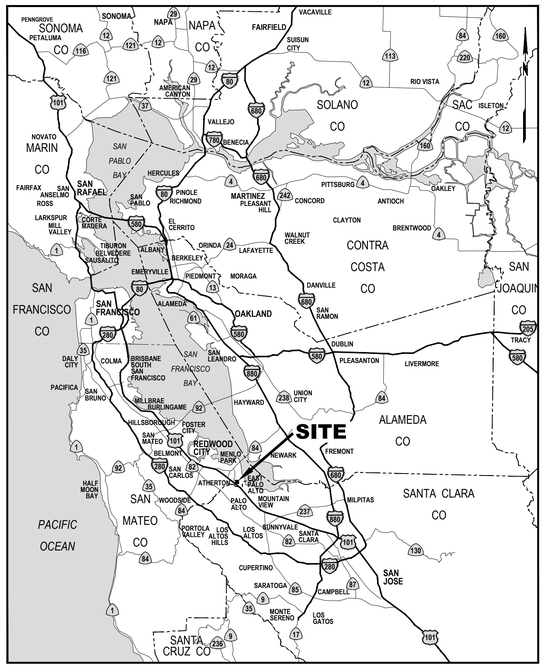
PAD D STANDBY WELL

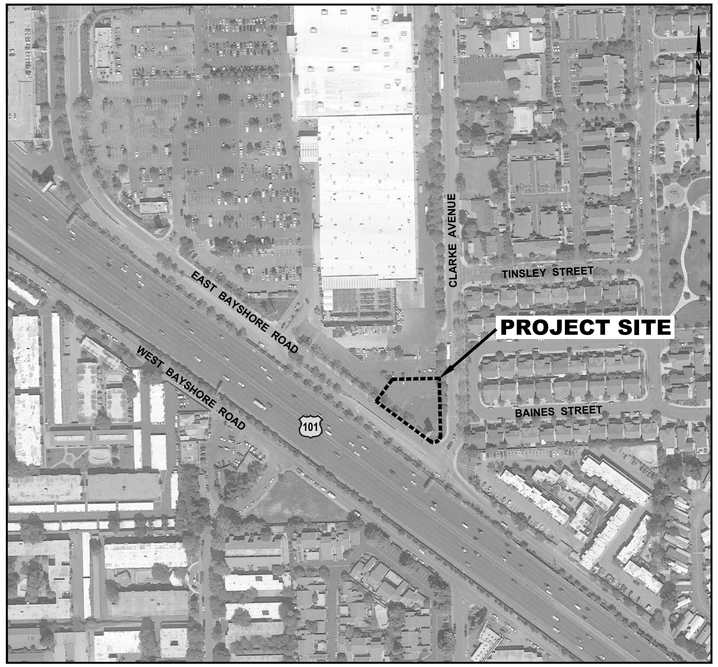
EAST BAYSHORE ROAD AND CLARKE AVENUE
EAST PALO ALTO, CALIFORNIA



REFERENCE: TRACED FROM THE THOMAS GUIDE BAY AREA METRO STREET GUIDE, 2007.

VICINITY MAP

50,000 0 50,000 100,000
(APPROXIMATE SCALE IN FEET)



REFERENCE: GOOGLE EARTH PRO, DATE OF IMAGERY 5 APRIL 2016.

PROJECT LOCATION MAP

200 0 200 400
(APPROXIMATE SCALE IN FEET)

LIST OF DRAWINGS

100% SUBMITTAL
NOT FOR CONSTRUCTION

KAMAL FALLAHA
PUBLIC WORKS DIRECTOR
CITY OF PALO ALTO

R.C.E. 50843
EXPIRES: 9/30/2021

REGISTERED PROFESSIONAL ENGINEER
NELSON J. SCHLATER
C 66547
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PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

TITLE SHEET, VICINITY MAP, PROJECT LOCATION MAP, AND LIST OF DRAWINGS

REV	DESCRIPTION	APPRD	DATE
A	100% SUBMITTAL	NJS	09-23-20
Δ	60% SUBMITTAL	NJS	06-18-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: CCR
DESIGNED: TFC
APPROVED: NJS
JOB NO.: B60019.01

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
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SHEET NUMBER
G-1
1 OF 26

G:\EKI_CONSTRUCTION DWGS\B60019.01\2029-06\G-1.dwg 6-02-20

ABBREVIATIONS

A	AMP
ABAN	ABANDON
AC	ASPHALTIC CONCRETE
ACI	AMERICAN CONCRETE INSTITUTE
ADDIT	ADDITIONAL
AGG	AGGREGATE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALUM	ALUMINIUM
APPROX	APPROXIMATE
ARV	AIR RELEASE VALVE
AS	AMMONIUM SULFATE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AVRV	AIR VACUUM RELIEF VALVE
AWS	AMERICAN WELDING SOCIETY
BM	MARK, BEAM
BOT	BOTTOM
BLKG	BLOCKING
BF	BLIND FLANGE
BW	BACKWASH
BWS	BACKWASH WATER SOLIDS
BWW	BACKWASH WASTE
CA	COMPRESSED AIR
CB	CATCH BASIN
CC	CALIBRATION COLUMN
C.C.	CENTER TO CENTER
CHEM	CHEMICAL
CFM	CUBIC FEET PER MINUTE
C/L, CL	CENTERLINE
CL	CHLORINE (SODIUM HYPOCHLORITE)
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
CONST(R)	CONSTRUCTION
CONT	CONTINUATION
CPLG	COUPLING
D	DRAIN
DCA	DIGESTER COVER AIR
DET	DETAIL
DFPT	DOUGLAS FIR PRESSURE TREATED
DI	DUCTILE IRON
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DIM	DIMENSION
DN	DOWN
DR	PROCESS DRAIN
DW	DECANT WATER
DWG	DRAWING
(E)	EXISTING
E	EAST
EA	EACH
EL(EV)	ELEVATION
ELEC	ELECTRICAL
EMH	ELECTRICAL MANHOLE
EP	EDGE OF PAVEMENT
EW	EACH WAY
EXP	EXPANSION
(F)	FUTURE
FCA	FLANGED COUPLING ADAPTER
FCV	FLOW CONTROL VALVE
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FH	FIRE HYDRANT
FIG	FIGURE
FIN	FINISH
FM	FLOW METER
FPM	FEET PER MINUTE
FT	FEET
FTW	FILTER TO WASTE
F2E	FOOD TO ENERGY
G	GAS
GA	GAGE
GAL	GALLON
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
GR	GRADE
GS	GALVANIZED STEEL
GV	GATE VALVE
GW	GROUNDWATER
GWBO	GROUNDWATER BLOWOFF
HB	HOSE BIB AND HOSE RACK
HF	HYDROFLUOSILICIC ACID
HHS	HETCH HETCHY SUPPLY
HORIZ	HORIZONTAL
HP	HORSE POWER
I.D.	INSIDE DIAMETER
I.E.	INVERT ELEVATION
INV	INVERT
IN.	INCHES
IN. WC	INCHES OF WATER COLUMN
IRR(IG)	IRRIGATION
JB	JUNCTION BOX
JT(S)	JOINT(S)
L	LENGTH
LD	DEVELOPMENT LENGTH
LEL	LOWER EXPLOSION LIMIT
(M)	MODIFIED
Mg/L	MILLIGRAM PER LITER
MAX	MAXIMUM
MB	MACHINE BOLT
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
Mn	SODIUM PERMANGANATE
N	NORTH
(N)	NEW
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO.	NUMBER
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OC	ON CENTER
O.D.	OUTSIDE DIAMETER
OF	OUTSIDE FACE, OVERFLOW
P	PIPE
PB	PULL BOX
PPM	PARTS PER MILLION
PCO	PRESSURE CLEANOUT
PL	PLATE
PRV	PRESSURE RELIEF VALVE
PSL	PRIMARY SLUDGE
PT	POINT
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PW	POTABLE WATER
QC	QUICK CONNECT
QTY	QUANTITY
R	RADIUS
R/W	RIGHT OF WAY
RC(P)	REINFORCED CONCRETE (PIPE)
RD	ROOF DRAIN
RED	REDUCER
REINF	REINFORCED(ING)
REQD	REQUIRED
RES	RESIDUAL
RM	ROTAMETER
S	SOUTH
SCFM	STANDARD CUBIC FEET PER MINUTE
SCH	SCHEDULE
SD(M)	STORM DRAIN (MANHOLE)
SECT	SECTION
SHT(S)	SHEET(S)
SIM	SIMILAR
SM	STATIC MIXER
SMH	SEWER MANHOLE
SPEC(S)	SPECIFICATION(S)
SQ	SQUARE
SS	SANITARY SEWER
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
SU	SUPERNATANT
T/	TOP OF
T	THICKNESS
TEL	TELEPHONE
TEMP	TEMPORARY
THK	THICK
TM	TURBIDITY METER
TOC	TOP OF CONCRETE
TYP.	TYPICAL
TW	TREATED WATER
TW (B)	TREATED WATER BLENDED
UG	UNDERGROUND
UNK	UNKNOWN
V	VOLT
VAC	VACUUM
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
W	WEST
W/	WITH
WC	WATER COLUMN
W/O	WITHOUT
WH	WHARF HYDRANT
WL	WATER LINE
WM	WATER METER
WMM	WELDED WIRE MESH
WSP	WELDED STEEL PIPE
WTR	WATER

PAD D STANDBY WELL DESIGN CRITERIA

ITEM	UNITS	VALUE
PLANT FLOW RATE	GPM	500
GROUNDWATER WELL PUMP		
TYPE		WELL SUBMERSIBLE
NUMBER OF UNITS		1
CAPACITY, EACH	GPM	500
MOTOR	HP	60
SPEED CONTROL		CONSTANT SPEED
HYPOCHLORITE SYSTEM		
INJECTION STRENGTH	%	<0.05%
DOSAGE	MG/L	2.0
SYSTEM MODEL		DRY, TABLET-BASED
TABLET STORAGE	POUNDS	75
SUPPLY		ON-SITE GENERATION
AMMONIUM SULFATE		
INJECTION STRENGTH	%	30%
DOSAGE	MG/L	0.5 (AS N)
METERING PUMPS		1
METERING PUMP RATE	GAL/HR	0.2
STORAGE	GAL	1 x 55 GAL DRUM
SUPPLY	DAYS	2 (assuming 24 hours/day operation)
HYDROPNEUMATIC TANK		
TYPE		AIR OVER WATER
NUMBER OF UNITS		1
CAPACITY, EACH	GAL	3,600
DIAMETER	FT	6'-0"
LENGTH	FT	19'-4"
AIR COMPRESSOR FOR HYDROPNEUMATIC TANK		
AIR FLOW RATE	CFM	15
PRESSURE	PSIG	100
MOTOR SIZE	HP	3

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EAST PALO ALTO, CALIFORNIA

ABBREVIATIONS AND DESIGN CRITERIA

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GENERAL NOTES

1. THE CONTRACTOR SHALL SATISFY ITSELF AS TO THE EXISTING CONDITIONS PRIOR TO BIDDING THE PROJECT.
2. THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF THE SAN MATEO COUNTY AND CITY OF EAST PALO ALTO MUNICIPAL REGIONAL PERMIT (MRP) NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT CAS612008 AND SHALL FOLLOW STORM WATER BEST MANAGEMENT PRACTICES.
3. THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN ADEQUATE DRAINAGE PATTERNS AT THE SITE. WATER SHALL NOT BE ALLOWED TO POND OR STAND DUE TO CONTRACTOR ACTIVITY.
4. FOR LANE CLOSURES, THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN AND OBTAIN APPROVAL FROM THE ENGINEER BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE FLAGMEN, CONES, AND/OR BARRICADES, AS NECESSARY TO CONTROL TRAFFIC AND PREVENT HAZARDOUS CONDITIONS, PER THE CALIFORNIA DEPARTMENT OF TRANSPORATION STANDARD PLANS, SPECIFICATIONS AND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITIONS.
5. THE CONTRACTOR SHALL CONTROL DUST AT ALL TIMES, IN ACCORDANCE WITH CALTRANS STANDARD PLANS, OR AS DIRECTED BY THE ENGINEER.
6. ANY PAVEMENT MARKING AND STRIPING DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR, IN ACCORDANCE WITH CALTRANS STANDARD PLANS, OR AS DIRECTED BY THE ENGINEER.
7. NO TRENCHES OR HOLES IN THE PUBLIC RIGHT OF WAY SHALL BE LEFT OPEN OVERNIGHT; USE STEEL PLATING OR HOT-MIX ASPHALT AS REQUIRED TO PROTECT EXCAVATIONS OVERNIGHT.
8. SURVEY MONUMENTS TO BE PROTECTED DURING CONSTRUCTION. DO NOT ADJUST SURVEY MONUMENTS DURING PAVING UNLESS THEY ARE REFERENCED AND RECORDED.
9. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND ARE BASED ON RECORD INFORMATION PROVIDED BY UTILITY OWNERS. THE EXISTING ELEVATIONS AND LOCATIONS MAY VARY FROM THOSE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL UTILITIY COMPANIES SO THAT THOSE COMPANIES MARK THE LOCATIONS OF THEIR UTILITIES PRIOR TO CONTRACTOR EXCAVATIONS. CONTACT UNDERGROUND SERVICE ALERT (USA) (800) 642-2444 TO MARK UTILITIES, AT LEAST 48 HOURS PRIOR TO EXCAVATING. ALL UNDERGROUND FACILITIES, PIPING AND UTILITIES ELEVATIONS AND LOCATIONS WHICH WILL AFFECT THE WORK SHALL BE VERIFIED BY THE CONTRACTOR BY POTHOLING.
10. PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION. DAMAGE TO EXISTING UTILITIES RESULTING FROM THE CONTRACTOR'S CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE.
11. CONTRACTOR TO FIELD VERIFY ALL EXISTING SITE CONDITIONS IN THE AREA OF THE WORK PRIOR TO CONSTRUCTION. IF A SIGNIFICANT CONFLICT EXISTS BETWEEN THE CONTRACT DOCUMENTS AND ACTUAL CONDITIONS, CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
12. CONTRACTOR'S WORK INCLUDES ALL INCIDENTAL AND APPURTENANT WORK NECESSARY TO PROVIDE A COMPLETE AND FULLY-FUNCTIONING FACILITY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ANY ACTIVITIES OTHER THAN THOSE LISTED IN THE BID SCHEDULE WITHOUT AN AUTHORIZED CHANGE ORDER.
13. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, APPURTENANCES, AND APPARATUS NOT SPECIFICALLY MENTIONED ON THE PLANS OR SPECIFICATIONS, BUT WHICH ARE NECESSARY TO COMPLETE THE CONTRACTED WORK AND PROVIDE A FULLY-FUNCTIONING INSTALLATION READY FOR FULL-TIME OPERATION.
14. THE CONTRACTOR SHALL SUPPLY AND MAINTAIN SANITARY FACILITIES FOR WORKERS AND VISITORS AT THE CONSTRUCTION SITE. SERVICE AT LEAST TWICE WEEKLY.
15. ALL EXCESS EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE HANDLED, TRANSPORTED, AND DISPOSED FROM THE SITE IN ACCORDANCE WITH LAWS AND REGULATIONS AT THE CONTRACTOR'S EXPENSE. CONTRACTOR MAY ASSUME, FOR BIDDING PURPOSES ONLY, THAT EXCAVATED SOIL IS NON-HAZARDOUS. HOWEVER, SUCH ASSUMPTION DOES NOT RELIEVE CONTRACTOR'S FULL AND COMPLETE RESPONSIBILITY FOR COMPLYING WITH LAWS AND REGULATIONS, INCLUDING CHARACTERIZATION OF EXCESS MATERIAL FOR MANAGEMENT AND DISPOSAL. CONTRACTOR SHALL PROMPTLY NOTIFY AND CONFER WITH ENGINEER IF ANY EVIDENCE OF SOIL CONTAMINATION IS OBSERVED.
16. UNLESS OTHERWISE NOTED, ALL PAVEMENT, GUTTERS, WALKS, FENCES AND OTHER SURFACE IMPROVEMENTS THAT ARE DISTURBED OR DAMAGED BY CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITIONS BY CONTRACTOR WITHOUT ADDITIONAL COST TO THE CITY.
17. CONCRETE OR OTHER GUTTERS REMOVED FOR TRENCHING IN STREETS, INSTALLATION OF SEWER LINE, OR SERVICE CONNECTION SHALL BE REPLACED IN KIND.
18. PIPES ABANDONED IN PLACE SHALL HAVE ALL ENDS CAPPED. ABANDONED PIPE OPENINGS AT STRUCTURES SHALL BE PLUGGED WITH CONCRETE. PLUG SHALL BE A MINIMUM THREE PIPE DIAMETERS LONG AND SHALL BE FINISHED FLUSH WITH CONCRETE WALL SURFACE.
19. AT CONNECTIONS TO EXISTING BURIED PIPE, CONTRACTOR SHALL EXPOSE THE EXISTING PIPE AND VERIFY LOCATIONS, INVERT, MATERIALS, AND DIMENSIONS. THE CONTRACTOR SHALL FURNISH ALLNECESSARY COUPLINGS, FITTINGS, APPURTENANCES, TOOLS, AND LABOR TO COMPLETE THE CONNECTIONS WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT, AT NO ADDITIONAL COST TO THE OWNER.
20. THE CONTRACTOR SHALL SELECT, INSTALL AND MAINTAIN SHORING, SHEETING, BRACING, AND SLOPING AS NECESSARY TO MAINTAIN SAFE EXCAVATIONS.
21. ALL PIPING UNDER THE CONE OF INFLUENCE OF STRUCTURES OR CONCRETE SLABS SHALL BE CONCRETE ENCASED PER TYPICAL DETAIL C-230. UNLESS NOTED OTHERWISE, THE CONE OF INFLUENCE IS DEFINED WITH A 1:1 SLOPE FROM THE EXTERIOR LOWER CORNER OF THE STRUCTURAL FOOTING TO THE PIPE CENTERLINE.
22. CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
23. CONTRACTOR SHALL MAINTAIN TEMPORARY FENCING DURING THE CONSTRUCTION PERIOD.
24. COORDINATES TO STRUCTURES ARE SHOWN TO THE OUTSIDE OF WALLS UNLESS OTHERWISE NOTED.
25. DIMENSIONS AND TOP ELEVATIONS OF ALL CONCRETE EQUIPMENT PADS SHOWN SHALL BE COMPARED WITH THE DIMENSIONS AND ANCHORAGE NEEDS FOR THE FAVORABLY REVIEWED EQUIPMENT PRIOR TO FORMING AND REBAR FABRICATION. CONTRACTOR SHALL INCREASE OR DECREASE EQUIPMENT PAD DIMENSIONS AS REQUIRED TO FIT EQUIPMENT PROVIDED AT NO ADDITIONAL COST TO THE CITY. CONFIRM LAYOUT CHANGES WITH THE ENGINEER FOR DIMENSION CHANGES GREATER THAN 6 INCHES IN ANY DIRECTION.
26. NOT ALL THE REQUIRED FITTINGS ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL THE FITTINGS SHOWN ON THE DRAWINGS AND ADDITIONAL FITTINGS AS REQUIRED FOR PIPING ARRANGEMENTS SHOWN ON THE DRAWINGS AND PER EQUIPMENT FURNISHED.
27. FLEXIBLE COUPLINGS SHALL BE RESTRAINED UNLESS SPECIFICALLY NOTED OTHERWISE.
28. ALL STRUCTURAL DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR. FOR ALL STRUCTURAL ELEMENTS OF THE PROJECT INCLUDING BUT NOT LIMITED TO: CONCRETE PADS; CMU WALL STRUCTURES WITH CANOPIES; PIPE SUPPORTS; AND STANCHON MOUNTED PANELS. CONTRACTOR SHALL PROVIDE DEFERRED SUBMITTAL SHOP DRAWINGS FOR ALL STRUCTURE DESIGN FOR FAVORABLE REVIEW BY ENGINEER. STRUCTURAL DESIGN SHALL BE CONFORMANCE WITH CBC 2019 AND ASCE 7-16, RISK CATEGORY IV AND IMPORTANCE FACTOR Ie of 1.50, FASTEST MILE WIND SPEED (3 SECOND GUST) 115 MILES PER HOUR, WIND EXPOSURE CATEGORY "C", AND IMPORTANCE FACTOR Iw =1.15. FURTHERMORE, CONTRACTOR STRUCTURAL DESIGNER SHALL PROVIDE SPECIFICATIONS FOR SEISMIC DESIGN CRITERIA (WHICH WILL BE LABELED 01612 SEISMIC DESIGN CRITERIA AND WIND DESIGN CRITERIA WHICH WILL BE LABELED 01614 WIND DESIGN CRITERIA) TO CONFORM TO STRUCTURAL DESIGN CRITERIA LIST ABOVE.

100% SUBMITTAL

NOT FOR CONSTRUCTION

LEGEND

- PUMP
- FM — FLOW METER
- STATIC MIXER
- YARD HYDRANT
- INSTRUMENT (TYP)
- PROPERTY BOUNDARY
- LIMITS OF WORK
- CMU WALL
- CONCRETE
- ASPHALT
- CRUSHED ROCK
- LANDSCAPE
- DEMOLISH
- TREES
- (E) FENCE
- xx — (N) PERIMETER FENCE
- 20.87 × — (E) SPOT ELEVATION
- × 20.4 — (N) SPOT ELEVATION
- FLOW DIRECTION
- CATCH BASIN
- M — MANHOLE

REFERENCE SYMBOLS

SECTION — A / G-1 — SECTION DESIGNATION; SHEET DRAWN ON

DETAIL — 1 / G-1 — DETAIL DESIGNATION

VALVE SYMBOLS

VALVES	SINGLE LINE	DOUBLE LINE
GATE		
GATE (NORMALLY CLOSED)		
GLOBE		
PLUG		
CHECK		
BUTTERFLY (FLANGED)		
BUTTERFLY (WAFER)		
BALL		
NEEDLE VALVE		
RELIEF VALVE		
PRESSURE REGULATING VALVE		
SOLENOID VALVE	S	S
THREE-WAY VALVE		S
MOTOR ACTUATOR	M	M

PIPING SYMBOLS

FITTINGS	SINGLE LINE	DOUBLE LINE
ELBOW		
TEE		
CAM LOCK		
REDUCER		
JOINTS		
WELDED		
FLANGED		
SCREWED		
BELL		
FLEXIBLE CONNECTOR		

REGISTERED PROFESSIONAL ENGINEER — NELSON J. SCHLATER — C 66547 — CIVIL — STATE OF CALIFORNIA

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GENERAL NOTES AND LEGEND

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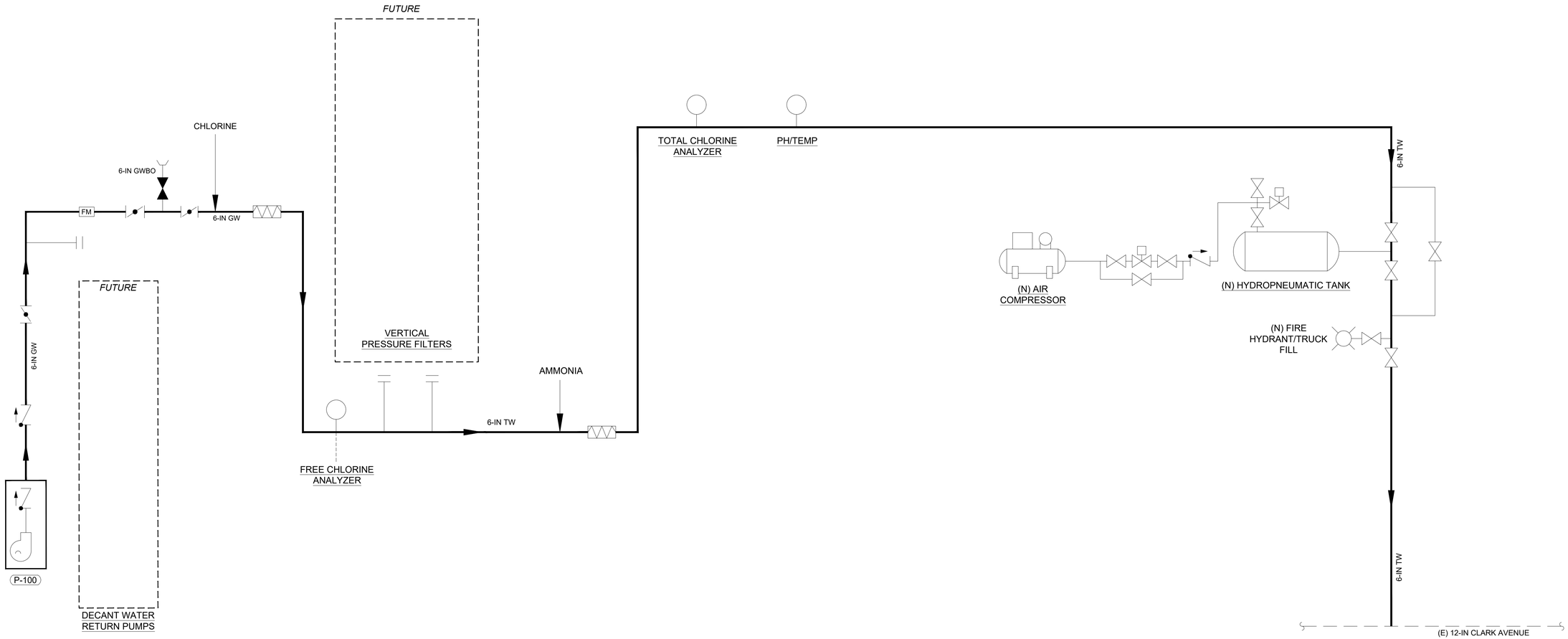

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PAD D STANDBY WELL
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PROCESS FLOW DIAGRAM (PFD)

REV	DESCRIPTION	APPRD	DATE
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CIVIL
STATE OF CALIFORNIA

SHEET NUMBER
G-4
4 OF 26

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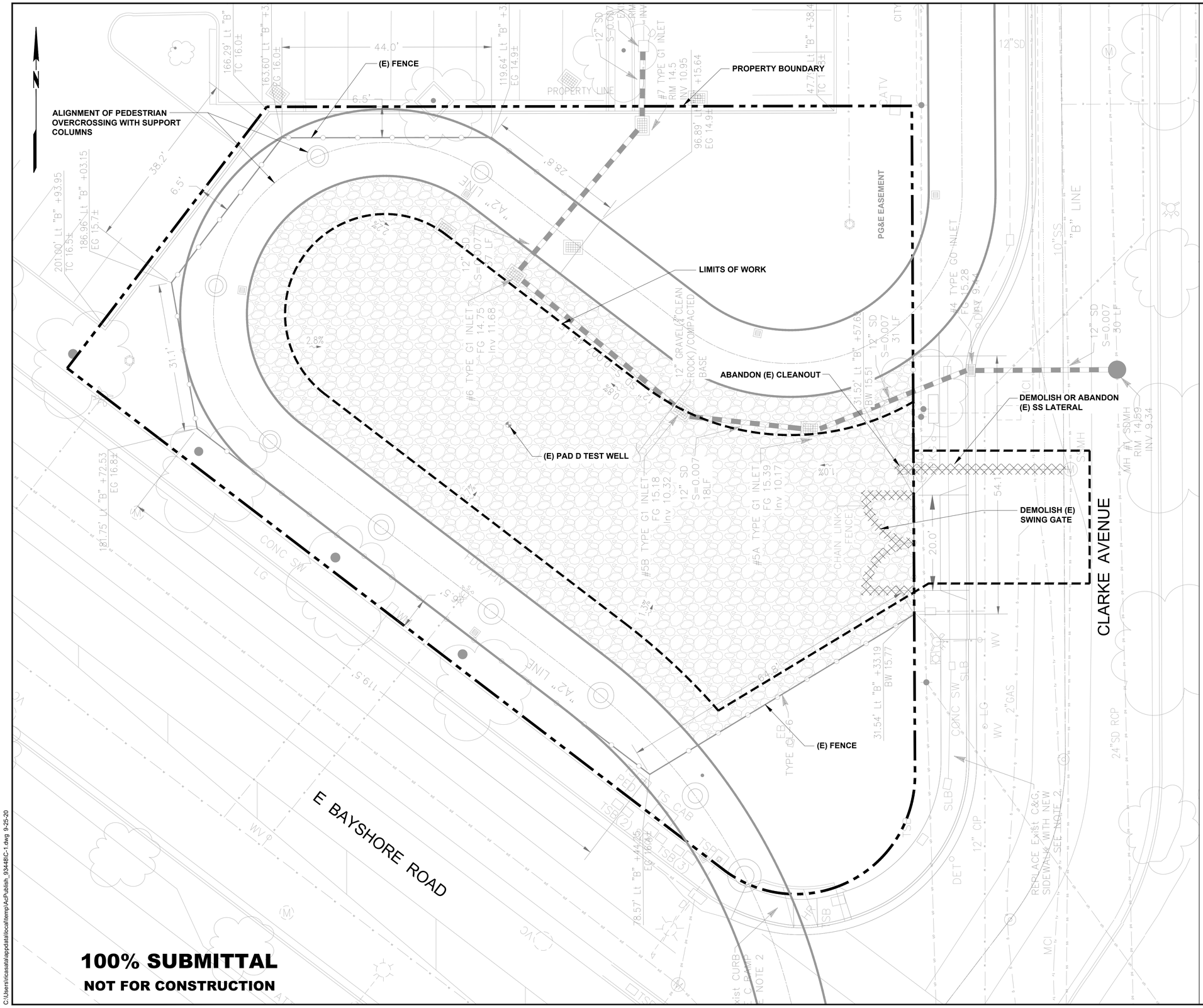

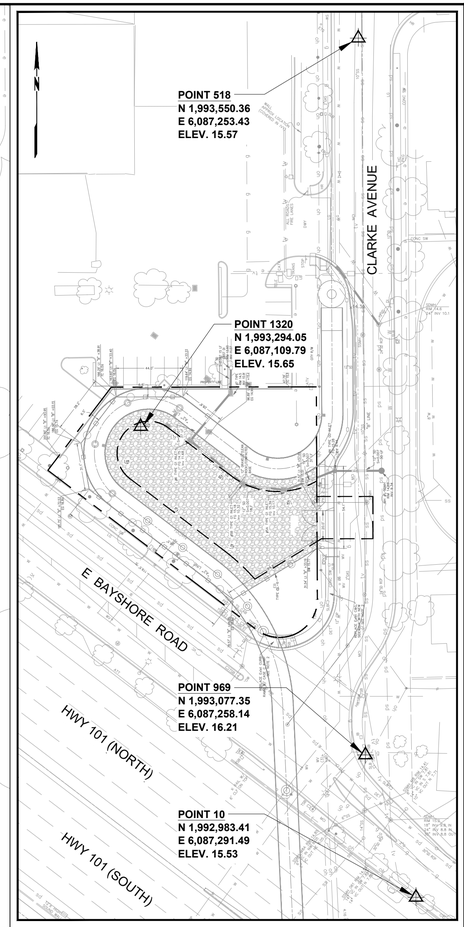

INSET MAP

50 0 50 100

SCALE: 1" = 50'

NOTES:

1. EXISTING SITE CONDITIONS ARE BASED ON AS-BUILTS FROM THE RECENT PEDESTRIAN OVERCROSSING PROJECT. CITY, ENGINEER, AND DESIGN ENGINEER ARE NOT RESPONSIBLE FOR THE COMPLETENESS, LOCATIONS OR SIZES SHOWN. CONTRACTOR SHALL POTHOLE TO IDENTIFY AND CONFIRM LOCATIONS OF UTILITIES.
2. A GEOTECHNICAL INVESTIGATION WAS PERFORMED BY GEO-LOGIC ASSOCIATES WITH A FINAL REPORT DATED 22 JUNE 2016. REPORT IS AVAILABLE FROM OWNER UPON REQUEST. THE REPORTS AND ITS RECOMMENDATIONS SHALL BE UPDATED BY CONTRACTOR, TO COMPLY WITH CITY OF EAST PALO ALTO ADOPTED BUILDING CODES TO SUPPORT CONTRACTOR'S DESIGN ENGINEER SERVICES TO DESIGN STRUCTURAL ELEMENTS FOR THE PROJECT.
3. CONTRACTOR SHALL COORDINATE WITH OWNER ON ACCESS TO PARKING AND LAYDOWN AREA.

SURVEY NOTES:

BASIS OF COORDINATE SYSTEM:
I. HORIZONTAL: CCS 83 ZONE 3
II. VERTICAL: NAVD 88

10 0 10 20

SCALE: 1" = 10'

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EXISTING SITE PLAN

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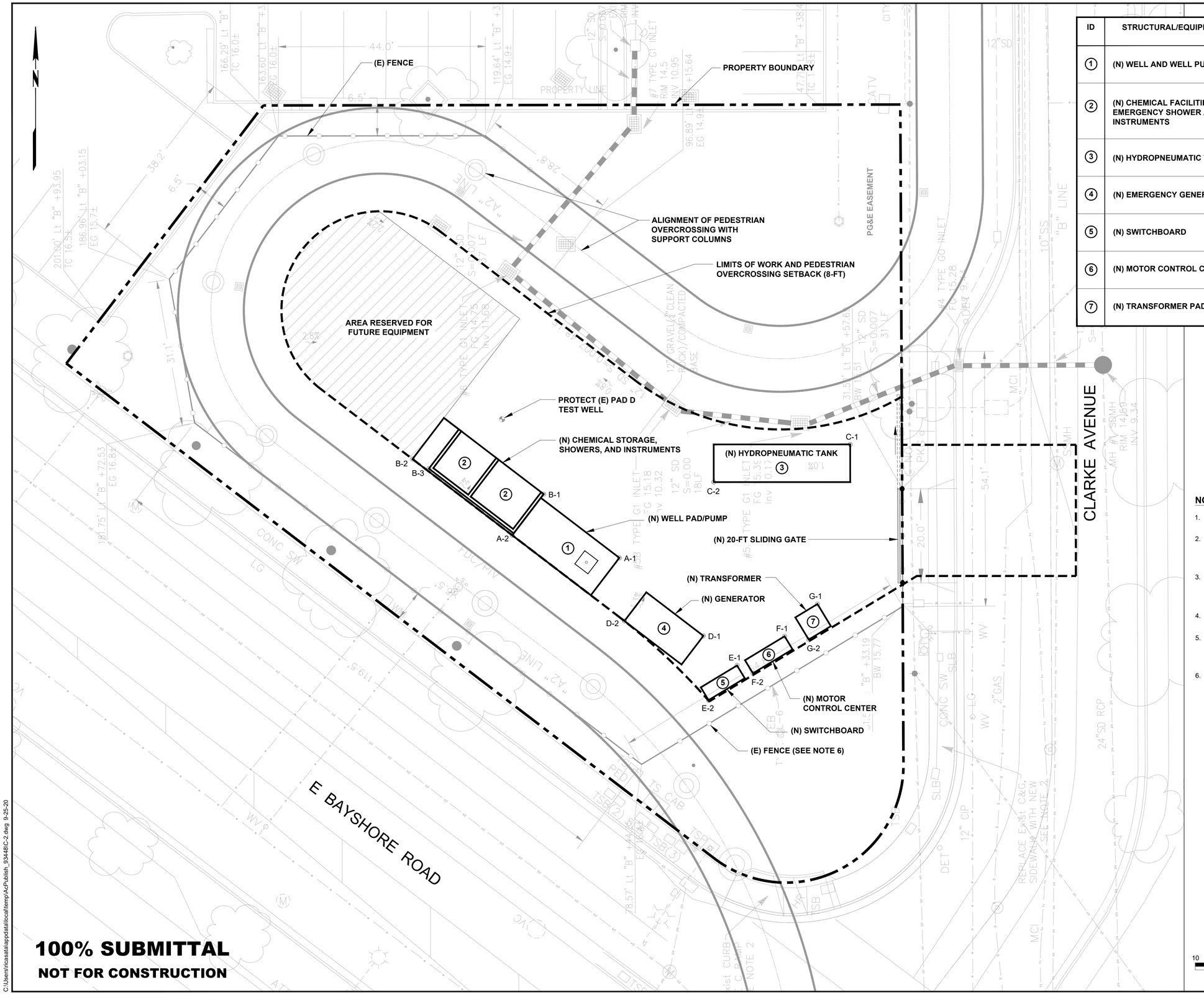

ID	STRUCTURAL/EQUIPMENT	CONTROL POINTS	COORDINATES	
			EASTING (X)	NORTHING (Y)
1	(N) WELL AND WELL PUMP	A-1	6,087,166.03	1,993,223.89
		A-2	6,087,143.27	1,993,228.69
2	(N) CHEMICAL FACILITIES, EMERGENCY SHOWER AND INSTRUMENTS	B-1	6,087,149.95	1,993,237.43
		B-2	6,087,122.08	1,993,244.88
		B-3	6,087,125.56	1,993,242.85
3	(N) HYDROPNEUMATIC TANK	C-1	6,087,215.07	1,993,247.99
		C-2	6,087,186.07	1,993,239.99
4	(N) EMERGENCY GENERATOR	D-1	6,087,183.88	1,993,207.32
		D-2	6,087,167.11	1,993,210.48
5	(N) SWITCHBOARD	E-1	6,087,191.04	1,993,201.03
		E-2	6,087,184.97	1,993,193.66
6	(N) MOTOR CONTROL CENTER	F-1	6,087,201.14	1,993,207.23
		F-2	6,087,194.40	1,993,199.36
7	(N) TRANSFORMER PAD	G-1	6,087,208.12	1,993,214.08
		G-2	6,087,206.26	1,993,206.53

NOTES:

1. COORDINATES TO STRUCTURES ARE SHOWN TO THE OUTSIDE OF WALLS UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL INSTALL TEMPORARY FENCING AS NEEDED TO CONTINUOUSLY MAINTAIN SITE SECURITY DURING THE PROJECT. TEMPORARY FENCING SHALL BE 6 FEET HIGH WITH 3 STRANDS OF BARBED WIRE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING EACH PERMIT ISSUING AGENCY WITHIN THE TIME PERIOD SPECIFIED BY THAT AGENCY PRIOR TO BEGINNING CONSTRUCTION. THE CITY WILL BE RESPONSIBLE FOR APPLICABLE AIR QUALITY PERMIT.
4. CONTRACTOR SHALL PROTECT ALL EXISTING FEATURES LOCATED OUTSIDE OF LIMITS OF WORK.
5. CONTRACTOR IS RESPONSIBLE FOR STRUCTURAL DESIGN OF ALL PADS AND CHEMICAL STORAGE AREA PAD, CMU WALLS, AND CANOPY. CONTRACTOR SHALL PROVIDE STRUCTURAL DESIGN SUBMITTALS FOR ENGINEER'S FAVORABLE REVIEW. SEE GENERAL NOTE 28 ON DWG G-3.
6. CONTRACTOR SHALL INSTALL (N) 8-FT TALL FENCE IN THE SAME FOOTPRINT AROUND THE SITE PERIMETER AS THE EXISTING FENCE. CONTRACTOR SHALL COORDINATE (N) FENCE WITH NEW MANUAL SLIDING GATE. CONTRACTOR SHALL PROVIDE SHOP DRAWING FOR FAVORABLE REVIEW OF FENCE CONCRETE POSTS.

10 0 10 20
SCALE: 1" = 10'

100% SUBMITTAL
NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
NELSON J. SCHLATER
C 66547
CIVIL
STATE OF CALIFORNIA

ekl environment & water
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BURLINGAME, CALIFORNIA 94010-5306
(650) 292-9100 FAX (650) 552-9912

PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

PROPOSED SITE PLAN

REV	DESCRIPTION	APPRD	DATE
B	100% SUBMITTAL	NJS	09-23-20
A	60% SUBMITTAL	NJS	06-18-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: CCR
DESIGNED: TFC
APPROVED: NJS
JOB NO.: B60019.00

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

SHEET NUMBER
C-2
6 OF 26

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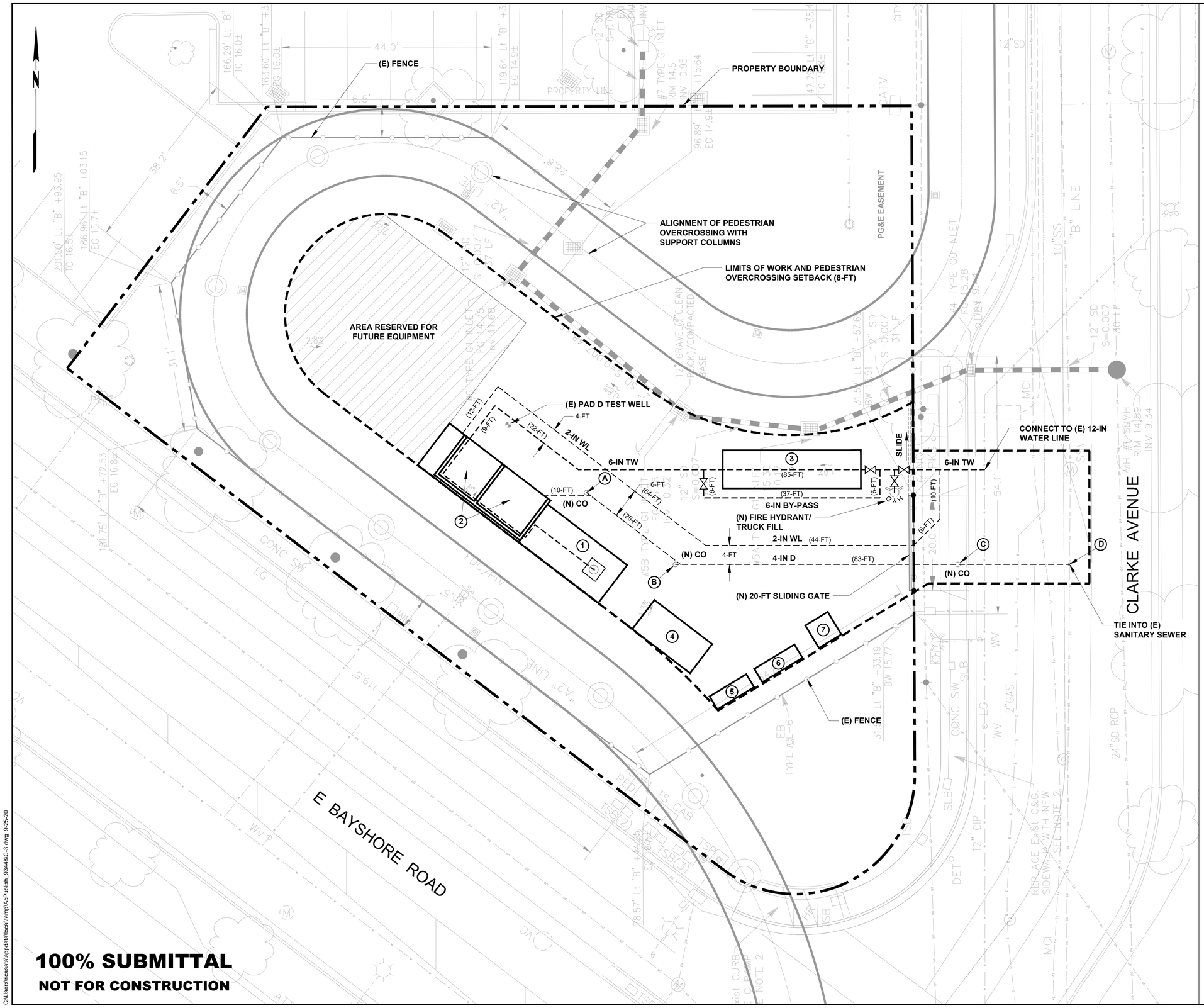

ID	STRUCTURAL/EQUIPMENT
1	(N) WELL AND WELL PUMP
2	(N) CHEMICAL FACILITIES, EMERGENCY SHOWER AND INSTRUMENTS
3	(N) HYDROPNEUMATIC TANK
4	(N) EMERGENCY GENERATOR
5	(N) SWITCHBOARD
6	(N) MOTOR CONTROL CENTER
7	(N) TRANSFORMER PAD

ID	DRAIN INVERT ELEVATION (FT- NAVD88)
A	11.47
B	10.97
C	9.79
D	9.32

NOTES:

1. 4-IN LATERAL SLOPED AT 2%.
2. (E) 6-IN LINE INTO SSMH UPSTREAM OF PROPOSED TIE IN POINT D HAS AN INVERT OF 7.62 PER ALTA SURVEY DATED APRIL 2010. CONTRACTOR TO VIF AND ADJUST DRAIN INVERT ELEVATIONS ACCORDINGLY SO AS TO NOT CONFLICT WITH (E) 12-IN WL.

NOTES:

1. ALL DUCTILE IRON, PUSH ON OR MECHANICAL JOINT PIPE SHALL BE SELF -RESTRAINING. IN ADDITION, DUCTILE IRON PIPE SHALL BE CONSTRUCTED WITH A RESTRAINED JOINT (MJ OR PO) WITHIN 3-FEET OF ALL STRUCTURS, BUILDINGS, OR CONCRETE ENCASEMENTS AND AN ACTUAL RESTRAINED JOINT WITHIN 8-FEET.
2. AT CONNECTIONS TO EXISTING BURIED PIPE, CONTRACTOR SHALL EXPOSE THE EXISTING PIPE AND VERIFY LOCATIONS, INVERT, MATERIALS, AND DIMENSIONS. THE CONTRACTOR SHALL FURNISH ALL NECESSARY COUPLINGS, FITTINGS, APPURTENANCES, TOOLS, AND LABOR TO COMPLETE THE CONNECTIONS WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT, AT NO ADDITIONAL COST TO THE OWNER.
3. UNLESS SHOWN OTHERWISE, MINIMUM PIPE COVER SHALL BE 3-FEET.
4. FOR BURIED GATE VALVES, SEE DETAIL C-110/C-5.
5. FOR WATERLINE TIE-INS, HOT TAP EXISTING WATER LINES, SEE DETAIL C-313/C-6.
6. INSTALL 4-INCH DRAIN (D) LINE IN ACCORDANCE WITH THE FOLLOWING EAST PALO ALTO SANITARY SEWER DISTRICT TYPICAL DETAILS: TRENCH - DETAIL 4, LATERAL CONNECTION - DETAIL 6, AND SERVICE LATERAL CLEANOUT - DETAIL 8. IF THE LATERAL INSTALLATION REQUIRES A UTILITY CROSSING, INSTALL IN ACCORDANCE WITH LATERAL UTILITY CROSSING: DETAIL 10. SEWER DETAILS ON C-6.
7. PRIOR TO COMMENCING WORK, CONTRACTOR SHALL FIELD VERIFY ELEVATIONS AND INVERTS OF (E) CLARKE AVENUE SANITARY SEWER FOR (N) 4-IN LATERAL TO (E) SANITARY. CONTRACTOR SHALL ALSO FIELD VERIFY UPSTREAM AND DOWNSTREAM MANHOLE INVERTS AND CALCULATE CLARKE SEWER INVERT AT 4-IN LATERAL TIE-IN. IF, THERE ARE ANY ISSUES, CONTRACTOR SHALL ADJUST (N) 4-IN LATERAL INVERTS TO ACHIEVE CLARKE SEWER CONNECTION.
8. CONTRACTOR SHALL PROVIDE TEMPORARY SANITARY SEWER BYPASS PUMPING TO FACILITATE MAINTAINING SERVICE DURING TIE-IN TO EXISTING SANITARY SEWER ON CLARKE AVENUE.
9. LOCATOR WIRE SHALL BE PROVIDED FOR ALL UNDERGROUND PIPING.
10. TIE-INS TO EXISTING SYSTEMS SHALL BE MADE WITHOUT INTERRUPTION OF EXISTING SERVICE UNLESS NOTED OTHERWISE IN THE DRAWINGS OR SPECIFICATIONS. IF REQUIRED, CONTRACTOR SHALL SUBMIT A SCHEDULE OF INTERRUPTION OF SERVICE IN ACCORDANCE WITH THE SPECIFICATIONS.

REGISTERED PROFESSIONAL ENGINEER
NELSON J. SCHLATER
C 66547
CIVIL
STATE OF CALIFORNIA

10 0 10 20
SCALE: 1" = 10'

100% SUBMITTAL
NOT FOR CONSTRUCTION

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ekl environment & water
577 AIRPORT BOULEVARD, SUITE 500
BURLINGAME, CALIFORNIA 94010-5306
(650) 292-9100 FAX (650) 552-9912

PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

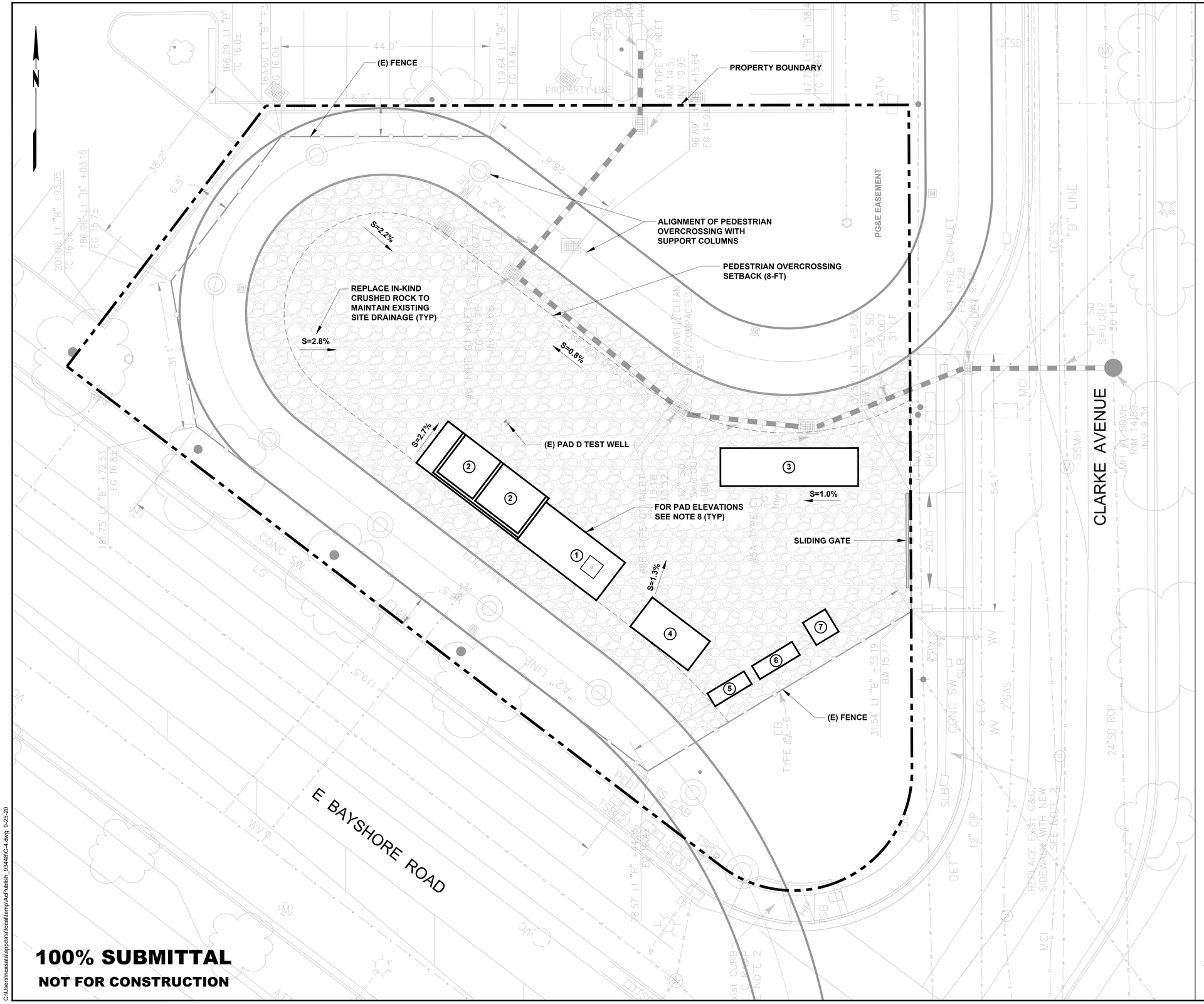
YARD PIPING PLAN

REV	DESCRIPTION	APPRD	DATE
B	100% SUBMITTAL	NJS	09-23-20
A	60% SUBMITTAL	NJS	06-18-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: CCR
DESIGNED: TFC
APPROVED: NJS
JOB NO.: B60019.00

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

SHEET NUMBER
C-3
7 OF 26



ID	STRUCTURAL/EQUIPMENT
1	(N) WELL AND WELL PUMP
2	(N) CHEMICAL FACILITIES, EMERGENCY SHOWER AND INSTRUMENTS
3	(N) HYDROPNEUMATIC TANK
4	(N) EMERGENCY GENERATOR
5	(N) SWITCHBOARD
6	(N) MOTOR CONTROL CENTER
7	(N) TRANSFORMER PAD

NOTES:

1. CONTRACTOR SHALL MAINTAIN EXISTING SITE GRADES WITH THE MINOR SLOPES SHOWN ON THE PLANS TO CONVEY STORMWATER TO THE EXISTING STORM INLET DRAINS. CONTRACTOR SHALL EMPLOY STORMWATER BEST MANAGEMENT PRACTICES IN ACCORDANCE WITH SAN MATEO COUNTY REQUIREMENTS.
2. SEE SPECIFICATIONS FOR SITE FENCING AND GATE.
3. EXISTING CURBS AND SIDEWALKS BEING DEMOLISHED BECAUSE OF PIPE OR ELECTRICAL TRENCHING SHALL BE REPLACED TO MATCH THE EXISTING CURB AND SIDEWALK.
4. FOR SIDEWALK REPAIR, SEE DETAIL C-260 DWG C-5.
5. MATCH GRADE TO EDGE OF SITE.
6. GRADE TO DRAIN AWAY FROM ALL CONCRETE PADS
7. FOR AREAS UNDER CANOPY, COORDINATE SPLASH BLOCK LOCATIONS WITH RAIN WATER DOWNSPOUTS.
8. ALL CONCRETE PADS SHALL BE A MINIMUM OF 6-INCH ABOVE EXISTING GRADE.

10 0 10 20
SCALE: 1" = 10'

100% SUBMITTAL
NOT FOR CONSTRUCTION

ekl environment & water
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(650) 292-9100 FAX (650) 552-9912

PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

GRADING AND PAVING PLAN

REV	DESCRIPTION	APPRD	DATE
B	100% SUBMITTAL	NJS	09-23-20
A	60% SUBMITTAL	NJS	06-16-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: CCR
DESIGNED: TFC
APPROVED: NJS
JOB NO.: B60019.00

REGISTERED PROFESSIONAL ENGINEER
NELSON J. SCHLATER
C 66547
CIVIL
STATE OF CALIFORNIA

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

SHEET NUMBER
C-4
8 OF 26

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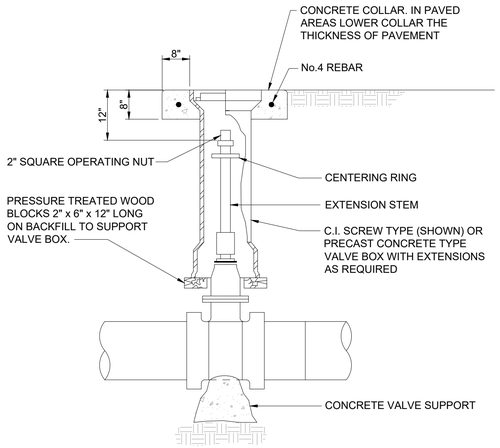
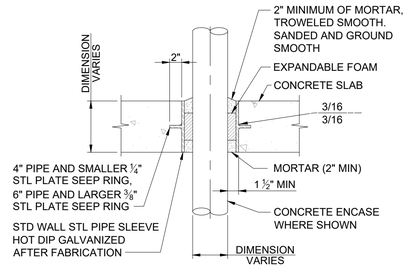


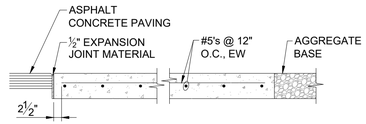
BURIED GATE VALVE OPERATOR C-110

NOT TO SCALE — TYP



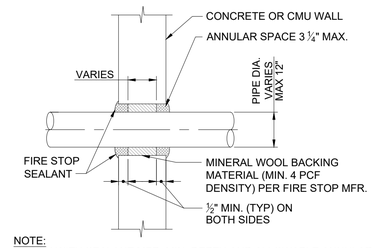
TYPICAL CONCRETE SLAB ON GRADE PIPE PENETRATION C-200

NOT TO SCALE — TYP



CONCRETE TRANSITION PAD C-210

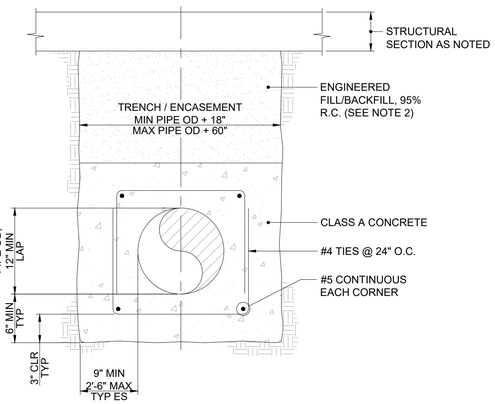
NOT TO SCALE — TYP



NOTE:
VERIFY WITH SEALANT MFR. MIN. DEPTH AND ALLOWABLE ANNULAR SPACE TO ACHEIVE NECESSARY FIRE RATING. IF FIRE RATING IS NOT NOTED ON DRAWINGS, PROVIDE 3 HR FIRE STOP PENETRATION

TYPICAL METAL PIPE THROUGH FIRE RATED CONCRETE OR CMU WALL PENETRATION C-230

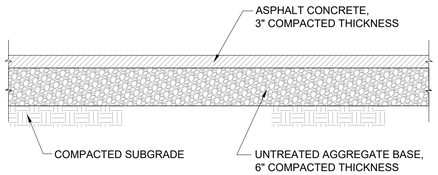
NOT TO SCALE — TYP



NOTES:
1. CONCRETE ENCASEMENT IS REQUIRED FOR ALL PRESSURIZED UTILITIES UNDER STRUCTURES AND WHERE NOTED AND EXTENDING 4' EACH SIDE OF STRUCTURE FOOTPRINT.
2. IF TOP OF PIPE IS LESS THAN 18" BELOW STRUCTURE FOUNDATION, BACKFILL WITH LOW DENSITY CONCRETE BACKFILL ABOVE CONCRETE ENCASEMENT.
3. PROVIDE ENCASEMENT FOR ALL UTILITIES IN ROADWAYS WITH 2' OR LESS OF COVER.

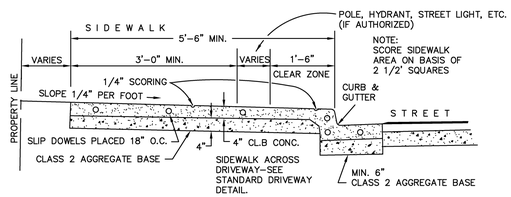
TYPICAL CONCRETE PIPE ENCASEMENT C-240

NOT TO SCALE — TYP



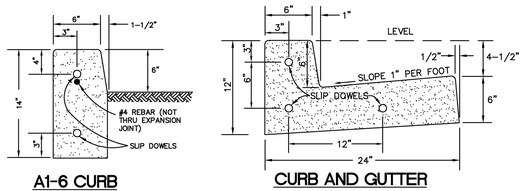
TYPICAL ASPHALT CONCRETE C-250

NOT TO SCALE — TYP



TYPICAL SECTION URBAN CURB, GUTTER AND SIDEWALK

NOTE: OBSTRUCTIONS SUCH AS POLES, HYDRANTS, STREET SIGNS, UTILITY BOXES, STREET LIGHTS, ETC. SHALL BE LOCATED BEHIND THE SIDEWALK, UNLESS OTHERWISE SPECIFICALLY AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS. A CLEAR ZONE ALONG THE CURB AND SIDEWALK 18 INCHES IN WIDTH (MEASURED FROM THE FACE OF THE CURB) SHALL BE KEPT CLEAR AND OPEN FROM ALL OBSTRUCTIONS. IN ADDITION, AN AREA 3 FEET IN WIDTH ALONG THE SIDEWALK, EXCLUSIVE OF THE CURB WIDTH, SHALL BE KEPT CLEAR AND OPEN FROM ALL OBSTRUCTIONS IN COMPLIANCE WITH THE STATE BUILDING CODE (PART 2, TITLE 24, C.A.C.).



TYPICAL SECTIONS

NOTES:
1. ALL CONCRETE TO BE CLASS B CONCRETE.
2. MINIMUM SIDEWALK THICKNESS = 4 INCHES PCC.
3. PLACE 1/2" DIAMETER X 18" LONG DOWELS AT EXPANSION JOINTS AS SHOWN.
4. PLACE 1/2" THICK EXPANSION JOINTS FULL WIDTH 20' ON CENTER.
5. CONSTRUCT MONOLITHIC CURB, GUTTER AND SIDEWALK UNLESS OTHERWISE SPECIFICALLY AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS.
6. SUB-BASE MATERIALS WITHIN 30" OF SUBGRADE SHALL BE COMPACTED TO 95%.

TYPICAL CURB, GUTTER, AND SIDEWALK C-260

NOT TO SCALE — TYP

100% SUBMITTAL

NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER — NELSON J. SCHLATER — C 66547 — CIVIL — STATE OF CALIFORNIA

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BURLINGAME, CALIFORNIA 94010-5306
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PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

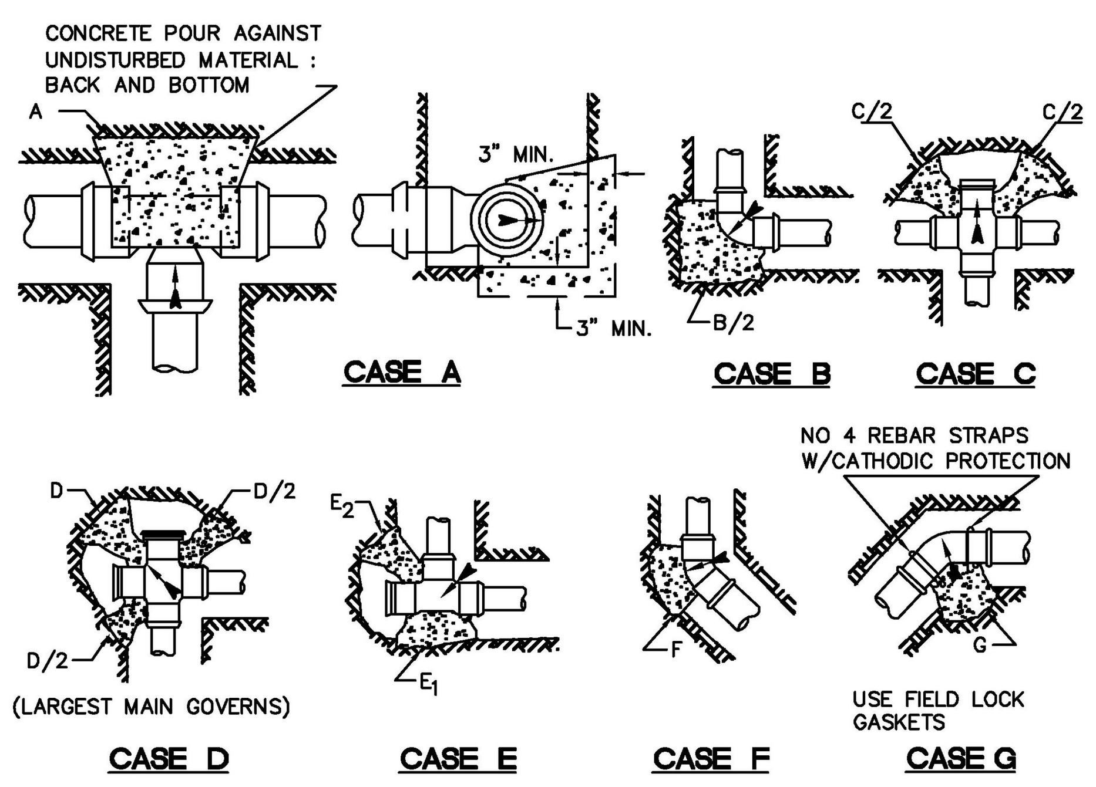
CIVIL DETAILS (SHEET 1 OF 2)

REV	DESCRIPTION	APPRD	DATE
A	100% SUBMITTAL	NJS	09-23-20
A	60% SUBMITTAL	NJS	06-18-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: CCR
DESIGNED: TFC
APPROVED: NJS
JOB NO.: B40039.00

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

SHEET NUMBER
C-5
9 OF 26



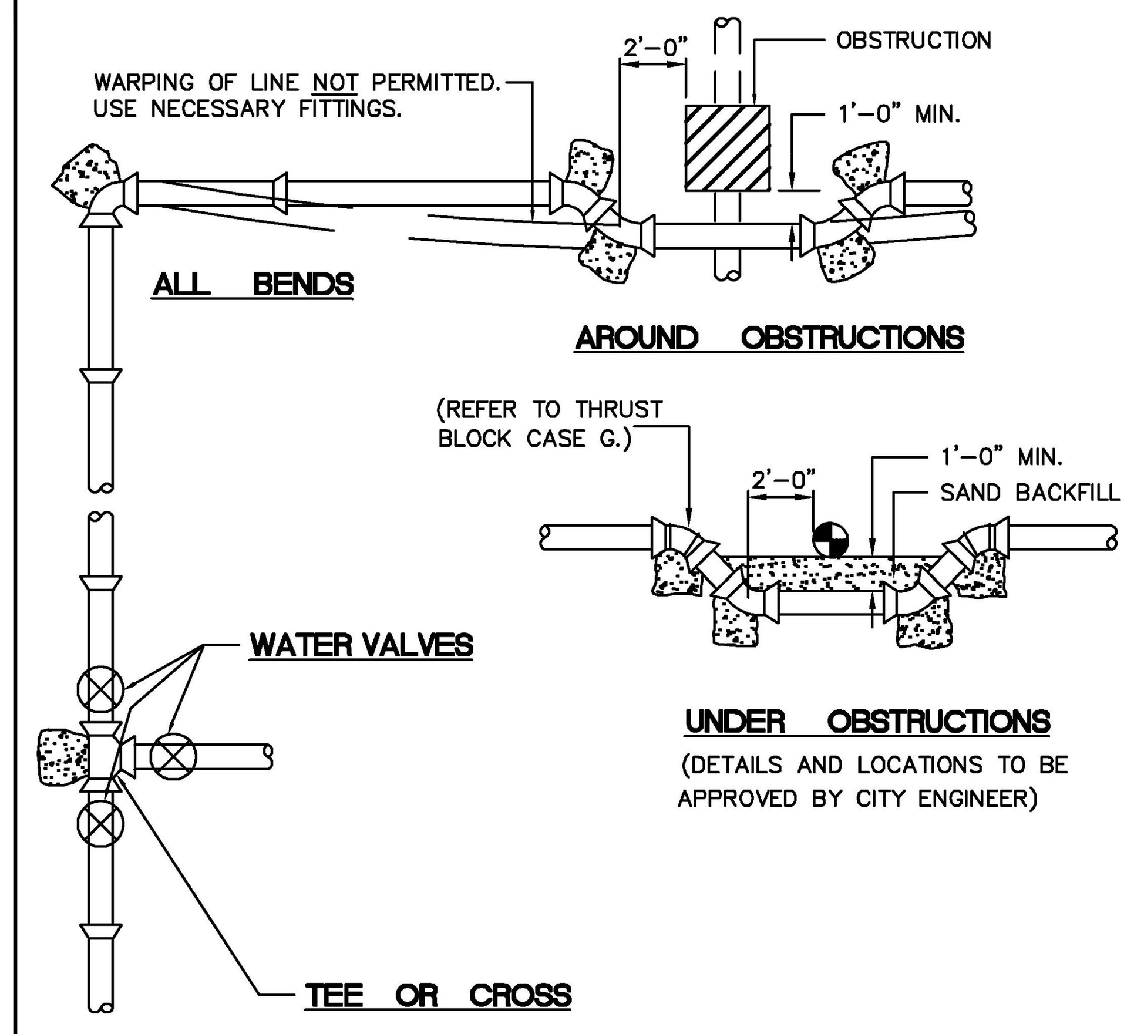
NOTES:

1. CASE "A" IS TYPICAL FOR ALL.
2. ALL BLOCKS TO BE KEPT CLEAR OF LUGS.
3. UNSUPPORTED SURFACES TO BE FORMED.
4. ARROWS ON CASE "A", "C" & "E" INDICATE MAINS WHICH DETERMINE BEARING AREA.
5. BASED ON 150 P.S.I. PRESSURE, 1,000 P.S.F. SOIL BEARING.
6. CONCRETE SHALL BE CLASS B PER STANDARD SPECIFICATIONS.
7. RE-BAR STRAPS FOR CASE G SHALL HAVE CATHOTIC PROTECTION

REQUIRED BEARING AREAS–SQ.FT.

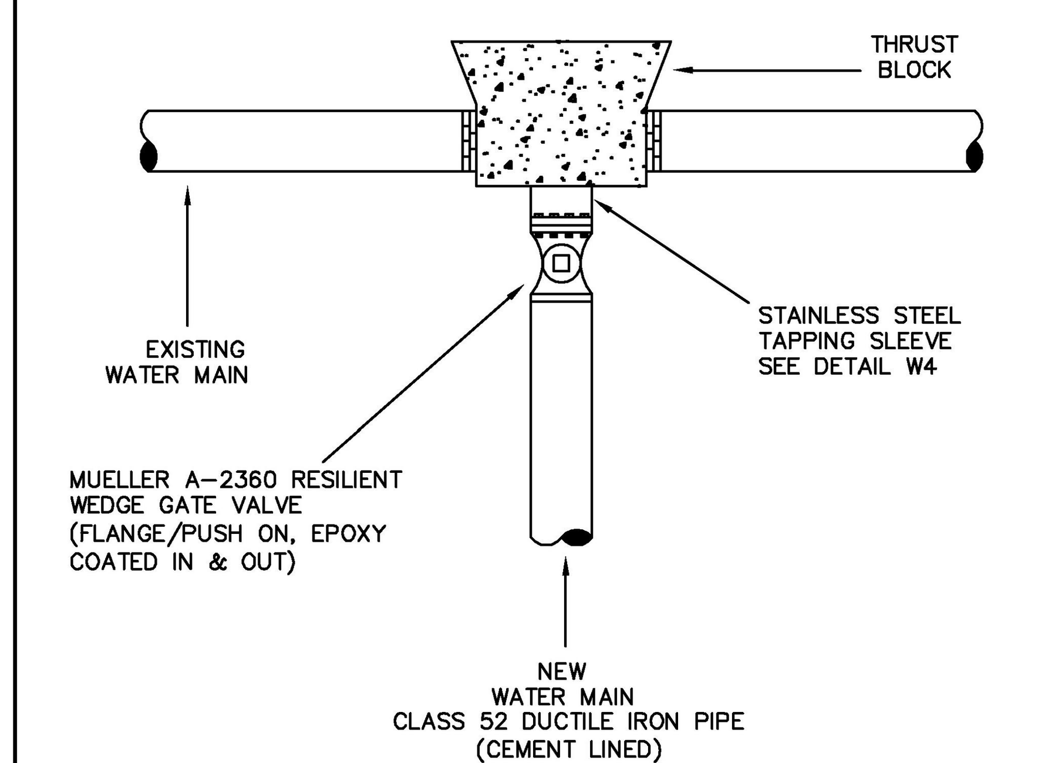
PIPE SIZE	A	B	C	D	E_1	E_2	F	G
4"	2	3	3	3	2	3	2	2
6"	5	6	7	7	5	7	4	4
8"	8	12	11	11	8	11	6	6
10"	12	18	17	17	12	17	8	8
12"	17	24	24	24	17	24	12	12

THRUST BLOCKS C-310
NOT TO SCALE TYP



NOTE: IF FLANGED FITTINGS ARE SPECIFIED, USE 316 STAINLESS STEEL BOLTS AND NUTS. USE FIELD LOCK GASKETS ON ALL BENDS.

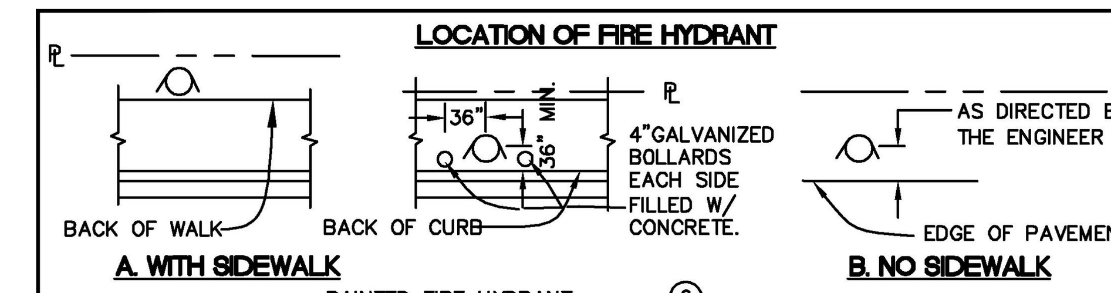
WATER MAIN INSTALLATION C-311
NOT TO SCALE TYP

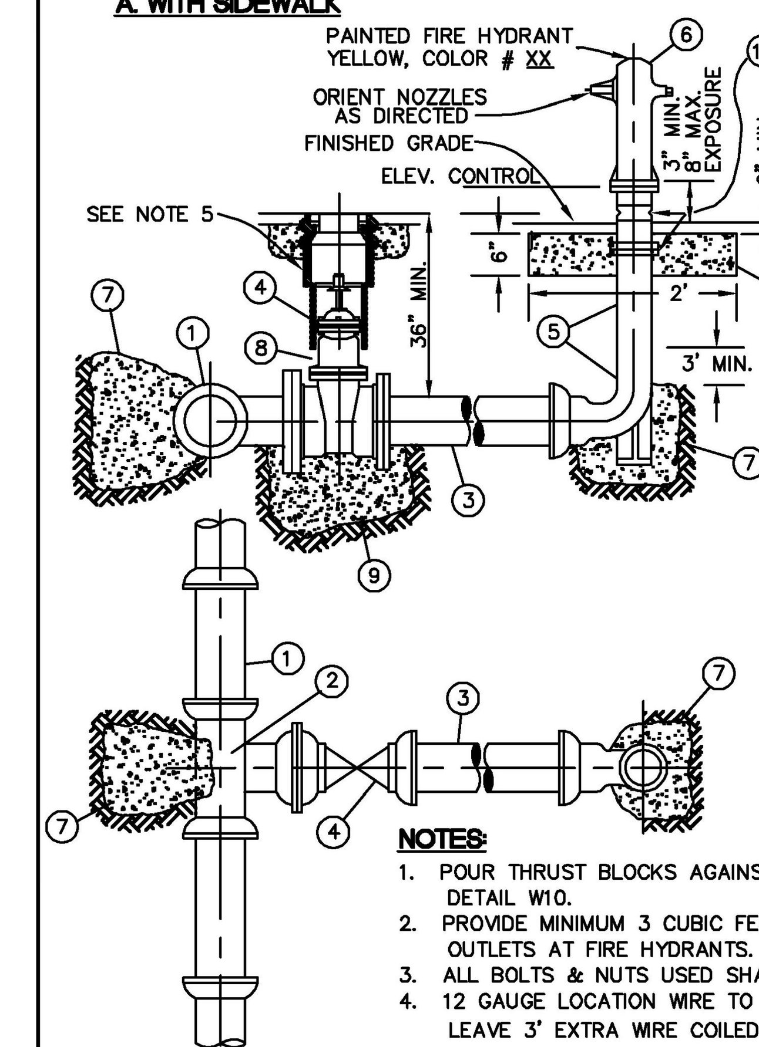


NOTES:
1. PRIOR TO ANY WORK IN THE PUBLIC RIGHT–OF–WAY, AN ENCROACHMENT PERMIT SHALL BE OBTAINED FROM THE CITY.
2. TAPPING VALVES SHALL BE MUELLER RESILIENT WEDGE A–2360, EPOXY COATED (FL. X P.O. OR AS DIRECTED.
3. ALL BOLTS SHALL BE 316 STAINLESS STEEL.
4. TAPPING SLEEVE: JCM 432 ALL STAINLESS STEEL FOR LESS THAN 150 PSI, JCM 452 ALL STAINLESS STEEL, FOR GREATER THAN 150 PSI, OR MUELLER H 30–4 STAINLESS STEEL.
5. HEALTH SAMPLES ARE REQUIRED BY THE TOWN, PER WATER DEPT. DIRECTION
6. THIS METHOD SHALL REQUIRE APPROVAL FROM THE CITY ENGINEER.

TAPPING SLEEVE AND VALVE ASSEMBLT (HOT TAP) C-313
NOT TO SCALE TYP

LOCATION OF FIRE HYDRANT

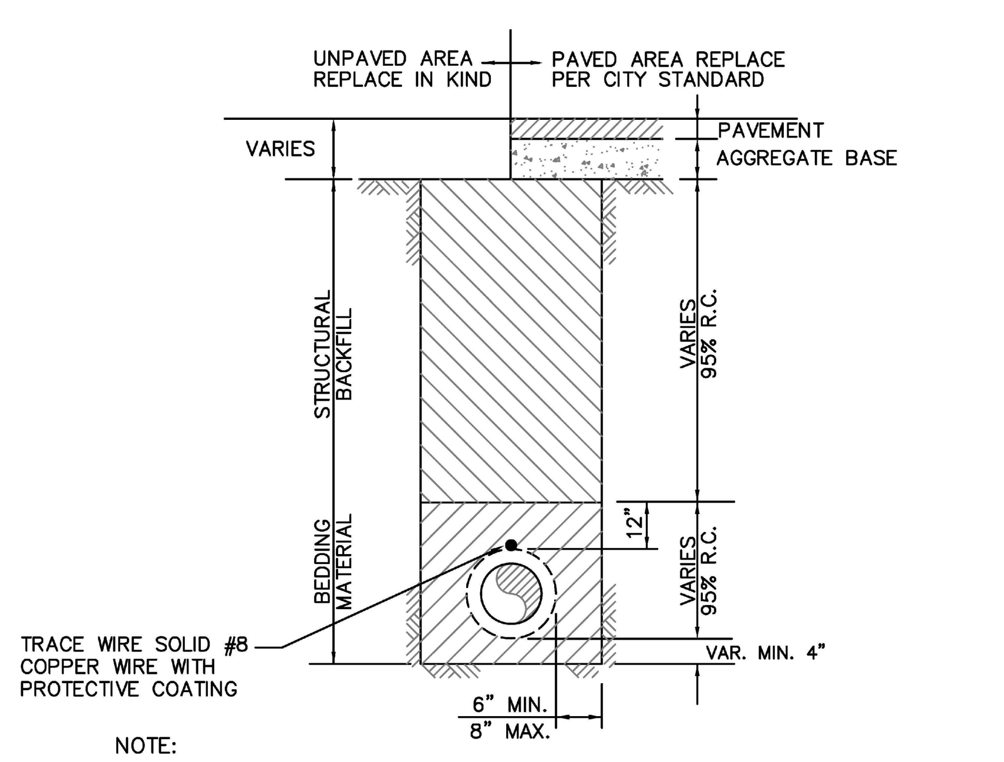




1. WATER PIPE MAIN.
2. TEE (P.O.xFL.xP.O.) EPOXY COATED
3. 6" D.I. PIPE (OR AS SPECIFIED BY THE ENGINEER)
4. RESILIENT WEDGE GATE VALVE OR EQUAL FL X P.O. REFER TO DETAIL W3
5. BURY CLOW EPOXY COATED
6. HYDRANT, CLOW 76 W/ 2– 2 1/2" AND 1– 4 1/2" OUTLETS 6 BOLT MOUNTING FLANGE OR EQUAL, WITH 316 S.S. BREAK–OFF BOLTS.
7. STANDARD WATER MAIN THRUST BLOCK REFER TO DETAIL W10
8. CONCRETE SHOCK COLLAR, NOT USED IN SIDEWALK
9. CONCRETE SUPPORT PAD (CLASS B)
10. BREAKOFF SPOOL EPOXY COATED

NOTES:
1. POUR THRUST BLOCKS AGAINST UNDISTURBED EARTH. REFER TO DETAIL W10.
2. PROVIDE MINIMUM 3 CUBIC FEET OF DRAIN ROCK AROUND DRAIN OUTLETS AT FIRE HYDRANTS.
3. ALL BOLTS & NUTS USED SHALL BE 316 STAINLESS STEEL.
4. 12 GAUGE LOCATION WIRE TO BE CONNECTED TO MAIN LINE WIRE. LEAVE 3' EXTRA WIRE COILED IN VALVE BOX.
5. SEE STANDARD GATE VALVE ASSEMBLY.
6. 3' MIN. CLEARANCE AROUND HYDRANT FOR FIRE PROTECTION PURPOSE.
7. REQUIRES FIELD LOCK GASKETS ON ASSEMBLY'S.

FIRE HYDRANT ASSEMBLY C-316
NOT TO SCALE TYP



NOTE:

1. SHALLOW PIPE INSTALLATIONS WITH PIPE COVER LESS THAN 3' SHALL BE DUCTILE IRON PIPE, OR CAPPED WITH CONCRETE.

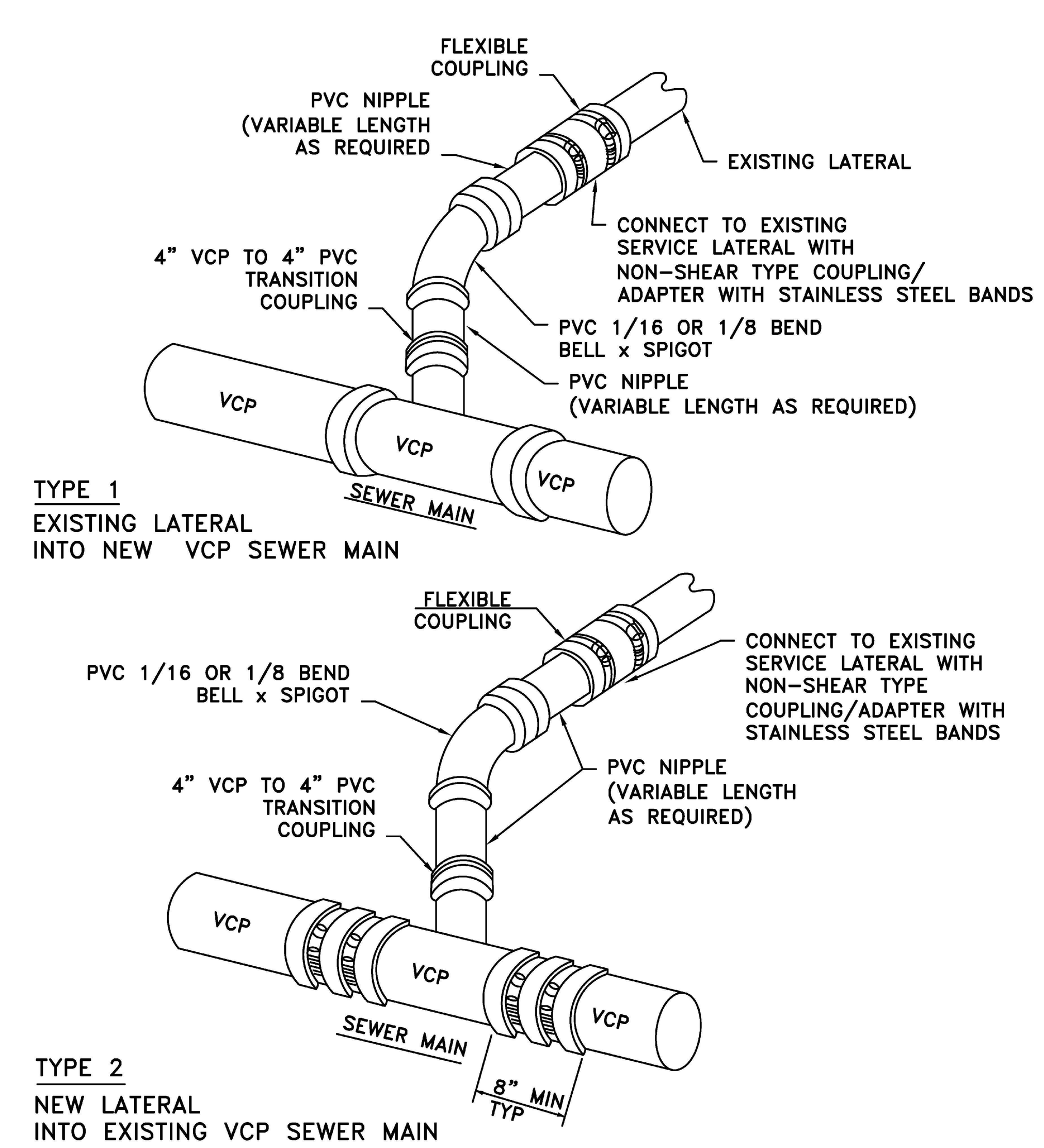
2. BEDDING AND STRUCTURAL BACKFILL MATERIAL SHALL BE IMPORTED 3/4" CLASS II MATERIAL (CALTRANS CALIF. TEST 202) WITH A MIN. SAND EQUIVALENT OF 20.

SIEVE SIZES	PERCENTAGE PASSING
1–1/2"	100
3/4"	80–100
#4	30–60
#30	5–35
#200	0–12

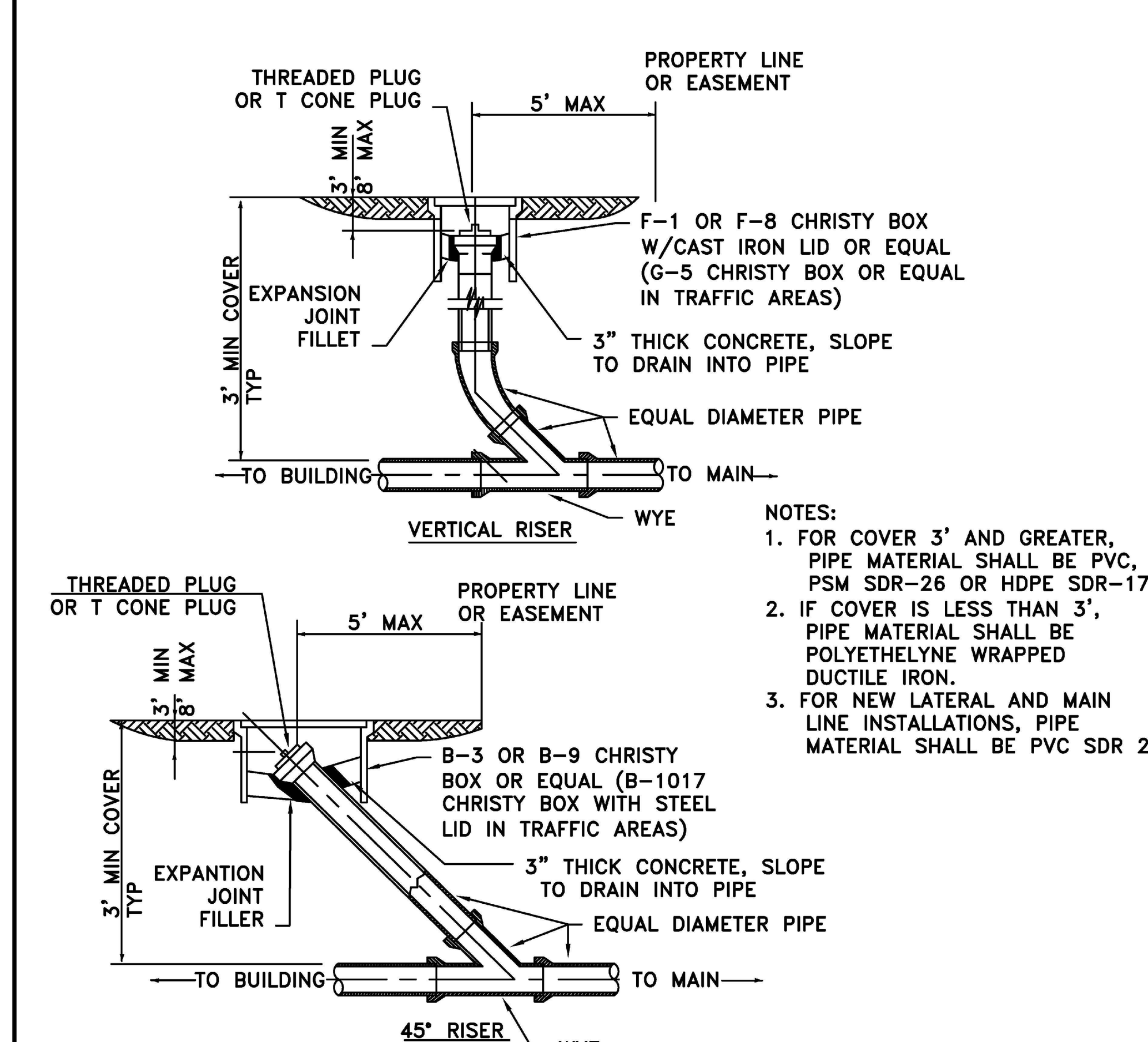
3. PAVEMENT RESTORATION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE CITY OF EAST PALO ALTO AND THE CITY OF MENLO PARK.

4. CERTAIN SITE CONDITIONS MAY REQUIRE THE USE OF FILTER FABRIC AND DRAIN ROCK TO ASSURE PROPER PIPE INSTALLATION. THE USE OF DRAIN ROCK MUST BE APPROVED BY DISTRICT ENGINEER.

APPROVED BY: /S/ – RICH LAURETA, P.E. DISTRICT ENGINEER DATE: 03–05–15
EPASD EAST PALO ALTO SANITARY DISTRICT
STANDARD TRENCH
DETAIL 4

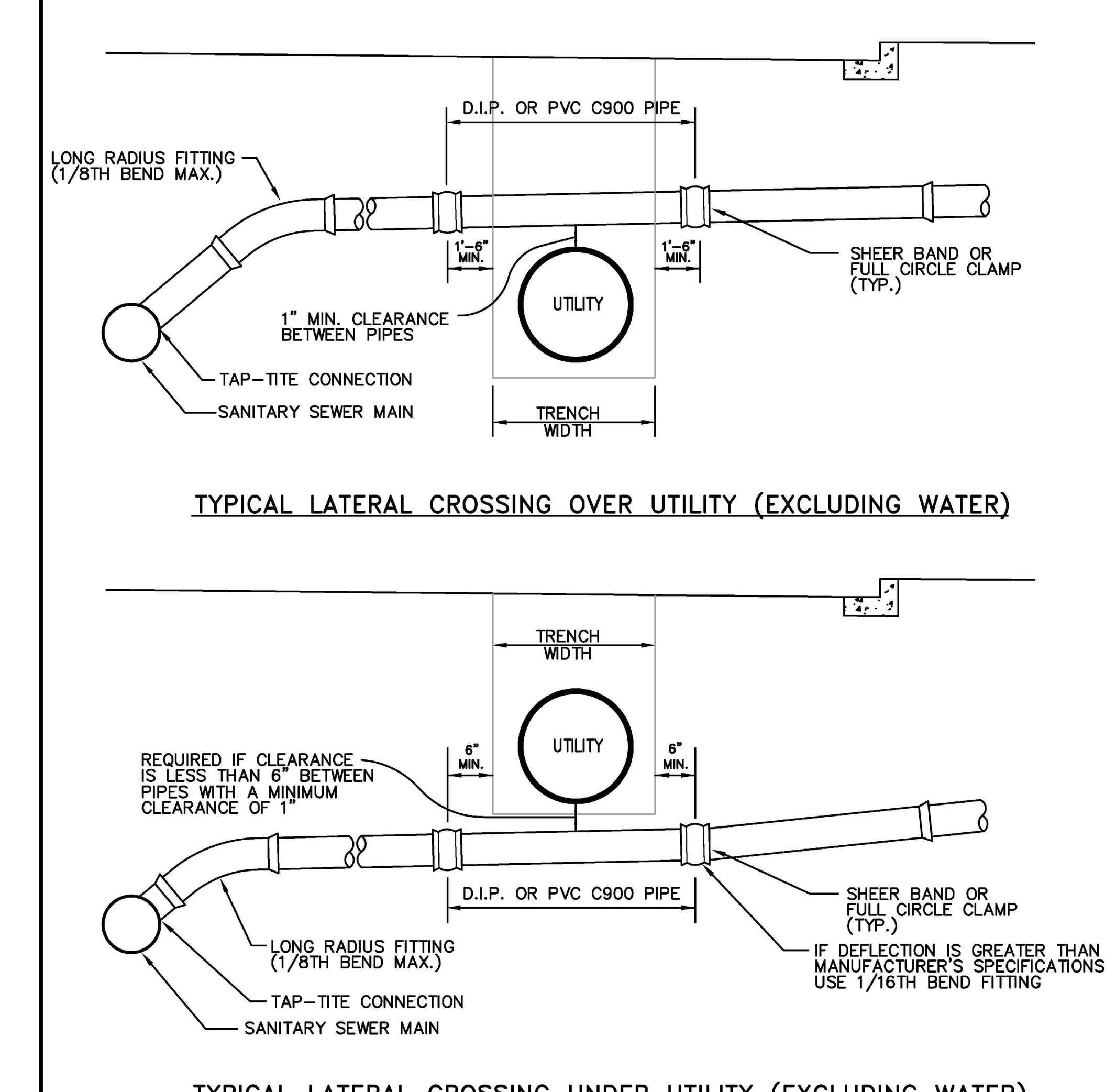


APPROVED BY: /S/ – RICH LAURETA, P.E. DISTRICT ENGINEER DATE: 03–05–15
EPASD EAST PALO ALTO SANITARY DISTRICT
LATERAL CONNECTION TO VCP MAIN TYPE 1 & TYPE 2
DETAIL 6



NOTES:
1. FOR COVER 3' AND GREATER, PIPE MATERIAL SHALL BE PVC, PSM SDR–26 OR HDPE SDR–17.
2. IF COVER IS LESS THAN 3', PIPE MATERIAL SHALL BE POLYETHELYNE WRAPPED DUCTILE IRON.
3. FOR NEW LATERAL AND MAIN LINE INSTALLATIONS, PIPE MATERIAL SHALL BE PVC SDR 26

APPROVED BY: /S/ – RICH LAURETA, P.E. DISTRICT ENGINEER DATE: 03–05–15
EPASD EAST PALO ALTO SANITARY DISTRICT
TYPICAL SERVICE LATERAL CLEANOUT
DETAIL 8



NOTE:
1) PIPE SHALL BE D.I.P, PVC SDR 27, OR PVC C–900 DR 18.
2) CONTROLLED DENSITY FILL SHALL BE USED AS BACKFILL BETWEEN SANITARY SEWER AND CROSSING UTILITY.

APPROVED BY: /S/ – RICH LAURETA, P.E. DISTRICT ENGINEER DATE: 03–05–15
EPASD EAST PALO ALTO SANITARY DISTRICT
SANITARY SEWER LATERAL UTILITY CROSSING (EXCLUDING WATER)
DETAIL 10

100% SUBMITTAL

NOT FOR CONSTRUCTION

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(650) 292-9100 FAX (650) 552-9012

PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

CIVIL DETAILS (SHEET 2 OF 2)

REV	DESCRIPTION	APPR'D	DATE
B	100% SUBMITTAL	NJS	09-23-20
A	60% SUBMITTAL	NJS	06-18-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: CCR
DESIGNED: TFC
APPROVED: NJS
JOB NO.: B40039.00

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
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SHEET NUMBER
C-6

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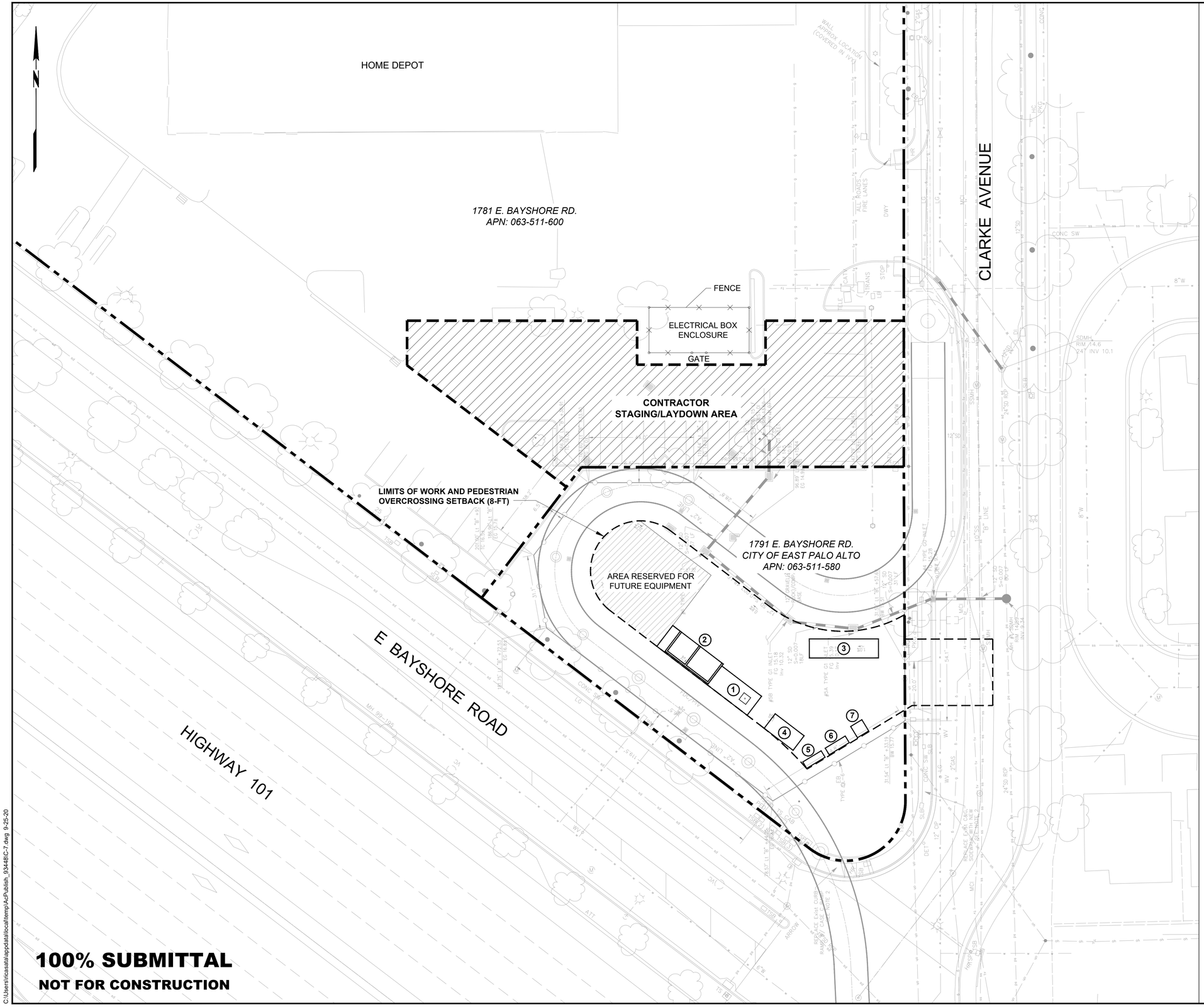

ID	STRUCTURAL/EQUIPMENT
1	(N) WELL AND WELL PUMP
2	(N) CHEMICAL FACILITIES, EMERGENCY SHOWER AND INSTRUMENTS
3	(N) HYDROPNEUMATIC TANK
4	(N) EMERGENCY GENERATOR
5	(N) SWITCHBOARD
6	(N) MOTOR CONTROL CENTER
7	(N) TRANSFORMER PAD

100% SUBMITTAL
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BURLINGAME, CALIFORNIA 94010-5306
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PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

CONTRACTOR STAGING/LAYDOWN AREA

REV	DESCRIPTION	APPRD	DATE
B	100% SUBMITTAL	NJS	09-23-20
A	60% SUBMITTAL	NJS	08-11-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: CCR
DESIGNED: TFC
APPROVED: NJS
JOB NO.: B60019.00

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REGISTERED PROFESSIONAL ENGINEER
NELSON J. SCHLATER
C 66547
CIVIL
STATE OF CALIFORNIA

SHEET NUMBER
C-7
11 OF 26

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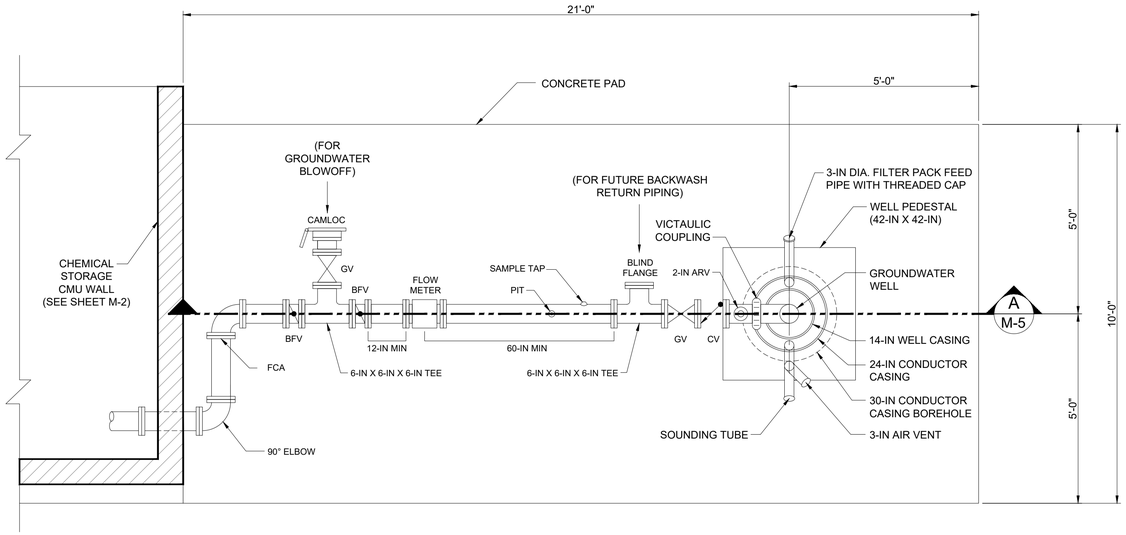
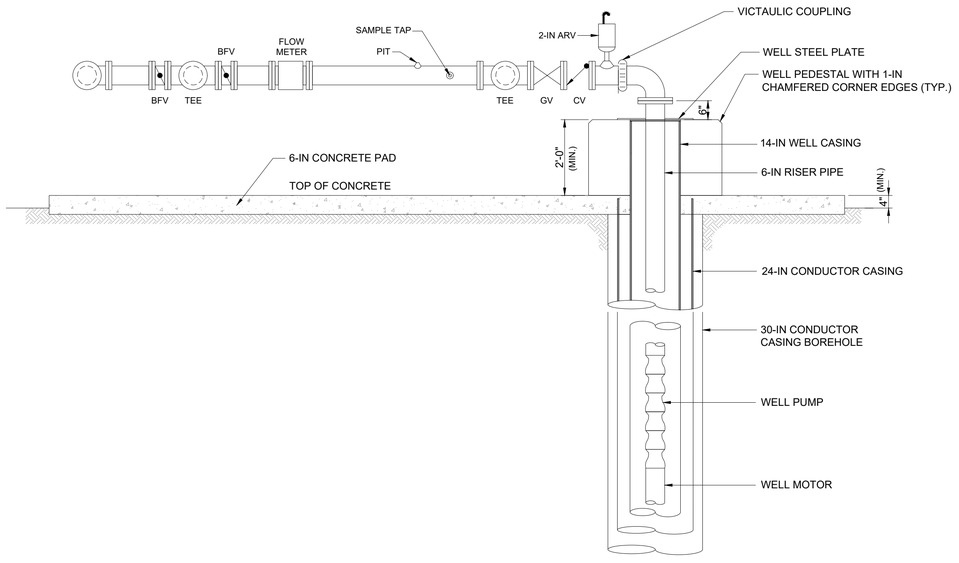


WELL PLAN — 1 / M-1

SCALE: 1/2" = 1'-0"



WELL SECTION — A / M-1

SCALE: 1/2" = 1'-0"

100% SUBMITTAL

NOT FOR CONSTRUCTION

NOTES:

1. CONTRACTOR SHALL DESIGN, LOCATE, AND INSTALL ALL PIPE SUPPORTS IN ACCORDANCE WITH SPECIFICATION 02400. TYPICAL PIPE SUPPORT DETAILS ARE SHOWN IN DWG M-4. TYPICAL PIPE SUPPORT DETAILS ARE SHOWN IN DWG M-4 FOR CONTRACTOR CONSIDERATION IN THEIR DESIGN.
2. FOR ALL PIPES BELOW AT GRADE SLABS, PROVIDE PIPE CONCRETE ENCASEMENT, SEE DETAIL C-240 DWG C-5.
3. FOR PIPE PENETRATION THROUGH CONCRETE SLAB, SEE DETAIL C-220 DWG C-5.
4. INSTALL AIR RELEASE VALVES AS INDICATED. ALL AIR RELEASE VALVES SHALL BE 1-INCH UNLESS OTHERWISE NOTED. FOR AIR RELEASE VALVES, SEE DETAIL M-110 DWG M-4. PROVIDE BOSS FOR PIPE TAPS IN ACCORDANCE WITH AWWA C151.
5. FOR PIPE TAPS, PROVIDE 1-INCH TAPS USING BRONZE DOUBLE STRAP SADDLE, IP OUTLET WITH CORP STOP, IPXIP. PROVIDE INSULATING BUSHING AT SADDLE. IF SPECIFIED AS A SAMPLE TAP, PROVIDE ½-INCH STAINLESS STEEL THREADED SAMPLING COCK.
6. PUMP DISCHARGE PIPING AIR VACUUM AIR RELEASE VALVE SHALL BE APCO SERIES 140 DAT OR APPROVED EQUAL.
7. PUMP DISCHARGE CHECK VALVE SHALL BE APCO SERIES 600 OR APPROVED EQUAL.
8. WELL PUMP SUPPLIER SHALL BE RESPONSIBLE FOR DESIGNING THE WELL PLATE IN ACCORDANCE WITH SPECIFICATION 11210.
9. ELECTRIC CONDUIT OPENING IN THE WELL PLATE TO BE COORDINATED WITH WELL PUMP SUPPLIER.
10. FOR FILTER PACK FEED PIPE, SOUNDING TUBE, AND AIR VENT, SEE DWG W-3.
11. RISER PIPE INTERMEDIATE CHECK VALVE TO BE LOCATED PER PUMP MANUFACTURER'S RECOMMENDATIONS.
12. BOTTOM OF WELL PUMP MOTOR SHALL BE SET 10-FT ABOVE HIGH WELL SCREENING ELEVATION OF APPROXIMATELY 240-FT BELOW GROUND SURFACE. CONTRACTOR TO FIELD VERIFY.
13. CONTRACTOR SHALL PROVIDE STRUCTURAL DESIGN SUBMITTAL, FOR FAVORABLE REVIEW BY ENGINEER, FOR THE WELL PEDESTAL AND WELL PAD. SEE DWG G-3, GENERAL NOTE 28.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL PIPE CONNECTIONS, DISSIMILAR MATERIAL CONNECTIONS, AND ANY OTHER PIPE SPOOLS AND APPURTENANCES AT NO EXTRA COST TO OWNER.

REGISTERED PROFESSIONAL ENGINEER
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PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

WELL
PLAN AND SECTION

REV	DESCRIPTION	APPRD	DATE
B	100% SUBMITTAL	NJS	09-23-20
A	60% SUBMITTAL	NJS	06-18-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: AVC
DESIGNED: TFC
APPROVED: NJS
JOB NO.: B60019.01

VERIFY SCALE
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SHEET NUMBER
M-1
12 OF 26

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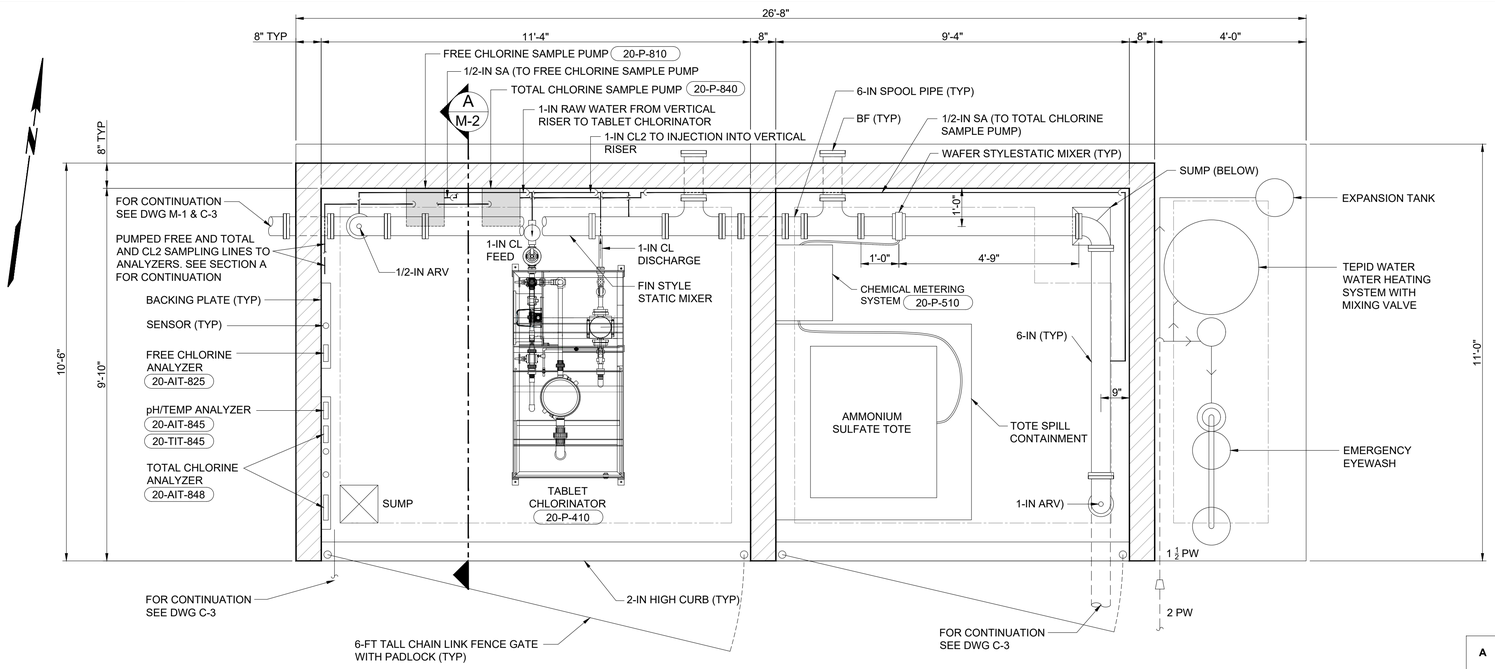


CHEMICAL STORAGE AND INSTRUMENTS

SCALE: 1/2" = 1'-0"

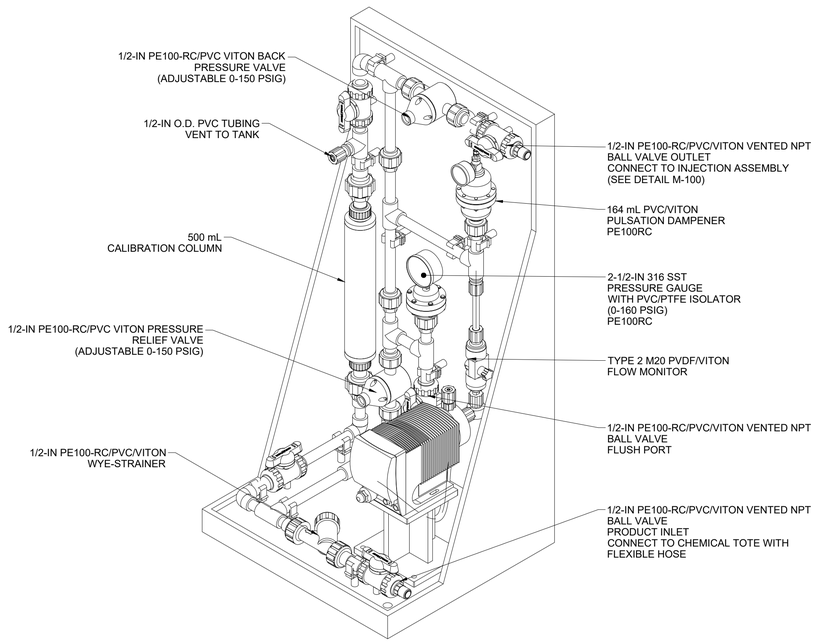
1 / M-2

INSTRUMENTS

A	20-AIT-825	FREE CHLORINE ANALYZER
B		FREE CHLORINE SENSOR
C		TOTAL CHLORINE SENSOR
D	20-AIT-848	TOTAL CHLORINE ANALYZER
E	20-AIT-845 20-TIT-845	pH/TEMP ANALYZER
F		pH SENSOR
G		TEMPERATURE SENSOR

NOTES:

1. CONTRACTOR SHALL DESIGN, LOCATE, AND INSTALL ALL PIPE SUPPORTS IN ACCORDANCE WITH SPECIFICATION 02400. TYPICAL PIPE SUPPORT DETAILS ARE SHOWN IN DWG M-4 FOR CONTRACTOR CONSIDERATION IN THEIR DESIGN.
2. FOR PIPE PENETRATION THROUGH CMU WALL, SEE DETAIL C-230 DWG C-5.
3. FOR ALL PIPES BELOW AT GRADE SLABS, PROVIDE PIPE CONCRETE ENCASEMENT, SEE DETAIL C-240 DWG C-5.
4. FOR PIPE PENETRATION THROUGH CONCRETE SLAB, SEE DETAIL C-200 DWG C-5.
5. INSTALL AIR RELEASE VALVES AS INDICATED. ALL AIR RELEASE VALVES SHALL BE 1-INCH UNLESS OTHERWISE NOTED. FOR AIR RELEASE VALVES, SEE DETAIL M-110 DWG M-4. PROVIDE BOSS FOR PIPE TAPS IN ACCORDANCE WITH AWWA C151.
6. FOR AMMONIUM SULFATE, INSTALL FLOOR MOUNTED CHEMICAL METER SYSTEM IN ACCORDANCE WITH DETAIL M-201 AND SPECIFICATION 11400.
7. INSTALL CHEMICAL INJECTION ASSEMBLY AT PIPE SPRING LINE AS INDICATED ON THE DRAWINGS AND PER DETAIL M-100 DWG M-4. PROVIDE HOSE CONNECTION FROM CHEMICAL STORAGE TO SUCTION SIDE OF CHEMICAL METERING SYSTEMS IN ACCORDANCE WITH SPECIFICATION 11400.
8. INSTALL 1-FT X 1-FT X 1-FT CHEMICAL SUMP WITH FIBERGLASS GRATING.
9. INSTALL TOTE CHEMICAL CONTAINMENT PALLETS IN ACCORDANCE WITH SPECIFICATION 11400.
10. PRE-ENGINEERED CANOPY OVER CHEMICAL AREA NOT SHOWN IN PLAN VIEW.
11. SAMPLE LINES AND CHLORINATOR INFLUENT AND DISCHARGE LINES SHOWN SCHEMATICALLY. CONTRACTOR SHALL PROVIDE SHOW DRAWING FOR FAVORABLE REVIEW SHOWING PROPOSED ROUTING AND CONNECTIONS.
12. CONTRACTOR SHALL PROVIDE STRUCTURAL DESIGN SUBMITTAL, FOR FAVORABLE REVIEW BY ENGINEER, FOR THE CHEMICAL STORAGE STRUCTURE AND CANOPY, AND TEBID WATER SYSTEM SLAB. SEE DWG G-3, GENERAL NOTE 28

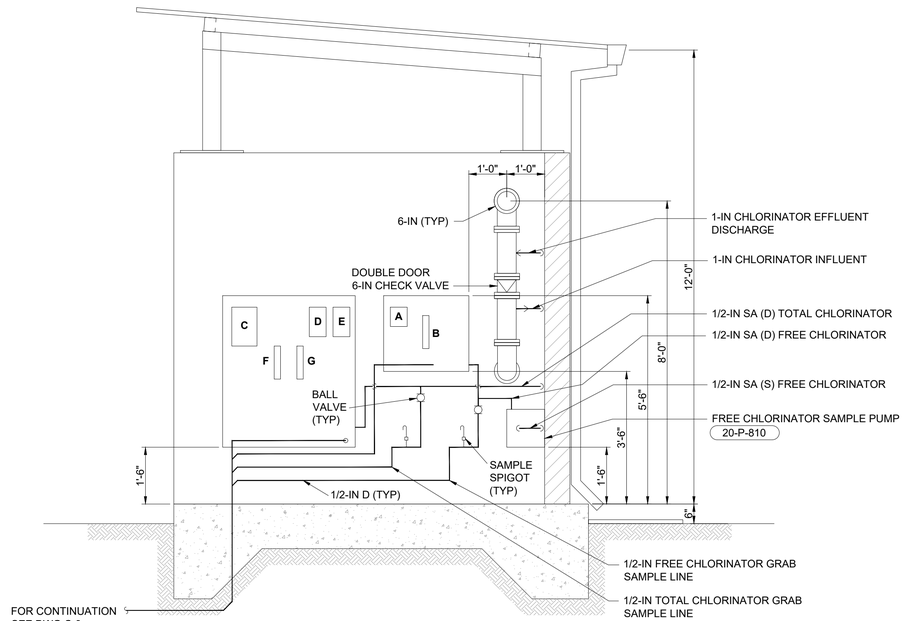


ISOMETRIC VIEW

TYPICAL FLOOR MOUNTED PACKAGE CHEMICAL METERING SYSTEM

SCALE: 1/2" = 1'-0"

M-201 / TYP



SECTION

SCALE: 1/2" = 1'-0"

A / TYP

100% SUBMITTAL

NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
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CIVIL
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EAST PALO ALTO, CALIFORNIA

CHEMICAL STORAGE AND INSTRUMENTS PLAN AND SECTIONS

REV	DESCRIPTION	APPRD	DATE
B	100% SUBMITTAL	NJS	09-23-20
A	60% SUBMITTAL	NJS	06-16-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: AVC
DESIGNED: TFC
APPROVED: NJS
JOB NO.: B60019.01

VERIFY SCALE
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SHEET NUMBER
M-2
13 OF 26

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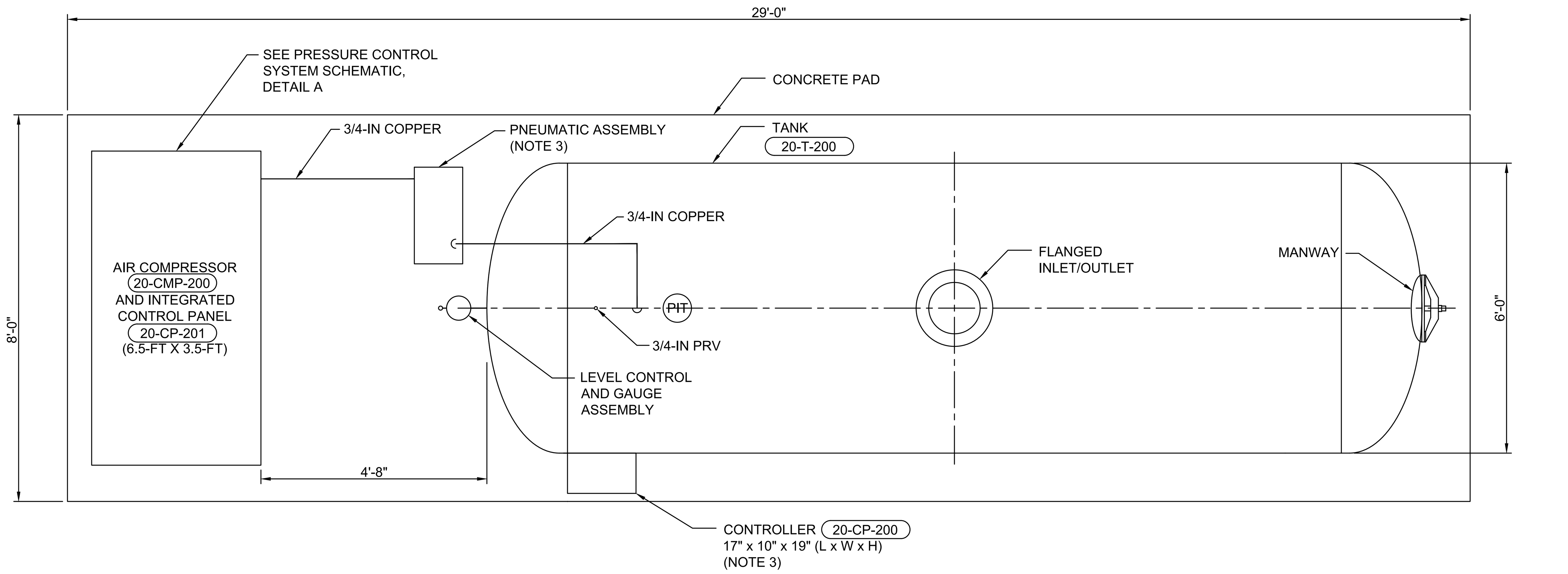
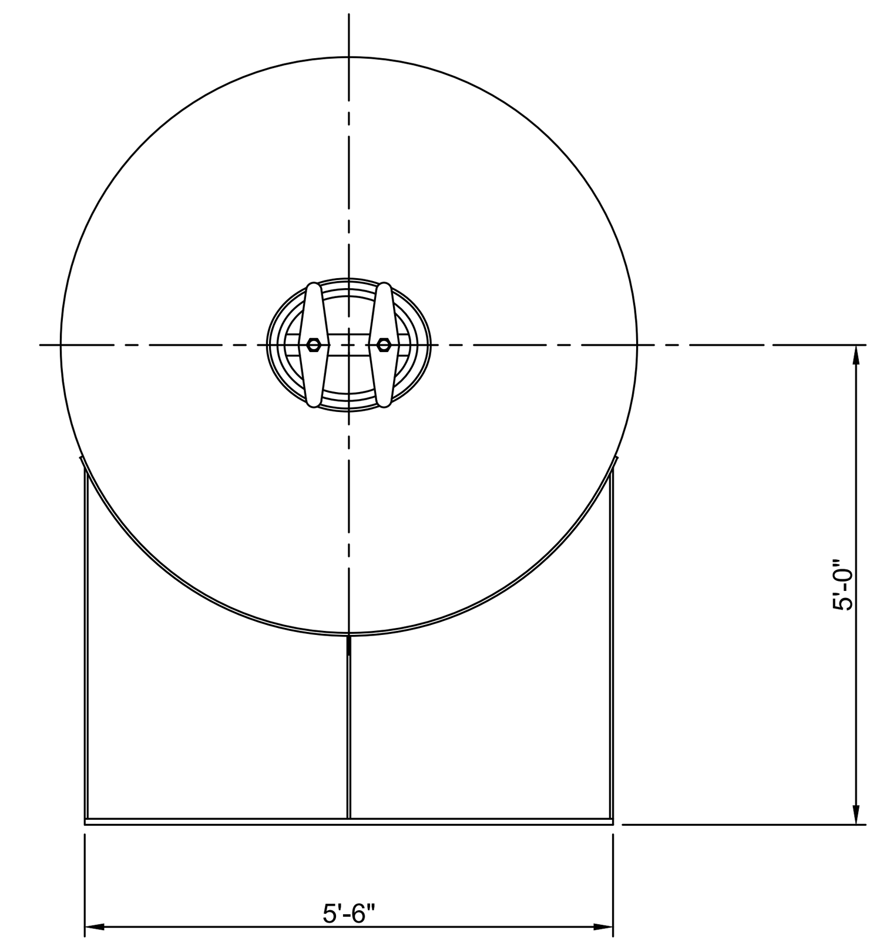
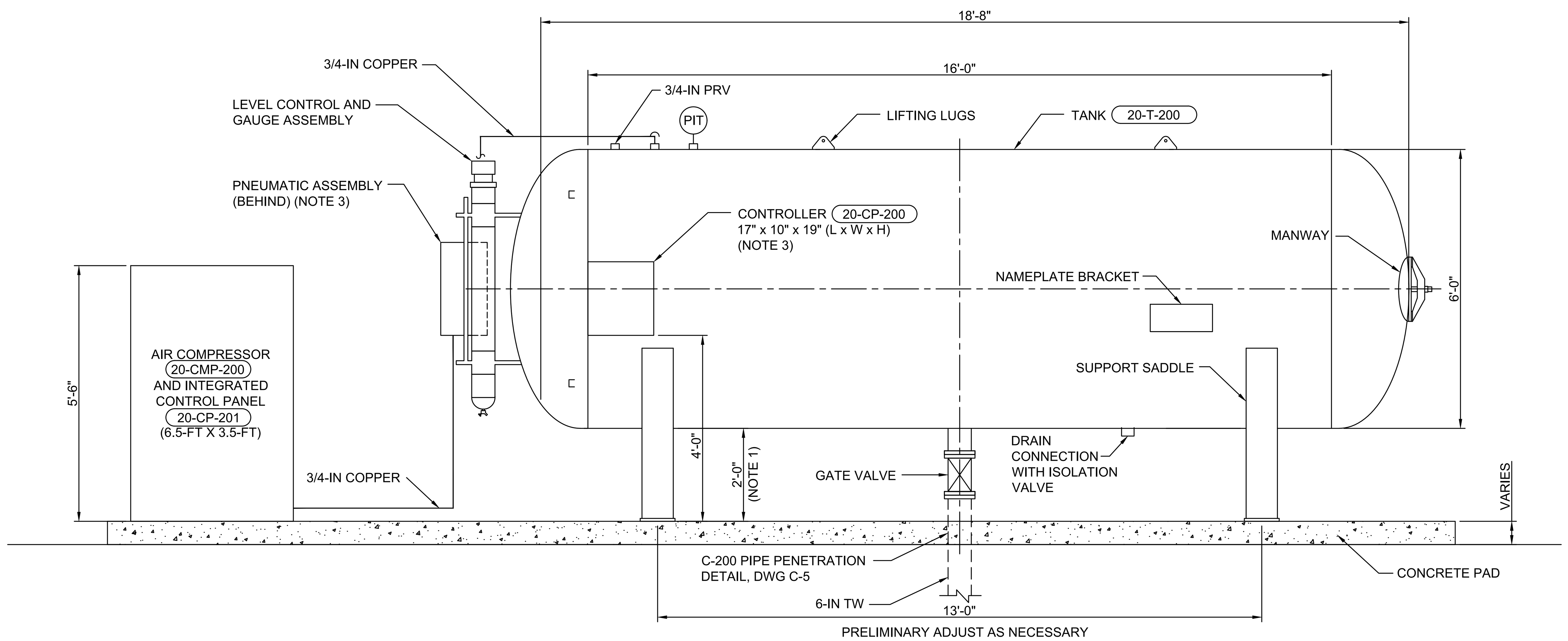


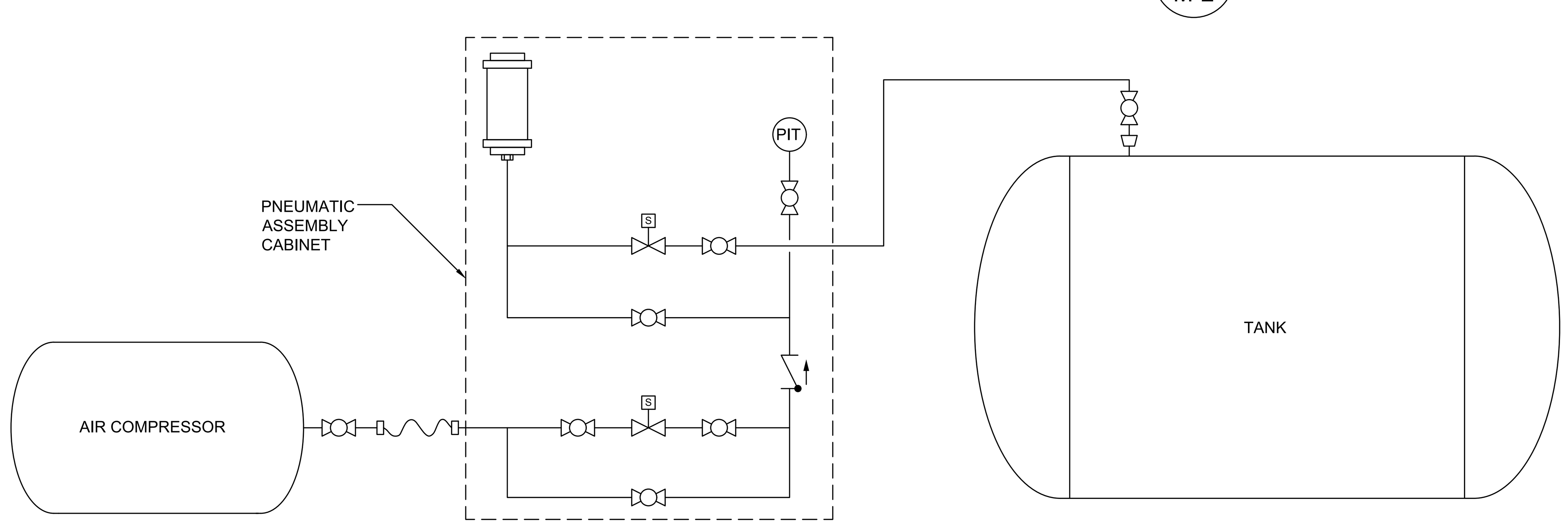
TOP PLAN
SCALE: 1/2" = 1'-0"
1 / M-2



SIDE VIEW
SCALE: 1/2" = 1'-0"
3 / M-2



ELEVATION VIEW
SCALE: 1/2" = 1'-0"
2 / M-2



HYDROPNEUMATIC TANK PRESSURE CONTROL SCHEMATIC - DETAIL
A / M-2

100% SUBMITTAL
NOT FOR CONSTRUCTION

NOTES:

1. CONTRACTOR TO VERIFY ALL DIMENSIONS AND LOCATIONS OF SUPPORTS WITH TANK SUPPLIER PRIOR TO INSTALLATION.
2. CONTRACTOR IS RESPONSIBLE FOR STRUCTURAL DESIGN OF PAD AND SHALL PROVIDE STRUCTURAL DESIGN SUBMITTAL FOR ENGINEER'S FAVORABLE REVIEW. SEE DWG G-3, GENERAL NOTE 28.
3. CONTRACTOR SHALL DESIGN STANCHION MOUNTING OF PNEUMATIC ASSEMBLY AND COORDINATE WITH TANK SUPPLIER TO MOUNT CONTROLLER TO TANK.

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PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

HYDROPNEUMATIC TANK PLAN AND SECTIONS

REV	DESCRIPTION	APPR'D	DATE
B	100% SUBMITTAL	NJS	09-23-20
A	60% SUBMITTAL	NJS	06-18-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: AVC
DESIGNED: TFC
APPROVED: NJS
JOB NO.: B60019.01

VERIFY SCALE
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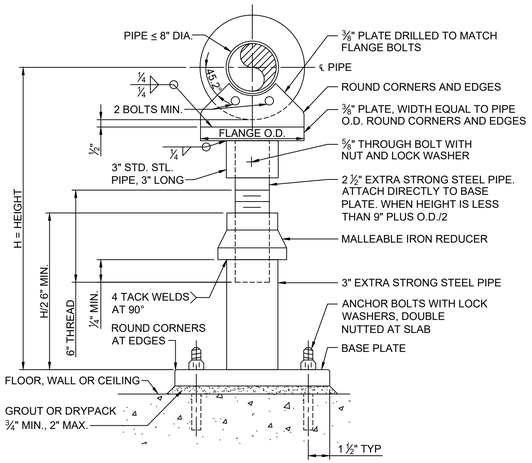
REGISTERED PROFESSIONAL ENGINEER
NELSON J. SCHLATER
C 66547
CIVIL
STATE OF CALIFORNIA

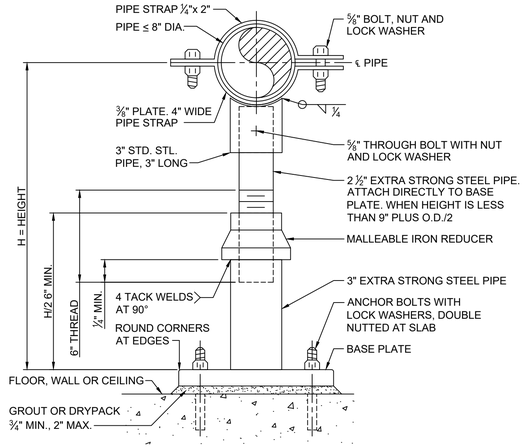
SHEET NUMBER
M-3



LOCATION	H (MAX.)	MEMBER	
		BASE PLATE	ANCHOR BOLTS
FLOOR	4'-6"	3/8"x12"x12"	4-5/8"
CEILING	4'-0"	5/8"x12"x12"	4-3/4"
WALL	1'-6"	5/8"x12"x12"	4-3/4"

NOTES:
1. AS AN ALTERNATE, IF ADJUSTMENT IS NOT NECESSARY, DELETE 2 ½" PIPE AND REDUCER AND WELD 3" STEEL PIPE DIRECTLY TO ⅜" PLATE ATTACHED TO PIPE FLANGE.
2. DO NOT CUT OR WELD AFTER GALVANIZING.
3. PIPE SUPPORT MAY BE ORIENTED IN ANY DIRECTION.

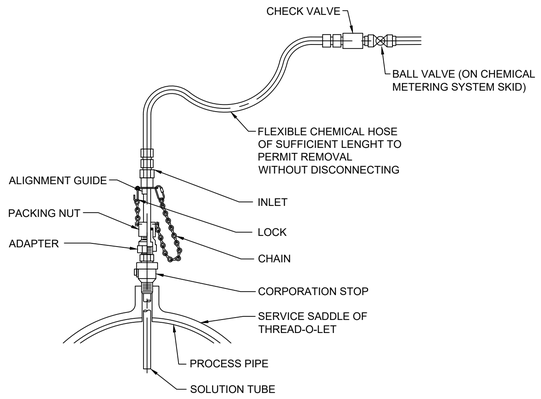
PIPE SUPPORT 1
NOT TO SCALE -



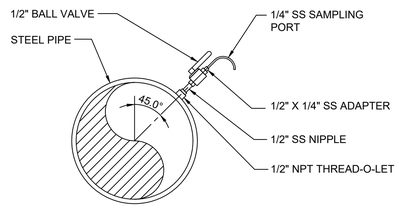
LOCATION	H (MAX.)	MEMBER	
		BASE PLATE	ANCHOR BOLTS
FLOOR	4'-6"	3/8"x12"x12"	4-5/8"
CEILING	4'-0"	5/8"x12"x12"	4-3/4"
WALL	1'-6"	5/8"x12"x12"	4-3/4"

NOTES:
1. AS AN ALTERNATE, IF ADJUSTMENT IS NOT NECESSARY, DELETE 2 ½" PIPE AND REDUCER AND WELD 3" STEEL PIPE DIRECTLY TO BOTTOM OF STRAP.
2. DO NOT CUT OR WELD AFTER GALVANIZING.
3. PIPE SUPPORT MAY BE ORIENTED IN ANY DIRECTION.
4. FOR USE IN CORROSIVE ENVIRONMENTS, SUPPORTS AND APPARATUSES SHALL BE TYPE 316 STAINLESS STEEL.

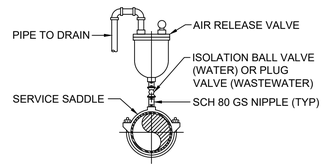
PIPE SUPPORT 2
NOT TO SCALE -



TYPICAL CHEMICAL INJECTION ASSEMBLY M-100
NOT TO SCALE TYP



TYPICAL SAMPLE TAP M-120
NOT TO SCALE TYP



TYPICAL AIR RELEASE VALVE M-110
NOT TO SCALE TYP

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REGISTERED PROFESSIONAL ENGINEER
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(650) 292-9100 FAX (650) 552-9012

PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

MECHANICAL DETAILS

REV	DESCRIPTION	APPRD	DATE
1	100% SUBMITTAL	NJS	09-23-20
0	60% SUBMITTAL	NJS	06-18-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: AVC
DESIGNED: TFC
APPROVED: NJS
JOB NO.: B60019.01

VERIFY SCALE
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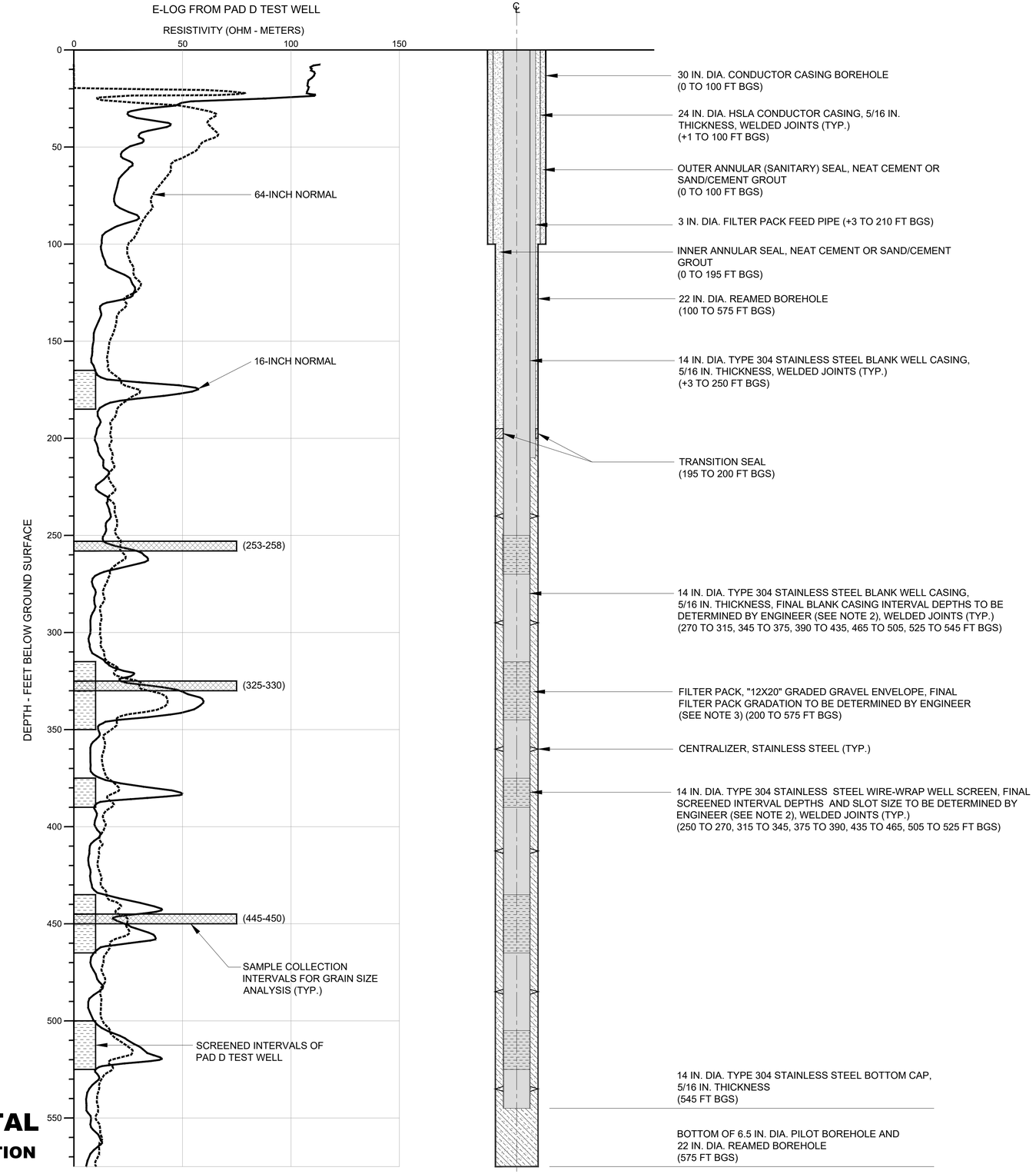
SHEET NUMBER
M-4
15 OF 26



100% SUBMITTAL

NOT FOR CONSTRUCTION

NOTES:

1. E-LOG FROM PAD D TEST WELL (AUGUST 2014). SEE SHEET C-1 FOR PAD D TEST WELL LOCATION. BOREHOLE GEOPHYSICAL LOG DEPICTED MAY NOT REPRESENT CONDITIONS AT DRILLED WELL LOCATION.
2. FINAL SCREEN SLOT SIZE TO BE DETERMINED BY ENGINEER BASED ON GRAIN SIZE ANALYSIS OF FORMATION SAMPLES COLLECTED FROM PILOT BOREHOLE (SEE SPECIFICATION SECTION 02520 PARAGRAPH 1.06A, SCREEN LENGTH AND APERTURE SELECTION PERIOD).
3. FINAL FILTER PACK GRADATION BASED ON DATA COLLECTED DURING DRILLING OF THE PILOT BOREHOLE. (SEE SPECIFICATIONS SECTION 02520 PARAGRAPH 1.06B, FILTER PACK SELECTION PERIOD).
4. TYPICAL DEPTH TO WATER IN PAD D TEST WELL IS 0 TO 8.5 FT BGS.

DESIGN CRITERIA:

WELL CAPACITY = 500 GPM
DEPTH OF PERMANENT PUMP = 240 FT BGS
PLUMBNESS TOLERANCE = MAX. ALLOWABLE DRIFT FROM VERTICAL NO GREATER THAN 2/3 OF SMALLEST INSIDE DIAMETER OF CASING PER 100 FEET DEPTH

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PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

WELL PROFILE

REV	DESCRIPTION	APPRD	DATE
B	100% SUBMITTAL	CH	09-23-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: CCR
DESIGNED: CSH/JRS
APPROVED: NJS
JOB NO.: B60019.01

VERIFY SCALE
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SHEET NUMBER
W-1
16 OF 26

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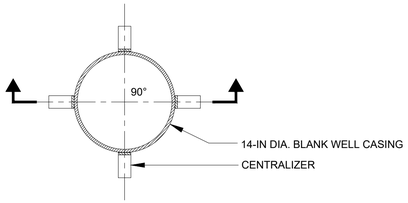
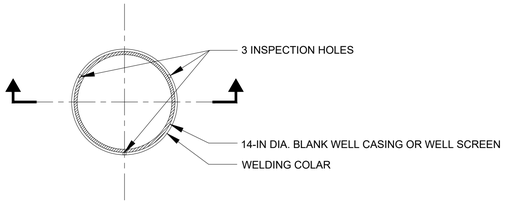
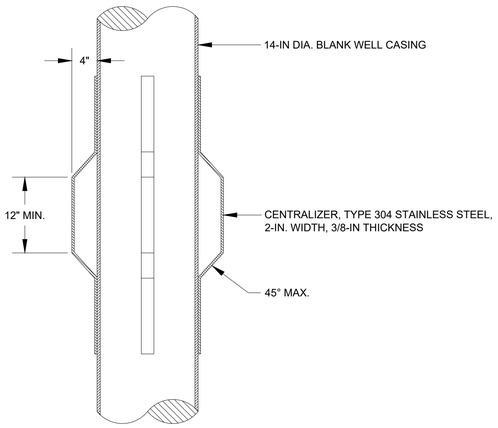


PLAN

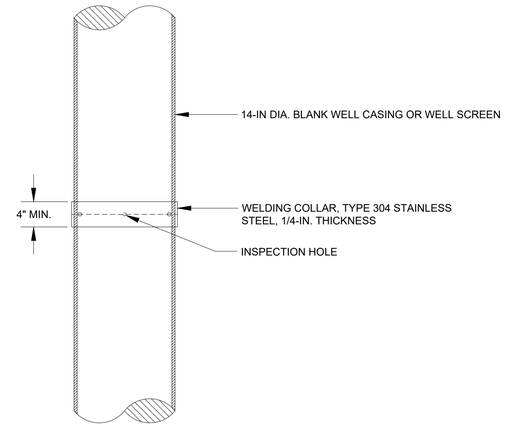


PLAN



SECTION

CENTRALIZER DETAIL 1
NOT TO SCALE W-5



SECTION

WELDING COLLAR DETAIL 2
NOT TO SCALE W-5

100% SUBMITTAL
NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
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PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

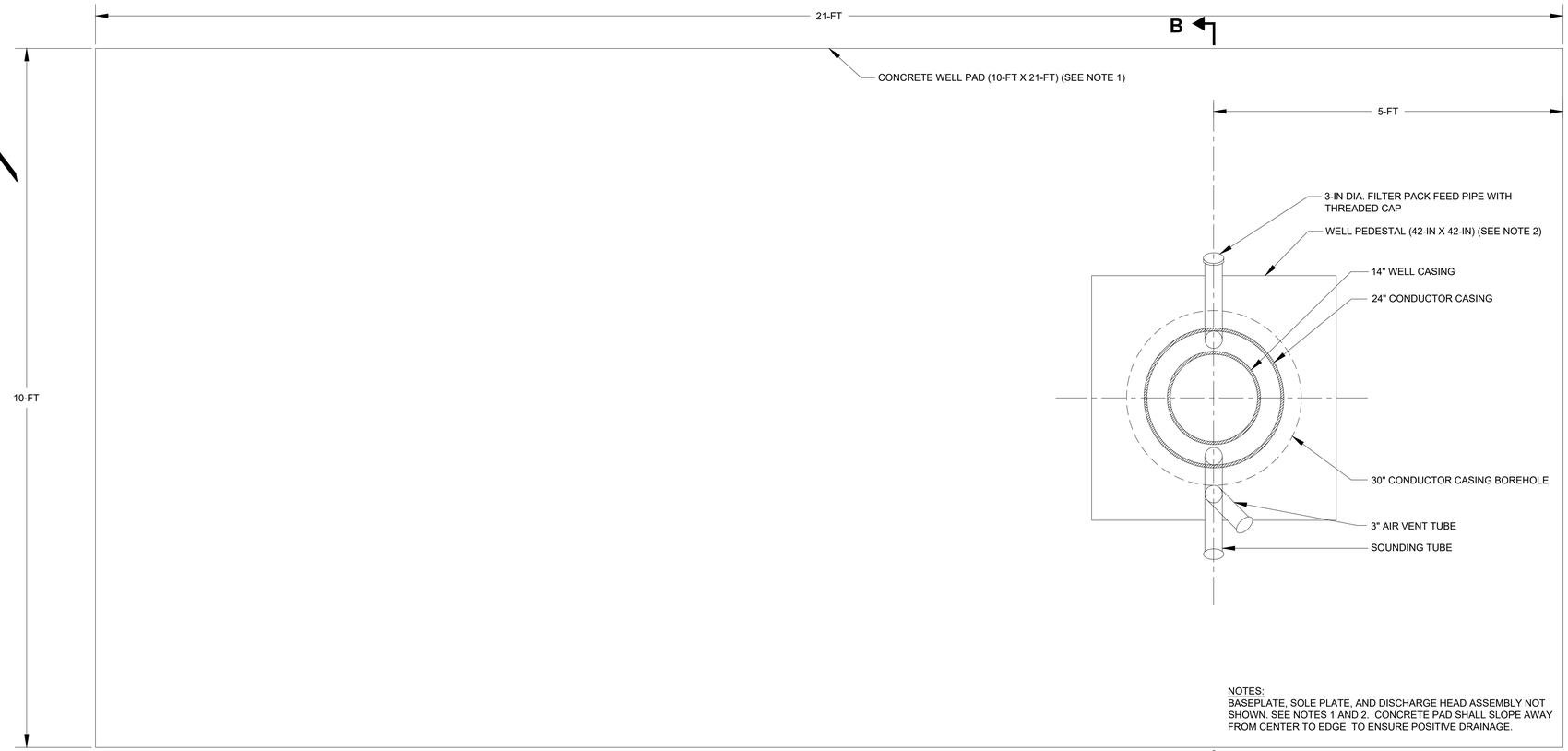
WELL DETAILS

REV	DESCRIPTION	APPRD	DATE
B\	100% SUBMITTAL	CH	09-23-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: CCR
DESIGNED: CSH/JRS
APPROVED: NJS
JOB NO.: B40039.01

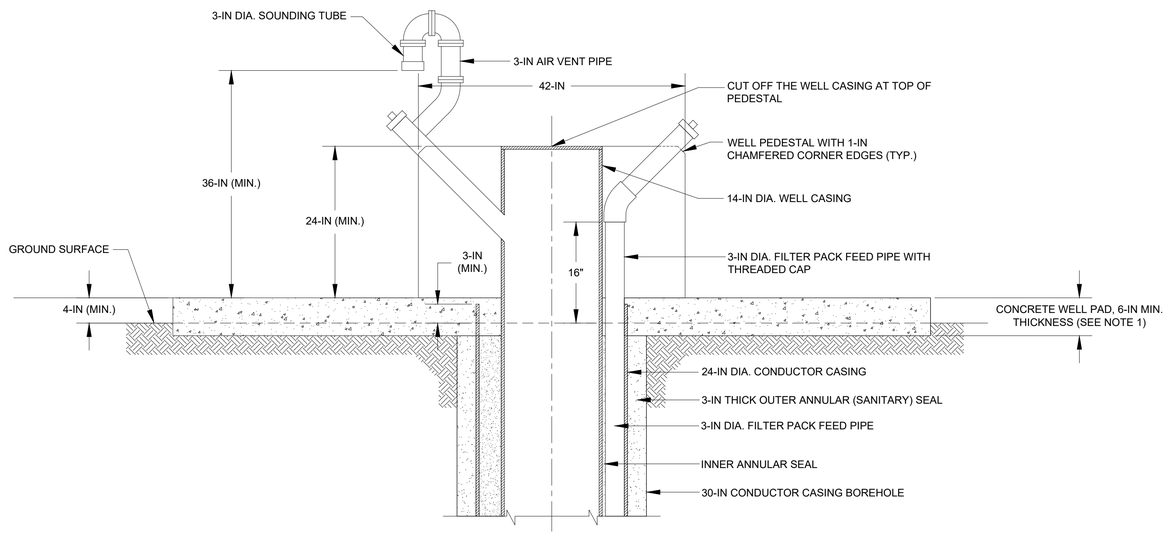
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SHEET NUMBER
W-2
17 OF 26



WELL HEAD PLAN

NOT TO SCALE



WELL HEAD SECTION

NOT TO SCALE

B

W-3

NOTES:
BASEPLATE, SOLE PLATE, AND DISCHARGE HEAD ASSEMBLY NOT SHOWN. SEE NOTES 1 AND 2. CONCRETE PAD SHALL SLOPE AWAY FROM CENTER TO EDGE TO ENSURE POSITIVE DRAINAGE.

100% SUBMITTAL

NOT FOR CONSTRUCTION

NOTES:

1. CONTRACTOR SHALL PROVIDE STRUCTURAL DESIGN SUBMITTAL FOR THE WELL PEDESTAL AND WELL PAD.
2. CONTRACTOR SHALL DESIGN WELL PEDESTAL TO INCORPORATE A SOUNDING TUBE WITH THREADED CAP AND AIR VENT, FILTER PACK FEED PIPE WITH THREADED CAP, ELECTRICAL, AND OTHER APPROPRIATE APPURTENANCES. DESIGN SHALL BE IN CONFORMANCE WITH ALL APPLICABLE CODES AND REGULATIONS AS LISTED IN SPECIFICATIONS SECTION 02520 PARAGRAPH 1.02.

ekI environment & water
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BURLINGAME, CALIFORNIA 94010-5306
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PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

WELL SURFACE COMPLETION PLAN AND SECTION

REV	DESCRIPTION	APPRD	DATE
B	100% SUBMITTAL	CH	09-23-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: CCR
DESIGNED: CSH/JRS
APPROVED: NJS
JOB NO.: B60019.01

VERIFY SCALE
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REGISTERED PROFESSIONAL ENGINEER
NELSON J. SCHLATER
C 66547
CIVIL
STATE OF CALIFORNIA

SHEET NUMBER

W-3

18 OF 26

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
XXXXXXXX	XXXXXXXX	EQUIPMENT IDENTIFIER AS DEFINED BY THE PROCESS
ZXXX	ZXXX	CONDUIT ID: Z = CONDUIT TYPE (AS NOTED OR SCHEDULED) XXX = NUMBER PER SCHEDULE (NOTE 3)
MOV	MOV	MOTOR OPERATED VALVE
	G	GENERATOR, RATINGS AND CONNECTIONS AS NOTED
#	M	MOTOR, NUMERAL INDICATES HORSEPOWER
UTILITY METER	N/A	UTILITY METER
DMM	N/A	DIGITAL MULTIMETER
TRIP FRAME TRIP FRAME	CB	LOW VOLTAGE AIR OR MOLDED CASE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED; STABS INDICATE DRAWOUT TYPE
*	*	SOLID STATE MOTOR CONTROL * D.C. = D.C. DRIVE CONTROLLER SCR = SILICON CONTROLLED RECTIFIER VFD = VARIABLE FREQUENCY DRIVE RVSS = REDUCED VOLTAGE SOLID STATE
SPD	N/A	SURGE PROTECTION DEVICE
MCP * #		COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC MOTOR STARTER, FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE NOTED: * FVR FULL VOLTAGE REVERSING 2S2W TWO SPEED, TWO WINDING RVAT REDUCED VOLTAGE, AUTO TRANSFORMER # NUMERAL INDICATES NEMA SIZE
*		NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE * AMPERE RATING NOTED IF OTHER THAN 30A
* #	F	FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE, AMPERE RATING AND FUSE SIZE AS NOTED * AMPERE RATING NOTED IF OTHER THAN 30A # FUSE RATING EXAMPLE 15
	P 2	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD HEATER "P" INDICATES WITH PILOT LIGHT "2" INDICATES TWO POLE
*	T	POWER TRANSFORMER, * RATINGS AND CONNECTIONS AS SHOWN ON THE SINGLE LINE DIAGRAM
*	T	CONTROL TRANSFORMER, * RATINGS AND CONNECTIONS AS SHOWN ON THE SINGLE LINE DIAGRAM
100A ATS-1 N S	N/A	AUTOMATIC TRANSFER SWITCH NO. 1 (ATS-1) "N" INDICATES NORMAL SOURCE "S" INDICATES STANDBY SOURCE 100A INDICATES CONTINUOUS CURRENT RATING
*	N/A	ARRESTOR, TYPE AS INDICATED * LA = LIGHTNING SURGE ARRESTOR SA = SURGE ARRESTOR
		GROUND OR GROUND ROD
		TERMINAL LUG, TERMINATION POINT, OR GROUNDING BOND POINT
30A	N/A	FUSE, AMPERE RATING AS NOTED
	N/A	CONTACT, NORMALLY OPEN (NO)
	N/A	CONTACT, NORMALLY CLOSED (NC)
MS #	N/A	MOTOR STARTER COIL, NUMBER AS INDICATED
CR #	N/A	CONTROL RELAY COIL, NUMBER AS INDICATED
#	N/A	KEY INTERLOCK: # - KEY NUMBER AS INDICATED
E	N/A	ELECTRICAL INTERLOCK

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	N/A	TERMINAL TO EXTERNAL DEVICE (FIELD OR OTHER PANEL)
	N/A	NETWORK CONNECTION TERMINATION
N/A	*- ## CS	CONTROL STATION, TAG NO. AS INDICATED * DEVICE TYPE DEFINED ON P&ID SHEETS OR CONTROL DIAGRAMS ## LOOP NO.
	CS	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY CLOSED
	CS	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY OPEN
	CS	EMERGENCY STOP PUSHBUTTON WITH RED MUSHROOM HEAD OPERATOR (MAINTAINED CONTACT)
A B	CS	SELECTOR SWITCH A ON LOCAL B OFF REMOTE
O H A (XOO) (OXO) (OOX)	CS	3 POSITION SELECTOR SWITCH, MAINTAINED CONTACT O-OPEN X-CLOSED POSITION / TOP CONTACT / MIDDLE CONTACT / BOTTOM CONTACT A / X / 0 / 0 B / 0 / X / 0 C / 0 / 0 / X NAMEPLATE (A/B/C) * HOA - HAND/OFF/AUTO HOR - HAND/OFF/REMOTE LOR - LOCAL/OFF/REMOTE OSC - OPEN/STOP/CLOSE
	N/A	PILOT LIGHT AND PILOT LIGHT PUSH-TO-TEST TYPE COLOR AS NOTED * R - RED G - GREEN B - BLUE W - WHITE A - AMBER
# TD	N/A	TIME DELAY RELAY, NUMBER AS INDICATED RANGE AS NOTED SETPOINT AS NOTED
	N/A	NOTC-NORMALLY OPEN, TIMED CLOSING WHEN ENERGIZED (ON DELAY)
	N/A	NCTO-NORMALLY CLOSED, TIMED OPENING WHEN ENERGIZED (ON DELAY)
	N/A	NOTO-NORMALLY OPEN, TIMED OPENING WHEN DE-ENERGIZED (OFF DELAY)
	N/A	NCTC-NORMALLY CLOSED, TIMED CLOSING WHEN DE-ENERGIZED (OFF DELAY)
N/A	*- ##	FIELD INSTRUMENT, TAG NO. AS INDICATED * INSTRUMENT TYPE DEFINED ON P&ID SHEETS, CONTROL DIAGRAMS, AND DIVISION 13 ## LOOP NO.
		LIQUID LEVEL SWITCH NORMALLY OPEN, CLOSES ON RISING LEVEL NORMALLY CLOSED, OPENS ON RISING LEVEL NORMALLY OPEN, CLOSES ON DROPPING LEVEL
		PRESSURE SWITCH NORMALLY OPEN, CLOSES ON RISING PRESSURE NORMALLY CLOSED, OPENS ON RISING PRESSURE
		FLOW SWITCH (AIR, WATER, ETC.) NORMALLY OPEN, CLOSES ON INCREASED FLOW NORMALLY CLOSED, OPENS ON INCREASED FLOW
		POSITION (LIMIT) SWITCH NORMALLY OPEN NORMALLY OPEN - HELD CLOSED NORMALLY CLOSED NORMALLY CLOSED - HELD OPEN
	T	TEMPERATURE SWITCH OR ROOM THERMOSTAT NORMALLY OPEN, CLOSES ON RISING TEMPERATURE
	HTR	STRIP HEATER OR HEATING ELEMENT
	SV	SOLENOID VALVE

SUBTITLE
ASSOCIATED SPECIFICATION DIVISION NUMBER
DETAIL NUMBER
DETAIL NTS
16110 VAR
16410 GE-2
SHEET NO. WHERE DETAIL IS DRAWN

SYMBOL WHERE THERE IS A DETAIL
SYMBOL WHERE DETAIL IS DRAWN

DETAIL SYMBOL
(NOTE 2)

PLAN	DESCRIPTION
NEMA X	NEMA AREA: "X" INDICATES REQUIRED NEMA RATING OF EQUIPMENT IN THE AREA
	EXPOSED CONDUIT (SEE NOTE 4)
	CONCEALED CONDUIT (SEE NOTE 4)
1 E-10	UNDERGROUND DUCT BANK, CONCRETE ENCASED UNLESS OTHERWISE NOTED. CONDUIT ARRAY SHOWN IN SECTION 1 ON SHEET E-10.
G 1,3,LP-1	HOMERUN TO PANEL AND CIRCUIT SHOWN WITH TICK MARK INDICATES NUMBER OF CONDUCTORS: SHORT TICK = HOT LONG TICK = NEUTRAL LONG TICK WITH "G"= GROUND EXAMPLE SHOWN: CIRCUITS 1 AND 3 TO PANEL LP-1 (HOT, HOT, NEUTRAL, AND GROUND). (SEE NOTE 3)
	CONDUIT STUBBED OUT AND CAPPED
	FLEXIBLE METAL CONDUIT "WHIP" FOR RECESSED LIGHTING FIXTURES AND LIQUID TIGHT MOTOR CONNECTIONS (SEE NOTE 4)
	CONDUIT TURNING DOWN
	CONDUIT TURNING UP
	CONDUIT, CIRCUIT, OR EQUIPMENT TO BE DEMOLISHED
	LIGHTING PANELBOARD (120, 208, 240V)
UPS	UNINTERRUPTIBLE POWER SUPPLY
A 3b	CEILING MOUNTED LIGHTING FIXTURE "A" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "b" - CONTROLLED BY SWITCH "b" "3" - CIRCUIT NUMBER
A 3b	PENDANT OR SURFACE MOUNTED LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
A 3b	WALL MOUNTED LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
A 3b	POLE MOUNTED LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
A 3b A 3b	CROSS HATCH INDICATES LIGHTING FIXTURE FOR EMERGENCY EGRESS LIGHTING
A 3	EMERGENCY LIGHTING FIXTURE. NOTATIONS SAME AS ABOVE (NO SWITCHING REQUIRED)
E	EXIT SIGN. ARROW INDICATES DIRECTION OF EGRESS
$ 3 b	MULTIPLE POLE SWITCH # INDICATES NUMBER OF POLES (2, 3 OR 4); BLANK IS SINGLE POLE "a" INDICATES SWITCHLEG SHALL CONTROL LIGHT FIXTURES WITH "a" DESIGNATION
* 4	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W, NUMBER INDICATES CIRCUIT * GF GROUND FAULT INTERRUPTER TYPE WP WEATHERPROOF T TRANSIENT VOLTAGE SURGE SUPPRESSOR
	SPECIALTY POWER RECEPTACLE, FUNCTION AS NOTED
/	SPECIAL SYSTEM JACK, TELEPHONE / DATA
TD	TELEPHONE DEMARCATION (CABINET OR BACKBOARD)
J OR J	JUNCTION BOX
P	PULL BOX
TB	TERMINAL BOX
* -XXX	UNDERGROUND STRUCTURE (MANHOLE OR HANDHOLE) * STRUCTURE TYPE (MH OR HH) XXX ID NUMBER PER PLANS, SCHEDULE, OR AS SPECIFIED

CONTROL SYSTEM INPUT/OUTPUT DEVICES

DI	DIGITAL INPUT		DIGITAL OUTPUT NORMALLY OPEN MOMENTARY CONTROL OUTPUT
AI	ANALOG INPUT 4-20mA UNLESS NOTED		DIGITAL OUTPUT NORMALLY CLOSED MOMENTARY CONTROL OUTPUT
AO	ANALOG OUTPUT 4-20mA UNLESS NOTED	M	DIGITAL OUTPUT NORMALLY OPEN MAINTAINED CONTROL OUTPUT
PI	PULSE INPUT	M	DIGITAL OUTPUT NORMALLY CLOSED MAINTAINED CONTROL OUTPUT

ABBREVIATIONS

A, AMP	AMPERE	LES	LOCAL EMERGENCY STOP
ac	ALTERNATING CURRENT	LTG	LIGHTING
AF	AMP FRAME	LP	LIGHTING PANEL
AFF	ABOVE FINISHED FLOOR	LV	LOW VOLTAGE
AL	ALUMINUM	MAX	MAXIMUM
AIC	AMPERE INTERRUPTING CAPACITY	MCC	MOTOR CONTROL CENTER
		MCP	MOTOR CIRCUIT PROTECTOR
AT	AMP TRIP		
ATS	AUTOMATIC TRANSFER SWITCH	MFR	MANUFACTURER
		MH	MANHOLE
AUTO	AUTOMATIC	MIN	MINIMUM
AUX	AUXILIARY	ML	MOTOR LOAD
AWG	AMERICAN WIRE GAUGE	MV	MEDIUM VOLTAGE
BCG	BARE COPPER GROUND	N	NEUTRAL
BLDG	BUILDING	N/A	NOT APPLICABLE
C	CONDUIT, CONTACTOR	NC	NORMALLY CLOSED
CB	CIRCUIT BREAKER	NCL	NON-CONTINUOUS LOAD
CKT	CIRCUIT	NIC	NOT IN CONTRACT
CL	CONTINUOUS LOAD	NO	NORMALLY OPEN
CMU	CONCRETE MASONRY UNIT	NO.	NUMBER
CP	CONTROL PANEL	NTS	NOT TO SCALE
CPT	CONTROL POWER TRANSFORMER	OL	OVERLOAD
		P	POLE
CT	CURRENT TRANSFORMER	PB	PULL BOX
CU	COPPER	PC	PHOTOCELL
CWS	CONDUIT WALL SEAL	PH	PHASE
dc	DIRECT CURRENT	PNL	PANEL OR PANELBOARD
DIA	DIAMETER	PT	POTENTIAL TRANSFORMER
DWG	DRAWING		
(E)	EXISTING	PVC	POLYVINYL CHLORIDE
EA	EACH	RECEPT	RECEPTACLE
ELEC	ELECTRICAL	REQD	REQUIRED
EL	ELEVATION	SEC	SECONDS OR SECONDARY
ENCL	ENCLOSURE OR ENCLOSED	SHT	SHEET
		SS	STAINLESS STEEL
EQUIP	EQUIPMENT	SW	SWITCH
ETM	ELAPSED TIME METER	SWBD	SWITCHBOARD
(F)	FUTURE	SWGR	SWITCHGEAR
FO	FIBER OPTIC	TC	TIME DELAY ON CLOSING
FT	FEET	TEL	TELEPHONE
FU	FUSE	TD	TELEPHONE DEMARCATION POINT
G, GRD	GROUND		
GALV	GALVANIZED	TM	TIME SWITCH
GEN	GENERATOR	TO	TIME DELAY ON OPENING
GFI	GROUND FAULT INTERRUPTER	TSP	TWISTED SHIELDED PAIR
		TYP	TYPICAL
GRS	GALVANIZED RIGID STEEL	UG	UNDERGROUND
HID	HIGH INTENSITY DISCHARGE	UON	UNLESS OTHERWISE NOTED
HH	HANDHOLE	UPS	UNINTERRUPTIBLE POWER SUPPLY
hp	HORSEPOWER		
HVAC	HEATING VENTILATION AIR CONDITIONING	V	VOLTS
		VA	VOLT AMPS
Hz	HERTZ	VAR	VOLT AMPS REACTIVE, VARIOUS
kcmil	1000 CIRCULAR MILS		
kVA	KILOVOLT AMPERES	VFD	VARIABLE FREQUENCY DRIVE
kW	KILOWATTS	W	WIRE, WATTS, WIDTH
		W/	WITH
		WP	WEATHERPROOF
		XFMR	TRANSFORMER

NOTES:

1. THIS IS A STANDARD LEGEND SHEET. SOME SYMBOLS MAY NOT APPEAR WITHIN THE DRAWING SET FOR THIS PROJECT.
2. DETAILS REPRESENT TYPICAL INSTALLATION REQUIREMENTS TO BE USED ON THIS PROJECT FOR THE CONDITION SHOWN. DETAILS ARE NOT SPECIFICALLY CALLED OUT AT EVERY APPLICATION POINT FOR CLARITY AND SIMPLICITY. THE INDICATED DETAIL REQUIREMENTS SHALL APPLY FOR ALL APPLICABLE LOCATIONS.
3. PLANS DO NOT SHOW ROUTES OR SIZING OF RACEWAYS AND CONDUCTORS FOR RECEPTACLES, LIGHTING FIXTURES, LIGHTING SWITCHES, OR OTHER LOADS. PROVIDE RACEWAYS AND CONDUCTORS AS REQUIRED PER THE DEVICE LOCATION, SWITCH DESIGNATION, PANEL/CIRCUIT NUMBER, AND PROTECTIVE DEVICE RATING SHOWN ON THE DRAWINGS. HOMERUNS SHOWN CONCEALED OR EXPOSED SHALL BE INDICATIVE OF THE ENTIRE CIRCUIT INSTALLATION.
4. IF NOT SHOWN, PROVIDE MINIMUM CONDUIT AND WIRE CIRCUIT RUN CONSISTING OF 3/4" CONDUIT WITH 2#12, 1#12 GROUND.
5. WHERE LUMINAIRE MOUNTING HEIGHTS ARE SHOWN ON THE DRAWINGS, HEIGHTS SHALL BE AS MEASURED TO BOTTOM OF THE SOURCE OF ILLUMINATION.

100% SUBMITTAL
NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER PAUL A. GTORSETH No. E 11674 Exp. 09/30/22 ELECTRICAL STATE OF CALIFORNIA

TJC and ASSOCIATES, INC.
ekl environment & water
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BURLINGAME, CALIFORNIA 94010-5306
(650) 292-9100 FAX (650) 552-9012

PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

ELECTRICAL
SYMBOLS AND ABBREVIATIONS

REV	DESCRIPTION	APPRD	DATE
A	100% SUBMITTAL	MSC	09-18-20
A	60% SUBMITTAL	MSC	06-18-20

DATE: SEP2020
SCALE: NTS
DRAWN: BV
DESIGNED: MSC
APPROVED: -
JOB NO.: B60019.00

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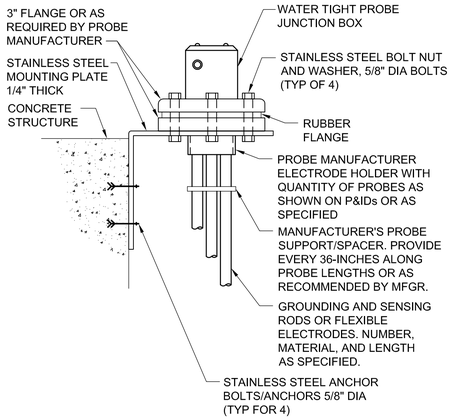
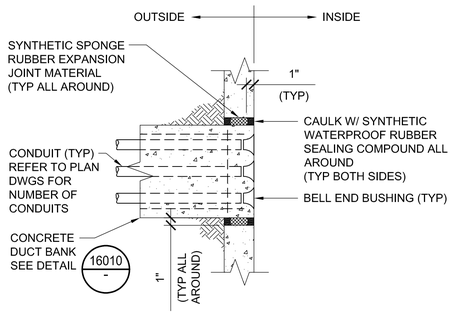
0 1"

SHEET NUMBER
GE-1
19 OF 26



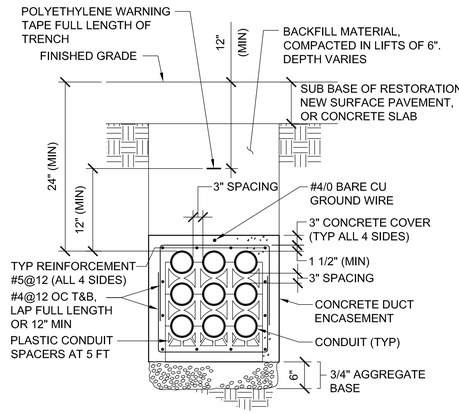
LEVEL PROBE INSTALLATION

DETAIL 13104A / NTS / VAR



CONCRETE ENCASED ELECTRICAL CONDUITS AT PRECAST MANHOLE OR HANDHOLE WITHOUT WATERSTOP

DETAIL 16000 / NTS / VAR

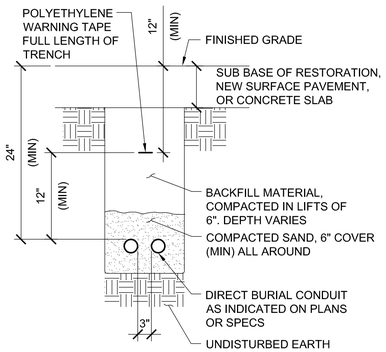


REINFORCED CONCRETE DUCT BANK

DETAIL 16010 / NTS / VAR

NOTES:

1. MAINTAIN A MINIMUM OF 12" SEPARATION BETWEEN INSTRUMENTATION AND POWER DUCT BANKS.
2. DETAIL IS APPLICABLE TO ALL UNDERGROUND CONDUIT RUNS.
3. DETAIL IS SHOWN WITH 9 CONDUITS AS A TYPICAL ONLY. REFER TO THE DETAILED PLAN DRAWINGS FOR THE QUANTITY AND SIZE OF CONDUITS REQUIRED FOR EACH DUCT BANK.
4. CONCRETE AND SOILS SHALL BE COMPACTED PER PROJECT SPECIFICATIONS.

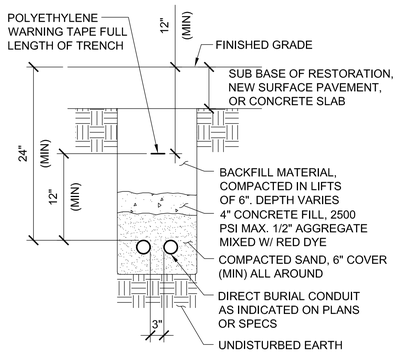


NOTES:

1. FIELD CONDITIONS MAY REQUIRE A MINIMUM DEPTH GREATER THAN SHOWN.
2. SHARP TURNS OR BENDS OR OTHER IRREGULARITIES IN THE CONDUIT MUST BE AVOIDED.
3. SOILS SHALL BE COMPACTED PER PROJECT SPECIFICATIONS.
4. IF BOTTOM OF TRENCH IS ROCKY AND PLASTIC CONDUITS ARE USED, USE ROCK FREE BACKFILL AND TAMP TO AFFORD A SMOOTH BEDDING FOR THE CONDUIT. BEFORE TAMPING IN AREA OF PLASTIC CONDUIT, APPLY AT LEAST SIX INCHES OF BACKFILL OVER TOP OF CONDUIT TO AVOID BREAKAGE. FINAL BACKFILL MAY THEN BE PLACED IN THE TRENCH AND TAMPING EMPLOYED TO FINISH GRADE. IN ORDER TO REDUCE COSTS, WHERE APPROVED BY THE ENGINEER, THE SOIL ORIGINALLY REMOVED FROM THE TRENCH SHOULD BE USED AS BACKFILL WHEREVER POSSIBLE.
5. DO NOT USE SALT WATER SAND BACKFILL WITH STEEL CONDUIT.

DIRECT BURIAL CONDUIT OR CABLE

DETAIL 16020 / NTS / VAR

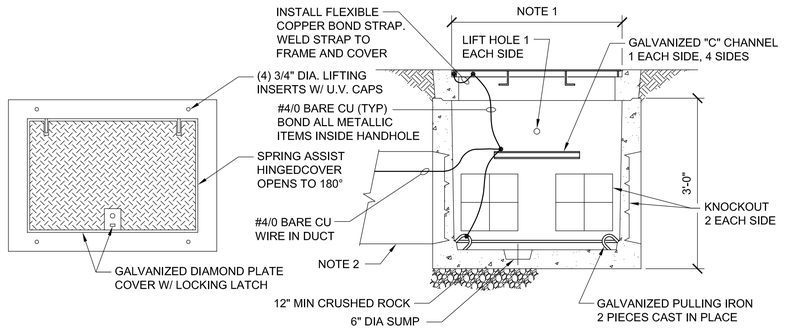


NOTES:

1. FIELD CONDITIONS MAY REQUIRE A MINIMUM DEPTH GREATER THAN SHOWN.
2. SHARP TURNS OR BENDS OR OTHER IRREGULARITIES IN THE CONDUIT MUST BE AVOIDED.
3. PROVIDE PLASTIC CONDUIT SPACERS AT 5'-0" FOR 3 OR MORE CONDUITS.
4. SOILS SHALL BE COMPACTED PER PROJECT SPECIFICATIONS.
5. IF BOTTOM OF TRENCH IS ROCKY AND PLASTIC CONDUITS ARE USED, USE ROCK FREE BACKFILL AND TAMP TO AFFORD A SMOOTH BEDDING FOR THE CONDUIT. BEFORE TAMPING IN AREA OF PLASTIC CONDUIT, APPLY AT LEAST SIX INCHES OF BACKFILL OVER TOP OF CONDUIT TO AVOID BREAKAGE. FINAL BACKFILL MAY THEN BE PLACED IN THE TRENCH AND TAMPING EMPLOYED TO FINISH GRADE. IN ORDER TO REDUCE COSTS, WHERE APPROVED BY THE ENGINEER, THE SOIL ORIGINALLY REMOVED FROM THE TRENCH SHOULD BE USED AS BACKFILL WHEREVER POSSIBLE.
6. DO NOT USE SALT WATER SAND BACKFILL WITH STEEL CONDUIT.

DIRECT BURIAL CONDUIT OR CABLE WITH CONCRETE CAP

DETAIL 16023 / NTS / VAR



COVER PLAN

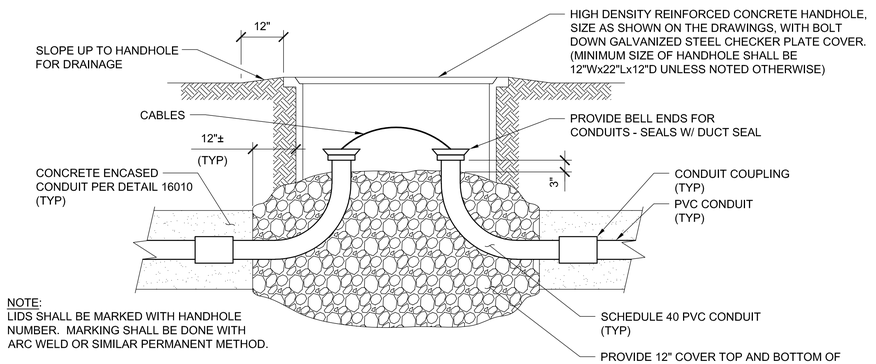
SECTION

NOTES:

1. SIZE OF HANDHOLE PER HANDHOLE SCHEDULE SHOWN ON DRAWINGS.
2. SEE DETAIL 16000 FOR CONCRETE ENCASED CONDUIT DUCT ENTRY INTO HANDHOLE.

TYPICAL ELECTRICAL HANDHOLE

DETAIL 16051 / NTS / VAR



NOTE:
LIDS SHALL BE MARKED WITH HANDHOLE NUMBER. MARKING SHALL BE DONE WITH ARC WELD OR SIMILAR PERMANENT METHOD.

TYPICAL HANDHOLE INSTALLATION

DETAIL 16052 / NTS / VAR

100% SUBMITTAL

NOT FOR CONSTRUCTION

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(650) 292-9100 FAX (650) 552-9012

PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

ELECTRICAL
INSTALLATION DETAILS I

REV	DESCRIPTION	APPRVD	DATE
B	100% SUBMITTAL	MSC	09-18-20
A	60% SUBMITTAL	MSC	06-18-20

DATE: SEP2020
SCALE: NTS
DRAWN: BV
DESIGNED: MSC
APPROVED: -
JOB NO.: B60019.00

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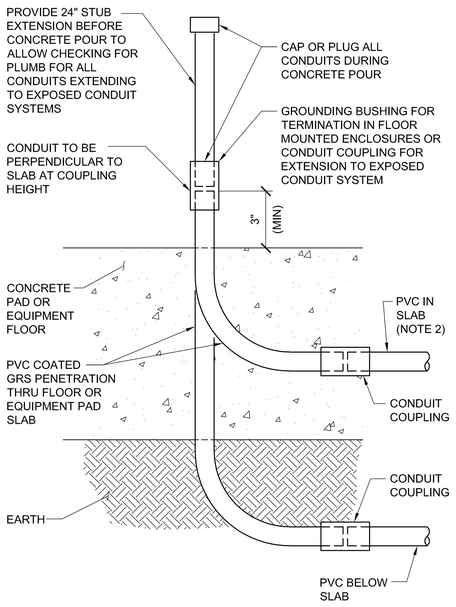
SHEET NUMBER

GE-2

20 OF 26

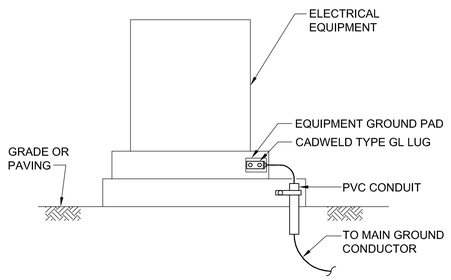


NOTES:

1. APPLICABLE IN ALL AREAS UNLESS NOTED OTHERWISE.
2. CONDUITS MAY BE ENCASED IN SLAB ONLY WHERE SPECIFICALLY SHOWN ON THE PLAN DRAWINGS. COORDINATE ENCASED CONDUIT WITH SLAB REINFORCEMENT.

CONDUIT STUB UP / FLOOR PENETRATION

DETAIL 16107 / NTS VAR



PAD MOUNTED EQUIPMENT GROUND

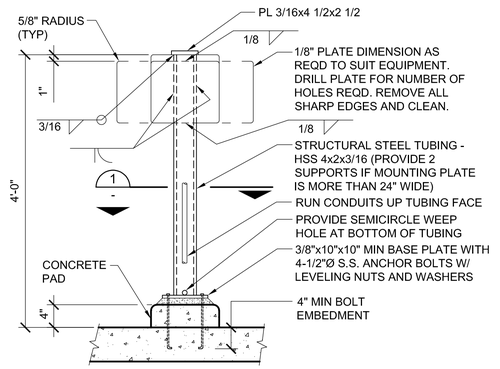
DETAIL 16211 / NTS VAR

NOTE:

1. REBAR SHOWN IS INTENDED FOR POLE MOUNTING REQUIREMENTS AND SHALL BE IN ADDITION TO THE REINFORCING STEEL SHOWN ON STRUCTURAL DRAWINGS.

CONCRETE SLAB MOUNTED LIGHT POLE

DETAIL 16502 / NTS VAR

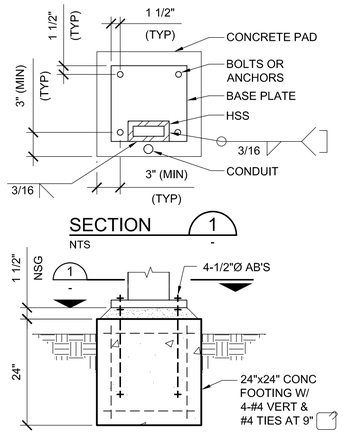


NOTES:

1. WEIGHT OF MOUNTED EQUIPMENT ≤ 250 lbs.
2. UNLESS OTHERWISE NOTED, ALL MATERIAL SHALL BE STEEL AND HOT DIP GALVANIZED (G90) AFTER FABRICATION.

CONTROL STATION MOUNTING STAND

DETAIL 16410 / NTS VAR



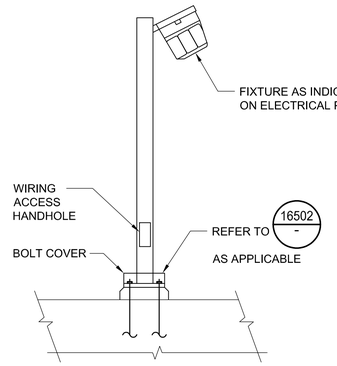
FOOTING DETAIL FOR STANDS NOT ON CONCRETE SLAB

NOTES:

1. LAG BOLTS MUST FULLY ENGAGE A WOOD JOIST.
2. LAG BOLT SHALL BE PROVIDED WITH A LEAD HOLE AND SHALL HAVE A DIAMETER EQUAL TO 40% TO 70% OF THE SHANK DIAMETER.
3. LAG BOLTS SHALL BE INSERTED BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER.

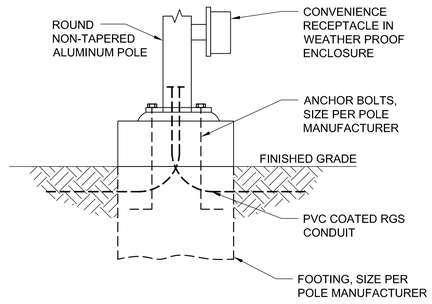
FIXTURE MOUNTING

DETAIL 16524 / NTS VAR



AREA LIGHTING FIXTURE

DETAIL 16531 / NTS VAR



CONDUIT STUB-UP RECEPTACLE

DETAIL 16536 / NTS VAR

100% SUBMITTAL

NOT FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER — PAUL S. GTORGIEFF — No. E 11674 Exp. 09/30/22 — ELECTRICAL — STATE OF CALIFORNIA

TJC and ASSOCIATES, INC.

ekl environment & water
577 AIRPORT BOULEVARD, SUITE 500
BURLINGAME, CALIFORNIA 94010-5306
(650) 292-9100 FAX (650) 552-9012

PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

ELECTRICAL INSTALLATION DETAILS II

REV	DESCRIPTION	APPRVD	DATE
A	60% SUBMITTAL	MSC	06-18-20
B	100% SUBMITTAL	MSC	09-18-20

DATE: SEP2020
SCALE: NTS
DRAWN: BV
DESIGNED: MSC
APPROVED: -
JOB NO.: B60019.00

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

SHEET NUMBER
GE-3
21 OF 26

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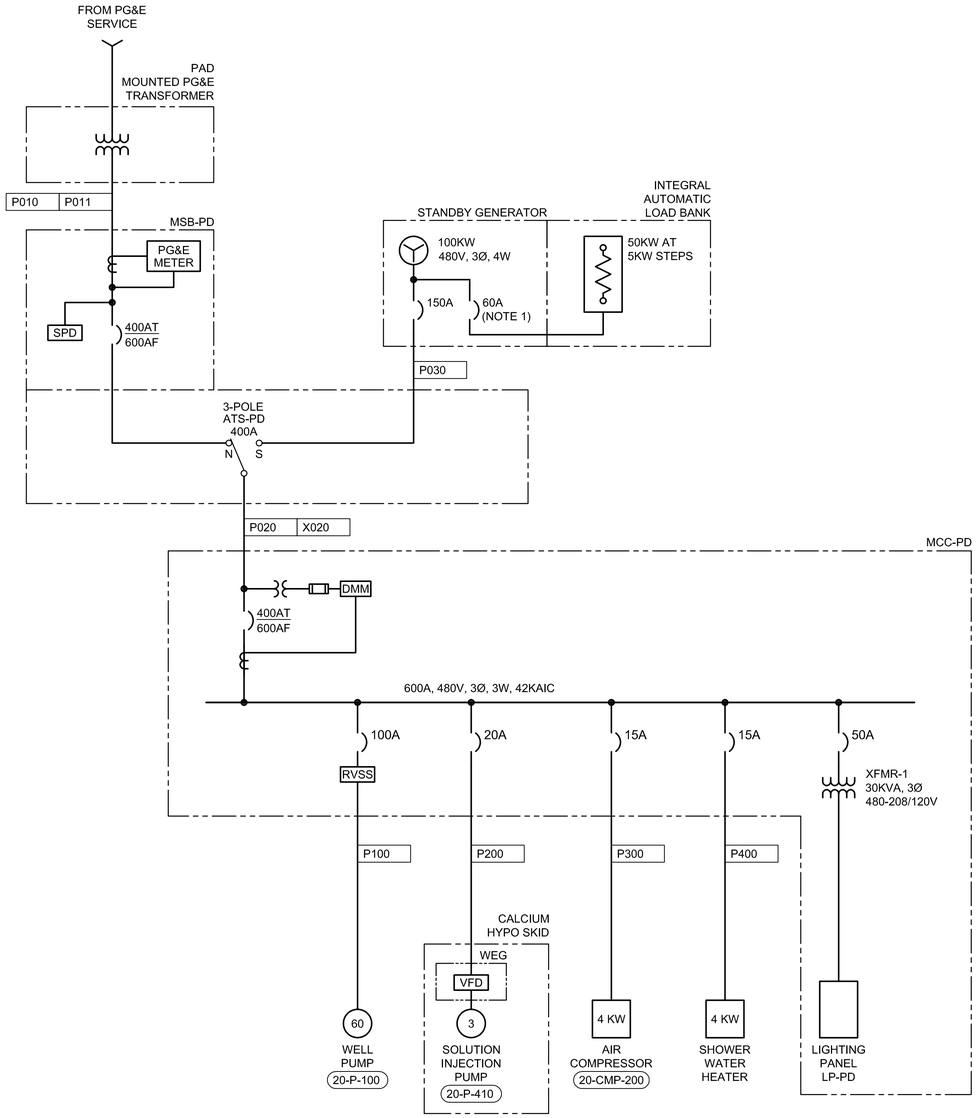
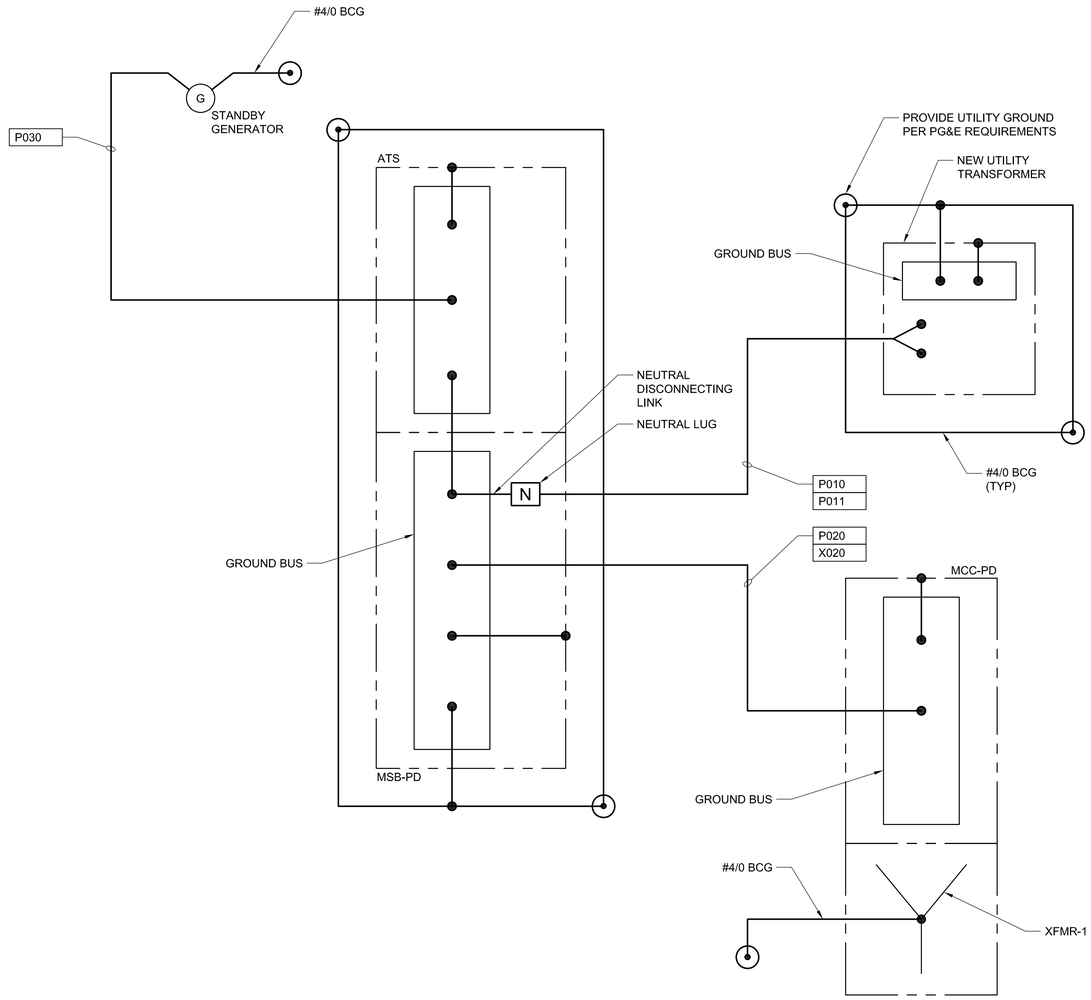


SINGLE LINE DIAGRAM

SCALE: NTS

NOTES:

1. SIZE AS RECOMMENDED BY GENERATOR SUPPLIER.



GROUNDING SCHEMATIC

SCALE: NTS

100% SUBMITTAL

NOT FOR CONSTRUCTION

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ELECTRICAL
SINGLE-LINE DIAGRAM AND GROUNDING

REV	DESCRIPTION	APPRD	DATE
B	100% SUBMITTAL	MSC	09-18-20
A	60% SUBMITTAL	MSC	06-18-20

DATE: SEP2020
SCALE: NTS
DRAWN: BV
DESIGNED: MSC
APPROVED: -
JOB NO.: B60019.00

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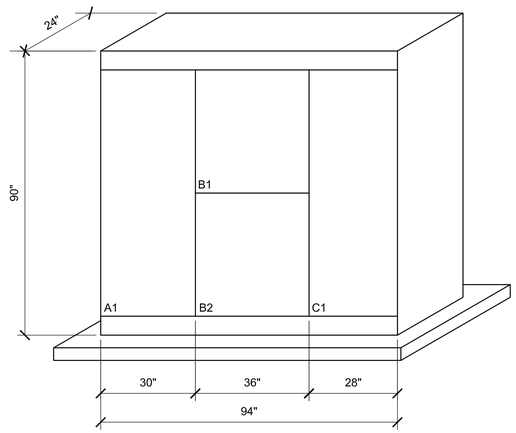
REGISTERED PROFESSIONAL ENGINEER
PAUL J. GIORGETTO
No. E 11674
Exp. 09/30/22
ELECTRICAL
STATE OF CALIFORNIA

SHEET NUMBER

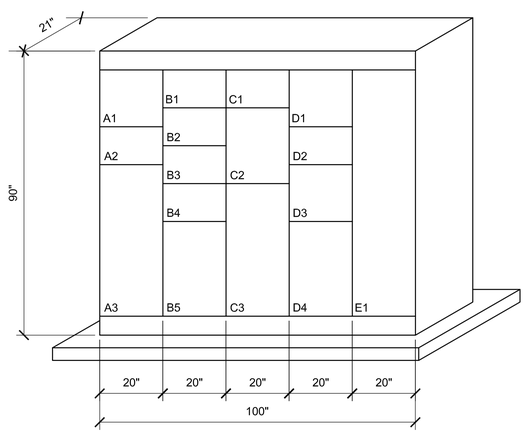
E-1

22 OF 26



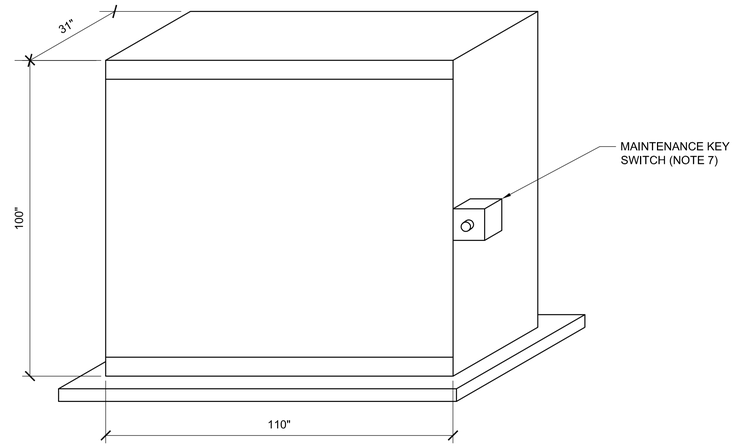
MSB-PD ELEVATION

SCALE: NTS (NOTE 7)



MCC-PD ELEVATION

SCALE: NTS



MCC WEATHERPROOF HOUSING ELEVATION

SCALE: NTS (NOTES 1 THRU 6)

NAMEPLATE SCHEDULE : MSB-PD			
NO.	LINE 1 - EQUIPMENT ID	LINE 2 - EQUIPMENT DESCRIPTIONS	CHAR. SIZE
A1		PULL SECTION	1/4"
B1		UTILITY METERING	1/4"
B2		MAIN BREAKER	1/4"
C1	ATS-PD	ATS	1/4"

NAMEPLATE SCHEDULE : MCC-PD			
NO.	LINE 1 - EQUIPMENT ID	LINE 2 - EQUIPMENT DESCRIPTIONS	CHAR. SIZE
A1		SPACE	1/4"
A2		DMM	1/4"
A3		MAIN BREAKER	1/4"
B1	20-P-410	SOLUTION INJECTION PUMP	1/4"
B2	20-CMP-200	AIR COMPRESSOR	1/4"
B3		SHOWER WATER HEATER	1/4"
B4		SPARE	1/4"
B5	20-P-100	WELL PUMP	1/4"
C1		SPACE	1/4"
C2	XMFR-1	30 KVA TRANSFORMER	1/4"
C3	LP-PD	LIGHTING PANEL	1/4"
D1		SPACE	1/4"
D2		SPARE	1/4"
D3		SPARE	1/4"
D4		SPARE	1/4"
E1	20-CP-100	CONTROL SECTION	1/4"

PANELBOARD SCHEDULE

CKT NO	LOAD TYPE	USAGE	VA PHASE A	VA PHASE B	VA PHASE C	BRKR A/PLS	CKT NO	LOAD TYPE	USAGE	VA PHASE A	VA PHASE B	VA PHASE C	BRKR A/PLS
1	CL	20-CP-100	1200	-	-	20/1	2	CL	20-FIT-115	100	-	-	20/1
3	NCL	ENTRANCE LIGHT	-	120	-	20/1	4	CL	20-AIT-825, 20-AIT-845, 20-AIT-848	-	150	-	20/1
5	CL	GEN BATT CHARGER	-	-	500	20/1	6	ML	20-P-810	-	-	200	20/1
7	CL	GEN BLOCK HEATER	500	-	-	20/1	8	ML	20-P-840	200	-	-	20/1
9	NCL	MCC LIGHTING AND INTRUSION		200	-	20/1	10	ML	20-CP-510	-	35	-	20/1
11	NCL	MCC SPACE HEATER	-	-	500	20/1	12	NCL	20-CP-200	-	-	1000	20/1
13	NCL	WELL PUMP PAD LIGHT	120	-	-	20/1	14	NCL	EYEWASH SHWR LTG	100	-	-	20/1
15	NCL	HYDROP PAD LIGHT	-	120	-	20/1	16	NCL	CHEM CONTAINMENT RECEPTS	-	360	-	20/1
17	NCL	CHEM CONTAINMENT LTG	-	-	200	20/1	18	CL	SPARE	-	-	-	20/1
19	CL	SPARE	0	-	-	20/1	20	CL	SPARE	0	-	-	20/1
21	CL	SPARE	-	0	-	20/1	22	CL	SPARE	-	0	-	20/1
23	CL	SPARE	-	-	0	20/1	24	CL	SPARE	-	-	0	20/1
25	CL	SPARE	0	-	-	20/1	26	CL	SPARE	0	-	-	20/1
27	CL	SPARE	-	0	-	20/1	28	CL	SPARE	-	0	-	20/1
29	CL	SPARE	-	-	0	20/1	30	CL	SPARE	-	-	0	20/1
31	CL	SPARE	0	-	-	20/1	32	CL	SPARE	0	-	-	20/1
33	CL	SPARE	-	0	-	20/1	34	CL	SPARE	-	0	-	20/1
35	CL	SPARE	-	-	0	20/1	36	CL	SPARE	-	-	0	20/1
37	CL	SPARE	0	-	-	20/1	38	CL	SPARE	0	-	-	20/1
39	CL	SPARE	-	0	-	20/1	40	CL	SPARE	-	0	-	20/1
41	CL	SPARE	-	-	0	20/1	42	CL	SPARE	-	-	0	20/1
		PHASE VA SUBTOTALS	1820	440	1200				PHASE VA SUBTOTALS	400	545	1200	
									PHASE VA TOTALS	2220	985	2400	
									PANELBOARD VA TOTAL			5605	

CL	125%	TOTAL CONTINUOUS LOADS (VA):	3063		PANEL NO.:	LP-PD
NCL		TOTAL NON-CONTINUOUS LOADS (VA):	2720		LOCATION:	MCC-PD
ML		MOTOR LOADS (VA):	435		VOLTAGE:	208/120V, 3Ø, 4W
		25% LARGEST MOTOR LOAD (VA):	50	200	BUS RATING:	100A
		CALCULATED TOTAL LOAD (VA):	6268		MAIN BREAKER:	100A
		CALCULATED TOTAL LOAD (AMPS):	17		SHORT CIRCUIT RATING:	10 KAIC

ABBREVIATIONS

CL - CONTINUOUS LOAD
ML - MOTOR LOAD
NCL - NON-CONTINUOUS LOAD

NOTES:

1. WEATHERPROOF HOUSING SHALL BE 304 STAINLESS STEEL, NEMA TYPE 3R WITH PADLOCKABLE DOORS. NO OPERATOR DEVICES SHALL BE MOUNTED THROUGH THE OUTER ENCLOSURE.
2. ARRANGE WEATHERPROOF HOUSING DOORS SUCH THAT INTERIOR MOTOR CONTROL CENTER DOORS CAN FULL OPEN.
3. PROVIDE DUCT WORK TO ENSURE FULL A/C UNIT AIR CIRCULATION ACHIEVED.
4. PROVIDE INTRUSION SWITCH ON EACH WEATHERPROOF HOUSING DOOR.
5. PROVIDE LIGHTING ON WEATHERPROOF HOUSING INTERIOR ROOF IN FRONT OF MOTOR CONTROL CENTER.
6. ALL EQUIPMENT AND DEVICES MOUNTED TO WEATHERPROOF HOUSING SHALL MAINTAIN HOUSING NEMA TYPE 4X RATING.
7. PROVIDE UL LISTED SERVICE ENTRANCE RATED SWITCHBOARD.

REGISTERED PROFESSIONAL ENGINEER
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TJC and ASSOCIATES, INC.

ekI environment & water
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(650) 292-9100 FAX (650) 552-9012

PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

ELEVATIONS AND SCHEDULES

REV	DESCRIPTION	APPRD	DATE
A	100% SUBMITTAL	MSC	09-18-20
-	60% SUBMITTAL	MSC	06-18-20

DATE: SEP2020
SCALE: AS SHOWN
DRAWN: BV
DESIGNED: MSC
APPROVED: -
JOB NO.: B60019.00

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
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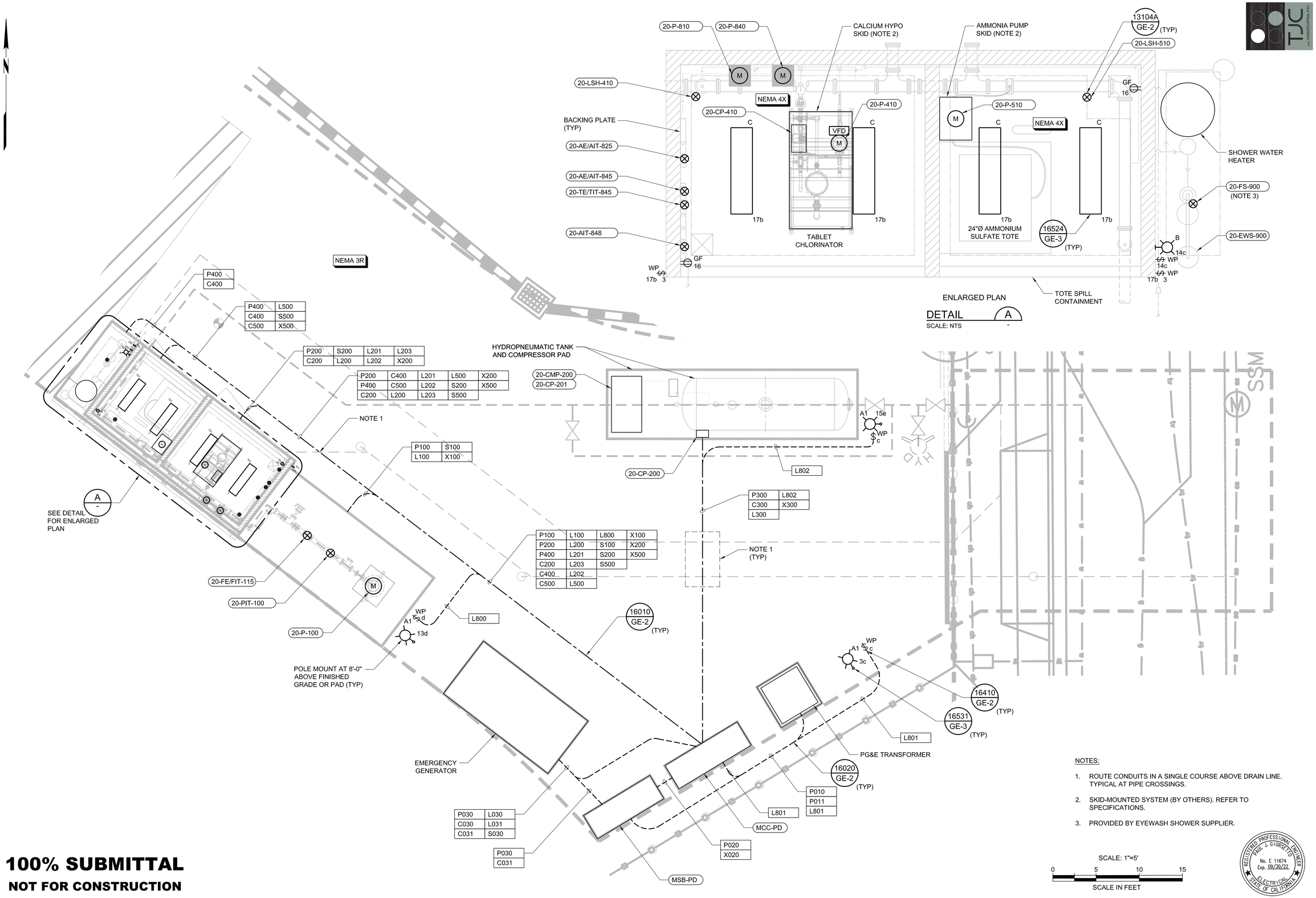
SHEET NUMBER

E-2

23 OF 26



NOTES:

1. ROUTE CONDUITS IN A SINGLE COURSE ABOVE DRAIN LINE. TYPICAL AT PIPE CROSSINGS.
2. SKID-MOUNTED SYSTEM (BY OTHERS). REFER TO SPECIFICATIONS.
3. PROVIDED BY EYEWASH SHOWER SUPPLIER.

SCALE: 1"=5'

0 5 10 15

SCALE IN FEET

100% SUBMITTAL

NOT FOR CONSTRUCTION

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PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

ELECTRICAL PLAN

REV	DESCRIPTION	APPRD	DATE
B	100% SUBMITTAL	MSC	09-18-20
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DRAWN: BV
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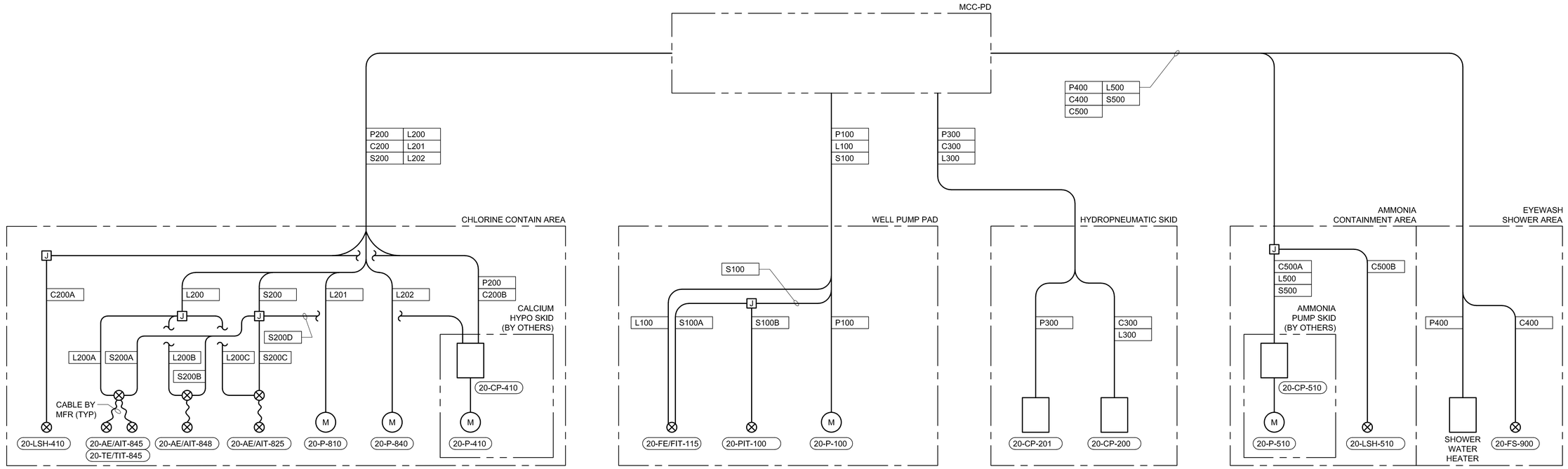
PAUL J. GTORSETTO
No. E 11674
Exp. 09/30/22
ELECTRICAL
STATE OF CALIFORNIA

SHEET NUMBER

E-3

24 OF 26



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PAD D STANDBY WELL
EAST PALO ALTO, CALIFORNIA

ELECTRICAL INTERCONNECTION DIAGRAM

REV	DESCRIPTION	APPRD	DATE
B	100% SUBMITTAL	MSC	09-18-20
A	60% SUBMITTAL	MSC	06-18-20

DATE: SEP2020
SCALE: NTS
DRAWN: BV
DESIGNED: MSC
APPROVED: -
JOB NO.: B60019.00

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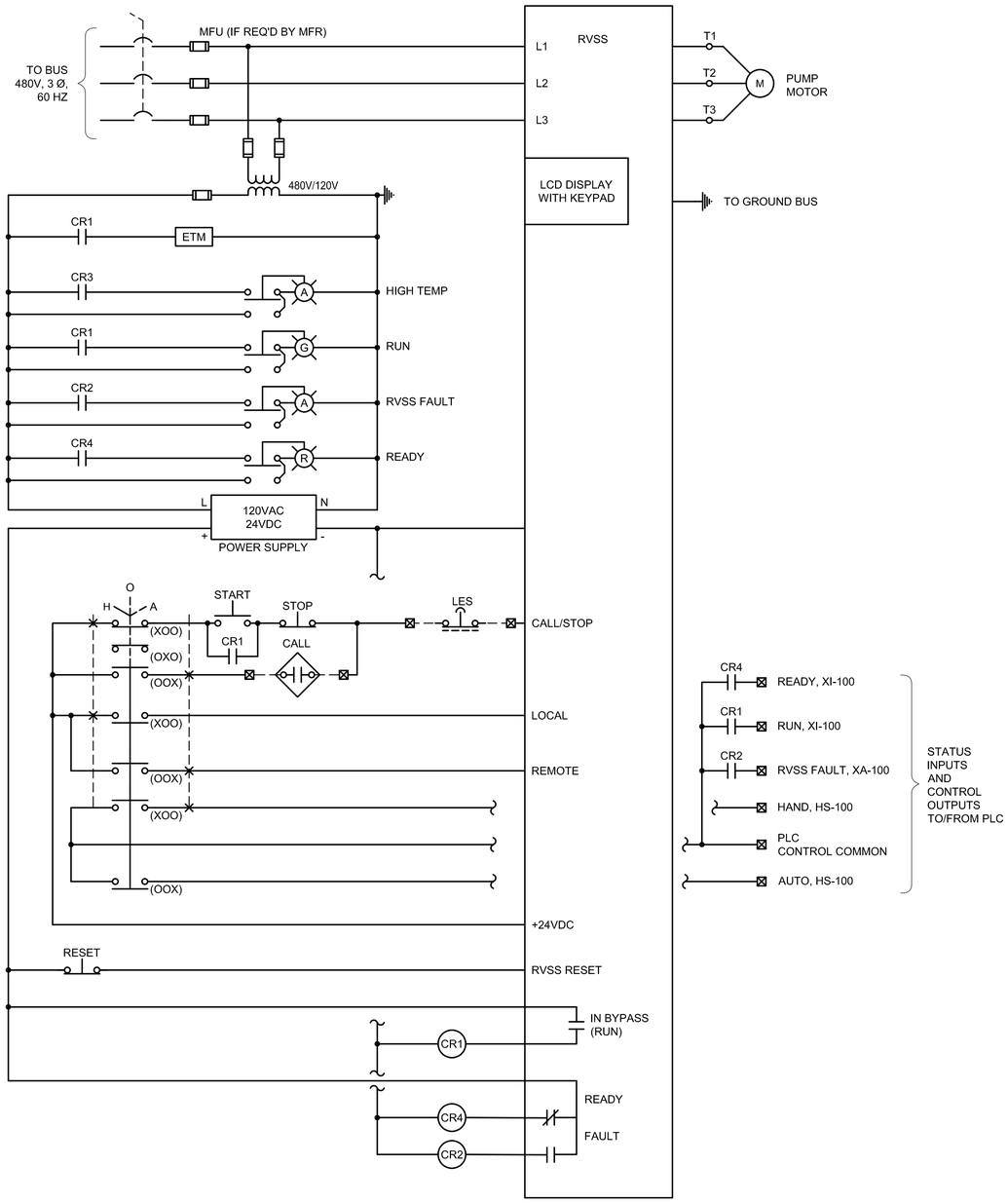
SHEET NUMBER

E-4

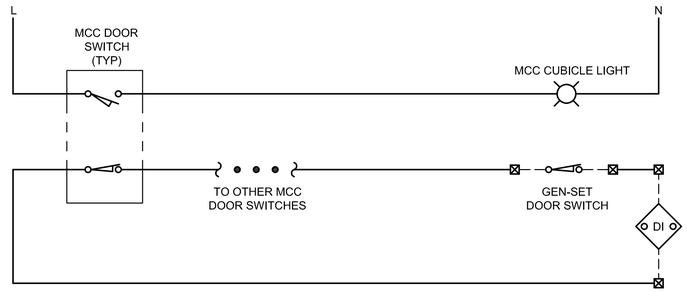
25 OF 26



TAG TABLE							
EQUIPMENT	IN AUTO	IN HAND	CALL	READY	RUN	RVSS FAULT	HTR
PUMP-100	HS-100	HS-100	XC-100	XI-100	XI-100	XA-100	HTR-100

RVSS CONTROL SCHEMATIC

NTS



MCC LIGHTING AND INTRUSION MONITORING

SCALE: NTS

LEGEND:

- ▲ AT FIELD EQUIPMENT LOCATION
- ■ AT LOCAL CONTROL PANEL
- ● AT PLC CONTROL PANEL

NOTES:

1. FULL TAG NAME TO INCLUDE PROCESS AREA CODE, ISA DESIGNATION, AND LOOP NUMBER.

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ELECTRICAL CONTROL SCHEMATICS

REV	DESCRIPTION	APPRD	DATE
B	100% SUBMITTAL	MSC	09-18-20
A	60% SUBMITTAL	MSC	06-18-20

DATE: SEP2020
SCALE: NTS
DRAWN: BV
DESIGNED: ETM
APPROVED: -
JOB NO.: B60019.00

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SHEET NUMBER

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