

20 363

C A M B R I A



To: Scott Seery

Company: Alameda County D.E.H.

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Phone: (510) 567-6783

From: Owen C. Ratchye *OR*

Phone: (510) 450-1984

Date: Tuesday, January 21, 2003

Re: Pleasanton – 3790 Hopyard Remedial Plans

Transmittal

Scott –

Attached are a copy of the plans that were submitted to the City of Pleasanton for building permit review. Jacquelyn Jones of our office mentioned that you had requested a set.

Let me know you need anything else or have any questions.

Owen

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Alameda County
Environmental Health
 JAN 28 2003

RO 363

REMEDIAL DESIGN PLANS

SHELL-BRANDED SERVICE STATION
3790 Hopyard Road
Pleasanton, California

GROUNDWATER EXTRACTION SYSTEM

Prepared for:
SHELL OIL PRODUCTS US

Prepared by:
CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.

Alameda County
Environmental Health
JAN 28 2003

Alameda County
Environmental Health
JAN 28 2003
TITLE PAGE

Scope of Work:

The following items define the scope of work to (1) provide groundwater extraction from wells SR-1, SR-2, SR-3, and T-3, (2) treat the extracted groundwater, and (3) provide discharge of the treated groundwater to the Dublin/San Ramon Services District sewer collection system:

1. Trench from remediation compound to designated wells as shown on Figure 1 and referenced details.
2. Install remediation pipe as shown on Figures 1 and referenced details.
3. Backfill, compact and resurface trenches as shown on Figure 3.
4. Install well vaults as shown on Figure 3.
5. Install discharge pipe as shown on Figures 1 and 5.
6. Construct remediation compound as shown on Figures 1 and 2, and referenced details.
7. Install remediation equipment as shown on Figures 2 and 4, and referenced details.
8. Install process pipe as shown on Figure 4 and referenced details.
9. Trench from remediation compound to PG&E transformer as shown on Figure 1 and referenced details.
9. Install vault box, conduit, wire, meter panel, and distribution panel for new electrical service as shown on Figures 1 and 7.
10. Install electrical control panel, controls, and instrumentation as shown on Figure 4 and 7, and referenced details.

Notes:

1. The design of this groundwater extraction system is based on the 1997 UBC, 1996 NEC, and the 1997 UFC, where applicable. Construction is to comply with the design basis and/or local agency requirements.
2. Remedial action is being implemented with the approval of the Alameda County Health Care Services Agency.
3. Treated groundwater is to be discharged to the local sewer system under the authorization of a Dublin/San Ramon Services District wastewater discharge permit.

C A M B R I A



Vicinity Map

ABBREVIATIONS

A.C	ASPHALTIC CONCRETE	MAX.	MAXIMUM
BLDG	BUILDING	MIN	MINIMUM
BLVD.	BOULEVARD	N	NEW
B.W.	BOTH WAYS	NDC(S)	NUMBERS
CNC.	CONCRETE	Ø	NOMINAL DIAMETER
CONTR.	CONTROL	O.C	ON CENTER
DIA.	DIAMETER	DWS	OIL WATER SEPARATOR
DBL.	DOUBLE	PSI	POUNDS PER SQUARE INCH
E	EXISTING	R.R.	RAILROAD
EA	EACH	SS	SANITARY SEWER
EL.	ELEVATION	SCH.	SCHEDULE
FIN.	FINISH	STL	STEEL
FRP	FIBERGLASS REINFORCED PLASTIC	SD	STORM DRAIN
B.G.S.	BELOW GROUND SURFACE	TC	TOP OF CURB
GAL(S)	GALLON(S)	TYP.	TYPICAL
HPFS	HIGH POINT OF FINISHED SURFACE	UG	UNDERGROUND
DVS	OIL WATER SEPARATOR	UST(S)	UNDERGROUND STORAGE TANK(S)
		WC	INCHES WATER COL. PRESS.

LEGEND

	VACUUM BREAKER		SAMPLE PORT		CONCRETE
	CHECK VALVE		FLOW TOTALIZING INDICATOR		ASPHALTIC CONCRETE
	BALL VALVE		LEVEL SW HIGH HIGH		EARTH
	PRESSURE REG		LEVEL SW HIGH		FILL AND BACKFILL
	GLOVE VALVE		LEVEL SW LOW		COARSE AGGREGATE
	FLOW ELEMENT		PRESSURE INDICATOR		PEA GRAVEL
	FILTER		PRESSURE SW HIGH		SAND AND TOPSOIL
	FLOW DIRECTION		FLOW INDICATOR		
	PUMP W/UNIONS		PRESSURE REGULATOR		
	SUMP PUMP				
	UG PIPE AND CONDUIT				
	FENCE/K-RAIL				
	UG UST ELECTRICAL CONDUIT				

WELL ID	WELL SIZE	DEPTH	SCREEN SECTION	PUMP	GPM	SVE	COMMENTS
SR-1	4"	35'	10-35'	AP4TL	1.0	NA	CEE PUMP
SR-2	4"	35'	10-35'	AP4TL	1.0	NA	CEE PUMP
SR-3	4"	35'	10-35'	AP4TL	1.0	NA	CEE PUMP
T-3	4"	12'	0-12'	SP/25	1.0	NA	WATSON MARLOW

<p>ELECTRICAL FIBER SVE SYSTEM</p> <p>MFG: [] TYPE: [] SCFM RATING: [] PREHEATER: [] TEMPERATURE RANGE: [] DISCHARGE TEMPERATURE: [] STACK SIZE: [] VACUUM MOTOR HP: [] POWER VOLTS: [] FLA: [] HZ: [] PH: [] CONTROL VOLTS: []</p>	<p>FUEL FIBER SVE SYSTEM</p> <p>MFG: [] TYPE: [] FUEL GAS: [] SCFM RATING: [] BURNER MAX. BTU/HR: [] BURNER RATIO: [] COMBUSTION BLOWER HP: [] PROCESS BLOWER HP: [] STACK SIZE: [] POWER VOLTS: [] FLA: [] HZ: [] PH: [] CONTROL VOLTS: []</p>	<p>CARBON SYSTEM</p> <p>MFG: US FILTER TYPE: ASC-1200 VESSEL SIZE: 35 CU FT MAX. FLOW RATE: 50 GPM PRESSURE RATING: 15 PSI MAX. TEMPERATURE: 140 F CONTACT TIME: 5 MINUTES BACK WASH FLOW RATE: 25 GPM POUNDS GAC: 1,000</p>	<p>GROUND WATER UNIT SVE</p> <p>MFG: [] TYPE: [] VESSEL SIZE: [] MAX. FLOW RATE: [] PRESSURE RATING: [] MAX. TEMPERATURE: [] PUMP HP: [] FILTERS: [] BAG MESH: [] POWER VOLTS: [] FLA: [] HZ: [] PH: [] CONTROL VOLTS: []</p>
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ITEM No	PART	LOCATION	MANUFACTURER INFORMATION
1	WELL SUMP	WELLHEAD	RONCO DIST. HARRINGTON PLASTICS-30 GAL-VPSUMP-2 WELL TUBE W/COVER
2	WELL SUMP	WELLHEAD	RONCO DIST. HARRINGTON PLASTICS-70 GAL-VPSUMP WELL TUBE W/COVER
3	PULL BOX	TRENCHES	BROOKS JENSEN PRE-CAST 3' X 5' X 1' VARIABLE DEPTH WITH SPRING ASSISTED TRAFFIC RATED COVER
4	TRAFFIC BOX	MONITORING WELL	DPW MONITORING/OBSERVATION WELL MANHOLE 104ADV-1200 LABELED 'DD NOT FILL'
5	TRAFFIC RING	WELLHEAD	POHECO/DPW - CONDUITABOR MANHOLE MODEL 79C3-VT10 BOLT DOWN GASKETED WITH RECESSED HANDLE
6	TRAFFIC RING	WELLHEAD	POHECO/DPW - CONDUITABOR MANHOLE MODEL 74C3-VT10 BOLT DOWN GASKETED WITH RECESSED HANDLE
7	PROCESS LINE	TRENCHES	WESTFLEX HDPE W304 100 PSI UTILITY POLYETHYLENE -SILVER LABEL 3/4" DR
8	AIR PUMP	WELL	CLEAN ENVIRONMENT EQUIPMENT- SUBMERSIBLE AIR PUMP AP-2 (TYPE FOR REQUIRED FLOW RATE)
9	WELL CAP	WELLHEAD	CLEAN ENVIRONMENT EQUIPMENT- WELL CAP (WATER EXTRACTION ONLY)
10	WELL CAP	WELLHEAD	CLEAN ENVIRONMENT EQUIPMENT- FIBROD WELLHEAD CAP WITH COMPRESSION FITTINGS SIZED TO MEET FLOW RATE (VAPOR AND WATER EXTRACTION)
11	PUMP HOSES	WELL	CLEAN ENVIRONMENT EQUIPMENT- WATER, AIR, VENT SIZED FOR FLOW RATE PLUS PUMP SUPPORT CABLE
12	PULSE COUNTER	WELLHEAD	CLEAN ENVIRONMENT EQUIPMENT- 1/4" NPT PULSE COUNTER (AIR PUMPS ONLY)
13	REGULATOR	WELLHEAD	CLEAN ENVIRONMENT EQUIPMENT- 1/4" DR 3/8" NPT AIR REGULATOR (AIR PUMPS ONLY)
14	ELECTRICAL PUMP	WELL	GRUNDFOS S SERIES 4" ELECTRICAL SUBMERSIBLE PUMP, CAPACITY, HP, VOLTAGE AND PHASE TO SUIT FLOW RATE AND AVAILABLE POWER SUPPLY
15	WELL SEAL	WELLHEAD	CAMPBELL CAST IRON SPLIT WELL SEAL SIZED FOR WELL CASING DIAMETER AND NUMBER AND SIZE OF OPENINGS
16	TORQUE ARRESTOR	WELL	CAMPBELL TORQUE ARRESTOR WITH CLAMPS
17	SENSOR	WELLBOX & TREATMENT AREA	WARRICK CONTROLS MULTI-PROBE FITTING 302B W/NEOPRENE GASKETS AND STAINLESS STEEL SCREWS. SPECIFY NO. OF SS ROD & LENGTH
18	LEVELS	TANKS	WARRICK CONTROLS MULTI-PROBE FITTING 301 THRU 48 W/NEOPRENE GASKETS AND STAINLESS STEEL SCREWS (FOR CONTROL) SPECIFY NO. OF SS RODS & LENGTH
19	LEVELS	TANKS	WARRICK CONTROLS SINGLE-PROBE FITTING 303XXX (LEVEL CONTROL)
20	FLOW METER	TREATMENT AREA	BADGER RECORD-ALL COLD WATER BRONZE DISC METER MODEL 25 - 5/8" NPT FLOW TOTALIZER
21	FLOW METER	TREATMENT AREA DISCHARGE	BADGER RECORD-ALL COLD WATER BRONZE DISC METER MODEL 70 - 3" NPT FLOW TOTALIZER
22	FLOW SENSOR	VAPOR LINES	DWYER SERIES DS FLOW SENSOR, MODEL DS-300-(PIPE SIZE) USE WITH DWYER MAGNETIC DIFFERENTIAL PRESSURE GAGES
23	VACUUM GAGE	WELL BOX & TREATMENT AREA	ASHCROFT VACUUM GAGE MODEL 1009 GRADE 1A102 F.S.25" STAINLESS STEEL CONSTRUCTION. SPECIFY VACUUM RANGE
24	PRESSURE GAGE	WELL BOX & TREATMENT AREA	ASHCROFT PRESSURE GAGE MODEL 1009 GRADE 1A102 F.S.25" STAINLESS STEEL CONSTRUCTION. SPECIFY PRESSURE RANGE
25	CLAMPS	"HDPE" TUBING	WIPACOR HEAVY DUTY T-BOLT HOSE CLAMP W3-25 FOR 3/4" HDPE TUBING DR #31-34 FOR 1" HDPE TUBING
26	HOSE BARBS	"HDPE" TUBING	SPRAYS MALE ADAPTER 1436-107 FOR 3/4" TUBING DR 1436-010 FOR 1" TUBING (REDUCING MALE ADAPTERS MAY BE SUBSTITUTED AS REQUIRED)
27	PENETRATION BOOTS	PIPE & SUMP	WEAVER MFG LLC PENETRATION FITTINGS (SPECIFY SIZES REQUIRED)
28	FLEXIBLE BELLOWS	PULL BOX	HEMASTER-CAMP "PROTECTIVE BELLOWS" NEOPRENE-LATEX DIP-MOLDED BELLOWS
29	SWEEPS	DUAL EXTRACTION PIPING	POPPING-PURGE-304 AT PEX BOXES W/IGD NONMETALLIC ELECTRICAL CONDUIT SWEEPS FOR DOUBLE CONTAINMENT
30	HOSE	CARBON FILTERS	PACIFIC ECHO PVC "SPIRALITE" 2"-SUCTION & DISCHARGE HOSE -10' TO 130' (HARRINGTON ORDER NO 110P-020)
31	PUMP	SUMP	TEEL: 1 1/2" NPT AUTO ECONOMY SUMP PUMP POLYPROPYLENE HOUSING, 1/2" HP 1/2 V 60 HZ 19, FLOW RATE 15.1 GPM @ 20 FT HEAD
32	GRATING	SUMP	MENCHOLS CD: 1 1/2"x1/8" 2'-2 1/2"x2'-2 1/2" DD BANDED GALVANIZED GW TYPE PRESS-LOCKED GRATING (LOAD RATED 1544 @ 2'-0") MINIMUM REQUIRED
33	BULKHEAD FITTING	TANKS	HAYWARD 2"-FPT X FPT PVC W/ EPDM GASKET TANK BULKHEAD FITTING
34	VACUUM BREAKER	SEAL LOOP	FIP/PLAST-O-MATIC VACUUM BREAKER W/VITON SEALS
35			
36			
37			
38			
39			
40			

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2	REMEDIATION COMPOUND
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5	MECHANICAL DETAILS 1
6	MECHANICAL DETAILS 2
7	ELECTRICAL DETAILS

FIGURE
B

GENERAL NOTES:

THIS REMEDIATION SYSTEM STANDARDS PACKAGE (STANDARDS) IS FOR THE SOLE USE OF EQUIVA SERVICES LLC AND ITS CONSULTANTS. UNAUTHORIZED USE OR DISCLOSURE OF THE STANDARDS SHALL BE CONSIDERED A VIOLATION OF THE EQUIVA ENVIRONMENTAL SERVICES AGREEMENT (EESA).

THE INTENT OF THE STANDARDS IS TO PROVIDE BOTH A BASIS FOR A UNIT COST PROGRAM AND TO PROVIDE DESIGN CONSISTENCY BETWEEN REMEDIAL INSTALLATIONS AND CONTRACTORS. THE STANDARDS CANNOT COVER 100% OF ALL THE POSSIBLE PERMUTATIONS OF REMEDIATION SYSTEM INSTALLATIONS. HOWEVER, THE MAJORITY OF "GASLINE SERVICE STATION" REMEDIATION SYSTEM INSTALLATIONS WILL BE COVERED BY THE STANDARDS.

FOR A TYPICAL REMEDIATION SYSTEM INSTALLATION, THE CONTRACTOR/CONSULTANT SHALL USE THE STANDARDS AS A STARTING POINT FOR THE COMPLETION OF THE DRAWINGS AND DOCUMENTS NECESSARY TO PROPERLY DESIGN, PERMIT AND CONSTRUCT THE SYSTEM. IT IS THE SOLE RESPONSIBILITY OF THE MANAGING CONSULTANT TO ASSURE THAT BOTH THE DESIGN AND ACTUAL INSTALLATION COMPLIES WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES, REGULATIONS AND STANDARDS.

THE CONSULTANT SHALL NOTIFY THE EQUIVA PROJECT ENGINEER WHEN ANY DISPUTE OR CONFLICT ARISES REGARDING THE STANDARDS.

FOR IMPLEMENTATION OF THE STANDARDS, REFER TO THE EESA UNIT COST CONTRACT ADDENDUM.

ANY SCOPE OF WORK CHANGES OR ITEMS NOT COVERED BY THE UNIT COST PROGRAM WHICH ARISE DURING A PRE-CONSTRUCTION SITE VISIT, PERMITTING PHASE OR CONSTRUCTION PHASE SHALL BE COMMUNICATED TO THE RESPECTIVE EQUIVA PROJECT MANAGER WITHIN 24 HOURS. APPROVAL FROM THE RESPECTIVE EQUIVA PROJECT MANAGER SHALL BE OBTAINED BEFORE FIELDWORK IS CONTINUED UNLESS DELAY PRESENTS A SAFETY RISK. CONSULTANT SHOULD USE BEST PROFESSIONAL JUDGMENT IN SUCH CASES. A WRITTEN CHANGE ORDER (AS REQUESTED WITH DOLLAR AMOUNTS) SHALL BE SUBMITTED WITHIN 3 BUSINESS DAYS TO THE EQUIVA PROJECT MANAGER FOR APPROVAL.

CONSTRUCTION NOTES:

PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, STANDARDS AND CODES INCLUDING OSHA AND CALOSHA.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY BUILDING PERMITS AND CONDUCTING AGENCY NOTIFICATIONS.

EXECUTE WORK SO AS TO MINIMIZE ANY DISRUPTIONS TO THE FUELING FACILITY OPERATIONS. PROVIDE AND MAINTAIN ACCESS FOR FACILITY OPERATIONS AS DIRECTED. IT IS THE CONSULTANT'S/CONTRACTOR'S RESPONSIBILITY TO ISSUE NOTIFICATIONS.

CONTRACTOR TO VERIFY THE LOCATION OF TANKS, PIPING, APPURTENANCES AND UTILITIES. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS WHICH AFFECT THE WORK PRIOR TO BEGINNING CONSTRUCTION. NOTIFY UNDERGROUND SERVICE ALERT (USA) PRIOR TO ANY SUBSURFACE WORK.

PROTECT EXISTING ITEMS WHICH ARE TO REMAIN IN PLACE, BE REUSED OR REMAIN PROPERTY OF THE STATION OWNER OR EQUIVA SERVICES. REPAIR ITEMS WHICH ARE TO REMAIN AND WHICH ARE DAMAGED DURING THE PERFORMANCE OF THE WORK TO THEIR ORIGINAL CONDITION OR REPLACE WITH NEW. DO NOT EXCEED LOADING CAPACITIES OF SITE PAVEMENT.

UNSHORED EXCAVATIONS GREATER THAN 4 FEET DEEP SHALL NOT HAVE A SLOPE GREATER THAN 1:1.

STACKPILED SOIL SHALL BE PROTECTED FROM WEATHER. CONTAMINATED SOIL SHALL BE COVERED IN ACCORDANCE WITH SCADMD REQUIREMENTS. PROVIDE STORMWATER RUN-ON AND RUN-OFF CONTROLS FOR TEMPORARY SOIL STOCKPILES AND OPEN EXCAVATIONS. PREVENT CONSTRUCTION OR DEMOLITION MATERIALS FROM ENTERING STORM DRAINS AND SEWER SYSTEMS.

ALL SOIL AND WATER SAMPLING SHALL BE DONE IN ACCORDANCE WITH LOCAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE CHARACTERIZATION, TRANSPORTATION AND DISPOSAL OF MATERIALS AND WASTEWATERS ASSOCIATED TRENCH EXCAVATION AND DECONTAMINATION WITH EQUIVA (CRM) FOR PROPER HANDLING. CONCRETE AND ASPHALT DEBRIS SHALL BE RECYCLED WHERE POSSIBLE.

RESTORE OR PROVIDE ARCHITECTURAL FINISHES IN AREAS AFFECTED BY DEMOLITION TO MATCH PRE-CONSTRUCTION CONDITIONS. WORK TO INCLUDE BUT NOT LIMITED TO PAVEMENT RESTRIPPING, CURB PAINTING, LANDSCAPING AND PATCHING SURFACE IRREGULARITIES. ALL LEFT BEHIND SAW CUTS SHOULD BE KEPT TO AN ABSOLUTE MINIMUM.

THE CONVEYANCE PIPING LAYOUT OF THE SITE SHALL BE IN SUCH A MANNER AS TO MINIMIZE THE AMOUNT PRODUCT LINE OR TANK SLAB CROSSINGS.

ALL PROCESS LINES AND CONDUITS SHALL BE FREE OF DIRT AND DEBRIS AFTER INSTALLATION. THE GW SECONDARY CONTAINMENT LINES SHALL BE CLEANED PRIOR TO THE INSTALLATION OF THE PRIMARY LINE.

PRESSURE TEST ALL SVE AND GW SECONDARY LINES TO 5PSI PRIOR TO BACKFILL. PRESSURE TEST GW PRIMARY, COMPRESSED AIR AND AIR SPARGE LINES TO 75% OF THE PROCESS LINE PRESSURE. THERE SHALL BE NO NOTICEABLE CHANGE AFTER 1 HOUR OR ANY VISIBLE LEAK INDICATIONS.

G:\PLEASANTON 2780 HOPYARD\SPURS\REMEDIATION\LEGEND-NOTES.DWG



EXPLANATION	
MW-1	Monitoring well location
SR-1	Wells proposed for shallow groundwater extraction
T-1	Existing Tank Backfill Well
---	Proposed electrical service trench location
---	Proposed water discharge connection
---	Proposed fence
---	Proposed remediation trench location
(D/3)	Denotes Shell Standard Detail Drawing Number
(D/3) with arrow	Cross-Section Indicator & Detail Designator

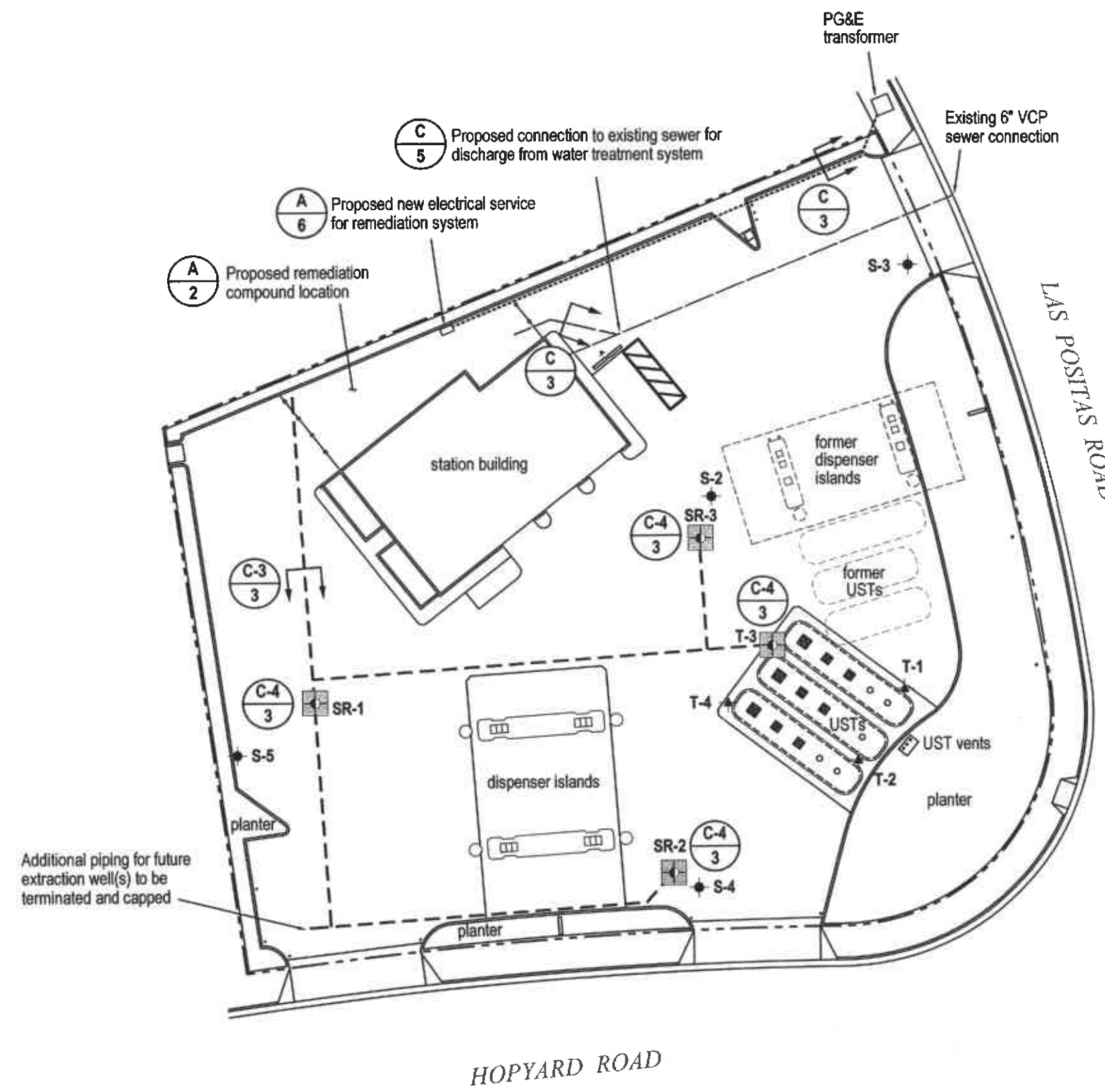
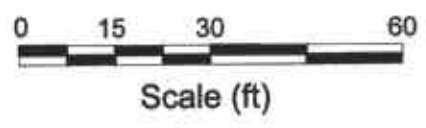
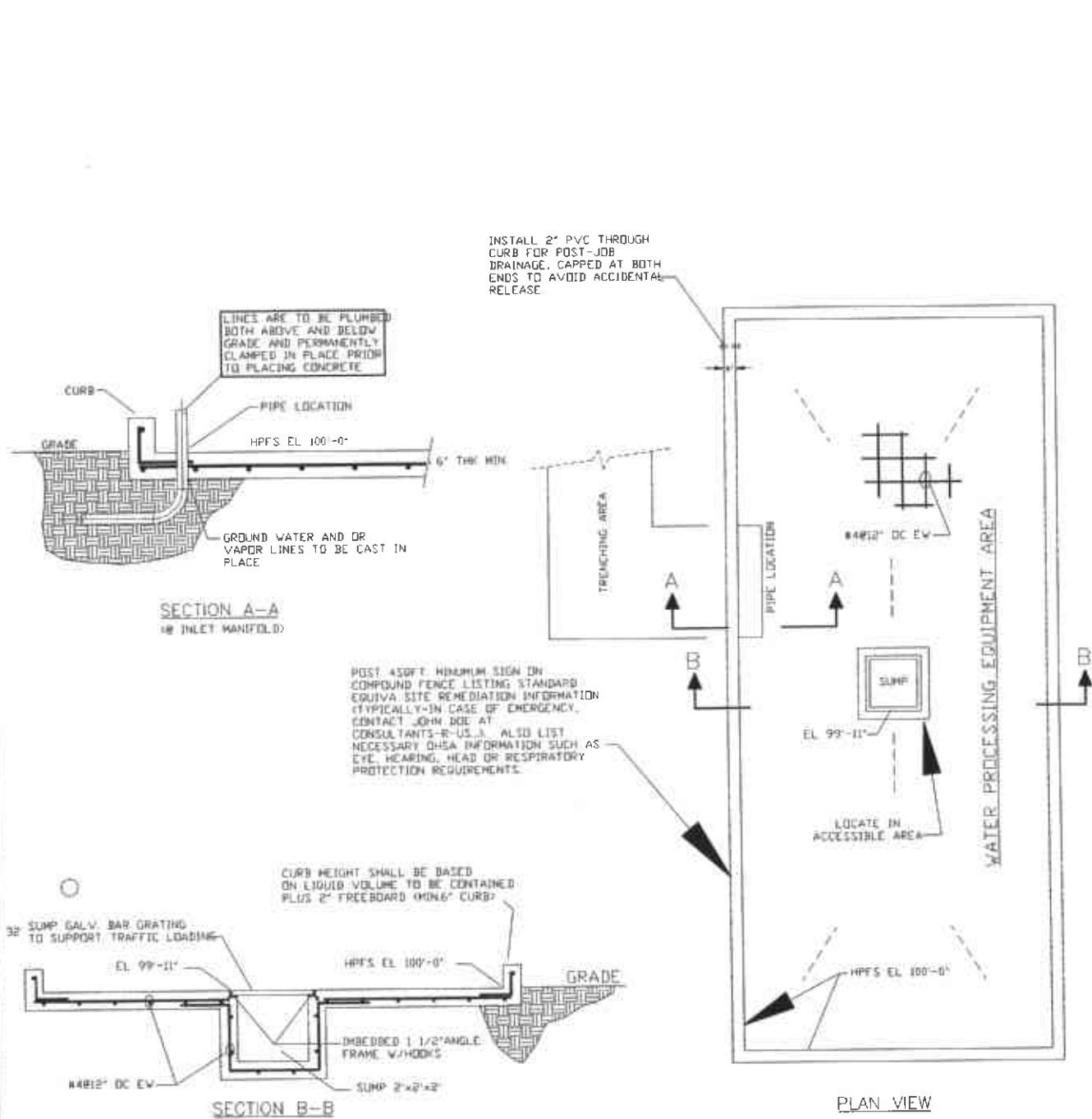


FIGURE 1



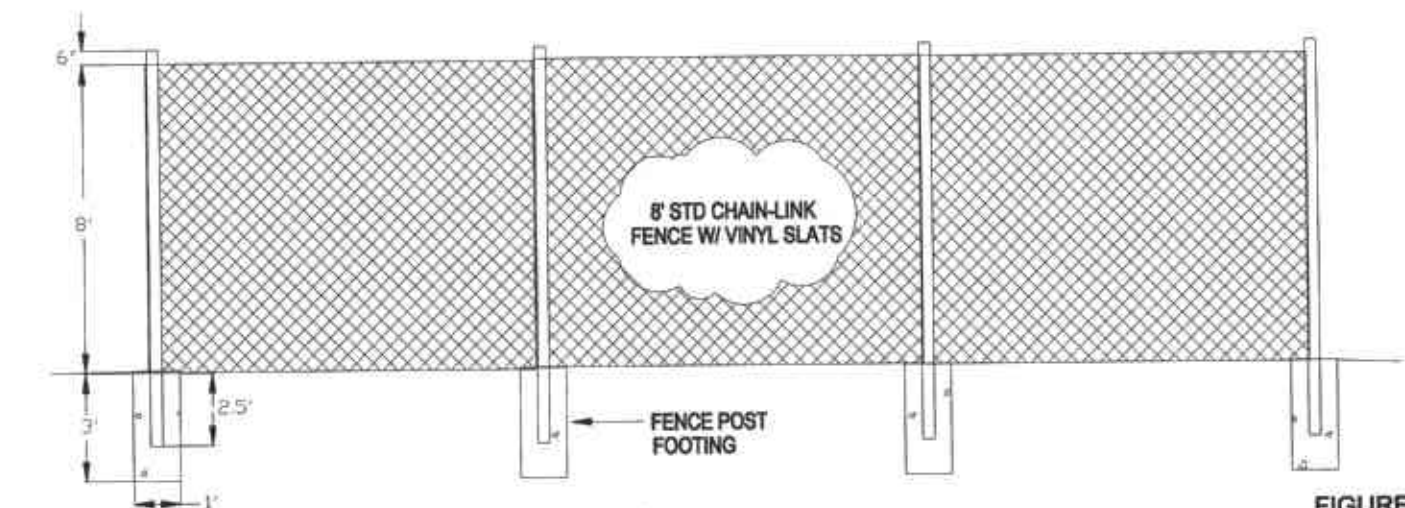
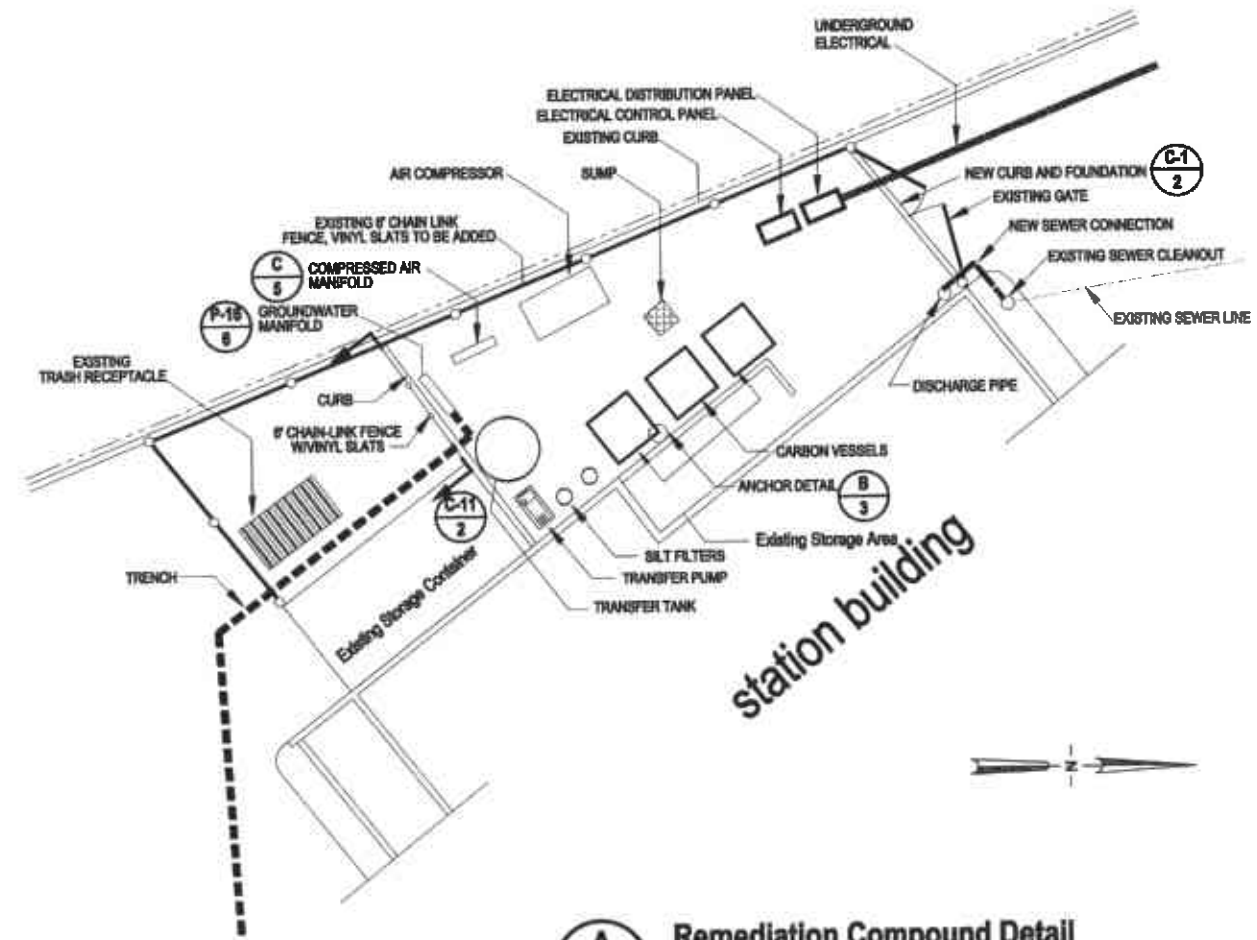
G:\PLEASANTON\HOPYARD\REMEDIATION\SYSTEM\PLAN.DWG



C-1
2 Compound Foundation Details
Not to Scale

NOTES:
SHOWN IS A DIAGRAMMATIC COMPOUND FOUNDATION. THE ACTUAL COMPOUND CONFIGURATION SHALL BE DETERMINED BY THE EQUIPMENT LAYOUT AND THE SITE SPECIFIC CONDITIONS.

THE GROUNDWATER TREATMENT SECTION SHALL BE CURBED FOR CONTAINMENT. THE SVE SYSTEM DOES NOT NEED TO BE CONTAINED AND MAY BE LOCATED ON EXISTING PAVEMENT SURFACES



NOTES:
FENCE SHALL BE TYPICAL 11 GAUGE 2" MESH GAW CHAIN LINK FABRIC
FENCE POSTS SHALL BE 2-7/8" OD STRUCT GRADE GALV STEEL
TOP RAIL SHALL BE 1-5/8" OF 16 GAUGE GALV STEEL
BOTTOM TENSION WIRE SHALL BE AMINIMUM OF 9 GAUGE GALV WIRE
GATE POSTS FOR GATES WIDER THAN 6' SHALL BE 2-7/8" OD SCH40 STEEL

FIGURE
2

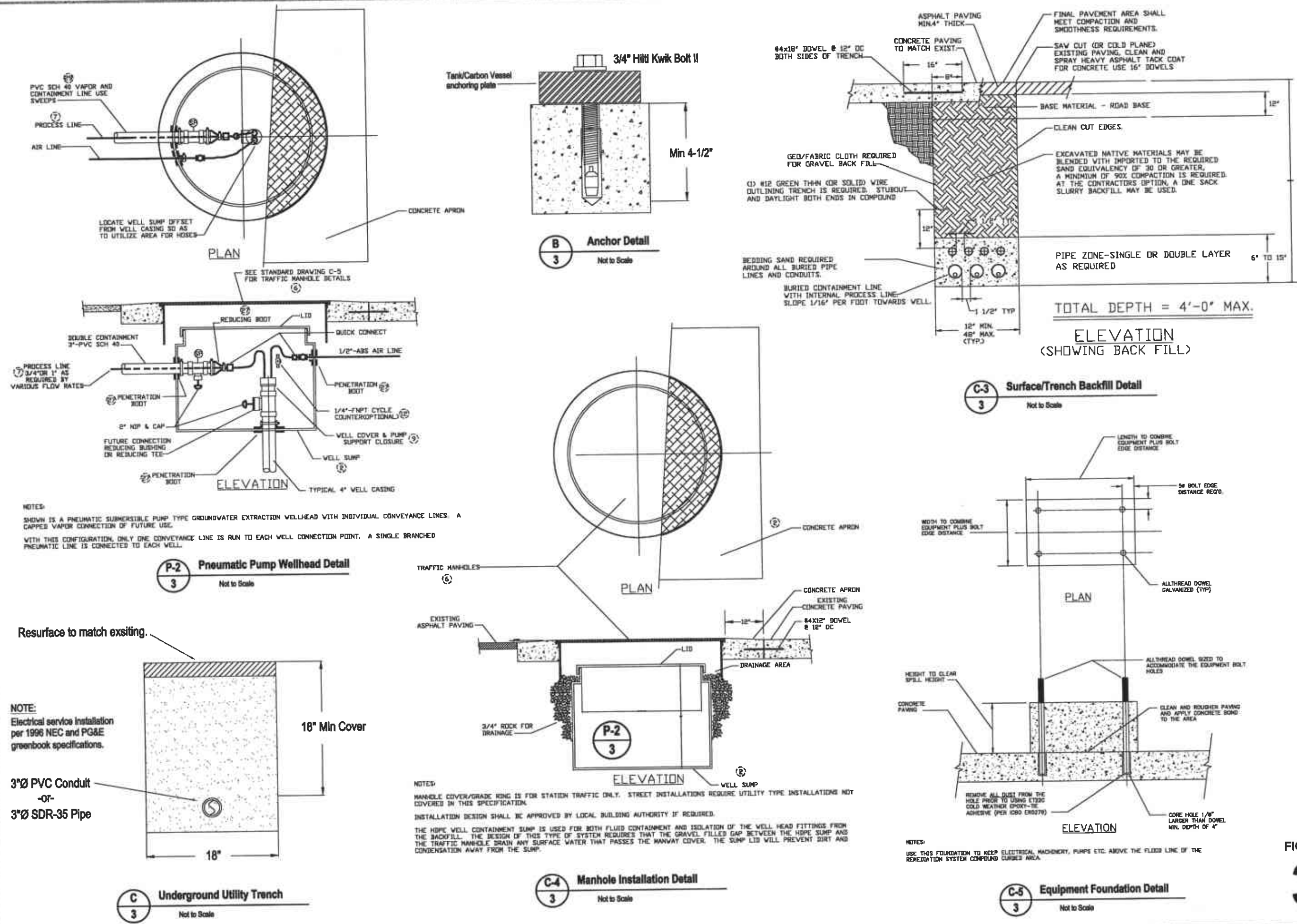
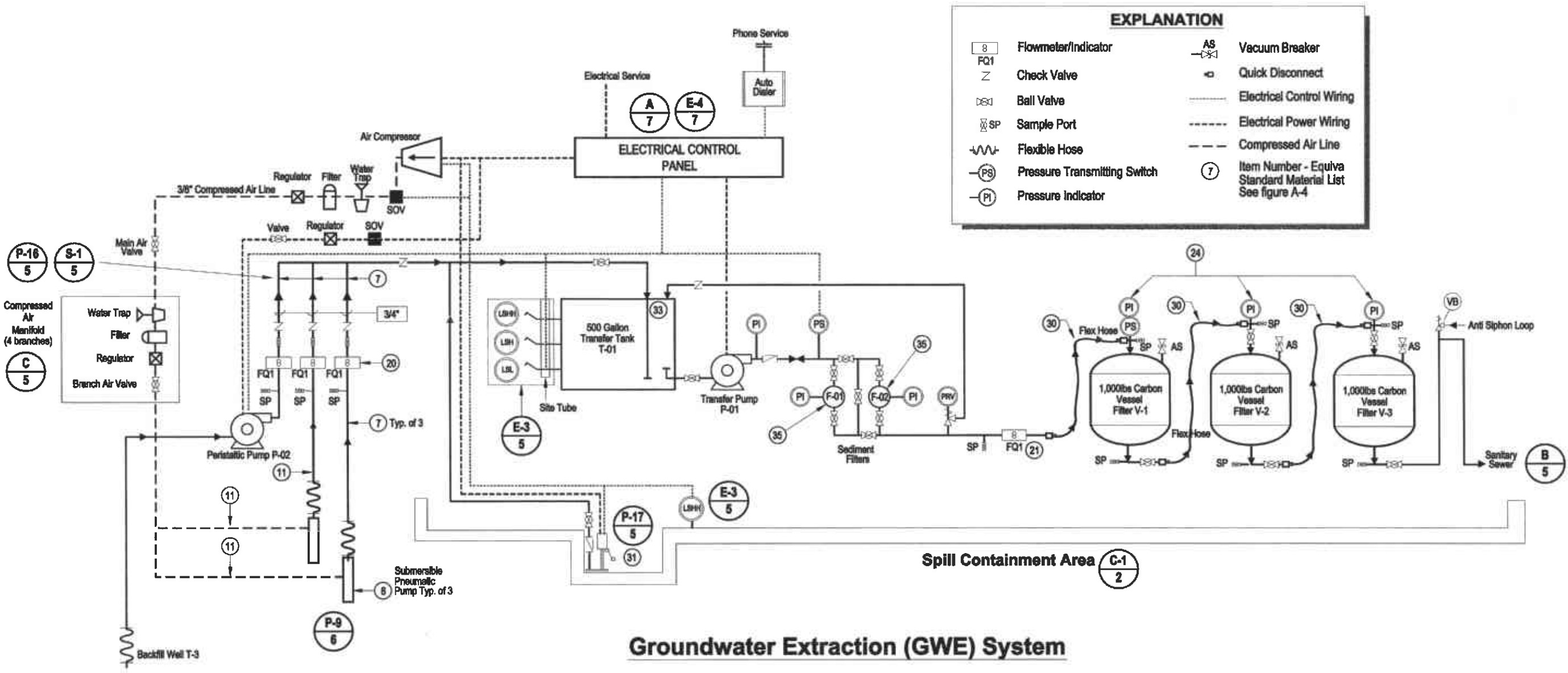


FIGURE
3



SUPPLEMENT 3790 HOPKINSVILLE REMEDIATION PROCESS FLOW DIAG

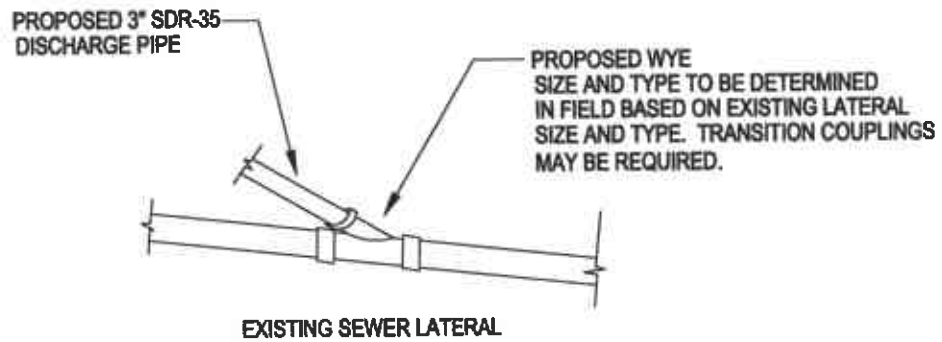
Groundwater Extraction (GWE) System



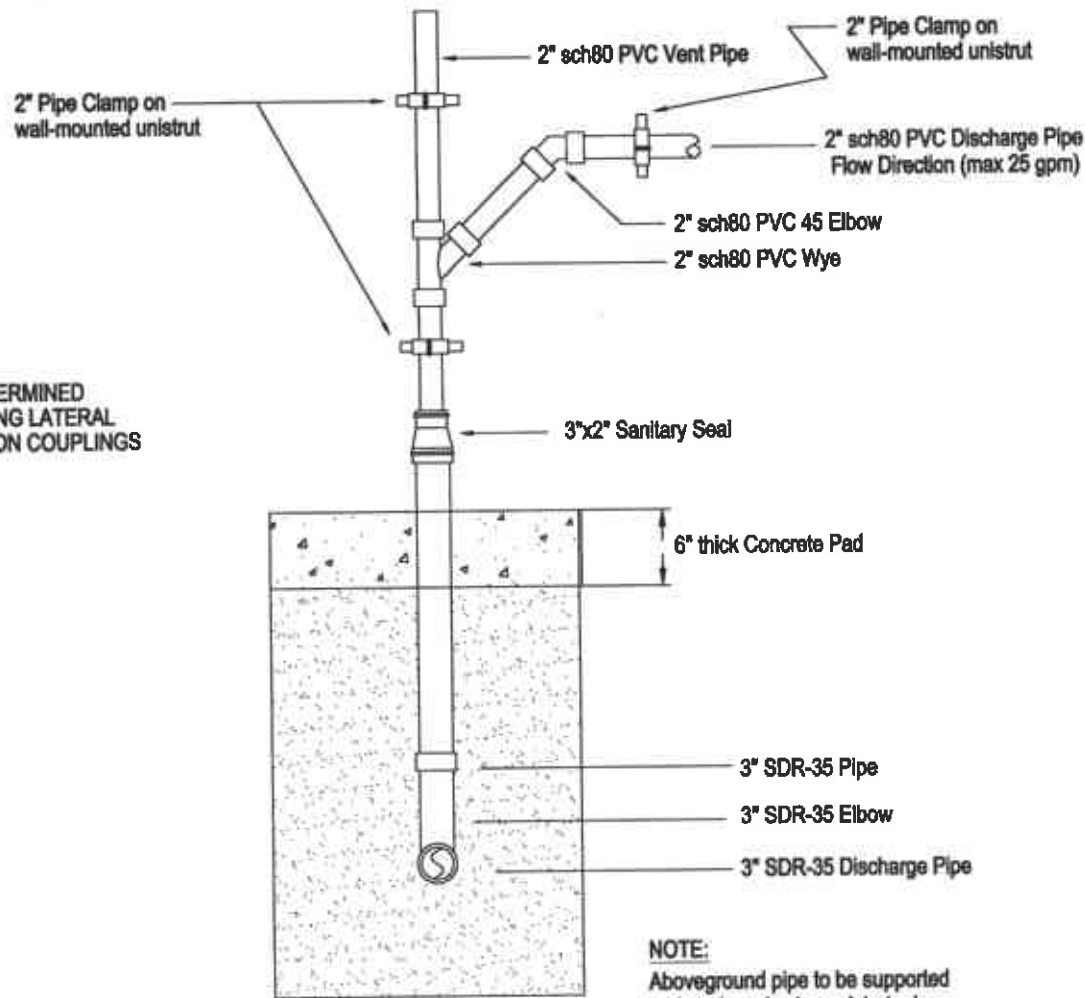
C A M B R I A

Shell-branded Service Station
3790 Hopyard Road
Pleasanton, California
Incident # 98995842

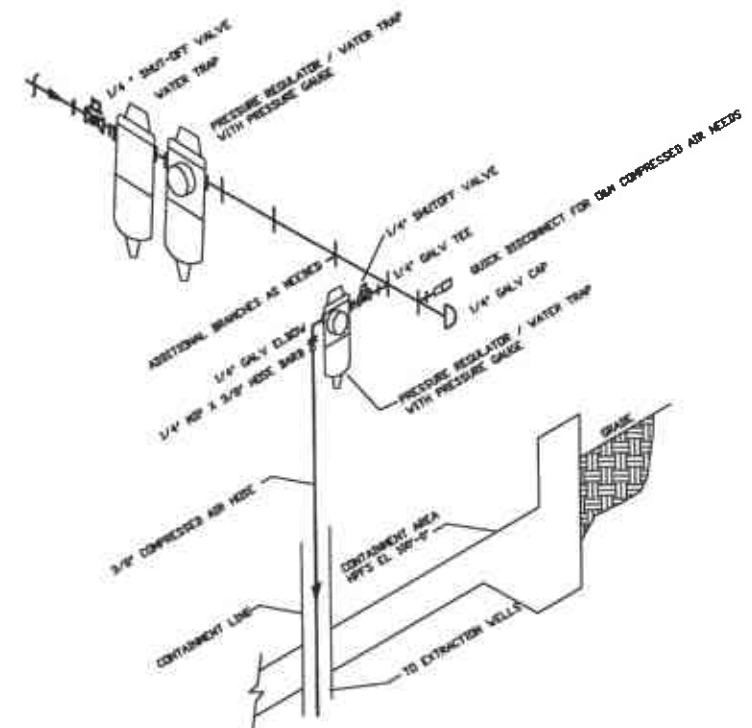
FIGURE
4



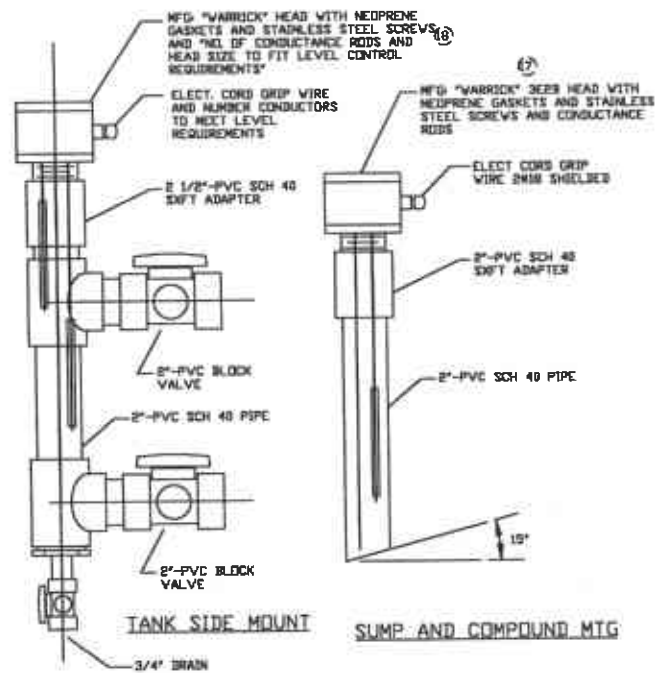
A
5 Sanitary Sewer Connection
Not to Scale



B
5 Discharge Pipe Detail
Not to Scale

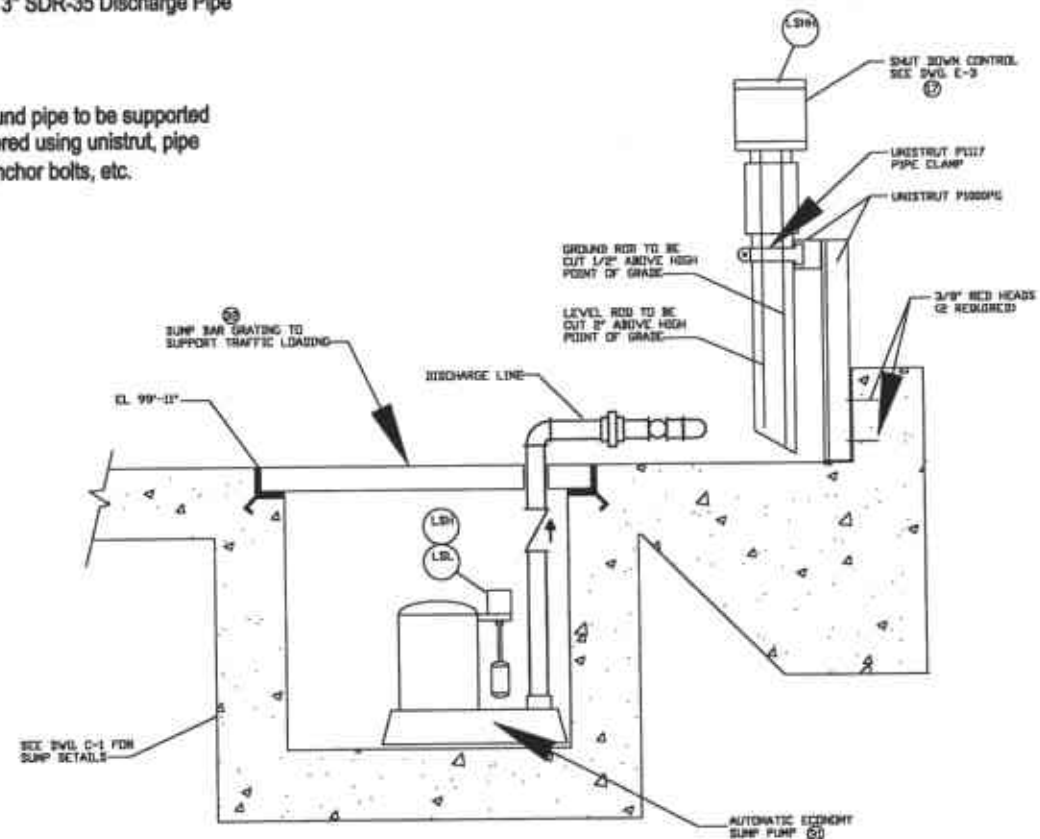


C
5 Compressed Air Manifold
Not to Scale



E-3
5 Level Control Detail
Not to Scale

NOTE:
Aboveground pipe to be supported and anchored using unistrut, pipe clamps, anchor bolts, etc.



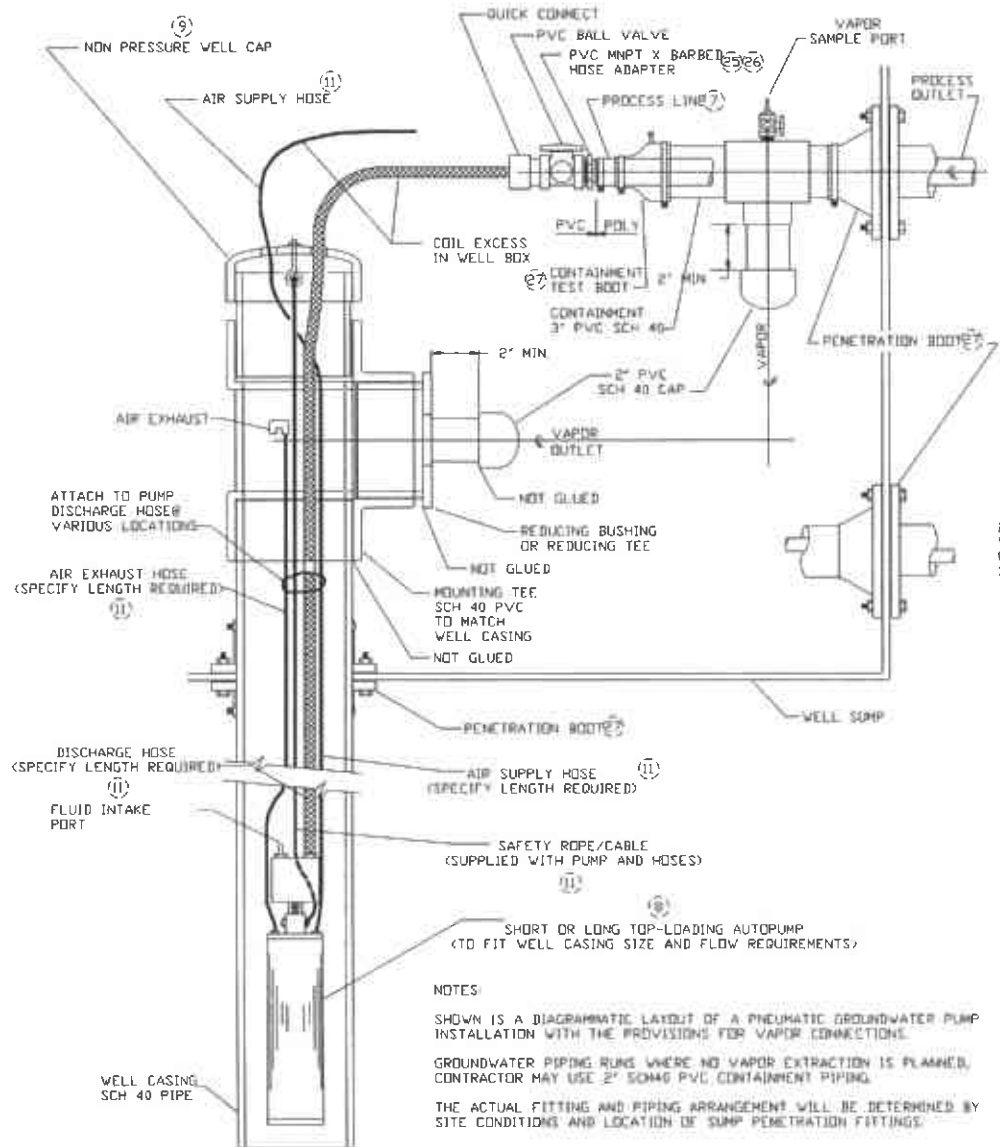
P-17
5 Sump & Level Control Detail
Not to Scale

NOTES:
SHOWN ARE TWO INSTALLATIONS OF THE WARRICK 3K STYLE CONDUCTANCE PROBE ASSEMBLIES FOR POINT LIQUID LEVEL DETECTION. THEY ARE USED IN CONJUNCTION WITH WARRICK 27, 47 OR 67 SERIES CONTROLLERS.
THE SIDE MOUNT INSTALLATION UTILIZES 4 ROD HEADS FOR TANK LOW, HIGH, HIGH/ALARM LEVELS AND REFERENCE GROUND. THE WARRICK CONTROLLER IS TYPICALLY CONFIGURED TO USE THESE LEVEL POINTS FOR PUMP OFF, PUMP ON AND HIGH LEVEL ALARM. THESE CAN BE USED FOR EFFLUENT SURGE TANKS AND OWS UNITS.
THE SUMP AND COMPOUND INSTALLATIONS UTILIZE THE 2 ROD HEAD FOR SINGLE POINT LEVEL CONTROL. THESE ARE CONFIGURED TO ACT AS SWITCH FOR A HIGH LEVEL ALARM SIGNAL.
ON ALL THE CONDUCTANCE PROBE INSTALLATIONS, THE BOTTOM OF THE ROD ACTS AS THE SPECIFIC LEVEL ACTUATION POINT.

SECTION B-B

FIGURE
5

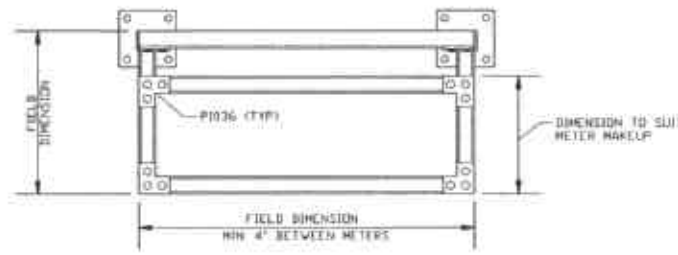




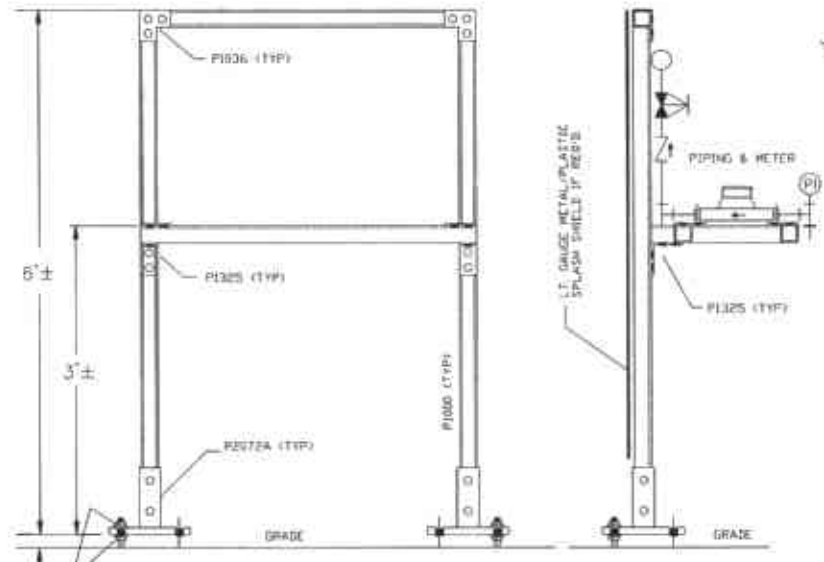
P-9
6
Pneumatic GW Pump Detail
Not to Scale

NOTES:
SHOWN IS A DIAGRAMMATIC LAYOUT OF A PNEUMATIC GROUNDWATER PUMP INSTALLATION WITH THE PROVISIONS FOR VAPOR CONNECTIONS.
GROUNDWATER PIPING RUNS WHERE NO VAPOR EXTRACTION IS PLANNED, CONTRACTOR MAY USE 2" SCH 40 PVC CONTAINMENT PIPING.
THE ACTUAL FITTING AND PIPING ARRANGEMENT WILL BE DETERMINED BY SITE CONDITIONS AND LOCATION OF SUMP PENETRATION FITTINGS.

2" SCH 40 PVC W PENETRATION & RED BOOT
3/8" 200 PSI AIR HOSE



PLAN

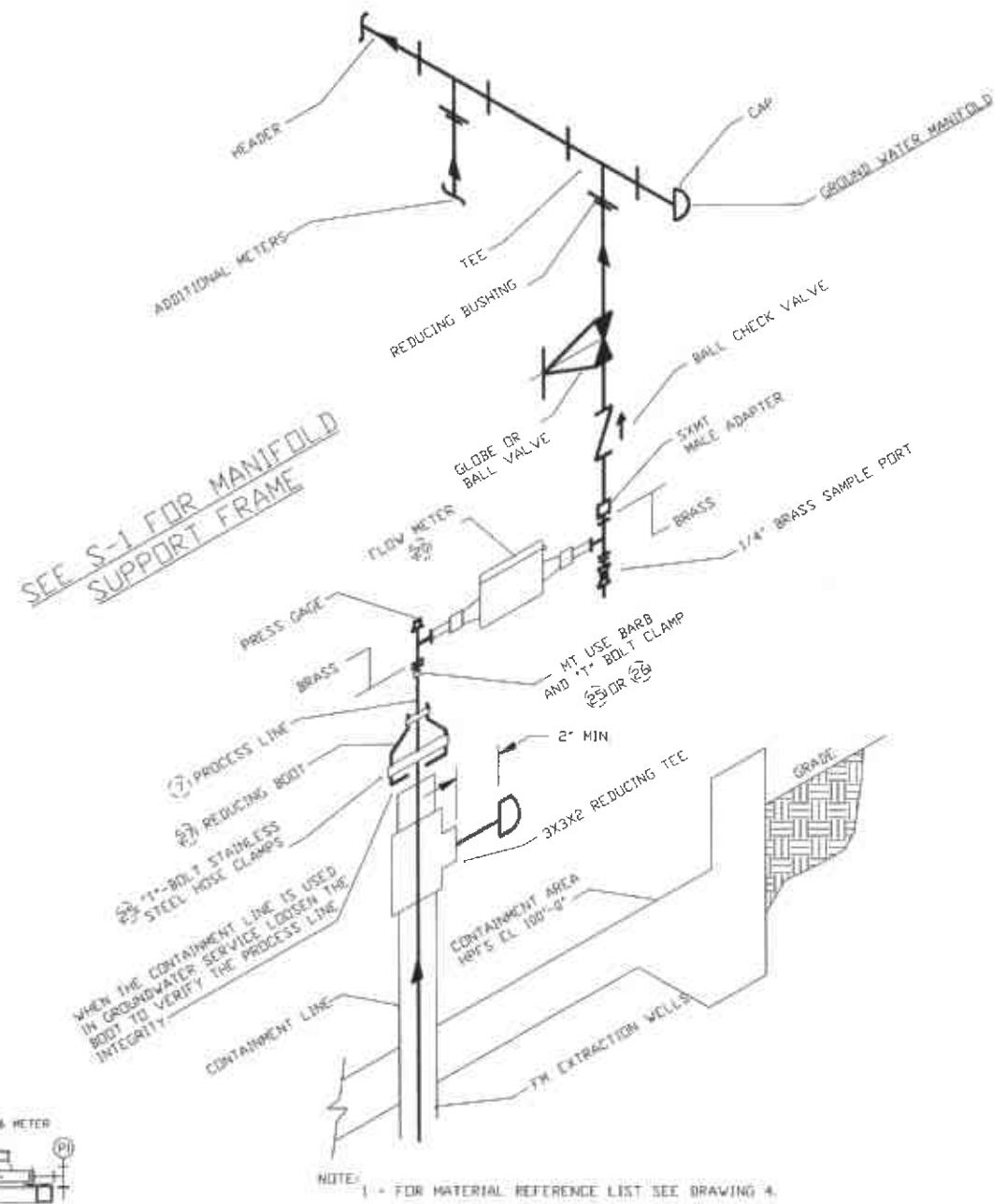


FRONT ELEVATION

SIDE ELEV.

NOTE:
ALL MATERIAL CALL OUTS ARE AND/OR APPROVED EQUAL

S-1
6
Groundwater Manifold Support Detail
Not to Scale



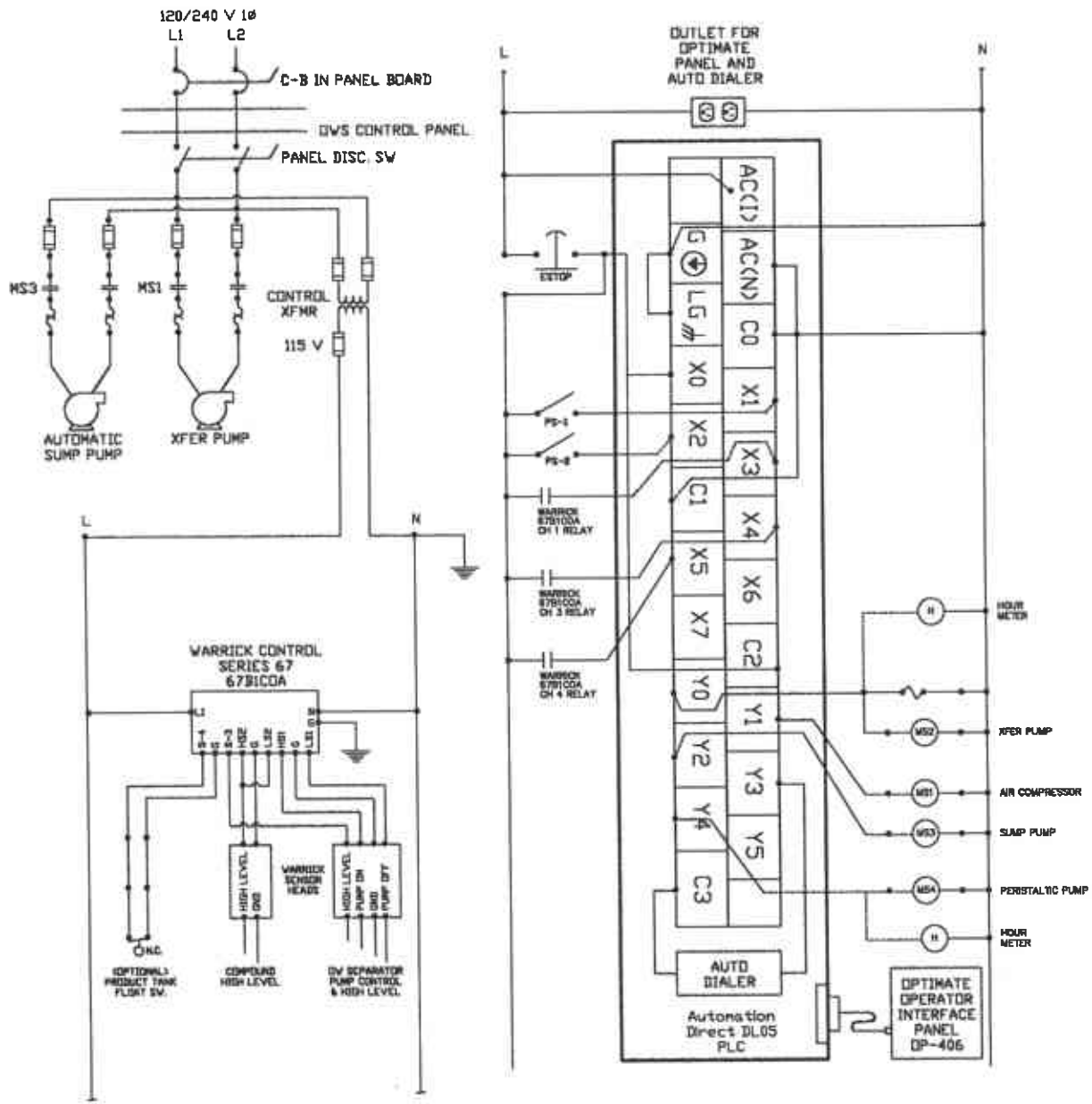
SEE S-1 FOR MANIFOLD SUPPORT FRAME

WHEN THE CONTAINMENT LINE IS USED IN GROUNDWATER SERVICE, LOOSEN THE BOOT TO VERIFY THE PROCESS LINE INTEGRITY

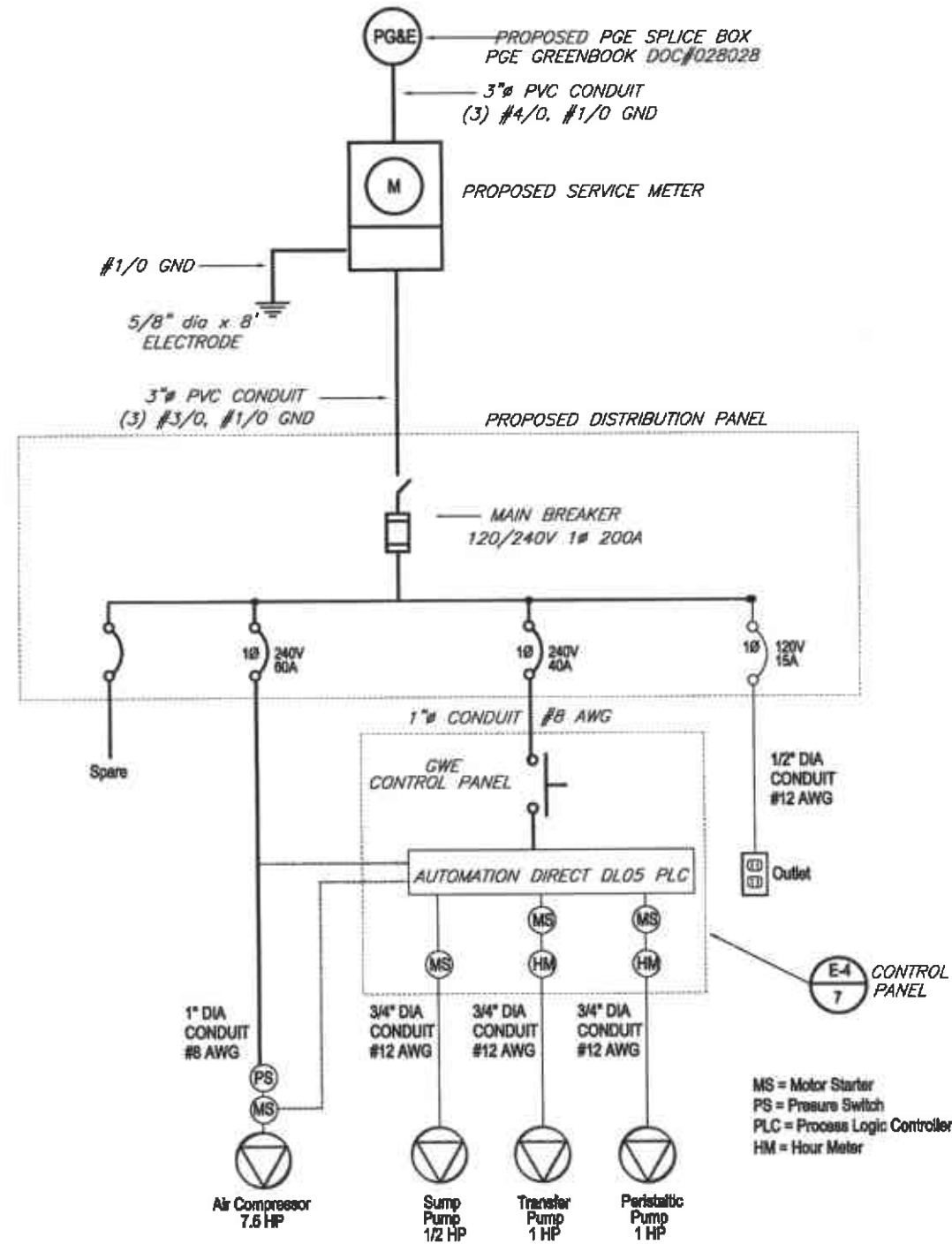
P-16
6
Groundwater Manifold Detail
Not to Scale



SUPPLEMENT 3790 HOPYARD ROAD PLEASANTON CALIFORNIA MECHANICAL DETAILS 2.2.02



E-4
7 Control Panel Diagram



A
7 Single Line Diagram

- Notes:**
- 1 - Wire shall be copper stranded with THWN or THHN insulation.
 - 2 - Above ground conduit to be rigid galv. steel or EMT.
 - 3 - Below ground conduit to be sch 40 PVC, concrete encased if required.
 - 4 - All equipment to be U.L. listed.
 - 5 - All work to comply with the local, state and federal codes.
All electrical installations at an active fueling facility must comply with article 514 of the 1999 NEC.
 - 6 - Enclosures shall be NEMA 3R or 4 Rated.
 - 7 - All panels shall have a minimum 3-foot clearance per NEC art 110-16(a)

FIGURE
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