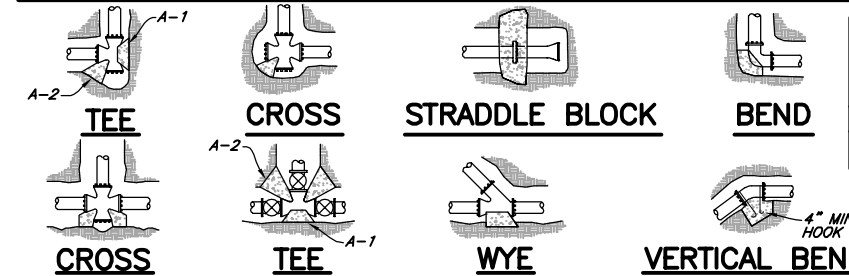


PIPE DIAMETER	PIPE SLOPE	MAXIMUM SPACING	"A" MINIMUM	"B" MINIMUM
<12"	20% TO 35%	40'	9"	9"
	35% TO 49%	20'	18"	18"
	>50%	15'	18"	18"

NOTE:
 PIPE COLLAR SHOULD NOT OCCUR AT PIPE JOINTS. PIPE COLLAR SHALL OCCUR A MINIMUM OF 3' AWAY FROM PIPE JOINTS.

DETAIL 3
 NTS C6.1
 (PIPE COLLAR)

FITTING SIZE	BEARING AREA OF THRUST BLOCKS (SF)							VOLUME OF THRUST BLOCKS (CY)			
	TEE, WYE, DEAD END, AND HYDRANT	STRADDLE BLOCK	90° BEND PLUGGED OR VALVED CROSS	TEE PLUGGED OR VALVED ON RUN	45° BEND	22 1/2° BEND	11 1/4° BEND	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4	2.0	3.2	2.8	3.8	2.0	-	-	-	-	-	-
6	4.2	7.4	6.0	8.6	3.2	2.0	-	2.6	-	-	-
8	7.6	13.0	10.6	15.2	5.8	3.0	2.0	4.6	2.2	-	-
10	11.8	20.4	16.8	23.6	9.2	4.8	2.4	7.4	3.6	-	-
12	17.0	29.4	24.0	34.0	13.2	6.8	3.4	11.0	5.6	2.4	-
14	23.0	-	32.6	46.0	17.8	9.2	4.6	15.2	7.8	3.4	-
16	30.0	52.2	42.6	60.0	23.2	12.0	6.0	19.8	10.2	4.6	1.8
18	38.0	-	54.0	76.0	29.2	15.2	7.6	-	-	-	-
20	47.0	81.6	66.6	94.0	36.2	18.8	9.4	-	-	-	-
24	68.0	117.6	96.0	136.0	52.4	27.2	13.6	-	-	-	-



RODS FOR VERTICAL BENDS

FITTING SIZE	ROD SIZE	EMBEDMENT
12" AND LESS	#6	30"
14"-16"	#8	36"

FROM AMERICAN PUBLIC WORKS ASSOCIATION

NOTES:

1. BEARING AREAS ARE BASED UPON A TEST PRESSURE OF 150 PSI AND AN ALLOWABLE SOIL BEARING STRESS OF 1000 PSF VOLUMES ARE BASED ON A TEST PRESSURE OF 150 PSI AND A UNIT WEIGHT OF CONCRETE OF 150 PCF.
2. CONCRETE THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH, AND SHALL CONSIST OF 3000 PSI CONCRETE MIX. SECTIONS OF THRUST BLOCK POURED AGAINST DISTURBED EARTH DO NOT COUNT AS PART OF THE BEARING AREA.
3. ALL DUCTILE IRON FITTINGS SHALL HAVE ALL EXPOSED NUTS AND BOLTS COMPLETELY COVERED WITH SPRAY-ON RUBBERIZED UNDERCOATING, AND ALL FITTINGS SHALL BE WRAPPED WITH 6-MIL POLYETHYLENE PLASTIC PRIOR TO TRENCH BACKFILL.
4. JOINTS AND CONNECTIONS SHALL NOT BE COMPLETELY ENCASED IN THRUST BLOCKS.
5. THRUST BLOCKING SHALL NOT BE DISTURBED AFTER IT HAS BEEN PLACED. THE CONTRACTOR SHALL ENSURE THAT ADEQUATE LENGTHS OF PIPING ARE INSTALLED PRIOR TO POURING THRUST BLOCKS TO BE CERTAIN THAT EXCAVATION BEHIND THE THRUST BLOCK IS NOT NECESSARY TO MAKE ANY CONNECTIONS.

DETAIL 2
 NTS C6.5
 (THRUST BLOCK SIZING)

HORIZONTAL BENDS, DEAD ENDS, AND INLINE VALVES

Pipe Size	1 1/4" Bend	2 1/2" Bend	45° Bend	90° Bend	Dead End & Inline Valve
3"	2'	3'	6'	13'	39'
4"	2'	3'	6'	14'	43'
6"	2'	4'	8'	19'	60'
8"	3'	5'	11'	25'	78'
10"	3'	6'	13'	30'	94'
12"	4'	7'	15'	35'	111'
14"	4'	8'	17'	40'	129'
16"	5'	9'	18'	44'	143'
18"	5'	10'	20'	48'	156'

TEES

Branch Size	3"	4"	6"	8"	10"	12"	14"	16"	18"
3"	1'	1'	1'	1'	1'	1'	1'	1'	1'
4"	1'	1'	1'	1'	1'	1'	1'	1'	1'
6"	1'	2'	1'	1'	1'	1'	1'	1'	1'
8"	1'	2'	2'	1'	1'	1'	1'	1'	1'
10"	1'	2'	2'	2'	1'	1'	1'	1'	1'
12"	1'	2'	2'	2'	2'	1'	1'	1'	1'
14"	1'	2'	2'	2'	2'	2'	1'	1'	1'
16"	1'	2'	2'	2'	2'	2'	2'	1'	1'
18"	1'	2'	2'	2'	2'	2'	2'	2'	1'

REDUCERS

Branch Size	3"	4"	6"	8"	10"	12"	14"	16"	18"
3"	1'	1'	1'	1'	1'	1'	1'	1'	1'
4"	1'	1'	1'	1'	1'	1'	1'	1'	1'
6"	1'	1'	1'	1'	1'	1'	1'	1'	1'
8"	1'	1'	1'	1'	1'	1'	1'	1'	1'
10"	1'	1'	1'	1'	1'	1'	1'	1'	1'
12"	1'	1'	1'	1'	1'	1'	1'	1'	1'
14"	1'	1'	1'	1'	1'	1'	1'	1'	1'
16"	1'	1'	1'	1'	1'	1'	1'	1'	1'
18"	1'	1'	1'	1'	1'	1'	1'	1'	1'

VERTICAL OFFSET

Branch Size	L1	L2
3"	1'	17"
4"	1'	18"
6"	1'	25"
8"	1'	33"
10"	1'	39"
12"	1'	46"
14"	1'	54"
16"	1'	59"
18"	1'	66"

NOTES:

1. JOINT RESTRAINT DEVICES SHALL BE USED IN LIEU OF THRUST BLOCKING FOR ALL PRESSURE MAIN AND APPURTENANCE INSTALLATIONS UNLESS PROJECT PLANS OR DESIGN CONDITIONS SPECIFICALLY REQUIRE THRUST BLOCKING.
2. THE RESTRAINED LENGTHS LISTED IN THE ABOVE TABLES ARE VALID FOR THE FOLLOWING INSTALLATION CONDITIONS:
 SOIL CLASSIFICATION: GW (ASTM STD. D2487); INCLUDES CLASS 2 AGGREGATE BASE BACKFILL
 TRENCH TYPE: TYPE 5 (AWWA C605)
 TEST PRESSURE: 150 PSI
 SAFETY FACTOR: 2 TO 1
 DEPTH OF BURY: 36" FROM SURFACE TO TOP OF PIPE
 PIPE TYPE: PVC C900
 WHERE INSTALLATION CONDITIONS DO NOT MATCH THOSE LISTED ABOVE, THE RESTRAINED LENGTHS SHALL BE RECALCULATED TO SUIT THE ACTUAL SITE CONDITIONS. ALL REVISED CALCULATIONS SHALL BE MADE WITH A TEST PRESSURE OF 150 PSI MINIMUM AND A SAFETY FACTOR OF 2. REVISED RESTRAINED LENGTHS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PIPE INSTALLATION.
3. ALL RESTRAINT FITTINGS SHALL BE FACTORY MANUFACTURED AND APPROVED FOR USE BY THE ENGINEER PRIOR TO PIPE INSTALLATION. THE FOLLOWING RESTRAINT FITTINGS HAVE BEEN PREQUALIFIED FOR USE:
 MECHANICAL JOINT GLANDS: ROMAC 'GRIPRING' PIPE RESTRAINER
 EBBA IRON SERIES 2000 PV
 BELL AND SPIGOT JOINTS: ROMAC MODEL 611 (4" THROUGH 8")
 EBBA IRON SERIES 1600 (4" THROUGH 12")
 EBBA IRON SERIES 2800 (14" THROUGH 36")
4. ALL MECHANICAL JOINT CONNECTIONS AT FITTINGS SHALL BE RESTRAINED.

DETAIL 5
 NTS
 (RESTRAINED JOINTS FOR PVC PIPES)



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 FURESEN, CA 95021
 WWW.SFH-CAL.COM
 707-441-8855

SFH

DESIGN: JSO
 DRAWING: JWF/CON
 CHECK: PEG
 APPROVED: APVD

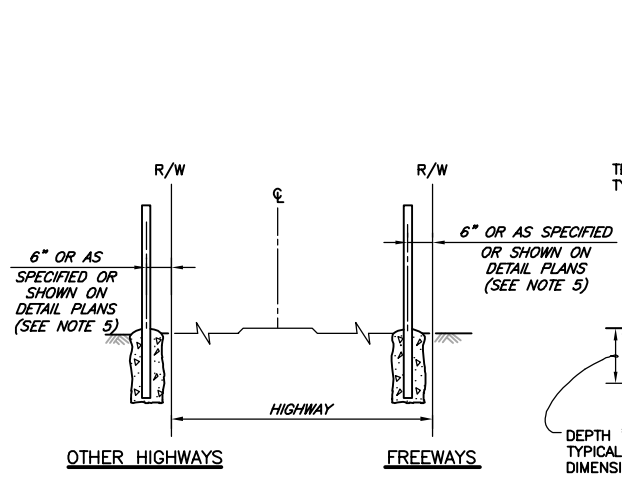
GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA

CIVIL DETAILS

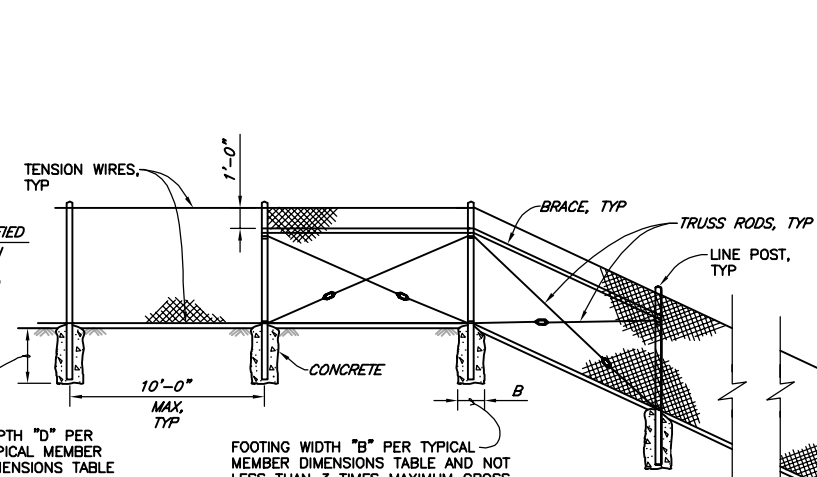
SHEET: C8.1
 SEQ: 04/2024
 DATE: 04/2024
 PROJ. NO.: 022067

4/19/24

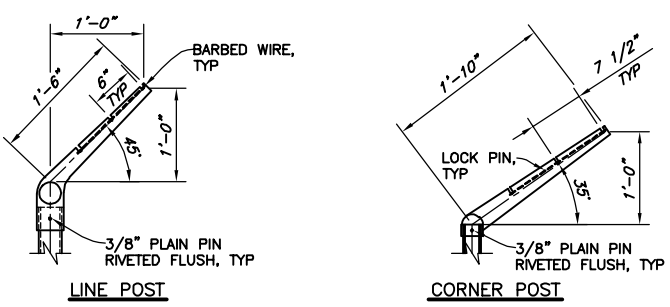
SAVED: 4/19/2024 11:00 AM CNEWELL, PLOTTED: 4/19/2024 11:20 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-DETAILS-DWR.dwg



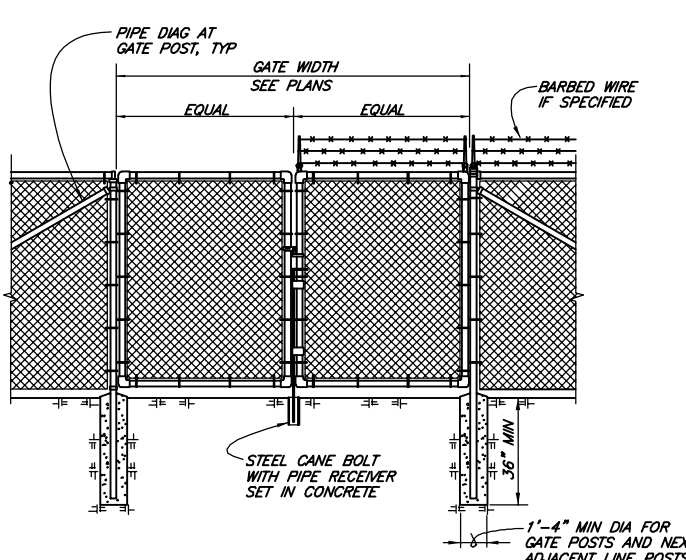
FENCE LOCATION



CHAIN LINK FENCE ON SHARP BREAK IN GRADE

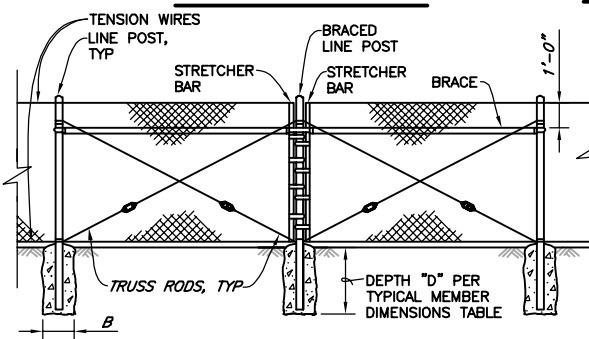


BARBED WIRE POST TOP

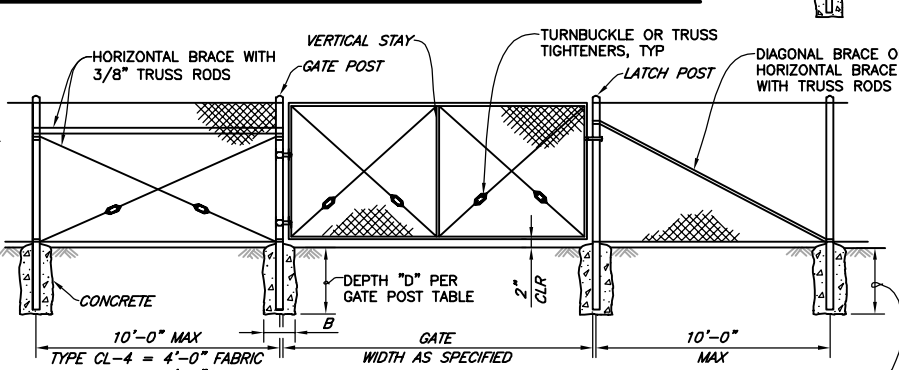


NOTE:
 1. LATCH MECHANISM SHALL BE LOCKABLE. FREE END OF GATES SHALL BE EQUIPPED WITH DEVICES TO HOLD BOTH GATES IN THE OPEN POSITION.
 2. FENCE AND DOUBLE LEAF SWING GATE PER CALTRANS STANDARD DETAIL A-85.

DETAIL 2
 NTS C3.2
(CHAIN LINK DOUBLE-SWING GATE)



BRACED LINE POST INSTALLATION



CHAIN LINK GATE INSTALLATION

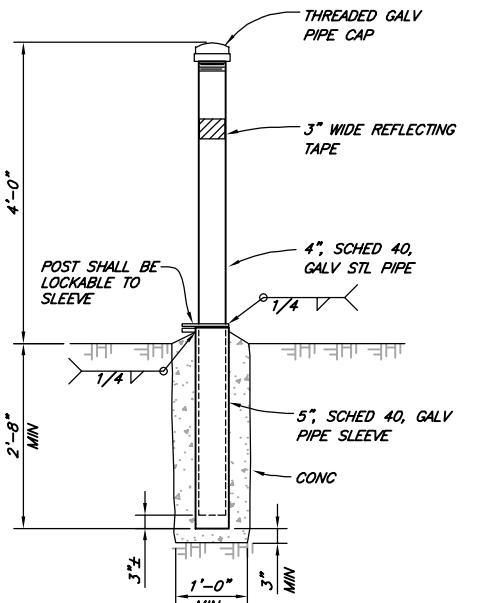
FENCE HEIGHT (MAX)	SLATTED	B (IN)	D (FT)	ROUND PIPE		
				SECTION	ROUND OD PIPE	WEIGHT (LB/FT)
5'-0"	NO	12"	2'-6"	3 Std	3.50"	7.58
6'-0"	NO	12"	2'-6"	3 Std	3.50"	7.58
8'-0"	NO	12"	3'-0"	3 Std	3.50"	7.58
10'-0"	NO	14"	3'-6"	3 Std	3.50"	7.58
5'-0"	YES	12"	3'-0"	3 1/2 Std	4.00"	9.12
6'-0"	YES	14"	3'-6"	4 Std	4.50"	10.80
8'-0"	YES	18"	3'-6"	5 Std	5.56"	14.60
10'-0"	YES	20"	4'-0"	6 Std	6.63"	19.00

ABOVE POST DIMENSIONS AND WEIGHTS ARE MINIMUMS. LARGER SIZES MAY BE USED UPON APPROVAL.

FENCE HEIGHT (MAX)	SLATTED	B (IN)	D (FT)	LINE POSTS				BRACES					
				ROUND PIPE		ROLL FORMED		ROUND PIPE		ROLL FORMED			
				SECTION	ROUND OD PIPE	WEIGHT (LB/FT)	SECTION	WEIGHT (LB/FT)	SECTION	ROUND OD PIPE	WEIGHT (LB/FT)	SECTION	WEIGHT (LB/FT)
5'-0"	NO	8"	2'-6"	1 1/2 Std	1.90"	2.72	1.875" x 1.625"	1.85	1 1/2 Std	1.90"	2.72	1.625" x 1.250"	1.35
6'-0"	NO	10"	2'-6"	2 Std	2.38"	3.66	1.875" x 1.625"	2.40	2 Std	2.38"	3.66	1.625" x 1.250"	1.35
8'-0"	NO	12"	3'-0"	2 1/2 Std	2.88"	5.80	3.250" x 2.500"	4.50	2 Std	2.38"	3.66	1.625" x 1.250"	1.35
10'-0"	NO	14"	3'-6"	3 Std	3.50"	7.58	3.250" x 2.500"	4.50	2 1/2 Std	2.88"	5.80	1.625" x 1.250"	1.35
5'-0"	YES	12"	3'-0"	3 1/2 Std	4.00"	9.12	N/A	-	2 Std	2.38"	3.66	N/A	-
6'-0"	YES	14"	3'-0"	4 Std	4.50"	10.80	N/A	-	2 Std	2.38"	3.66	N/A	-
8'-0"	YES	18"	3'-6"	5 Std	5.56"	14.60	N/A	-	2 Std	2.38"	3.66	N/A	-
10'-0"	YES	20"	4'-0"	6 Std	6.63"	19.00	N/A	-	2 1/2 Std	2.88"	5.80	N/A	-

DETAIL 1
 NTS C3.2
(SECURITY FENCE)

NOTES:
 1. THE TABLE TO THE RIGHT SHOWS MINIMUM SIZED POSTS AND BRACES COMPLYING WITH THE SPECIFICATIONS. LARGER OR HEAVIER POST AND BRACE SIZES MAY BE USED UPON APPROVAL.
 2. SECTIONS SHOWN IN THE TABLES MUST ALSO COMPLY WITH STRENGTH REQUIREMENTS AND OTHER PROVISIONS OF THE SPECIFICATIONS.
 3. OTHER SECTIONS WHICH COMPLY WITH THE STRENGTH REQUIREMENTS AND OTHER PROVISIONS OF THE SPECIFICATIONS MAY BE USED UPON APPROVAL.
 4. OPTIONS EXERCISED SHALL BE UNIFORM ON ANY ONE PROJECT.
 5. OFFSET TO BE 2'-0" AT MONUMENT LOCATIONS, MEASURED AT RIGHT ANGLES TO R/W LINES. TAPER TO ACHIEVE OFFSET TO BE AT LEAST 20'-0" LONG.
 6. SEE STANDARD PLAN A85B FOR BRACE, STRETCHER BAR, AND TRUSS TIGHTENER DETAILS.



DETAIL 3
 NTS C5.2
(REMOVABLE BOLLARD)

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 100
 WUBRENS, CA 95989
 WWW.S&W.COM
 707-441-8885



NO.	DATE	REVISION	BY

DR	JWF/CON	CHK	PEG	APVD

DSGN	JSO

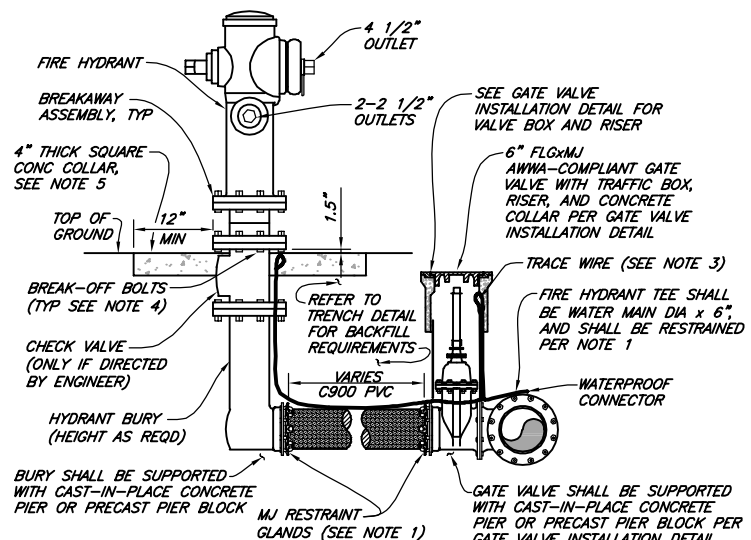
GARBVILLE SANITARY DISTRICT
 GARBVILLE TANKS REPLACEMENT PROJECT
 GARBVILLE, CALIFORNIA

SHEET **C8.2**
 SEQ
 DATE **04/2024**
 PROJ. NO. **022067**



4/19/24

SAVED: 4/19/2024 11:00 AM CNEWELL, PLOTTED: 4/19/2024 11:20 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Drawings\022067-DETAILS-DWR.dwg



- NOTES:**
1. ALL RESTRAINED JOINT GLANDS SHALL CONFORM TO RESTRAINED JOINT PIPE INSTALLATION DETAILS.
 2. THE CONTRACTOR SHALL PLACE AND SECURE A YELLOW BAG OVER THE HYDRANT IMMEDIATELY UPON EITHER INSTALLATION OR REMOVAL FROM SERVICE. THIS BAG SHALL BE REMOVED ONCE THE HYDRANT IS READY FOR USE.
 3. #10 COPPER TRACE WIRE WITH BLUE INSULATION SHALL BE TAPED TO ALL WATER MAINS, FITTINGS, AND SERVICES. SERVICE TRACE WIRE SHALL BE SECURELY CONNECTED TO THE WATER MAIN TRACE WIRE AT ONE END WITH WATERPROOF, CORROSION RESISTANT CONNECTOR SHALL BE LOOPED JUST BELOW THE LID OF THE TRAFFIC BOX, AND SHALL TERMINATE AT THE BREAKOFF FLANGE.
 4. THE HYDRANT BURY SHALL BE SHIMMED IN SUCH A WAY THAT THE WEAKENED BREAKAWAY JOINT ON THE BREAKAWAY ASSEMBLY IS 1.5" ABOVE THE FINISHED CONCRETE SURFACE. IN ADDITION, BREAK-OFF BOLTS SHALL BE USED ON THE BOTTOM FLANGE OF THE BREAKAWAY ASSEMBLY AS NOTED.
 5. WHERE NO SIDEWALK EXISTS A 4" THICK 4'x4' CONCRETE PAD SHALL BE INSTALLED.
 6. SEE SPECIFICATIONS FOR HYDRANT MAKE/MODEL.

DETAIL 1
 NTS C6.2
(FIRE HYDRANT)

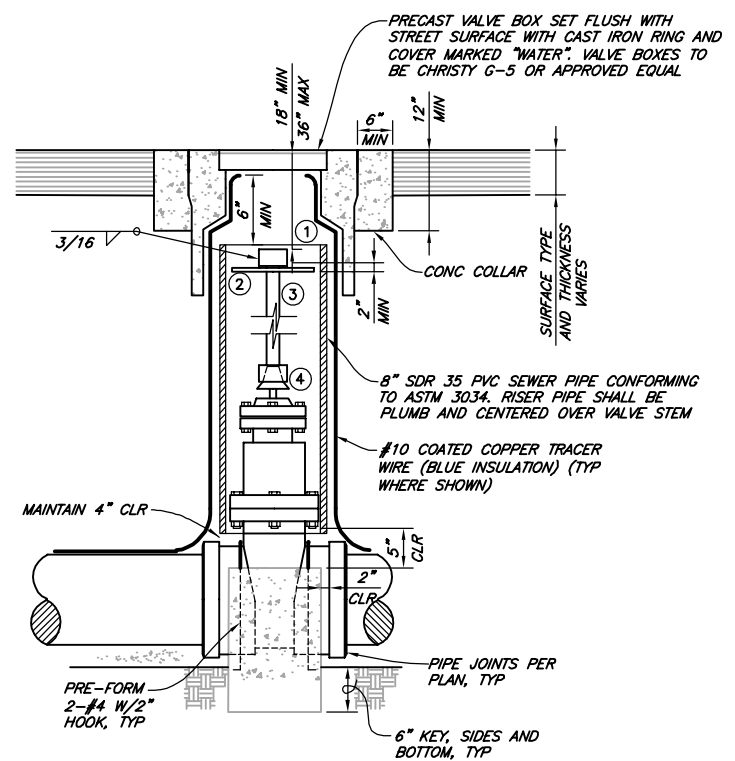
STEM EXTENSION FABRICATION NOTES

1. ALL WELDS TO RISER SHAFT SHALL BE FILLET WELD ALL AROUND, AS SPECIFIED BELOW.
2. ALL STEEL REQUIRED FOR RISER FABRICATION SHALL BE STRUCTURAL STEEL PER ASTM A36.

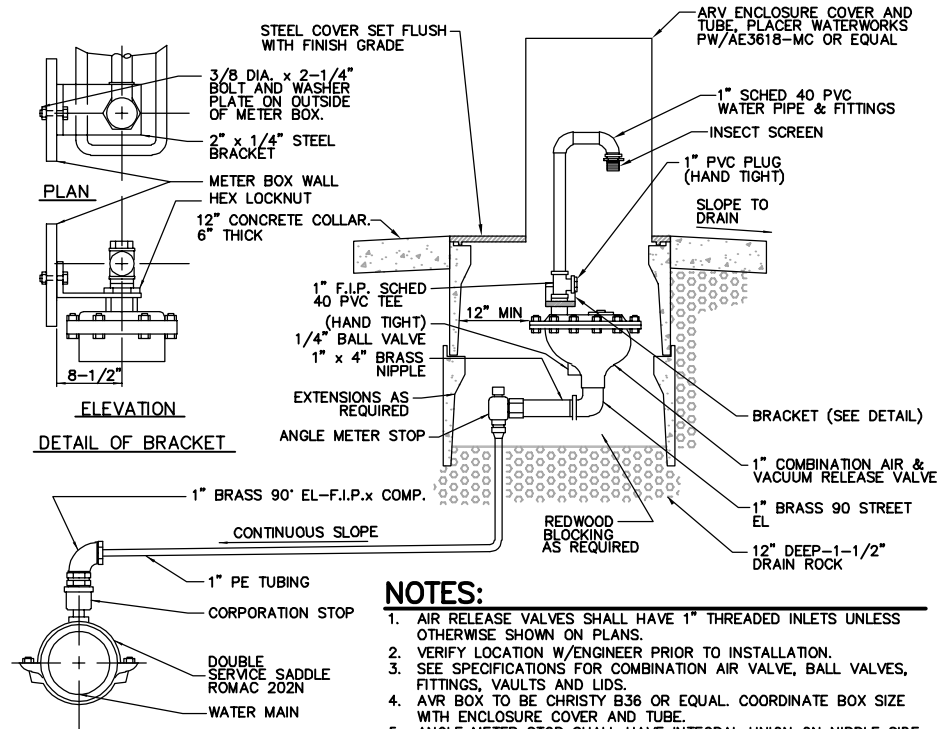
VALVE STEM EXTENSION PARTS LIST

- 1 VALVE OPERATING NUT OR 1-7/8"x 1-7/8"x2" HIGH, SOLID STEEL WELDED TO RISER SHAFT.
- 2 1/8" THKx7-1/2" DIA GUIDE PLATE WELDED TO RISER SHAFT.
- 3 1-1/2"x3/16" SQUARE STEEL TUBING, LENGTH AS REQUIRED, EDGE WELD OPERATING NUT AT BOTH ENDS.
- 4 2-1/2"x3/16" SQUARE STEEL TUBING 2-1/2" IN LENGTH WELDED TO RISER SHAFT.

- NOTES:**
1. IF VALVE IS INSTALLED SO THAT THE TOP OF THE OPERATING NUT IS LESS THAN 36" BELOW FINISHED GRADE, THE STEM RISER IS NOT REQUIRED.
 2. ALL EXTERNAL BOLTS AND NUTS ON VALVES SHALL BE 304 STAINLESS STEEL VALVE ASSEMBLY SHALL BE POLY WRAPPED.
 3. IF ENDLINE VALVE, THEN PROVIDE ADEQUATE THRUST BLOCKING & RESTRAINT.



DETAIL 3
 NTS C5.2, C6.2, C8.0
(GATE VALVE INSTALLATION)



- NOTES:**
1. AIR RELEASE VALVES SHALL HAVE 1" THREADED INLETS UNLESS OTHERWISE SHOWN ON PLANS.
 2. VERIFY LOCATION W/ENGINEER PRIOR TO INSTALLATION.
 3. SEE SPECIFICATIONS FOR COMBINATION AIR VALVE, BALL VALVES, FITTINGS, VAULTS AND LIDS.
 4. AVR BOX TO BE CHRISTY B36 OR EQUAL. COORDINATE BOX SIZE WITH ENCLOSURE COVER AND TUBE.
 5. ANGLE METER STOP SHALL HAVE INTEGRAL UNION ON NIPPLE SIDE.

DETAIL 2
 NTS
(COMBINATION AIR-RELEASE VACUUM (CARV) VALVE)

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1 1'
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 200
 EUREKA, CA 95501
 WWW.S&W.COM
 707-441-8855

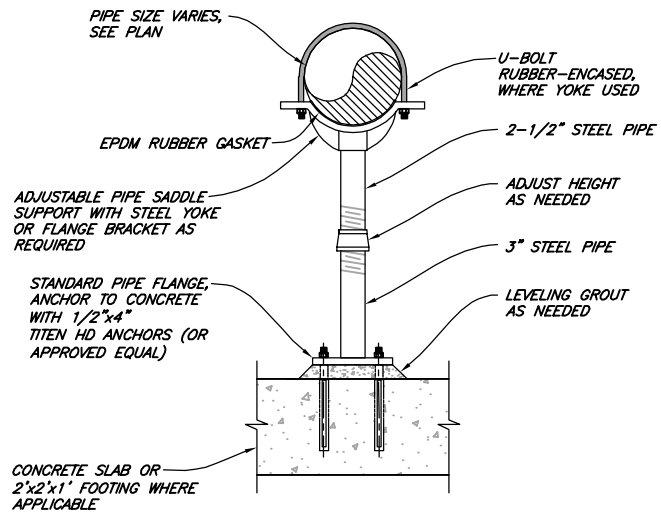


DESIGN	JSO	DATE	
DR	JWF/CDN	NO.	
CHK	PEG	REVISION	
APVD		BY	

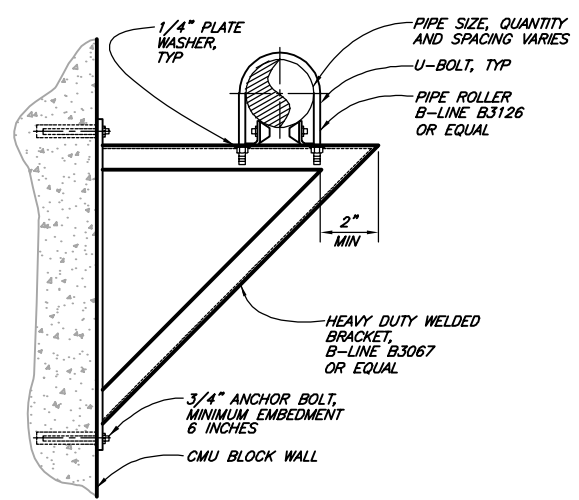
GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
CIVIL DETAILS



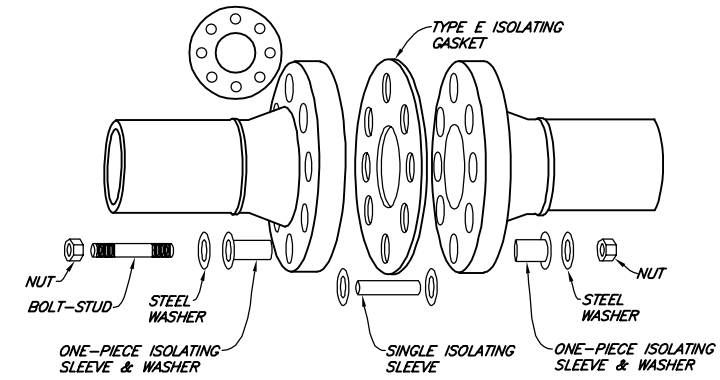
SHEET **C8.3**
 SEQ
 DATE **04/2024**
 PROJ. NO. **022067**
 4/19/24



DETAIL 1
NTS C3.3, C5.4, C8.0
(PIPE SUPPORT, FLOOR)

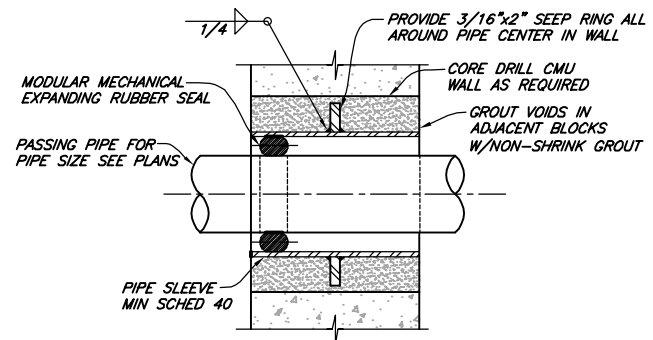


DETAIL 2
NTS
(PIPE SUPPORT, WALL)



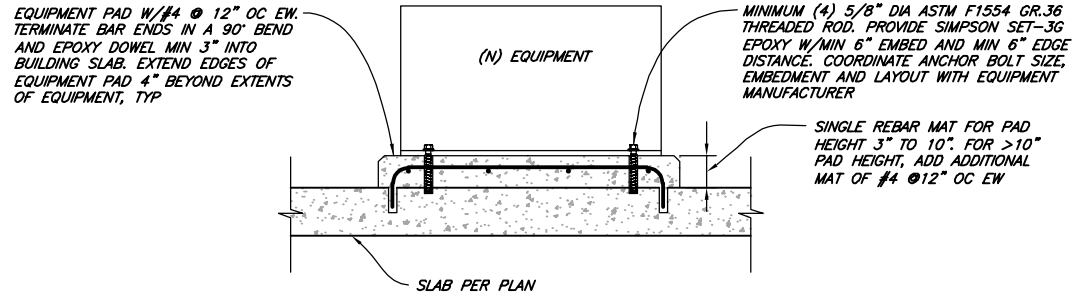
- NOTES:**
1. USE TYPE E ISOLATING GASKET WHERE TWO DISSIMILAR METAL FLANGES ARE ATTACHED.
 2. WHERE FLUID TYPE IS POTABLE WATER, TYPE E ISOLATING GASKETS SHALL BE NSF 61 APPROVED.
 3. ISOLATING GASKETS SHALL MEET OR EXCEED THE PRESSURE RATING OF THE FLANGES.
 4. USE ISOLATING SLEEVES AND WASHERS, OR ONE PIECE ISOLATING SLEEVE & WASHER WHERE STAINLESS STEEL HARDWARE IS USED TO ATTACH NON-STAINLESS STEEL METAL FLANGES. SLEEVES AND WASHERS SHALL BE MATCHING COMPONENTS FROM THE SAME KIT.
 5. ISOLATION KITS SHALL BE PRE-MANUFACTURED AND NOT FIELD FABRICATED.
 6. ISOLATION MATERIAL: AS RECOMMENDED BY MANUFACTURER FOR APPLICATION.

DETAIL 3
NTS C3.3, C5.4
(DIELECTRIC ISOLATION)

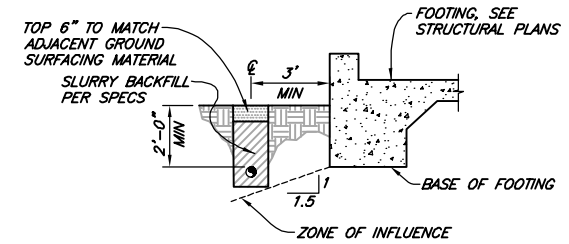


DETAIL 4
NTS C5.4
(CMU WALL PIPE PENETRATION)

NOTE:
SLEEVE DIAMETER SHALL BE AS RECOMMENDED BY THE MECHANICAL SEAL MANUFACTURER.



DETAIL 5
NTS C4.1, C5.4
(TYPICAL HOUSEKEEPING PAD)

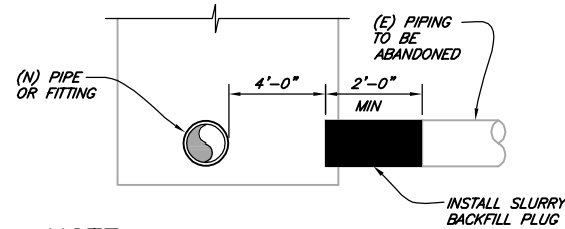


DETAIL 6
NTS C5.2
(SHALLOW PIPE PARALLEL TO FOOTING)

SAVED: 4/19/2024 11:00 AM CNEWELL, PLOTTED: 4/19/2024 11:20 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\Details-DWR.dwg



VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON SCALES ACCORDINGLY	
812 W. WABASH AVE. SUITE 100 WILMINGTON, CA 94790 WWW.SHA-8885 707-441-8885	
DSGN JSO DR JWF/CDN CHK PEG APVD	BY REVISION DATE NO.
GARBERVILLE SANITARY DISTRICT GARBERVILLE TANKS REPLACEMENT PROJECT GARBERVILLE, CALIFORNIA	
CIVIL DETAILS	
SHEET C8.4	
SEQ	
DATE 04/2024	
PROJ. NO. 022067	
4/19/24	

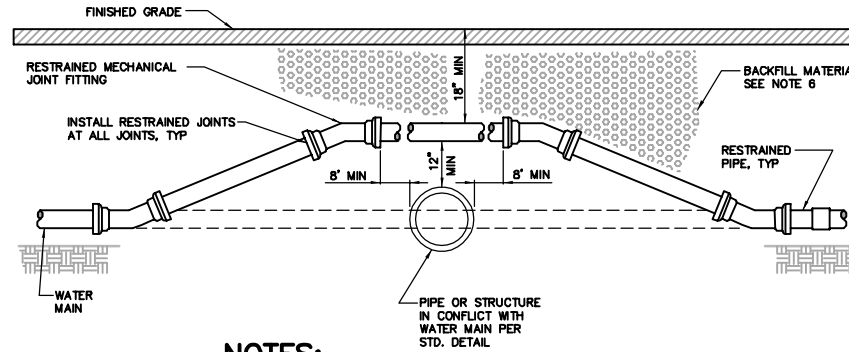


NOTE:

- EXISTING PIPING SHALL BE BACKFILLED WITH CEMENT SAND SLURRY AS DIRECTED BY ENGINEER.
- PIPES TO BE ABANDONED WITHIN HUMBOLDT COUNTY RIGHT OF WAY SHALL BE PRESSURE GROUTED FOR THE ENTIRE LENGTH.

DETAIL 1
NTS C3.1, C6.2

(ABANDONED PIPING PLUG)

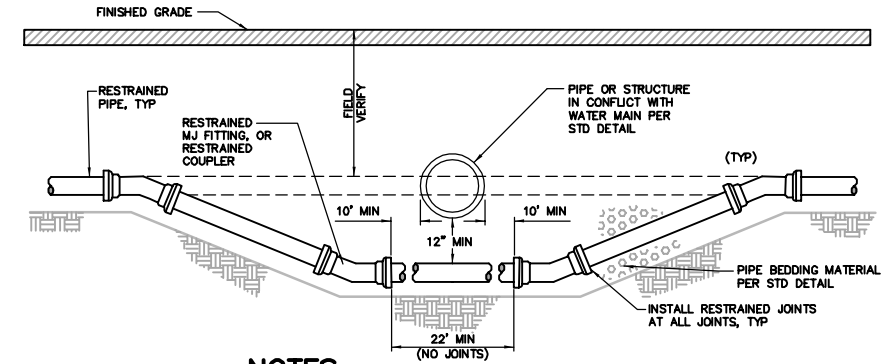


NOTES:

- PIPE SHALL BE C900 PVC DR18 DIPS, NO JOINTS ALLOWED WITHIN 8' EITHER SIDE OF THE CROSSING PIPE OUTER DIAMETER.
- ALL FITTINGS SHALL BE MJ DIP.
- ALL BENDS SHALL BE 45° OR 22.5° FITTINGS.
- HORIZONTAL CROSSING ANGLE SHALL NOT BE LESS THAN 45-DEGREES.
- NOTIFY OWNER AND ENGINEER IMMEDIATELY IF FIELD CONDITIONS REQUIRE ALTERATIONS. NO ALTERATIONS FROM THIS INSTALLATION DETAIL SHALL BE PERFORMED WITHOUT DIVISION OF DRINKING WATER APPROVAL.
- WHERE PIPE COVER IS LESS THAN 30" BACKFILL SHALL BE SLURRY PER CALTRANS 19-3.02E.

DETAIL 2
NTS C5.2

(TYP WATER MAIN INSTALLATION OVER STRUCTURE)

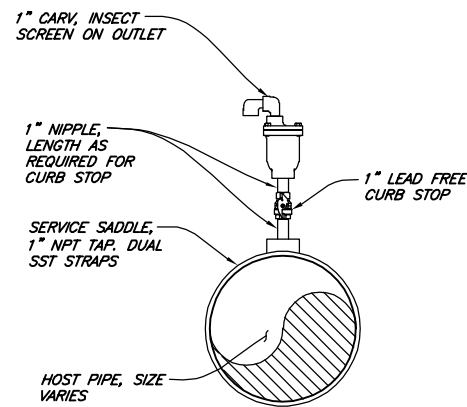


NOTES:

- PIPE SHALL BE C900 PVC DR18 DIPS, NO JOINTS ALLOWED WITHIN 10' EITHER SIDE OF THE CROSSING PIPE OUTER DIAMETER. FUSED PVC OR A SINGLE STICK OF PVC PIPE THAT HAS A MINIMUM LENGTH OF 22' IS REQUIRED.
- ALL FITTINGS SHALL BE MJ DIP.
- ALL BENDS SHALL BE 45° OR 22.5° FITTINGS.
- HORIZONTAL CROSSING ANGLE SHALL NOT BE LESS THAN 45-DEGREES.
- NOTIFY OWNER AND ENGINEER IMMEDIATELY IF FIELD CONDITIONS REQUIRE ALTERATIONS. NO ALTERATIONS FROM THIS INSTALLATION DETAIL SHALL BE PERFORMED WITHOUT DIVISION OF DRINKING WATER APPROVAL.

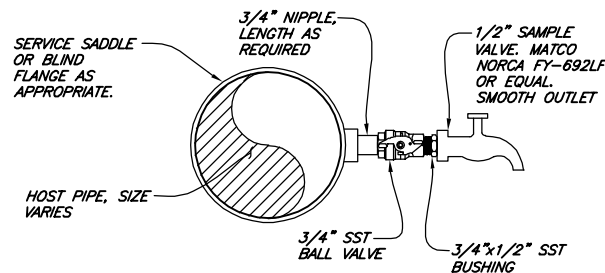
DETAIL 3
NTS C5.2, C6.2, C6.3, C6.5

(TYP WATER MAIN INSTALLATION UNDER STRUCTURE)



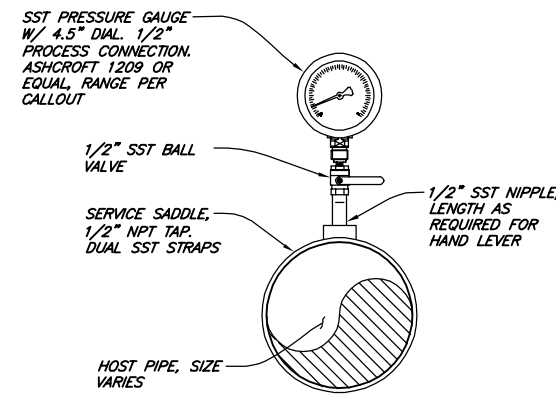
DETAIL 4
NTS C4.1, C5.4

(CARV NON-BURIED)



DETAIL 5
NTS C3.3, C5.4

(SAMPLE VALVE)



DETAIL 6
NTS C4.1, C5.4

(PRESSURE GAUGE)

SAVED: 4/19/2024 11:00 AM CNEWELL, PLOTTED: 4/19/2024 11:20 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\DETAILS-DWR.dwg



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WADSWORTH AVE.
 SUITE 200
 WARM SPRING, CA 95983
 WWW.SJW.COM
 707-441-8855

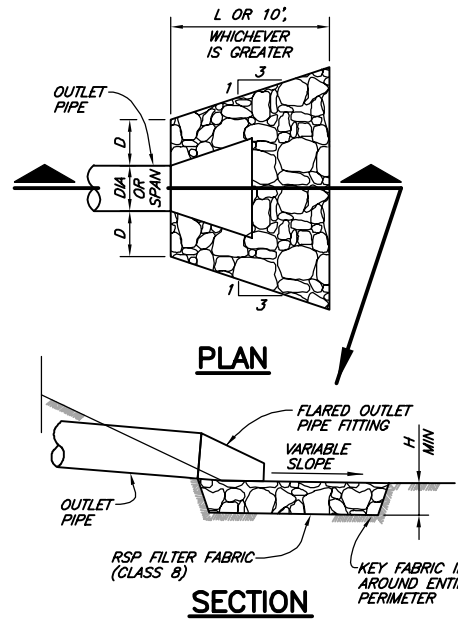


DESIGN	JSO	BY	
DR	JWF/CDN	REVISION	
CHK	PEG	DATE	
APVD		NO.	

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
CIVIL DETAILS

SHEET **C8.5**
 SEQ
 DATE **04/2024**
 PROJ. NO. **022067**

4/19/24



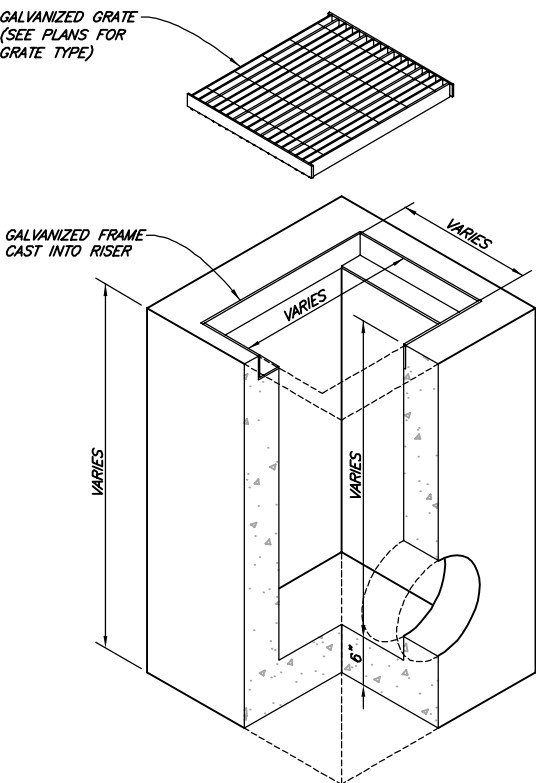
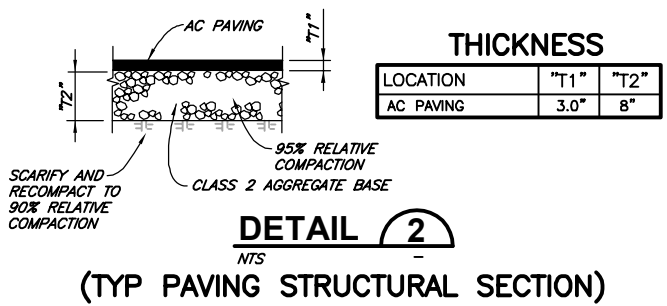
OUTLET WITHOUT DITCH PROTECTIVE APRON DIMENSIONS AND ESTIMATED QUANTITIES

CULVERT SIZE D (INCHES)	RIPRAP CLASS	LENGTH OF APRON L (FEET)	DEPTH OF APRON H (FEET)
12	2	10	1.5
18	2	10	1.5
24	2	10	1.5
30	3	12.5	2
36	3	16	2
42	4	21	2.5
48	4	24	2.5

NOTES:

1. FOR CULVERT DIAMETERS SMALLER THAN THOSE SHOWN IN TABLE, APPLY 12 INCH DIMENSIONS TO DISSIPATORS.
2. APPLY SPAN OF VALLEY GUTTERS WHERE DISSIPATORS ARE SHOWN AT THEIR TERMINATION POINT.
3. DISSIPATOR DETAIL SHALL ONLY APPLY FOR EXIT SLOPES OF 2:1 OR LESS. NOTIFY ENGINEER IF FIELD CONDITIONS DO NOT MEET CRITERIA.
4. DISSIPATOR DETAIL SHALL ONLY APPLY TO CULVERTS WITH SLOPES OF LESS THAN 10%. NOTIFY ENGINEER IF FIELD CONDITIONS DO NOT MEET CRITERIA.

DETAIL 1
NTS C3.2
(RSP ENERGY DISSIPATOR)



NOTE:
MANUFACTURER IS RESPONSIBLE FOR DESIGN OF DI FOR PROPOSED BURIAL DEPTHS.

DETAIL 3
NTS C3.2, 3.3
(DRAIN INLET)

SAVED: 4/19/2024 11:00 AM CNEWELL, PLOTTED: 4/19/2024 11:20 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Drawings\DETAILS-DWR.dwg



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 CALIFORNIA
 WUREN@WUREN.COM
 WWW.WUREN.COM
 707-441-8855



NO.	DATE	REVISION	BY

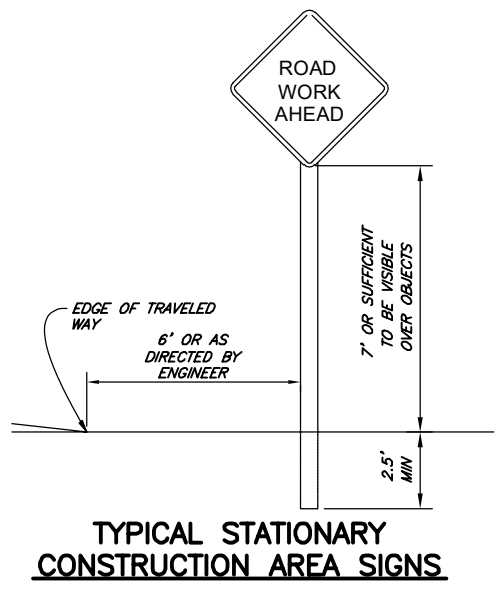
DSGN	JSO
DR	JWF/CDN
CHK	PEG
APVD	

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
CIVIL DETAILS

SHEET **C8.6**
 SEQ
 DATE **04/2024**
 PROJ. NO. **022067**

4/19/24

SAVED: 4/19/2024 2:50 PM CNEWELL, PLOTTED: 4/19/2024 2:51 PM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-Traffic-CONTR-DWR.dwg



**TYPICAL STATIONARY
CONSTRUCTION AREA SIGNS**

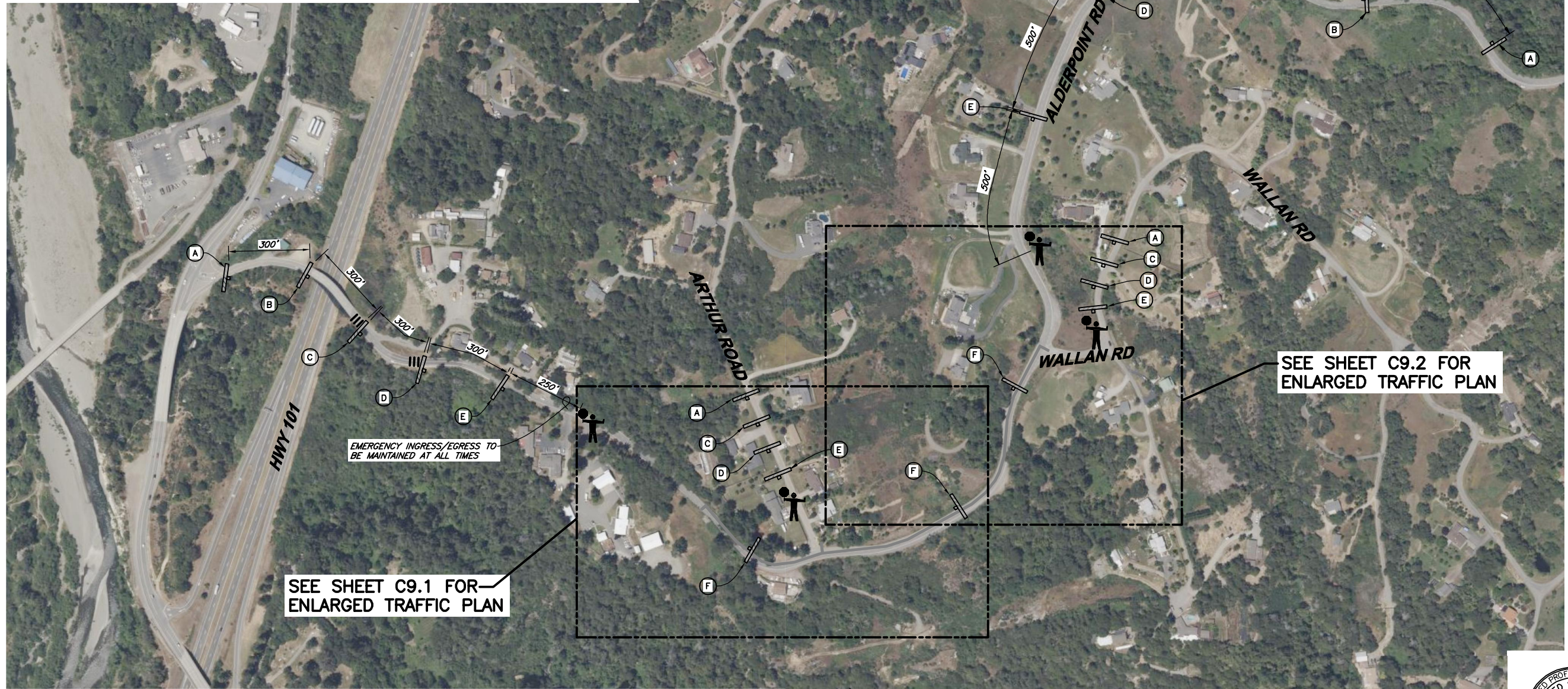
CONSTRUCTION NOTES:

1. EXACT SIGN LOCATIONS AND POSITIONS TO BE APPROVED BY THE ENGINEER.
2. ALL WARNING SIGNS SHALL HAVE A BLACK LEGEND AND BORDER ON ORANGE BACKGROUND.
3. ALTERNATIVE POST/MOUNTING CONFIGURATIONS FOR WARNING SIGNAGE TO BE APPROVED BY THE ENGINEER.
4. ALL TRAFFIC CONTROLS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROLS DEVICES (CAMUTCD) AND CALTRANS 2022 STANDARD PLANS.
5. MAINTAIN ONE TRAVEL LANE AT ALL TIMES. KEEP A MINIMUM OF 1 TRAFFIC LANE AT LEAST 11' WIDE OPEN FOR TRAFFIC, EXCEPT THE FULL WIDTH OF THE TRAVELED WAY MUST BE OPEN WHEN CONSTRUCTION OPERATIONS ARE NOT ACTIVE OR AN APPROVED TRAFFIC CONTROL PLAN IS IN PLACE.
6. PROVIDE FLAGGERS AS REQUIRED TO ACCOMMODATE CONSTRUCTION.
7. EACH ADVANCE WARNING SIGN SHALL BE EQUIPPED WITH AT LEAST TWO FLAGS FOR DAYTIME CLOSURES. EACH FLAG SHALL BE AT LEAST 16"x16" IN SIZE AND SHALL BE ORANGE OR FLUORESCENT RED-ORANGE IN COLOR.
8. FLASHING BEACONS SHALL BE PLACED AT THE LOCATIONS INDICATED FOR LANE CLOSURE DURING HOURS OF DARKNESS.
9. EMERGENCY VEHICLES SHALL BE ALLOWED TO PASS THROUGH CONTROLLED AREAS AT ALL TIMES.
10. CLOSURE OF BOTH TRAVEL LANES FOR LONGER THAN 5 MINUTES REQUIRES PRIOR WRITTEN APPROVAL FROM DIRECTOR OF PUBLIC WORKS.
11. 48 HOURS ADVANCE NOTIFICATION TO THE DEPARTMENT OF PUBLIC WORKS, HUMBOLDT COUNTY SHERIFF'S OFFICES, AND CALIFORNIA HIGHWAY PATROL IS REQUIRED FOR CLOSURE OF BOTH TRAVEL LANES.
12. IF SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE DRAWINGS, REFER TO CALTRANS STANDARD PLAN T13 FOR GUIDANCE.

CONSTRUCTION AREA SIGNS					
SIGN LETTER	SIGN CODE	SIGN MESSAGE	SIGN SIZE	NUMBER & POST SIZE	NO. OF SIGNS
A	W20-1	ROAD WORK AHEAD	4'x4'	(3) 4"x4"	3
B	C45(CA)	RUMBLE STRIPS SIGN	4'x4'	(2) 4"x4"	2
C	W20-4	ONE LANE ROAD AHEAD	4'x4'	(3) 4"x4"	3
	W13-1P	20 MPH	4'x4'	(3) 4"x4"	3
D	C9A(CA)	FLAGGER SYMBOL SIGN	4'x4'	(3) 4"x4"	3
E	W3-4	BE PREPARED TO STOP	4'x4'	(3) 4"x4"	3
F	C30(CA)	LANE CLOSED	30"x30"	(1) 4"x4"	1

LEGEND

- WORK AREA
- CHANNELIZERS
- TEMP TRAFFIC SIGNAL
- FLAGGER
- CONSTRUCTION AREA SIGN SINGLE POST
- TRAVEL DIRECTION
- RUMBLE STRIPS



SEE SHEET C9.1 FOR ENLARGED TRAFFIC PLAN

SEE SHEET C9.2 FOR ENLARGED TRAFFIC PLAN

PLAN
1"=200'



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 100
 WILSON, CA 95751
 WWW.S&W-ENR.COM
 707-441-8855

DESIGN	JSO	DATE	
DR	JWF/CON	REVISION	
CHK	PEG	NO.	
APVD		DATE	

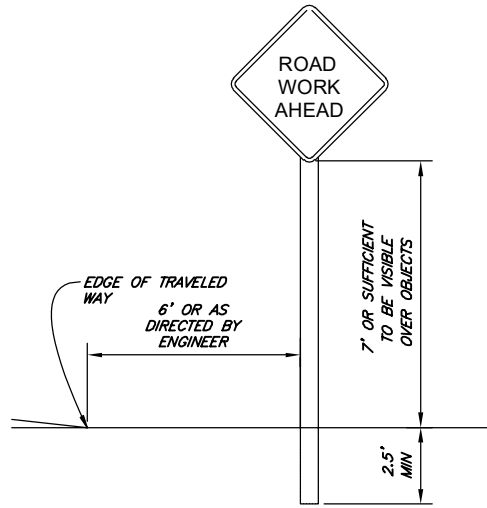
GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
TRAFFIC CONTROL PLAN

SHEET
C9.0
 SEQ
 DATE 04/2024
 PROJ. NO. 022067

REGISTERED PROFESSIONAL ENGINEER
 JARED S. OBERGON
 No. 76125
 CIVIL
 STATE OF CALIFORNIA
 4/19/24

CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE	SIGN MESSAGE	SIGN SIZE	NUMBER & POST SIZE	NO. OF SIGNS
A	W20-1	ROAD WORK AHEAD	4'x4'	(1) 4"x4"	1
B	C45(CA)	RUMBLE STRIPS SIGN	4'x4'	(1) 4"x4"	1
C	W20-4	ONE LANE ROAD AHEAD	4'x4'	(1) 4"x4"	1
	W13-1P	20 MPH	4'x4'	(1) 4"x4"	1
D	C9A(CA)	FLAGGER SYMBOL SIGN	4'x4'	(1) 4"x4"	1
E	W3-4	BE PREPARED TO STOP	4'x4'	(1) 4"x4"	1
F	C30(CA)	LANE CLOSED	30"x30"	(1) 4"x4"	1



TYPICAL STATIONARY CONSTRUCTION AREA SIGNS

CONSTRUCTION NOTES

1. EXACT SIGN LOCATIONS AND POSITIONS TO BE APPROVED BY THE ENGINEER.
2. ALL WARNING SIGNS SHALL HAVE A BLACK LEGEND AND BORDER ON ORANGE BACKGROUND.
3. ALTERNATIVE POST/MOUNTING CONFIGURATIONS FOR WARNING SIGNAGE TO BE APPROVED BY THE ENGINEER.
4. ALL TRAFFIC CONTROLS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROLS DEVICES (CAMUTCD) AND CALTRANS 2022 STANDARD PLANS.
5. MAINTAIN ONE TRAVEL LANE AT ALL TIMES. KEEP A MINIMUM OF 1 TRAFFIC LANE AT LEAST 11' WIDE OPEN FOR TRAFFIC, EXCEPT THE FULL WIDTH OF THE TRAVELED WAY MUST BE OPEN WHEN CONSTRUCTION OPERATIONS ARE NOT ACTIVE OR AN APPROVED TRAFFIC CONTROL PLAN IS IN PLACE.
6. PROVIDE FLAGGERS AS REQUIRED TO ACCOMMODATE CONSTRUCTION.
7. EACH ADVANCE WARNING SIGN SHALL BE EQUIPPED WITH AT LEAST TWO FLAGS FOR DAYTIME CLOSURES. EACH FLAG SHALL BE AT LEAST 16"x16" IN SIZE AND SHALL BE ORANGE OR FLUORESCENT RED-ORANGE IN COLOR.
8. FLASHING BEACONS SHALL BE PLACED AT THE LOCATIONS INDICATED FOR LANE CLOSURE DURING HOURS OF DARKNESS.
9. EMERGENCY VEHICLES SHALL BE ALLOWED TO PASSED THROUGH CONTROLLED AREAS AT ALL TIMES.
10. CLOSURES OF BOTH TRAVEL LANES FOR LONGER THAN 5 MINUTES REQUIRE PRIOR WRITTEN APPROVAL FROM DIRECTOR OF PUBLIC WORKS.
11. 48 HOURS ADVANCE NOTIFICATION TO THE DEPARTMENT OF PUBLIC WORKS, HUMBOLDT COUNTY SHERIFF'S OFFICE, AND CALIFORNIA HIGHWAY PATROL IS REQUIRED FOR CLOSURE OF BOTH TRAVEL LANES.
12. IF SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE DRAWINGS, REFER TO CALTRANS STANDARD PLAN T13 FOR GUIDANCE.

LEGEND

- WORK AREA
- CHANNELIZERS
- FLAGGER
- CONSTRUCTION AREA SIGN SINGLE POST
- TRAVEL DIRECTION



PLAN
NTS



VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
SACRAMENTO, CA 95801
WWW.S&W-ENR.COM
707-441-8855



NO.	DATE	REVISION	BY

DSGN	JSO
DR	JWF/CON
CHK	PEG
APVD	

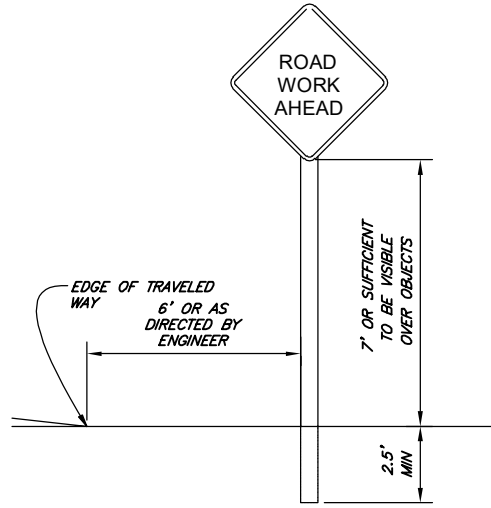
GARBERVILLE SANITARY DISTRICT
GARBERVILLE TANKS REPLACEMENT PROJECT
GARBERVILLE, CALIFORNIA

ENLARGED TRAFFIC CONTROL PLAN

SHEET	C9.1
SEQ	
DATE	04/2024
PROJ. NO.	022067

CONSTRUCTION AREA SIGNS

SIGN LETTER	SIGN CODE	SIGN MESSAGE	SIGN SIZE	NUMBER & POST SIZE	NO. OF SIGNS
A	W20-1	ROAD WORK AHEAD	4'x4'	(1) 4"x4"	1
B	C45(CA)	RUMBLE STRIPS SIGN	4'x4'	(1) 4"x4"	1
C	W20-4	ONE LANE ROAD AHEAD	4'x4'	(1) 4"x4"	1
	W13-1P	20 MPH	4'x4'	(1) 4"x4"	1
D	C9A(CA)	FLAGGER SYMBOL SIGN	4'x4'	(1) 4"x4"	1
E	W3-4	BE PREPARED TO STOP	4'x4'	(1) 4"x4"	1
F	C30(CA)	LANE CLOSED	30"x30"	(1) 4"x4"	1



TYPICAL STATIONARY CONSTRUCTION AREA SIGNS

CONSTRUCTION NOTES

- EXACT SIGN LOCATIONS AND POSITIONS TO BE APPROVED BY THE ENGINEER.
- ALL WARNING SIGNS SHALL HAVE A BLACK LEGEND AND BORDER ON ORANGE BACKGROUND.
- ALTERNATIVE POST/MOUNTING CONFIGURATIONS FOR WARNING SIGNAGE TO BE APPROVED BY THE ENGINEER.
- ALL TRAFFIC CONTROLS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROLS DEVICES (CAMUTCD) AND CALTRANS 2022 STANDARD PLANS.
- MAINTAIN ONE TRAVEL LANE AT ALL TIMES. KEEP A MINIMUM OF 1 TRAFFIC LANE AT LEAST 11' WIDE OPEN FOR TRAFFIC, EXCEPT THE FULL WIDTH OF THE TRAVELED WAY MUST BE OPEN WHEN CONSTRUCTION OPERATIONS ARE NOT ACTIVE OR AN APPROVED TRAFFIC CONTROL PLAN IS IN PLACE.
- PROVIDE FLAGGERS AS REQUIRED TO ACCOMMODATE CONSTRUCTION.
- EACH ADVANCE WARNING SIGN SHALL BE EQUIPPED WITH AT LEAST TWO FLAGS FOR DAYTIME CLOSURES. EACH FLAG SHALL BE AT LEAST 16"x16" IN SIZE AND SHALL BE ORANGE OR FLUORESCENT RED-ORANGE IN COLOR.
- FLASHING BEACONS SHALL BE PLACED AT THE LOCATIONS INDICATED FOR LANE CLOSURE DURING HOURS OF DARKNESS.
- EMERGENCY VEHICLES SHALL BE ALLOWED TO PASSED THROUGH CONTROLLED AREAS AT ALL TIMES.
- CLOSURES OF BOTH TRAVEL LANES FOR LONGER THAN 5 MINUTES REQUIRES PRIOR WRITTEN APPROVAL FORM DIRECTOR OF PUBLIC WORKS.
- 48 HOURS ADVANCE NOTIFICATION TO THE DEPARTMENT OF PUBLIC WORKS, HUMBOLDT COUNTY SHERIFF'S OFFICE, AND CALIFORNIA HIGHWAY PATROL IS REQUIRED FOR CLOSURE OF BOTH TRAVEL LANES.
- IF SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE DRAWINGS, REFER TO CALTRANS STANDARD PLAN T13 FOR GUIDANCE.

LEGEND

- WORK AREA
- CHANNELIZERS
- FLAGGER
- CONSTRUCTION AREA SIGN SINGLE POST
- TRAVEL DIRECTION



PLAN
NTS



VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
SACRAMENTO, CA 95801
WWW.S&W-ENR.COM
707-441-8855



NO.	DATE	REVISION	BY

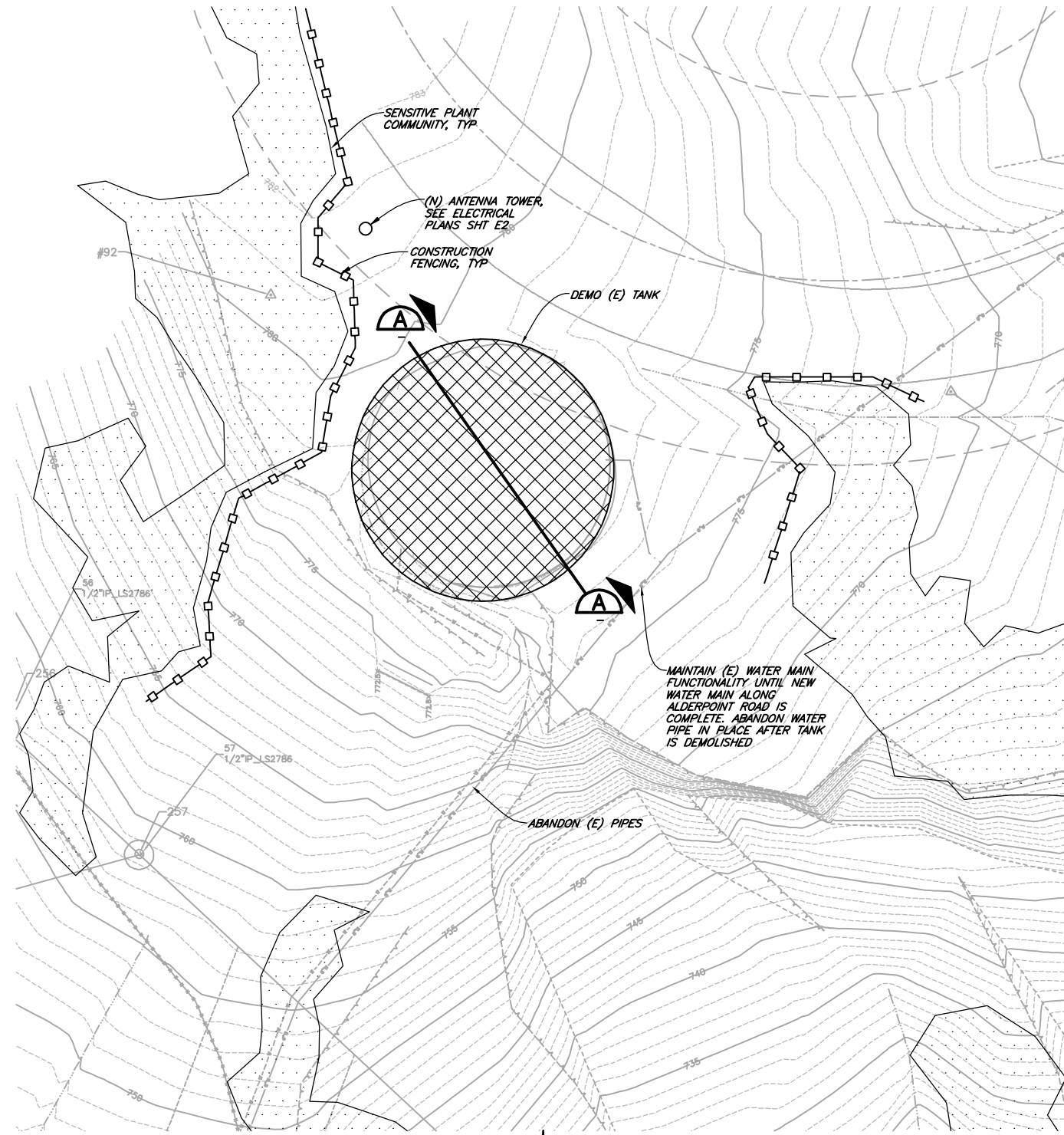
DSGN	JSO
DR	JWF/CON
CHK	PEG
APVD	

GARBERVILLE SANITARY DISTRICT
GARBERVILLE TANKS REPLACEMENT PROJECT
GARBERVILLE, CALIFORNIA
ENLARGED TRAFFIC CONTROL PLAN

SHEET	C9.2
SEQ	
DATE	04/2024
PROJ. NO.	022067

SAVED: 4/19/2024 2:50 PM CNEWELL, PLOTTED: 4/19/2024 2:54 PM NEWELL, CHRIS
 P:\Eureka\2022\GSD-Water\Draws\022067-Traffic-CONTRL-DWR.dwg

4/19/24



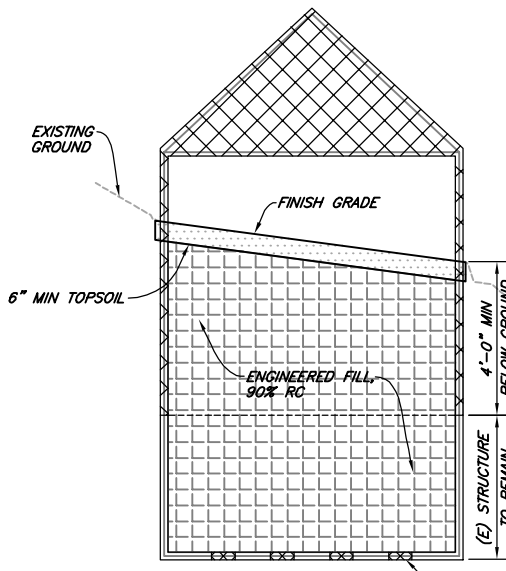
PLAN
 1"=10'

DEMOLITION NOTES:

- EXISTING FACILITIES SHALL REMAIN FULLY OPERATIONAL UNTIL NEW FACILITIES ARE FULLY OPERATIONAL. DEMOLITION OF EXISTING FACILITIES SHALL NOT BEGIN UNTIL APPROVED BY THE OWNER AND THE ENGINEER.
- ALL DEMOLITION SHALL BE CARRIED OUT IN A MANNER WHICH WILL PREVENT DAMAGE TO ADJACENT FACILITIES. DEMOLITION WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS AND ORDINANCES. EXISTING MATERIALS AND EQUIPMENT REMOVED BY THE CONTRACTOR SHALL NOT BE REUSED IN THE WORK UNLESS OTHERWISE SPECIFIED, SHALL BECOME THE PROPERTY OF THE CONTRACTOR, AND SHALL BE REMOVED FROM THE JOB SITE AND PROPERLY DISPOSED OF.
- CONTRACTOR TO PROVIDE PHOTO SURVEY OF PROPERTY TO DOCUMENT EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK IN THIS AREA.
- CONTRACTOR TO PROTECT IN PLACE ALL LANDSCAPING AND ARCHITECTURAL ELEMENTS. IF DAMAGE OCCURS, THE CONTRACTOR IS TO REPLACE DAMAGED ELEMENTS IN KIND.
- REFER TO ASBESTOS SURVEY AND LEAD PAINT SAMPLING REPORT BY BRUNNELLE & CLARK CONSULTING, LLC, DATED 12/14/2023 PRIOR TO DEMOLITION EFFORTS. DEMOLITION SHALL COMPLY WITH INFORMATION PROVIDED IN THIS REPORT. CONCRETE SHALL BE CONTINUOUSLY WETTED DURING DEMOLITION AND SHALL BE DISPOSED OF AT AN APPROVED LANDFILL.
- PROVIDE CONTINUOUS AIR SAMPLING TO VERIFY CONTAMINATION OF SURROUNDING ENVIRONMENT HAS NOT OCCURRED.
- PROVIDE LOAD TICKETS FOR DISPOSAL IN ACCORDANCE WITH THE SPECIFICATION AND CONTRACT REQUIREMENTS.
- CONTRACTOR TO OBTAIN DEMOLITION PERMIT FROM NCUAQMD PRIOR TO COMMENCEMENT OF ANY DEMOLITION ACTIVITIES, AND SHALL COMPLY WITH ALL PERMIT REQUIREMENTS.

LEGEND

- SENSITIVE PLANTS COMMUNITY
- DEMO
- CONSTRUCTION FENCING



SECTION A
 NTS

BREAK A MINIMUM OF FOUR 4" DIA HOLES THROUGH TANK SLAB, PER GEOTECHNICAL RECOMMENDATIONS. FILL REMAINING VOIDS WITH DRAIN ROCK



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 100
 WUREN, CA 95981
 WWW.S&W-ENR.COM
 707-441-8885

NO.	DATE	REVISION	BY

DESIGN	JSO
DR	CDN/JWF
CHK	PEG
APVD	

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA

ROBERTSON TANK DEMOLITION PLAN

SHEET
C10.0

SEQ

DATE **04/2024**

PROJ. NO.
022067

4/19/24

GENERAL STRUCTURAL NOTES:

1. VERIFICATION: VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK. NOTIFY THE OWNER IMMEDIATELY OF ANY DISCREPANCIES.
2. CONFLICTS: NOTES AND DETAILS ON THE DRAWINGS TAKE PRECEDENCE OVER THE GENERAL NOTES AND TYPICAL DETAILS IN CASE OF CONFLICT.
3. SUBSTITUTIONS: PROVIDE MANUFACTURER'S APPROVED PRODUCT EVALUATION REPORTS AND A LIST OF ALL PROPOSED SUBSTITUTIONS TO THE OWNER FOR REVIEW AND APPROVAL BEFORE FABRICATION AND/OR INSTALLATION.
4. SIMILAR WORK: WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE THE SAME AS FOR SIMILAR WORK SHOWN ON THE DRAWINGS.
5. EXCAVATIONS: LOCATE AND PROTECT UNDERGROUND OR CONCEALED CONDUIT, PLUMBING, OR OTHER UTILITIES WHERE NEW WORK IS BEING PERFORMED.
6. CONSTRUCTION METHODS AND PROJECT SAFETY: THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE METHODS, PROCEDURES OR SEQUENCE OF CONSTRUCTION. TAKE NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION, NEITHER THE OWNER NOR DESIGNER/ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
7. CHANGES TO THE DRAWINGS: OBTAIN PRIOR WRITTEN APPROVAL.

DESIGN CRITERIA:

REFERENCE CODES AND STANDARDS:
 2022 CALIFORNIA BUILDING CODE
 ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES
 ACI 318 CODE REQUIREMENTS FOR REINFORCED CONCRETE
 TMS 402 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES

BUILDING CLASSIFICATION:
 RISK CATEGORY = IV

WIND LOAD PARAMETERS:
 DESIGN WIND SPEED = 103 MPH
 EXPOSURE CATEGORY = C
 IMPORTANCE FACTOR, I_w = 1.0

SEISMIC LOAD PARAMETERS:
 SITE CLASS = D
 S_s = 1.709
 S_1 = 0.854
 S_{rs} = 1.139
 IMPORTANCE FACTOR, I_p = 1.5
 SEISMIC DESIGN CATEGORY = E

SEISMIC RESPONSE PARAMETERS:
 SEISMIC FORCE RESISTING SYSTEM = SPECIAL REINFORCED MASONRY SHEAR WALLS
 RESPONSE MODIFICATION FACTOR, R = 5
 DESIGN METHOD = EQUIVALENT LATERAL FORCE PROCEDURE
 SEISMIC RESPONSE COEFFICIENT, C_s = 0.342

APPLIED GRAVITY LOADS:
 ROOF LIVE LOAD = 20 PSF

FOUNDATION AND SOIL:

1. FOOTINGS SHALL BEAR ON SUITABLE, UNDISTURBED NATIVE SOILS AND/OR CLEAN FILL COMPACTED IN LIFTS OF ONE FOOT OR LESS TO 95% OF A MODIFIED PROCTOR PER ASTM D1557. SOILS SHALL BE FIRM AND UNYIELDING SOIL.
2. ALL ORGANIC AND DELETERIOUS MATERIAL BENEATH THE FOOTINGS, FOUNDATIONS, AND SLABS TO BE REMOVED AND REPLACED WITH GRANULAR FILL COMPACTED TO 95% RELATIVE COMPACTION. BOTTOM OF FOOTINGS TO BE BELOW LOCALLY PRESCRIBED FROST ZONE, NOT LESS THAN 18". REPLACE ALL OVER-EXCAVATED AREAS WITH GRANULAR MATERIAL COMPACTED IN 12" MAXIMUM LIFTS TO 95% RELATIVE COMPACTION (RC).
3. DESIGN BEARING PRESSURE = 2,500 PSF*
 *SEE THE GEOTECHNICAL REPORT BY SHN DATED OCTOBER, 2023. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL PREPARATION AND TASKS GIVEN IN THE GEOTECHNICAL REPORT.

CONCRETE:

1. ALL CONCRETE CONSTRUCTION SHALL CONFORM WITH CHAPTER 19A OF THE CBC AND WITH THE PROVISIONS OF ACI 318.
2. UNLESS OTHERWISE STATED, CONCRETE SHALL BE HARD ROCK CONCRETE AND SHALL MEET THE FOLLOWING DESIGN CRITERIA:
 2.1. MINIMUM 28-DAY COMPRESSIVE STRENGTH = 4,000 PSI
3. REINFORCING SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE."
4. MINIMUM CLEAR DISTANCE BETWEEN EDGE OF REBAR AND THE NEAREST EXTERIOR EDGE OF THE CONCRETE SHALL BE AS FOLLOWS:
 4.1. EXPOSED TO SOIL = 3" MIN
 4.2. EXPOSED TO WEATHERING = 2" MIN
 4.3. INTERIOR EXPOSURE ONLY 1 1/2" MIN
5. MINIMUM DISTANCE BETWEEN REINFORCING STEEL SHALL BE NO LESS THAN THREE TIMES THE DIAMETER OF THE LARGEST AGGREGATE IN THE CONCRETE MIXTURE.
6. ALL REBAR SPLICED SHALL BE EITHER 55 TIMES THE DIAMETER OF THE BAR OR 36 INCHES, WHICHEVER IS GREATER.
7. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A 615 GRADE 60 (A706 FOR REINF TO BE WELDED).
8. ALL ITEMS TO BE CAST IN CONCRETE SUCH AS REINFORCING DOWELS, BOLTS, ANCHORS, PIPES AND SLEEVES SHALL BE SECURELY POSITIONED IN FORMS BEFORE PLACEMENT OF CONCRETE.
9. WHEN AIR TEMPERATURE IS ABOVE 80 DEGREES FAHRENHEIT, HOT WEATHER CONCRETING - ACI 305R - APPLIES. WHEN THE AVERAGE AIR TEMPERATURE IS BELOW 40 DEGREE FAHRENHEIT, COLD WEATHER CONCRETING - ACI 306R - APPLIES.

MASONRY:

1. ALL MASONRY CONSTRUCTION SHALL CONFORM WITH CHAPTER 21A OF THE CBC AND WITH THE PROVISIONS OF TMS 402.
2. UNLESS OTHERWISE STATED, MASONRY SHALL MEET THE FOLLOWING DESIGN CRITERIA:
 2.1. MINIMUM NET AREA COMPRESSIVE STRENGTH OF CONCRETE MASONRY, F'_m = 2,500 PSI
 2.2. MINIMUM NET AREA COMPRESSIVE STRENGTH OF MASONRY UNIT @ 28 DAYS = 3,250 PSI
 2.3. MINIMUM COMPRESSIVE STRENGTH OF GROUT = 2,000 PSI
3. ALL GROUT FOR CONCRETE MASONRY WALLS AND LINTELS SHALL BE MIXED AND PROPORTIONED IN ACCORDANCE WITH ASTM C476.
4. ALL CONCRETE MASONRY WALLS TO BE REINFORCED AS SHOWN. SEE TYPICAL DETAILS FOR BAR PLACEMENT AT CORNERS, INTERSECTIONS, AND OPENINGS.
5. ALL CELLS OF MASONRY UNITS TO BE GROUTED SOLID.
6. ALL BAR REINFORCING FOR MASONRY SHALL CONFORM TO ASTM A615 GRADE 60.
7. BOND BEAM REINFORCING STEEL TO RUN CONTINUOUS THROUGH CONTROL JOINTS.
8. ALL VERTICAL REINFORCING BARS IN MASONRY WALLS TO BE PLACED IN CENTER OF WALLS USING VERTICAL BAR POSITIONERS SPACED AT INTERVALS NOT EXCEEDING 200 BAR DIAMETERS.
9. AT REINFORCED MASONRY LINTELS, PROVIDE TEMPORARY SHORING TO SUPPORT MASONRY OVER OPENINGS. SHORING TO REMAIN IN PLACE A MINIMUM OF 14 DAYS.
10. CONTRACTOR TO SUBMIT PLAN SHOWING PROPOSED CONTROL JOINT LOCATIONS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

WOOD:

1. TOP PLATE ON MASONRY WALL SHALL BE NO. 1 OR BETTER PRESSURE TREATED DOUGLAS FIR.
2. ALL OTHER FRAMING LUMBER SHALL BE NO. 2 OR BETTER DOUGLAS FIR.
3. GABLE PLYWOOD PANELS SHALL BE 15/32" STRUCTURAL SHEATHING, 32/16 EXTERIOR RATED, WITH A MINIMUM PANEL WIDTH OF 24". FASTEN WITH 8d COMMON NAILS (WOOD) OR #8 SELF-DRILLING SHEET METAL SCREWS (STEEL) @ 6" EDGE/12" FIELD. STAGGER ADJOINING PANEL EDGES. CONTRACTOR TO COORDINATE W/ TRUSS MANUFACTURER FOR ATTACHMENT AND PROVIDE BLOCKING AS NECESSARY.
4. ROOF PLYWOOD PANELS SHALL BE 15/32" STRUCTURAL SHEATHING, 32/16 EXTERIOR RATED, WITH A MINIMUM PANEL WIDTH OF 24". FASTEN WITH 8d COMMON NAILS (WOOD) OR #8 SELF-DRILLING SHEET METAL SCREWS (STEEL) @ 6" EDGE/12" FIELD. STAGGER ADJOINING PANEL EDGES. CONTRACTOR TO COORDINATE W/ TRUSS MANUFACTURER FOR ATTACHMENT AND PROVIDE BLOCKING AS NECESSARY.
5. WHERE MANUFACTURED FRAMING CONNECTORS ARE USED, PROVIDE FULL FASTENING OF CONNECTIONS IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS.
6. MINIMUM NAILING REQUIRED SHALL BE IN ACCORDANCE WITH CBC TABLE 2304.10.2.

COLD-FORMED STEEL TRUSSES:

1. TRUSS INFORMATION FROM MANUFACTURER TO BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
2. WHERE MANUFACTURED FRAMING CONNECTORS ARE USED, PROVIDE FULL FASTENING OF CONNECTIONS IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS.

STANDING SEAM ROOF PANELS:

1. PANELS SHALL BE 12" 24 GAUGE TAYLOR METAL PRODUCTS EASY-LOCK W/ KYNAR 500 COATING, OR APPROVED EQUAL.
2. PROVIDE FULL FASTENING OF PANELS IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS.
3. COLOR TO BE SELECTED BY OWNER PRIOR TO CONSTRUCTION.

SAVED: 4/19/2024 9:11 AM CNEWELL, PLOTTED: 4/19/2024 11:21 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-STRCT-NOTES-LEGEND-DWR.dwg

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 100
 EUREKA, CA 95501
 WWW.SHN-ENR.COM
 707-441-8855



BY	
REVISION	
DATE	
NO.	

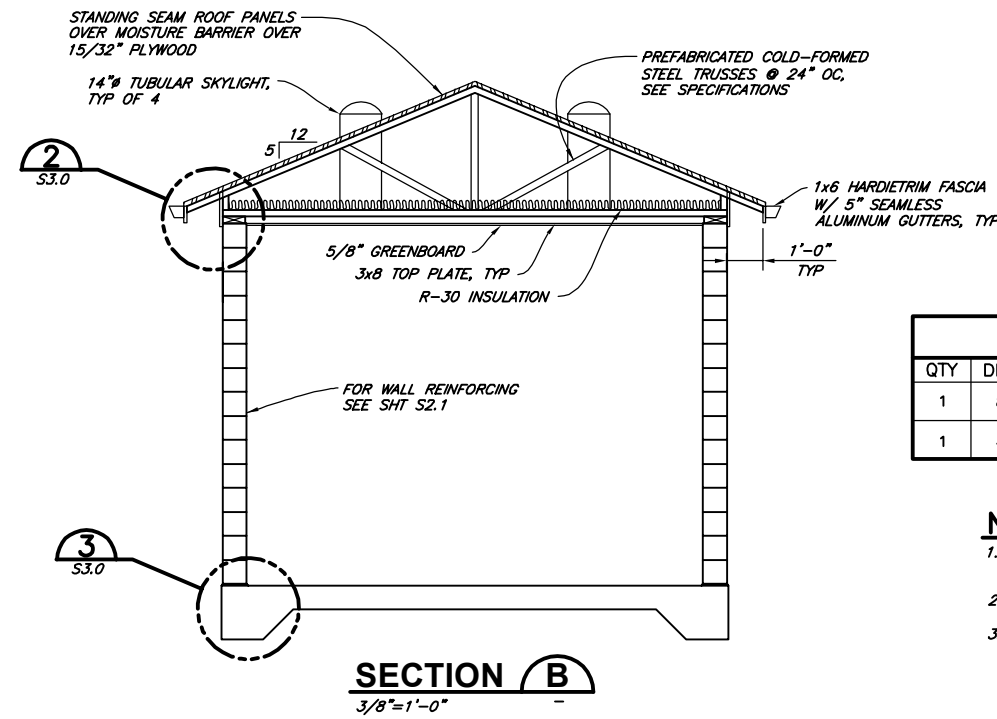
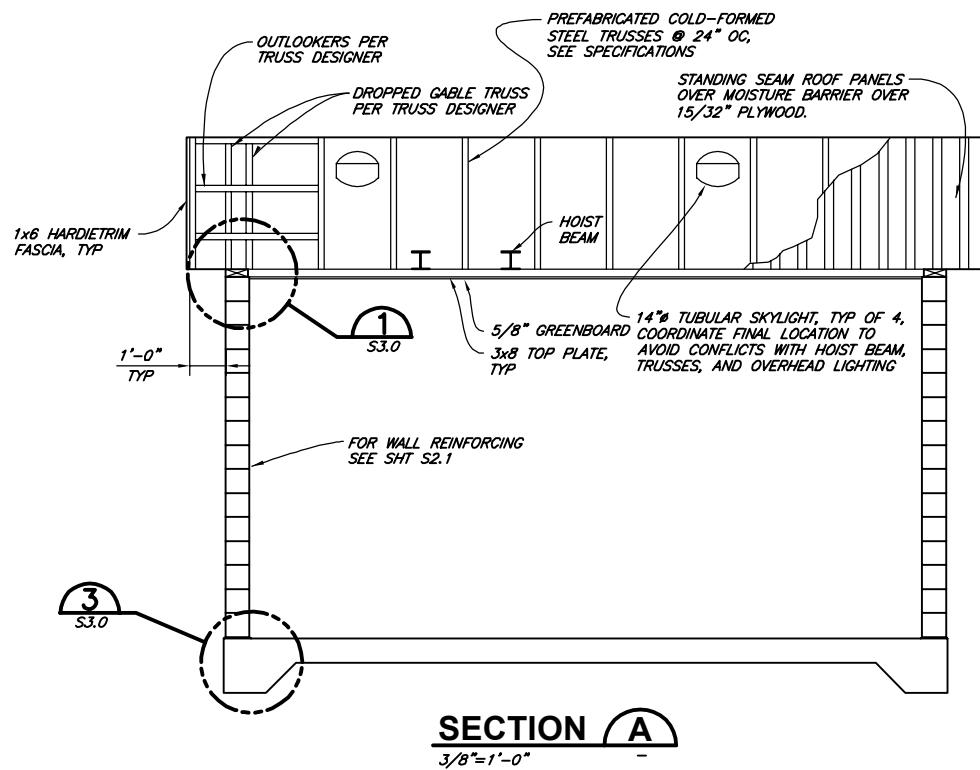
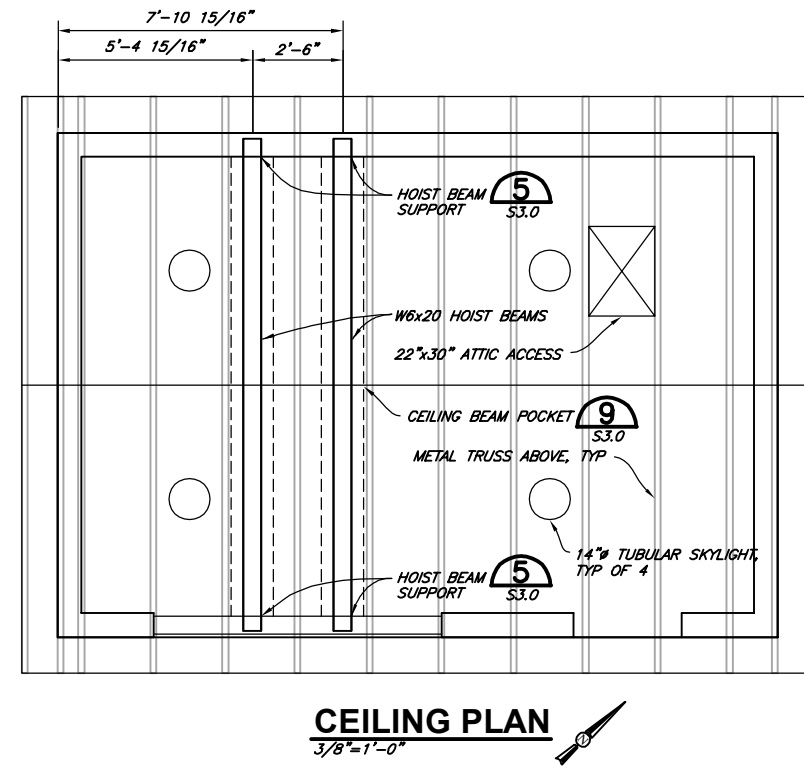
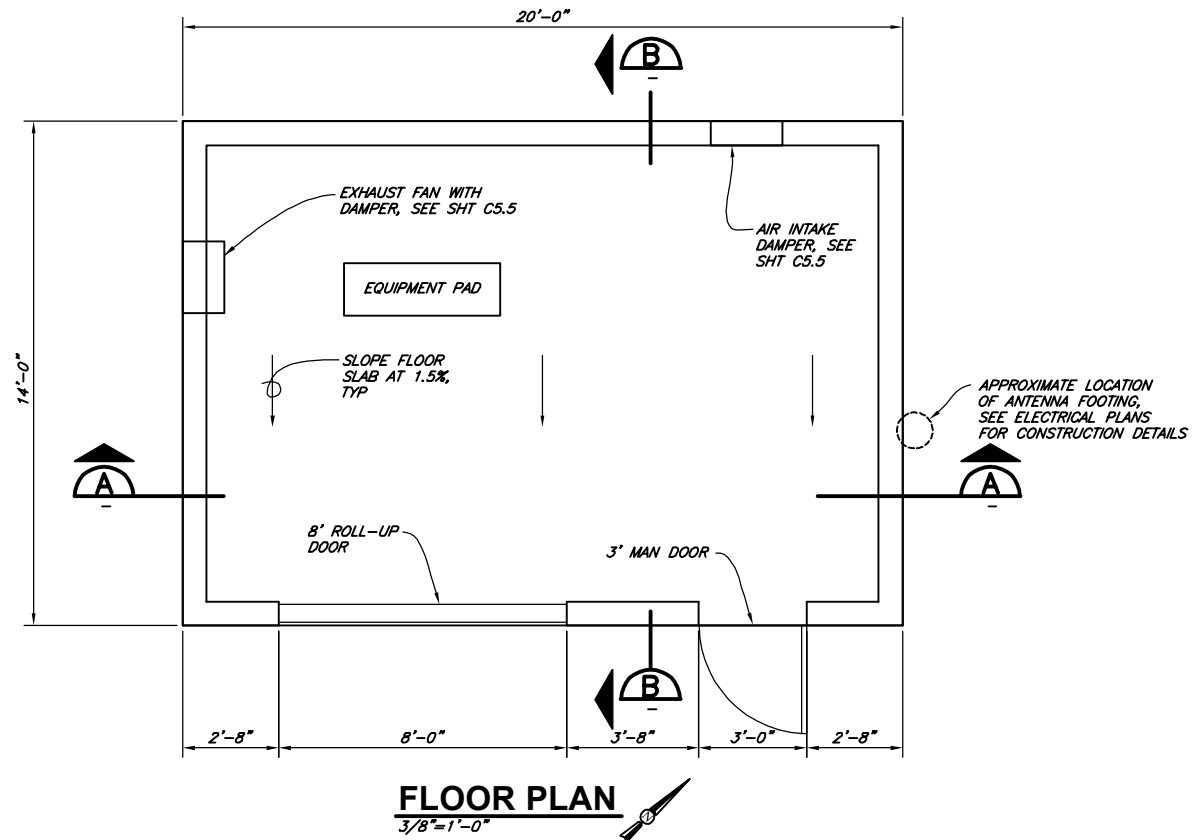
DSGN	JSO
DR	JWF/CDN
CHK	PEG
APVD	

STRUCTURAL NOTES AND LEGEND
 GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA



SHEET	S0.1
SEQ	
DATE	04/2024
PROJ. NO.	022067

4/19/24



INTERIOR FINISH SCHEDULE		
SURFACE	MATERIAL	FINISH
FLOOR	EXPOSED CONCRETE	BROOM FINISH
WALLS	EXPOSED MASONRY	SEALED, BLOCK FILLER, AND PAINTED
CEILING	GREENBOARD 5/8" GYPSUM BOARD	PAINTED, COLOR BY OWNER

DOOR SCHEDULE			
QTY	DIMENSIONS	MATERIAL	NOTES
1	8'-0"x8'-0"	ALUMINUM	COMMERCIAL ROLL-UP DOOR, PAINTED PER OWNER
1	3'-0"x7'-0"	STEEL	EXTERIOR DOOR W/18"x18" LOUVERED VENT, RIGHT OUTSWING, SEE NOTES BELOW

NOTES:

- DOOR SHALL BE 1-3/4" THICK 16 GAUGE. PROVIDE COMMERCIAL GRADE SST HARDWARE WITH GRADE 1 LEVER LOCK AND DEAD BOLT. COORDINATE LOCK KEYING WITH OWNER
- FRAME SHALL BE WRAP-AROUND STYLE AND ANCHORED TO CMU WALL PER MANUFACTURER'S INSTRUCTIONS
- DOOR AND FRAME SHALL BE GALVANNEALED, RUST-INHIBITIVE PRIMER, AND ENAMEL TOPCOAT. COORDINATE DOOR COLOR WITH OWNER.

SAVED: 4/19/2024 9:09 AM CNEWELL, PLOTTED: 4/19/2024 11:21 AM NEWELL, CHRIS
 P:\Eureka\2022\GSD-Water\Draws\022067-STRUC-ALDRPNT-PIP-STA.dwg



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 FURRELL, CA 95001
 WWW.S&W.COM
 707-441-8855

DR	CDN/JWF	CHK	PEG	APVD
DSGN	JSO			

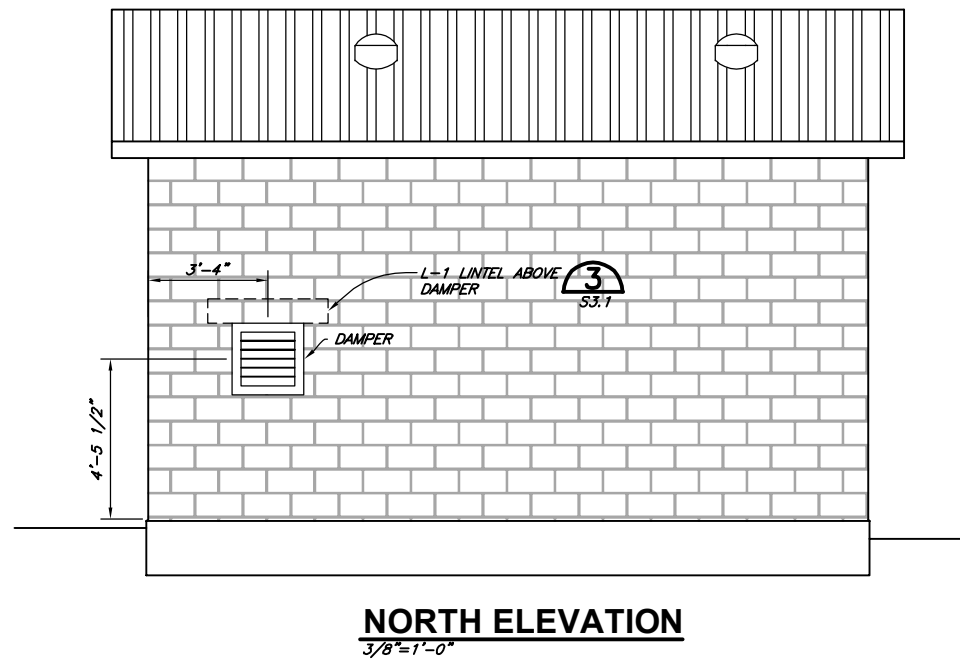
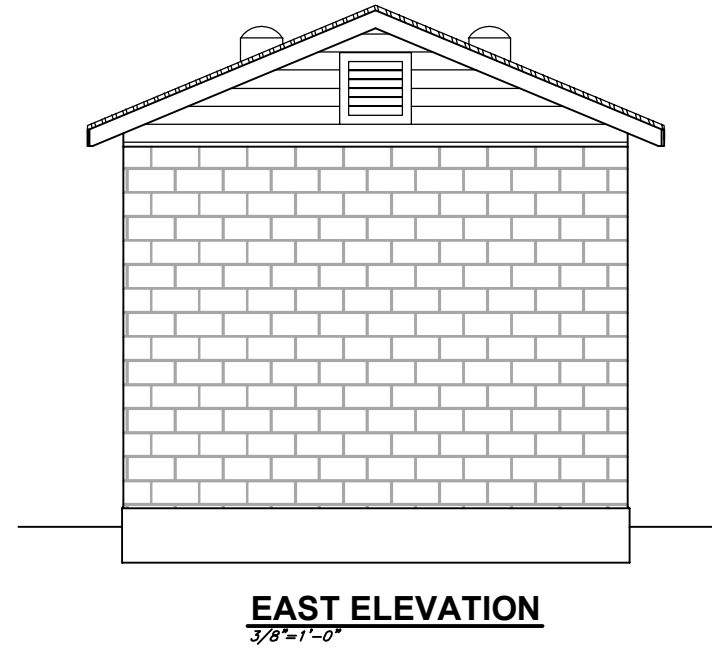
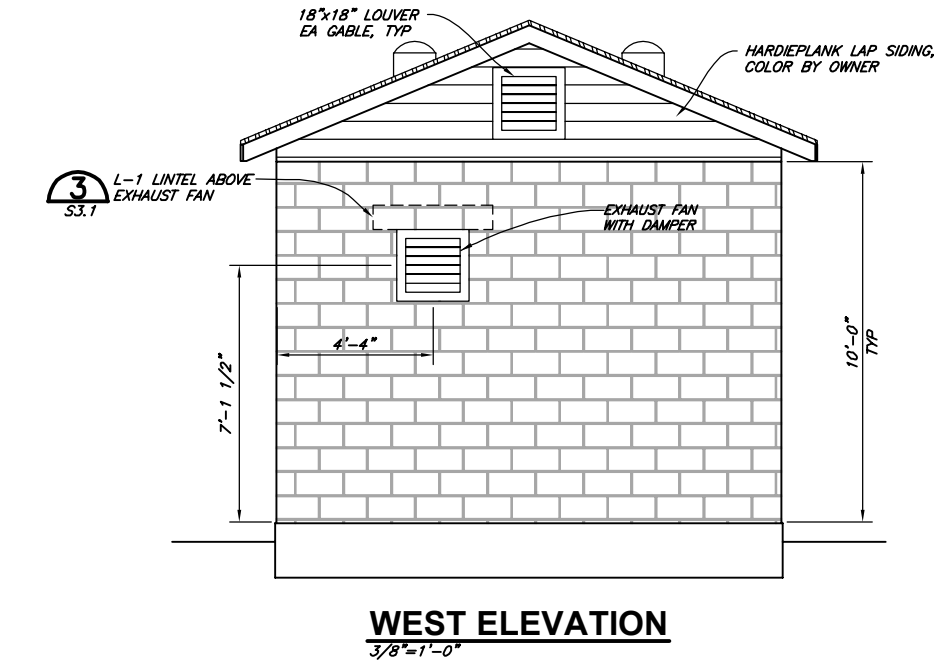
GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
ALDERPOINT PUMP STATION PLAN AND SECTIONS

SHEET	S2.0
SEQ	
DATE	04/2024
PROJ. NO.	022067

DATE
 REVISION
 NO.
 BY

4/19/24

SAVED: 4/19/2024 9:09 AM CHENEWELL, PLOTTED: 4/19/2024 11:21 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\STRUCT-ALDRPNT-PIP-STA.dwg



NOTES:

1. SEE SHEET S3.1 FOR REINFORCING DETAILS.
2. ALL DIMENSIONS FOR OPENINGS ARE NOMINAL. CONTRACTOR TO ADJUST PER BLOCK CONSTRUCTION. COORDINATE CLEAR OPENINGS FOR LOUVERS WITH REINFORCEMENT.
3. SOLID GROUT ALL CELLS.



4/19/24

VERIFY SCALES
 BAR IS ONE INCH ON
 ORIGINAL DRAWING
 0 IF NOT ONE INCH ON
 SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 100
 WASHINGTON, CA 95071
 WWW.S&W.COM
 707-441-8855

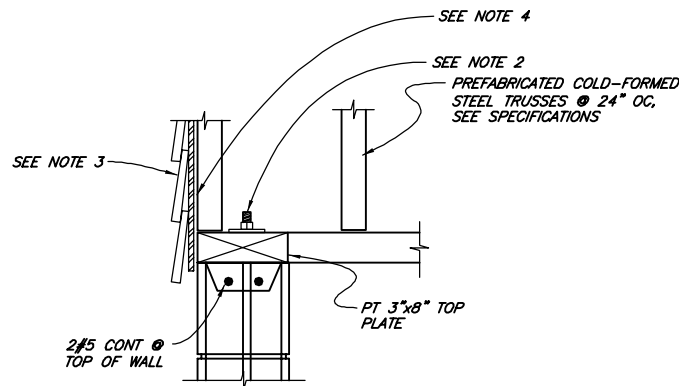


NO.	DATE	REVISION	BY

DESIGN JSD
 DR CDN/JWF
 CHK PEG
 APVD

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANKS REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
**ALDERPOINT PUMP STATION
 ELEVATIONS**

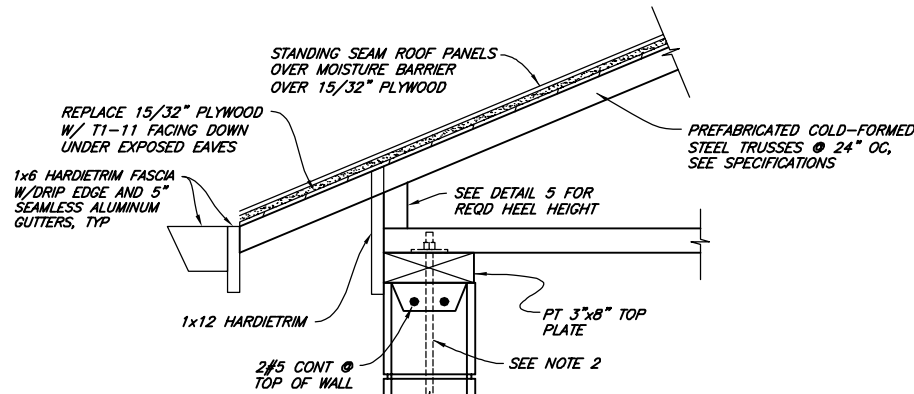
SHEET
S2.1
 SEQ
 DATE 04/2024
 PROJ. NO. 022067



NOTES:

1. TRUSS TO TOP PLATE CONNECTION PER TRUSS MANUFACTURER.
2. 5/8" DIA ANCHOR BOLTS W/15" MIN EMBEDMENT. PLACE IN GROUTED CELLS. DO NOT EXCEED 48" OC SPACING. INSTALL W/1/4"x3"x3" WASHER.
3. HARDIEPLANK LAP SIDING OVER 15/32" PLYWOOD SHEETING. COLOR TO BE DETERMINED BY OWNER. ATTACH PER MANUFACTURER.

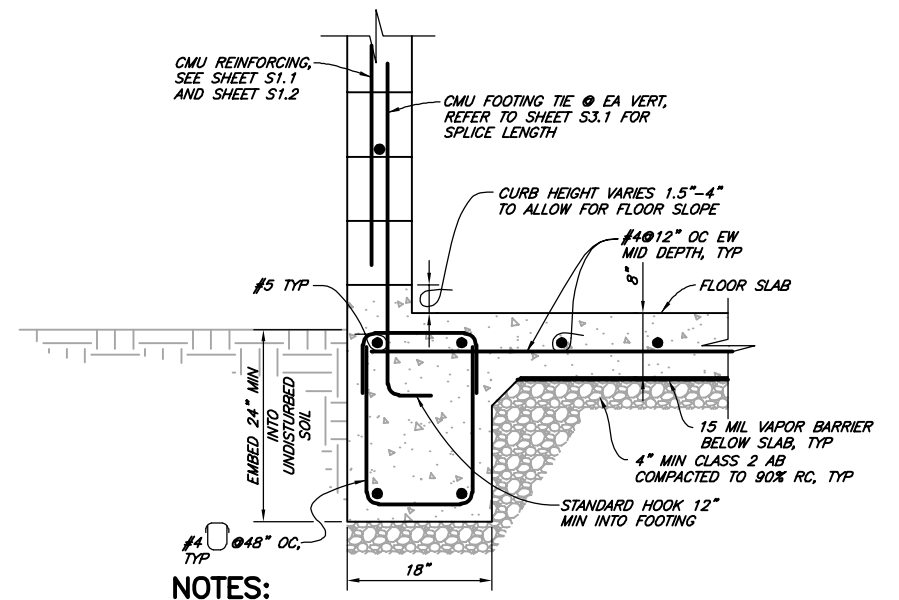
DETAIL 1
NTS S2.1
(CORNER CONNECTION)



NOTES:

1. TRUSS TO TOP PLATE CONNECTION PER TRUSS MANUFACTURER.
2. 5/8" DIA ANCHOR BOLTS W/15" MIN EMBEDMENT. PLACE IN GROUTED CELLS. DO NOT EXCEED 48" OC SPACING. INSTALL W/ 1/4"x3"x3" WASHER.
3. SEE NOTES ON S0.1 FOR FASTENING OF PLYWOOD SHEATHING AND STANDING SEAM ROOF PANELS.
4. FASTEN HARDIETRIM PER MANUFACTURER RECOMMENDATIONS. PROVIDE BLOCKING AS NEEDED BETWEEN TRUSSES.

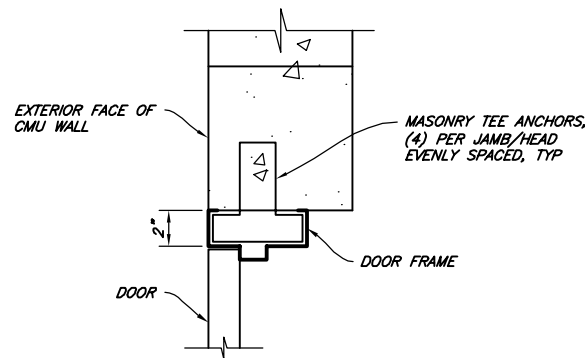
DETAIL 2
NTS S2.1
(CORNER CONNECTION)



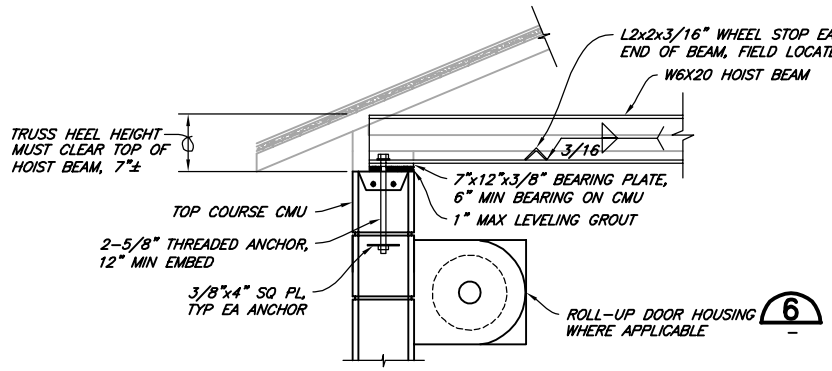
NOTES:

1. SUBGRADE PREPARATION SHALL BE COMPLETED IN ACCORDANCE WITH RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL REPORT.
2. MAINTAIN 3" CLEAR FROM REINFORCEMENT TO EDGE OF CONCRETE, TYP.
3. SEE DETAILS 7 AND 8 FOR CONCRETE REINFORCEMENT BENDS, HOOKS, AND SPLICES.

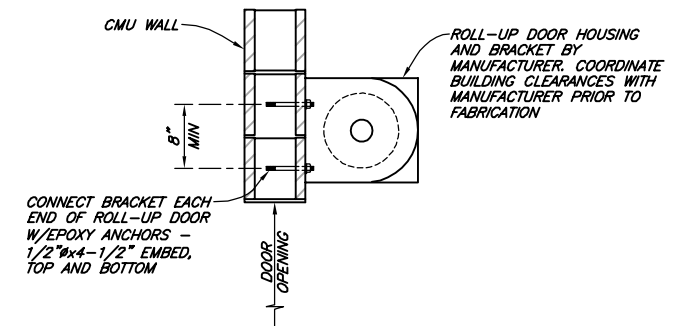
DETAIL 3
NTS S2.1
(FOUNDATION AND SLAB)



DETAIL 4
NTS
(DOOR JAMB PLAN VIEW)



DETAIL 5
NTS S2.1
(HOIST BEAM SUPPORT)



NOTE:

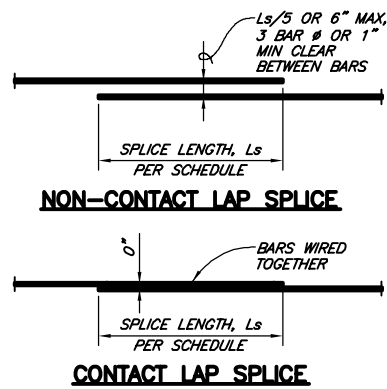
MINIMUM BRACKET CONNECTION SHOWN. ALTERNATE CONNECTION OF EQUAL OR GREATER CAPACITY PROVIDED BY ROLL-UP DOOR MANUFACTURER ACCEPTABLE.

DETAIL 6
NTS
(ROLL-UP DOOR BRACKET CONNECTION)

STANDARD HOOKS			
BAR SIZE	"D" IN	180° HOOKS "K"	90° HOOKS "K"
#3	2-1/4"	2-1/2"	4-1/2"
#4	3"	2-1/2"	6"
#5	3-3/4"	2-1/2"	7-1/2"
#6	4-1/2"	3"	9"

STIRRUP AND TIE HOOKS				
BAR SIZE	"D" IN	180° HOOKS "K"	135° HOOKS "K"	90° HOOKS "K"
#3	1-1/2"	2-1/2"	3"	3"
#4	2"	2-1/2"	3"	3"
#5	2-1/2"	2-1/2"	3-3/4"	3-3/4"

DETAIL 7
NTS
(TYP CONCRETE REBAR BENDS & HOOKS)

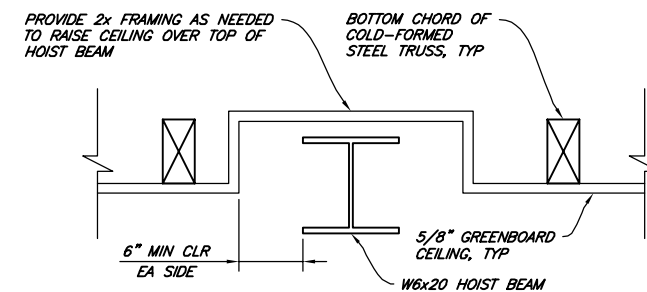


DETAIL 8
NTS
(TYP CONCRETE REBAR LAP SPLICES)

REBAR LAP SPLICE LENGTHS (Ls)		
BAR SIZE	HARD ROCK (REG WT) CONCRETE	
	CLASS B SPLICE, TYP, UNO	TOP BARS (SEE NOTE 1)
#3	22"	28"
#4	29"	37"
#5	36"	47"
#6	43"	56"

NOTES:

1. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW BARS. IN SAME POUR AS BARS (AS IN DEEP BEAM OR FOOTING POURS, ETC).
2. STAGGER LAPS IN SUCCESSIVE PARALLEL BARS IN SLABS AND WALLS A DISTANCE EQUAL TO THE REQUIRED LAP SPLICE LENGTH, BUT NOT LESS THAN 24" (ALONG LENGTH OF BARS).
3. ALL LAP SPLICES SHALL BE CONTACT OR NON-CONTACT TYPE, AS SHOWN.



DETAIL 9
NTS
(BEAM HOIST CEILING POCKET)

SAVED: 4/19/2024 9:11 AM CNEWELL, PLOTTED: 4/19/2024 11:21 AM NEWELL, CHRIS
 P:\Eureka\2022\022067-GSD-Water\Draws\022067-STRUC-DTLS-DWR.dwg

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
 SUITE 100
 WURESH, CALIFORNIA 95758
 WWW.S&W-ENR.COM
 707-441-8855



NO.	DATE	REVISION	BY

DESIGN: JSO
 DRAWING: JWF
 CHECK: PEG
 APPROVED: APVD

GARBVILLE SANITARY DISTRICT
 GARBVILLE TANKS REPLACEMENT PROJECT
 GARBVILLE, CALIFORNIA

SHEET **S3.0**
 SEQ
 DATE 04/2024
 PROJ. NO. 022067

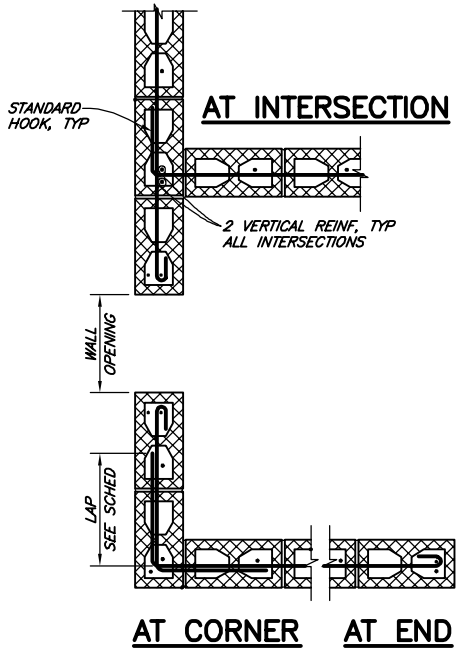


4/19/24

STRUCTURAL DETAILS

CMU REINFORCEMENT SCHEDULE

TYPE	LOCATION	REINFORCEMENT
VERTICAL	VERTICAL BARS	1-#5 @ 24" OC, UNO
	JAMBS	2-#5
	CORNERS/INTERSECTIONS	2-#5, SEE DETAIL 1
	MCJ	2-#5 EA SIDE
HORIZ	TOP OF WALL BOND BEAM	2-#5
	BELOW OPENINGS	2-#5
	LINTELS	SEE DETAIL 3
	INTERMEDIATE BOND BEAMS	1-#5 @ 24" VERT SPACING, UNO

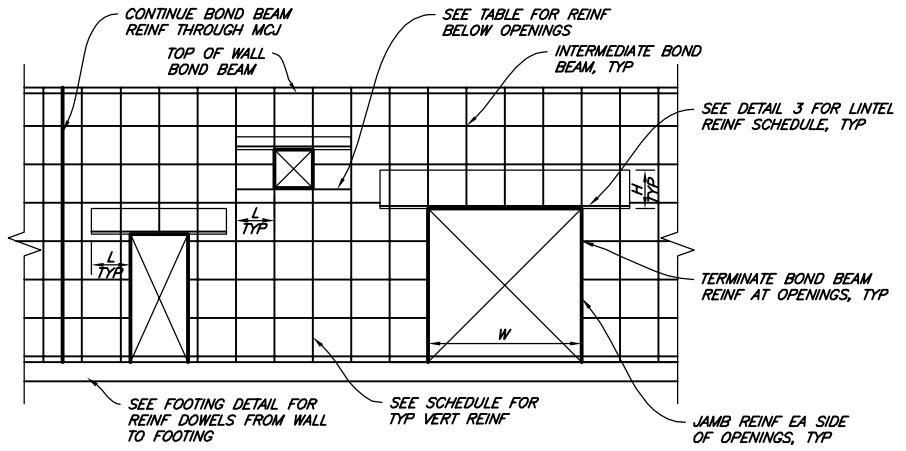


NOTE:
ALL HORIZONTAL REINFORCEMENT SHALL END IN A 90° OR 180° HOOK, WHICH SHALL WRAP AROUND MAIN VERTICAL BAR.

DETAIL 1

NTS

(TYP REINFORCEMENT AT CMU WALL)



NOTES:

- GROUT SOLID ALL CELLS.
- PROVIDE REINFORCING NOTED FOR ALL MASONRY WALLS UNLESS NOTED OTHERWISE.
- MAINTAIN MINIMUM 3"x3" CONTINUOUS VERTICAL CELL AT EACH REBAR. PLACE WALLS TO MAXIMUM 4'-0" HEIGHT BEFORE GROUTING.
- STOP GROUT POUR 1/2" BELOW TOP OF COURSE AT EACH GROUT LIFT.
- SEE DETAIL 4 FOR REQUIRED REINFORCEMENT LAP DISTANCES.
- FOOTING DOWELS SHALL MATCH SIZE AND SPACING W/ VERTICAL BARS.

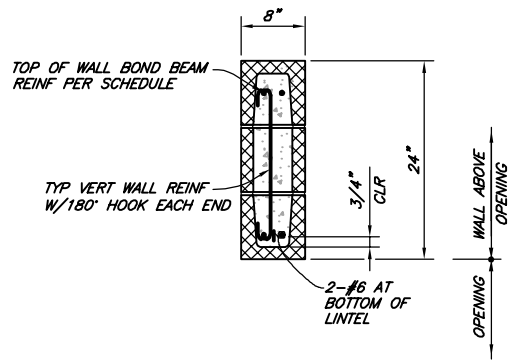
DETAIL 2

NTS

(CMU REINFORCEMENT SCHEDULE)

LINTEL SCHEDULE

TYPE	W	REINF	L	H
L-1	1'-4" THRU 2'-10"	1-#5	8"	8"
L-2	2'-10" THRU 6'-8"	2-#5	16"	16"
L-3	6'-8" THRU 10'-0"	2-#6	24"	24"



L-3 LINTEL SECTION

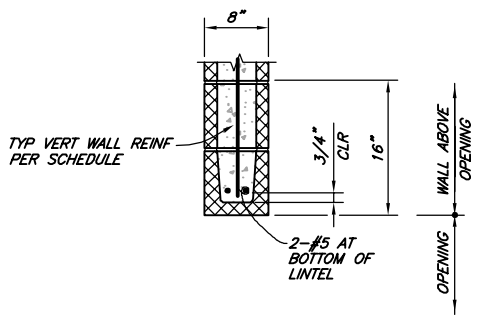
NOTES:

- SEE DETAIL 2 AND PLAN DRAWINGS FOR DIMENSION OF "W" AND "L".
- IF "L" IS LESS THAN THE DEVELOPMENT LENGTH OF THE REINFORCEMENT BAR(S), PROVIDE STANDARD 90° BEND.
- WHERE LINTEL TYPE IS NOT SHOWN ON PLAN, PROVIDE LINTELS FROM THE ABOVE SCHEDULE BASED ON MAX CLEAR OPENING. VERIFY W/ ENGINEER PRIOR TO CONSTRUCTION.
- OPENINGS 12" OR LESS WIDE MAY OCCUR WITHOUT LINTEL REINFORCING AS LONG AS NO REINFORCING IS INTERRUPTED.

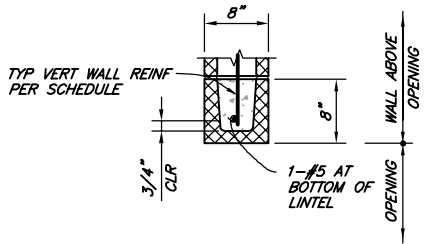
DETAIL 3

NTS S2.1

(CMU LINTELS)



L-2 LINTEL SECTION



L-1 LINTEL SECTION

MASONRY LAP SPLICE LENGTHS

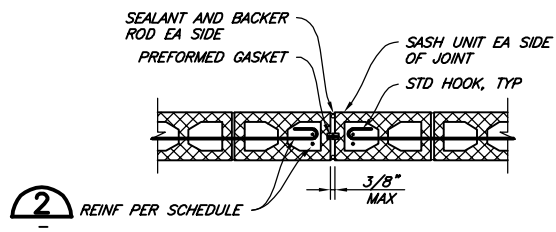
$F'_m = 2,500$ PSI, $F_y = 60,000$ PSI

BAR SIZE	8" CMU	
	BAR @ C	BAR @ EDGE
#3	1'-0"	1'-0"
#4	1'-0"	1'-8"
#5	1'-5"	2'-6"
#6	2'-9"	4'-6"
#7	3'-10"	5'-3"

DETAIL 4

NTS

(TYP MASONRY REBAR LAP SPLICES)



NOTES:

- BOND BEAM REINFORCEMENT TO EXTEND THROUGH JOINT.
- MAXIMUM JOINT SPACING SHALL BE 15 FT UNLESS NOTED OTHERWISE.
- CONTRACTOR TO SUBMIT PLAN SHOWING PROPOSED CONTROL JOINT LOCATIONS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

DETAIL 5

NTS

(MASONRY CONTROL JOINT - MCJ)

SAVED: 4/19/2024 9:11 AM CNEWELL, PLOTTED: 4/19/2024 11:21 AM NEWELL, CHRIS
 P:\Eureka\2022\GSD-Water\Draws\022067-STRUC-DTLS-DWR.dwg



VERITY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON SCALES ACCORDINGLY

812 W. WABASH AVE.
SACRAMENTO, CA 95831
WWW.SHA-8885.COM
707-441-8885

NO.	DATE	REVISION	BY

DESIGN: JSO
DR: CDN/JWF
CHK: PEG
APVD: [Signature]

GARBERVILLE SANITARY DISTRICT
GARBERVILLE TANKS REPLACEMENT PROJECT
GARBERVILLE, CALIFORNIA

STRUCTURAL DETAILS

SHEET **S3.1**
SEQ
DATE 04/2024
PROJ. NO. 022067

4/19/24

SAVED: 4/19/2024 3:26 PM ATEEM, PLOTTED: 4/19/2024 3:29 PM ZAK KWAN VOGLEP
 lateem_Is Lateem_Files\ACAD\DWG\2022\220662\DWG\220662E001.dwg

MISCELLANEOUS ELECTRICAL & INSTRUMENTATION ABBREVIATIONS					
&	AND	HOR	HAND-OFF-REMOTE	PRESS	PRESSURE
@	AT	HP	HORSEPOWER	PRI	PRIMARY
A	AMBER, AMPERES	HPS	HIGH PRESSURE SODIUM	PROVIDE	FURNISH, INSTALL & CONNECT
AC	ALTERNATING CURRENT	HS	HAND SWITCH	PRR	POWER RELAY
AF	AMP FRAME	HTR	HEATER	PS	PRESSURE SWITCH, POWER SUPPLY
AFF	ABOVE FINISHED FLOOR	HZ	HERTZ (CYCLES PER SECOND)	PT	POTENTIAL TRANSFORMER
AI	ANALOG INPUT	HZD	HAZARDOUS AREA, EXPLOSION PROOF	PTT	PUSH TO TEST
AIC	AMP INTERRUPTING CAPACITY SYMMETRICAL	I	INTERLOCK	PV	PROCESS VARIABLE
AL	RIGID ALUMINUM CONDUIT	I/O	INPUT/OUTPUT	PVC	POLY VINYL CHLORIDE
ALT	ALTERNATOR	ICR	INSTRUMENTATION CONTROL RELAY	PWR	POWER
AM	AMMETER	INST	INSTANTANEOUS	R	RED
ARMS	ARC FLASH REDUCTION MAINTENANCE SYS	ISC	SHORT CKT INTERRUPTING CURRENT (SYMM)	RCT	REPEAT CYCLE TIMER
AO	ANALOG OUTPUT	ISR	INTRINSICALLY SAFE RELAY	REF	REFERENCE
AT	AMP TRIP	J	JUNCTION BOX	RIO	REMOTE I/O
ATS	AUTOMATIC TRANSFER SWITCH	K	KILO, PREFIX	RTD	RESISTANCE TEMPERATURE DETECTOR
AWG	AMERICAN WIRE GAUGE	KAIC	KILO-AMPERE INTERRUPTING CAPACITY	RTM	RUN TIME METER
B	BLUE	L	LINE	RTU	REMOTE TELEMETRY UNIT
BC	BARE COPPER	LA	LIGHTNING ARRESTOR	RVNR	REDUCED VOLTAGE NON-REVERSING
BFC	BELOW FINISHED CEILING	LC	LIGHTING CONTACTOR	(R)	REWIRE, RELOCATE, REVISE, REPLACE
BOD	BIOCHEMICAL OXYGEN DEMAND	LCD	LIQUID CRYSTAL DISPLAY	SC	SHORTING CONTACTOR
BLK	BLANK	LED	LIGHT EMITTING DIODE	SCH	SCHEDULE
BKR	BREAKER	LEL	LOWER EXPLOSIVE LIMIT	SEC	SECONDARY
C	CONDUIT	LGT	LIGHT	SECS	SECONDS
CAP	CAPACITOR	LO	LOW	SEL	SELECTOR
CB	CIRCUIT BREAKER	LOR	LOCAL-OFF-REMOTE	SFA	SERVICE FACTOR AMPS
CBL	CABLE	LOS	LOCK-OUT STOP SWITCH	SP	SETPOINT
CH	CHANNEL	LP	LIGHTING PANELBOARD	SPD	SURGE PROTECTIVE DEVICE
CKT	CIRCUIT	LPU	LINE PROTECTION UNIT	SPEC	SPECIFICATION
COAX	COAXIAL CABLE	LS	LEVEL SWITCH	SS	STAINLESS STEEL
COMM	COMMUNICATION PORT	LSI	LONG, SHORT, INSTANTANOUS	SSS	SOLID STATE SOFT STARTER
CP	CONTROL PANEL	M	MOTOR CONTRACTOR	STT	START
CPT	CONTROL POWER TRANSFORMER	MAX	MAXIMUM	STP	STOP
CR	CONTROL RELAY	MCC	MOTOR CONTROL CENTER	SV	SOLENOID VALVE
CT	CURRENT TRANSFORMER	MCM	THOUSAND CIRCULAR MILS	SW	SWITCH
CTQ	CONSTANT TORQUE	MCP	MOTOR CIRCUIT PROTECTOR	SWBD	SWITCHBOARD
CU	COPPER, CONDENSING UNIT	MH	MANHOLE	SWGR	SWITCHGEAR
DC	DIRECT CURRENT	MHD	METAL HALIDE	SYMM	SYMMETRICAL
DET	DETAIL	MIN	MINIMUM	T	TRIP
DI	DIGITAL INPUT	MINS	MINUTES	TB	TERMINAL BLOCK
DIA	DIAGRAM	MISC	MISCELLANEOUS	TC	TIME CLOCK
DISC	DISCONNECT	MNFR	MANUFACTURER	TDOD	TIME DELAY ON DE-ENERGIZATION
DIV	DIVISION	MOV	MOTOR OPERATED VALVE	TDOE	TIME DELAY ON ENERGIZATION
DO	DIGITAL OUTPUT	MPS	MOTOR PROTECTION SYSTEM	TEL	TELEMETRY
DPDT	DOUBLE POLE DOUBLE THROW	MS	MOISTURE SENSOR/SWITCH	TELCO	TELEPHONE COMPANY
DWG	DRAWING	MTR	MOTOR	TEMP	TEMPERATURE
ELEV	ELEVATION	MTS	MANUAL TRANSFER SWITCH	TM	THERMAL MAGNETIC
EMT	ELECTRICAL METALLIC TUBING	MV	MEDIUM VOLTAGE	TOC	TOTAL ORGANIC CARBON
ETM	ELAPSED TIME METER	N	NEUTRAL	TR	TIME DELAY RELAY
(E)	EXISTING	NC	NORMALLY CLOSED	TRIAD	TWISTED & SHIELDED 3 CONDUCTOR
F	FRAME	NEC	NATIONAL ELECTRICAL CODE	TS	TEMPERATURE SWITCH
FC	FAIL CLOSED, FAN COIL	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	TSPR	TWISTED & SHIELDED PAIR
FCS	FIELD CONTROL STATION	NIC	NOT IN CONTRACT	TYP	TYPICAL
FLA	FULL LOAD AMPS	NO	NORMALLY OPEN	UG	UNDERGROUND
FO	FAIL OPEN	NP	NAMEPLATE	UL	UNDERWRITERS LABORATORIES
FLEX	FLEXIBLE, METAL LIQUID TIGHT CONDUIT	NTS	NOT TO SCALE	UON	UNLESS OTHERWISE NOTED
FROA	FORWARD-REVERSE-OFF-AUTO	(N)	NEW	UPS	UNINTERRUPTIBLE POWER SUPPLIES
FS	FLOW SWITCH OR FULL SPEED	OC	ON CENTER	V	VOLTAGE
FV, FVNR	FULL VOLTAGE NON-REVERSING	OI	OPERATOR INTERFACE	VA	VOLT AMPS
FVR	FULL VOLTAGE REVERSING	OL	OVERLOAD	VAR	VOLT AMP REACTIVE
FWD	FORWARD	ORP	OXIDATION REDUCTION POTENTIAL	VFD	VARIABLE FREQUENCY DRIVE
(F)	FUTURE	P	PHASE, POLE	VLV	VALVE
G	GREEN	PB	PULL BOX	VM	VOLTMETER
GALV	GALVANIZED	PBI	PULL BOX INSTRUMENT	VTQ	VARIABLE TORQUE
GEN	GENERATOR	PBP	PULL BOX POWER	W	WHITE, WATTS
GFI	GROUND FAULT CIRCUIT INTERRUPTER	PE	PHOTOCELL	WHM	WATT-HOUR METER
GND	GROUND	PF	POWER FAIL	WM	WATTMETER
GRS	GALVANIZED RIGID STEEL CONDUIT	PFR	POWER (PHASE) FAIL RELAY	WP	WATERPROOF, WEATHER PROOF
GRS-PVC	PVC COATED GRS CONDUIT	PH	HYDROGEN ION CONCENTRATION	WS	TORQUE SWITCH, WATER SURFACE
HC	PUSHBUTTON	PLC	PROGRAMMABLE LOGIC CONTROLLER	XFMR	TRANSFORMER
HI	HIGH	PM	POWER MONITOR	XS	MISCELLANEOUS SWITCH
HID	HIGH INTENSITY DISCHARGE	PMP	PUMP	Y	YELLOW
HMI	HUMAN MACHINE INTERFACE	PNL	PANEL	Z	IMPEDANCE
HOA	HAND-OFF-AUTO	PR	PAIR, TWISTED & SHIELDED CABLE	ZS	LIMIT SWITCH

SYMBOL	DESCRIPTION
SWITCHES - PROCESS	
	FLOW SWITCH - CLOSING UPON INCREASING FLOW
	FLOW SWITCH - OPENS UPON INCREASING FLOW
	LEVEL SWITCH - CLOSING UPON INCREASING LEVEL
	LEVEL SWITCH - OPENS UPON INCREASING LEVEL
	PRESSURE SWITCH - CLOSING UPON INCREASING PRESSURE (INCREASING VACUUM)
	PRESSURE SWITCH - OPENS UPON INCREASING PRESSURE (INCREASING VACUUM)
	TEMPERATURE SWITCH - CLOSING UPON INCREASING TEMPERATURE
	TEMPERATURE SWITCH - OPENS UPON INCREASING TEMPERATURE
	LIMIT SWITCH - CLOSING AT SET LIMIT
	LIMIT SWITCH - OPENS AT SET LIMIT
	PROXIMITY SWITCH - CLOSING UPON DECREASING DISTANCE
	PROXIMITY SWITCH - OPENS UPON DECREASING DISTANCE
	TORQUE SWITCH - CLOSING UPON INCREASING TORQUE
	TORQUE SWITCH - OPENS UPON INCREASING TORQUE

SYMBOL	DESCRIPTION
SWITCHES - OPERATOR	
	TOGGLE OR DISCONNECT SWITCH
	PUSHBUTTON - NORMALLY OPEN, MOMENTARY ACTION
	PUSHBUTTON - NORMALLY CLOSED, MOMENTARY ACTION
	PUSHBUTTON, MECHANICALLY INTERLOCKED, DOUBLE CIRCUIT - NORMALLY CLOSED AND NORMALLY OPEN, MAINTAINED ACTION
	SELECTOR SWITCH, 3 POSITION - CONTACT STATUS SHOWN EXISTS AT POSITION OF H-HAND, O-OFF, OR A-AUTO
	SELECTOR SWITCH, 2 POSITION - CONTACT STATUS SHOWN EXISTS AT POSITION AS SHOWN

SYMBOL	DESCRIPTION
DEVICES - RELAY	
	CONTROL RELAY CR1 WITH NORMALLY OPEN CONTACT ON LINE 28 & NORMALLY CLOSED CONTACT ON LINE 111
	TIME DELAY RELAY TR2 - ADJUSTABLE TIME DELAY RANGE & SETTING AS SHOWN
	TIME DELAY ON ENERGIZATION TIME DELAY ON DE-ENERGIZATION
	CONTACTOR OR STARTER M1
	SOLENOID
	NORMALLY OPEN, RELAY CONTACT - ACTUATED BY RELAY CR1 COIL LOCATED ON LINE 105
	NORMALLY CLOSED, RELAY CONTACT - ACTUATED BY RELAY CR1
	NORMALLY OPEN, TIME DELAY RELAY CONTACT - CONTACT CLOSING AFTER TR2 IS ENERGIZED
	NORMALLY OPEN, TIME DELAY RELAY CONTACT - CONTACT OPENS AFTER TR2 IS DE-ENERGIZED
	NORMALLY CLOSED, TIME DELAY RELAY CONTACT - CONTACT CLOSING AFTER TR2 IS DE-ENERGIZED
	CONTACT OPENS AND CLOSING IN A TIMED REPEAT CYCLE


SYMBOL	DESCRIPTION
DEVICES - FRONT PANEL	
	INDICATING LIGHT, LETTER "X" INDICATES COLOR: R=RED, G=GREEN, A=AMBER, W=WHITE, Y=YELLOW, B=BLUE
	INDICATING LIGHT, PUSH TO TEST
	AMP METER
	VOLT METER
	ELAPSED TIME METER
	RUN TIME METER
	MULTI-POSITION SWITCH WHERE LETTER "X" IS FUNCTION: A=AMP, V=VOLT

SYMBOL	DESCRIPTION
COMPONENTS	
	RESISTOR
	POTENTIOMETER
	CAPACITOR, FIXED
	CAPACITOR, ADJUSTABLE
	DIODE
	DIODE, ZENER
	VARIATOR TRANSIENT VOLTAGE SUPPRESSOR
	VOLTAGE SURGE SUPPRESSOR, AC
	RESISTANCE TEMPERATURE DETECTOR (RTD)
	THERMOCOUPLE (T/C)
DEVICES - MISCELLANEOUS	
	AUDIBLE ALARM
	BATTERY
	HEATER
	3 PHASE HEATER
	GENERATOR
	3 PHASE MOTOR # = MOTOR HP
	SINGLE PHASE MOTOR
	TRANSFORMER
	LINE REACTOR

SYMBOL	DESCRIPTION
DEVICES - PROTECTIVE	
	DISCONNECT, 3 POLE
	CIRCUIT BREAKER, 3 POLE THERMAL MAGNETIC (TM) OR MOTOR CIRCUIT PROTECT (MCP)
	THERMAL OVERLOAD CONTACT
	THERMAL OVERLOAD ELEMENT
	FUSE WITH BLOWN FUSE INDICATING LIGHT
	FUSE
	MEDIUM VOLTAGE DRAWOUT CIRCUIT BREAKER
	LOW VOLTAGE DRAWOUT CIRCUIT BREAKER

SYMBOL	DESCRIPTION
WIRING - CONNECTIONS	
	PANEL OR EQUIPMENT WIRING
	FIELD WIRING
	CONDUCTORS - NOT CONNECTED
	CONDUCTORS - CONNECTED
	GROUND
	CHASSIS OR FRAME GROUND
	PLUG AND RECEPTACLE
	INCOMING LINE
	TERMINAL BLOCKS
	TERMINALS
	SHIELDED CABLE

SYMBOL	DESCRIPTION
PLAN - SYMBOLS	
	CONDUIT, EXPOSED
	CONDUIT, IN SLAB OR BELOW GRADE
	CONDUIT STUBBED OUT & CAPPED
	CONDUIT BENDS TOWARD OBSERVER
	CONDUIT BENDS AWAY FROM OBSERVER
	CONDUIT ENDS
	CONDUIT CHANGE IN ELEVATION
	BARE COPPER GROUND WIRE
	GROUND CONNECTION BOLTED TYPE
	GROUND CONNECTION EXOTHERMIC WELD TYPE
	PULL BOX
	DISCONNECT SWITCH
	FIELD CONTROL STATION WITH JUNCTION BOX
	FIELD CONTROL STATION WITH #AMP DISCONNECT SWITCH
	SPECIAL RECEPTACLE
	JUNCTION BOX
	THERMOSTAT
	LIGHTING, FANS, HEATERS
	# - CIRCUIT BREAKER NUMBER
	A - FIXTURE SCHEDULE REF.
	o - CONTROL SWITCH REFERENCE
	# - DUPLEX RECEPTACLE
	# - CIRCUIT BREAKER NUMBER
	TOGGLE SWITCH
	# - CIRCUIT BREAKER NUMBER SUBSCRIPT - CIRCUIT CONTROLLED
	SUPERSCRIPT - BLANK = 1 WAY, 2 = 2 WAY, 3 = 3 WAY
	CONDUIT #
	EQUIPMENT NUMBER



812 W. WABASH AVE.
EUREKA, CA 95501
WWW.SHN-ENGR.COM
707-441-8855

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	VERIFY SCALES IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY
DSGN SMK DR ZKV CHK XML APVD	BY REVISION DATE NO.
CARBERVILLE SANITARY DISTRICT CARBERVILLE TANK REPLACEMENT PROJECT CARBERVILLE, CALIFORNIA ELECTRICAL SYMBOLS & ABBREVIATIONS	
SHEET E1	
SEQ DATE 4/2024 PROJ. NO. 022067	



(916) 457-8144

© SEPTEMBER 2023
ATEEM ENGINEERING
ALL RIGHTS RESERVED



REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
No. 136987
Exp. 6-30-2024
4/19/2024

SAVED: 3/28/2024 11:01 AM ATEEM, PLOTTED: 4/19/2024 3:29 PM ZAK KHAN VOGLER
 Z:\ACADDWG\2022\22066\DWG\22066E002.dwg



© SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



4/19/2024



OVERALL SITE MAP ①

- NOTES: ① INFORMATION SHOWN ON THE DRAWINGS IS BASED ON LIMITED FIELD OBSERVATION AND AS-BUILT DOCUMENTATION. NOT ALL EXISTING ELECTRICAL EQUIPMENT ARE SHOWN. EXISTING EQUIPMENT AS SHOWN ARE THOSE ASSOCIATED WITH NEW WORK. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE ANY NEW WORK.
- ② ANTENNA AND SOLAR/RADIO PER DWG E13, DETAIL "A".
- ③ REPLACE I/O RADIO IN PLACE.



1"=300'



812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SH-ENGR.COM
 707-441-8855

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING 1"
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DSGN	SMK	DR	CHK	APVD	NO.	DATE	REVISION	BY

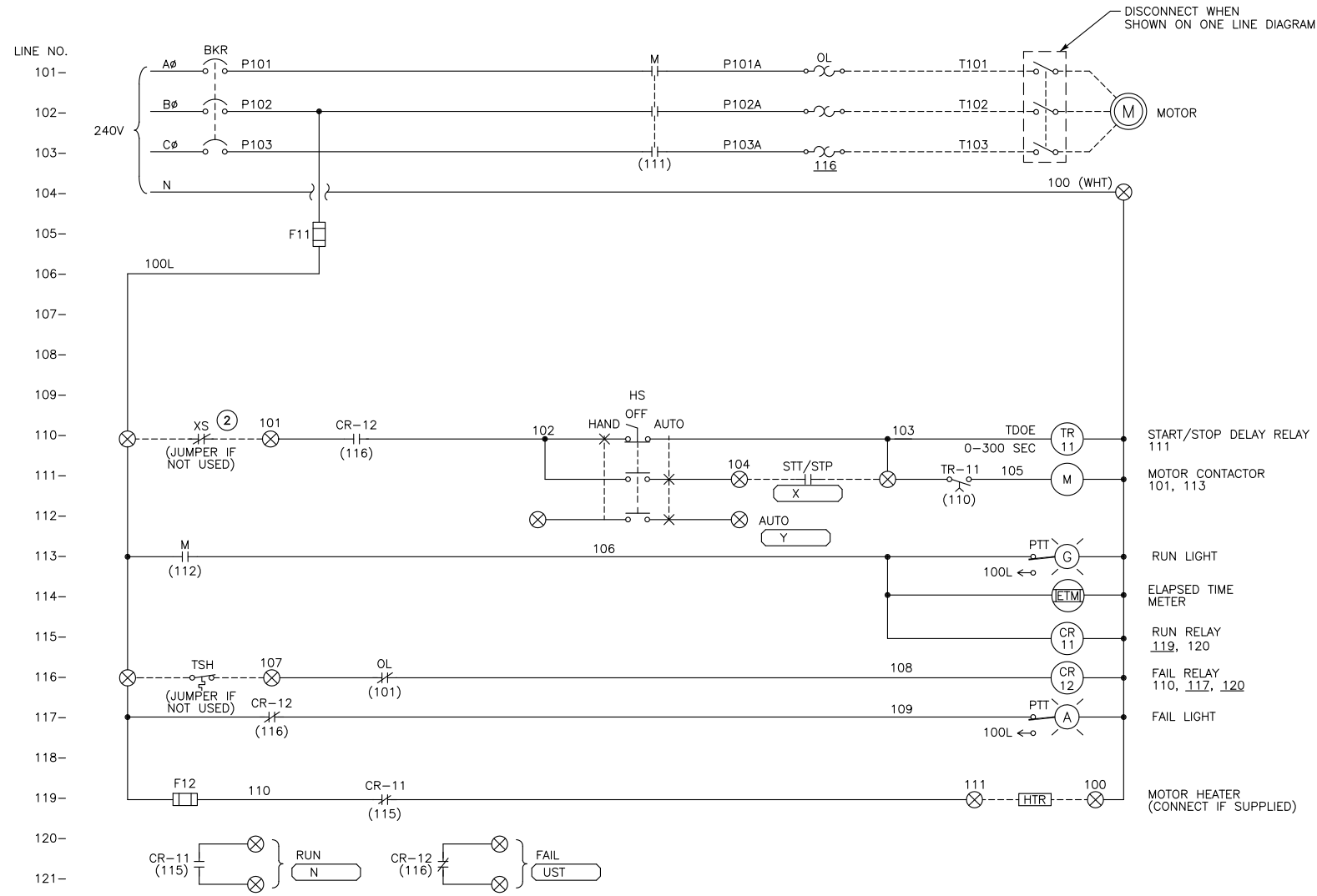
GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
 OVERALL SITE MAP

SHEET	E2
SEQ	
DATE	4/2024
PROJ. NO.	022067

SAVED: 1/12/2024 12:54 PM ATEEM, PLOTTED: 4/19/2024 3:29 PM ZAK KWAN VOGLER
 Z:\ACADDWG\2022\22066\DWG\22066E003.dwg

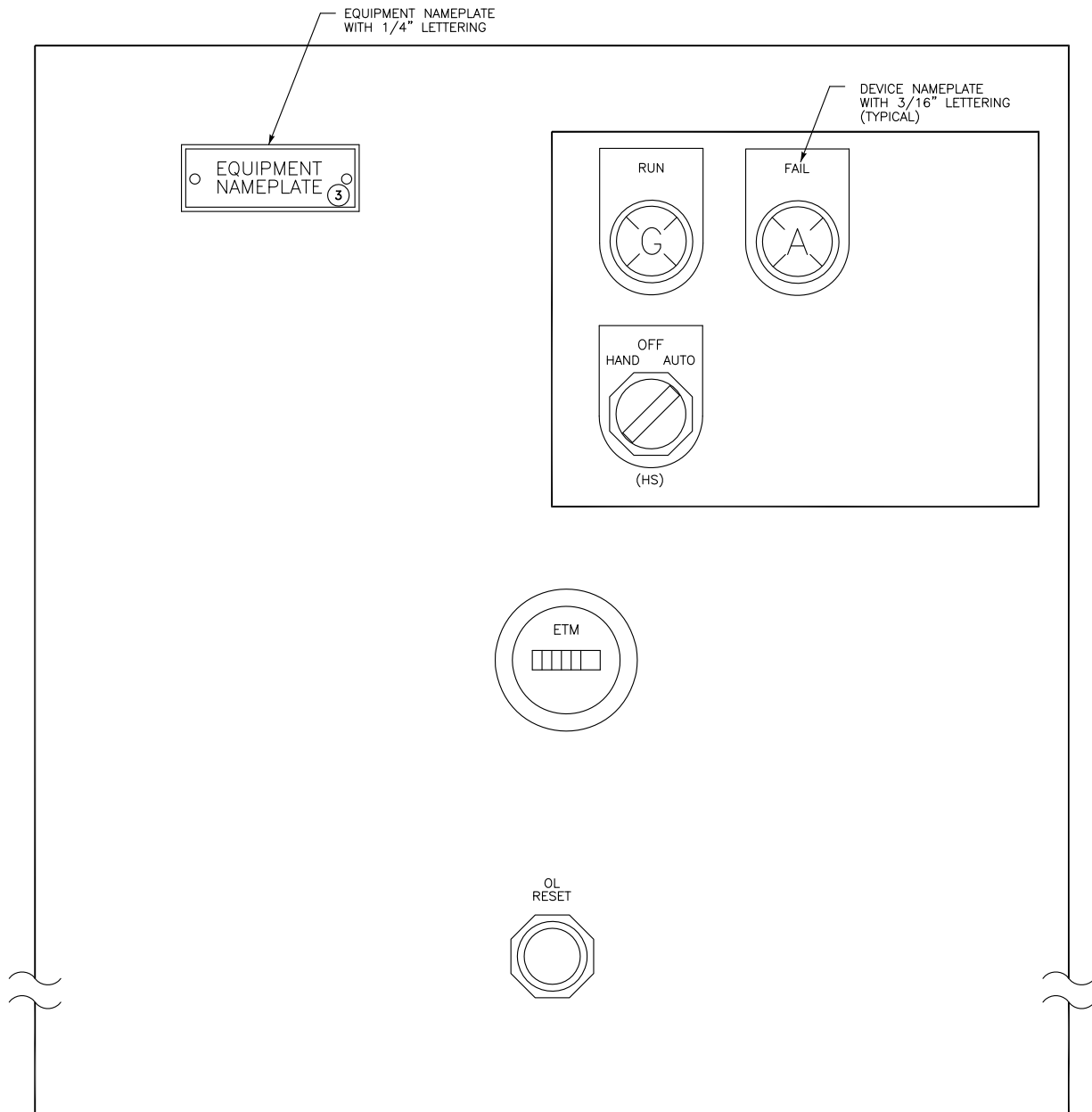


© SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED
 4/19/2024



FULL SPEED ELEMENTARY DIAGRAM ①

- NOTES:
- ① USE 100 SERIES & TERMINAL #S FOR PUMP 1, 200 SERIES #S FOR PUMP 2, ETC.
 - ② REMOTE SHUTDOWN XS=> PFR, LSL, PSH, ETC. PER P&ID. THESE ARE TO BE CONTACTS OFF OF AUXILIARY RELAY CONTACTS LOCATED IN CONTROL PANEL DRIVEN FROM FIELD DEVICE.
 - ③ EQUIPMENT NAMEPLATE TO CONTAIN EQUIPMENT DESCRIPTION AND EQUIPMENT NUMBER PER ELEVATION DIAGRAM.



DOOR LAYOUT

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

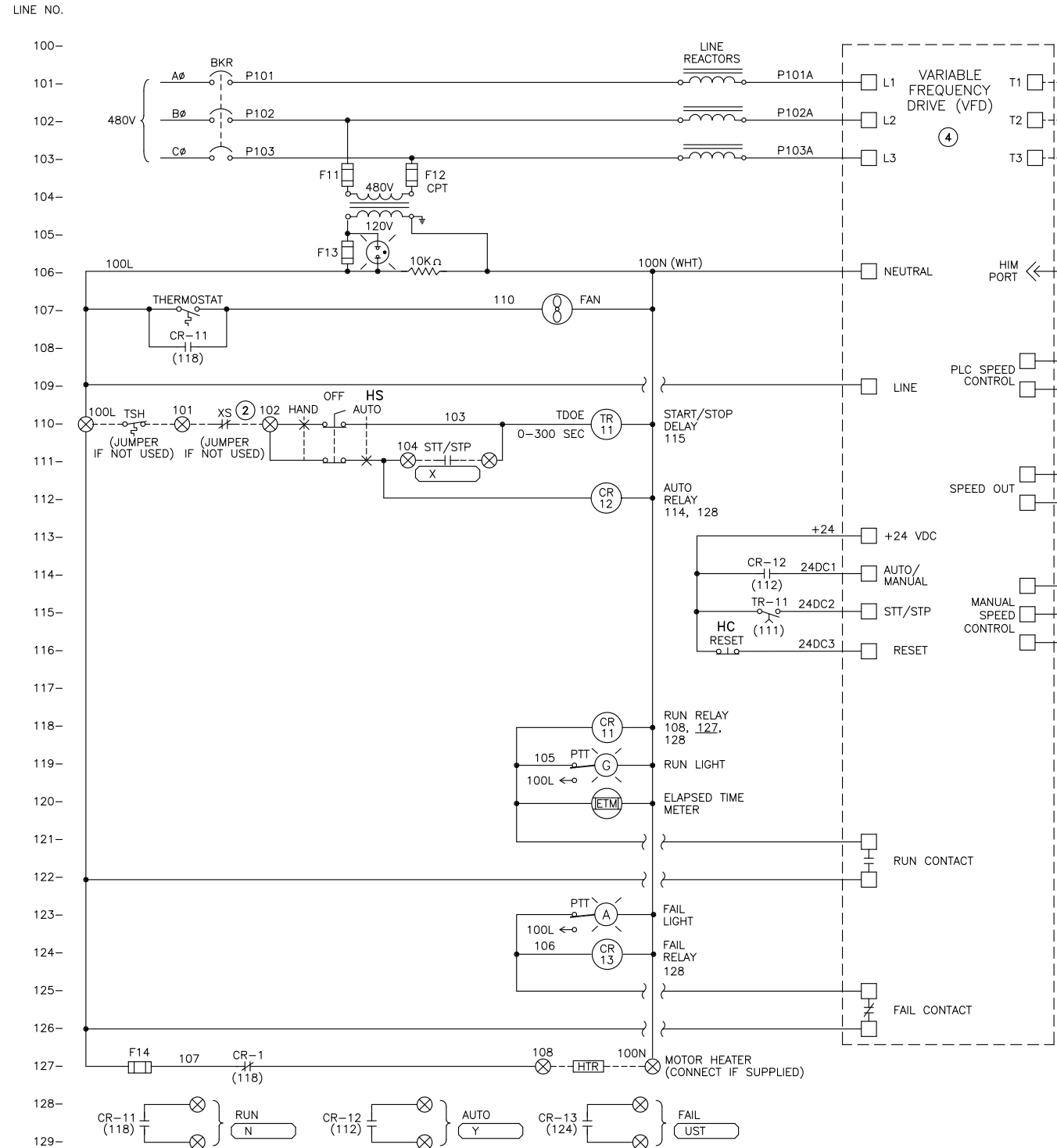
812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855



NO.	DATE	REVISION	BY

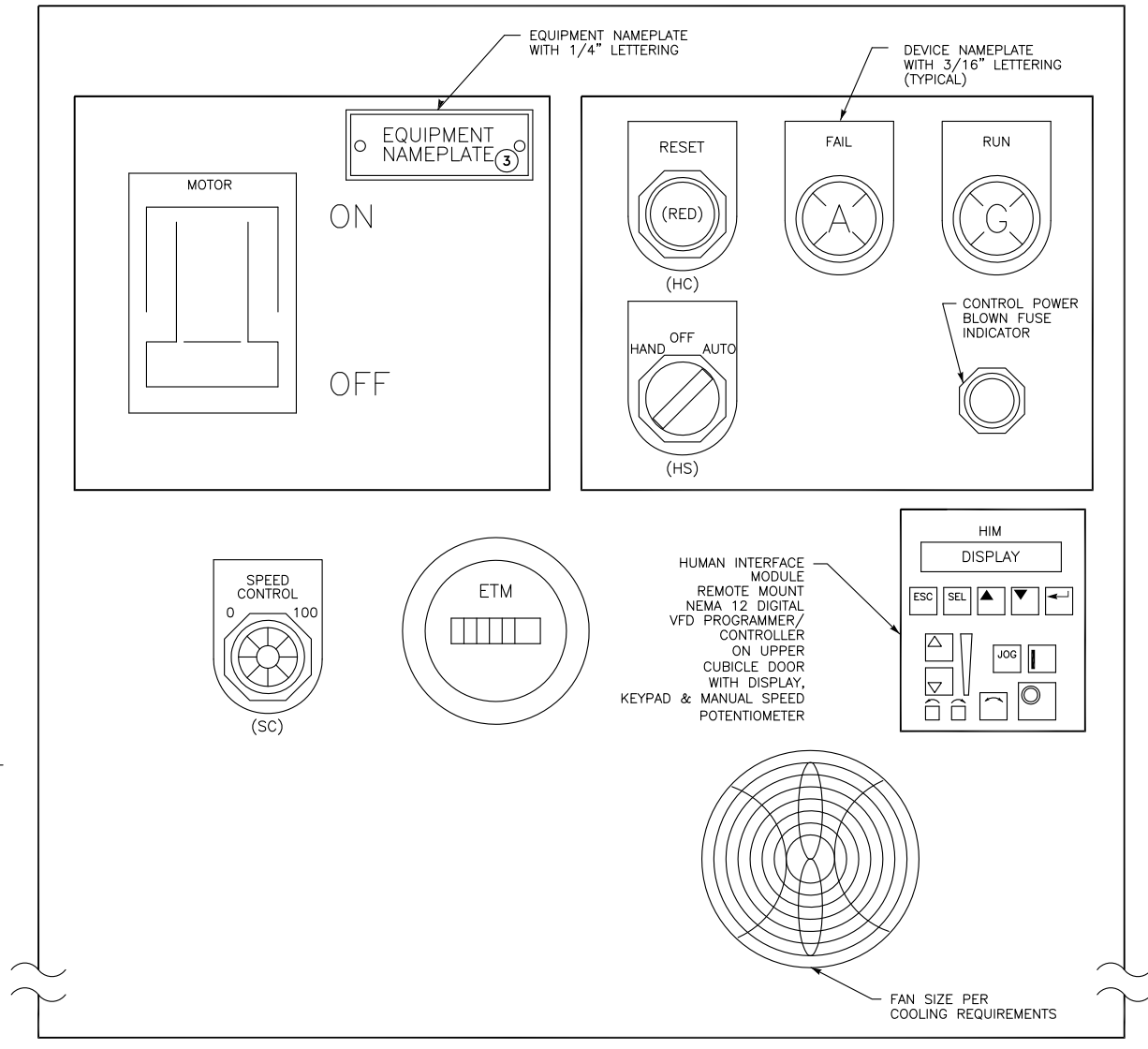
GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
FULL SPEED ELEMENTARY DIAGRAM

SHEET	E3
SEQ	
DATE	4/2024
PROJ. NO.	022067



VFD ELEMENTARY DIAGRAM ①

- NOTES:
- ① USE 100 SERIES WIRES & TERMINAL #s FOR PUMP 1, 200 #s FOR PUMP 2, ETC.
 - ② REMOTE SHUTDOWN XS => LSSL, ZSHH, PSHH, ETC., PER P&ID, JUMPER IF NOT USED. THESE ARE TO BE CONTACTS OFF OF AUXILIARY RELAY CONTACTS LOCATED IN MCC CONTROL PANEL DRIVEN FROM FIELD DEVICE.
 - ③ EQUIPMENT NAMEPLATE TO CONTAIN EQUIPMENT DESCRIPTION AND EQUIPMENT NUMBER PER ELEVATION DIAGRAM. MOUNT ON OR ABOVE DEVICE BOX ON FCS.
 - ④ VFD WITH ELECTRONIC OVERLOAD.



SAVED: 1/11/2024 5:16 PM ATEEM, PLOTTED: 4/19/2024 3:29 PM ZAK KWAN VOGLEP
 Z:\ACADDWG\2022\22066\DWG\22066E004.dwg



© SEPTEMBER 2023
ATEEM ENGINEERING
ALL RIGHTS RESERVED



4/19/2024

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855



NO.	DATE	REVISION	BY

DSGN SMK
 DR ZKV
 CHK XML
 APVD
 GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
 VFD ELEMENTARY DIAGRAM

SHEET E4
 SEQ
 DATE 4/2024
 PROJ. NO. 022067

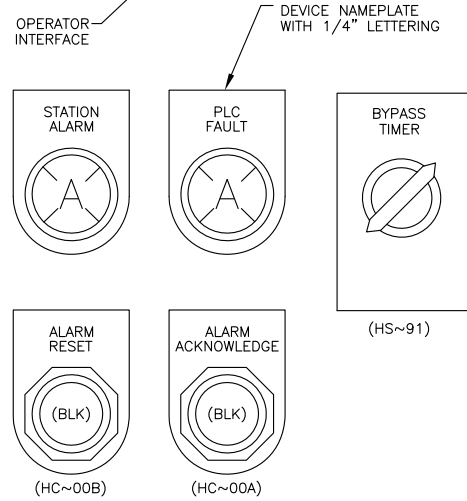
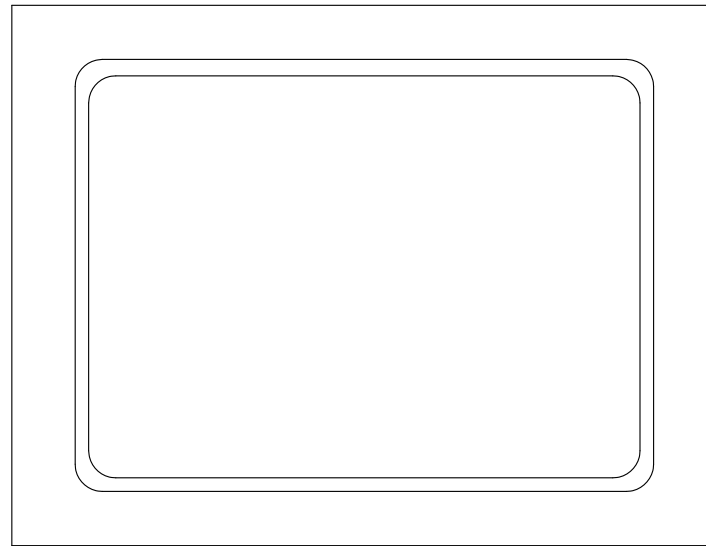
SAVED: 1/12/2024 12:48 PM ATEEM, PLOTTED: 4/19/2024 3:29 PM ZAK KWAN VOGLER
 Z:\ACADDWG\2022\22066\DWG\22066E005.dwg



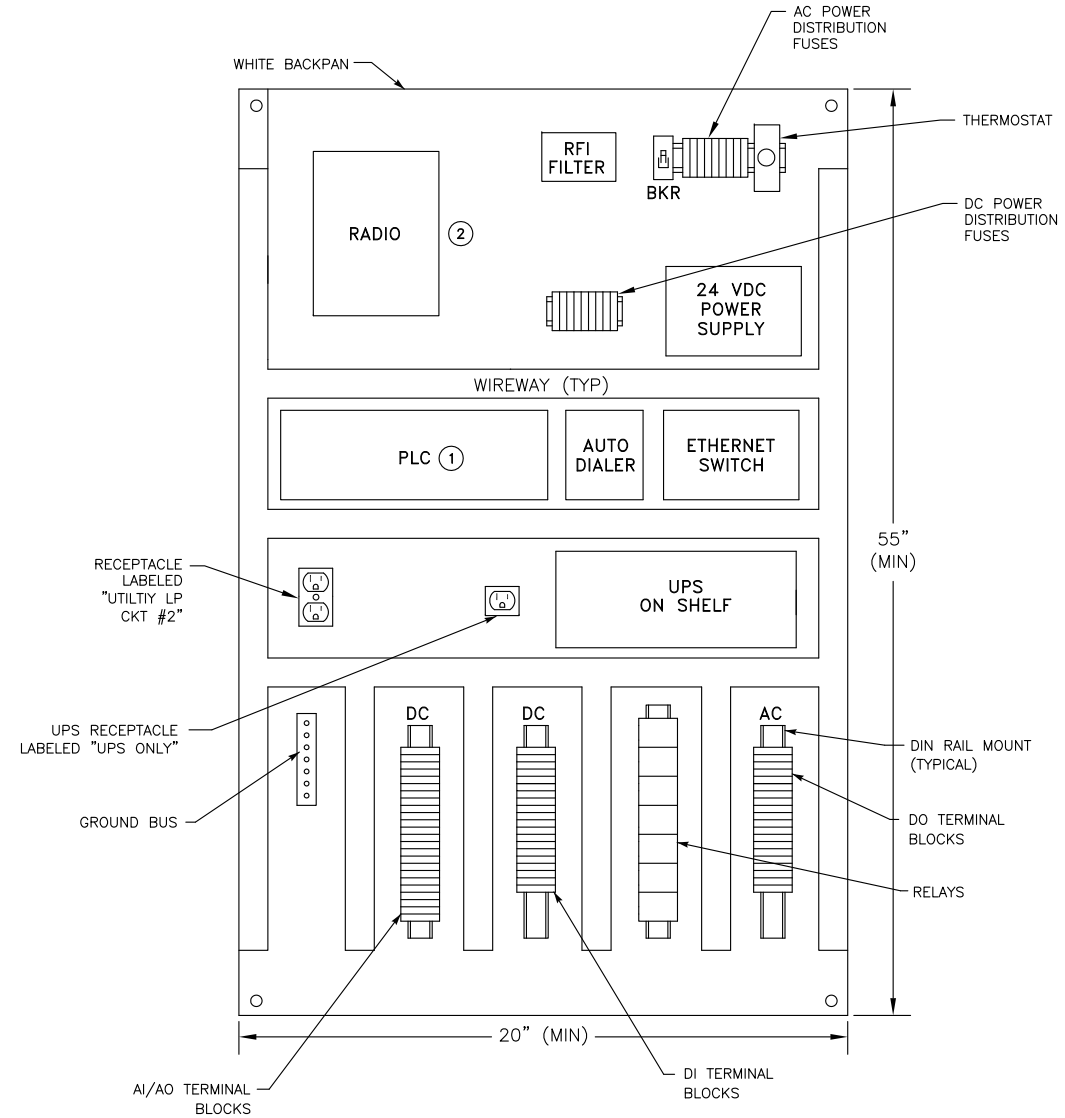
© SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



4/19/2024



CP DOOR ELEVATION
 NOT TO SCALE



CP BACKPAN LAYOUT

NOT TO SCALE

- NOTES: ① WIRE ALL SPARE I/O TO TERMINAL BLOCKS.
 ② INSTALL I/O RADIO PER DWG 12.



812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855

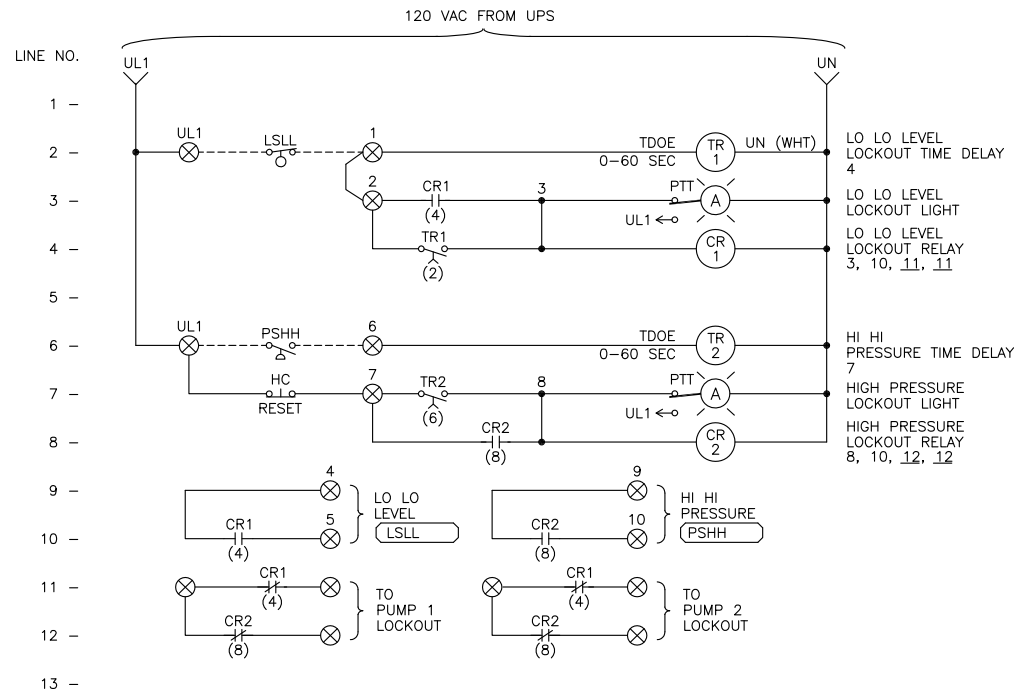
NO.	DATE	REVISION	BY

DSGN: SMK
 DR: ZKV
 CHK: XML
 APVD: APVD

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
**CONTROL PANEL ELEVATION &
 BACKPAN LAYOUT**

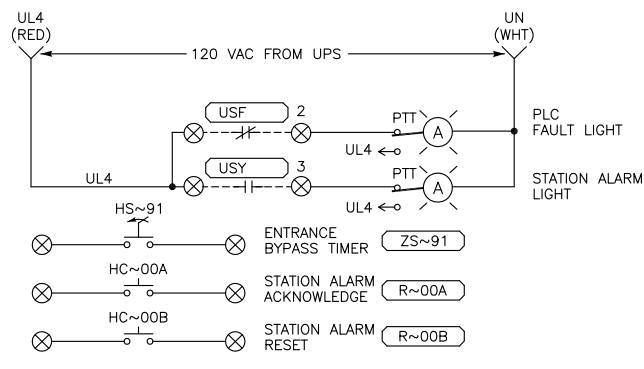
SHEET	F5
SEQ	
DATE	4/2024
PROJ. NO.	022067

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY



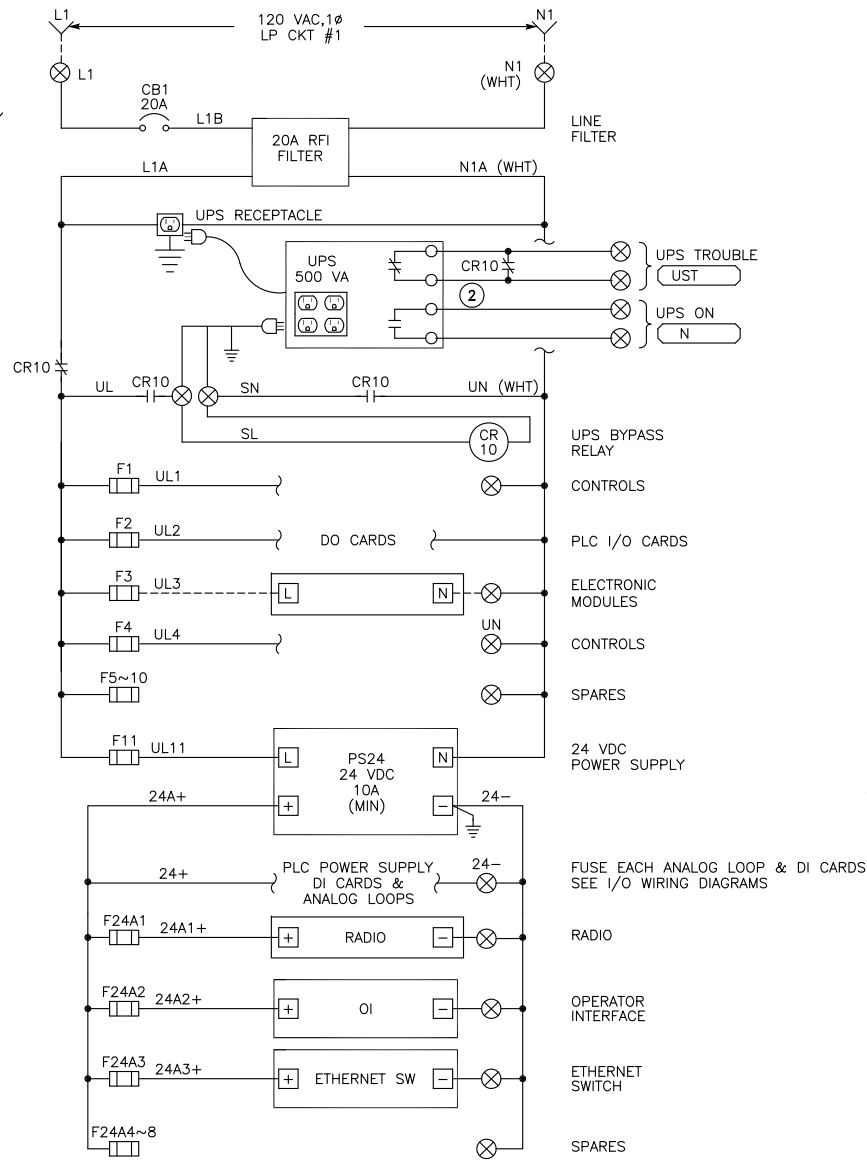
TYPICAL PUMP LOCKOUT ELEMENTARY DIAGRAM (A) E6 1

NOTES: 1 PUMP LOCKOUT PER P&ID.



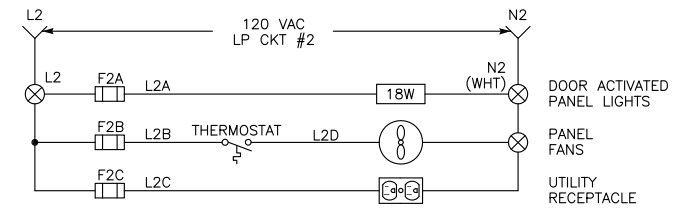
CP ELEMENTARY DIAGRAM (B) E6

NOTES: 1 WIRES & TERMINALS LABELLED PER LOOP DIAGRAMS.

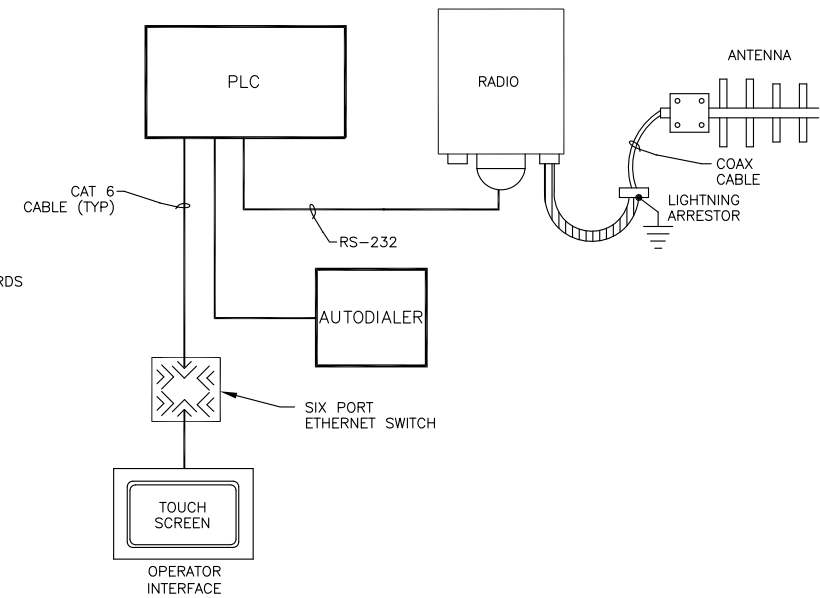


120 VAC POWER DISTRIBUTION DIAGRAM (C) E6 1

NOTES: 1 DISTRIBUTION DIAGRAM REPRESENTATIVE OF MAJOR COMPONENTS ONLY. ADDITIONAL FUSES, CIRCUITS AND COMPONENT CONNECTIONS MAY BE REQUIRED FOR A FUNCTIONAL SYSTEM.
2 PROVIDE & INSTALL INTERFACE RELAYS IF REQUIRED.



CP UTILITY ELEMENTARY DIAGRAM (D) E6



PLC BLOCK DIAGRAM (D) E6 1

NOTES: 1 SEE SPECS FOR DETAILS.

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
EUREKA, CA 95501
WWW.SHN-ENGR.COM
707-441-8855



NO.	DATE	REVISION	BY

DSGN	SMK	DR	ZKV	CHK	XML	APVD

GARBERVILLE SANITARY DISTRICT
GARBERVILLE TANK REPLACEMENT PROJECT
GARBERVILLE, CALIFORNIA
CONTROL PANEL
ELEMENTARY DIAGRAMS

SHEET	E6
SEQ	
DATE	4/2024
PROJ. NO.	022067

SAVED: 3/25/2024 5:28 PM ATEEM, PLOTTED: 4/19/2024 3:29 PM ZAK KHAN VOGLEF
Z:\ACADDWG\2022\22067\DWG\22067E06.dwg



(916) 457-8144

© SEPTEMBER 2023
ATEEM ENGINEERING
ALL RIGHTS RESERVED



4/19/2024

SAVED: 3/27/2024 1:17 PM ATEEM, PLOTTED: 4/19/2024 3:30 PM ZAK KWAN VOGLER
 Z:\ACADDWG\2022\22067\DWG\22067E007.dwg



(916) 457-8144
 © SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED

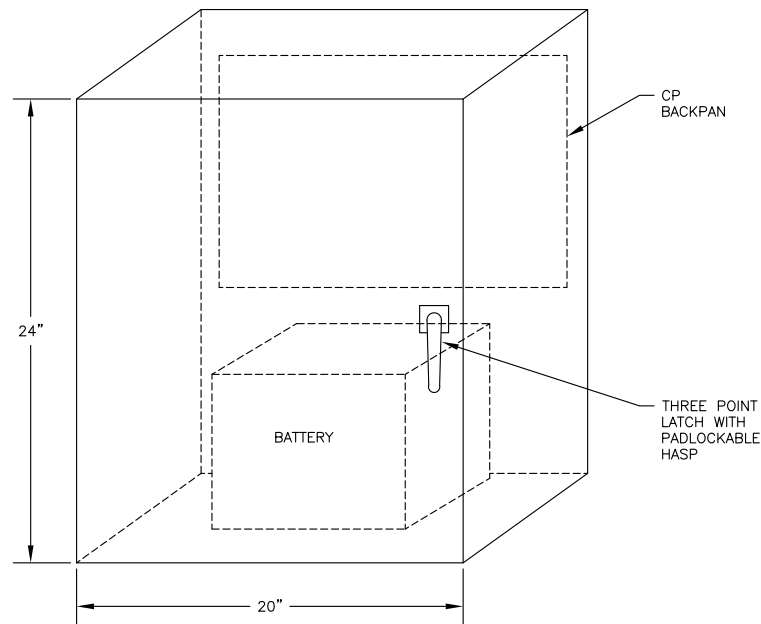


4/19/2024

SOLAR/RADIO CONTROL PANEL ELEVATION ①

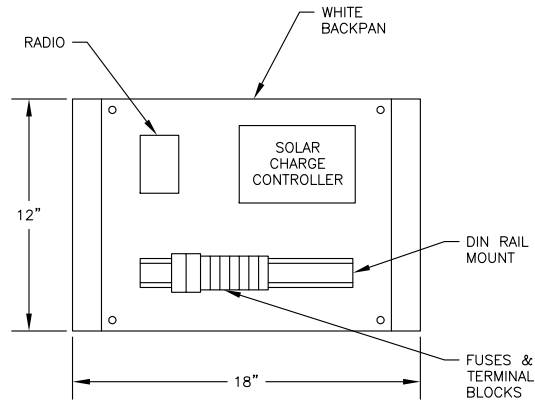
NOT TO SCALE

NOTES: ① NEMA 4X PAINTED WHITE ENCLOSURE WITH TYPICAL DIMENSIONS AS SHOWN.



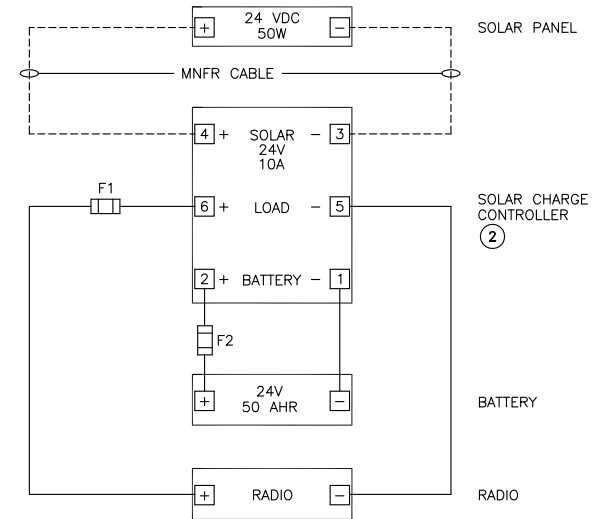
CP BACKPAN LAYOUT

NOT TO SCALE



SOLAR CHARGE ELEMENTARY DIAGRAM ①

NOTES: ① SEE SPECS FOR DETAILS.
 ② SOLPERK MODEL HC-F10A OR APPROVED EQUAL.



VERIFY SCALES
 BASED ON ONE INCH ON ORIGINAL DRAWING
 0 1"
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855



DSGN	SMK	DR	ZKV	CHK	XML	APVD	NO.	DATE	REVISION	BY

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
 SOLAR/RADIO PANEL

SHEET E7
 SEQ
 DATE 4/2024
 PROJ. NO. 022067

SAVED: 1/11/2024 4:46 PM ATEEM, PLOTTED: 4/19/2024 3:30 PM ZAK KWAN VOGLER
 Z:\ACADDWG\2022\22066\DWG\22066E009.dwg



(916) 457-8144

© SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



4/19/2024

GENERAL NOTES THAT APPLY TO LIGHTING AND RECEPTACLE PLAN

1. PROVIDE AND INSTALL NECESSARY WIRES IN CONCEALED 3/4" (MIN) GRS CONDUIT FOR LIGHTING AND RECEPTACLE ARRANGEMENT AS SHOWN. IF CONDUITS ARE ROUTED UNDERGROUND, THE UNDERGROUND SECTION AND CONCEALED RISER TO FIRST DEVICE BOX BY BE PVC-80. EXPOSED CONDUIT SHALL BE GRS.
2. DEVICE BOXES AND CONDUIT BODIES SHALL BE METALLIC. IN NEMA 4X AREAS, USE MALLEABLE METALLIC BOXES.
3. CONDUCTORS SHALL BE COPPER TYPE THHN, #12 AWG (MINIMUM).
4. MOUNT CONDUITS USING SINGLE BOLT GALVANIZED PIPE STRAPS AND CLAMP BACK SPACERS.
5. USE SS EXPANSION WEDGE ANCHORS OR EPOXY ANCHORS AS NECESSARY FOR EQUIPMENT MOUNTING.
6. PROVIDE AND INSTALL FIXTURES PER SCHEDULE THIS PAGE, QUANTITY AS SHOWN IN DRAWING.
7. PROVIDE AND INSTALL ALL DEVICE BOXES, JUNCTION BOXES, RECEPTACLES, SWITCHES, AND COVERS.
8. RECEPTACLES TO BE GROUND FAULT INTERRUPTER (GFI) TYPE AND WEATHERPROOF (WP) WHERE SHOWN.
9. SEE ELECTRICAL SYMBOLS AND ABBREVIATIONS DRAWING FOR SYMBOL DEFINITION.
10. ALL WORK SHALL CONFORM TO LOCAL CODES, LATEST CBC AND 2020 NATIONAL ELECTRICAL CODE.

LIGHTING AND FIXTURE SCHEDULE

CODE LETTER	FIXTURE TYPE	FINISH	FIXTURE LAMPS	WATTS/ FIXTURE	MANUFACTURER OR APPROVED EQUAL	MOUNTING ARRANGEMENT	NOTES
A	LED LUMINAIRE, 4 FT LED STRIPLIGHT; 5000 LUMENS SNAP ON DIFFUSER WIRE GUARD PROTECTORS 4000K TEMP	WHITE	LED 4000 K 120 VAC 80 CRI	38	LITHONIA ZL1N - MULTI VOLT	CEILING MOUNT	UL LISTED FOR DAMP LOCATIONS PROVIDE BATTERY BACK-UP NIGHT LIGHT WHERE SHOWN PLUG IN WIRING
B	SECURITY LIGHT, HEAVY DUTY WEATHERPROOF POWDER COAT FINISH FULL CUTOFF; ONE ENGINE; TYPE II DIST	DARK BRONZE	LED 4000 K MULTI-VOLT	65	LITHONIA WALL LIGHT WSQ	WALL MOUNT ON BUILDING AT 11 FT	WITH PHOTOCELL CONTROL PE (WHERE SHOWN) U.L. LISTED FOR WET LOCATIONS LIGHT SWITCH ON / ENABLE
E	EMERGENCY LIGHTING IMPACT RESISTANT CONTEMPORARY HOUSING REGULATED CHARGER	WHITE	3W LED 2 EACH 120 VAC	3	LITHONIA QUANTUM LED SERIES ELM2	WALL MOUNTED AT 9'	SEALED NICKEL CALCIUM BATTERY TEST SWITCH UL LISTED FOR DAMP ENVIRONMENT
T	AREA LIGHT MULTI-LEVEL MOTION CONTROL SQUARE POLE ARM MOUNTED FIXTURE TYPE 3 DISTRIBUTION	DARK BRONZE	256W LED 1 EACH 120 VAC	256	BETA ARE-EDG-3M-DA-16-UL-BZ-525ma-ML	MOUNT ON POLE PER DWG E12 DET C	U.L. LISTED FOR WET LOCATIONS FUSE IN HAND HOLE PHOTO CELL PE
X	EXIT LIGHTING WITH NICAD BATTERY STEEL HOUSING, DIRECTION KNOCKOUTS SELF POWERED	WHITE	GREEN LED TYPE 120 VAC	3.8	EMERGITITE LW-SNX-14-G	UNIVERSAL	UL LISTED TEST SWITCH



812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

BY	REVISION	DATE	NO.	APVD	CHK	XML	ZKV	SMK	DR	DSGN
----	----------	------	-----	------	-----	-----	-----	-----	----	------

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
 LIGHTING FIXTURE SCHEDULE
 & GENERAL NOTES

SHEET	EQ
SEQ	
DATE	4/2024
PROJ. NO.	022067



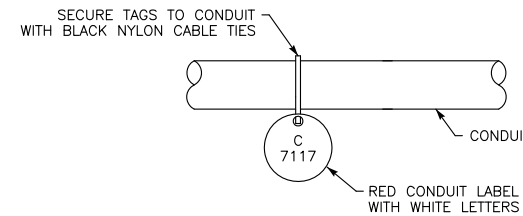
NOTES:

- ① CONDUIT SIZE & TYPE; WIRE FILL FOR CONDUITS TO BE DESIGNATED NEXT TO CONDUIT NUMBER ELLIPSE.
- ② THESE ARE THE CONTRACTOR DESIGNATED DRAWING NUMBERS.
- ③ NOT MORE THAN TWO WIRES PER TERMINAL BLOCK.
- ④ ALL TERMINAL BLOCKS TO BE PLACED IN NUMERICAL ORDER.
- ⑤ ALL NEUTRALS SHALL BE WHITE WIRE COLOR.
- ⑥ #12 GND TO DEVICES SHALL BE BONDED TO #8 GND LUG.

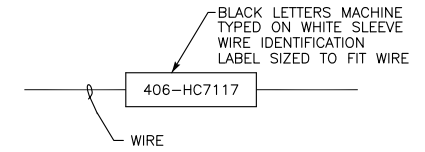
REFERENCE DOCUMENTS

DRAWING #	DESCRIPTION	MANUFACTURER
P712	P&ID DIAGRAM	DESIGN
E717	ELECTRICAL SITE PLAN	DESIGN
PAGE 32, 36	CONDUIT AND CABLE SCHEDULE	DESIGN
② 1354-11	LOOP DIAGRAM	CONTRACTOR
② 1354-68	ELEMENTARY DIAGRAM	CONTRACTOR

TYPICAL CONDUIT MARKING SYSTEM



TYPICAL WIRE LABEL

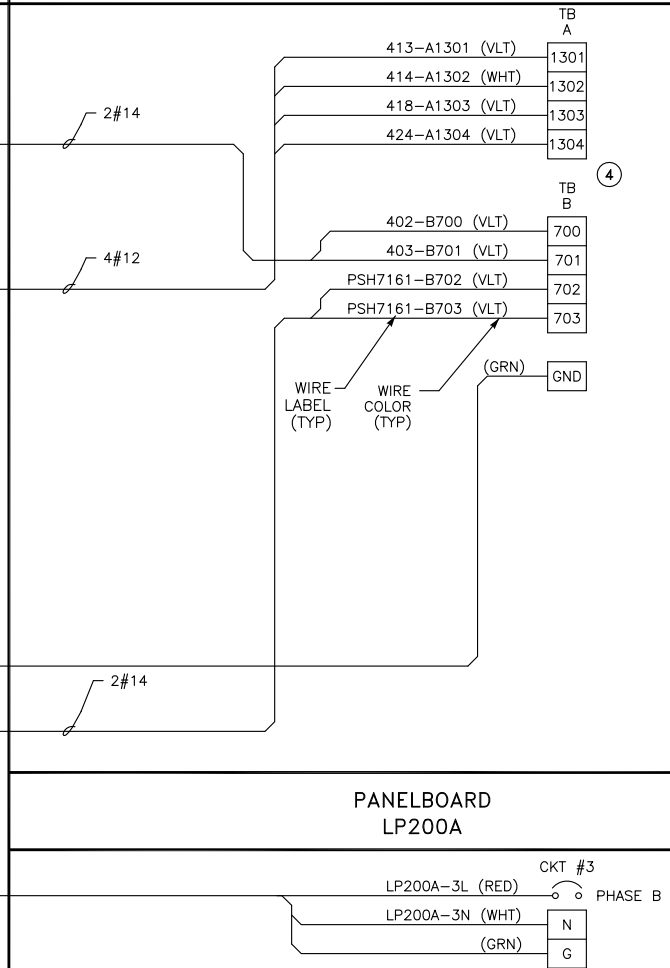
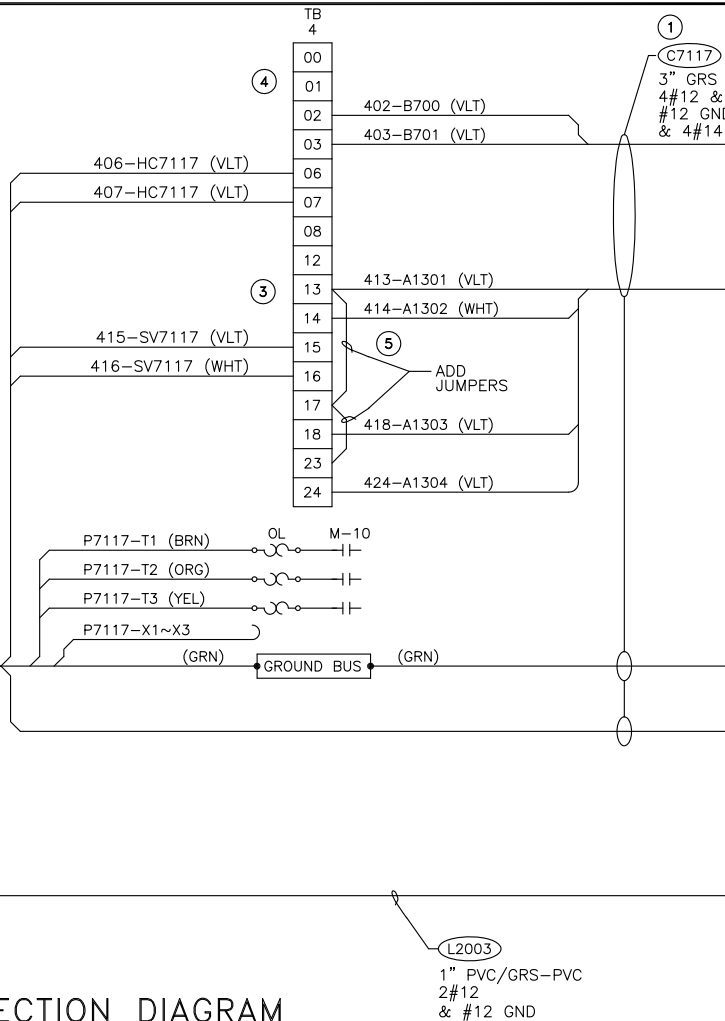
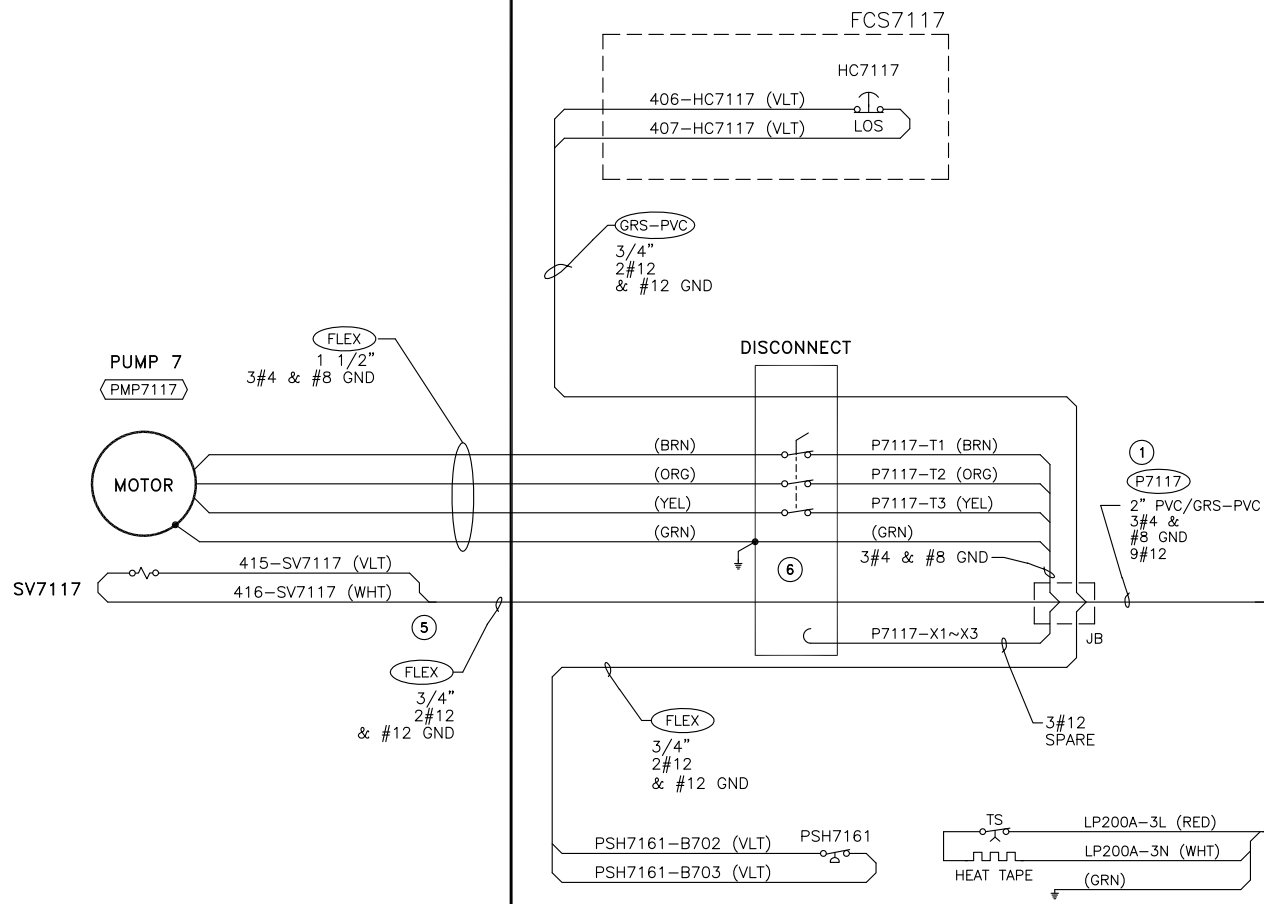


EQUIPMENT

FIELD

MCC-4 SECTION 1
 CUBICLE A~E

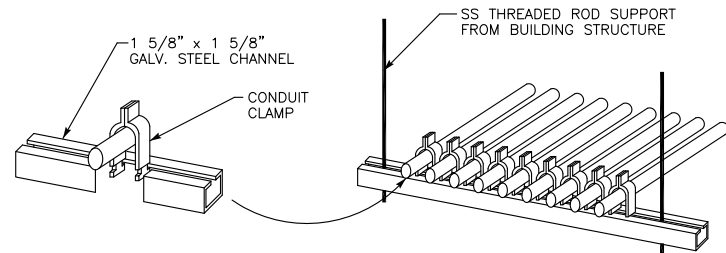
CONTROL PANEL
 NO.2



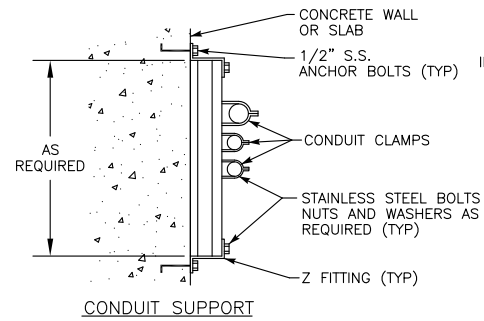
EXAMPLE INTERCONNECTION DIAGRAM

(THIS DRAWING ILLUSTRATES THE FORMAT THAT SHALL BE FOLLOWED IN PREPARATION OF ALL INTERCONNECT DWGS)



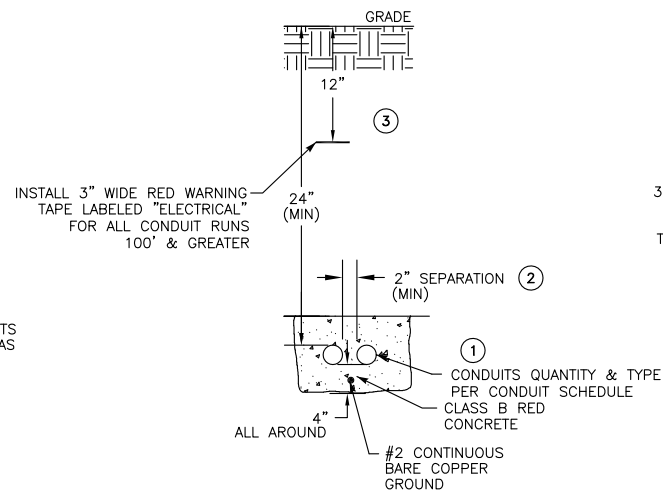


TRAPEZE ASSEMBLY



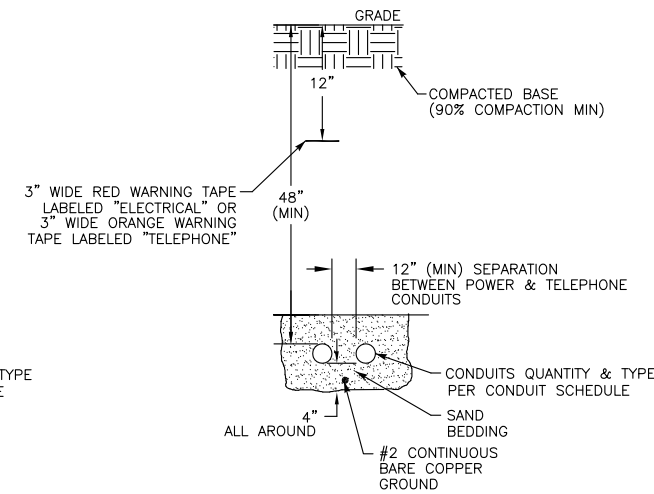
CONDUIT PIPE STRAP MOUNTING **A**
NOT TO SCALE **DETAIL** E11

- NOTES: ① THIS DETAIL TYPICAL FOR BOTH VERTICAL AND HORIZONTAL MOUNTING.
- ② CHANNEL AND ALL SUPPORT DEVICES TO BE NEMA RATED PER AREA CLASSIFICATION. FIELD COAT ALL CUTS, ETC. TO MATCH.
- ③ CHANNELS TO BE SPACED 5' MAXIMUM.

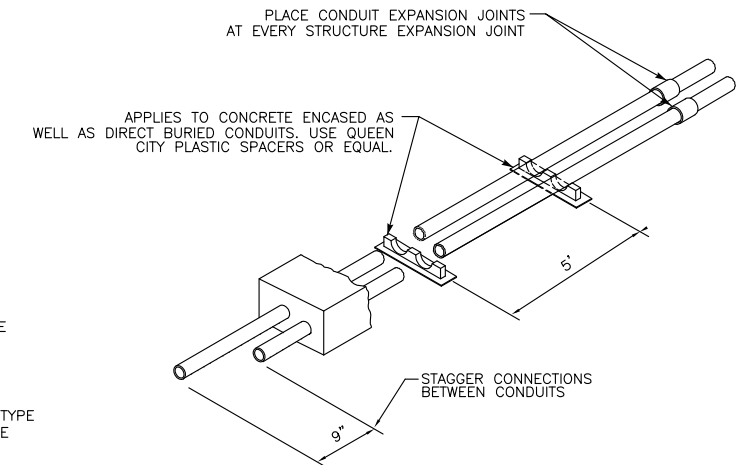


ENCASED CONDUITS **B**
NOT TO SCALE **DETAIL** E11

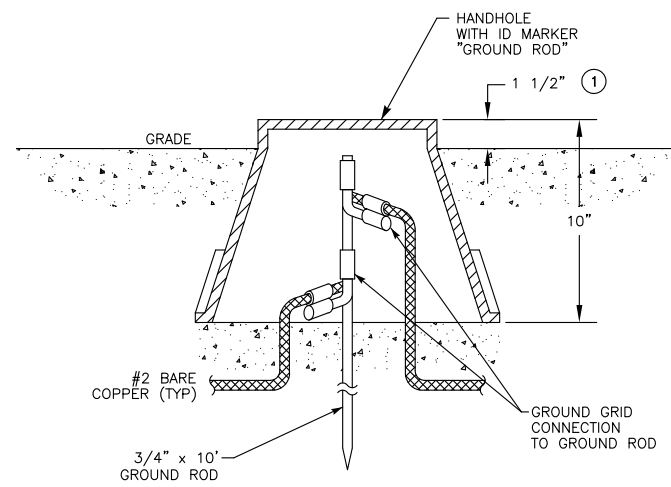
- NOTES: ① PLACE CONDUIT RUNS OF 4 CONDUITS OR GREATER IN PLASTIC SPACERS (RATED FOR DIRECT BURIAL) EVERY 5' ALONG LENGTH OF RUN.
- ② PROVIDE 12" (MIN) SEPARATION BETWEEN "A, C & D" TYPE GROUP AND "L & P" TYPE GROUP CONDUITS.
- ③ TRENCHING & COMPACTED BACKFILL PER SPECIFICATIONS.



UTILITY CONDUITS **C**
NOT TO SCALE **DETAIL** E11

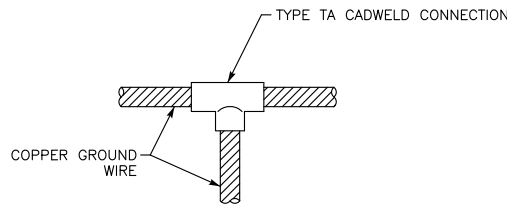


SPACERS AND JOINTS INSTALLATION **D**
NOT TO SCALE **DETAIL** E11

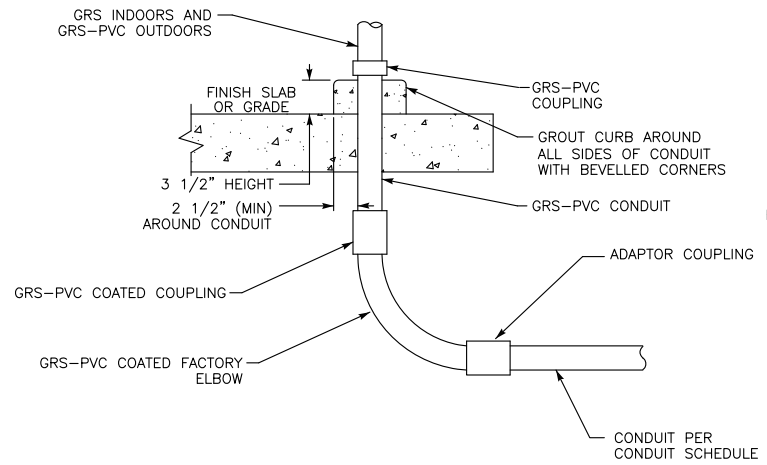


HANDHOLE GROUNDING **E**
NOT TO SCALE **DETAIL** E11

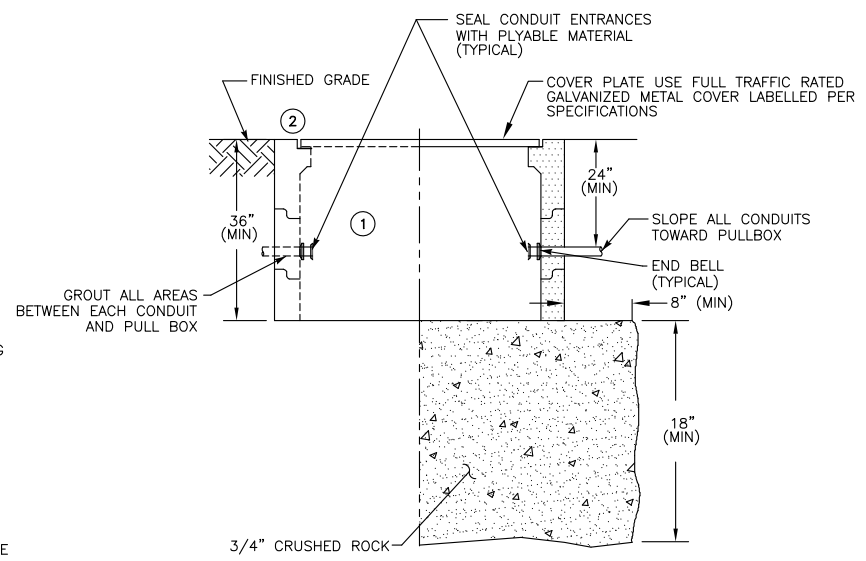
- NOTES: ① FLUSH IN PAVED AREAS.



GROUND CABLE CONNECTION **F**
NOT TO SCALE **DETAIL** E11



EXPOSED CONDUIT TRANSITION **G**
NOT TO SCALE **DETAIL** E11



PULL BOX **H**
NOT TO SCALE **DETAIL** E11

- NOTES: ① TRAFFIC RATED CHRISTY "B" SERIES OR EQUAL, MINIMUM BOX SIZE PER PLANS.
- ② ADD EXTENSIONS WHERE NECESSARY TO RAISE COVER TO FINISHED GRADE.

SAVED: 2/14/2024 12:57 PM ATEEM, PLOTTED: 4/19/2024 3:30 PM ZAK KWAN VOGLER
 Z:\ACADDWG\2022\220661\DWG\22066101.dwg



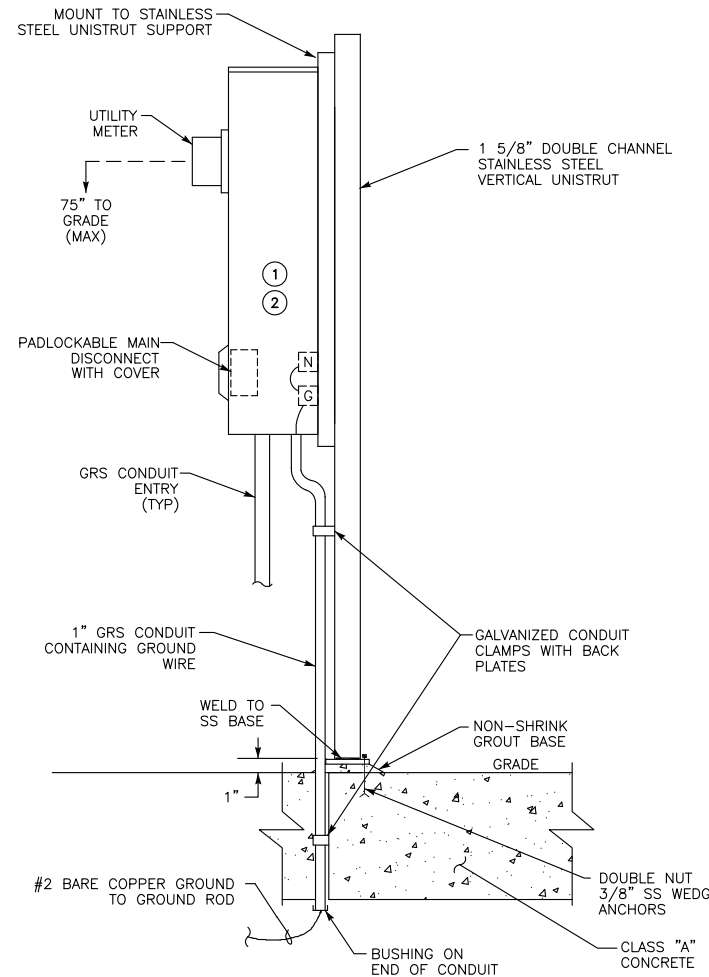
4/19/2024

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855

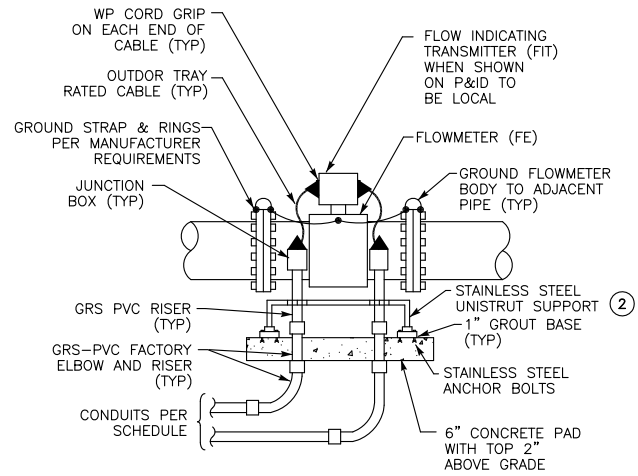


BY	
REVISION	
DATE	
NO.	
DSGN	SMK
DR	ZKV
CHK	XML
APVD	
GARBERVILLE SANITARY DISTRICT GARBERVILLE TANK REPLACEMENT PROJECT GARBERVILLE, CALIFORNIA TYPICAL ELECTRICAL DETAILS NO. 1	
SHEET	E11
SEQ	
DATE	4/2024
PROJ. NO.	022067



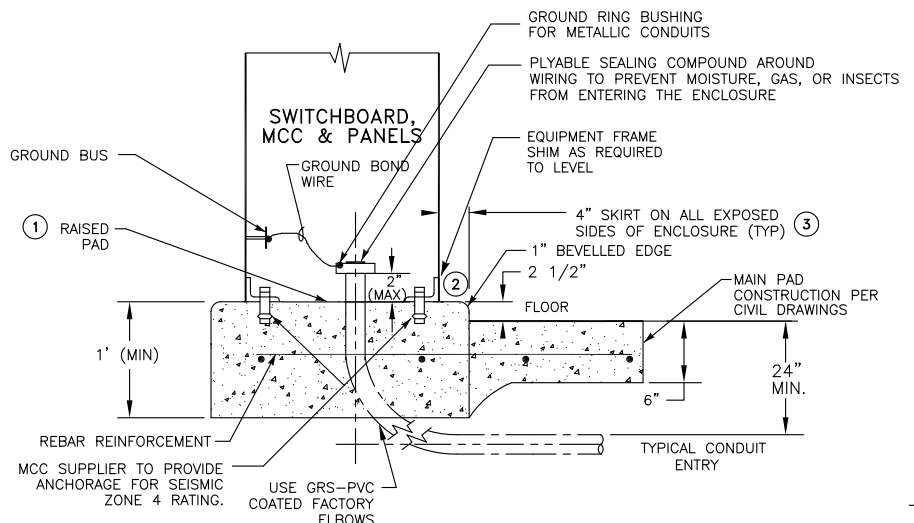
METER/MAIN PANEL (A) E12
NOT TO SCALE DETAIL

- NOTES: ① PAINT ENCLOSURE, SUPPORT & ALL CONDUITS TO MATCH COLOR OF PANEL.
② PROVIDE ENGRAVED RED NAMEPLATE WITH 1" WHITE LETTERS TO MEET NEC 702.7 (A).



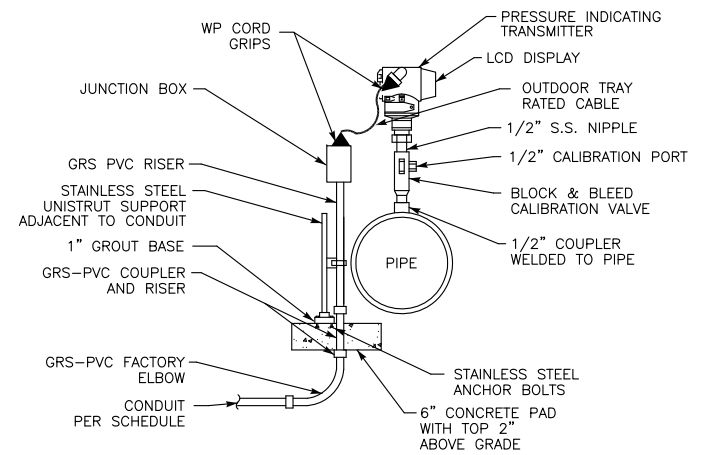
ABOVE GRADE FLOWMETER (E) E12
NOT TO SCALE DETAIL

- NOTES: ① SIMILAR INSTALLATION SHALL BE USED FOR VERTICAL PIPES.
② SUPPORT WITH TWO HOLE BASE ON EACH SIDE AND HEIGHT OF HORIZONTAL UNISTRUT SUPPORT TO BE 12" MINIMUM.

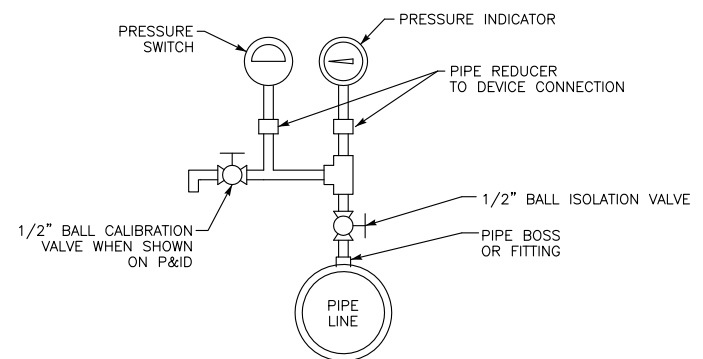


EQUIPMENT CONCRETE PAD (B) E12
NOT TO SCALE DETAIL

- NOTES: ① CONCRETE PAD ABOVE FLOOR TO BE POURED AFTER MAIN PAD HAD BEEN POURED. PAD ABOVE FLOOR TO BE FINE CONCRETE COMPOSITION ACCURATELY LEVELED WITHIN 1/16" INCH.
② ALL ENCLOSURES INSTALLED IN NEMA 4X AREAS TO HAVE BEAD OF SILICON AROUND ALL BOTTOM EDGES TO SEAL OUT WATER.
③ FOR MMS FRONT SIDE, MINIMUM 4' PER UTILITY'S REQUIREMENTS.

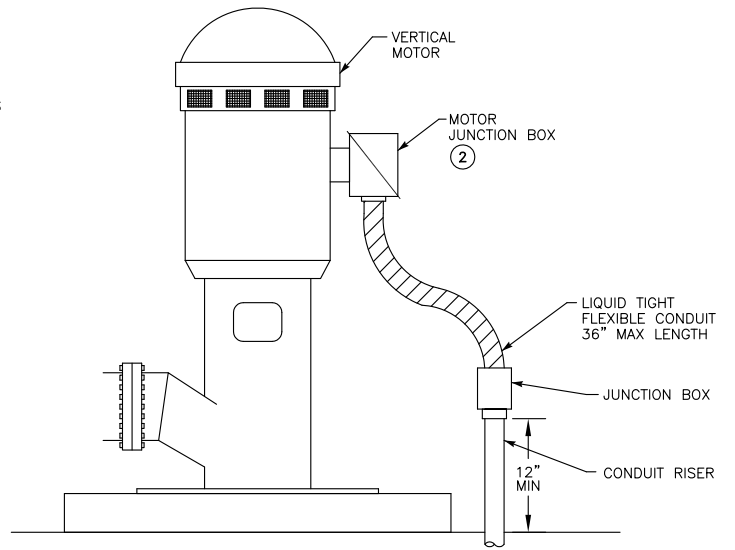


PRESSURE TRANSMITTER (F) E12
NOT TO SCALE DETAIL



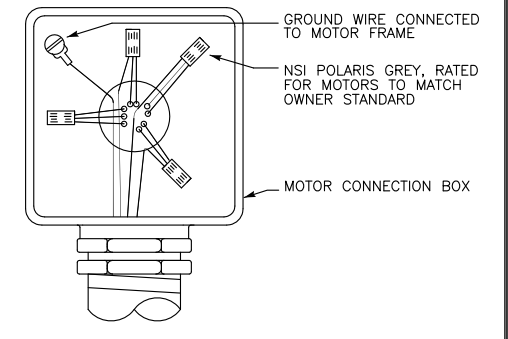
PRESSURE SWITCH/INDICATOR (G) E12
NOT TO SCALE DETAIL

- NOTES: ① 1/2" GALVANIZED PIPING & VALVES.

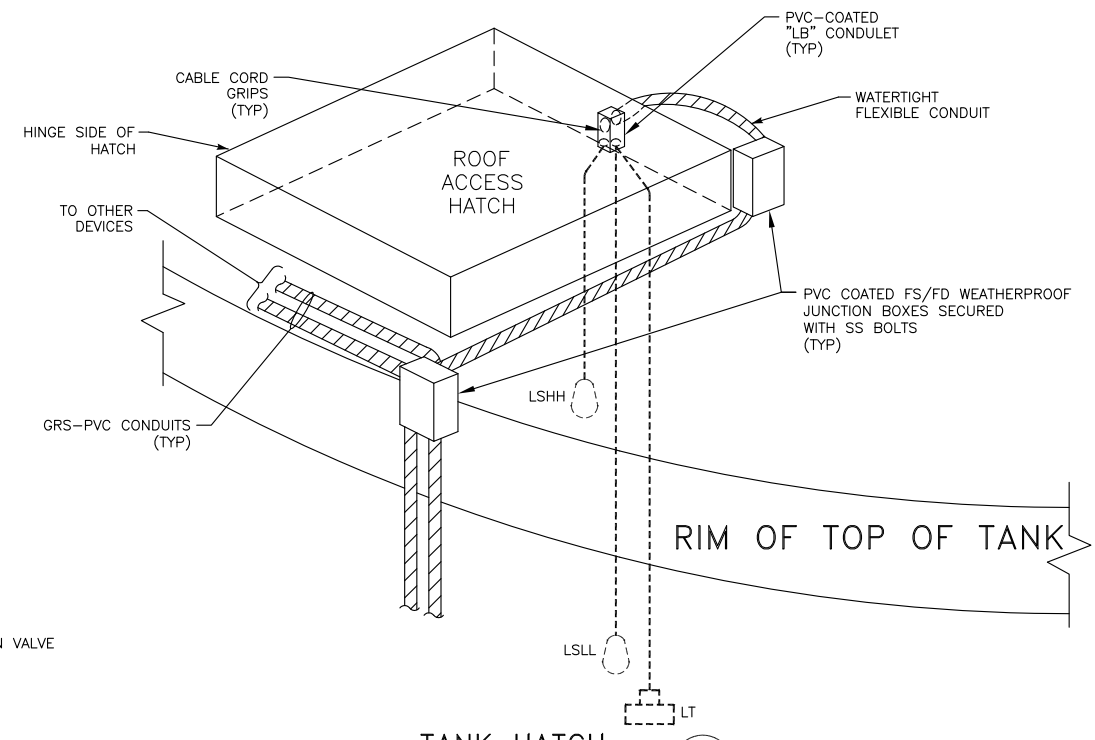


VERTICAL MOTOR CONNECTION (C) E12
NOT TO SCALE DETAIL

- NOTES: ① MOTOR MAKEUP PER DWG E13, DET "C".
② PROVIDE LARGER MOTOR JUNCTION BOX TO ACCOMMODATE WIRES & CONDUIT IN CONDUIT & WIRE ROUTING SCHEDULE.



MOTOR MAKEUP (D) E12
NOT TO SCALE DETAIL



TANK HATCH (H) E12
NOT TO SCALE DETAIL

- NOTES: ① THIS DETAIL SHOWS GENERAL INSTALLATION REQUIREMENTS. ADJUST ACCORDINGLY FOR HATCH ARRANGEMENT SHOWN ON CIVIL DWGS.
② CONDUITS TO MATCH TANK COLOR.
③ SEAL ALL CONDUITS WITH REMOVABLE PLUGGING COMPOUND.

SAVED: 3/28/2024 2:27 PM ATEEM, PLOTTED: 4/19/2024 3:30 PM ZAK KHAN VOGLEF
 Z:\ACADDWG\2022\2206B\DWG\2206B012.dwg



© SEPTEMBER 2023
ATEEM ENGINEERING
ALL RIGHTS RESERVED
4/19/2024

VERIFY SCALES
BASED ON ONE INCH ON ORIGINAL DRAWING
0 1" 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
EUREKA, CA 95501
WWW.SHN-ENGR.COM
707-441-8855

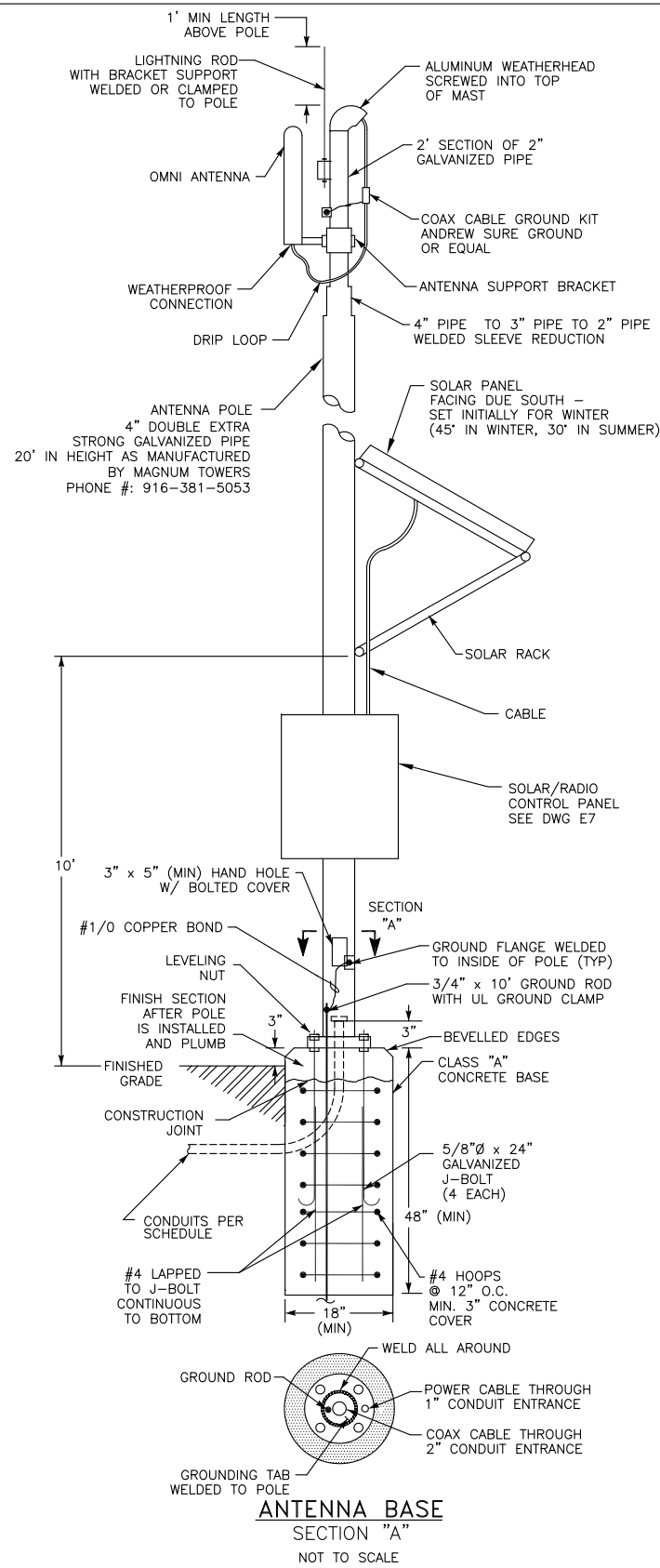


NO.	DATE	REVISION	BY

DSGN	SMK	DR	ZKV	CHK	XML	APVD

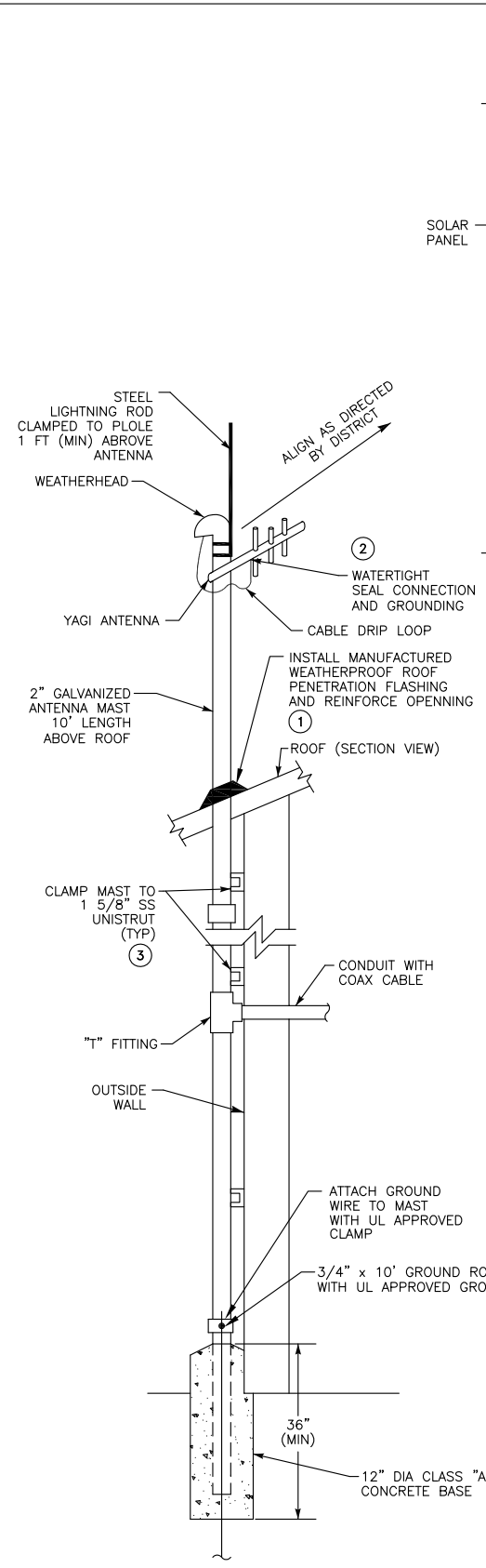
GARBERVILLE SANITARY DISTRICT
GARBERVILLE TANK REPLACEMENT PROJECT
GARBERVILLE, CALIFORNIA
TYPICAL ELECTRICAL
DETAILS NO.2

SHEET	E12
SEQ	
DATE	4/2024
PROJ. NO.	022067



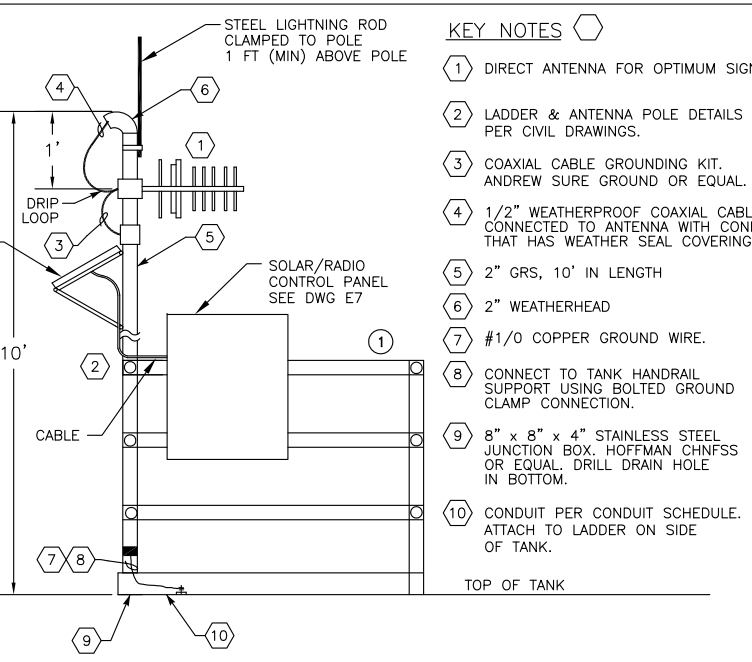
ANTENNA MAST INSTALLATION (A) E13
NOT TO SCALE

NOTES: ① ANTENNA MAST AND POLE SHALL BE POWDER COATED BLACK.



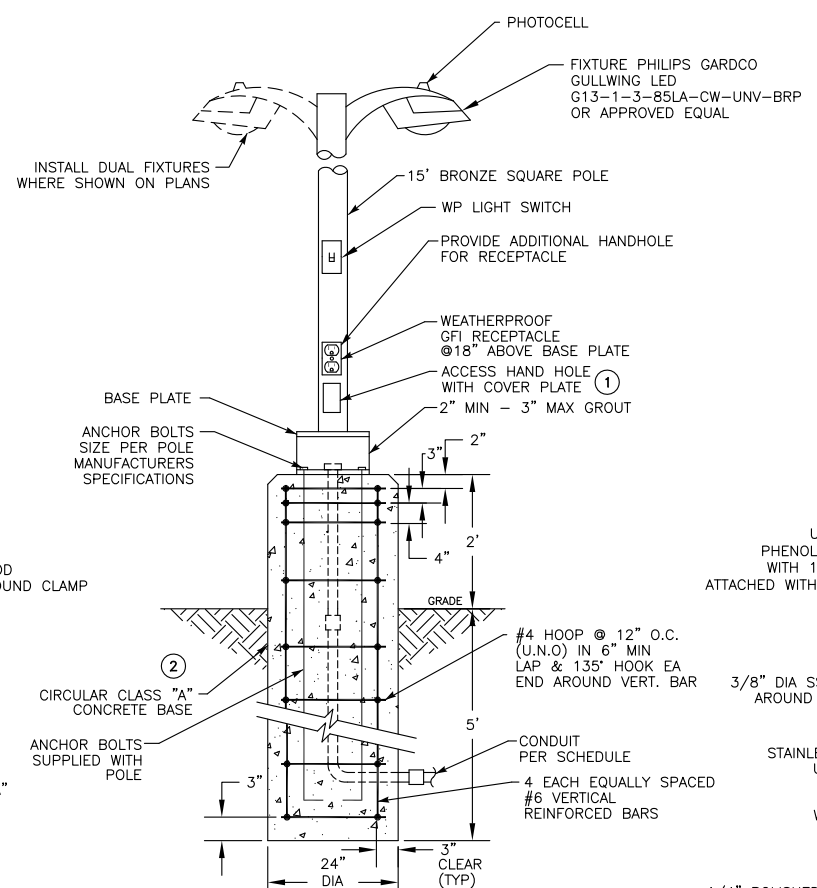
ANTENNA INSTALLATION (B) E13
NOT TO SCALE

NOTES: ① SEAL FLASHING WITH BLACK TAR ROOFING COMPOUND (MASTIC OR EQUAL) AND TEST AREA FOR LEAKS. PAINT FLASHING TO MATCH COLOR OF ROOF.
② MAKE CONNECTION WITH ANDREW SURE GROUND KIT OR EQUAL.
③ ALL CLAMPS AND MOUNTING HARDWARE TO BE STAINLESS STEEL. PAINT EXPOSED PORTIONS OF ANTENNA, MAST, SLEEVE AND SUPPORTS UNDER ROOF TO MATCH COLOR OF WALL.



ABOVE TANK ANTENNA (C) E13
NOT TO SCALE

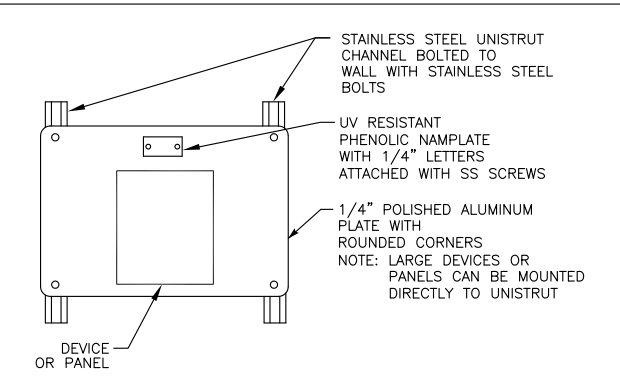
NOTES: ① ADD ANTENNA AND MISC. ITEMS TO ACROSS PLATFORM AT THE TOP OF THE TANK.



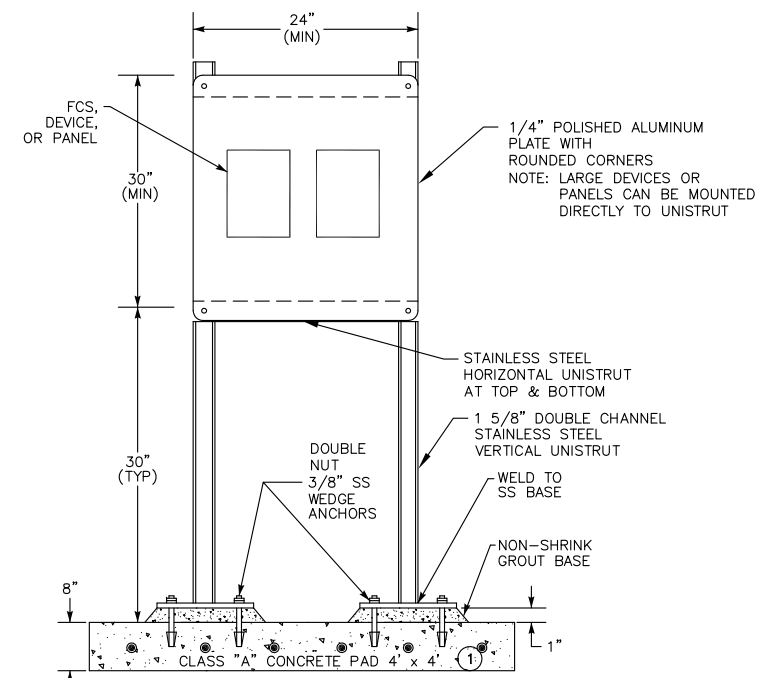
AREA LIGHT (D) E13
NOT TO SCALE

NOTES: ① PROVIDE 2 POLE FUSE HOLDER WITH FUSES & RUBBER BOOTS ON LIGHT WIRING FEED INSIDE HANDHOLE.
② PLACE FINISH CONCRETE ON EXPOSED SURFACE AFTER FORMING TUBE IS REMOVED.

- KEY NOTES**
- DIRECT ANTENNA FOR OPTIMUM SIGNAL STRENGTH.
 - LADDER & ANTENNA POLE DETAILS PER CIVIL DRAWINGS.
 - COAXIAL CABLE GROUNDING KIT. ANDREW SURE GROUND OR EQUAL.
 - 1/2" WEATHERPROOF COAXIAL CABLE CONNECTED TO ANTENNA WITH CONNECTOR THAT HAS WEATHER SEAL COVERING.
 - 2" GRG, 10' IN LENGTH
 - 2" WEATHERHEAD
 - #1/0 COPPER GROUND WIRE.
 - CONNECT TO TANK HANDRAIL SUPPORT USING BOLTED GROUND CLAMP CONNECTION.
 - 8" x 8" x 4" STAINLESS STEEL JUNCTION BOX. HOFFMAN CHNFS OR EQUAL. DRILL DRAIN HOLE IN BOTTOM.
 - CONDUIT PER CONDUIT SCHEDULE. ATTACH TO LADDER ON SIDE OF TANK.

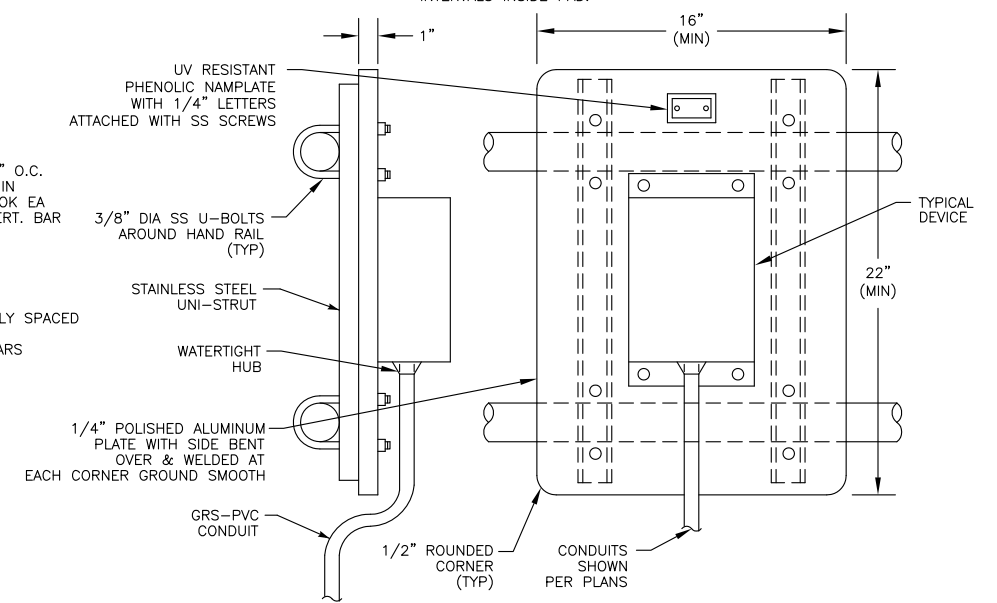


WALL PLATE SUPPORT (E) E13
NOT TO SCALE



PANEL SUPPORT (F) E13
NOT TO SCALE

NOTES: ① #3 REBAR CROSSWAYS AT 12" INTERVALS INSIDE PAD.



HANDRAIL SUPPORT PLATE (G) E13
NOT TO SCALE

NOTES: ① ALL HARDWARE TO BE STAINLESS STEEL.

SAVED: 3/27/2024 1:28 PM ATEEM, PLOTTED: 4/19/2024 3:30 PM ZAK KWAN VOGELER
 Z:\ACADDWG\2022\220661\DWG\220661013.dwg



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1 1
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855



NO.	DATE	REVISION	BY

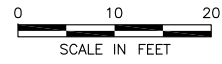
DSGN	SMK	DR	ZKV	CHK	XML	APVD

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
 TYPICAL ELECTRICAL
 DETAILS NO. 3

SHEET E13
 SEQ
 DATE 4/2024
 PROJ. NO. 022067

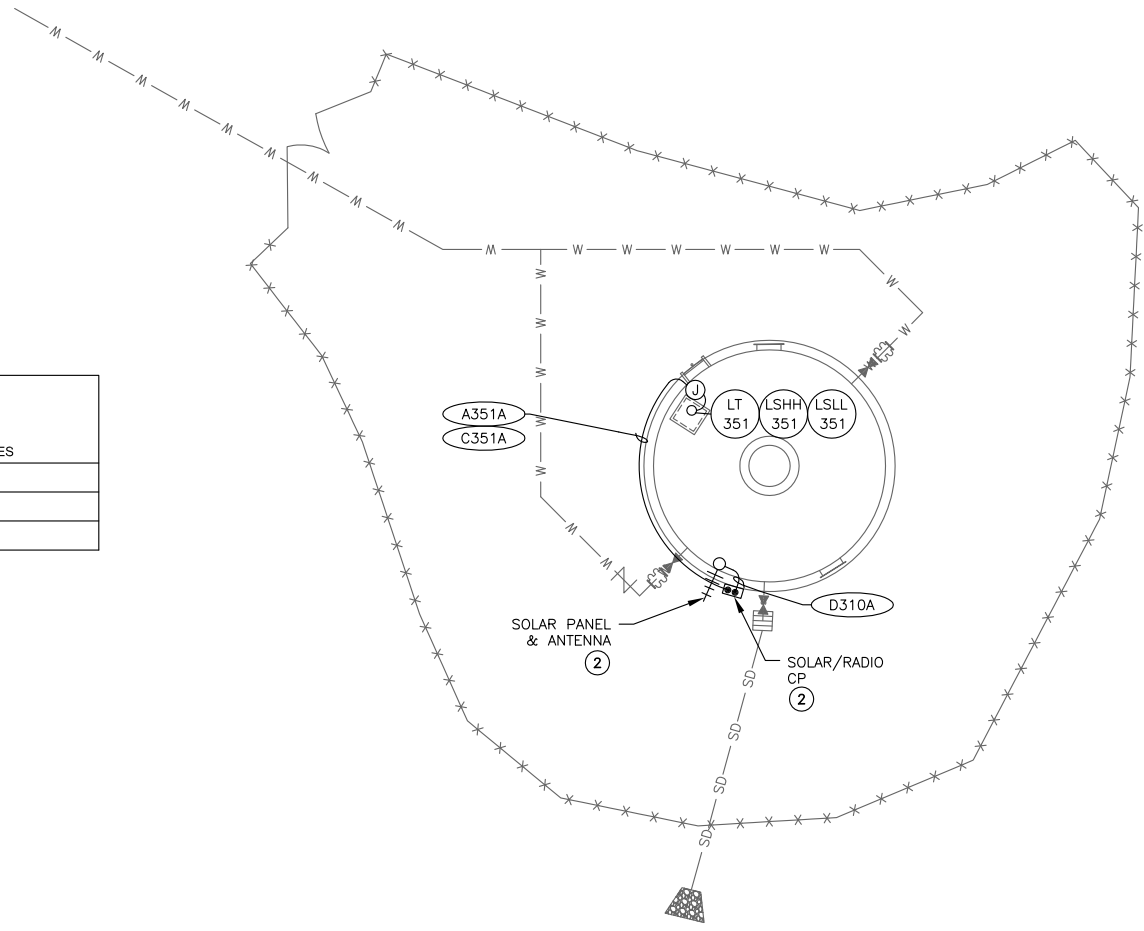


OUTSIDE BUILDING



CONDUIT & WIRE ROUTING SCHEDULE

REF DWG	CONDUIT NO.	FROM	TO	QTY	SIZE	TYPE	PWR QTY	SIZE	GND SIZE	CONTROL QTY	SIZE	SIGNAL QTY	SIZE	NOTES
E300	A 351 A	RADIO CP	LT351	1	1"	GRS-PVC	-	-	#12	-	-	-	-	MNFR CBL
E300	C 351 A	RADIO CP	LSHH/LL351	1	1"	GRS-PVC	-	-	#12	8	#14	-	-	
E300	D 310 A	PEDESTAL-CP	ANTENNA	1	2"	GRS-PVC	-	-	#8	-	-	1	1/2" COAX	



WALLAN TANK ELECTRICAL SITE PLAN ①

- NOTES: ① EXPOSED CONDUITS PER DWG E11, DETAIL "A".
- ② COORDINATE WITH OWNER TO INSTALL SOLAR/RADIO CP AND SOLAR PANEL PER DWG E13, DETAIL "C", SEE DWG E7 FOR CP DETAILS.

SAVED: 3/27/2024 1:41 PM ATEEM, PLOTTED: 4/19/2024 3:30 PM ZAK KWAN VOGLEF
 Z:\ACADDWG\2022\2206B\DWG\2206BE300.dwg



© SEPTEMBER 2023
ATEEM ENGINEERING
ALL RIGHTS RESERVED



4/19/2024

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
EUREKA, CA. 95501
WWW.SHN-ENGR.COM
707-441-8855



NO.	DATE	REVISION	BY

DSGN	SMK
DR	ZKV
CHK	XML
APVD	

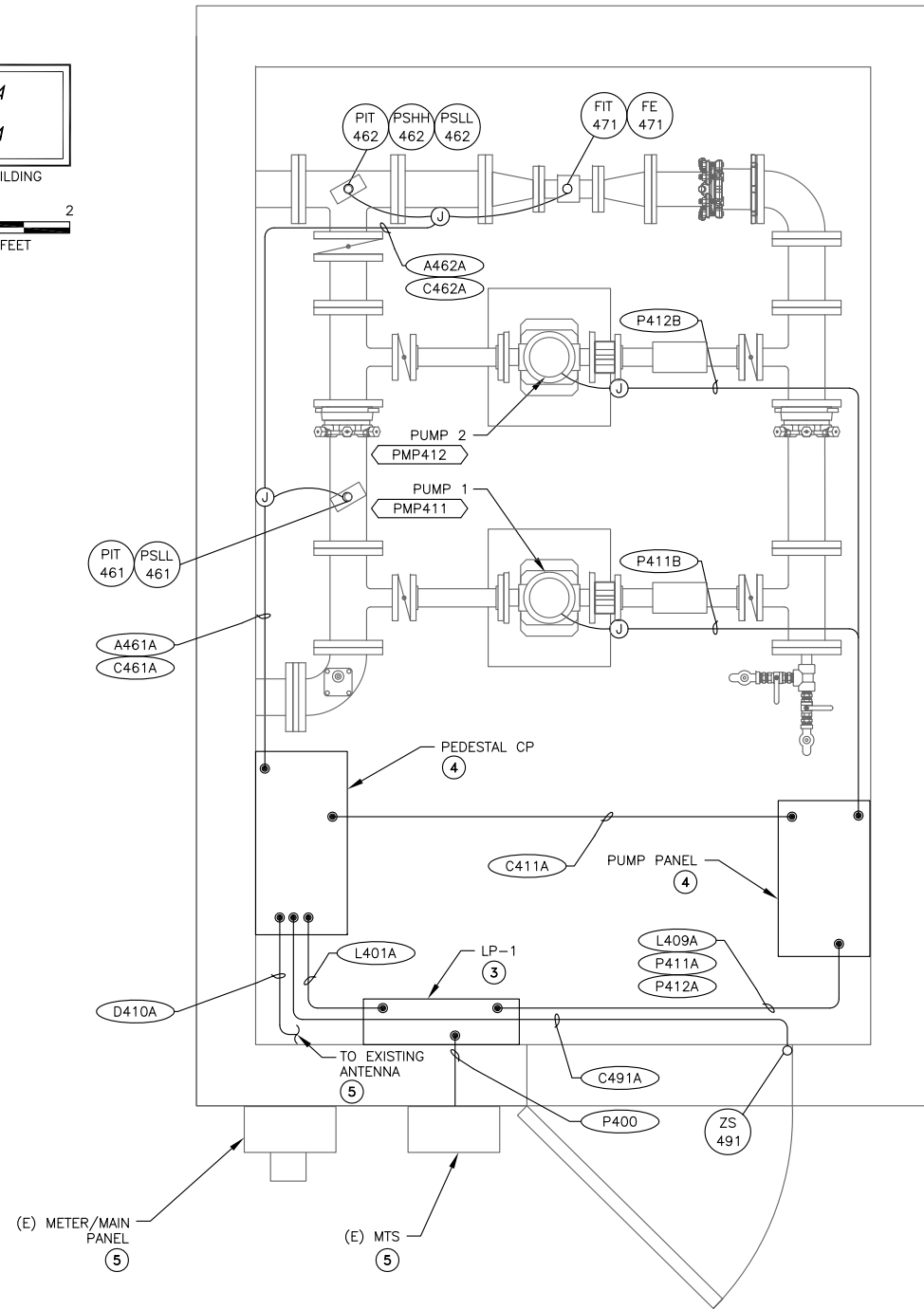
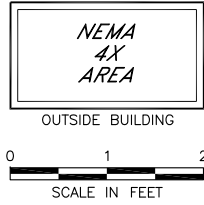
GARBERVILLE SANITARY DISTRICT
GARBERVILLE TANK REPLACEMENT PROJECT
GARBERVILLE, CALIFORNIA
WALLAN TANK
ELECTRICAL SITE PLAN

SHEET
E300

SEQ

DATE 4/2024

PROJ. NO.
022067



WALLAN PUMP STATION ELECTRICAL PLAN ① ②

- NOTES:
- ① EXPOSED CONDUITS PER DWG E11, DETAIL "A".
 - ② COORDINATE WITH OWNER TO REFEED EXISTING LIGHTS AND RECEPTACLES TO NEW PANEL LP-1. INSTALL NEW CONDUIT & WIRES AS REQUIRED PER DWG E9 REQUIREMENTS.
 - ③ INSTALL PANEL LP-1 PER DWG E13, DETAIL "E".
 - ④ PEDESTAL PER DWG E12, DETAIL "B".
 - ⑤ EXISTING METER/MAIN PANEL, MTS AND ANTENNA SHALL BE REMAINED IN PLACE, SEE PHOTO-A.



(E) METER/MAIN PANEL & MTS A
PHOTO

CONDUIT & WIRE ROUTING SCHEDULE														
REF DWG	CONDUIT NO.	FROM	TO	QTY	SIZE	TYPE	PWR QTY	SIZE	GND SIZE	CONTROL QTY	SIZE	SIGNAL QTY	SIZE	NOTES
E400	A 461 A	PEDESTAL-CP	PIT461 JB	1	1-1/2"	GRS	4	#14	#12	-	-	4	#16 TSPR	
E400	A 462 A	PIT461 JB	PIT462/FIT471	1	1"	GRS	2	#14	#12	-	-	3	#16 TSPR	
E400	C 411 A	PEDESTAL-CP	PUMP PANEL	1	1-1/2"	GRS	-	-	#12	20	#14	-	-	
E400	C 461 A	PEDESTAL-CP	PSLL461 JB	1	1"	GRS	-	-	#12	12	#14	-	-	
E400	C 462 A	PSLL461 JB	PSHH/LL462	1	1"	GRS	-	-	#12	8	#14	-	-	
E400	C 491 A	PEDESTAL-CP	ZS491	1	3/4"	GRS	-	-	#12	4	#14	-	-	
E400	D 410 A	PEDESTAL-CP	ANTENNA	1	2"	GRS	-	-	#8	-	-	1	1/2" COAX	
E400	L 401 A	LP-1	PEDESTAL-CP	1	1"	GRS	4	#12	#12	-	-	-	-	
E400	L 409 A	LP-1	PUMP PANEL	1	1"	GRS	2	#12	#12	-	-	-	-	
E400	P 400	MTS	LP-1	1	2"	GRS	4	#1	#6	-	-	-	-	
E400	P 411 A	LP-1	PUMP PANEL	1	1"	GRS	4	#8	#10	-	-	-	-	
E400	P 411 B	PUMP PANEL	PMP411	1	1-1/2"	GRS	3	#8	#10	4	#14	-	-	
E400	P 412 A	LP-1	PUMP PANEL	1	1"	GRS	4	#8	#10	-	-	-	-	
E400	P 412 B	PUMP PANEL	PMP412	1	1-1/2"	GRS	3	#8	#10	4	#14	-	-	

SAVED: 3/28/2024 11:14 AM ATEEM, PLOTTED: 4/19/2024 3:31 PM ZAK KWAN VOGLER
 Z:\ACADDWG\2022\2206B\DWG\2206BE-400.dwg



4/19/2024

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855



NO.	DATE	REVISION	BY

DSGN	SMK	DR	ZKV	CHK	XML	APVD

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
 WALLAN PUMP STATION
 ELECTRICAL PLAN

SHEET	E400
SEQ	
DATE	4/2024
PROJ. NO.	022067

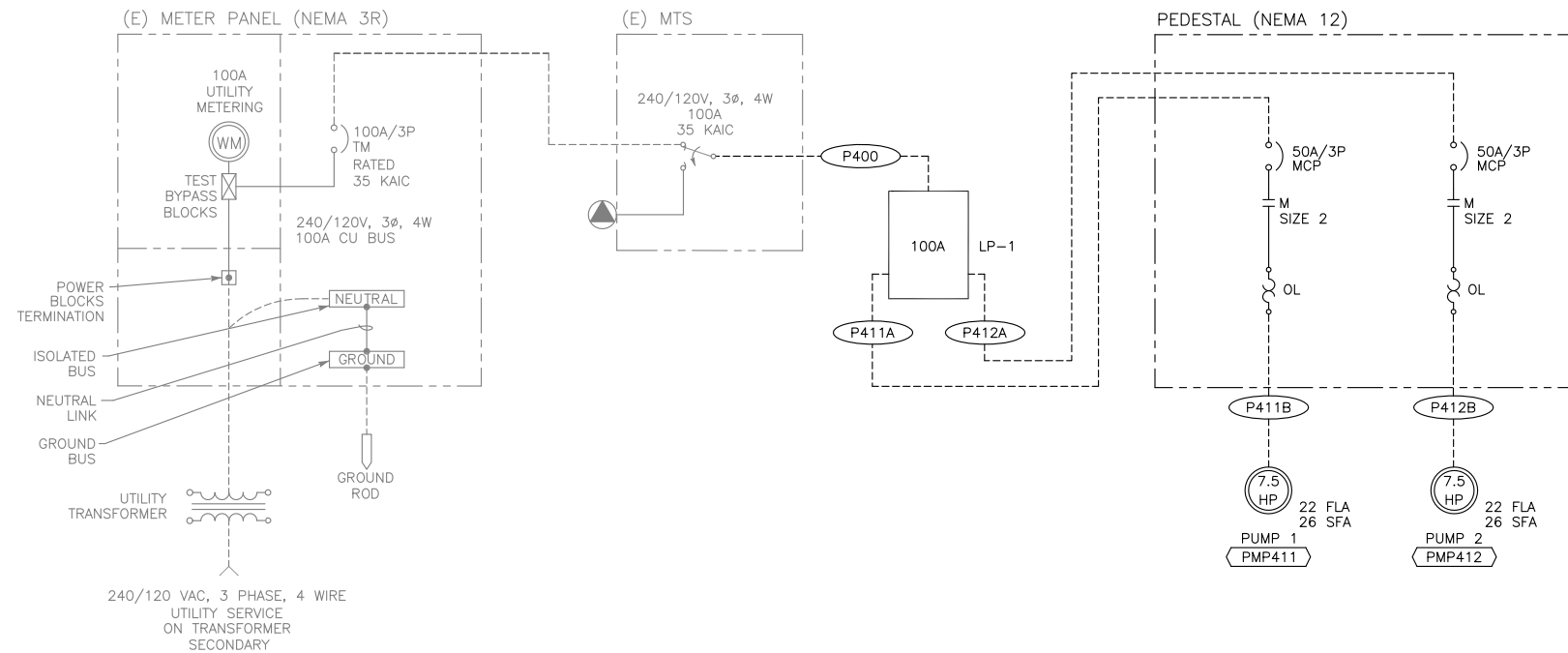
BKR NO.		LOAD DESCRIPTION	LOAD VA	LINE AMPS	BKR AMP/ POLE	BKR NO.	PHASE	BKR NO.	BKR AMP/ POLE	LINE AMPS	LOAD VA	LOAD DESCRIPTION	BKR NO.
1		CP UPS	500	4	20/1	1	A	2	20/1	3	300	CP AUX	2
3		LIGHTS	300	3	20/1	3	B	4	20/1(G)	3	360	RECEPT	4
5		HI LEG		0		5	C	6		0		HI LEG	6
7		SPARE	0	0	20/1	7	A	8	20/1	0	0	SPARE	8
9		PUMP PANEL FAN/HTR	100	1	20/1	9	B	10	20/1	0	0	SPARE	10
11		HI LEG		0		11	C	12		0		HI LEG	12
13		PUMP 1	2,640	22	40/3	13	A	14	40/3	22	2,640	PUMP 2	14
15			2,640	22	(L)	15	B	16	(L)	22	2,640		16
17			2,640	22		17	C	18		22	2,640		18
19		SPACE		0		19	A	20		0		SPACE	20
21		SPACE		0		21	B	22		0		SPACE	22
23		SPACE		0		23	C	24		0		SPACE	24
25		SPACE		0		25	A	26		0		SPACE	26
27		SPACE		0		27	B	28		0		SPACE	28
29		SPACE		0		29	C	30		0		SPACE	30

PHASE	A	B	C
LEFT SIDE AMPS	26	25	22
LEFT SIDE KVA	3.14	3.04	2.64
TOTAL KVA	17.40		
TOTAL AMPS @ 208V, 3P	41.9		
DIVERSITY FACTOR	0.80		
LOAD KVA	13.92		

NEUTRAL
GROUND

350	B	C	PHASE
25	25	22	RIGHT SIDE AMPS
2.94	3.00	2.64	RIGHT SIDE KVA
3.14	3.04	2.64	LEFT SIDE KVA
6.08	6.04	5.28	TOTAL PHASE KVA
51	50	44	TOTAL PHASE AMPS
105	104	91	% OF AVERAGE

- NOTES: 1. MEANS OF WIRE COLOR CODING SHALL BE POSTED ON PANELBOARD PER NEC 210.5
 2. (G) INDICATES GFI BREAKER REQUIRED WITH 30 MA SENSITIVITY.
 3. (H) INDICATES HACR RATED BREAKER.
 4. (L) PROVIDE PADLOCKING PROVISION IN ORDER TO LOCK BREAKER IN THE OFF POSITION.



WALLAN PUMP STATION ONE LINE DIAGRAM ①

- NOTE: ① ALL LUGS SHALL BE COPPER, SIZE FOR WIRES LISTED IN "CONDUIT & WIRE SCHEDULE".
 ② ATS SHALL BE OPEN TRANSITION TYPE.

SAVED: 3/28/2024 1:50 PM ATEEM, PLOTTED: 4/19/2024 3:31 PM ZAK KWAN VOGLEP
 Z:\ACADDWG\2022\220661\DWG\22066E-401.dwg



© SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



4/19/2024

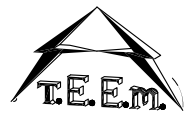
VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855



DSGN	SMK	DR	ZKY	CHK	XML	APVD	NO.	DATE	REVISION	BY
SHEET E401										
SEQ										
DATE 4/2024										
PROJ. NO. 022067										

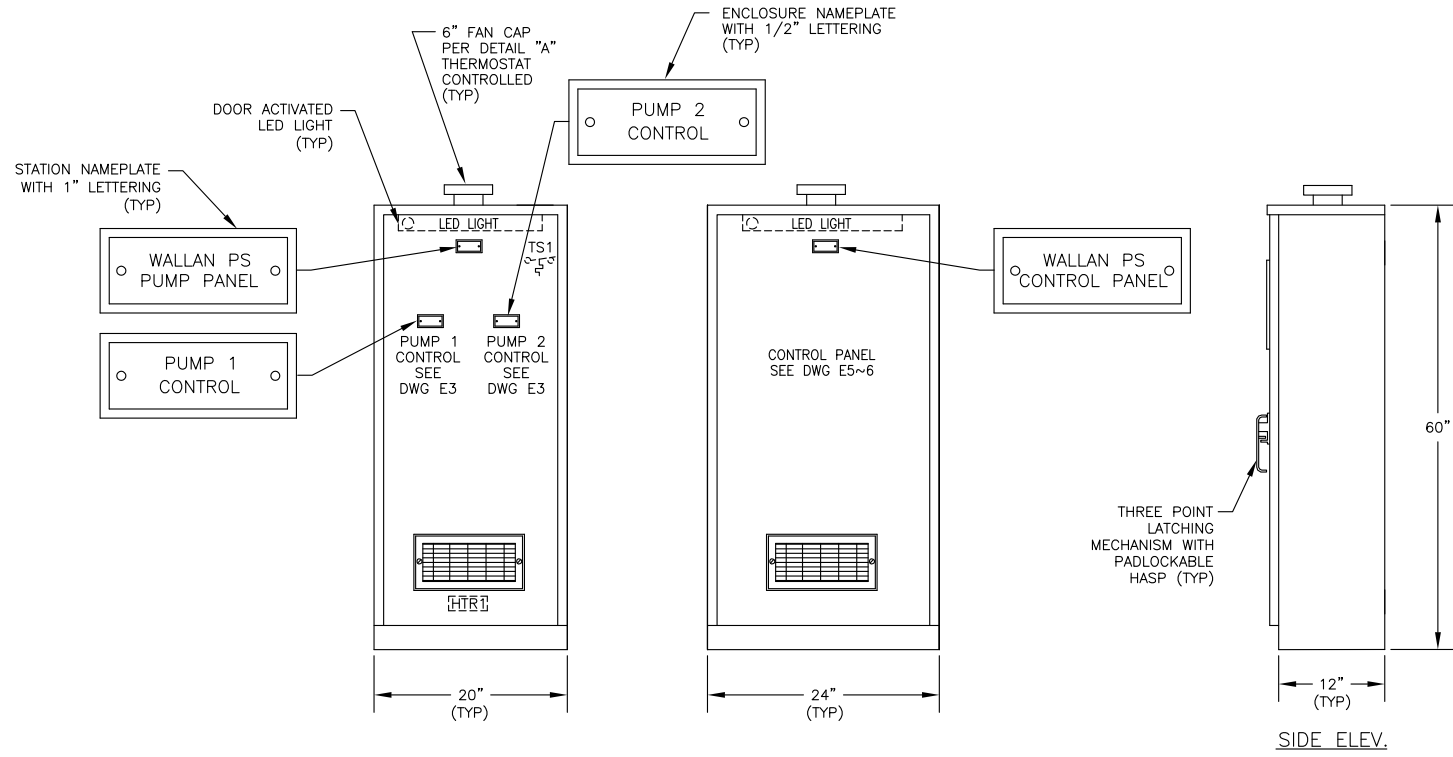
SAVED: 3/27/2024 1:47 PM ATEEM, PLOTTED: 4/19/2024 3:31 PM ZAK KWAN VOGLER
 Z:\ACADDWG\2022\2206B\DWG\2206BE-402.dwg



(916) 457-8144
 © SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



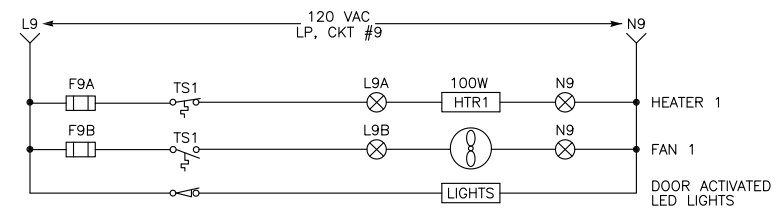
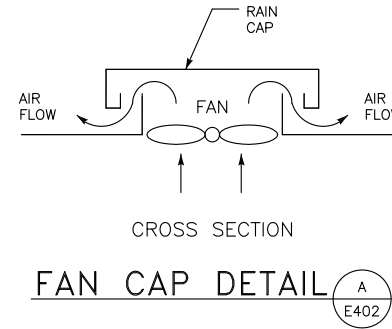
4/19/2024



PEDESTAL ELEVATION ① ②

NOT TO SCALE

- NOTES: ① ITEMS DRAWN IN DASHED LINES ARE TO BE LOCATED BEHIND DEADFRONT DOORS.
 ② EACH BREAKER SHALL HAVE PADLOCKING PROVISION TO LOCK BREAKER IN THE OFF POSITION, NOT ALL BREAKERS ARE SHOWN.



PEDESTAL AUXILIARY ELEMENTARY DIAGRAM B E402

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

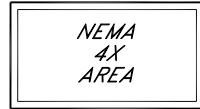
812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855



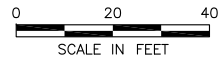
NO.	DATE	REVISION	BY

Garberville Sanitary District
 Garberville Tank Replacement Project
 Garberville, California
 Wallan Pump Station
 Pedestal Elevation

SHEET
 E402
 SEQ
 DATE 4/2024
 PROJ. NO.
 022067

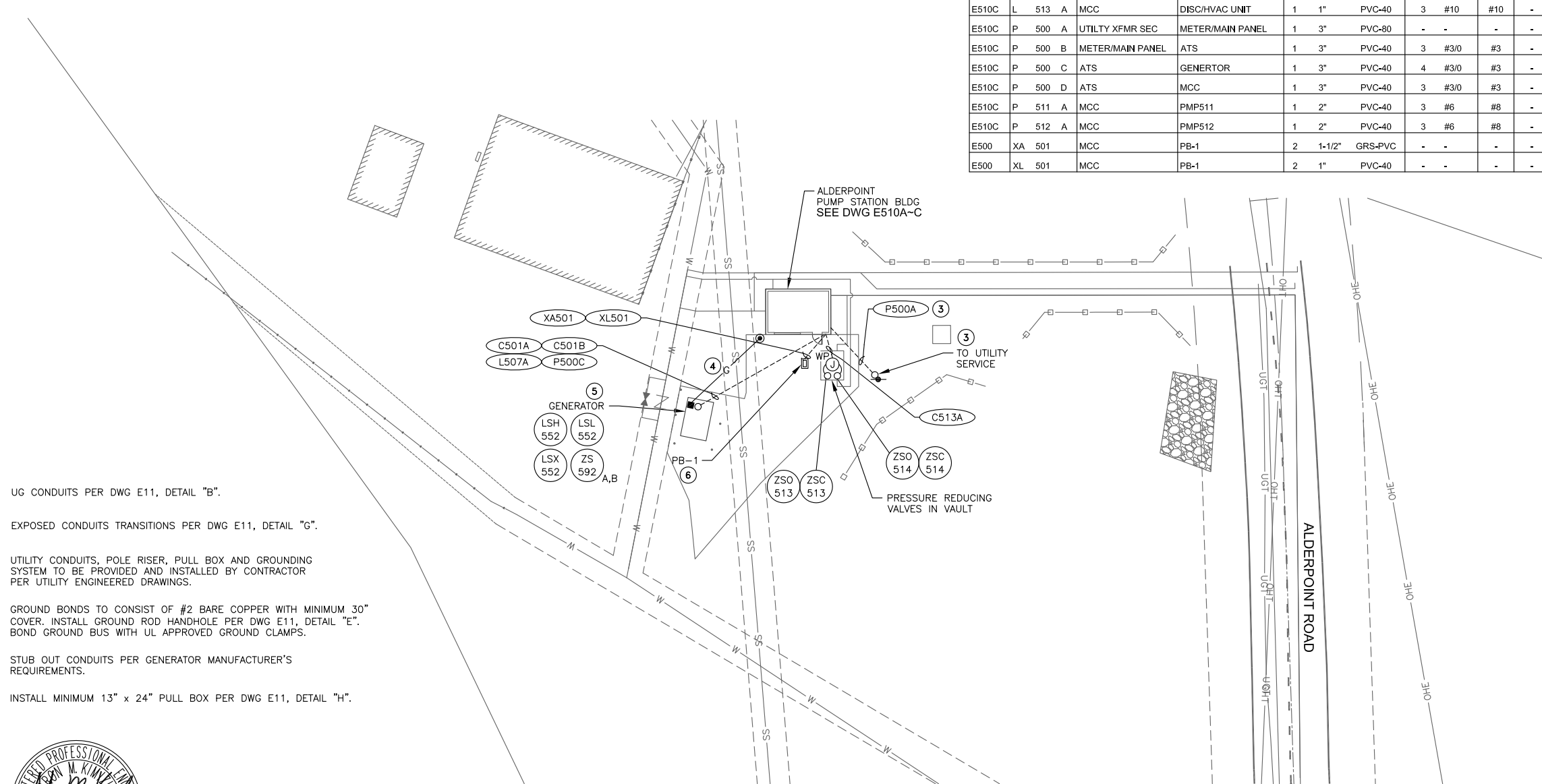


OUTSIDE BUILDING



CONDUIT & WIRE ROUTING SCHEDULE

REF DWG	CONDUIT NO.	FROM	TO	QTY	SIZE	TYPE	PWR QTY	SIZE	GND SIZE	CONTROL QTY	SIZE	SIGNAL QTY	SIZE	NOTES
E510C	A 561 A	MCC	PIT561 JB	1	1-1/2"	GRS-PVC	2	#14	#12	-	-	4	#16 TSPR	
E510C	A 562 A	PIT561 JB	PIT562 JB	1	1"	GRS-PVC	2	#14	#12	-	-	3	#16 TSPR	
E510C	A 563 A	PIT562 JB	PIT563	1	1"	GRS-PVC	2	#14	#12	-	-	1	#16 TSPR	
E510C	A 571 A	MCC	FIT571	1	1"	GRS-PVC	2	#14	#12	-	-	1	#16 TSPR	
E500	C 501 A	ATS	GENERATOR	1	1"	PVC-40	-	-	#12	6	#14	-	-	
E500	C 501 B	MCC	GENERATOR	1	1"	PVC-40	-	-	#12	10	#14	-	-	
E510C	C 501 C	MCC	ATS	1	1"	PVC-40	-	-	#12	8	#14	-	-	
E510C	C 511 A	MCC	PMP511	1	1"	PVC-40	-	-	#12	4	#14	-	-	
E510C	C 512 A	MCC	PMP512	1	1"	PVC-40	-	-	#12	4	#14	-	-	
E500	C 513 A	MCC	ZSO/ZSC513-4	1	1"	PVC-40	-	-	#12	12	#14	-	-	
E510C	C 521 A	MCC	MOV521	1	1"	PVC-40	-	-	#12	12	#14	-	-	
E510C	C 561 A	MCC	PSLL561 JB	1	1"	PVC-40	-	-	#12	16	#14	-	-	
E510C	C 562 A	PSLL561 JB	PSHH/LL562 JB	1	1"	PVC-40	-	-	#12	12	#14	-	-	
E510C	C 563 A	PSHH/LL562 JB	PSHH563	1	1"	PVC-40	-	-	#12	6	#14	-	-	
E510A	C 591 A	MCC	ZS591	1	3/4"	GRS	-	-	#12	4	#14	-	-	
E510A	D 510 A	MCC	ANTENNA	1	2"	GRS	-	-	#8	-	-	1	1/2" COAX	
E500	L 507 A	MCC	GEN BATT CHGR/HTR	1	1"	PVC-40	4	#10	#10	-	-	-	-	
E510A	L 508 A	MCC	EF SW/T-STAT	1	3/4"	GRS	2	#12	#12	-	-	-	-	
E510A	L 508 B	EF SW/T-STAT	EXHAUST FAN	1	3/4"	GRS	2	#12	#12	-	-	-	-	
E510C	L 512 A	MCC	MOV521	1	1"	PVC-40	2	#12	#12	-	-	-	-	
E510C	L 513 A	MCC	DISC/HVAC UNIT	1	1"	PVC-40	3	#10	#10	-	-	-	-	
E510C	P 500 A	UTILITY XFMR SEC	METER/MAIN PANEL	1	3"	PVC-80	-	-	-	-	-	-	-	PULL TAPE
E510C	P 500 B	METER/MAIN PANEL	ATS	1	3"	PVC-40	3	#3/0	#3	-	-	-	-	
E510C	P 500 C	ATS	GENERATOR	1	3"	PVC-40	4	#3/0	#3	-	-	-	-	
E510C	P 500 D	ATS	MCC	1	3"	PVC-40	3	#3/0	#3	-	-	-	-	
E510C	P 511 A	MCC	PMP511	1	2"	PVC-40	3	#6	#8	-	-	-	-	VFD RATED CBL
E510C	P 512 A	MCC	PMP512	1	2"	PVC-40	3	#6	#8	-	-	-	-	VFD RATED CBL
E500	XA 501	MCC	PB-1	2	1-1/2"	GRS-PVC	-	-	-	-	-	-	-	PULL ROPE
E500	XL 501	MCC	PB-1	2	1"	PVC-40	-	-	-	-	-	-	-	PULL ROPE



- NOTES:
- 1 UG CONDUITS PER DWG E11, DETAIL "B".
 - 2 EXPOSED CONDUITS TRANSITIONS PER DWG E11, DETAIL "G".
 - 3 UTILITY CONDUITS, POLE RISER, PULL BOX AND GROUNDING SYSTEM TO BE PROVIDED AND INSTALLED BY CONTRACTOR PER UTILITY ENGINEERED DRAWINGS.
 - 4 GROUND BONDS TO CONSIST OF #2 BARE COPPER WITH MINIMUM 30" COVER. INSTALL GROUND ROD HANDHOLE PER DWG E11, DETAIL "E". BOND GROUND BUS WITH UL APPROVED GROUND CLAMPS.
 - 5 STUB OUT CONDUITS PER GENERATOR MANUFACTURER'S REQUIREMENTS.
 - 6 INSTALL MINIMUM 13" x 24" PULL BOX PER DWG E11, DETAIL "H".

ALDERPOINT PUMP STATION ELECTRICAL SITE PLAN ①②

SAVED: 3/28/2024 1:51 PM ATEEM, PLOTTED: 4/19/2024 3:31 PM ZAK KWAN VOGLER
Z:\ACADDWG\2022\220661\DWG\22066E500.dwg



© SEPTEMBER 2023
ATEEM ENGINEERING
ALL RIGHTS RESERVED
4/19/2024

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
EUREKA, CA. 95501
WWW.SHN-ENGR.COM
707-441-8855



NO.	DATE	REVISION	BY

DSGN	SMK	DR	ZKV	CHK	XML	APVD

GARBERVILLE SANITARY DISTRICT
GARBERVILLE TANK REPLACEMENT PROJECT
GARBERVILLE, CALIFORNIA
ALDERPOINT PUMP STATION
ELECTRICAL SITE PLAN

SHEET E500
SEQ
DATE 4/2024
PROJ. NO. 022067

POWER UTILITY SERVICE DIVISION OF WORK	Electrical Contractor	Utility Company
Primary Conduits	N/A	
Primary Conductors		N/A
Transformer Pad	N/A	
Transformer		X
Transformer Connections		X
Transformer Ground Rod	N/A	
Secondary Conduits	X	
Secondary Conductors		X
Bollards	X	
Meter Enclosure/Base	X	
Utility Meter		X
C/T Enclosure	N/A	
Current Transformers C/T		N/A
Meter Room Lock Box	N/A	

Power Company Information:

Contact Name: _____
 Power Utility: Pacific Gas & Electric
 Address: _____
 City/State/Zip: _____
 Phone: _____
 Fax: _____
 E-mail: _____

- Notes:**
- All Utility Service installation work shall be done by Contractor per Power Utility Engineered drawings (which supersedes what is shown on Contract Drawings).
 - Contractor shall coordinate and schedule all Power Utility Inspections and tests in strict compliance with Power Utility requirements.

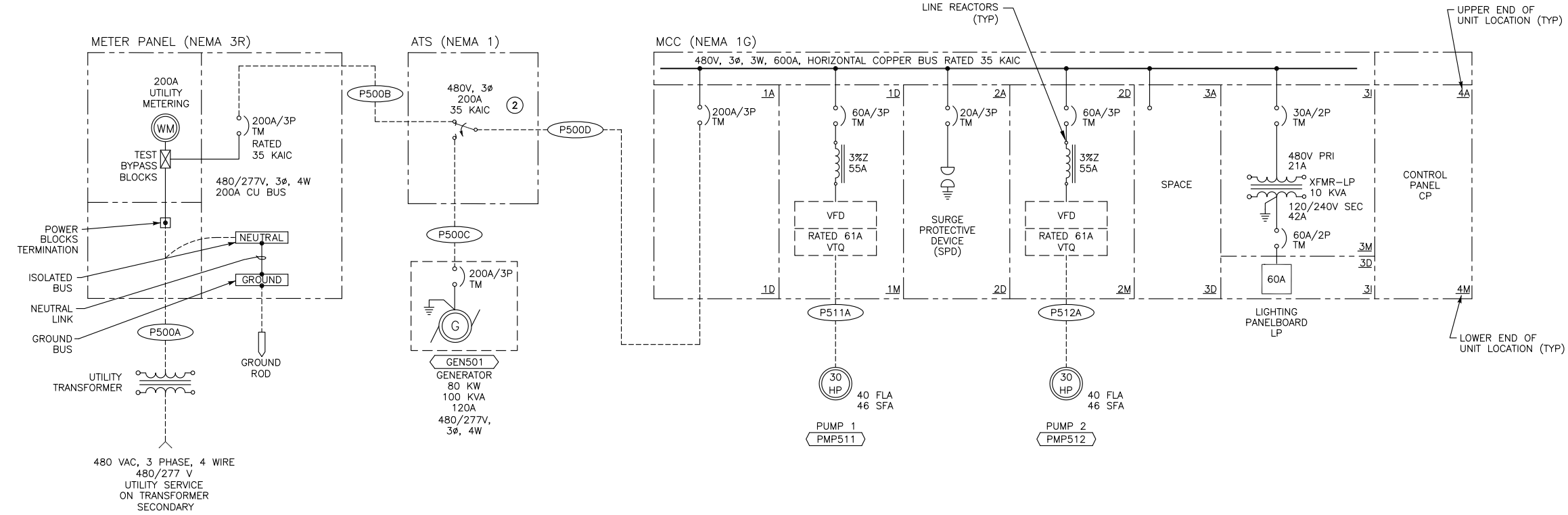
ALDERPOINT PS LOAD CALCULATIONS	UTILITY SERVICE						GENERATOR SERVICE		
HP DESCRIPTION	LOAD AMPS	QTY LOAD	LOAD VA	RUN AMPS	QTY RUN	RUN VA	QTY RUN	RUN VA	
30 PUMP	40.0	2	66,511	80.0	2	66,511	2	66,511	
PANEL LP	10.0		8,307	10.0		8,307		8,307	
SUBTOTAL	90.0		74,818	90.0		74,818		74,818	
DIVERSITY FACTOR	100 %						GEN SIZE		
30 HP Largest motor @ 25% additional							40.0	0.25	8,314
TOTAL							83,132		
/ 480 V, 3 Phase, 4 Wire, Service Amps =							AMPS= 90.0		
Service Size = 125.0 Amps							KVA= 74.8		
Main Breaker Size = 200.0 Amps							%GEN LOAD= 74.8%		
% Main Breaker Load = 62.5%									

DWG REF: E501 MOUNTING: FLUSH VOLTS: 120 / 240 BUS AMPS: 100A ENTRY: BOTTOM
 NAMEPLATE: LP PHASE: 1 MAIN BKR: N/A NEMA: 1
 LOCATION: MCC WIRE: 3 KAIC RATING: 10 SPD: NO

BKR NO.	LOAD DESCRIPTION	LOAD VA	LINE AMPS	BKR AMP/POLE	BKR NO.	PHASE	BKR NO.	AMP/POLE	LINE AMPS	LOAD VA	DESCRIPTION	BKR NO.
1	CP UPS	750	6	20/1	1	A	2	20/1	3	300	CP AUX	2
3	LIGHTS-INDOOR	300	3	20/1	3	B	4	20/1	2	200	LIGHTS-OUTDOOR	4
5	RECEPT-INDOOR	720	6	20/1	5	A	6	20/1	3	360	RECEPT-OUTDOOR	6
7	GENERATOR CHARGER	500	4	20/1(L)	7	B	8	20/1	8	1,000	EXHAUST FAN	8
9	GENERATOR HTR	1,000	8	20/1(L)	9	A	10	20/1(G)	0	0	SPARE	10
11	SPARE	0	0	20/1	11	B	12	20/1	1	100	MOV521	12
13	HVAC UNIT	2,000	17	30/2	13	A	14	20/2	0	0	SPARE	14
15		2,000	17	(L)	15	B	16	(L)	0	0		16
17	SPACE		0		17	A	18				SPACE	18

PHASE	A	B	PHASE	A	B
LEFT SIDE AMPS	37	23	RIGHT SIDE AMPS	6	11
LEFT SIDE KVA	4.47	2.80	RIGHT SIDE KVA	0.66	1.30
TOTAL KVA	9.23		LEFT SIDE KVA	4.47	2.80
TOTAL AMPS @ 240V, 1P	38.5		TOTAL PHASE KVA	5.13	4.10
DIVERSITY FACTOR	0.90		TOTAL PHASE AMPS	43	34
LOAD KVA	8.31		% OF AVERAGE	111	89

- NOTES: 1. MEANS OF WIRE COLOR CODING SHALL BE POSTED ON PANELBOARD PER NEC 210.5
 2. (G) INDICATES GFI BREAKER REQUIRED WITH 30 MA SENSITIVITY
 3. (H) INDICATES HACR RATED BREAKER.
 4. (L) PROVIDE PADLOCKING PROVISION IN ORDER TO LOCK BREAKER IN THE OFF POSITION.



ALDERPUMP STATION ONE LINE DIAGRAM ①

- NOTE: ① ALL LUGS SHALL BE COPPER. SIZE FOR WIRES LISTED IN "CONDUIT & WIRE SCHEDULE".
 ② ATS SHALL BE OPEN TRANSITION TYPE.

SAVED: 3/27/2024 3:45 PM ATEEM, PLOTTED: 4/19/2024 3:31 PM ZAK KHAN VOGLER
 Z:\ACADDWG\2022\2206B\DWG\2206BE501.dwg



4/19/2024

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SFH-ENGR.COM
 707-441-8855

BY

REVISION

DATE

NO.

DSGN SMK
 DR ZKV
 CHK XML
 APVD

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
 ALDERPOINT PUMP STATION
 ONE LINE DIAGRAM

SHEET E501

SEQ

DATE 4/2024

PROJ. NO. 022067

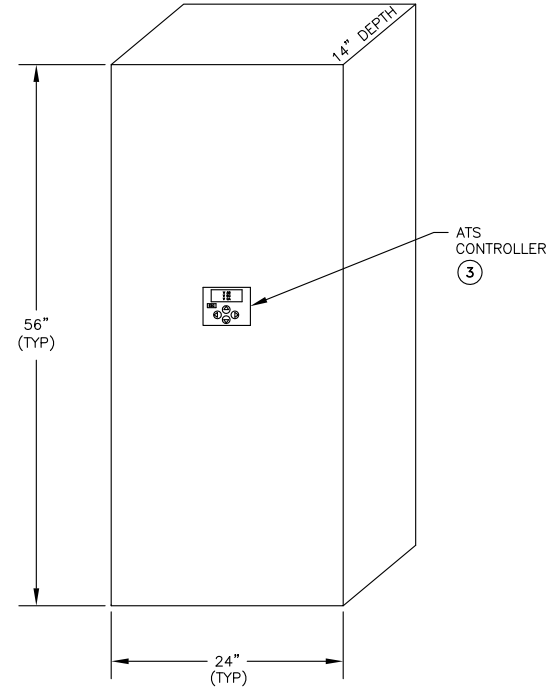
SAVED: 1/10/2024 3:33 PM ATEEM, PLOTTED: 4/19/2024 3:31 PM ZAK KWAN VOGLEP
 Z:\ACADDWG\2022\220661\DWG\22066E502.dwg



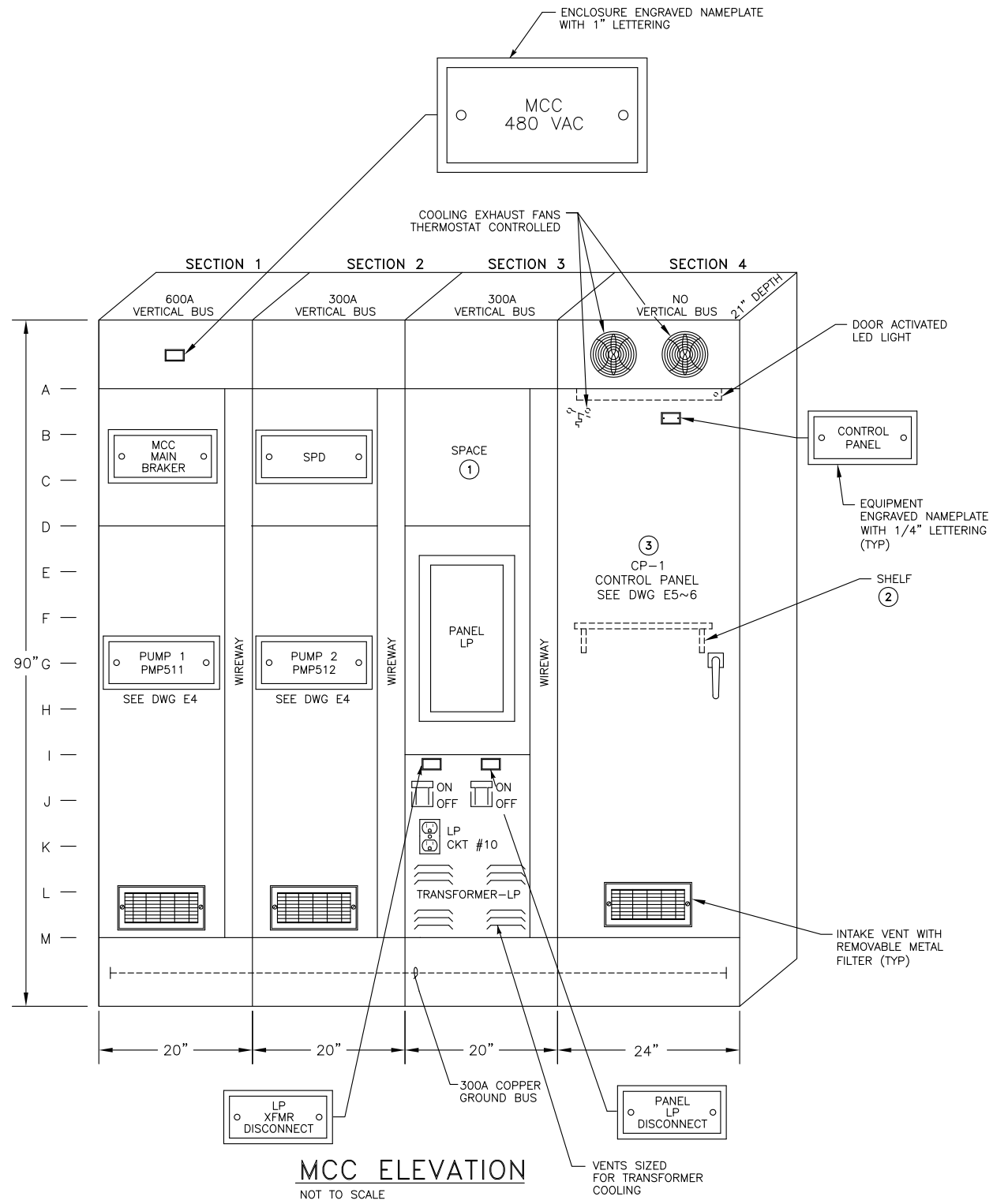
(916) 457-8144
 © SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



4/19/2024



ATS ELEVATION
 NOT TO SCALE



MCC ELEVATION
 NOT TO SCALE

- NOTES:
- ① EACH SPACE LOCATION TO HAVE DRAW OUT BUCKET WITH BLANK DOOR.
 - ② FOLD DOWN SHELF 18" X 18" MOUNTED INSIDE DOOR, HOFFMAN AASHLF1818 OR APPROVED EQUAL.
 - ③ TOP OF PILOT DEVICES - OPERATOR INTERFACE TO BE NO MORE THAN 66" ABOVE FINISHED FLOOR.

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855



NO.	DATE	REVISION	BY

DSGN: SMK
 DR: ZKV
 CHK: XML
 APVD:
 GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
 ALDERPOINT PUMP STATION
 ATS & MCC ELEVATION

SHEET: E502
 SEQ:
 DATE: 4/2024
 PROJ. NO.: 022067

SAVED: 3/28/2024 12:20 PM ATEEM, PLOTTED: 4/19/2024 3:31 PM ZAK KWAN VOGLER
 Z:\ACADDWG\2022\22067\DWG\22067E510A.dwg



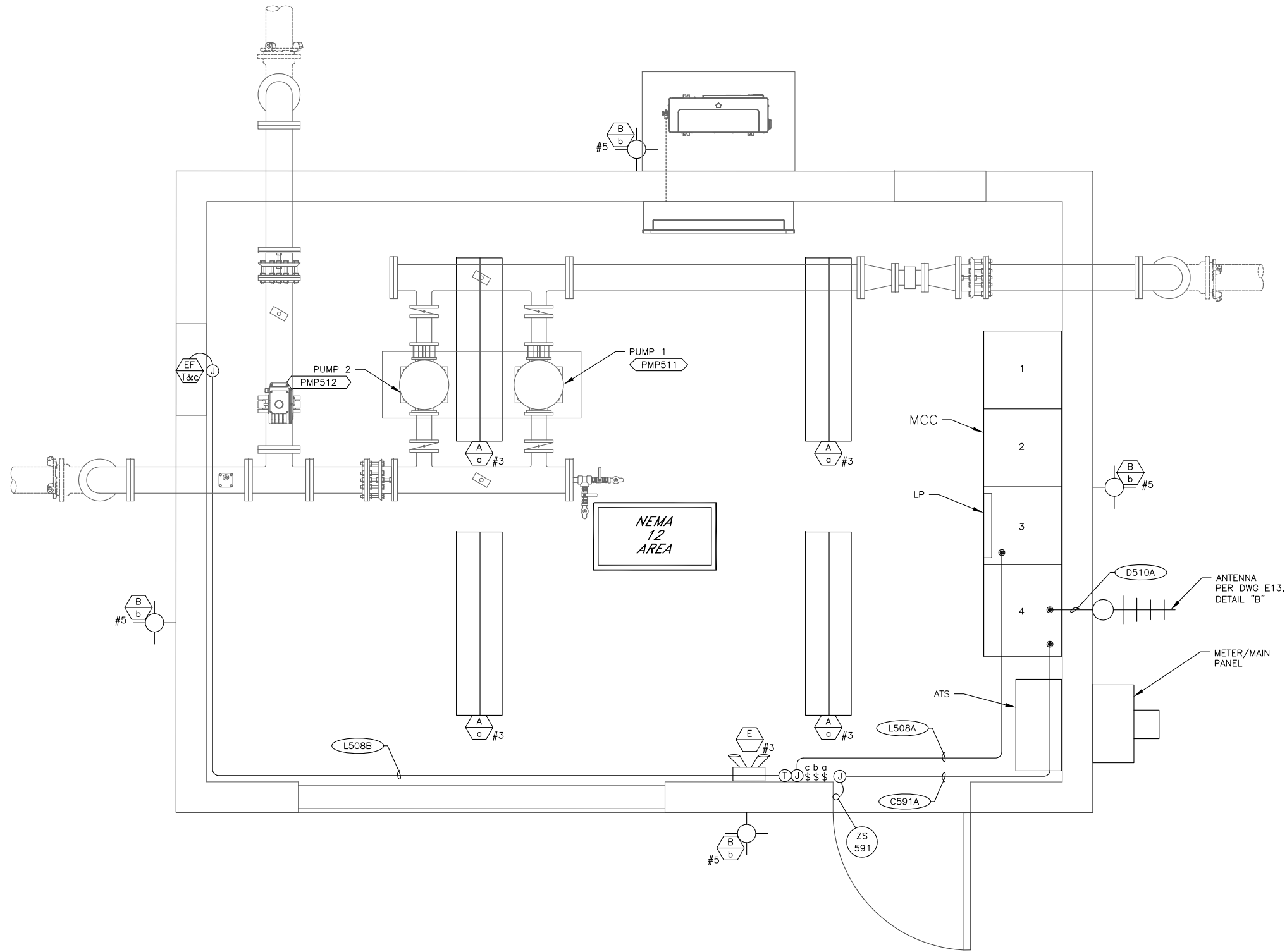
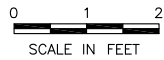
(916) 457-8144
 © SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



4/19/2024

NEMA
4X
AREA

OUTSIDE BUILDING



ALDERPOINT PUMP STATION BLDG ELECTRICAL REFLECTIVE PLAN ①②
 SCALE: 3/4" = 1'

NOTES: ① SEE DWG E9 FOR CONDUIT & WIRE INSTALLATION REQUIREMENTS & LIGHTING FIXTURES SCHEDULE. CIRCUITS SHOWN ARE FED FROM PANEL LP.

② EXPOSED CONDUITS PER DWG E11, DETAIL "A".

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855



NO.	DATE	REVISION	BY

DSGN	SMK
DR	ZKV
CHK	XML
APVD	

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
 ALDERPOINT PUMP STATION BLDG
 ELECTRICAL REFLECTIVE PLAN

SHEET	E510A
SEQ	
DATE	4/2024
PROJ. NO.	022067

SAVED: 3/28/2024 12:22 PM ATEEM, PLOTTED: 4/19/2024 3:31 PM ZAK KWAN VOGLER
 Z:\ACADDWG\2022\22067\DWG\22067E510B.dwg



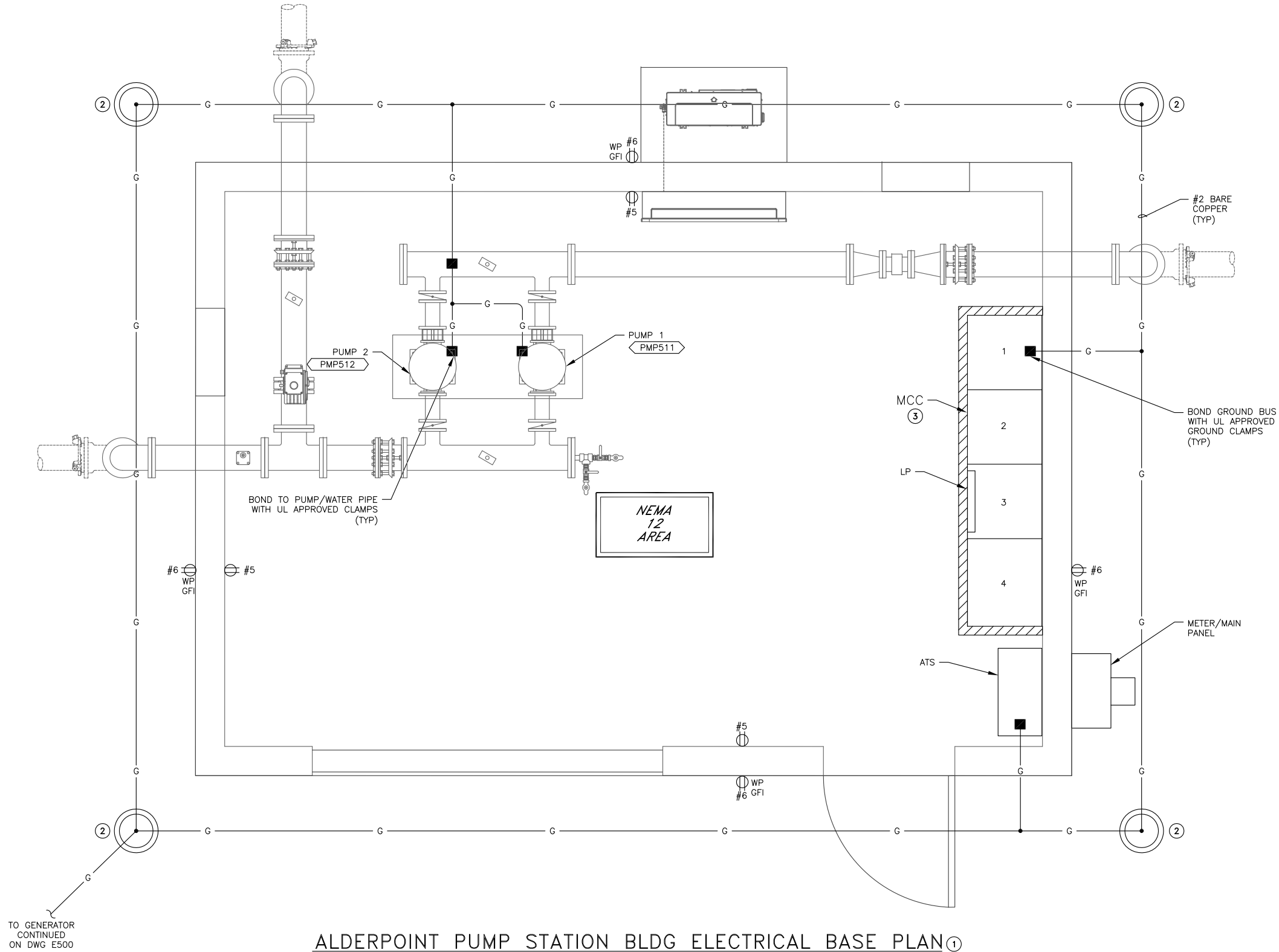
(916) 457-8144
 © SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



4/19/2024

NEMA
4X
AREA

OUTSIDE BUILDING
 0 1 2
 SCALE IN FEET



ALDERPOINT PUMP STATION BLDG ELECTRICAL BASE PLAN ①
 SCALE: 3/4" = 1'

- NOTES:
- ① SEE DWG E9 FOR CONDUIT & WIRE INSTALLATION REQUIREMENTS. CIRCUITS SHOWN ARE FED FROM PANEL LP.
 - ② GROUND RING TO CONSIST OF #2 BARE COPPER WITH MINIMUM 30" COVER. INSTALL GROUND ROD HANDHOLE PER DWG E11, DETAIL "E".
 - ③ HOUSEKEEPING CONCRETE PAD PER DWG E12, DETAIL "B".

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855



NO.		DATE	REVISION	BY
DSGN	SMK			
DR	ZKV			
CHK	XML			
APVD				

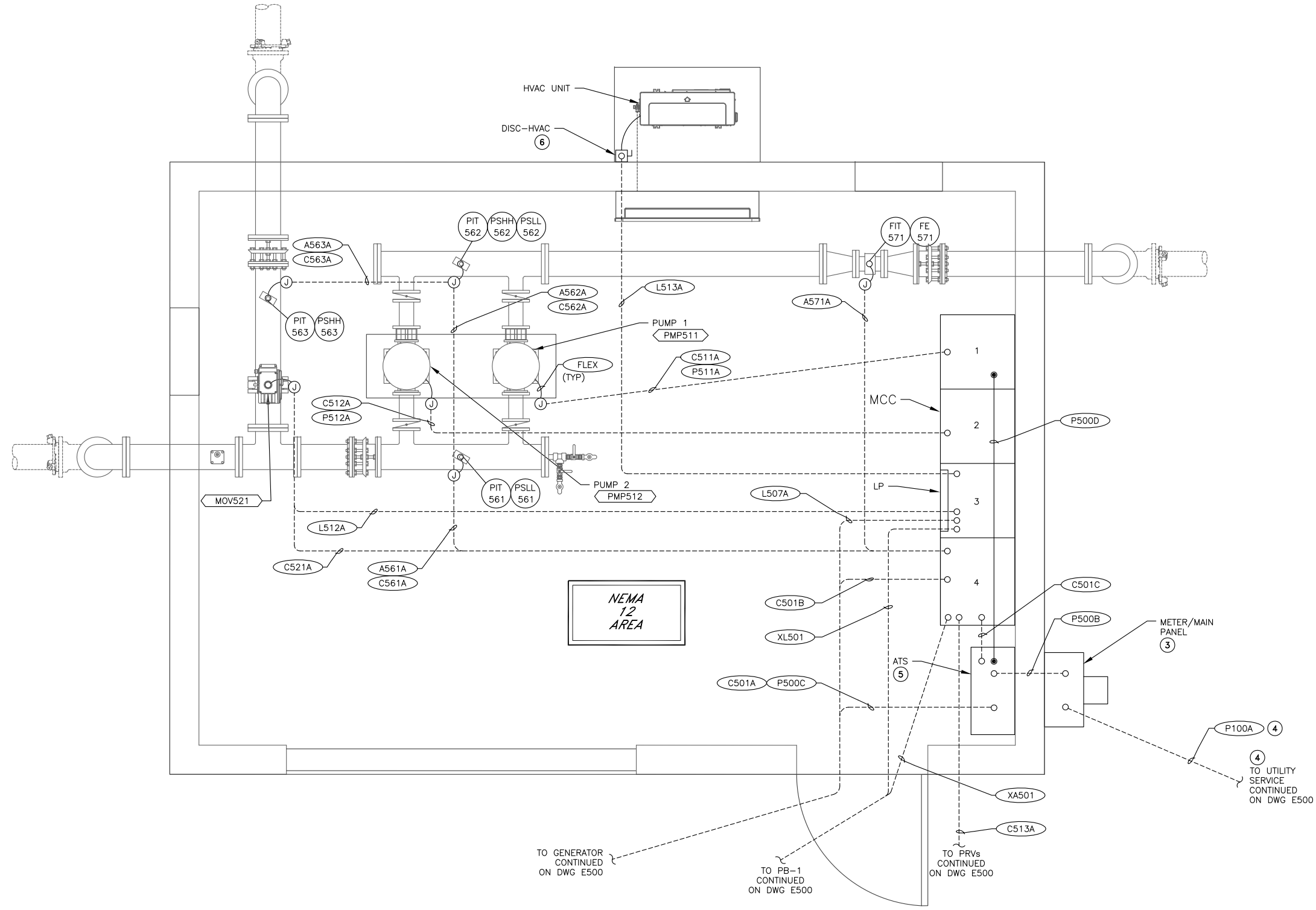
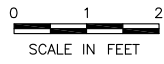
CARBERVILLE SANITARY DISTRICT
 CARBERVILLE TANK REPLACEMENT PROJECT
 CARBERVILLE, CALIFORNIA
 ALDERPOINT PUMP STATION BLDG
 ELECTRICAL BASE PLAN

SHEET
 E510B
 SEQ
 DATE 4/2024
 PROJ. NO.
 022067



NEMA
4X
AREA

OUTSIDE BUILDING



ALDERPOINT PUMP STATION BLDG ELECTRICAL POWER PLAN ①②

SCALE: 3/4" = 1'

- NOTES:
- ① UG CONDUITS PER DWG E11, DETAIL "B".
 - ② EXPOSED CONDUITS TRANSITIONS PER DWG E11, DETAIL "G".
 - ③ METER/MAIN PANEL PER DWG E12, DETAIL "A".
 - ④ UTILITY CONDUITS, POLE RISER, PULL BOX AND GROUNDING SYSTEM TO BE PROVIDED AND INSTALLED BY CONTRACTOR PER UTILITY ENGINEER DRAWINGS.
 - ⑤ ATS INSTALLATION PER DWG E13, DETAIL "E".
 - ⑥ INSTALL 30A NEMA 3R FUSED DISCONNECT SWITCH AND FUSES SIZED TO PROTECT EQUIPMENT PER DWG E13, DETAIL "E".

SAVED: 3/28/2024 12:42 PM ATEEM, PLOTTED: 4/19/2024 3:31 PM ZAK KWAN VOGLER
Z:\ACADDWG\2022\22066\DWG\22066E510C.dwg



© SEPTEMBER 2023
ATEEM ENGINEERING
ALL RIGHTS RESERVED
4/19/2024

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
EUREKA, CA. 95501
WWW.SHN-ENGR.COM
707-441-8855



NO.	DATE	REVISION	BY

DSGN SMK
DR ZKV
CHK XML
APVD

GARBERVILLE SANITARY DISTRICT
GARBERVILLE TANK REPLACEMENT PROJECT
GARBERVILLE, CALIFORNIA
ALDERPOINT PUMP STATION BLDG
ELECTRICAL POWER PLAN

SHEET
E510C
SEQ
DATE 4/2024
PROJ. NO.
022067

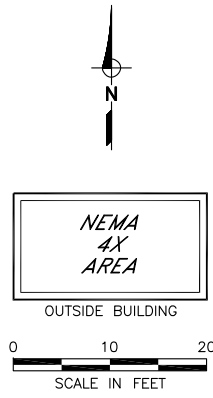
FILED: 3/27/2024 4:05 PM ATEEM, PLOTTED: 4/19/2024 3:32 PM ZAK KWAN VOGLER
 Z:\ACADDWG\2022\220661\DWG\22066E700.dwg



© SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



4/19/2024



TOBIN WELL GENERATOR ELECTRICAL SITE PLAN ①

CONDUIT & WIRE ROUTING SCHEDULE													
REF	CONDUIT	FROM	TO	QTY	SIZE	TYPE	PWR	GND	CONTROL	SIGNAL	NOTES		
DWG	NO.						QTY	SIZE	QTY	SIZE	QTY	SIZE	
E700	P 700 B	METER/MAIN PANEL	MTS	1	2"	GRS	4 #1	#6	-	-	-	-	
E700	P 700 C	MTS	GENERATOR	1	2"	PVC-40	4 #1	#6	-	-	-	-	
E700	P 700 D	MTS	PUMP CP	1	2"	GRS	4 #1	#6	-	-	-	-	
E700	XC 701	MTS	GENERATOR	2	1"	PVC-40	-	-	-	-	-	-	PULL ROPE

- NOTES:
- COORDINATE WITH OWNER TO INSTALL ALL CONDUITS TO EXISTING ELECTRICAL PANELS. EXPOSED CONDUITS PER DWG E11, DETAIL "A", UG CONDUITS PER DETAIL "B".
 - STUB OUT CONDUITS PER GENERATOR MANUFACTURER'S REQUIREMENTS.
 - PROVIDE ENGRAVED RED NAMEPLATE WITH 1" WHITE LETTERS TO MEET NEC 702.7(c).

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855



NO.	DATE	REVISION	BY

DSGN	SMK
DR	ZKV
CHK	XML
APVD	

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
 TOBIN WELL GENERATOR
 ELECTRICAL SITE PLAN

SHEET
 E700
 SEQ
 DATE 4/2024
 PROJ. NO.
 022067

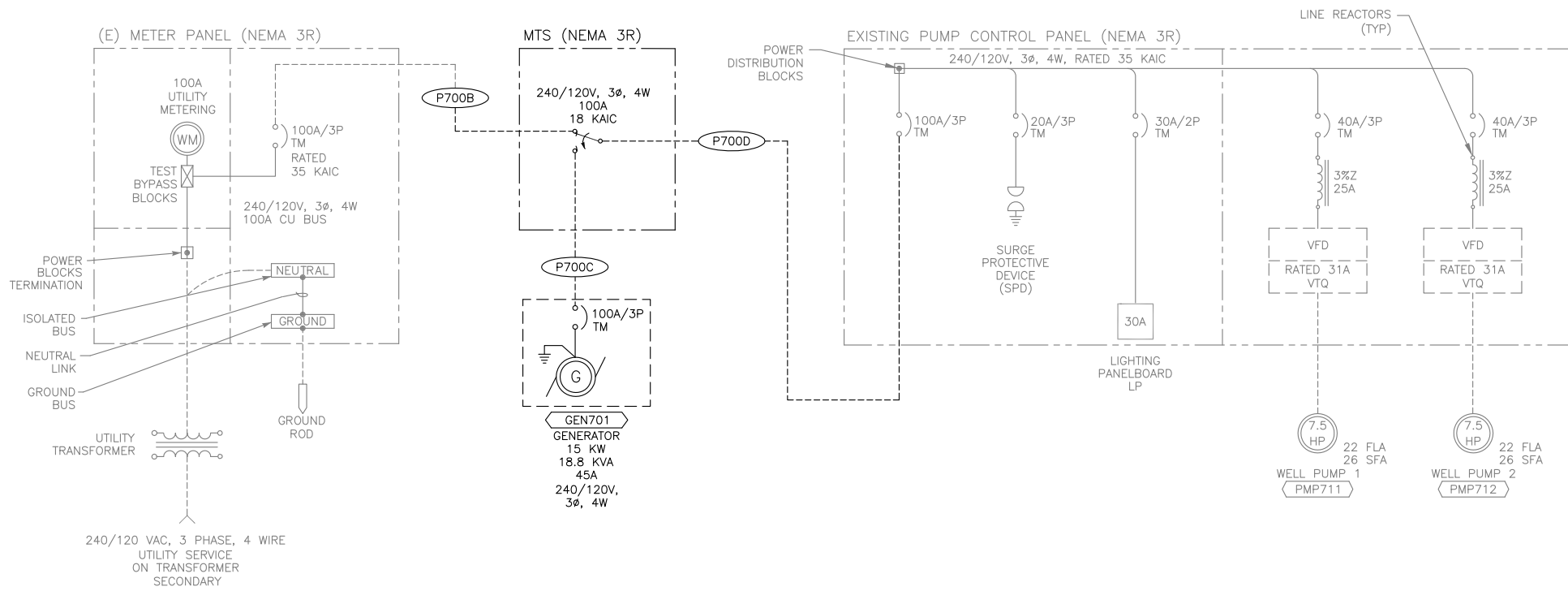
SAVED: 1/11/2024 4:00 PM ATEEM, PLOTTED: 4/19/2024 3:32 PM ZAK KWAN VOGLER
 Z:\ACADDWG\2022\22066\DWG\22066E701.dwg



© SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



4/19/2024



TOBIN WELL ONE LINE DIAGRAM ①

NOTE: ① ALL LUGS SHALL BE COPPER. SIZE FOR WIRES LISTED IN "CONDUIT & WIRE SCHEDULE".

TOBIN WELL LOAD CALCULATIONS	UTILITY SERVICE						GENERATOR SERVICE	
	LOAD AMPS	QTY LOAD	LOAD VA	RUN AMPS	QTY RUN	RUN VA	QTY RUN	RUN VA
7.5 PUMP	22.0	2	18,290	22.0	1	9,145	1	9,145
LP	14.7		6,102	14.7		6,102		6,102
SUBTOTAL	58.7		24,392	36.7		15,247		15,247
DIVERSITY FACTOR	63 %							
7.5 HP Largest motor @ 25% additional							2.286	GEN SIZE 15 KW 19 KVA 45 AMPS
TOTAL							17,534	
/ 240 V, 3 Phase, 4 Wire, Service Amps =							42.2 Amps	AMPS= 36.7
Service Size =							1.25 Multiplier	KVA= 15.2
Main Breaker Size =							52.7 Amps	%GEN LOAD= 81.3%
% Main Breaker Load =							100.0 Amps	
							52.7%	

VERIFY SCALES
 BAR IS ONE INCH ON
 ORIGINAL DRAWING
 1" = 1'
 IF NOT ONE INCH ON
 THIS SHEET, ADJUST
 SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855



NO.	DATE	REVISION	BY

DSGN	SMK
DR	ZKV
CHK	XML
APVD	

GARBerville SANITARY DISTRICT
 GARBerville TANK REPLACEMENT PROJECT
 GARBerville, CALIFORNIA
 TOBIN WELL
 ONE LINE DIAGRAM

SHEET	E701
SEQ	
DATE	4/2024
PROJ. NO.	022067

SAVED: 9/18/2023 1:31 PM ATEEM, PLOTTED: 4/19/2024 3:32 PM ZAK KWAN VOGLEF
 Z:\ACADDWG\2022\220661\DWG\220661001.dwg



(916) 457-8144

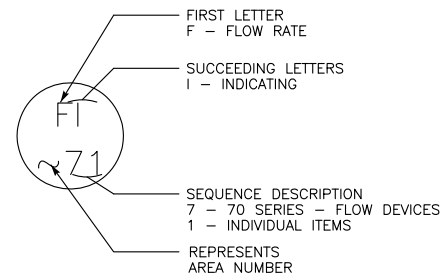
© SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



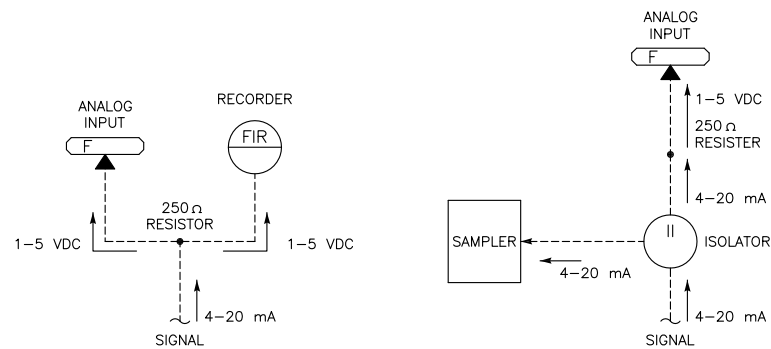
4/19/2024

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
P & I DIAGRAM SYMBOLS		P & I DIAGRAM SYMBOLS	
	FIELD MOUNTED INSTRUMENT		VALVE (GENERAL)
	FACE MOUNTED INSTRUMENT ON LOCAL PANEL, OPERATOR ACCESSIBLE		GATE (GENERAL)
	FACE MOUNTED INSTRUMENT ON FIELD PANEL, OPERATOR ACCESSIBLE		CHECK VALVE (GENERAL)
	INSTRUMENT MOUNTED IN LOCAL PANEL, OPERATOR INACCESSIBLE		PUMP (GENERAL)
	INSTRUMENT MOUNTED IN FIELD PANEL, OPERATOR INACCESSIBLE		
	OPERATION PERFORMED WITH LOGIC OR HARDWIRED DEVICES		VALVE/GATE NUMBER
	DWG # - REFERENCE ELEMENTARY DWG. #		EQUIPMENT NUMBER
	PLC OR COMPUTER FUNCTION PERFORMING OPERATION WITH VISUAL INDICATION		ELECTRIC SIGNAL
	PLC OR COMPUTER FUNCTION PERFORMING OPERATION WITH VISUAL ALARM INDICATION		LOGIC OR DATA SIGNAL
	PLC OR COMPUTER PERFORMING INTERNAL OPERATION		PNEUMATIC SIGNAL
	PLC OR COMPUTER PERFORMING INTERNAL ALARM OPERATION		CAPILLARY TUBING (FILLED SYSTEM)
	PROPORTIONAL, INTEGRAL, AND DIFFERENTIAL PARAMETERS		HYDRAULIC SIGNAL
	RATIO AND BIAS PARAMETERS		SONIC OR ELECTROMAGNETIC SIGNAL
	AUDIBLE ALARM (BUZZER OR HORN)		ELECTRIC SUPPLY
	ANNUNCIATOR WINDOW R - ROW # C - COLUMN #		SERVICE AIR
	LAMP INDICATION (STATUS OR ALARM)		INSTRUMENT AIR
	DISCONNECT SWITCH		
	DISCRETE INPUT		
	DISCRETE OUTPUT		
	ANALOG INPUT		
	ANALOG OUTPUT		
	JUMP TAG FROM ONE AREA TO ANOTHER AREA OF DRAWING		
	"a" TAG CONNECT POINT ON EACH DRAWING		
	CONTINUED ON DWG P-X		
	AUTODIALER PRIORITY # PC BASED SOFTWARE		

INSTRUMENT IDENTIFICATION LETTERS				
FIRST - LETTER	SUCCEEDING - LETTER			
MEASURED OF INITIATING VARIABLE	MODIFIER	READOUT PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A ANALYSIS		ALARM		
B BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C CONDUCTIVITY			CONTROLLER	
D DENSITY	DIFFERENTIAL			
E VOLTAGE		SENSOR, PRIMARY ELEMENT		
F FLOW RATE	RATIO (FRACTION)			
G GENERAL		GLASS VIEWING DEVICE		
H HAND				HIGH, OPENED
I CURRENT (ELEC.)		INDICATING, INDICATOR		
J POWER	SCAN			
K TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L LEVEL		LIGHT		LOW, CLOSED
M MOISTURE	MOMENTARY			MIDDLE
N STATUS		STATUS	USER'S CHOICE	USER'S CHOICE
O OPERATOR		ORIFICE, RESTRICTION		
P PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q QUANTITY	INTERGRATE, TOTALIZE			
R RESET		RECORD		
S SPEED, FREQUENCY	SAFETY		SWITCH	
T TEMPERATURE			TRANSMITTER	TEST
U MULTIVARIABLE		MULTIFUNCTION		MULTIFUNCTION
V VIBRATION, MECH. ANALYSIS			VALVE, DAMPER LOUVER	
W WEIGHT, FORCE		WELL		
X SWITCH	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTER, CONVERTOR	
Z POSITION DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	



P&ID INSTRUMENT IDENTIFICATION EXAMPLE



TYPICAL SIGNAL FLOWS

NUMBERING SEQUENCE	
SEQUENCE NUMBER	DESCRIPTION
00	COMMON ALARM
01-09	INDIVIDUAL ITEMS
10	MECHANICAL
20	MECHANICAL
30	MECHANICAL
40	MECHANICAL
50	LEVEL DEVICES
60	PRESSURE DEVICES
70	FLOW DEVICES
80	ANALYTICAL DEVICES
90	SAFETY & SECURITY DEVICES

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855

BY _____
 REVISION _____
 DATE _____
 NO. _____

DSGN	SMK	DR	ZKV	CHK	XML	APVD

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA

INSTRUMENTATION SYMBOLS & ABBREVIATIONS

SHEET 11
 SEQ _____
 DATE 4/2024
 PROJ. NO. 022067

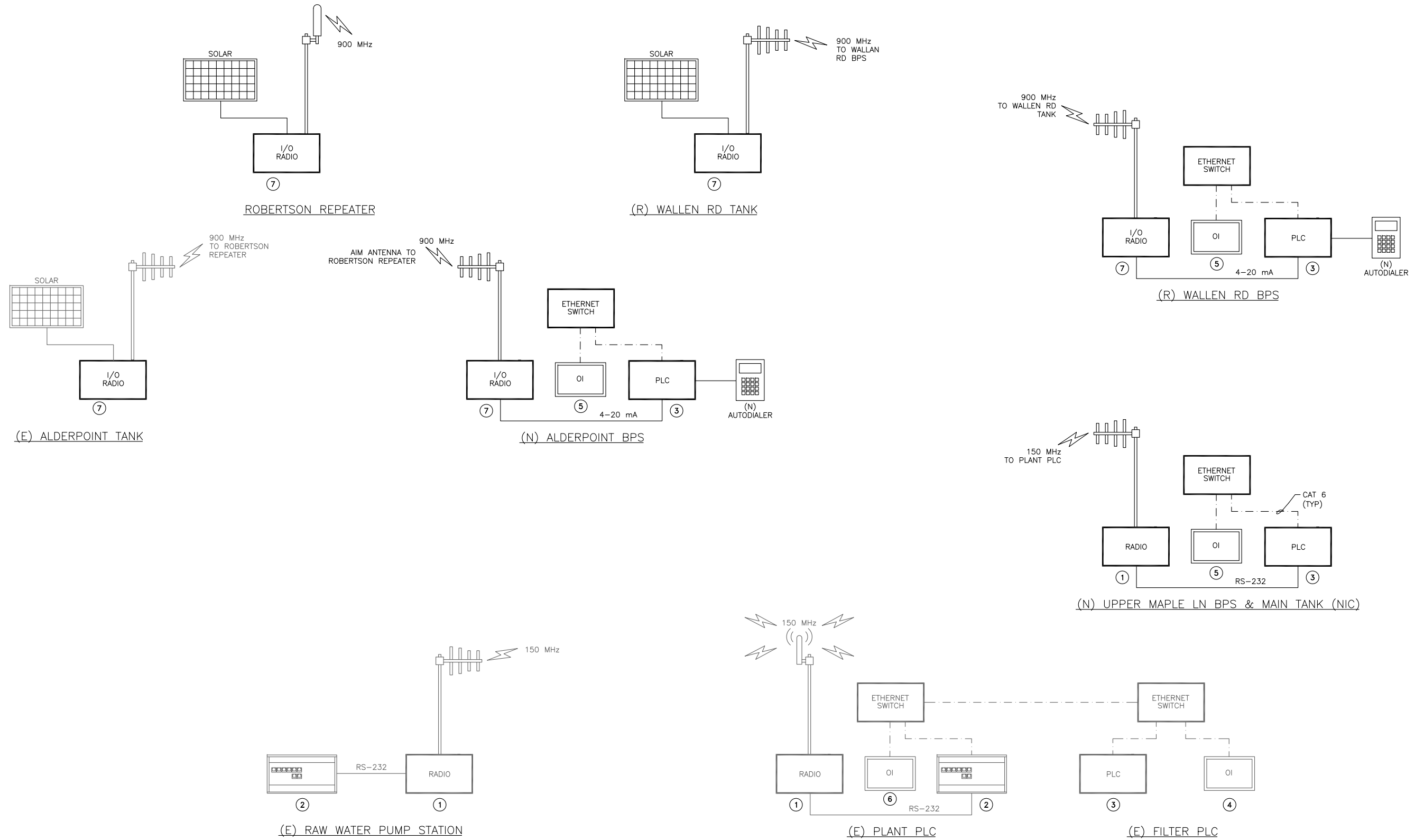
SAVED: 3/29/2024 3:00 PM ATEEM, PLOTTED: 4/19/2024 3:32 PM ZAK KWAN VOGLER
 Z:\ACADDWG\2022\22066\DWG\22066B002.dwg



(916) 457-8144
 © SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



4/19/2024



SCADA BLOCK DIAGRAM

- NOTES:
- ① RAVEON RADIO.
 - ② ICL SHASTA PROGRAMMABLE SCADA CONTROLLERS.
 - ③ ALLEN-BRADLEY MICROLOGIX SERIES PLC SYSTEM.
 - ④ C-MORE HMI.
 - ⑤ EZ AUTOMATION HMI.
 - ⑥ MAPLE SYSTEMS HMI.
 - ⑦ BANNER PM2 SERIES IO RADIO.

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855



BY	REVISION	DATE	NO.

DSGN SMK
 DR ZKV
 CHK XML
 APVD

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA

SCADA BLOCK DIAGRAM

SHEET	12
SEQ	
DATE	4/2024
PROJ. NO.	022067

SAVED: 2/14/2024 12:25 PM ATEEM, PLOTTED: 4/19/2024 3:32 PM ZAK KWAN VOGLER
 Z:\ACADDWG\2022\220661\DWG\220661301.dwg

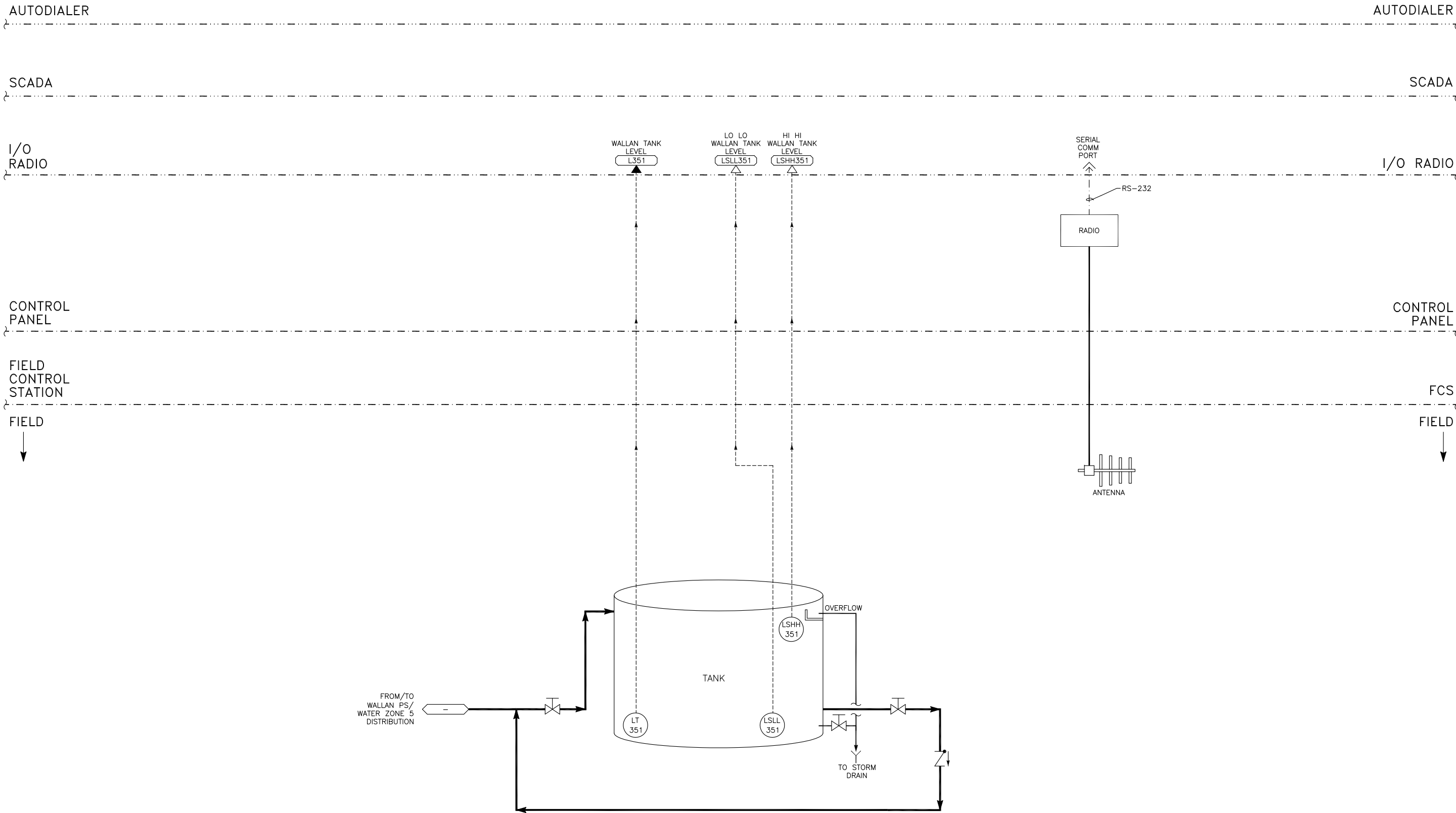


(916) 457-8144

© SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



4/19/2024



WALLAN TANK

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855

NO.	DATE	REVISION	BY

DSGN	SMK	DR	ZKV	CHK	XML	APVD

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA
 WALLAN TANK P&ID

SHEET 1301
 SEQ
 DATE 4/2024
 PROJ. NO. 022067

SAVED: 3/28/2024 11:08 AM ATEEM, PLOTTED: 4/19/2024 3:32 PM ZAK KIMAN VOGLER
 Z:\ACADDWG\2022\22067\DWG\22067P401.dwg

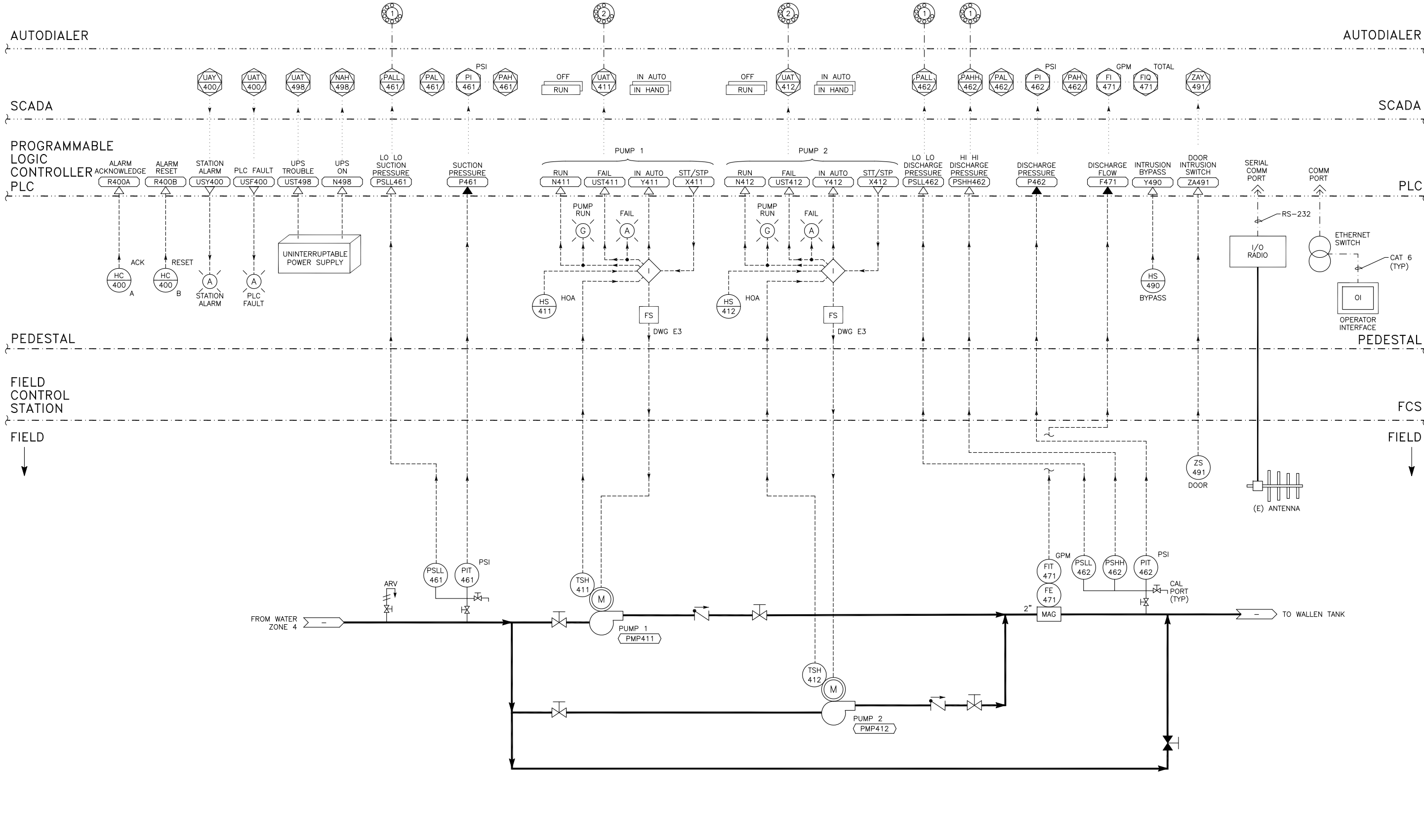


(916) 457-8144



4/19/2024

© SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



WALLAN PUMP STATION

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855

NO.	DATE	REVISION	BY

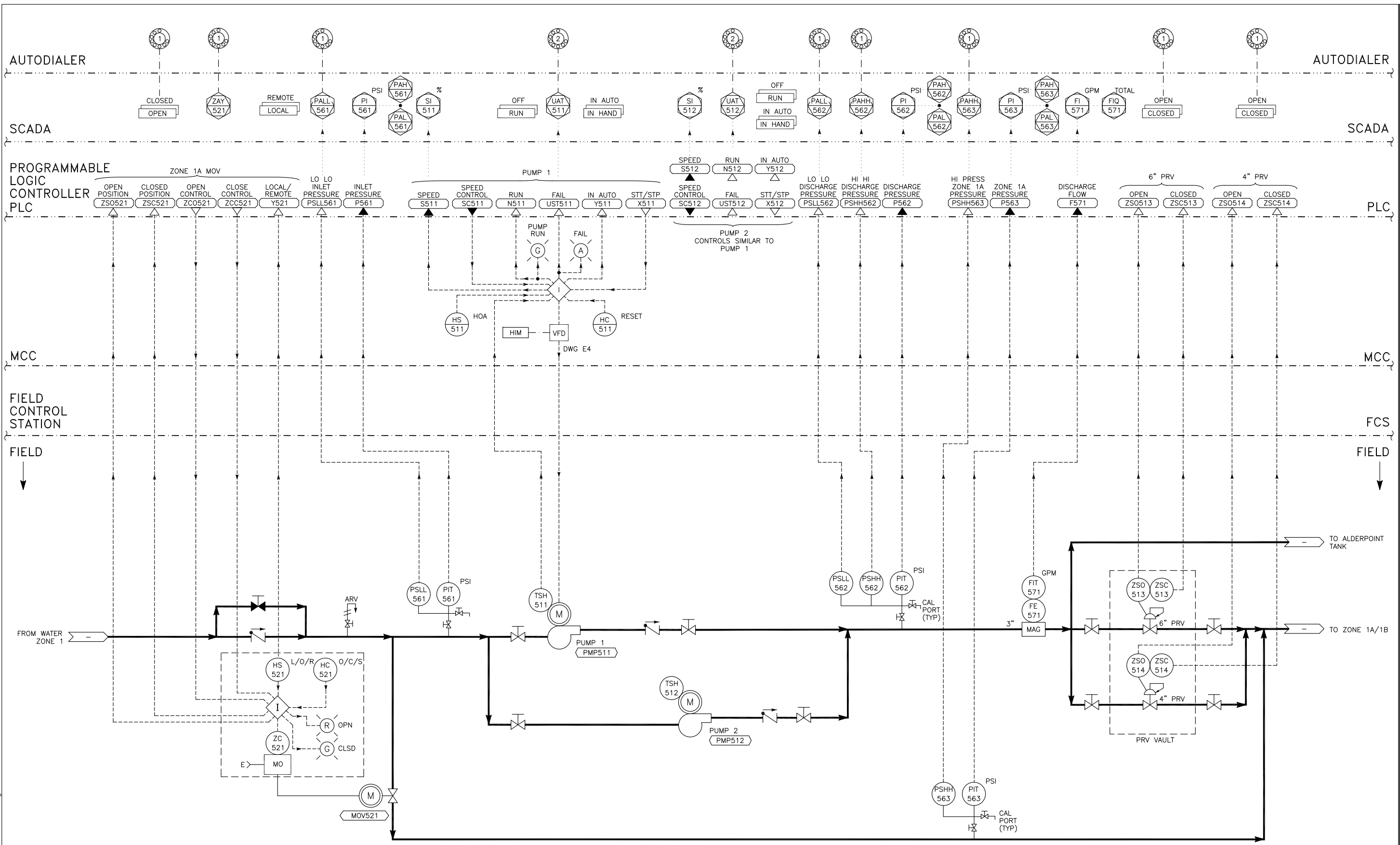
DSGN	SMK	DR	ZKV	CHK	XML	APVD

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA

WALLAN PUMP STATION P&ID

SHEET 1401
 SEQ
 DATE 4/2024
 PROJ. NO. 022067

SAVED: 2/19/2024 2:55 PM ATEEM, PLOTTED: 4/19/2024 3:32 PM ZAK KIMAN VOGLER
 Z:\ACADDWG\2022\220661\DWG\220661501.dwg



ALDERPOINT PUMP STATION



VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855

NO.	DATE	REVISION	BY

DSGN	SMK	ZKV	XML

DR	CHK	APVD

GARBERVILLE SANITARY DISTRICT
 GARBERVILLE TANK REPLACEMENT PROJECT
 GARBERVILLE, CALIFORNIA

ALDERPOINT PUMP STATION P&ID

SHEET 1501
 SEQ
 DATE 4/2024
 PROJ. NO. 022067

AUTODIALER

AUTODIALER

SCADA

SCADA

PROGRAMMABLE LOGIC CONTROLLER PLC

PLC

MCC

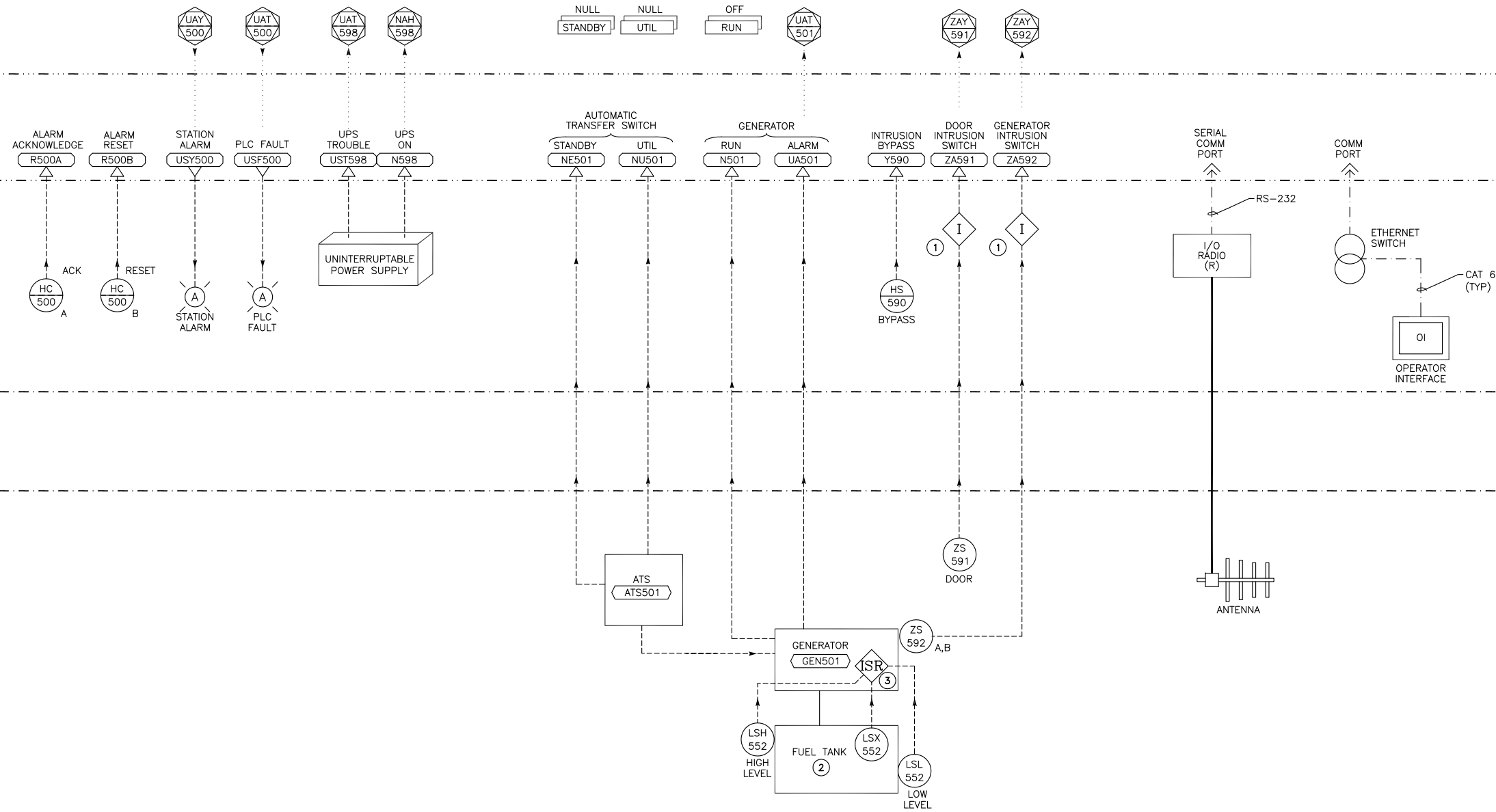
MCC

FIELD CONTROL STATION

FCS

FIELD

FIELD



ALDERPOINT PS AUXILIARY SYSTEMS

- NOTES:
- ① WIRE SWITCHES IN SERIES ON TERMINAL BLOCKS.
 - ② DOUBLE WALLED SUB-BASE FUEL TANK WITH HIGH & LOW LEVEL SWITCHES AND LEAK DETECTION.
 - ③ ISR => INTRINSIC SAFE RELAY.

VERIFY SCALES
 BAR IS ONE INCH ON ORIGINAL DRAWING
 0 1"
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

812 W. WABASH AVE.
 EUREKA, CA. 95501
 WWW.SHN-ENGR.COM
 707-441-8855



NO.	DATE	REVISION	BY

DSGN SMK
 DR ZKV
 CHK XML
 APVD
 CARBVILLE SANITARY DISTRICT
 CARBVILLE TANK REPLACEMENT PROJECT
 CARBVILLE, CALIFORNIA
 ALDERPOINT PS
 AUXILIARY SYSTEMS P&ID

SHEET	1502
SEQ	
DATE	4/2024
PROJ. NO.	022067

SAVED: 3/27/2024 4:10 PM ATEEM, PLOTTED: 4/19/2024 3:32 PM ZAK KWAN VOGLEP
 Z:\ACADDWG\2022\22067\DWG\22067502.dwg



(916) 457-8144
 © SEPTEMBER 2023
 ATEEM ENGINEERING
 ALL RIGHTS RESERVED



4/19/2024