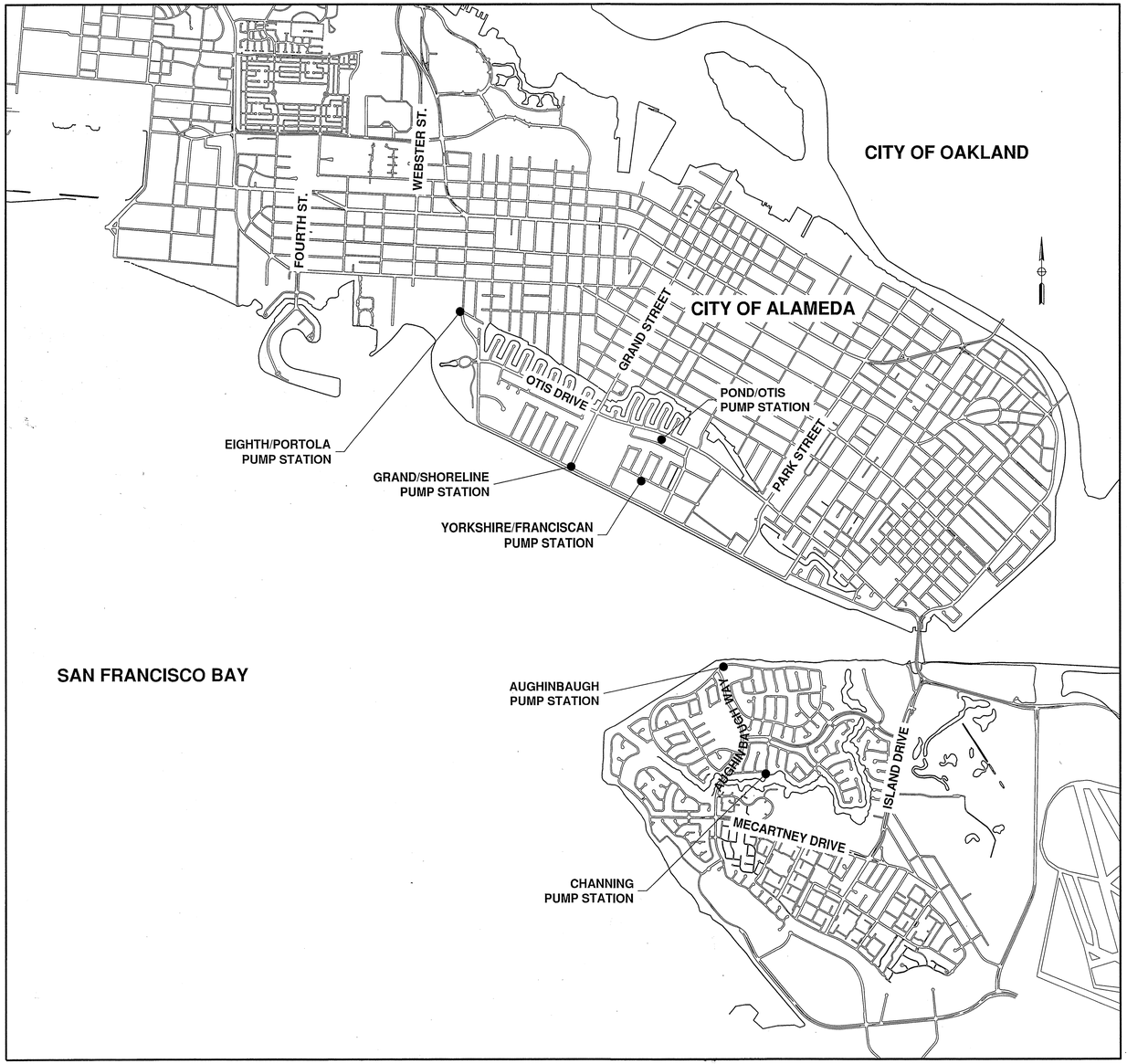
CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS
ALAMEDA, CALIFORNIA
PROJECT NO. PW 04-13-11



VICINITY MAP
SCALE: 1" = 1,500'

SHEET INDEX

PUMP STATION ADDRESS AND PLAN CHECK NUMBERS

PUMP STATION	ADDRESS	CITY PLAN CHECK NUMBER
CHANNING	346 CHANNING WAY	CB13-0285
AUGHINBAUGH	2695 SEAVIEW PARKWAY	CB13-0286
YORKSHIRE-FRANCISCAN	1980 FRANCISCAN WAY	CB13-0287
POND-OTIS	1934 OTIS DRIVE	CB13-0289
GRAND-SHORELINE	303 GRAND STREET	CB13-0290
EIGHTH-PORTOLA	1311 8th STREET	CB13-0288

CITY OF ALAMEDA BUILDING DEPARTMENT DEFERRED SUBMITTALS:

THE CONTRACTOR SHALL SUBMIT THE FOLLOWING ITEMS TO THE CITY'S BUILDING DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION OF THE EQUIPMENT:
1. PROVIDE DETAILS AND CALCULATIONS FOR THE ANCHORAGE OF GENERATORS TO THE CONCRETE SUPPORT PADS: PROVIDE A CONTINUOUS LOAD PATH WITH ADEQUATE STRENGTH AND STIFFNESS AS REQUIRED TO TRANSFER ALL FORCES FROM THE POINT OF APPLICATION TO THE FINAL POINT OF RESISTANCE (ASCE 7 12.1.3). DETAILS AND CALCULATIONS SHALL BE STAMPED AND SIGNED BY A CIVIL OR STRUCTURAL ENGINEER LICENSED IN THE STATE OF CALIFORNIA.

RECEIVED
AUG 20 2013
PUBLIC WORKS
CITY OF ALAMEDA

SUBMITTED

SCHAAF & WHEELER
BENJAMIN L. SHICK, RCE 68813
EXP. 9/30/2013

APPROVED

BARBARA HAWKINS, PE
CITY ENGINEER

NO	REVISIONS	DATE	APPR.
1			
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REGISTERED PROFESSIONAL ENGINEER BENJAMIN L. SHICK No. 68813 CIVIL STATE OF CALIFORNIA

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CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS

TITLE SHEET

DATE: 5/21/13
SCALE: AS SHOWN
DESIGN: GMA
DRAWN: GMA
CHECKED: BLS

DWG 9363 CASE 95

SHEET 1 OF 49

D:\JOBS\APWD\07-Phase 1 Pump Stations\Drawings\Phase 1_WORKING\Group 1\SHEET 01 COVER_Group 1.dwg, 6/3/2013 4:39 PM

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE GENERAL AND SPECIFIC PROVISIONS, STANDARD DRAWINGS, AND REQUIREMENTS OF THE CITY OF ALAMEDA.
2. NO CHANGE TO THE PROJECT IMPROVEMENT PLANS SHALL BE PERMITTED WITHOUT PRIOR APPROVAL BY THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER.
3. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE CITY AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT TO THE EXTENT ARISING FROM THE SOLE NEGLIGENCE OF THE CITY OR ENGINEER.
4. CONTRACTOR SHALL CONFORM TO THE RULES AND REGULATIONS OF THE STATE CONSTRUCTION SAFETY ORDERS.
5. INFORMATION CONCERNING EXISTING UTILITIES IS NOT GUARANTEED; LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL REQUEST THAT UNDERGROUND FACILITIES BE LOCATED AND MARKED IN THE FIELD A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION BY CALLING UNDERGROUND SERVICE ALERT (U.S.A.) AT 800-227-2600. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY POTENTIAL CONFLICT WITH EXISTING UTILITIES PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL NOTIFY THE CITY OF ALAMEDA DEPARTMENT OF PUBLIC WORKS AT LEAST 48 HOURS IN ADVANCE OF THE START OF ANY CONSTRUCTION ACTIVITY. ALL UTILITY SHUTDOWNS ARE TO BE COORDINATED THROUGH THE CITY. ANY TEMPORARY SUSPENSION OF THE WORK OR SUBSEQUENT RESUMPTION OF WORK REQUIRES THE NOTIFICATION OF THE CITY AND THE ENGINEER.
7. ALL EXISTING UTILITIES SHALL BE ADEQUATELY SUPPORTED AND PROTECTED TO THE SATISFACTION OF THE CITY. IN THE EVENT OF DAMAGE TO ANY UTILITY OCCASIONED BY THE CONTRACTOR OPERATIONS, THE CONTRACTOR, AT HIS SOLE COST AND EXPENSE, WILL IMMEDIATELY CAUSE REPAIRS TO BE MADE TO THE SATISFACTION OF THE AFFECTED UTILITY. NOTIFY THE ENGINEER OF ANY ADJUSTMENTS NECESSITATED BY WAY OF CONFLICT WITH EXISTING UTILITIES.
8. CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAG MEN, CONES OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ACCORDANCE WITH THE SPECIFICATIONS. CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN IN CONFORMANCE WITH THE SPECIFICATIONS.
9. CONTRACTOR SHALL REPLACE, AT HIS EXPENSE, ALL TREES, SHRUBS, LAWNS, FENCES AND IMPROVEMENTS WHICH ARE TO REMAIN INTACT BUT HAVE BEEN REMOVED OR DAMAGED DURING CONSTRUCTION. CONTRACTOR SHALL NOT REMOVE OR DAMAGE IMPROVEMENTS LOCATED WITHIN CITY PROPERTY WITHOUT WRITTEN PERMISSION FROM THE CITY.
10. WRITTEN PERMISSION FROM APPROPRIATE PROPERTY OWNERS MUST BE OBTAINED PRIOR TO REMOVING ANY EXISTING FENCES, SHEDS, OR OTHER PROPERTY OUTSIDE OF THE PUBLIC RIGHT-OF-WAY OR CITY PROPERTY.
11. ALL PERMANENT IMPROVEMENTS REMOVED OR DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL LOCATION AND CONDITION BY THE CONTRACTOR USING NEW MATERIALS AS DIRECTED BY THE ENGINEER. ALL INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO CURBS AND GUTTERS, SIDEWALKS, DRIVEWAYS, PAVEMENT RESTORATION, ETC. SHALL BE REPLACED PER THE CITY'S STANDARD PLANS.
12. CONTRACTOR TO PROVIDE TEMPORARY FENCING AND GATES WHENEVER AND WHEREVER EXISTING FENCING OR GATES ARE REMOVED FOR CONSTRUCTION PURPOSES.
13. CONTRACTOR TO MAINTAIN A MEANS OF ACCESS TO PROPERTIES, DRIVEWAYS, AND DWELLINGS AT ALL TIMES AS DETERMINED BY THE ENGINEER.
14. THE CONTRACTOR SHALL NOTIFY, BY CIRCULAR, AS DIRECTED BY THE ENGINEER, ALL BUSINESS ESTABLISHMENTS AND RESIDENCES AFFECTED BY THE WORK, AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. CIRCULAR SHALL BE SUBJECT TO APPROVAL BY THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER.
15. ALL SURPLUS AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE AND PUBLIC RIGHT-OF-WAY.
16. CONTRACTOR SHALL PERFORM HIS CONSTRUCTION AND OPERATION IN A MANNER WHICH WILL NOT ALLOW HARMFUL POLLUTANTS TO ENTER THE STORM DRAIN SYSTEM OR OAKLAND ESTUARY. THE CONTRACTOR SHALL PRESENT HIS PROPOSED POLLUTION PREVENTION BMP'S AT THE PRE-CONSTRUCTION MEETING FOR DISCUSSION AND APPROVAL.
17. THE CONTRACTOR SHALL NEITHER WASTE NOR DEPOSIT ANY HAZARDOUS MATERIALS WITHIN THE AREAS OF THIS PROJECT, INCLUDING BUT NOT LIMITED TO GASOLINE OR DIESEL FUELS, MOTOR OILS OR TRANSMISSION FLUIDS, ANTIFREEZE, HYDRAULIC FLUIDS, LUBRICANTS, STARTING FLUIDS AND FILTERS, AND/OR CONTAINERS FOR THESE PRODUCTS. HAZARDOUS MATERIAL SPILLS THAT OCCUR AS A RESULT OF EITHER EQUIPMENT FAILURES OR VANDALISM, INCLUDING ALL ADJACENT CONTAMINATED SOILS, SHALL BE REMOVED AND TRANSPORTED TO AN ENVIRONMENTALLY APPROVED DISPOSAL SITE. ALL REMOVAL, TRANSPORTATION AND DISPOSAL COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR OR HIS SUBCONTRACTORS.
18. OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT IN THE STREET RIGHT-OF-WAY OR ADJACENT PARKING LOT SHALL NOT BE PERMITTED, EXCEPT AT LOCATION(S) APPROVED BY THE CITY.
19. FIRM CAPACITY OF A PUMP STATION SHALL BE DEFINED AS THE STATION PUMPING CAPACITY WITH THE LARGEST (HIGHEST FLOW) PUMP TAKEN OUT OF SERVICE.
20. ALL PIPING CONNECTIONS SHALL BE MECHANICALLY RESTRAINED. MJ CONNECTIONS SHALL BE RESTRAINED USING EBAA MEGALUGS OR APPROVED EQUAL.
21. FIRE EXTINGUISHERS (2A-10B:C TYPE) SHALL BE PLACED AT EACH SITE WITH AN EXISTING OR PROPOSED GENERATOR, IN THE LOCATION SHOWN ON THE SITE PLANS. EXTINGUISHERS SHALL BE MOUNTED TO THE INSIDE WALL OF THE PROPOSED MAINTENANCE CABINETS PER THE MANUFACTURERS RECOMMENDATIONS. PENETRATIONS THROUGH NEW CABINET SHALL MEET THE ASSOCIATED SPECIFICATION REQUIREMENTS.
22. STREET ADDRESS SIGN SHALL BE POSTED AT EACH PUMP STATION, LOCATION OF SIGN IS SHOWN ON THE SITE PLANS. SIGN SHALL BE ⅛" THICK ALUMINUM WITH 1-INCH RADIUS CORNERS. SIGN SHALL BE COVERED WITH GREEN ENGINEER-GRADE REFLECTIVE SHEETING AND SHALL HAVE WHITE HORIZONTAL LETTERING. LETTERING SHALL BE 4 INCHES IN HEIGHT AND STENCILS SHALL HAVE ¾" THICK STROKE. PENETRATIONS THROUGH NEW PANELS SHALL MEET THE REQUIREMENTS WITHIN THE ASSOCIATED SPECIFICATIONS
23. ALL STATIONS SHALL BE PROVIDED WITH EITHER A FIRE DEPARTMENT APPROVED BREAK-AWAY PADLOCK, OR A KNOX KEY-LOCK BOX. PLEASE CONTACT FIRE INSPECTOR KEN JEFFREY, AT 510-337-2126, TO DETERMINE THE LOCK SYSTEM AND AN APPROVED LOCATION FOR ANY KEY-LOCK BOXES."

TREE PROTECTION NOTES

1. THE CONTRACTOR SHALL BE SENSITIVE TO THE REQUESTS OF THE LOCAL RESIDENTS AND EXERCISE ADDED CARE WHEN WORKING AROUND THE TREES THAT MAY CONFLICT WITH THE WORK IN THIS AREA.
2. PROTECTION - TREES TO BE PROTECTED ARE SHOWN ON THE PLANS; HOWEVER, ADDITIONAL TREES MAY NEED TO BE PROTECTED. ALL TREES THAT COULD BE DAMAGED FROM EQUIPMENT REQUIRE PROTECTION FROM PHYSICAL INJURY. TREE TRUNKS ARE TO BE WRAPPED WITH ORANGE PLASTIC CONSTRUCTION FENCING FROM THE BASE UP TO THE FIRST BRANCH. THE PLASTIC FENCING MUST BE WRAPPED TO A MINIMUM THICKNESS OF 2 INCHES TO PROTECT FROM POSSIBLE INJURY. ADDITIONAL PROTECTION FROM LARGER EQUIPMENT SHALL BE PROVIDED BY STRAPPING 2X4 BOARDS OVER THE ORANGE FENCING ON THE SIDE OF THE TREE WHERE THERE IS A POTENTIAL FOR INJURY. WHEN TRENCHING AND LIME SOIL STABILIZATION IS UNDERTAKEN, THE SIZE OF THE EQUIPMENT MAY REQUIRE THAT UPPER SCAFFOLD STEMS ARE ALSO WRAPPED AND PROTECTED.
3. WORK AROUND TREES - MECHANICAL BUCKET USE IS NOT ALLOWED WITHIN FIVE FEET OF THE BASE OF ALL TREES. IT IS ACCEPTABLE TO USE A JACKHAMMER TO BREAK CEMENT IMMEDIATELY ADJACENT TO THE TREE. IT IS ALSO ACCEPTABLE TO CONDUCT SAW CUTTING OF CEMENT AND ASPHALT INSIDE OF THE FIVE FOOT NO EQUIPMENT ZONE. TRENCHING CAN BE UNDERTAKEN INSIDE OF THE FIVE FOOT AREA AFTER ALL ROOT TREATMENT PROCEDURES HAVE BEEN COMPLETED. WHERE IN THE PUBLIC RIGHT-OF -WAY, TREE ROOTS CONFLICT WITH THE GRADE FOR THE PLACEMENT OR REPLACEMENT OF CONCRETE WORK, THE CONTRACTOR SHALL INFORM THE CITY MAINTENANCE DIVISION IMMEDIATELY. WHEN DIRECTED BY THE CITY MAINTENANCE DIVISION, THE CONTRACTOR SHALL PERFORM THE NECESSARY ROOT REMOVAL AND TRIMMING TO A MINIMUM DEPTH OF TEN INCHES (10) BELOW THE PROPOSED CONCRETE, TO PREPARE THE SITE FOR THE CONCRETE WORK. ALL CUT ROOTS SHALL BE PROPERLY PAINTED WITH AN APPROVED ROOT SEALING COMPOUND. AFTER ROOTS ARE PRUNED, EXPOSED ROOT ENDS SHALL BE COVERED WITH A MINIMUM OF TWO LAYERS OF BURLAP. BURLAP SHALL BE MAINTAINED IN A MOIST CONDITION UNTIL BACKFILLED.
4. METHOD OF EXCAVATION AROUND ROOTS - THE USE OF AIR SPADING IS THE ONLY ACCEPTABLE METHOD FOR EXCAVATING THE SOIL WITHIN FIVE FEET OF THE BASE OF TREES:
   A. PRIOR TO ANY LATERAL EXTENSION EXCAVATION, THE AREA MUST BE REVIEWED BY THE ENGINEER OR HIS REPRESENTATIVE, AND IF REQUIRED, THE CITY ARBORIST SHALL SUPERVISE THE EXCAVATION AND ANY ROOT CUTTING OR SHAVING WHERE TREE CONFLICTS EXIST.
   B. AIR SPADE - ALSO CALLED AN AIR KNIFE, THIS TOOL USES HIGH PRESSURE AIR TO REMOVE SOIL FROM AROUND TREE ROOTS WITH MINIMAL DAMAGE TO ROOTS. SOIL MUST BE MOISTENED PRIOR AND THE AREA MUST BE SURROUNDED WITH A PLYWOOD (OR ANOTHER COMPARABLE MATERIAL) BARRIER THAT WILL PREVENT THE DEBRIS FROM BEING BLOWN ABOUT.
5. MULCH SHALL BE APPLIED TO DISTURBED SOIL WITHIN THE DRIPLINE OF TREES. MULCH SHALL CONSIST OF GOOD QUALITY COMPOST AND WOOD CHIPS.

ABBREVIATIONS

AB	AGGREGATE BASE	MAX	MAXIMUM
AC	ASPHALTIC CONCRETE	MIN	MINIMUM
ATS	AUTOMATIC TRANSFER SWITCH	MJ	MECHANICAL JOINT
BFP	BACK FLOW PREVENTER	MCC	MOTOR CONTROL CENTER
BM	BENCH MARK	(N)	NEW
BOC	BACK OF CURB	NTS	NOT TO SCALE
C.	CONDUIT	PE	PLAIN END
CL	CENTERLINE	POC	POINT OF CONNECTION
CLR	CLEAR	PUE	PUBLIC UTILITY EASEMENT
C.O.	CONDUCTOR	PVC	POLY VINYL CHLORIDE
CONC	CONCRETE	RCP	REINFORCED CONCRETE PIPE
DEG	DEGREE	REQD	REQUIRED
DIA	DIAMETER	RFCA	RESTRAINED FLANGED COUPLING ADAPTER
DIP	DUCTILE IRON PIPE	ROW	RIGHT OF WAY
DWY	DRIVEWAY	SCH	SCHEDULE
EA	EACH	SDMH	STORM DRAIN MANHOLE
ELEC	ELECTRICAL	SPECS	SPECIFICATIONS
ELECT	ELECTRICAL	SS	STAINLESS STEEL, SANITARY SEWER
EL, ELEV	ELEVATION	SSCO	SANITARY SEWER CLEAN OUT
EG	ENGINE-GENERATOR	SSFM	SANITARY SEWER FORCE MAIN
EQ	EQUAL	SSMH	SANITARY SEWER MANHOLE
(E)	EXISTING	STA	STATION
FCA	FLANGED COUPLING ADAPTER	SD	STORM DRAIN
FDR	FEEDER	SDCB	STORM DRAIN CATCH BASIN
FG	FINISH GRADE	TC	TOP OF CURB
FL	FLANGE	TSB	TRAFFIC SIGNAL BOX
FM	FORCE MAIN	TW	TOP OF WALL
FRP	FIBERGLASS REINFORCED PLASTIC	TYP	TYPICAL
GALV	GALVANIZED	UG	UNDERGROUND
GND	GROUND	UON	UNLESS OTHERWISE NOTED
GRV	GROOVE	VCP	VITRIFIED CLAY PIPE
HV	HIGH VOLTAGE	W/	WITH
HP	HORSEPOWER	WM	WATER METER
ID	INSIDE DIAMETER	WV	WATER VALVE
INV	INVERT	XFMR	TRANSFORMER
KW	KILOWATT		
LF	LINEAL FEET		

LEGEND

EXISTING	PROPOSED	
		CURB, GUTTER AND SIDEWALK
		EASEMENT / PROPERTY LINE
SSFM	SSFM	SANITARY SEWER FORCE MAIN
SS	SS	SANITARY SEWER
SD	SD	STORM DRAIN
W	W	WATER MAIN
E	E	UNDERGROUND ELECTRIC
TV	TV	UNDERGROUND TELEVISION LINE
T	T	UNDERGROUND TELEPHONE LINE
		CENTER LINE
X	X	CHAIN LINK FENCE
		LANDSCAPING
		POWER POLE
X 14.39	X 14.39	SPOT ELEVATION
		BOLLARD
	A / 1	DETAIL OR SECTION DESIGNATION / SHEET NO. WHERE DETAIL OR SECTION IS DRAWN
WV		WATER VALVE
		MONUMENT DISC
		CONCRETE
		GRAVEL

IRRIGATION NOTES

1. ALL DISTURBED IRRIGATION SHALL BE REPLACED IN KIND.
2. ALL IRRIGATION HEADS SURROUNDING THE PROPOSED IMPROVEMENTS SHALL BE REPLACED OR ADJUSTED SO THAT SPRAY IS LIMITED TO THE LANDSCAPED AREAS AND DOES NOT HIT THE PROPOSED IMPROVEMENTS.
3. EXISTING IRRIGATION IRRIGATION EQUIPMENT (PIPES, HEADS, CONDUIT, WIRES, ETC.) LOCATED UNDER PROPOSED IMPROVEMENTS SHALL BE RE-ROUTED AROUND CONCRETE PADS. A ONE FOOT MINIMUM CLEARANCE SHALL BE PROVIDED FROM IMPROVEMENTS (CONCRETE PADS, FENCES, ETC.) TO IRRIGATION EQUIPMENT. ALL IRRIGATION LINES REQUIRED TO BE UNDER CONCRETE SHALL BE SLEEVED WITH 2" SCH 40 CONDUIT.
4. NEW IRRIGATION HEADS MAY BE REQUIRED TO PROVIDE COVERAGE FOR IRRIGATION HEADS REMOVED FOR IMPROVEMENTS.

NO	REVISIONS	DATE	APPR
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REGISTERED PROFESSIONAL ENGINEER — BRIAN L. SCHAAF — No. 58813 — CIVIL — STATE OF CALIFORNIA

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CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS

NOTES, LEGEND & ABBREVIATIONS

DATE: 5/21/13 | SCALE: AS SHOWN | DESIGN: GMA | DRAWN: GMA | CHECKED: BLS

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SHEET 2 OF 49

GENERAL SYMBOLS AND LEGEND

(E)	EXISTING
(N)	NEW
(R)	RELOCATED
Δ	DELTA CONNECTIONS OR DELTA CONNECTED WINDINGS
∠	OPEN DELTA CONNECTIONS
Y	WYE CONNECTIONS OR WYE CONNECTED WINDINGS
	GROUND, GROUND CONNECTION
(2)	SHEET NOTE IDENTIFICATION, REFER TO SHEET NOTE NUMBER 2
(K)	KEY INTERLOCK
(MI)	MECHANICAL INTERLOCK
	DISCONNECTING MEANS
-X-X-X-	FENCE
±	APPROXIMATE DIMENSION
	POLE MOUNTED ANTENNA

ELECTRICAL SYMBOLS

	POWER TRANSFORMER, TWO WINDING
	SWITCH
	SWITCH, FUSED
	LOW VOLTAGE MOLDED CASE CIRCUIT BREAKER
	CAPACITOR, RUNNING/STARTING
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	FUSE
RES	RESISTOR, IN CONTROL CIRCUIT
	SOLENOID VALVE OPERATING COIL
G	INDICATING LIGHT, G-GREEN, R-RED, W-WHITE, A-AMBER
CR	CONTROL RELAY
SR	STARTING RELAY
	BATTERY BANK
M	AMP REVENUE METER
	GENERATOR RECEPTACLE
	POLE MOUNTED LIGHT FIXTURE
	CLASS I, DIV 2 WALL MOUNTED LIGHT FIXTURE
	4 FOOT FLUORESCENT LIGHT FIXTURE
$	SINGLE POLE LIGHT SWITCH, 20A, 120V
J 3	CLASS I, DIV 2 LIGHT SWITCH 3 – INDICATES 3-WAY SWITCH
J	CLASS I, DIV 2 20A, 120V RECEPTACLE
J	CLASS I, DIV 2 WALL MOUNTED JUNCTION BOX
	DUPLEX RECEPTACLE, SURFACE MOUNTED, NEMA 5-20R, 20 AMP, 125 VOLT, +15" MIN. UON. SUBSCRIPT "GFI" DENOTES WITH GROUND FAULT INTERRUPTER WHERE INDICATED ON PLAN. ALL OUTDOOR RECEPTACLES SHALL BE WEATHERPROOF (WP) WITH LOCKABLE COVER.
℄	CENTERLINE, STRUCTURE OR EQUIPMENT
LV	LOW VOLTAGE WIRING SYSTEM
	FLEXIBLE WIRING AND EQUIPMENT CONNECTION.
	EXISTING EQUIPMENT TO BE REMOVED

UNDERGROUND DISTRIBUTION AND GROUNDING

	UNDERGROUND CONDUITS
G G	GROUND GRID, BURIED OR IN MH/VAULT
	UNDERGROUND CONDUIT, CAPPED
	GROUNDING PIGTAILS
	UNDERGROUND THERMO-WELD CONNECTIONS
	3/4" DIA X 10' LONG COPPERCLAD GROUND ROD
	3/4" DIA X 10' LONG COPPERCLAD GROUND ROD IN ACCESSIBLE CONCRETE GROUND ROD BOX
	CONDUIT STUB-UPS

ABBREVIATIONS

A	A	AMPERE
	A.C.	ALTERNATING CURRENT
	AI	ANALOG INPUT
	AIC	AMPS INTERRUPTING CURRENT
	AMP	ALAMEDA MUNICIPAL POWER
	ANN	ANNUNCIATOR
	AO	ANALOG OUTPUT
	AS	AMMETER SWITCH
	ATS	AUTOMATIC TRANSFER SWITCH
	AUX.	AUXILIARY
	AWG	AMERICAN WIRE GAUGE
B	BAL	BALANCE
	BATT.	BATTERY
	BCW	BARE COPPER WIRE
	BKR	BREAKER
	BLDG.	BUILDING
	BOT	BOTTOM
C	C	CONDUIT
	CB	CIRCUIT BREAKER
	CAB	CABINET
	CAP	CAPACITOR
	CHGR.	CHARGER
	CKT	CIRCUIT
	CL,CLE	CURRENT LIMITING, CURRENT LIMITING "E" FUSE
	COL	COLUMN
	COMP	COMPARTMENT
	CONT.	CONTROL
	CNTLR	CONTROLLER
	CO	CONDUIT ONLY
	CONC	CONCRETE
	COND.	CONDUCTOR
	CP	CONTROL PANEL
	CPT	CONTROL POWER TRANSFORMER
	C.S.	CONTROL SWITCH
	CT	CURRENT TRANSFORMER
	CU	COPPER
	CUB	CUBICLE
D	D	DEEP
	DB	DUCT BANK
	DC	DIRECT CURRENT
	D.E.	DEAD END
	DI	DIGITAL INPUT
	DIA	DIAMETER
	DIM	DIMENSION
	DISC	DISCONNECT
	DIST.	DISTRIBUTION
	DN	DOWN
	DO	DIGITAL OUTPUT
	DP	DISTRIBUTION PANEL
	DW	DRY WEATHER
	DWG	DRAWING
E	EA	EACH
	EF	EXHAUST FAN
	EO	ELECTRICALLY OPERATED
	ELEC	ELECTRICAL
	ELEV	ELEVATION
	EPR	ETHYLENE PROPYLENE RUBBER
	EQPMNT	EQUIPMENT
	ETM	ELAPSED TIME METER

ABBREVIATIONS (CONTINUED)

F	FDR	FEEDER
	F,FU	FUSE
	FLD	FIELD
	FLS	FLOAT SWITCH
	FT	FOOT, FEET
	FUT.	FUTURE
	FVR	FULL VOLTAGE REVERSING
	FVNR	FULL VOLTAGE NON-REVERSING
G	GAL	GALLONS
	GALV	GALVANIZED
	GFI, GFCI	GROUND FAULT CIRCUIT INTERRUPTER
	G.L.	GRADE LEVEL
	GND	GROUND
H	HI	HIGH
	HT	HEIGHT
	HH	HANDHOLE
	HTR	HEATER
	HOA	HAND-OFF-AUTO
	HV	HIGH VOLTAGE
I	IC	INTERRUPTING CAPACITY
	INC	INCOMING
	IND	INDICATION
	INS	INSULATOR
	IRR	IRRIGATION
	ISR	INTRINSICALLY SAFE RELAY
J	JB	JUNCTION BOX
K	KCM	THOUSAND CIRCULAR MILS
	KV	KILOVOLT
	KVA	KILOVOLT AMPERE
	KVAR	KILOVOLT AMPERE REACTIVE
	KW	KILOWATT
L	L	LONG, LENGTH
	L.A.	LIGHTNING ARRESTER
	LBS	POUNDS
	LCP	LIGHTING CONTROL PANEL
	L-L	LINE TO LINE
	L-N	LINE TO NEUTRAL
	LTG	LIGHTING
	LO	LOW
	LVL	LEVEL
	LxWxH	LENGTH, WIDTH AND HEIGHT
	LPS	LOW PRESSURE SODIUM
	LV	LOW VOLTAGE
M	MAX	MAXIMUM
	MCC	MOTOR CONTROL CENTER
	MCCB	MOLDED CASE CIRCUIT BREAKER
	MCP	MOTOR CIRCUIT PROTECTOR
	MCS	MOLDED CASE SWITCH
	MED	MEDIUM
	MFR.	MANUFACTURER
	MH	MANHOLE
	MI	MECHANICAL INTERLOCK
	MIN	MINIMUM
	MISC	MISCELLANEOUS
	MO	MANUALLY OPERATED
	MR	MULTI-RATIO
	MTD	MOUNTED
	MV	MEDIUM VOLTAGE
N	N.C.	NORMALLY CLOSED
	N.I.C.	NOT IN CONTRACT
	N.O.	NORMALLY OPEN
	NTS	NOT TO SCALE
	NP	NAMEPLATE
O	OC	ON CENTER
	O/C	OVERCURRENT
	O.H.	OVERHEAD
	OL	OVERLOAD
	OPER.	OPERATING

ABBREVIATIONS (CONTINUED)

P	PB	PULL BOX
	PCB	POLYCHLORINATED BIPHENYLS
	PCC	PORTLAND CEMENT CONCRETE
	PF	POWER FACTOR
	PFR	POWER FAIL RELAY
	PH	PHASE
	PLC	PROGRAMMABLE LOGIC CONTROLLER
	PMP	PUMP
	PNL.	PANEL
	PT	POTENTIAL TRANSFORMER
	PTT	PUSH-TO-TEST
	PVC	POLYVINYL CHLORIDE
	PWR	POWER
R	R	RADIUS
	REM	REMOTE
	RSC, RSG	RIGID STEEL CONDUIT, GALVANIZED
	REQ'D	REQUIRED
S	S.A.	SURGE ARRESTERS
	SB	SHORTING BLOCK
	SBC	SBC COMMUNICATIONS, INC.
	SCH	SCHEDULE
	SCTB	SHORT CIRCUITING TERMINAL BLOCK
	SEC	SECONDARY
	SHLD.	SHIELDED
	SHT	SHEET
	SPR	SPARE
	SPD	SURGE PROTECTION DEVICE
	SS	STAINLESS STEEL
	SSRVS	SOLID STATE REDUCED VOLTAGE STARTER
	STA.	STATION
	STD	STANDARD
	SUB	SUBSTATION
	SVCE	SERVICE
	SV	SOLENOID VALVE
	SW	SWITCH
	SWBD	SWITCHBOARD
	SWGR	SWITCHGEAR
	SYM	SYMMETRICAL
T	TEL	TELEPHONE
	TELEM	TELEMETERING
	TEMP	TEMPORARY
	TERM	TERMINAL
	TOC	TOP OF CONCRETE
	TS	TEST SWITCH
	TSP	TWISTED SHIELDED PAIR
	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	TYP.	TYPICAL
U	UG	UNDERGROUND
	UON	UNLESS OTHERWISE NOTED
	UL	UNDERWRITER LABORATORIES
	UPS	UNINTERRUPTIBLE POWER SUPPLY
	UV	UNDERVOLTAGE
V	V	VOLT
	V.C.B.	VACUUM CIRCUIT BREAKER
	VF	VENTILATING FAN
	VFD	VARIABLE FREQUENCY DRIVE
	VS	VOLTMETER SWITCH
	V.T.	VOLTAGE TRANSFORMER
W	W/	WITH
	WT	WEIGHT
	WP	WEATHERPROOF
X	XDCR	TRANSDUCER
	XFMR	TRANSFORMER
	XFR	TRANSFER
	XMTR	TRANSMITTER

SYMBOLS AND ABBREVIATIONS ARE FOR GENERAL USE.
DISREGARD THOSE WHICH ARE NOT USED ON THE DRAWINGS.

GENERAL NOTES:

1. THE COMPLETE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF NATIONAL ELECTRICAL CODE, THE LATEST RULES AND REGULATIONS OF THE SAFETY ORDERS ISSUED BY THE DIVISION OF INDUSTRIAL SAFETY, THE NATIONAL FIRE PROTECTION ASSOCIATION AND ALL APPLICABLE STATE AND LOCAL CODES ISSUED BY AUTHORITIES HAVING JURISDICTION.
2. LOCATION(S) OF CONTROLLERS, CONDUIT, PULL BOXES AND OTHER EQUIPMENT AS SHOWN ON THE PLAN IS APPROXIMATE AND MAY BE CHANGED TO SUIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
3. PULL ROPE SHALL BE PROVIDED IN ALL EMPTY CONDUITS.
4. ELECTRICAL EQUIPMENT AND FEEDER SHALL BE SUPPORTED AND/OR ANCHORED IN ACCORDANCE WITH 2010 CBC SEISMIC REQUIREMENTS.
5. ALL CONDUCTORS SHALL BE 600 VOLT, STRANDED COPPER, WITH TYPE XHHW INSULATION, UNLESS OTHERWISE NOTED. THE MINIMUM SIZE CONDUCTORS SHALL BE #12 AWG UNLESS OTHERWISE NOTED.

NO	REVISIONS	DATE	APPR
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REGISTERED PROFESSIONAL ENGINEER
JULIO C. HERDOCIA
No. 9580
Exp. 9/30/14
ELECTRICAL
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PROJECT NO. 11697-01

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS
ELECTRICAL
SYMBOLS, ABBREVIATIONS AND GENERAL NOTES

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	KM
DRAWN:	VM
CHECKED:	JH

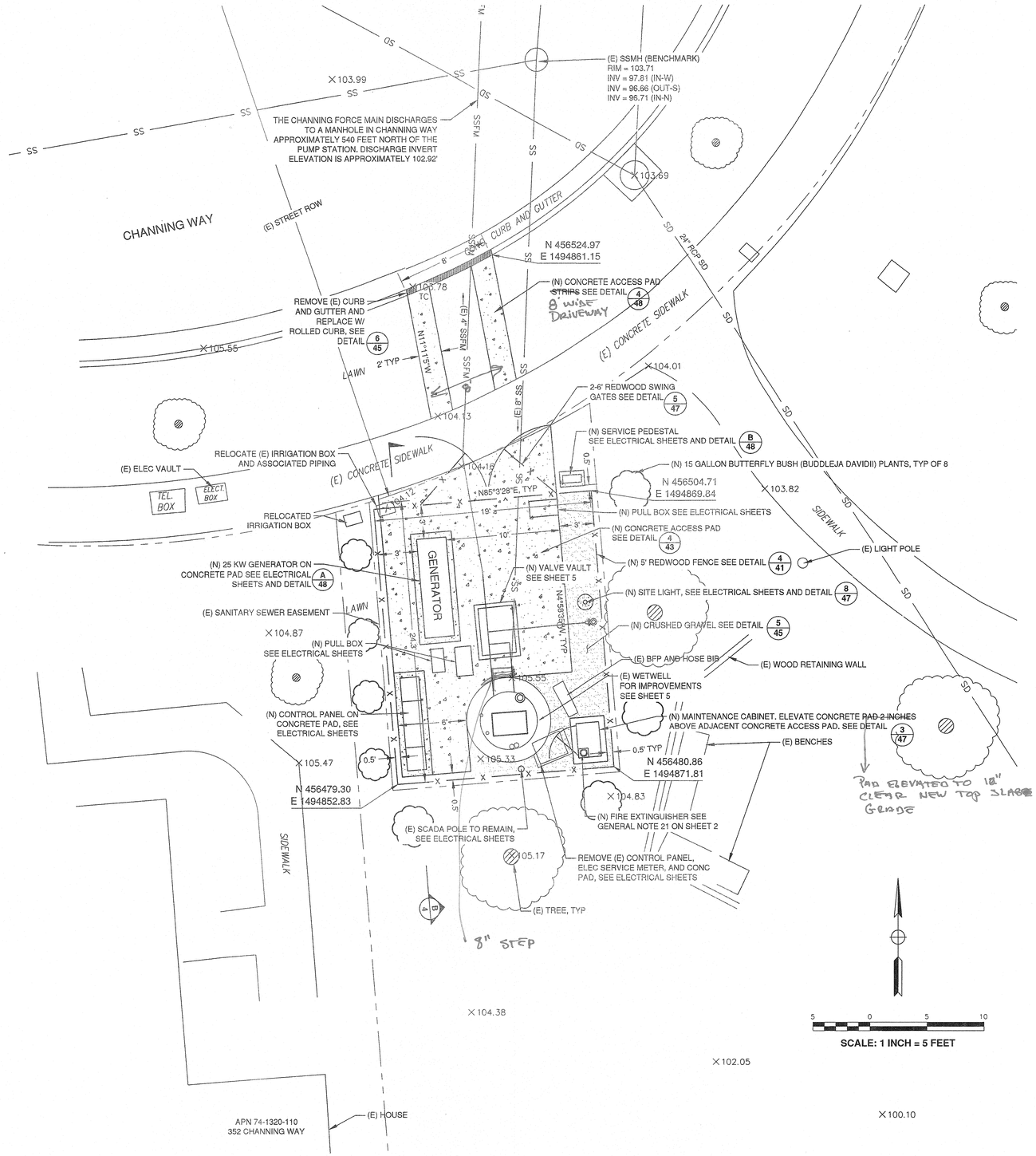
DWG 9363 CASE 95

E0.0

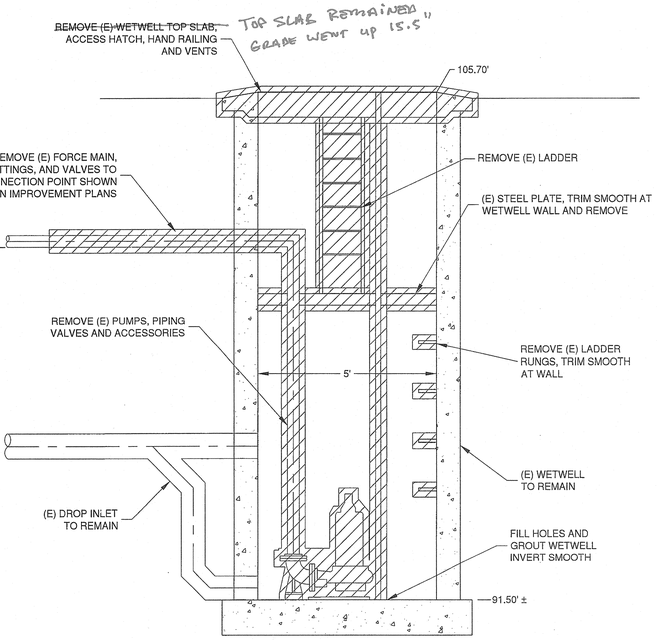
3 OF 49

M:\11697-01 Alameda Pumps II_Alameda_Phase-1_Group-1\3_01\E00.dwg, 5/21/2013 2:02 PM

#3 CHANNING PUMP STATION

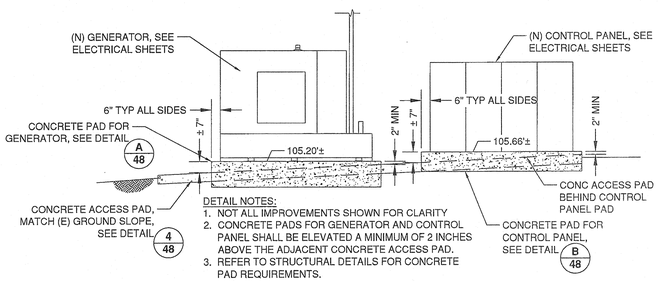


PLAN
SCALE: 1" = 5'



NOTES:
1. REMOVE ALL LADDERS, CONDUIT, CONNECTORS, FANS AND DUCTING FROM WETWELL. TRIM FLUSH WITH WETWELL WALL/CEILING.
2. WHERE EQUIPMENT REMOVAL LEAVES VOIDS, HOLES OR CRACKS IN WETWELL STRUCTURE, FILL WITH NON-SHRINK GROUT.

DEMOLITION SECTION A/4
NO SCALE



DETAIL NOTES:
1. NOT ALL IMPROVEMENTS SHOWN FOR CLARITY
2. CONCRETE PADS FOR GENERATOR AND CONTROL PANEL SHALL BE ELEVATED A MINIMUM OF 2 INCHES ABOVE THE ADJACENT CONCRETE ACCESS PAD.
3. REFER TO STRUCTURAL DETAILS FOR CONCRETE PAD REQUIREMENTS.

IMPROVEMENT SECTION B/4
NO SCALE

SHEET NOTES:
1. ESTIMATED PEAK WET WEATHER FLOW RATE IS 56 GPM. SEE SPECIFICATIONS FOR BYPASS PUMPING REQUIREMENTS.
2. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AT ALL TIMES WHEN WORK IS TAKING PLACE IN THE ROADWAY.
3. CONTRACTOR SHALL CONFIRM THE DEPTH AND LOCATION OF THE EXISTING FORCE MAIN PRIOR TO LAYING OUT IMPROVEMENTS. ADJUST LOCATION OF ASSOCIATED IMPROVEMENTS AS NECESSARY TO TIE INTO EXISTING FORCE MAIN
4. WHERE DEMOLITION OR REMOVAL OF EQUIPMENT LEAVES VOIDS IN THE CONCRETE STRUCTURE, FILL VOIDS WITH NON-SHRINK GROUT.
5. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING IRRIGATION SYSTEMS PRIOR TO CONSTRUCTION AND NOTIFY THE CITY OF ANY POTENTIAL CONFLICTS.
6. CONTRACTOR SHALL COORDINATE WITH THE CITY TO HAVE THE HOME OWNERS ASSOCIATION INSPECT ALL IRRIGATION EQUIPMENT PRIOR TO POURING CONCRETE OVER IRRIGATION PIPING AND EQUIPMENT. CONTACT LYRA GREENBERG AT (510) 865-3363.
7. ADDRESS SIGN SHALL BE MOUNTED TO THE CONTROL PANEL OR FENCING IN A LOCATION VISIBLE FROM THE STREET. SIGN SHALL SAY "346 CHANNING WAY". SEE GENERAL NOTE 22 ON SHEET 2 FOR ADDITIONAL INFORMATION.
8. CONTRACTOR SHALL PROVIDE A KEY LOCK BOX AT THE SITE, SEE GENERAL NOTE 23 ON SHEET 2.
9. GENERATOR AND CONTROL PANEL CONCRETE PADS SHALL BE ELEVATED 2 INCHES ABOVE ADJACENT CONCRETE ACCESS PAD.
10. EQUIPMENT SIZE AND DIMENSIONS SHOWN ARE BASED ON PRELIMINARY GENERATOR DIMENSIONS. CONCRETE PAD AND FENCE DIMENSIONS SHALL BE ADJUSTED BASED ON ACTUAL GENERATOR TO MEET MINIMUM CLEARANCE REQUIREMENTS (3' CLEARANCE TO ALL FACES OF GENERATOR) AS SHOWN.
11. SEE ELECTRICAL SHEETS FOR ADDITIONAL PUMP STATION IMPROVEMENTS.

CHANNING BASIS OF BEARING
BEARINGS AND COORDINATES PER TRACT 4307, BK 122, PAGES 84-87, MON #1421 TO #1422 N 4° 07' 51" E

CHANNING BENCHMARK
HELD SSMH 713 RIM AS SHOWN ON SYSTEM MAP ELEV. = 103.71 (RJA PT #1424)

CHANNING GENERATOR NOTES:
1. GENERATOR SIZE = 25 KW
2. GENERATOR ENCLOSURE = SOUND LEVEL II
3. GENERATOR NOISE REQUIREMENTS: 68 dBA AT 23'
4. APPROXIMATE OUTSIDE DIMENSIONS OF GENERATOR AND ENCLOSURE = 8.5' L X 2.6' W X 6.2' H
5. SEE ELECTRICAL PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS

NO	REVISIONS	DATE	APPR
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Schaaf & Wheeler
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SANTA CLARA, CA 95050
(408) 246-4848

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS

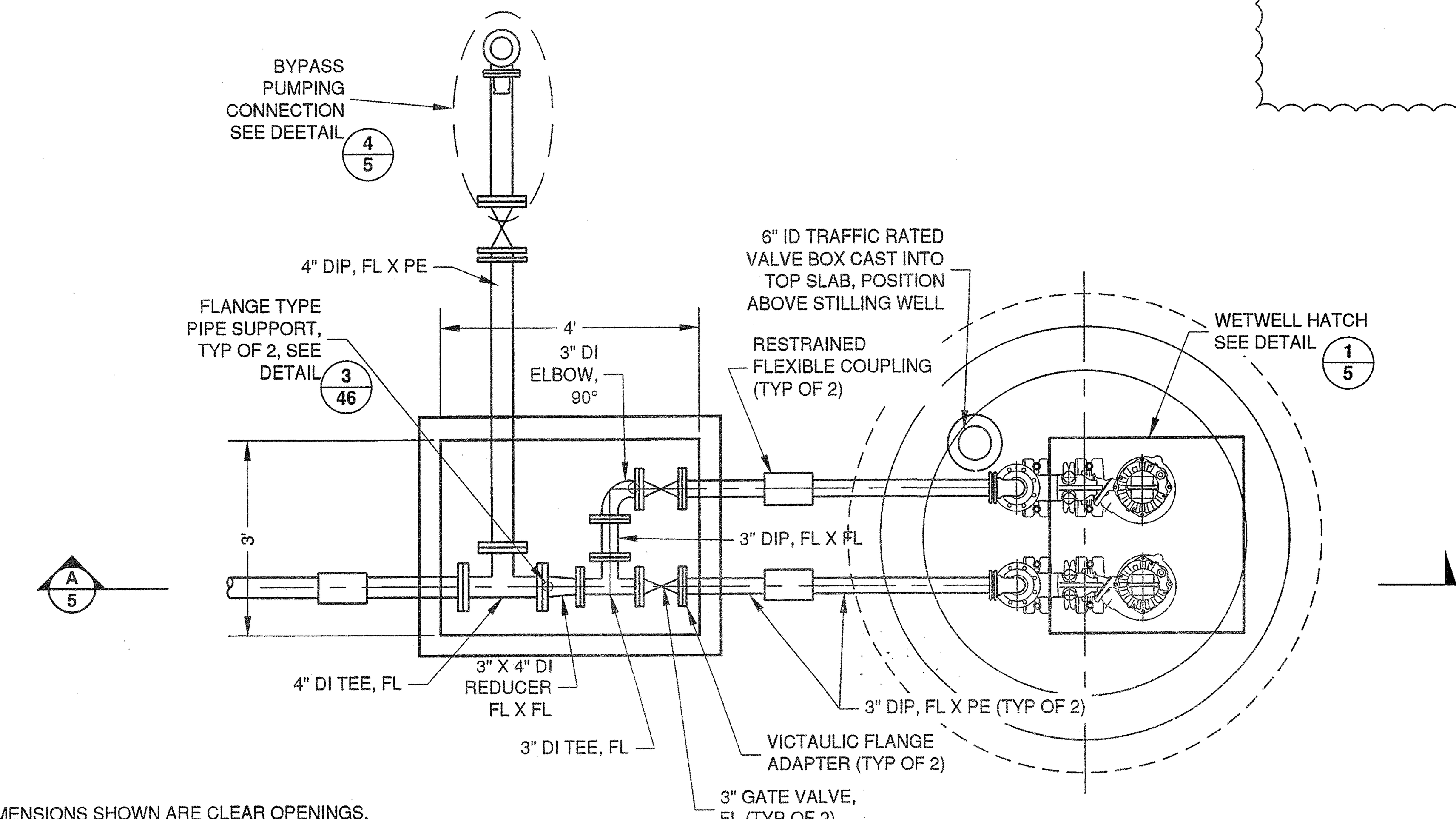
CHANNING SITE PLAN

DATE: 5/21/13
SCALE: AS SHOWN
DESIGN: GMA
DRAWN: GMA
CHECKED: BLS

DWG 9363 CASE 95

SHEET 4 OF 49

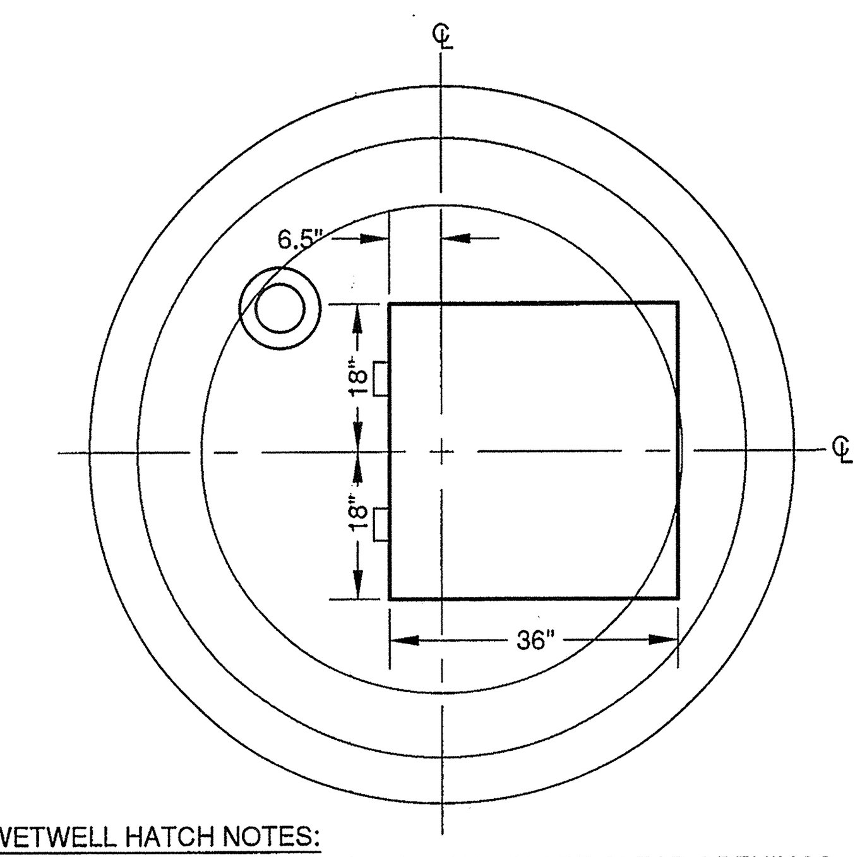
#3 CHANNING PUMP STATION



VALVE VAULT NOTES:
1. ACCESS HATCH DIMENSIONS SHOWN ARE CLEAR OPENINGS.
2. VALVE VAULT ACCESS HATCH SHALL BE RATED FOR H20 LOADING.
3. HATCH SHALL BE SYRACUSE CASTINGS MODEL DTD-HD-AOSG, OR APPROVED EQUAL.
4. HATCH SHALL HAVE A CHANNEL FRAME WITH A 1-1/2" DRAIN COUPLER THAT DRAINS TO WETWELL
5. TOP SHALL BE 1/4" DIAMOND PLATE
6. HATCH SHALL BE EQUIPPED WITH HYDRAULIC LIFT SPRINGS TO ASSIST WITH OPENING
7. HATCH SHALL HAVE A RECESSED PADLOCK CLIP FOR LOCKING

IMPROVEMENT PLAN

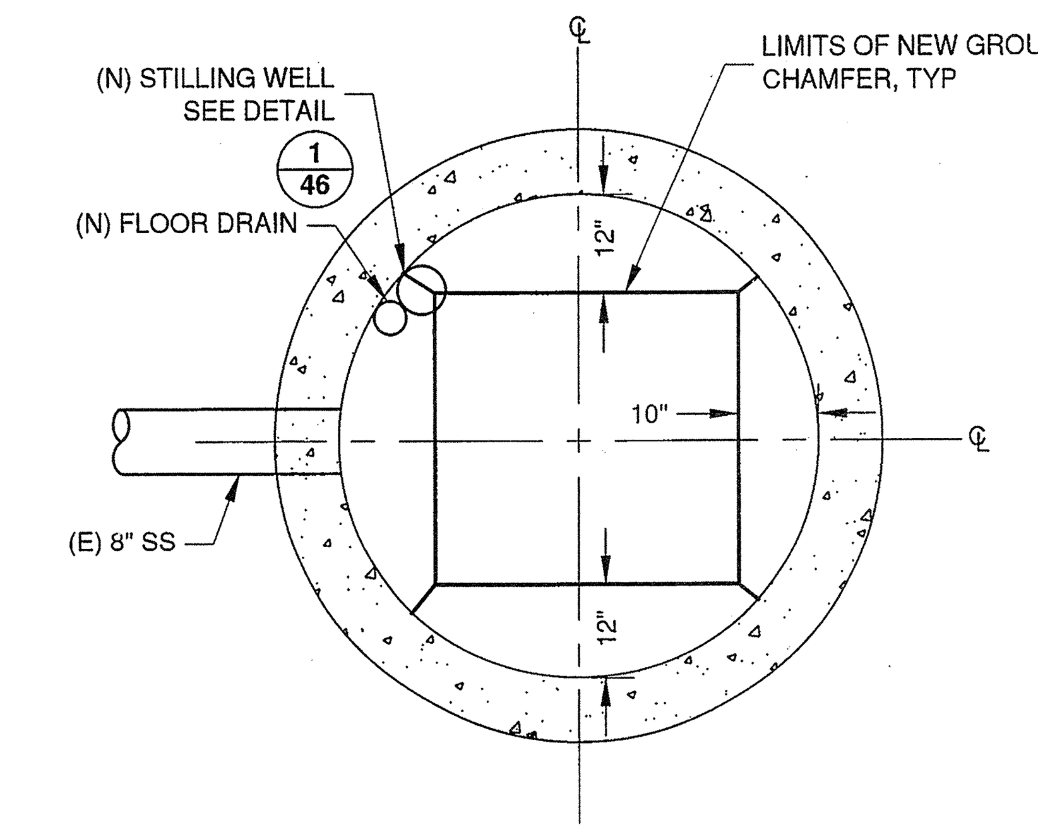
SCALE:1/2" = 1'



WETWELL HATCH NOTES:
1. ACCESS HATCH DIMENSIONS SHOWN ARE CLEAR OPENINGS.
2. ACCESS HATCH SHALL BE EQUIPPED WITH INTEGRAL FALL PROTECTION.
3. WETWELL ACCESS HATCH SHALL BE RATED FOR 300 PSF.
4. HATCH SHALL BE SYRACUSE CASTINGS MODEL DT-AOSG, OR APPROVED EQUAL.
5. HATCH SHALL HAVE A CHANNEL FRAME WITH A 1-1/2" DRAIN COUPLER THAT DRAINS TO WETWELL
6. HATCH TOP SHALL BE 1/4" DIAMOND PLATE
7. ALL HARDWARE AND HINGES SHALL BE SS

WETWELL HATCH DETAIL 1/5

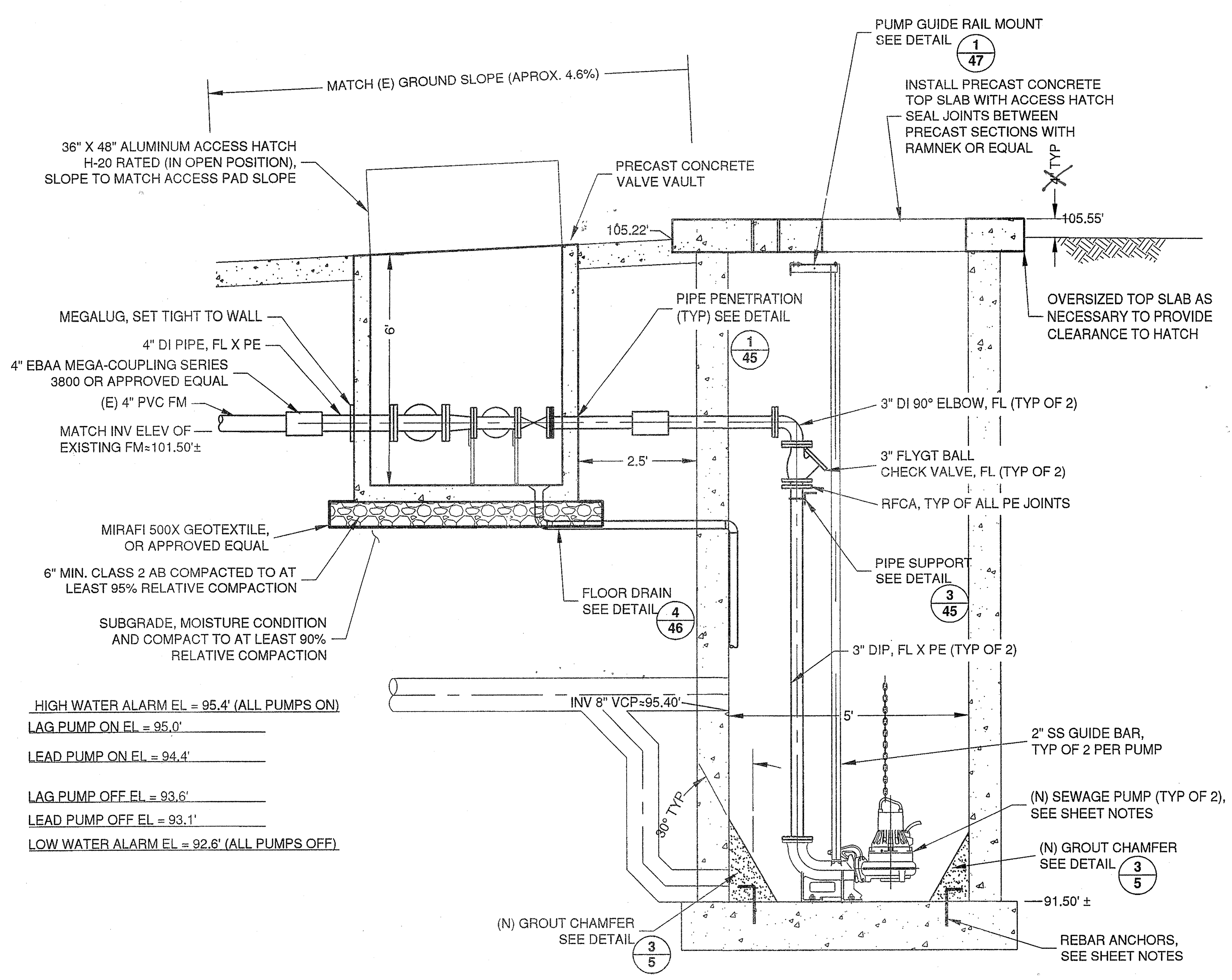
NO SCALE



DETAIL NOTES:
1. ALL NEW CHAMFERS SHALL BE ANCHORED WITH REBAR. SEE SHEET NOTES AND SECTION A/5.

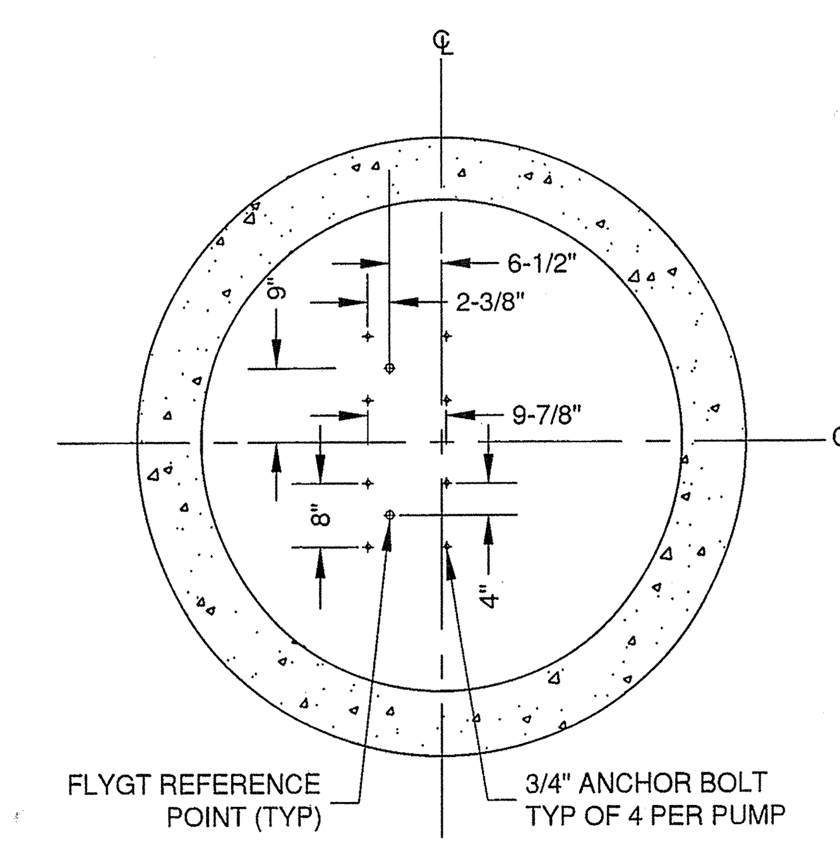
LIMITS OF CHAMFER DETAIL 3/5

SCALE:1/2" = 1'



IMPROVEMENT SECTION A/5

SCALE:1/2" = 1'



PUMP MOUNTING DETAIL 2/5

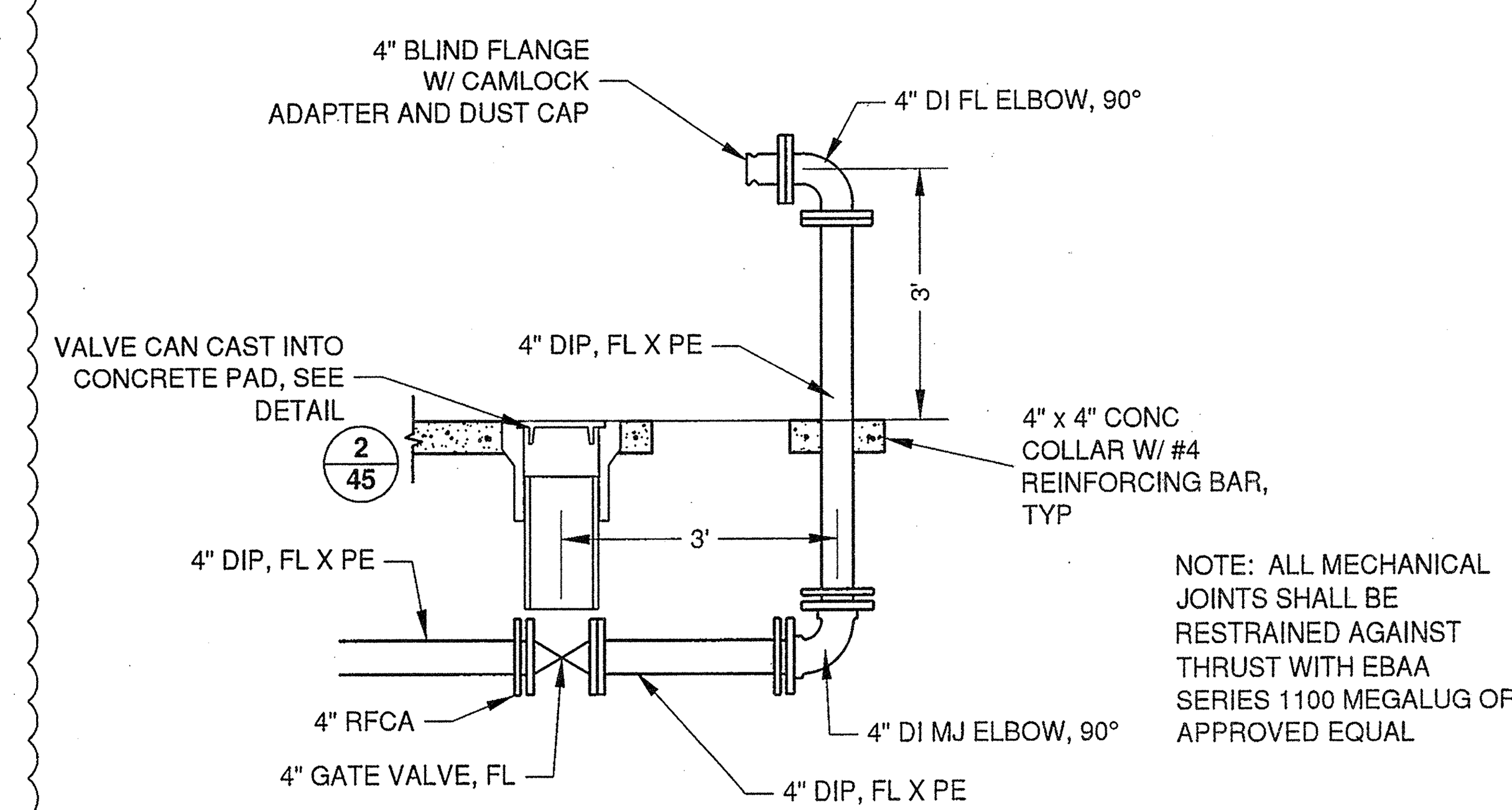
NO SCALE

SHEET NOTES:
1. ALL FORCE MAIN CONNECTIONS SHALL BE RESTRAINED AGAINST THRUST.
2. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SIZES, MATERIALS, ELEVATIONS AND DISTANCES PRIOR TO ORDERING AND FABRICATING MATERIALS.
3. EXACT LOCATION OF FORCE MAIN IS UNKNOWN. ADDITIONAL FITTINGS AND PIPE MAY BE REQUIRED TO CONNECT TO EXISTING FORCE MAIN. CONTRACTOR SHALL LOCATE EXISTING FORCE MAIN PRIOR TO CONSTRUCTING ANY ASSOCIATED ITEMS. THE VALVE VAULT SHALL BE POSITIONED TO MATCH THE ALIGNMENT OF THE EXISTING FORCE MAIN.
4. INSTALL REBAR ANCHORS FOR ALL GROUT CHAMFERS. REBAR ANCHORS SHALL BE #5 REBAR 12" IN TOTAL LENGTH, DRILLED AND EPOXIED 3" INTO EXISTING INVERT. SPACE ANCHORS AT 9" ON CENTER AND PROVIDE 2" MINIMUM CLEARANCE TO LIMIT OF GROUT.
4. ACTUAL WETWELL INVERT MAY BE HIGHER THAN INDICATED, CONTRACTOR SHALL VERIFY WETWELL INVERT ELEVATION PRIOR TO CONSTRUCTION AND ADJUST PUMP CONTROL LEVELS BASED ON DISTANCE FROM FINAL WETWELL INVERT.

CHANNING PUMP NOTES:
PUMPS SHALL BE INDUSTRIAL SEWAGE PUMPS, RATED FOR USE IN CLASS 1, DIVISION 1, GROUP D LOCATIONS. PUMP SHALL BE SUPPLIED WITH INTEGRAL MOISTURE AND TEMPERATURE SENSORS. PUMP SHALL BE FLYGT MODEL NP 3085 MT WITH THE FOLLOWING CHARACTERISTICS:

VOLTAGE: 230V, AC, 60 HZ
PHASES: THREE (3)
HORSEPOWER: 3
IMPELLER DIAMETER: 4.69 INCHES (119 MM)
RATING POINT: 130 GPM AT 16 FEET OF HEAD
DISCHARGE SIZE: 3 INCHES

THE CITY HAS STANDARDIZED THE PUMP MANUFACTURER, NO SUBSTITUTIONS WILL BE ACCEPTED.



NOTE: ALL MECHANICAL JOINTS SHALL BE RESTRAINED AGAINST THRUST WITH EBAA SERIES 1100 MEGALUG OR APPROVED EQUAL

BYPASS PUMPING DETAIL 4/5

NO SCALE

NO	REVISIONS	DATE	APPR
1	ADDENDUM 1	6/19/13	
2			
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REGISTERED PROFESSIONAL ENGINEER BENJAMIN L. SHICK No. 68813 CIVIL STATE OF CALIFORNIA

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CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS

CHANNING SECTIONS

DATE: 5/21/13
SCALE: AS SHOWN
DESIGN: GMA
DRAWN: GMA
CHECKED: BLS

DWG 9363 CASE 95

SHEET 5 OF 49

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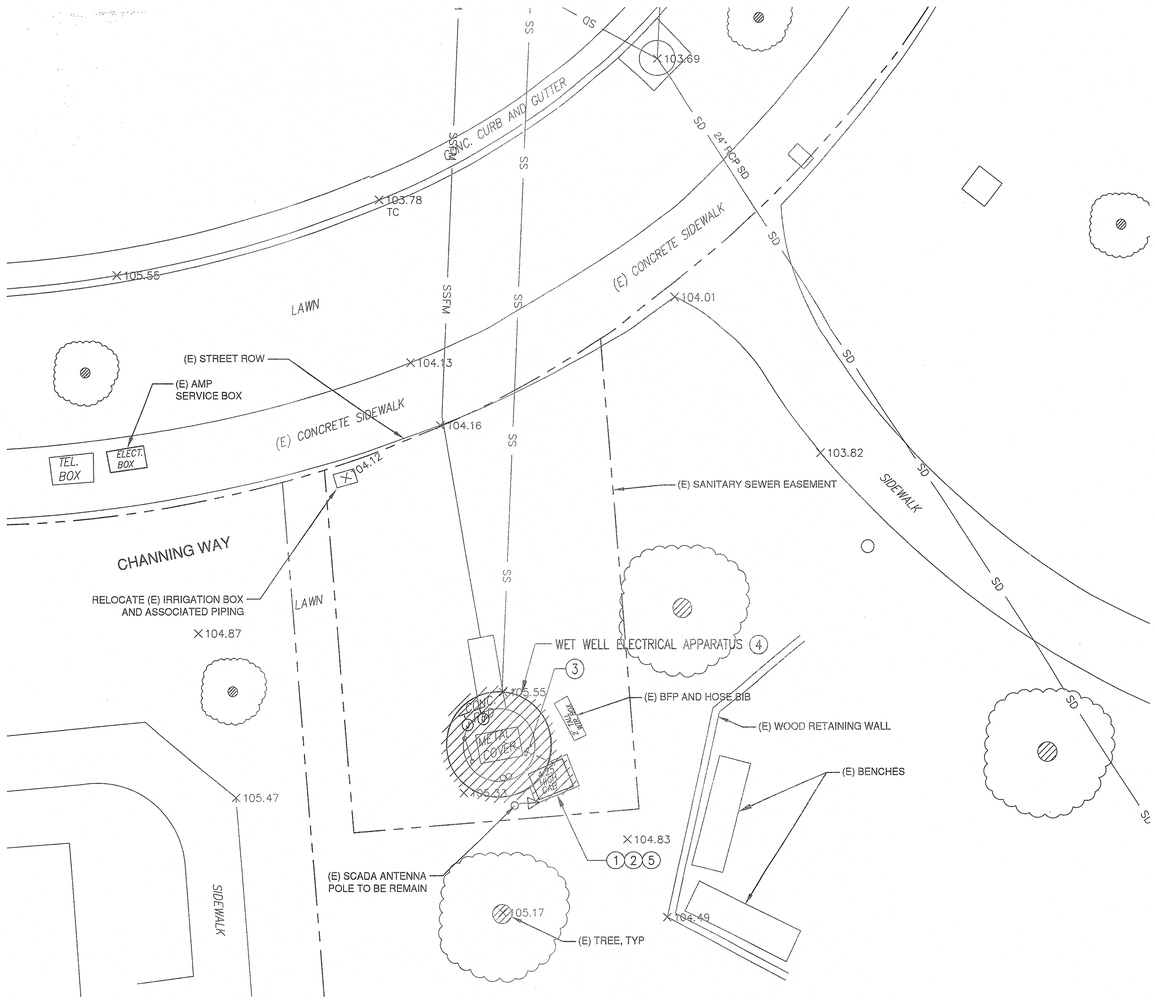


DETAIL 2 NOTES:

1. COORDINATE WITH ALAMEDA MUNICIPAL POWER FOR REMOVAL OF EXISTING METER.
2. REMOVE (E) SERVICE AND CONTROL PANEL.
3. REMOVE (E) CONDUITS AND WIRES FROM CONTROL PANEL TO WET WELL/ELECTRICAL BOXES.
4. REMOVE FROM WET WELL ALL CONDUITS, JUNCTION BOXES, WIRING AND DEVICES INCLUDING INTRUSION DETECTORS, LIGHTS, RECEPTACLES, CONTROLS AND BUBBLER SYSTEM THAT MAY EXIST. DISCONNECT (E) PUMPS.
5. REMOVE (E) SCADA SYSTEM AND RETAIN FOR RE-USE IN THE NEW CONSTRUCTION.

2 — CHANNING SITE PLAN

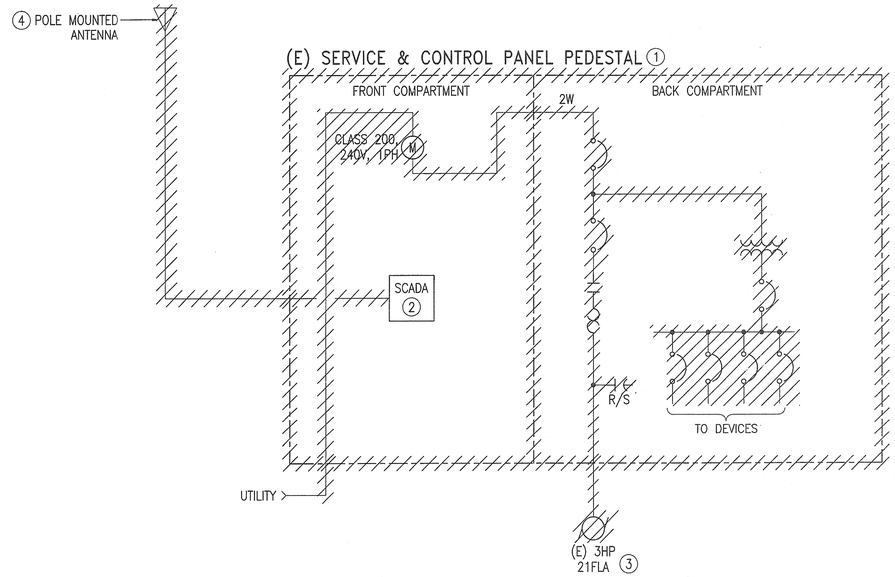
SCALE: 1" = 5'-0"

0 5' 10' 15'

SCALE: 1" = 5'-0"

GENERAL NOTES:

1. IT IS THE INTENTION OF THIS PROJECT TO LEAVE THE EXISTING WELL COMPLETELY CLEAR AND FREE OF ANY AND ALL EXISTING ELECTRICAL APPARATUS THAT IS NOT IN USE OR THAT IS BEING REPLACED BY THIS PROJECT. THIS INCLUDES DEVICES, CONDUIT, BOXES, IN GROUND BOXES SERVING THE WELL BUT LOCATED OUTSIDE THE WELL, AND ANY OTHER SYSTEMS THAT EXIST BUT WILL NOT BE USED OR REPLACED AT THE COMPLETION OF THIS PROJECT WHETHER SHOWN SPECIFICALLY ON THESE PLANS FOR REMOVAL OR NOT.



DETAIL 1 NOTES:

1. ADDITIONAL DEVICES IN PEDESTAL TO BE REMOVED INCLUDE RECEPTACLES, LTS, TERMINAL BLOCKS, CONTACTORS, RELAYS, PROGRAMMABLE CONTROLLERS, COMPRESSORS, ETC. CONNECTION DIAGRAM BASED ON FIELD OBSERVATION ONLY. VERIFY CONNECTIONS & EXISTING CONDITIONS TO THE EXTENT REQUIRED TO SAFELY REMOVE EQUIPMENT.
2. DISCONNECT AND RETAIN ANTENNA & SCADA SYSTEM FOR RE-USE.
3. DISCONNECT & REMOVE (E) PUMP.
4. REMOVE (E) SCADA ANTENNA POLE.

1 — CHANNING ONE-LINE DIAGRAM

NO SCALE

NO	REVISIONS	DATE	APPR
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REGISTERED PROFESSIONAL ENGINEER JULIO C. HERDOCIA No. 9580 Exp. 9/30/14 ELECTRICAL STATE OF CALIFORNIA

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PROJECT NO. 11697-01

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS
CHANNING PUMP STATION
ONE-LINE & SITE PLAN - REMOVAL WORK

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	KM
DRAWN:	VM
CHECKED:	JH

DWG 9363 CASE 95

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6 OF 49

FILE: M:\11697-01 Alemda Pumps \CHN-E11R.dwg 05/31/11 16:23 by rcatris
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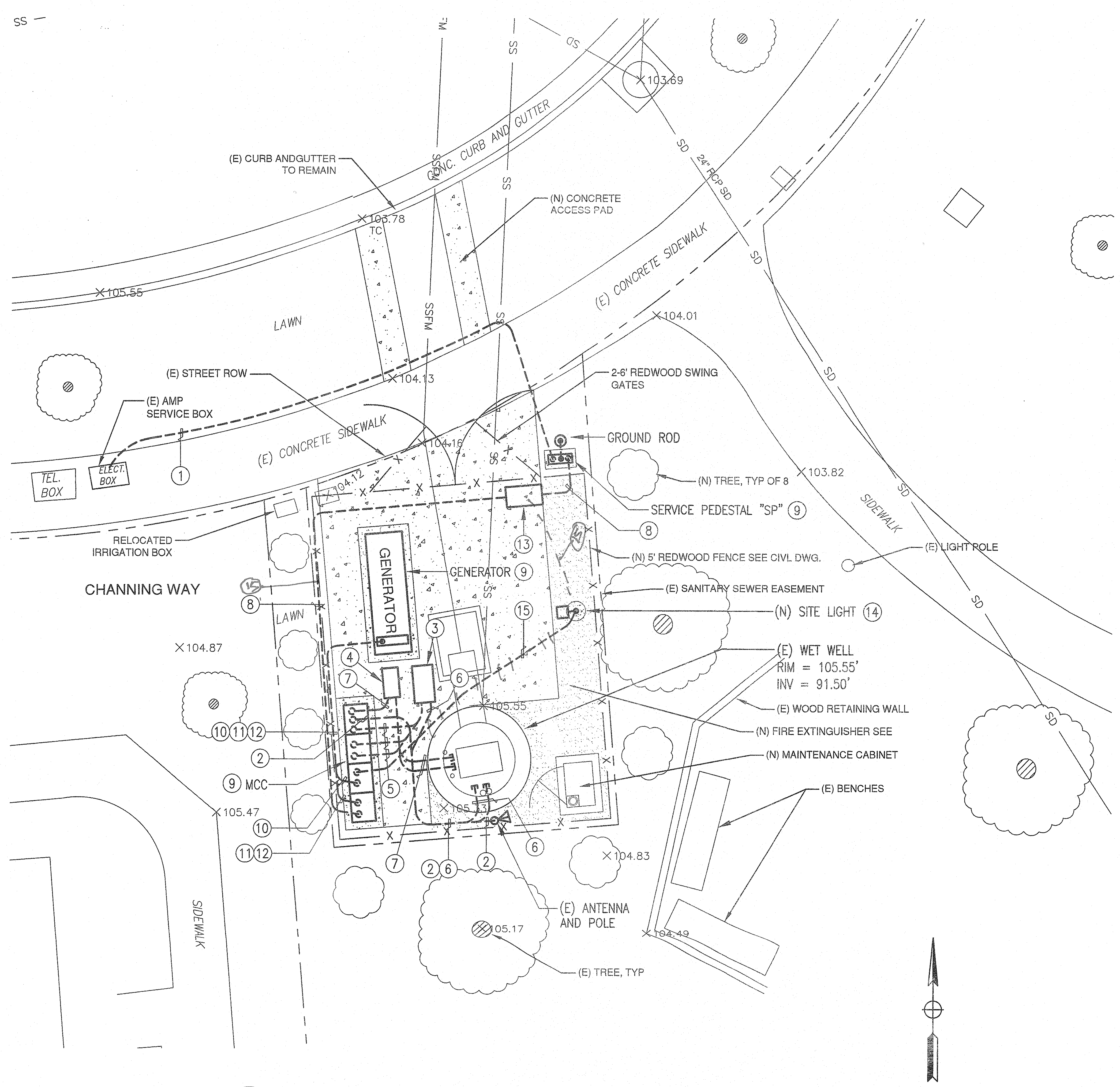
SCALE = BOUNDARY =

SHEET NOTES:

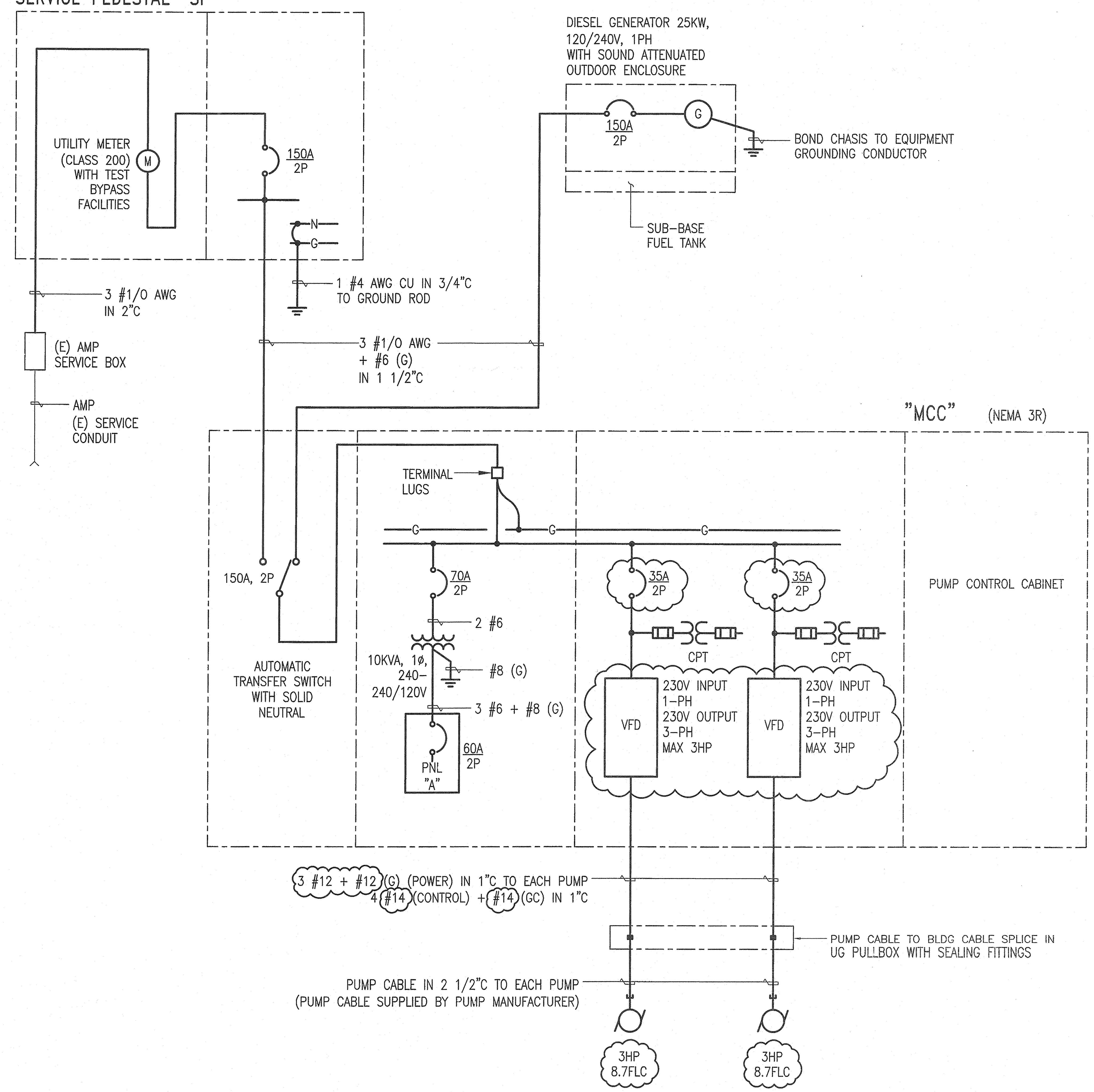
1. PROVIDE 2" PVC CONDUIT. INSTALL IN ACCORDANCE WITH ALAMEDA MUNICIPAL POWER (AMP) STANDARD DETAIL 1-L-412.
2. PROVIDE 2"C FOR COAX CABLE CONNECTION FROM (E) ANTENNA TO (R) SCADA SYSTEM.
3. PROVIDE IN GROUND PULLBOX FOR PUMP POWER AND MONOTORING CONTROL CIRCUITS, SIZE 6T, CHRISTY B1730 WITH 12" EXTENSION (17" X 30") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATE COVER.
4. PROVIDE IN GROUND PULLBOX SIZE 5T, CHRISTY B1324 WITH 12" EXTENSION (13" X 24") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATE COVER.
5. PROVIDE (2) 1" PVC COATED RSC CONDUIT FOR PUMP POWER, (1) 1"C PVC COATED RSC FOR MOISTURE AND TEMPERATURE MONITORING CONTROL CIRCUITS FOR WET WELL PUMPS. SEE ONE-LINE DIAGRAM FOR CABLE SIZES.
6. PROVIDE (2) 2 1/2" PVC COATED RSC CONDUIT FOR PUMP CABLING.
7. PROVIDE (2) 2 1/2" PVC COATED RSC FOR LEVEL TRANSMITTER AND HIGH AND LOW FLOAT CABLES.
8. PROVIDE 1 1/2"C FOR FEEDER TO MCC. SEE ONE-LINE DIAGRAM FOR CABLE SIZE.
9. COORDINATE EXACT CONDUIT STUB UP LOCATIONS WITH EQUIPMENT MANUFACTURER SHOP DRAWINGS.
10. PROVIDE 3/4" CONDUIT WITH
    2 #12+12 (G) PNL A, CKT 2 FOR JACKET HEATER
    2 #12 +12 (G) PNL. A CKT 4 FOR BATTERY CHARGER
11. PROVIDE 2 #10 IN 3/4"C FOR GENERATOR START SIGNAL WIRES.
12. PROVIDE 1 1/2"C FROM ATS TO GENERATOR. SEE ONE-LINE DIAGRAM FOR CABLE SIZES.
13. PROVIDE IN GROUND PULLBOX FOR FEEDER TO MCC, SIZE 6T, CHRISTY B1730 WITH 12" EXTENSION (17" X 30") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATE COVER.
14. LIGHTING FIXTURE MOUNTED ON POLE AT 10'-0".
    LIGHTING FIXTURE: KIM LIGHTING ARCHETYPE,
    CAT. # 1SA-SAR2-60L-4K-120-DB
    POLE: CAT. #PRA10-4125-SA-DB.
15. PROVIDE 1" PVC CONDUIT WITH
    2 #12 + 1 #12 (G), PNL A, CKT. #11, VIA LIGHT SWITCH IN CONTROL PANEL FOR SITE LIGHTING.



2 — CHANNING SITE PLAN
SCALE: 1" = 5'-0"

0 5' 10' 15'
SCALE: 1" = 5'-0"

200A, 240V, 1Ø, 3W, 10KAIC
SERVICE PEDESTAL "SP"



1 — CHANNING ONE-LINE DIAGRAM
NO SCALE

NO	REVISIONS	DATE	APPR
1	ADDENDUM #1	6/19/13	JH
2			
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REGISTERED PROFESSIONAL ENGINEER — JULIO C. HERDOCIA — No. 9580 — Exp. 9/30/14 — ELECTRICAL — STATE OF CALIFORNIA

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PROJECT NO. 11697-01

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS
CHANNING PUMP STATION
ONE-LINE & SITE PLAN - NEW WORK

DATE: 5/21/13
SCALE: AS SHOWN
DESIGN: KM
DRAWN: VM
CHECKED: JH

DWG 9363 CASE 95

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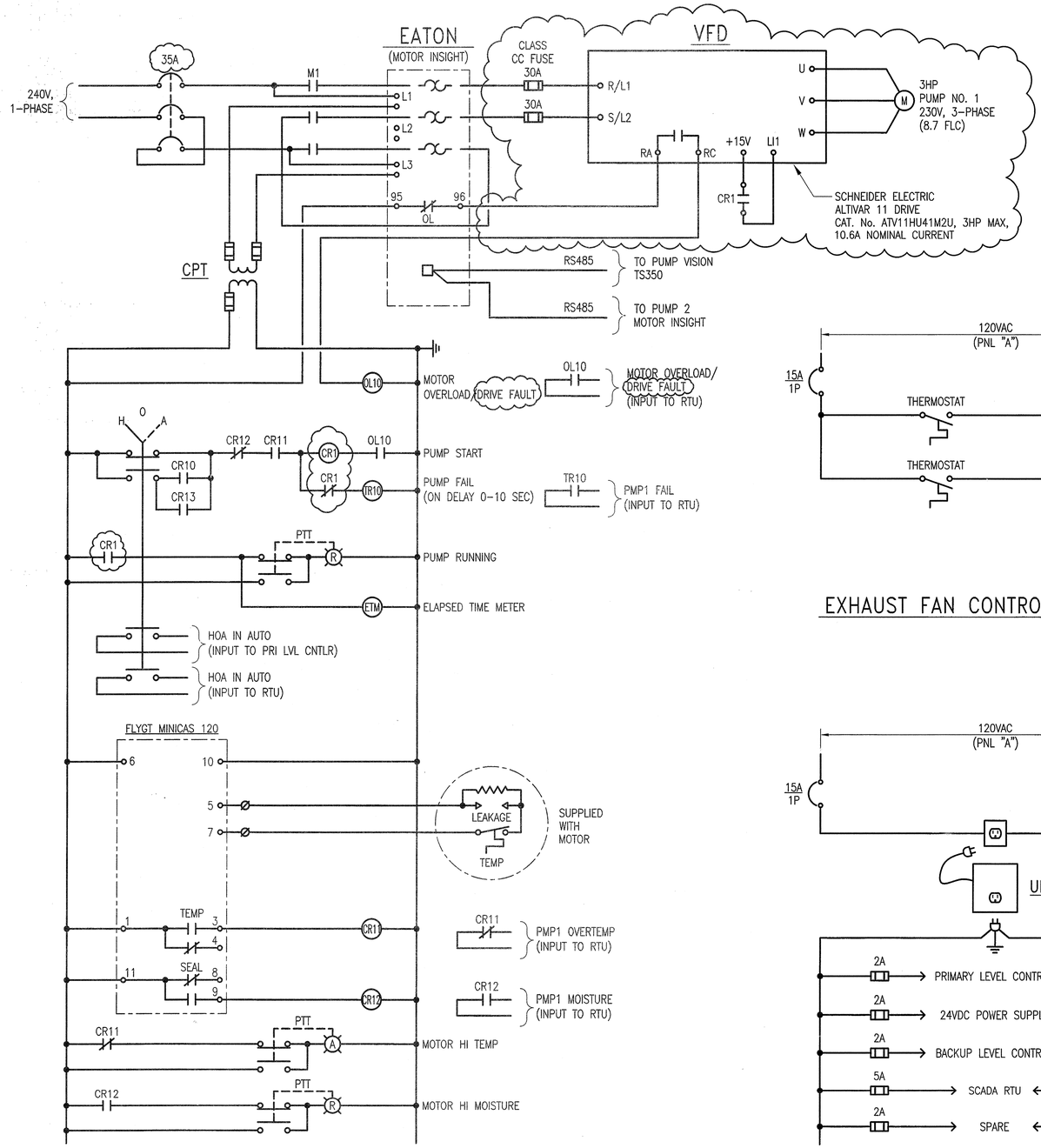
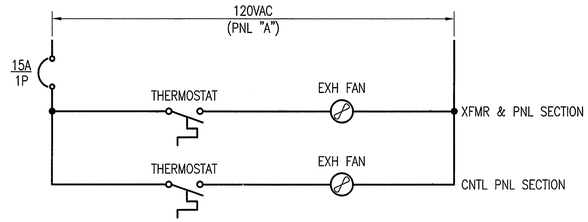
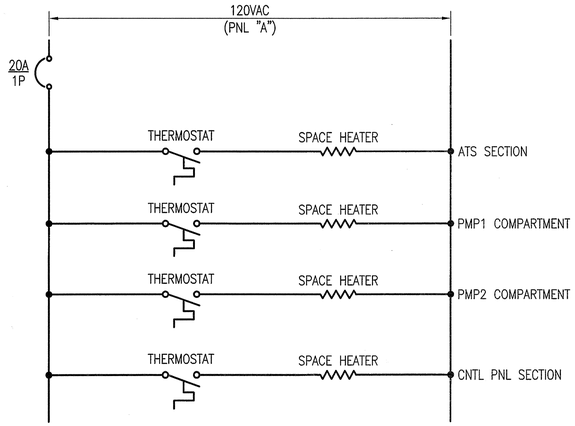


FVNR PUMP No. 1 CONTROL SCHEMATIC DIAGRAM

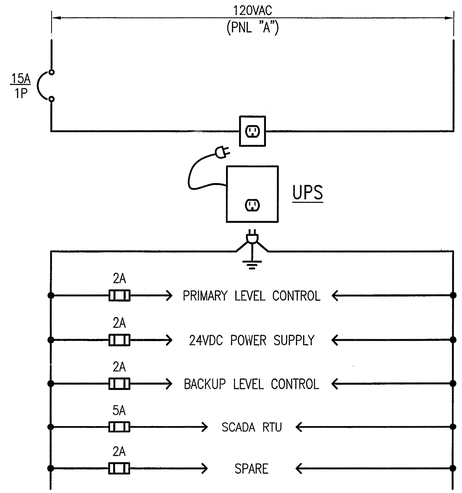
(SIMILAR FOR PUMP No. 2)



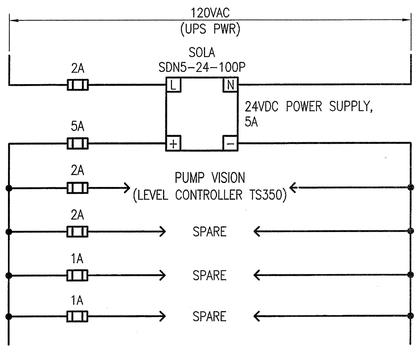
EXHAUST FAN CONTROL SCHEMATIC



SPACE HEATER CONTROL SCHEMATIC



120V UPS SYSTEM SCHEMATIC



24VDC SYSTEM SCHEMATIC

NO	REVISIONS	DATE	APPR
1	ADDENDUM #1	6/19/13	JH

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CITY OF ALAMEDA

GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS

CHANNING PUMP STATION

CONTROL SCHEMATIC DIAGRAM

DATE:	5/21/13	DESIGN:	KM
SCALE:	AS SHOWN	DRAWN:	VM
		CHECKED:	JH

DWG 9363 CASE 95

E2.1

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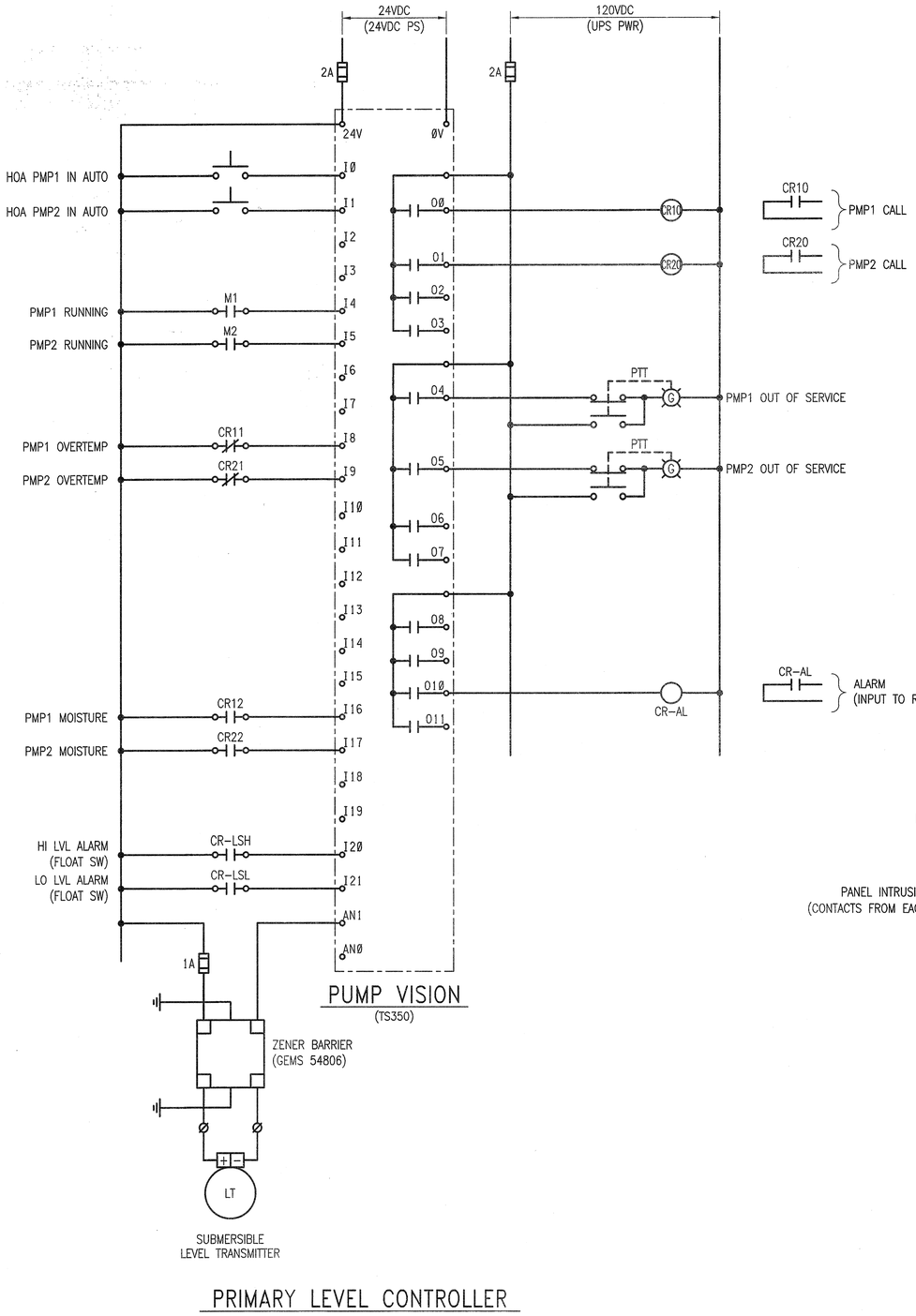
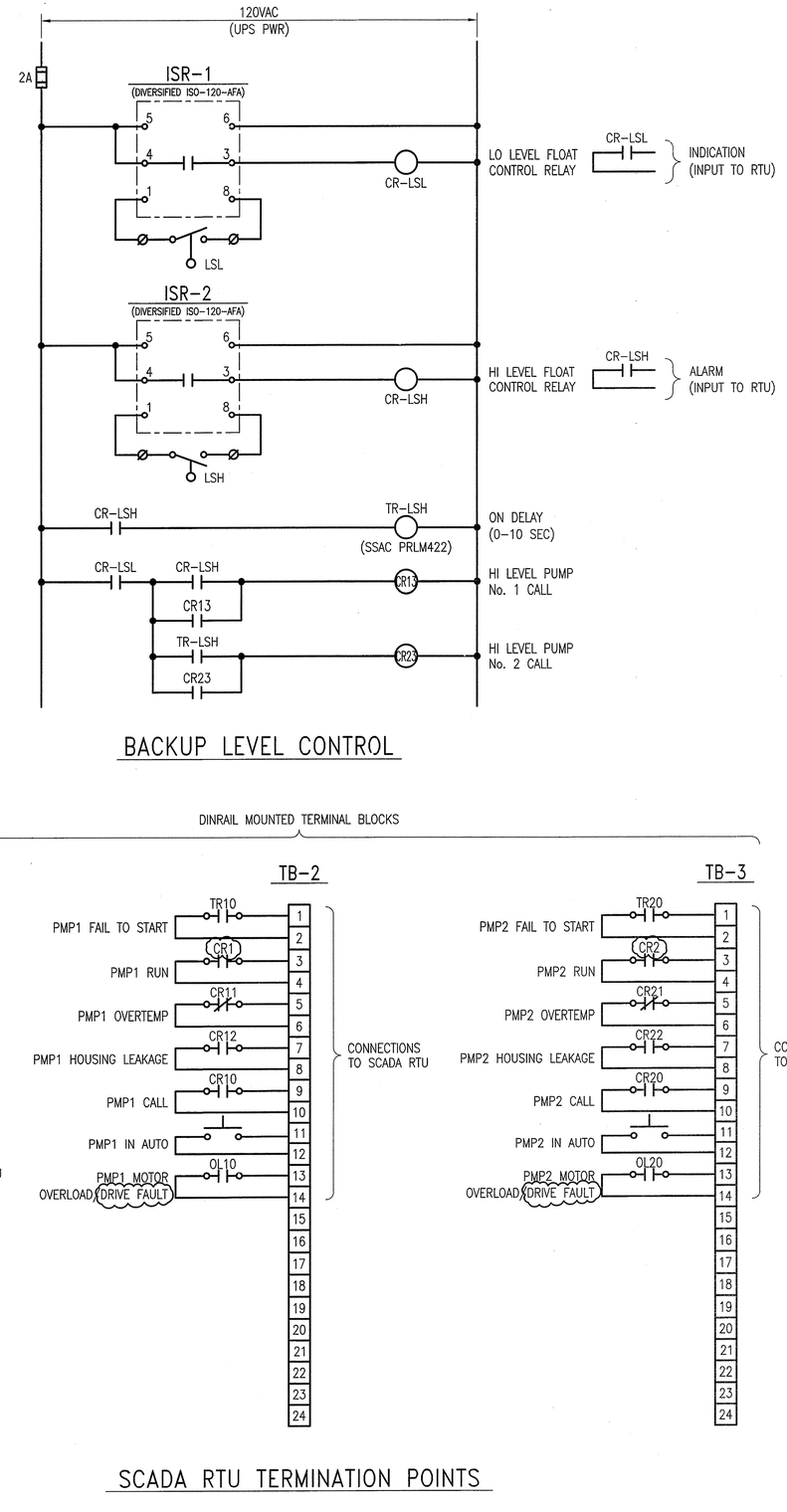
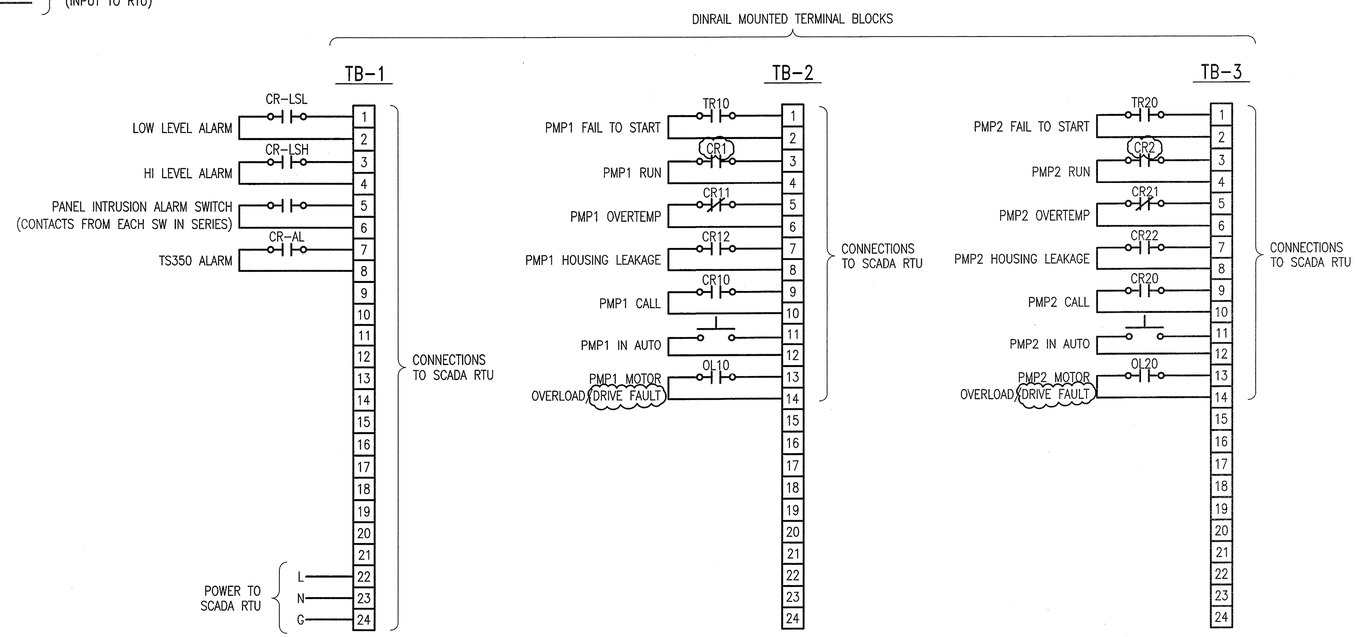


PUMP VISION
(TS350)

PRIMARY LEVEL CONTROLLER



BACKUP LEVEL CONTROL



SCADA RTU TERMINATION POINTS

NO	REVISIONS	DATE	APPR
1	ADDENDUM #1	6/19/13	JH

REGISTERED PROFESSIONAL ENGINEER
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PROJECT NO. 11697-01

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS

CHANNING PUMP STATION
SCHEMATIC DIAGRAM

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	KM
DRAWN:	VM
CHECKED:	JH

DWG 9363 CASE 95

E2.2

9 OF 49

FILE: M:\11697-01 Alameda Pumps \CHN-E21.dwg 05/29/11 16:21 by vuong
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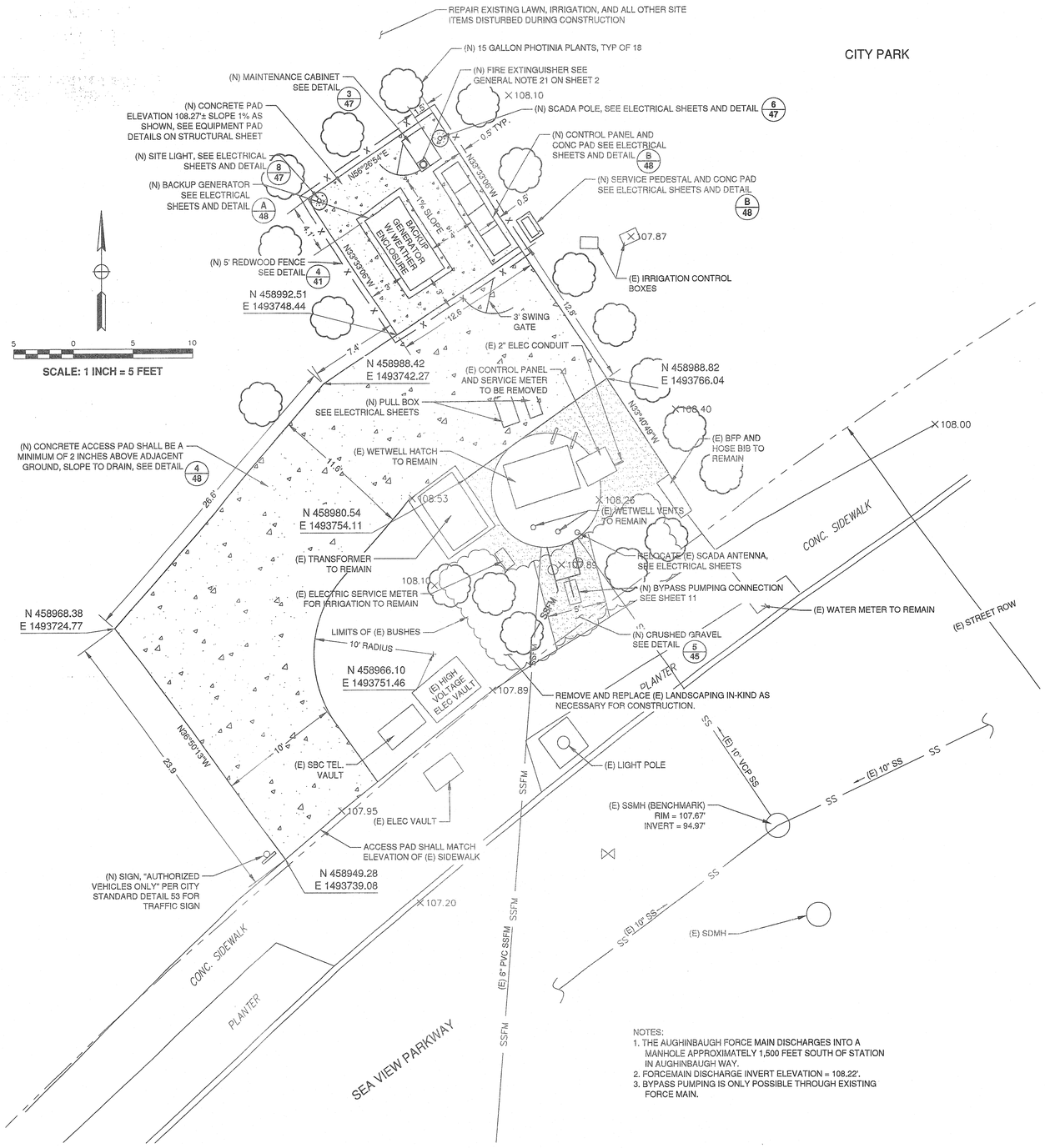
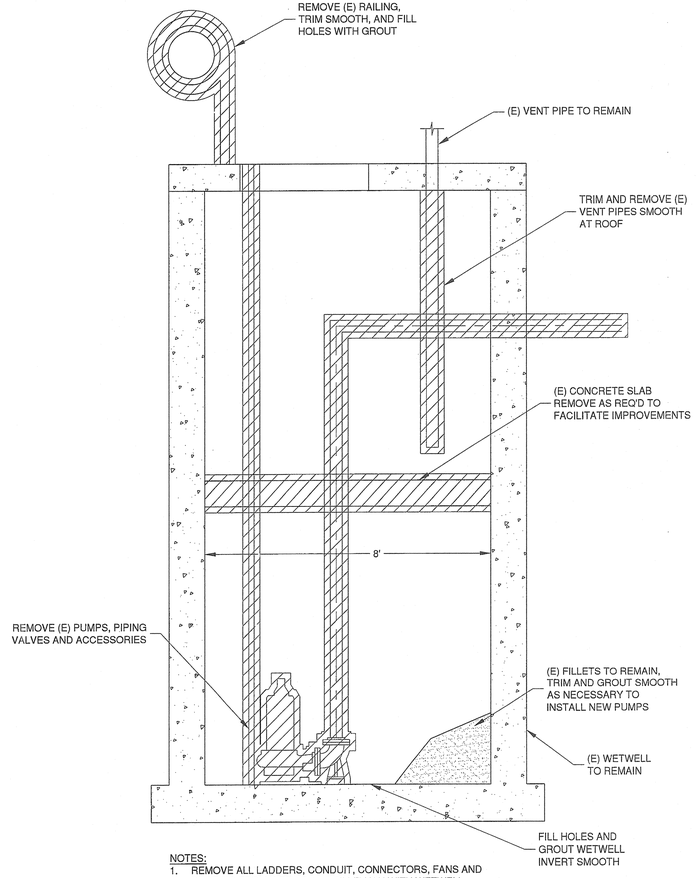
XREF: M:\11697-01 Alameda Pumps \ONE PHASE-PUMPS - XREF1.dwg
SCALE = BORDER =

#5 AUGHINBAUGH PUMP STATION



NOTES:
1. THE AUGHINBAUGH FORCE MAIN DISCHARGES INTO A MANHOLE APPROXIMATELY 1,500 FEET SOUTH OF STATION IN AUGHINBAUGH WAY.
2. FORCEMAIN DISCHARGE INVERT ELEVATION = 108.22'.
3. BYPASS PUMPING IS ONLY POSSIBLE THROUGH EXISTING FORCE MAIN.

PLAN
SCALE: 1" = 5'



NOTES:
1. REMOVE ALL LADDERS, CONDUIT, CONNECTORS, FANS AND DUCTING FROM WETWELL. TRIM FLUSH WITH WETWELL WALL/CEILING. REMOVE LADDER RUNGS FROM WETWELL SURFACE.
2. WHERE EQUIPMENT REMOVAL LEAVES VOIDS, HOLES OR CRACKS IN WETWELL STRUCTURE, FILL WITH NON-SHRINK GROUT.

WETWELL DEMOLITION SECTION
SCALE:1/2" = 1'

SHEET NOTES:
1. ESTIMATED PEAK WET WEATHER FLOW RATE IS 506 GPM. SEE SPECIFICATIONS FOR BYPASS PUMPING REQUIREMENTS.
2. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AT ALL TIMES WHEN WORK IS TAKING PLACE IN THE ROADWAY.
3. WHERE DEMOLITION OR REMOVAL OF EQUIPMENT LEAVES VOIDS IN THE CONCRETE STRUCTURE, FILL VOIDS WITH NON-SHRINK GROUT.
4. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING IRRIGATION SYSTEMS PRIOR TO CONSTRUCTION AND NOTIFY THE CITY OF ANY POTENTIAL CONFLICTS.
5. ADDRESS SIGN SHALL BE MOUNTED TO THE FENCING IN A LOCATION VISIBLE FROM THE STREET. SIGN SHALL SAY "2695 SEAVIEW PARKWAY". SEE GENERAL NOTE 22 ON SHEET 2 FOR ADDITIONAL INFORMATION.
6. CONTRACTOR SHALL PROVIDE A KEY LOCK BOX AT THE SITE, SEE GENERAL NOTE 23 ON SHEET 2.
7. ALL FENCE POSTS WITHIN CONCRETE SHALL BE REMOVABLE.
8. NEW SCADA POLE SHALL BE THE SAME HEIGHT AS THE EXISTING SCADA POLE, WHICH IS APPROXIMATELY 20 FEET ABOVE THE EXISTING GROUND.
9. EQUIPMENT SIZE AND DIMENSIONS SHOWN ARE BASED ON PRELIMINARY GENERATOR DIMENSIONS. CONCRETE PAD AND FENCE DIMENSIONS SHALL BE ADJUSTED BASED ON ACTUAL GENERATOR TO MEET MINIMUM CLEARANCE REQUIREMENTS (3' CLEARANCE TO ALL FACES OF GENERATOR) AS SHOWN.
10. SEE ELECTRICAL SHEETS FOR ADDITIONAL PUMP STATION IMPROVEMENTS.

AUGHINBAUGH GENERATOR NOTES:
1. GENERATOR SIZE = 50 KW
2. GENERATOR ENCLOSURE = WEATHER PROTECTIVE ENCLOSURE
3. GENERATOR NOISE REQUIREMENTS: 87 dBA AT 23'
4. APPROXIMATE OUTSIDE DIMENSIONS OF GENERATOR AND ENCLOSURE = 6.9' L X 3.33' W X 6.1' H
5. SEE ELECTRICAL PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS

AUGHINBAUGH BASIS OF BEARING
BEARINGS AND COORDINATES PER TRACT 3810,SHEET 12 OF 15, MONUMENT LINE ON AUGHINBAUGH ("CATALINA" ON MAP), BETWEEN FOUND MONUMENTS.
N 1° 55' 35" W, 309.15' MONUMENT TO MONUMENT

AUGHINBAUGH BENCHMARK
HELD SSMH 613 RIM AS SHOWN ON SYSTEM MAP ELEV. = 107.67 (RJA PT #424)

NO	REVISIONS	DATE	APPR
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CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS
AUGHINBAUGH SITE PLAN

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	GMA
DRAWN:	GMA
CHECKED:	BLS

DWG 9363 CASE 95

SHEET 10 OF 49

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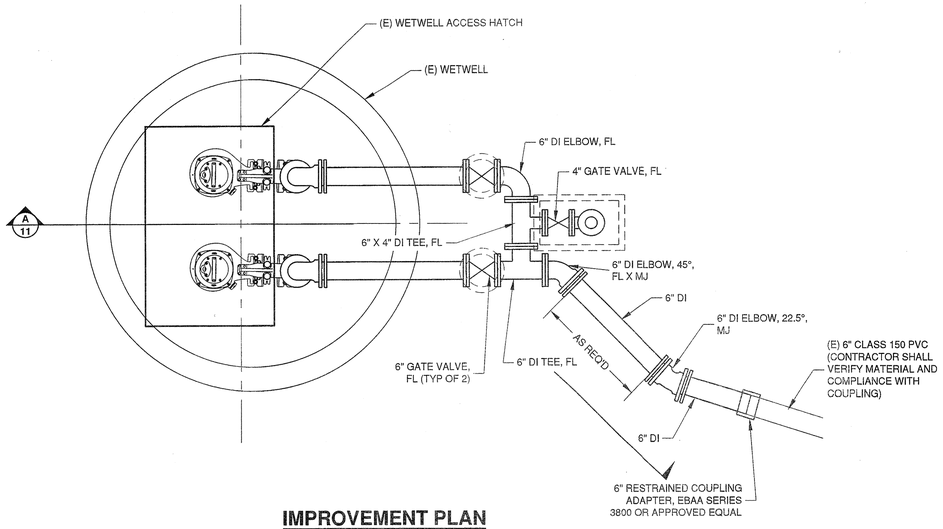
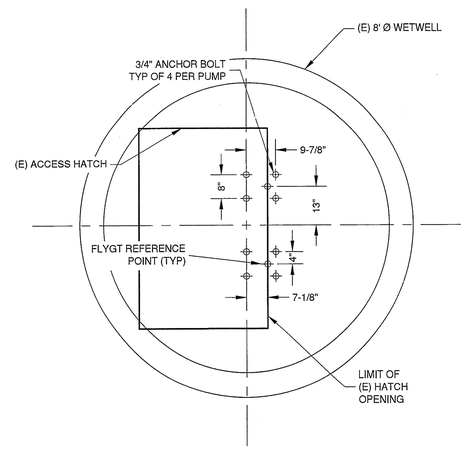
#5 AUGHINBAUGH PUMP STATION



IMPROVEMENT PLAN

SCALE:1/2" = 1'

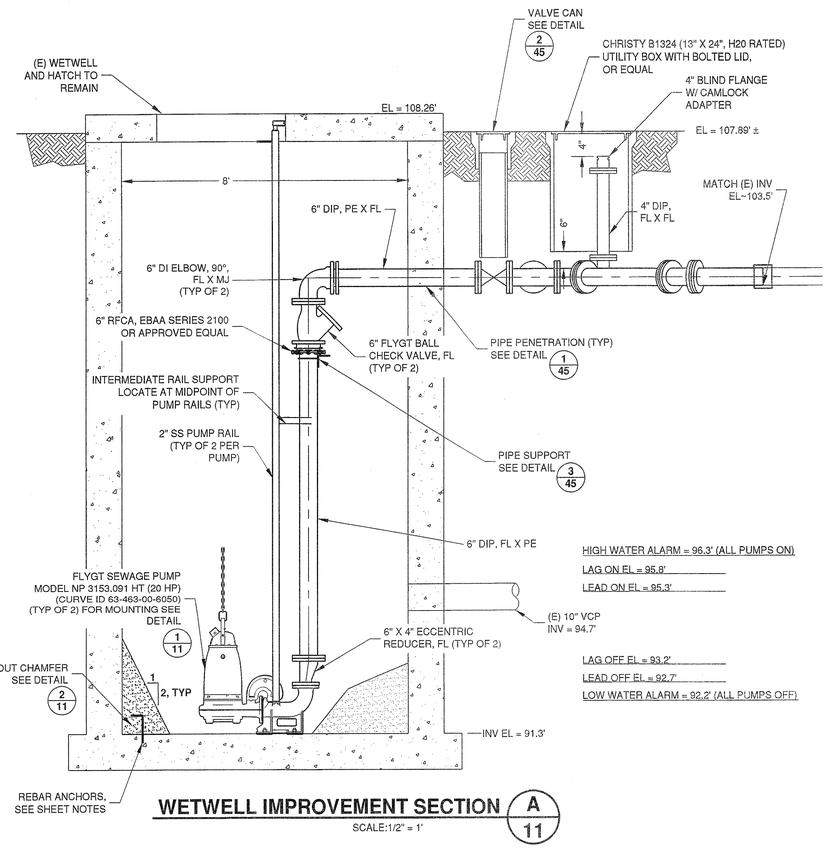


NOTES:

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSION PRIOR TO INSTALLATION OF PUMPS.

PUMP MOUNTING DETAIL 1/11

SCALE:1/2" = 1'



WETWELL IMPROVEMENT SECTION A/11

SCALE:1/2" = 1'

SHEET NOTES:

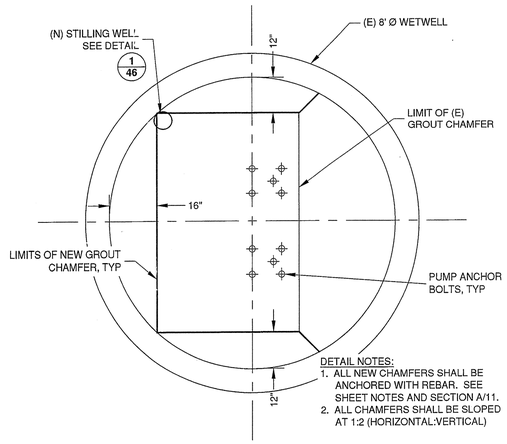
1. ALL FORCE MAIN CONNECTIONS SHALL BE RESTRAINED AGAINST THRUST.
2. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SIZES, MATERIALS, ELEVATIONS AND DISTANCES PRIOR TO ORDERING AND FABRICATING MATERIALS.
3. INSTALL REBAR ANCHORS FOR ALL GROUT CHAMFERS. REBAR ANCHORS SHALL BE #5 REBAR 12" IN TOTAL LENGTH, DRILLED AND EPOXIED 3" INTO EXISTING INVERT. SPACE ANCHORS AT 9" ON CENTER AND PROVIDE 2" MINIMUM CLEARANCE TO LIMIT OF GROUT.
4. ACTUAL WETWELL INVERT MAY BE HIGHER THAN INDICATED. CONTRACTOR SHALL VERIFY WETWELL INVERT ELEVATION PRIOR TO CONSTRUCTION AND ADJUST PUMP CONTROL LEVELS BASED ON DISTANCE FROM FINAL WETWELL INVERT. CONTRACTOR SHALL NOTIFY THE ENGINEER IF CITY INVERTS DO NOT MATCH PLANS.

AUGHINBAUGH PUMP NOTES:

PUMP SHALL BE AN INDUSTRIAL SEWAGE PUMP, RATED FOR USE IN CLASS 1, DIVISION 1, GROUP D LOCATIONS. PUMP SHALL BE SUPPLIED WITH INTEGRAL MOISTURE AND TEMPERATURE SENSORS. PUMP SHALL BE FLYGT NP 3153 HT WITH THE FOLLOWING CHARACTERISTICS:

VOLTAGE: 200V, AC, 60 HZ
PHASES: THREE (3)
HORSEPOWER: 20
IMPELLER DIAMETER: 10.35 INCHES (263 MM)
FLYGT CURVE NO. 63-463-00-6050
RATING POINT: 650 GPM AT 68 FEET OF HEAD
DISCHARGE SIZE: 4 INCHES

THE CITY HAS STANDARDIZED THE PUMP MANUFACTURER, NO SUBSTITUTIONS WILL BE ACCEPTED.



DETAIL NOTES:

1. ALL NEW CHAMFERS SHALL BE ANCHORED WITH REBAR. SEE SHEET NOTES AND SECTION A/11.
2. ALL CHAMFERS SHALL BE SLOPED AT 1:2 (HORIZONTAL:VERTICAL)

LIMITS OF CHAMFER DETAIL 2/11

SCALE:1/2" = 1'

NO	REVISIONS	DATE	APPR
1			
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REGISTERED PROFESSIONAL ENGINEER — No. 28819 — CIVIL — STATE OF CALIFORNIA

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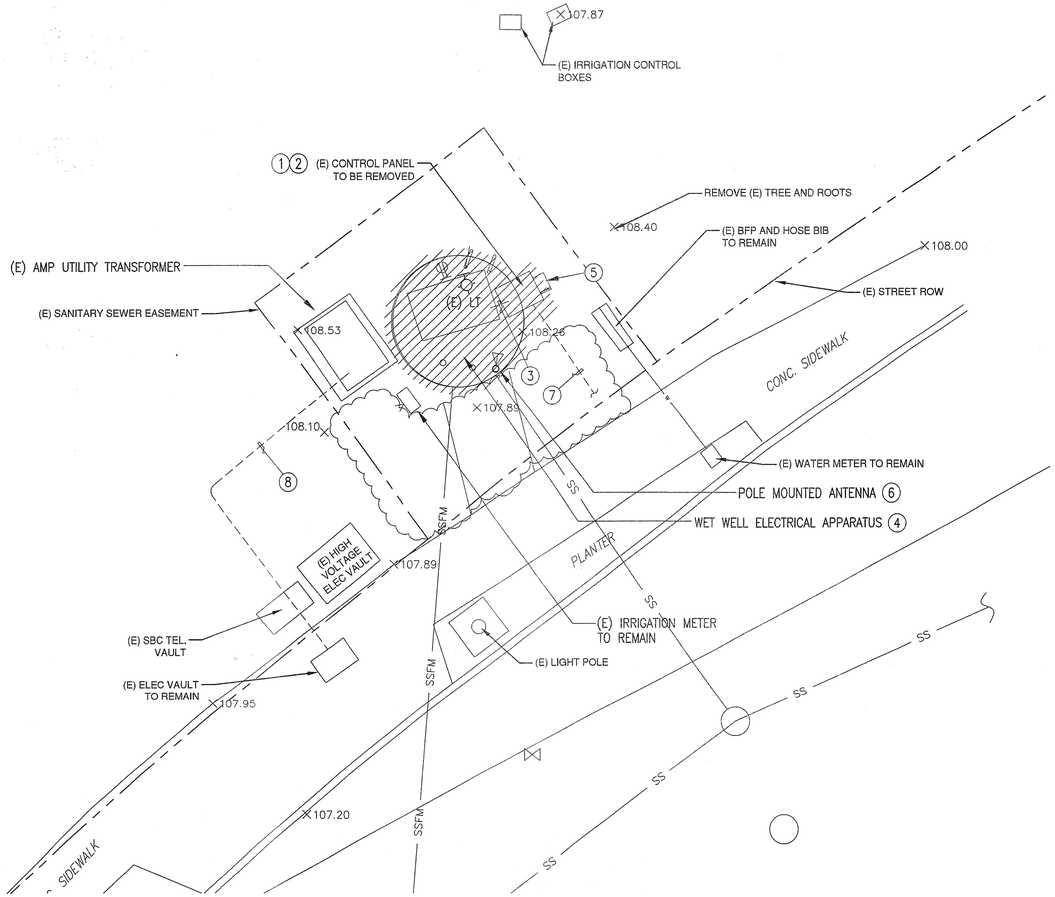
CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS

AUGHINBAUGH SECTIONS

DATE: 5/21/13
SCALE: AS SHOWN
DESIGN: GMA
DRAWN: GMA
CHECKED: BLS

DWG 9363 CASE 95

SHEET 11 OF 49



DETAIL 2 NOTES:

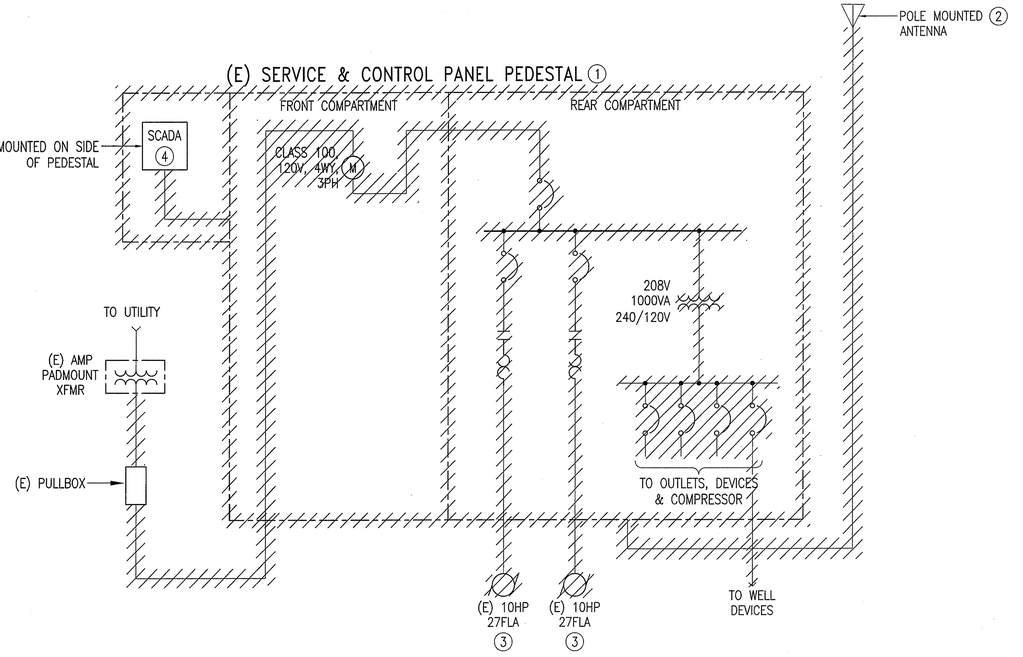
1. COORDINATE WITH ALAMEDA MUNICIPAL POWER (AMP) FOR REMOVAL OF EXISTING METER.
2. REMOVE (E) SERVICE AND CONTROL PANEL.
3. REMOVE (E) WIRES FROM CONTROL PANEL TO WET WELL/ELECTRICAL BOXES. REMOVE CONDUITS.
4. REMOVE FROM WET WELL ALL CONDUIT, JUNCTION BOXES, WIRING AND DEVICES, INCLUDING INTRUSION DETECTORS, LIGHTS, RECEPTACLES, CONTROLS AND BUBBLER SYSTEM THAT MAY EXIST. DISCONNECT AND REMOVE (E) PUMPS.
5. REMOVE (E) SCADA SYSTEM AND RETAIN FOR RE-USE IN THE NEW CONSTRUCTION.
6. RELOCATE (E) ANTENNA. SEE E1.1 (SHEET 13) FOR THE RELOCATED ANTENNA LOCATION. REMOVE (E) POLE AND FOUNDATION.
7. FIELD VERIFY EXACT ROUTING OF EXISTING SERVICE CONDUIT. COORDINATE WITH AMP THE REMOVAL OF (E) SERVICE CONDUCTORS ALL THE WAY BACK TO UTILITY TRANSFORMER.
8. (E) 2"C. COORDINATE WITH AMP FOR REMOVAL OF SERVICE WIRES. SEE ALSO DWG. E1.1 FOR (N) WIRES INSTALLATION.

2 — AUGHINBAUGH SITE PLAN
SCALE: 1" = 5'-0"

0 5' 10' 15'
SCALE: 1" = 5'-0"

GENERAL NOTES:

1. IT IS THE INTENTION OF THIS PROJECT TO LEAVE THE EXISTING WELL COMPLETELY CLEAR AND FREE OF ANY AND ALL EXISTING ELECTRICAL APPARATUS THAT IS NOT IN USE OR THAT IS BEING REPLACED BY THIS PROJECT. THIS INCLUDES DEVICES, CONDUIT, BOXES, IN GROUND BOXES SERVING THE WELL BUT LOCATED OUTSIDE THE WELL, AND ANY OTHER SYSTEMS THAT EXIST BUT WILL NOT BE USED OR REPLACED AT THE COMPLETION OF THIS PROJECT WHETHER SHOWN SPECIFICALLY ON THESE PLANS FOR REMOVAL OR NOT.



DETAIL 1 NOTES:

1. ADDITIONAL DEVICES IN PEDESTAL TO BE REMOVED INCLUDE RECEPTACLES, LTS, TERMINAL BLOCKS, CONTACTORS, RELAYS, PROGRAMMABLE CONTROLLERS, COMPRESSORS, ETC. CONNECTION DIAGRAM BASED ON FIELD OBSERVATION ONLY. VERIFY CONNECTIONS & EXISTING CONDITIONS TO THE EXTENT REQUIRED TO SAFELY REMOVE EQUIPMENT.
2. DISCONNECT AND RETAIN (E) ANTENNA FOR USE LATER. REMOVE (E) POLE.
3. DISCONNECT & REMOVE (E) PUMPS.
4. DISCONNECT AND RETAIN SCADA SYSTEM FOR RE-USE.

1 — AUGHINBAUGH ONE-LINE DIAGRAM
NO SCALE

REVISIONS

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PROJECT NO. 11697-01

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS
AUGHINBAUGH PUMP STATION
ONE-LINE & SITE PLAN - REMOVAL WORK

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	KM
DRAWN:	VM
CHECKED:	JH

DWG 9363 CASE 95

E1.1R

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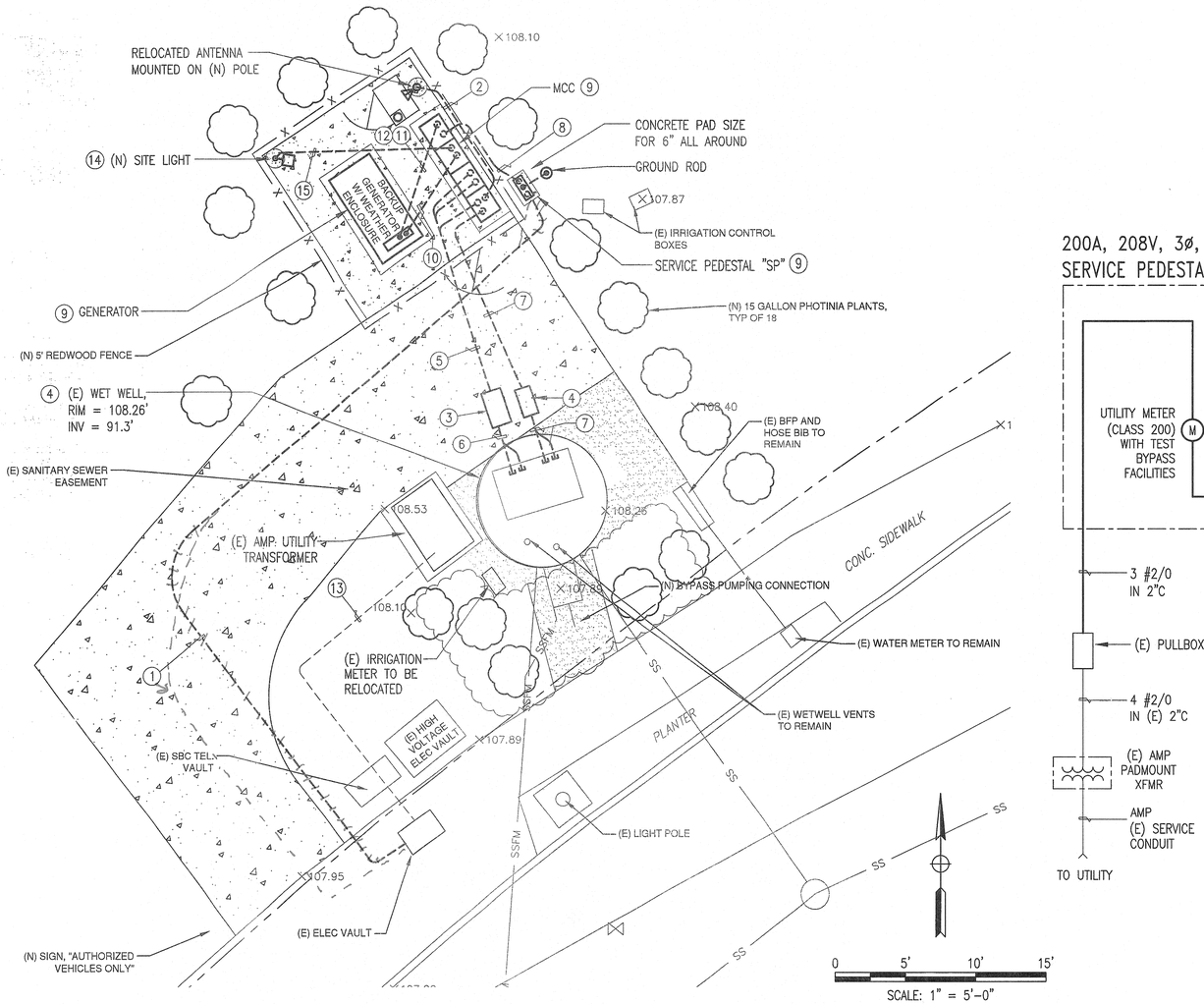

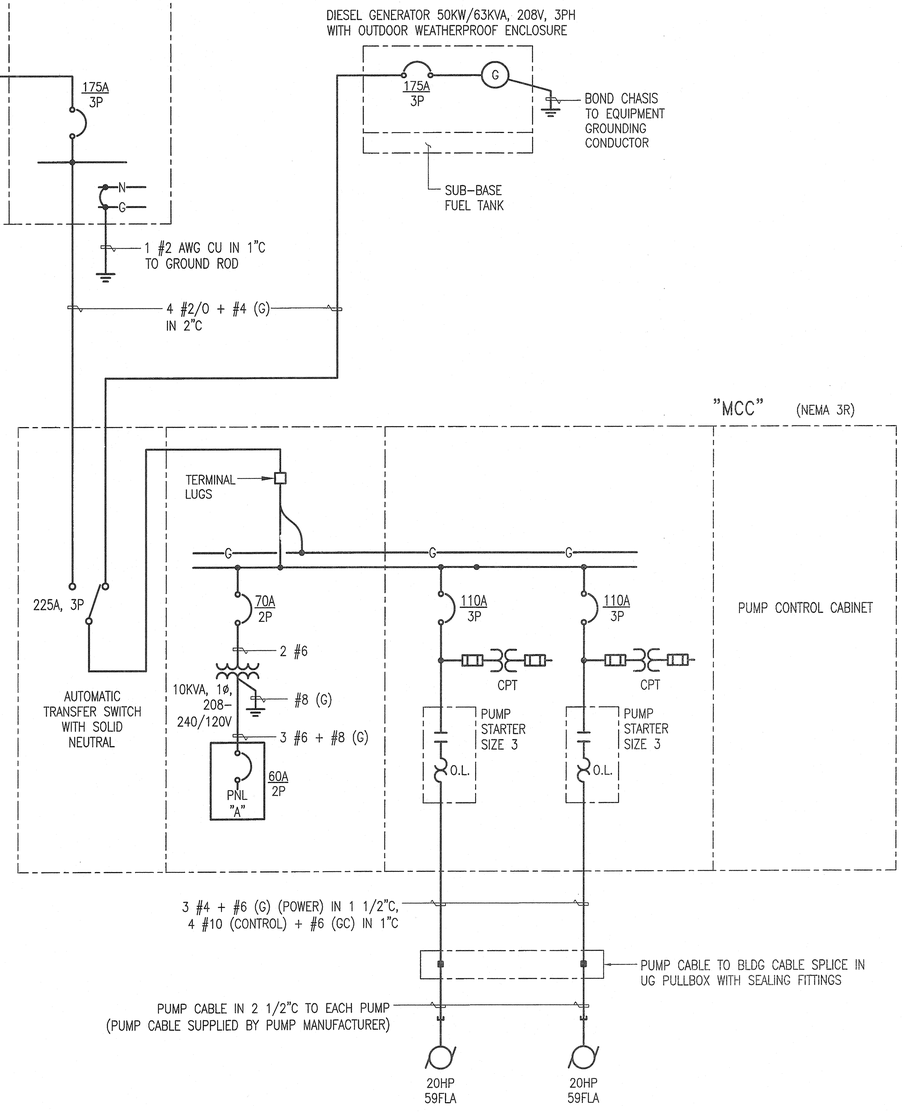

DETAIL 2 NOTES:

1. PROVIDE 2" PVC CONDUIT. INSTALL IN ACCORDANCE WITH ALAMEDA MUNICIPAL POWER (AMP) STANDARD DETAIL 1-L-142.
2. PROVIDE 2"C FOR COAX CABLE CONNECTION FROM (N) ANTENNA TO (R) SCADA SYSTEM.
3. PROVIDE IN GROUND PULLBOX FOR PUMP POWER AND MONITORING CONTROL CIRCUITS, SIZE 6T, CHRISTY B1730 WITH 12" EXTENSION (17" x 30") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATE COVER.
4. PROVIDE IN GROUND PULLBOX SIZE 5T, CHRISTY B1324 WITH 12" EXTENSION (13" x 24") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATE COVER.
5. PROVIDE (2) 1 1/2" PVC COATED RSC CONDUITS FOR PUMP POWER, (1) 1"C PVC COATED RSC FOR MOISTURE AND TEMPERATURE MONITORING CONTROL CIRCUITS FOR WET WELL PUMP. SEE ONE-LINE DIAGRAM FOR CABLE SIZES.
6. PROVIDE (2) 2 1/2" PVC COATED RSC CONDUITS FOR PUMP CABLING.
7. PROVIDE (2) 2 1/2" PVC COATED RSC FOR LEVEL TRANSMITTER AND HIGH AND LOW FLOAT CABLES.
8. PROVIDE 1 1/2"C FOR MCC FEEDER. SEE ONE-LINE DIAGRAM FOR FEEDER CABLE SIZE.
9. COORDINATE EXACT CONDUIT STUB UP LOCATIONS WITH EQUIPMENT MANUFACTURER SHOP DRAWINGS.
10. PROVIDE 3/4"C WITH
    2 #10 + #12 G, PNL "A", CKT. #2 FOR JACKET HEATER.
    2 #10 + #12 G, PNL "A", CKT. #4 FOR BATTERY CHARGER.
11. PROVIDE 2 #10 IN 3/4"C FOR ATS CONTROL SIGNAL WIRES.
12. PROVIDE 2"C FOR FEEDER FROM GENERATOR TO ATS. SEE ONE-LINE DIAGRAM FOR CABLE SIZES.
13. COORDINATE WITH ALAMEDA MUNICIPAL POWER (AMP) FOR (N) WIRES INSTALLATION. SEE ALSO ONE-LINE DIAGRAM FOR WIRE SIZE.
14. LIGHTING FIXTURE MOUNTED ON POLE AT 10'-0".
    LIGHTING FIXTURE: KIM LIGHTING ARCHETYPE,
    CAT. # 1SA-SAR2-60L-4K-120-DB
    POLE: CAT. #PRA10-4125-SA-DB.
15. PROVIDE 1" PVC CONDUIT WITH
    2 #12 + 1 #12 (G), PNL A, CKT. #11, VIA LIGHT SWITCH IN CONTROL PANEL FOR SITE LIGHTING.

2 — AUGHINBAUGH SITE PLAN
SCALE: 1" = 5'-0"

1 — AUGHINBAUGH ONE-LINE DIAGRAM
NO SCALE

NO	REVISIONS	DATE	APPR
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PROJECT NO. 11697-01

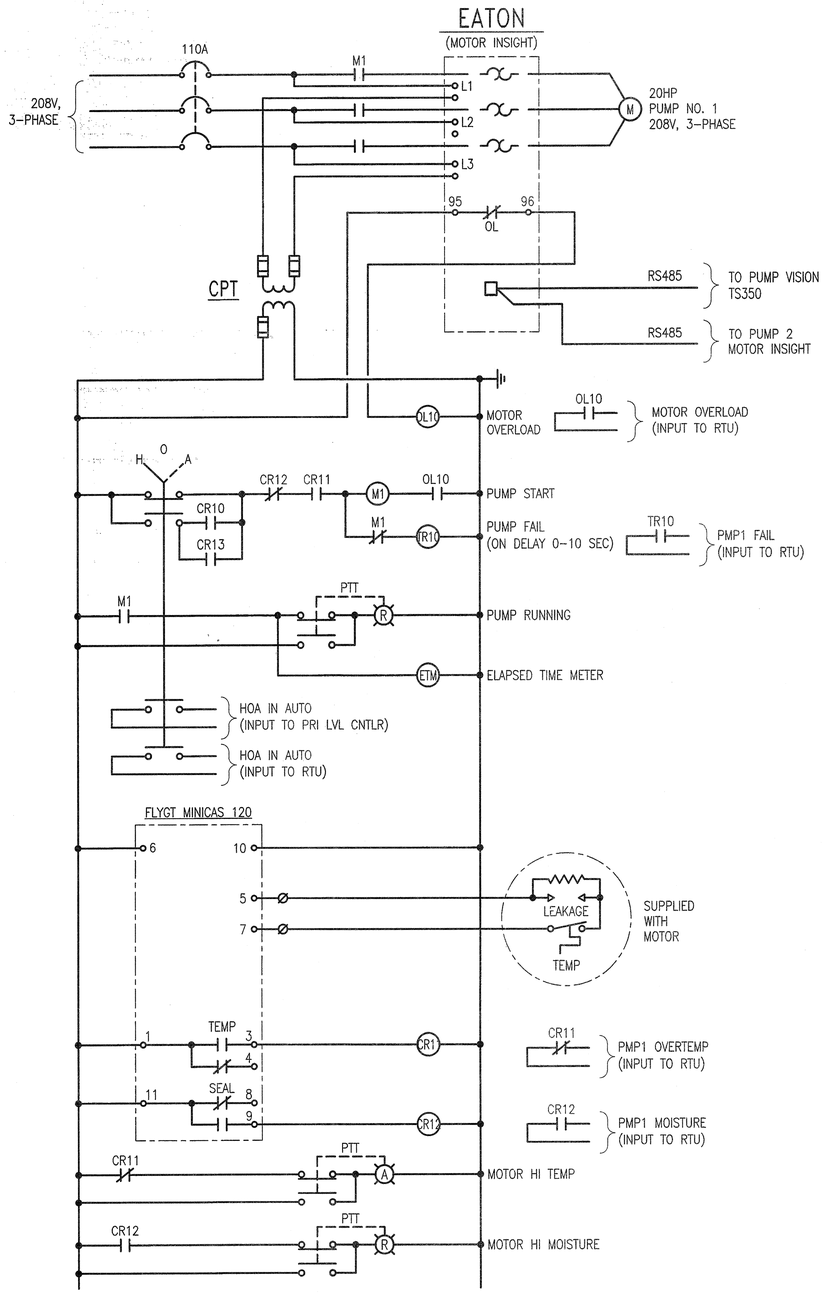
CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS
AUGHINBAUGH PUMP STATION
ONE-LINE & SITE PLAN - NEW WORK

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	KM
DRAWN:	VM
CHECKED:	JH

DWG 9363 CASE 95

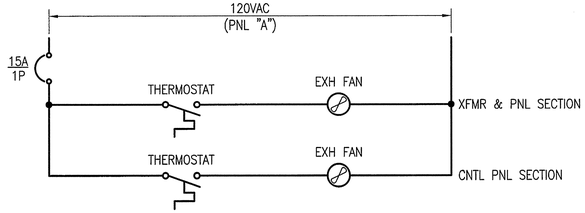
E1.1

13 OF 49

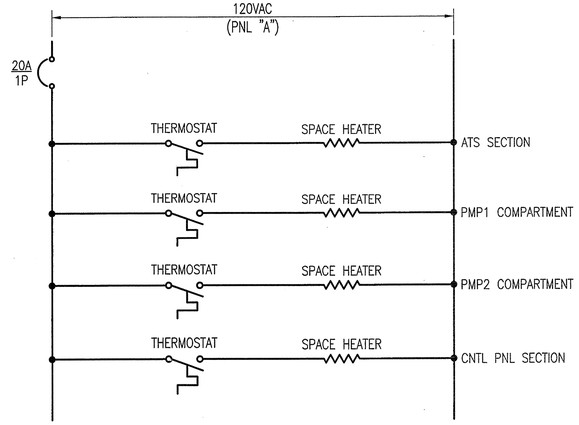


FVNR PUMP No. 1 CONTROL SCHEMATIC DIAGRAM

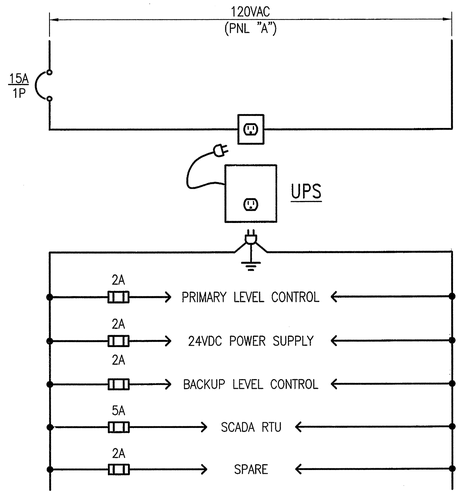
(SIMILAR FOR PUMP No. 2)



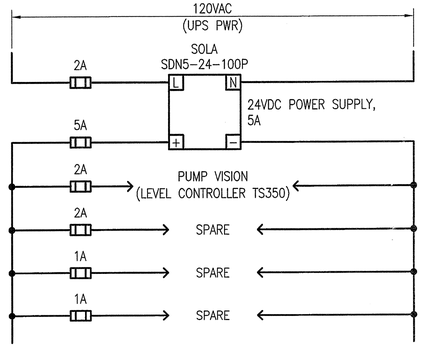
EXHAUST FAN CONTROL SCHEMATIC



SPACE HEATER CONTROL SCHEMATIC



120V UPS SYSTEM SCHEMATIC



24VDC SYSTEM SCHEMATIC

NO	REVISIONS	DATE	APPR

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PROJECT NO. 11697-01

CITY OF ALAMEDA

GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS

AUGHINBAUGH PUMP STATION
CONTROL SCHEMATIC DIAGRAM

DATE:	5/21/13	DESIGN:	KM	CHECKED:	JH
SCALE:	AS SHOWN	DRAWN:	VM		

DWG 9363 CASE 95

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14 OF 49

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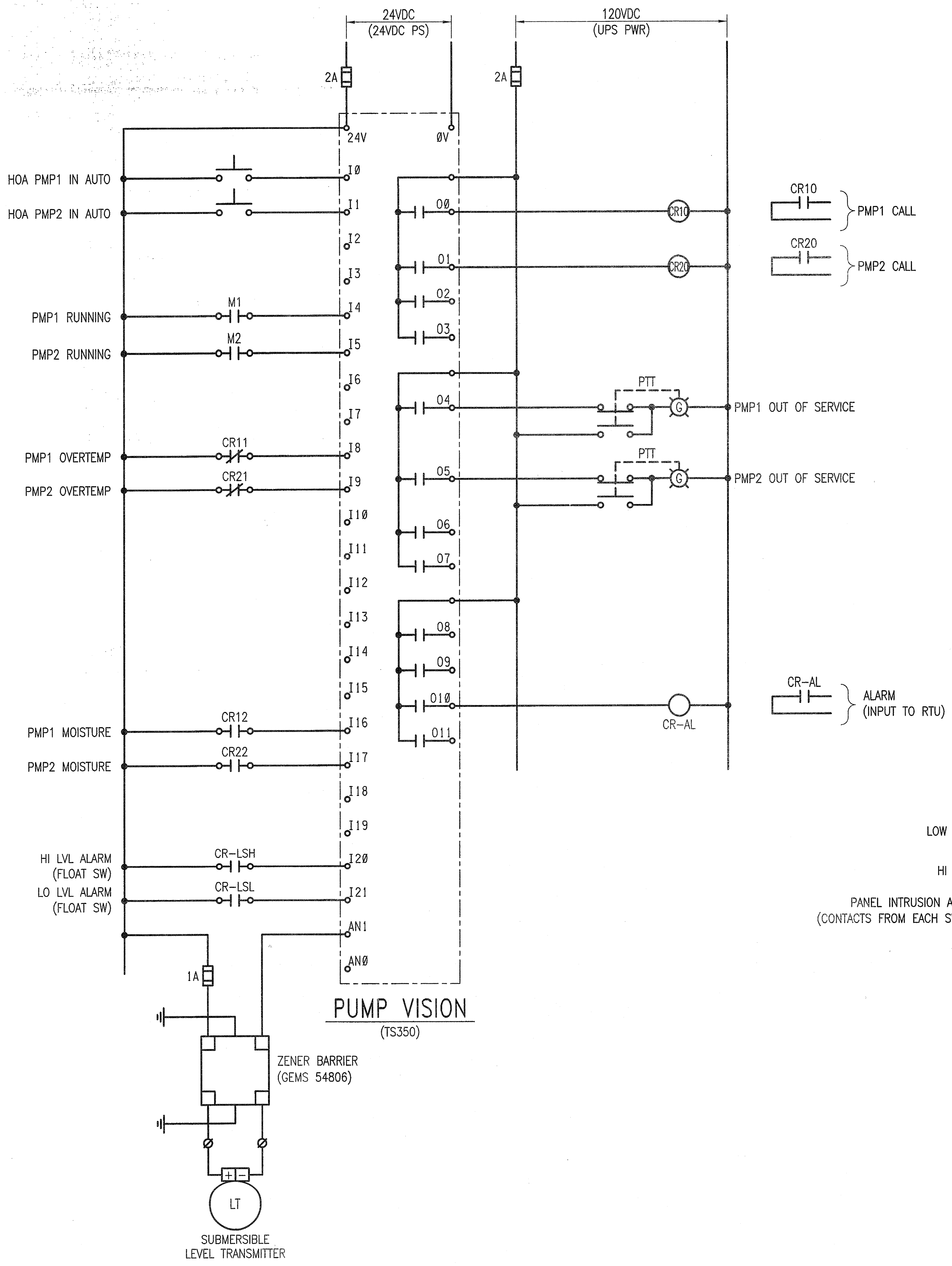
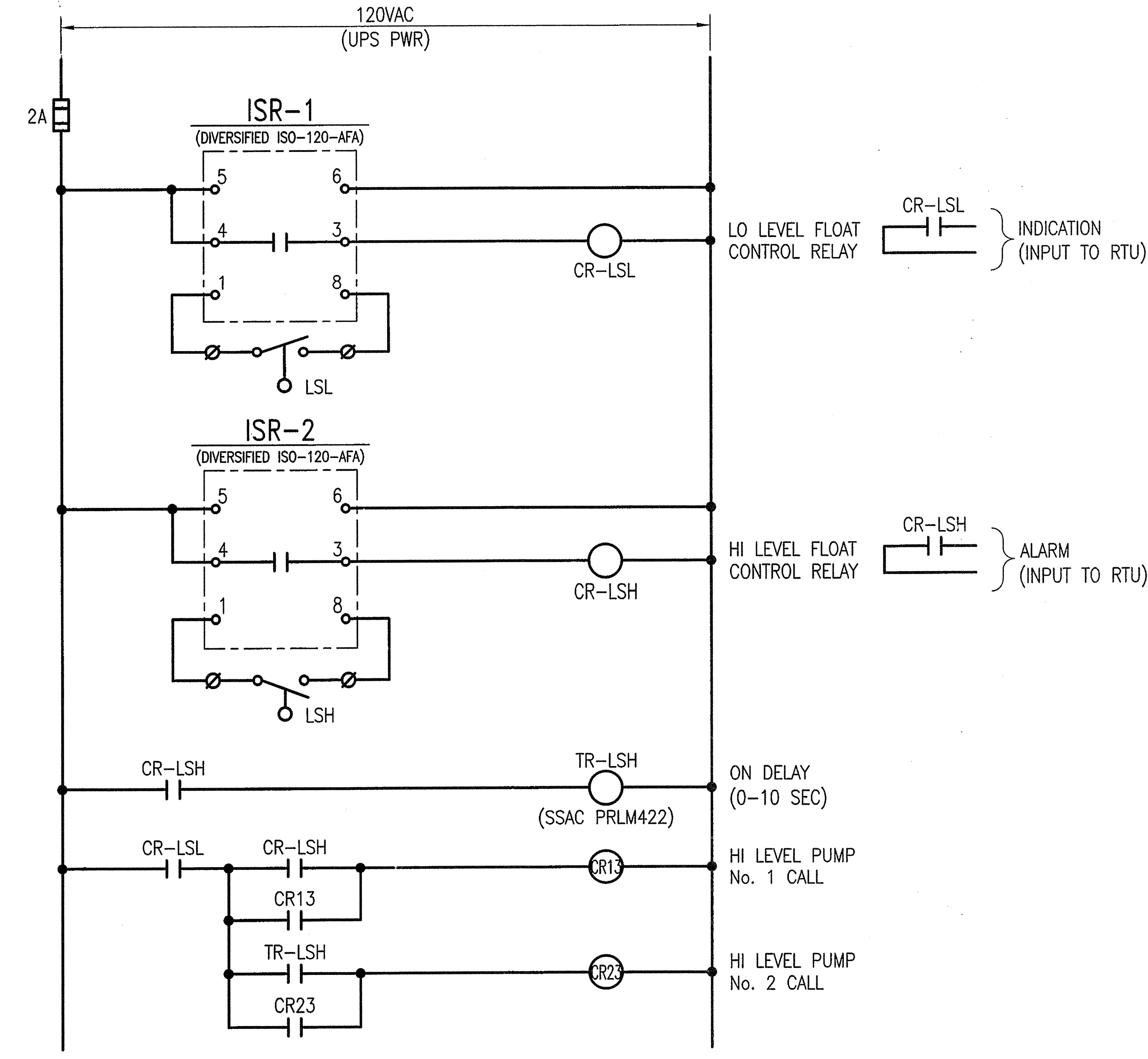
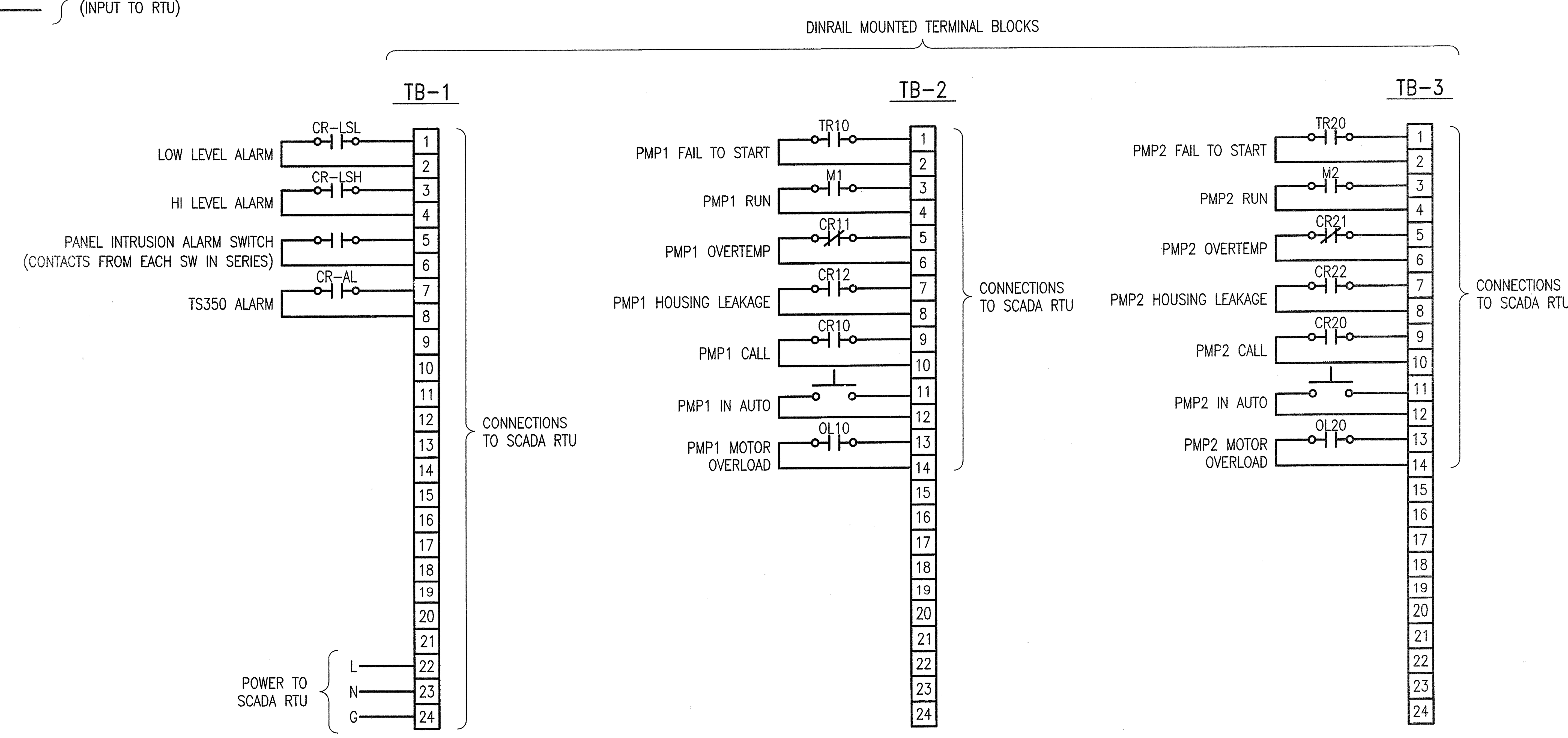


PRIMARY LEVEL CONTROLLER



BACKUP LEVEL CONTROL



SCADA RTU TERMINATION POINTS

NO	REVISIONS	DATE	APPR
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FOR RELIABILITY AND SAFETY IMPROVEMENTS
AUGHINBAUGH PUMP STATION
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DWG 9363 CASE 95

E2.2

FILE: M:\11697-01 Alemda Pumps I\AUG-E22.dwg 05/31/11 09:32 by vuong SCALE = BORDER =
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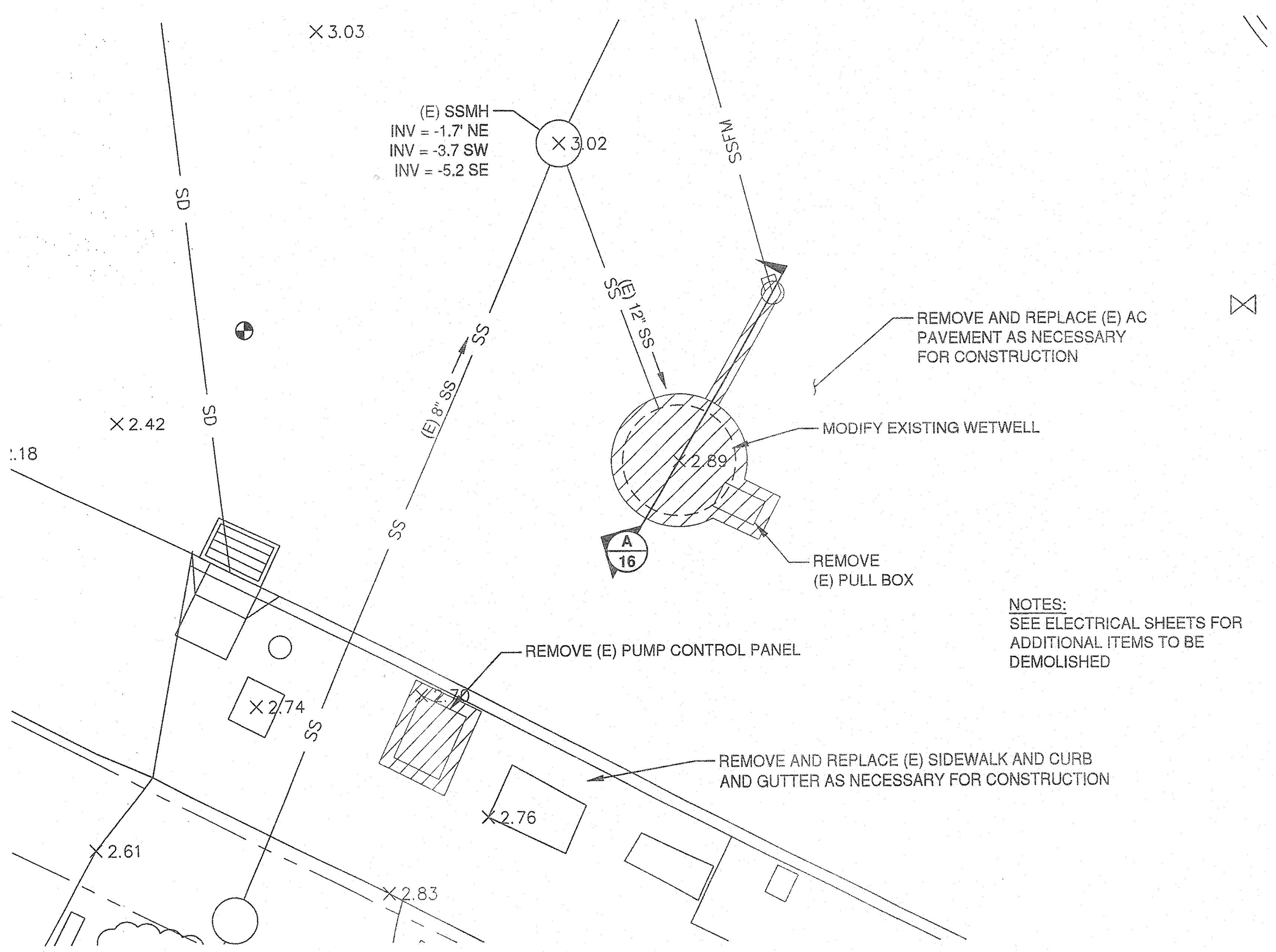
M:\11697-01 Alemda Pumps I\$_Alameda_Phase-1_Group-1\15_AUG-E22.dwg, 5/21/2013 2:17 PM

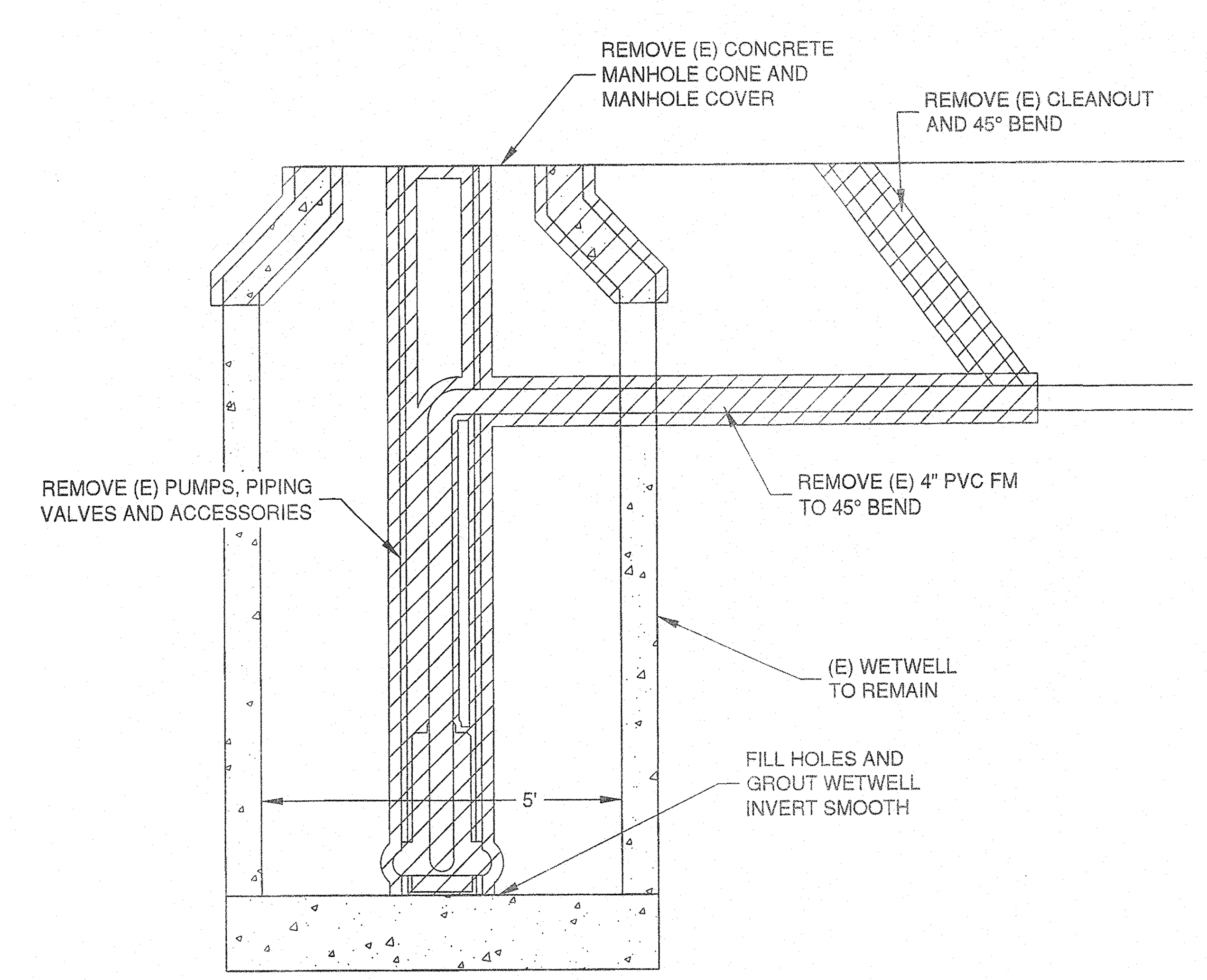
#19 YORKSHIRE-FRANCISCAN PUMP STATION



NOTES:
SEE ELECTRICAL SHEETS FOR ADDITIONAL ITEMS TO BE DEMOLISHED

DEMOLITION PLAN

SCALE: 1" = 5'

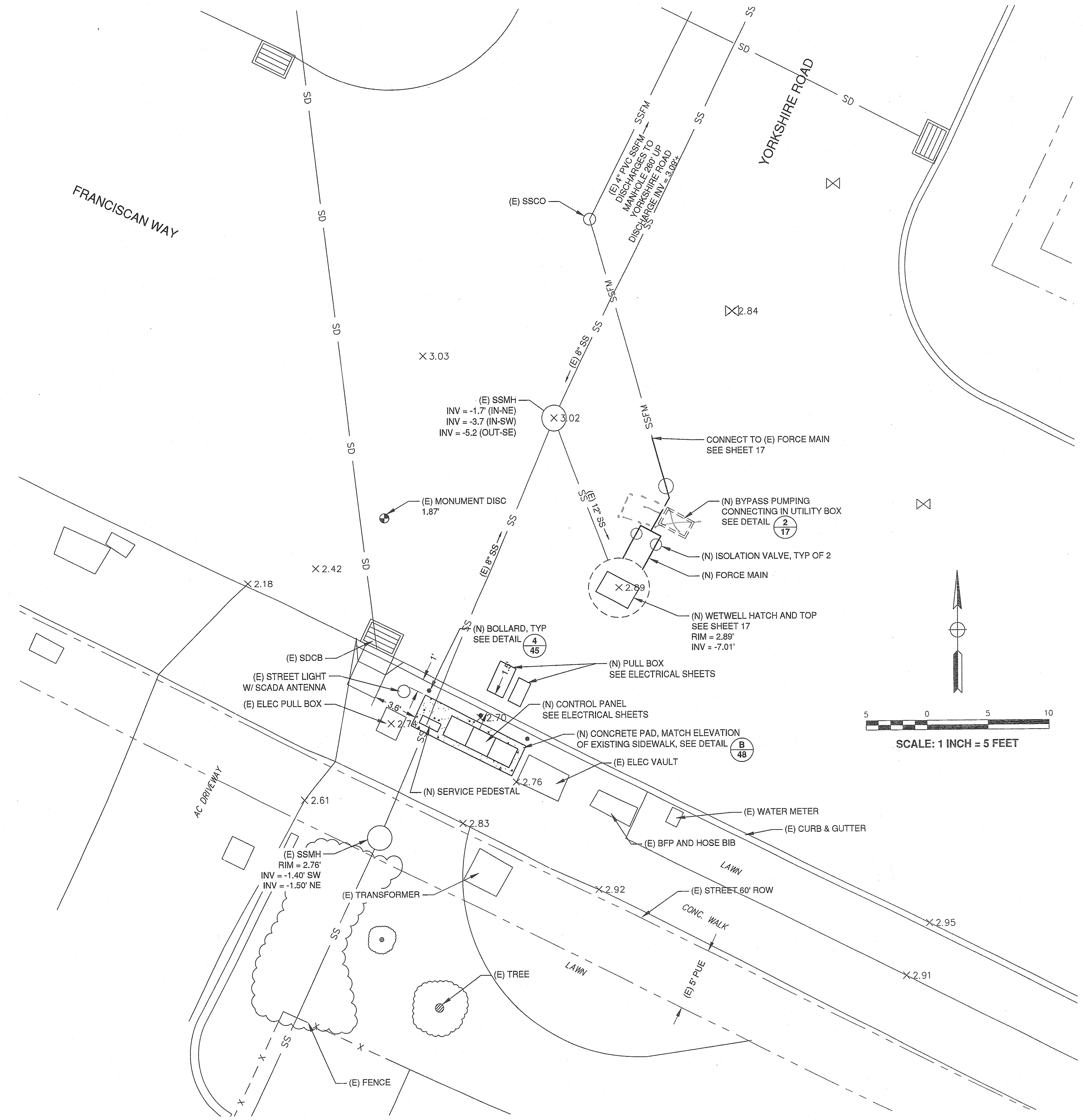


NOTES:
1. REMOVE ALL LADDERS, CONDUIT, AND CONNECTORS FROM WETWELL. TRIM FLUSH WITH WETWELL WALL/CEILING.
2. WHERE EQUIPMENT REMOVAL LEAVES VOIDS, HOLES OR CRACKS IN WETWELL STRUCTURE, FILL WITH NON-SHRINK GROUT.

DEMOLITION SECTION A/16

SCALE:1/2" = 1'

SHEET NOTES:
1. ESTIMATED PEAK WET WEATHER FLOW RATE IS 69 GPM. SEE SPECIFICATIONS FOR BYPASS PUMPING REQUIREMENTS.
2. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AT ALL TIMES WHEN WORK IS TAKING PLACE IN THE ROADWAY.
3. WHERE DEMOLITION OR REMOVAL OF EQUIPMENT LEAVES VOIDS IN THE CONCRETE STRUCTURE, FILL VOIDS WITH NON-SHRINK GROUT.
4. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING IRRIGATION SYSTEMS PRIOR TO CONSTRUCTION AND NOTIFY THE CITY OF ANY POTENTIAL CONFLICTS.
5. SEE ELECTRICAL SHEETS FOR ADDITIONAL PUMP STATION IMPROVEMENTS.



IMPROVEMENT PLAN

SCALE: 1" = 5'

SCALE: 1 INCH = 5 FEET

YORKSHIRE-FRANCISCAN BENCHMARK

EXISTING MONUMENT DISC ON THE SOUTH SIDE OF THE PUMP STATION = 1.87' AS SHOWN ON THE PLAN

NO	REVISIONS	DATE	APPR
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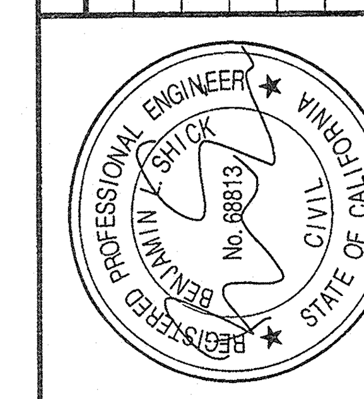

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(408) 246-4848

CITY OF ALAMEDA

GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS

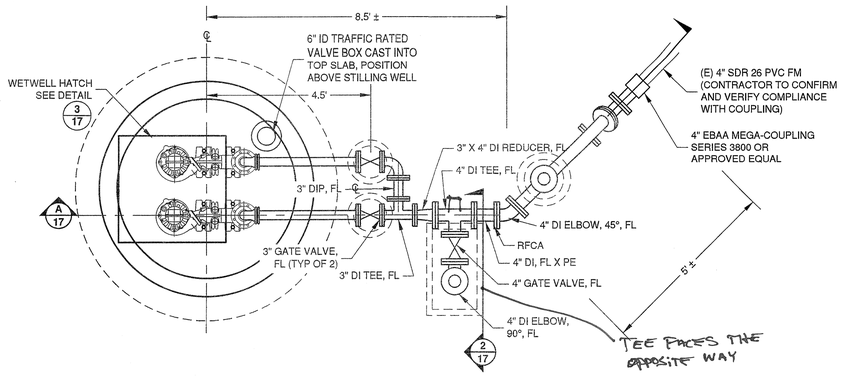
YORKSHIRE-FRANCISCAN SITE PLAN

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	GMA
DRAWN:	GMA
CHECKED:	BLS

DWG 9363 CASE 95

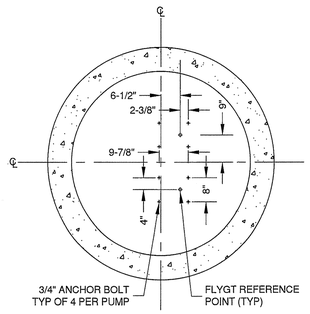
SHEET

#19 YORKSHIRE-FRANCISCAN PUMP STATION



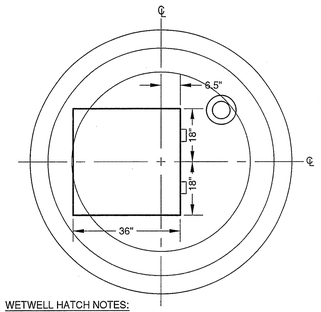
IMPROVEMENT PLAN

SCALE:1/2" = 1'



PUMP MOUNTING DETAIL 1/17

NO SCALE

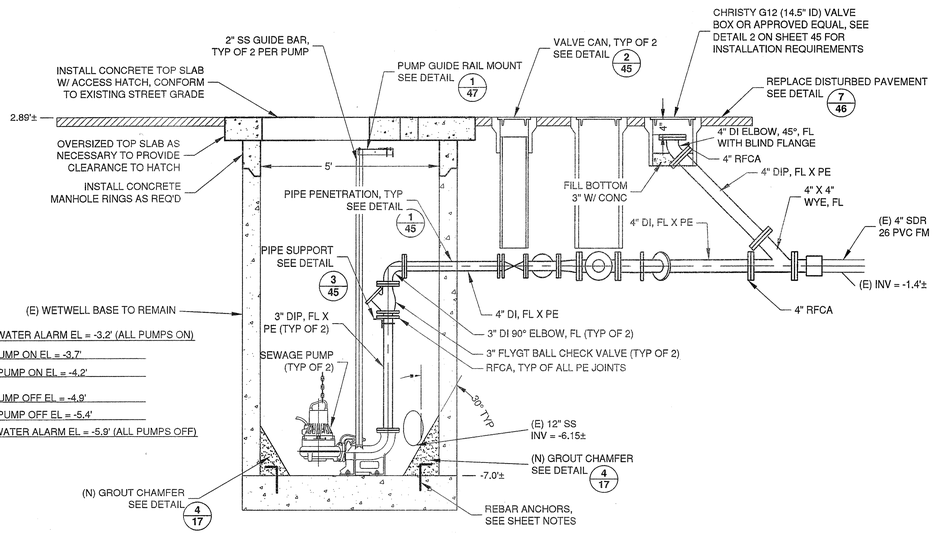


WETWELL HATCH NOTES:

1. ACCESS HATCH DIMENSIONS SHOWN ARE CLEAR OPENINGS.
2. OVERSIZE CONCRETE TOP SLAB AS NECESSARY TO PROVIDE H-20 RATED STRUCTURE AND REQUIRED CLEARANCES
3. ACCESS HATCH SHALL BE EQUIPPED WITH INTEGRAL FALL PROTECTION.
4. WETWELL ACCESS HATCH SHALL BE STREET RATED FOR CONTINUOUS H-20 LOADING.
5. HATCH SHALL BE EAST JORDAN IRON WORKS MODEL 8217 HD, EXTRA HEAVY DUTY HATCH, OR APPROVED EQUAL.
6. HATCH SHALL BE EQUIPPED WITH A SS SPRING ASSIST THAT REDUCES THE LIFTING FORCE TO LESS THAN 50 LBS.
7. HATCH SHALL HAVE BLACK ASPHALTIC COATING.

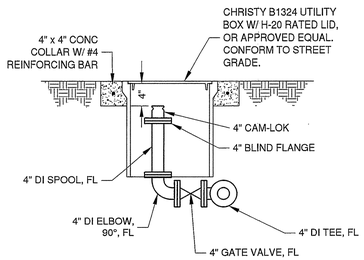
WETWELL HATCH DETAIL 3/17

NO SCALE



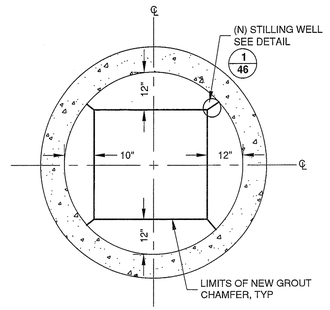
IMPROVEMENT SECTION A/17

SCALE:1/2" = 1'



BYPASS PUMP CONNECTION DETAIL 2/17

NO SCALE



DETAIL NOTES:

1. ALL NEW CHAMFERS SHALL BE ANCHORED WITH REBAR. SEE SHEET NOTES AND SECTION A/17.

LIMITS OF CHAMFER DETAIL 4/17

SCALE:1/2" = 1'

SHEET NOTES:

1. ALL FORCE MAIN CONNECTIONS SHALL BE RESTRAINED AGAINST THRUST.
2. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SIZES, MATERIALS, ELEVATIONS AND DISTANCES PRIOR TO ORDERING AND FABRICATING MATERIALS.
4. ACTUAL WETWELL INVERT MAY BE HIGHER THAN INDICATED, CONTRACTOR SHALL VERIFY WETWELL INVERT ELEVATION PRIOR TO CONSTRUCTION AND ADJUST PUMP CONTROL LEVELS BASED ON DISTANCE FROM FINAL WETWELL INVERT.

YORKSHIRE FRANCISCAN PUMP NOTES:

PUMP SHALL BE AN INDUSTRIAL SEWAGE PUMP, RATED FOR USE IN CLASS 1, DIVISION 1, GROUP D LOCATIONS. PUMP SHALL BE SUPPLIED WITH INTEGRAL MOISTURE AND TEMPERATURE SENSORS. PUMP SHALL BE FLYGT MODEL NP 3085 MT WITH THE FOLLOWING CHARACTERISTICS:

VOLTAGE: 230V, AC, 60 HZ
PHASES: THREE (3)
HORSEPOWER: 3
IMPELLER DIAMETER: 4.69 INCHES (119 MM)
RATING POINT: 130 GPM AT 16 FEET OF HEAD
DISCHARGE SIZE: 3 INCHES

THE CITY HAS STANDARDIZED THE PUMP MANUFACTURER, NO SUBSTITUTIONS WILL BE ACCEPTED.

NO	REVISIONS	DATE	APPR
1	ADDENDUM 1	6/19/13	

REGISTERED PROFESSIONAL ENGINEER — BENJAMIN L. SCHAAF — No. 68813 — CIVIL — STATE OF CALIFORNIA

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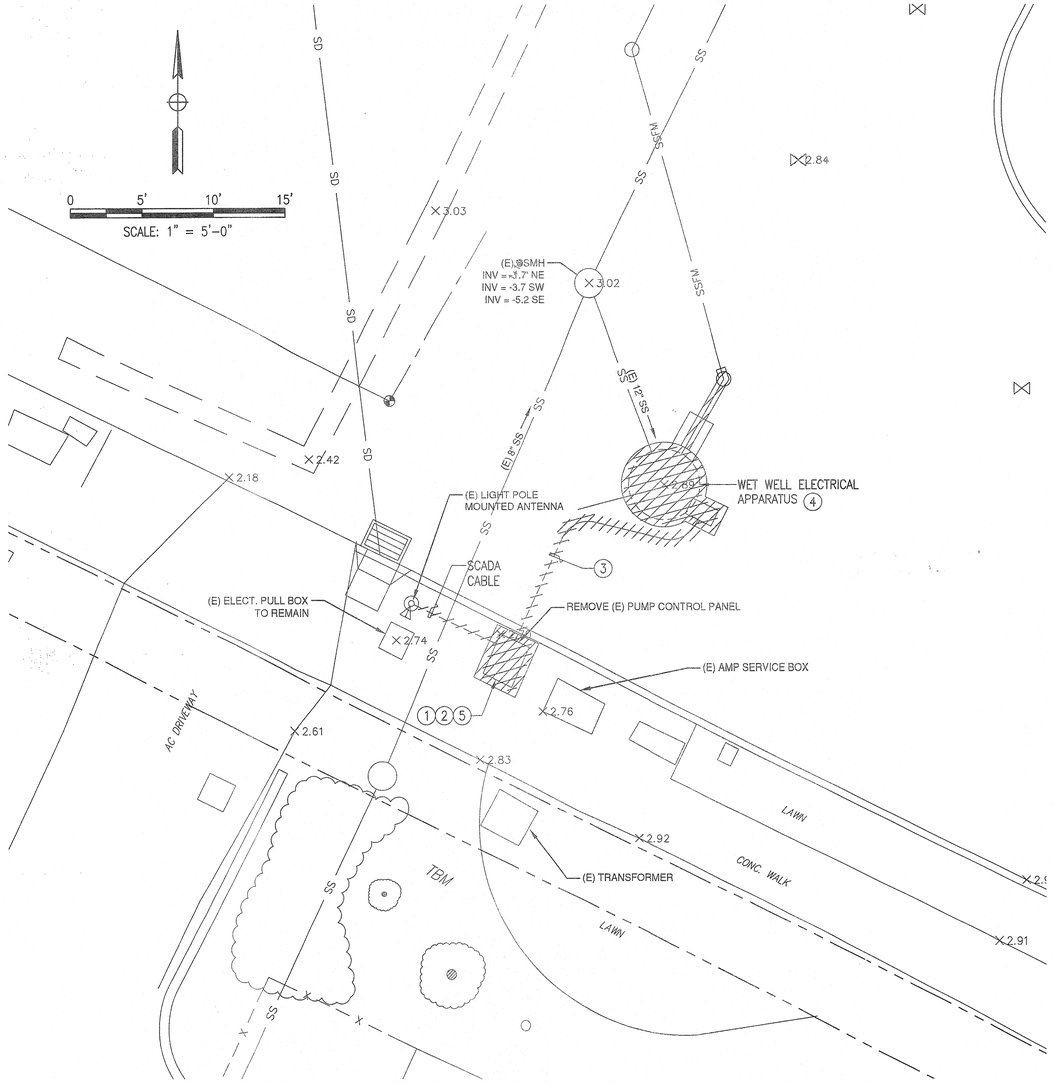
CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS
YORKSHIRE-FRANCISCAN PROFILE

DATE:	SCALE:	DESIGN:	DRAWN:	CHECKED:
5/21/13	AS SHOWN	GMA	GMA	BLS

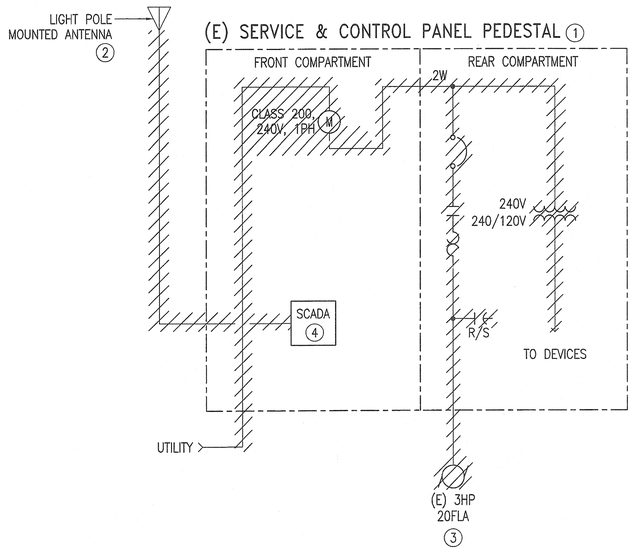
DWG 9363 CASE 95

SHEET 17 OF 49



GENERAL NOTES:

1. IT IS THE INTENTION OF THIS PROJECT TO LEAVE THE EXISTING WELL COMPLETELY CLEAR AND FREE OF ANY AND ALL EXISTING ELECTRICAL APPARATUS THAT IS NOT IN USE OR THAT IS BEING REPLACED BY THIS PROJECT. THIS INCLUDES DEVICES, CONDUIT, BOXES, IN GROUND BOXES SERVING THE WELL BUT LOCATED OUTSIDE THE WELL, AND ANY OTHER SYSTEMS THAT EXIST BUT WILL NOT BE USED OR REPLACED AT THE COMPLETION OF THIS PROJECT WHETHER SHOWN SPECIFICALLY ON THESE PLANS FOR REMOVAL OR NOT.



DETAIL 2 NOTES:

1. COORDINATE WITH ALAMEDA MUNICIPAL POWER (AMP) FOR REMOVAL OF EXISTING METER AND ELECTRICAL SERVICE.
2. REMOVE (E) SERVICE & CONTROL PANEL.
3. REMOVE (E) WIRES FROM CONTROL PANEL TO WET WELL/ELECT BOX. ABANDON CONDUIT IN PLACE.
4. REMOVE FROM WET WELL ALL CONDUITS, JUNCTION BOXES, WIRING AND DEVICES INCLUDING INTRUSION DETECTORS, LIGHTS, RECEPTACLES, WIRING, CONTROLS AND BUBBLER SYSTEM THAT MAY EXIST. DISCONNECT AND REMOVE (E) PUMPS.
5. REMOVE (E) SCADA SYSTEM AND RETAIN FOR RE-USE IN THE (N) CONSTRUCTION.

DETAIL 1 NOTES:

1. ADDITIONAL DEVICES IN PEDESTAL TO BE REMOVED INCLUDE RECEPTACLES, LTS, TERMINAL BLOCKS, CONTACTORS, RELAYS, PROGRAMMABLE CONTROLLERS, COMPRESSORS, ETC. CONNECTION DIAGRAM BASED ON FIELD OBSERVATION ONLY. VERIFY CONNECTIONS & EXISTING CONDITIONS TO THE EXTENT REQUIRED TO SAFELY REMOVE EQUIPMENT.
2. DISCONNECT AND REMOVE ANTENNA CABLE. LEAVE ANTENNA ON LIGHTING POLE FOR RE-USE.
3. DISCONNECT & REMOVE (E) PUMP.
4. DISCONNECT AND RETAIN SCADA SYSTEM FOR RE-USE IN THE (N) CONSTRUCTION.

2 — YORKSHIRE/FRANCISCAN SITE PLAN
SCALE: 1" = 5'-0"

1 — YORKSHIRE/FRANCISCAN ONE-LINE DIAGRAM
NO SCALE

NO	REVISIONS	DATE	APPR

REGISTERED PROFESSIONAL ENGINEER
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Exp. 9/30/14
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PROJECT NO. 11697-01

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS
YORKSHIRE-FRANCISCAN PUMP STATION
ONE-LINE & SITE PLAN - REMOVAL WORK

DATE: 5/21/13
SCALE: AS SHOWN
DESIGN: KM
DRAWN: VM
CHECKED: JH

DWG 9363 CASE 95

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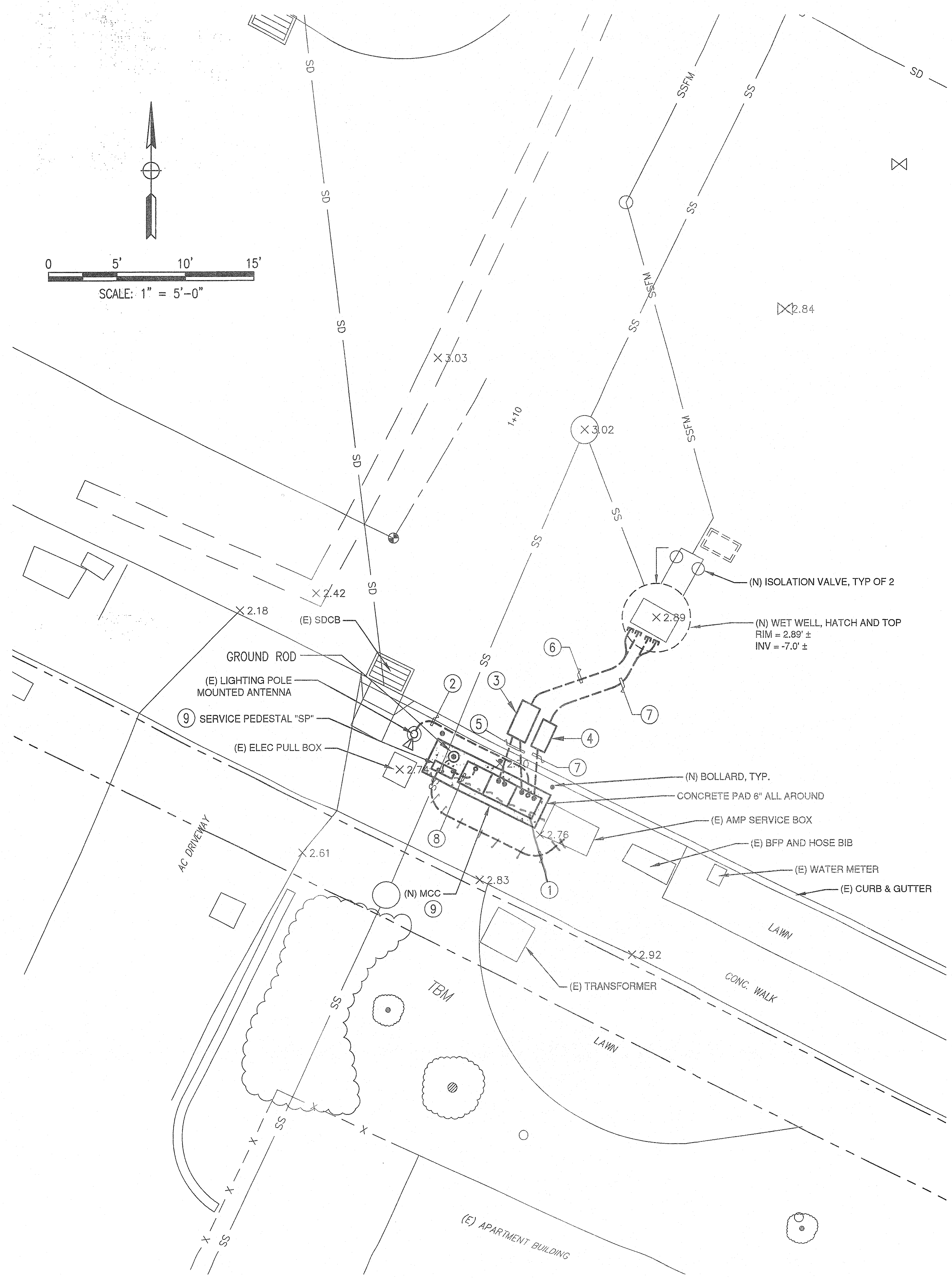
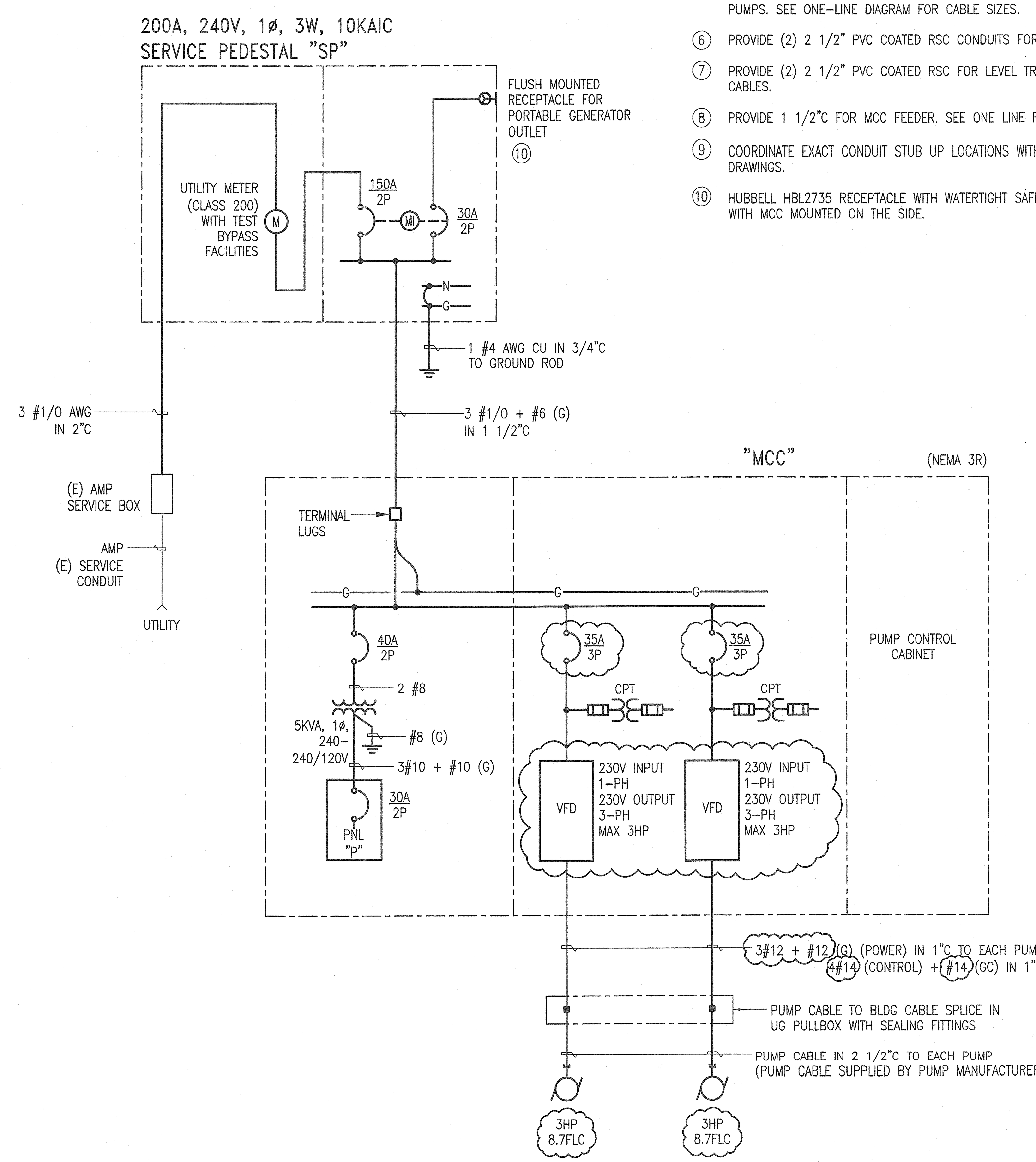
18 OF 49



2 YORKSHIRE/FRANCISCAN SITE PLAN

SCALE: 1" = 5'-0"



1 YORKSHIRE/FRANCISCAN ONE-LINE DIAGRAM

NO SCALE

SHEET NOTES:

1. PROVIDE 2" PVC CONDUIT. INSTALL IN ACCORDANCE WITH ALAMEDA MUNICIPAL POWER (AMP) STANDARD DETAIL 1-L-412.
2. INTERCEPT (E) CONDUIT AND EXTEND TO MCC CONTROL SECTION FOR COAX CABLE CONNECTION FROM (E) ANTENNA TO (R) SCADA SYSTEM.
3. PROVIDE IN GROUND PULL BOX FOR PUMP POWER AND MONITORING CONTROL CIRCUITS, SIZE 6T, CHRISTY B1730 WITH 12" EXTENSION (17" x 30") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATED COVER.
4. PROVIDE IN GROUND PULL BOX FOR CONTROLS, SIZE 5T, CHRISTY B1324 WITH 12" EXTENSION (13" x 24") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATED COVER.
5. PROVIDE (2) 1" PVC COATED RSC CONDUITS FOR PUMP POWER, AND (1) 1" PVC COATED RSC FOR MOISTURE AND TEMPERATURE MONITORING CONTROL CIRCUITS FOR WET WELL PUMPS. SEE ONE-LINE DIAGRAM FOR CABLE SIZES.
6. PROVIDE (2) 2 1/2" PVC COATED RSC CONDUITS FOR PUMP CABLING.
7. PROVIDE (2) 2 1/2" PVC COATED RSC FOR LEVEL TRANSMITTER AND HIGH AND LOW FLOAT CABLES.
8. PROVIDE 1 1/2"C FOR MCC FEEDER. SEE ONE LINE FOR FEEDER CABLE SIZE.
9. COORDINATE EXACT CONDUIT STUB UP LOCATIONS WITH EQUIPMENT MANUFACTURER SHOP DRAWINGS.
10. HUBBELL HBL2735 RECEPTACLE WITH WATERTIGHT SAFETY SHROUD HBL2735SW. PROVIDE WITH MCC MOUNTED ON THE SIDE.

NO	REVISIONS	DATE	APPR
1	ADDENDUM #1	6/19/13	JH
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REGISTERED PROFESSIONAL ENGINEER JULIO C. HERDOCIA No. 9580 Exp. 9/30/14 ELECTRICAL STATE OF CALIFORNIA

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PROJECT NO. 11697-01

CITY OF ALAMEDA

GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS

YORKSHIRE-FRANCISCAN PUMP STATION ONE-LINE & SITE PLAN - NEW WORK

DATE: 5/21/13
SCALE: AS SHOWN
DESIGN: KM
DRAWN: VM
CHECKED: JH

DWG 9363 CASE 95

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FILE: M:\11697-01 Alemda Pumps I\YSF-E11.dwg 06/01/11 10:49 by rcatris
XREF: M:\11697-01 Alemda Pumps I\APS-BDR.dwg XREF: M:\11697-01 Alemda Pumps I\X-BASE-APS.dwg
M:\11697-01 Alameda Pumps I\$_Alameda_Phase-1_Group-1\19_YSF-E11.dwg, 6/19/2013 3:45 PM
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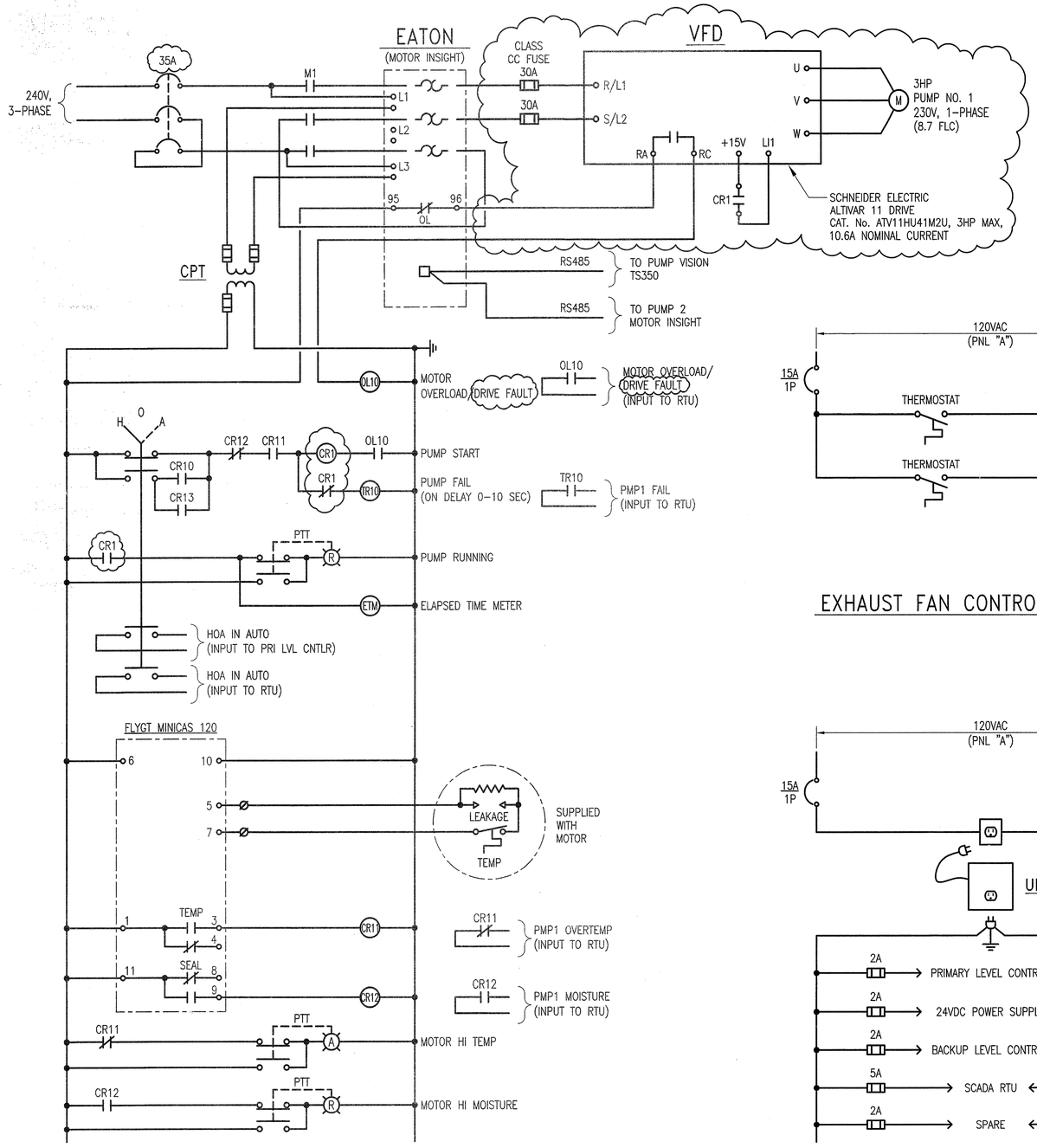
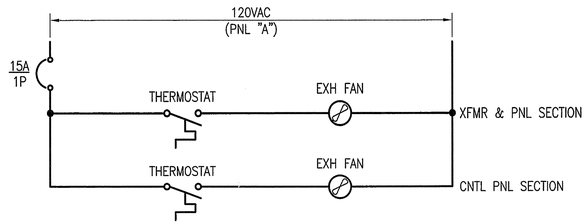
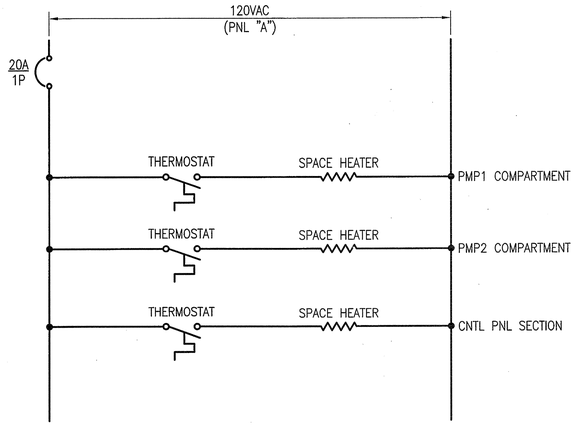
BORDER =



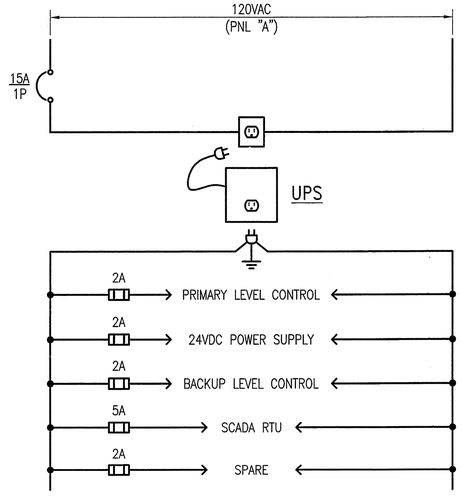
FVNR PUMP No. 1 CONTROL SCHEMATIC DIAGRAM
(SIMILAR FOR PUMP No. 2)



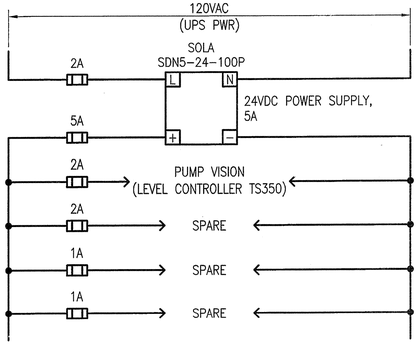
EXHAUST FAN CONTROL SCHEMATIC



SPACE HEATER CONTROL SCHEMATIC



120V UPS SYSTEM SCHEMATIC



24VDC SYSTEM SCHEMATIC

NO	REVISIONS	DATE	APPR
1	ADDENDUM #1	6/19/13	JH

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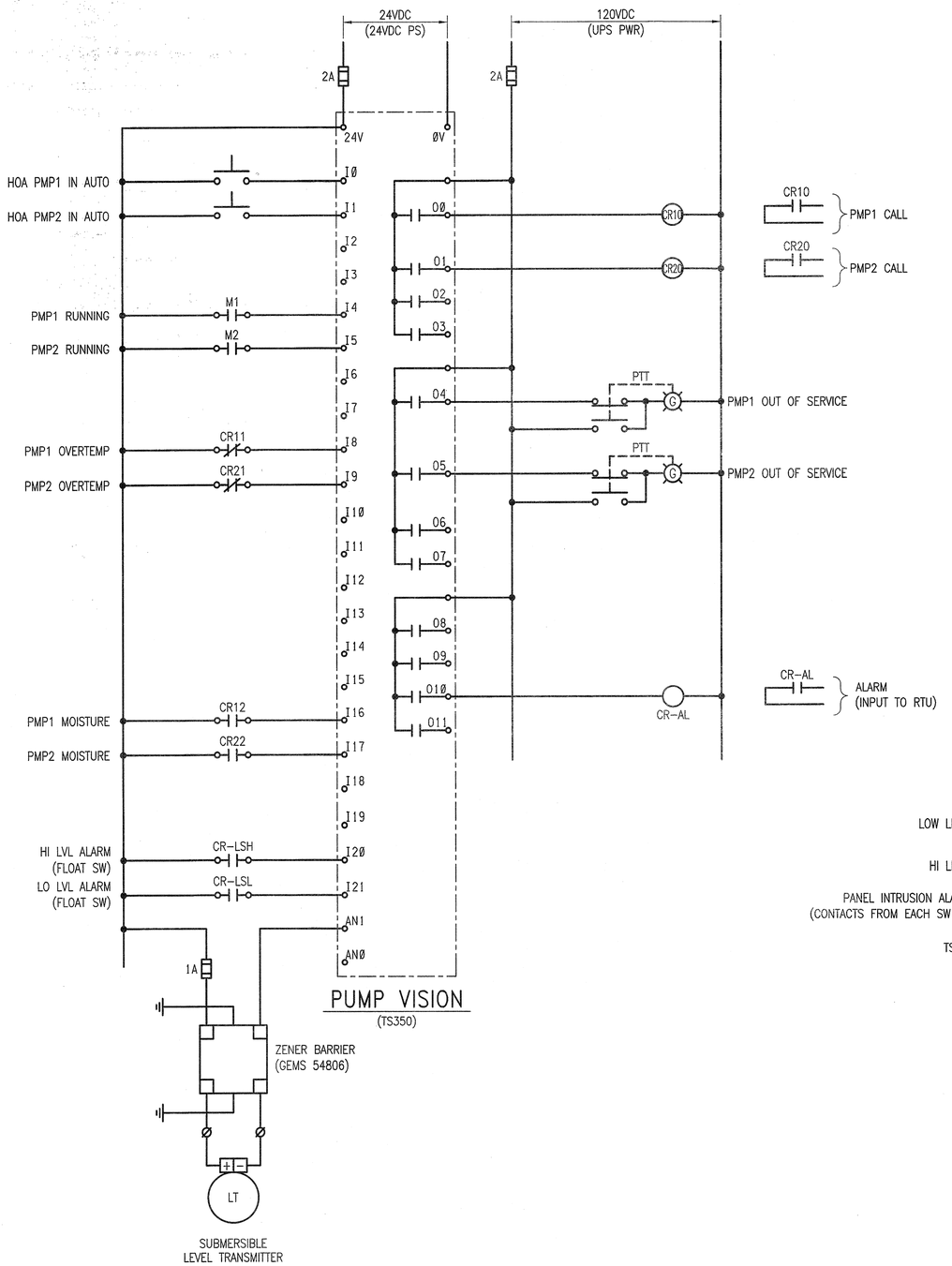
CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS
YORKSHIRE-FRANCISCAN PUMP STATION
CONTROL SCHEMATIC DIAGRAM

DATE:	SCALE:	DESIGN:	DRAWN:	CHECKED:
5/21/13	AS SHOWN	KM	VM	JH

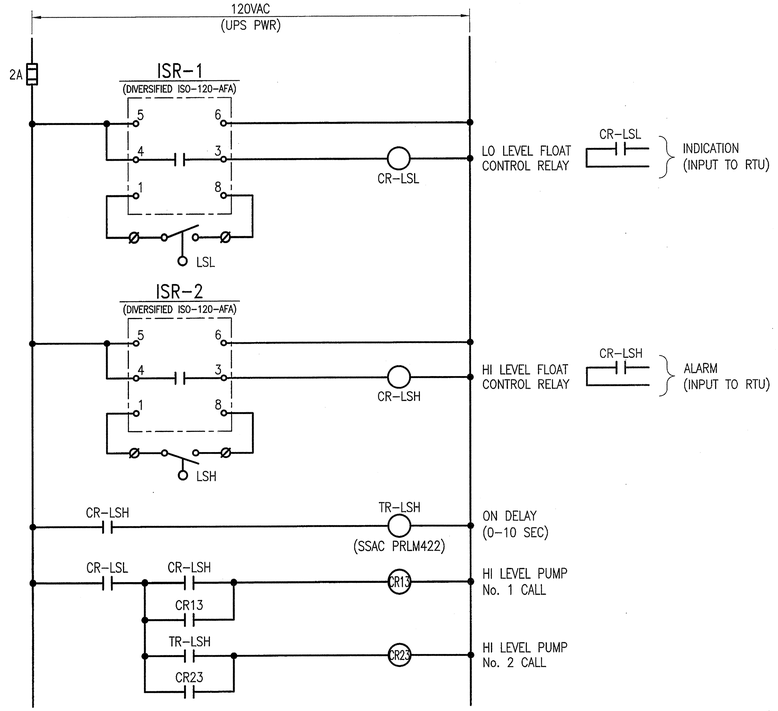
DWG 9363 CASE 95

E2.1

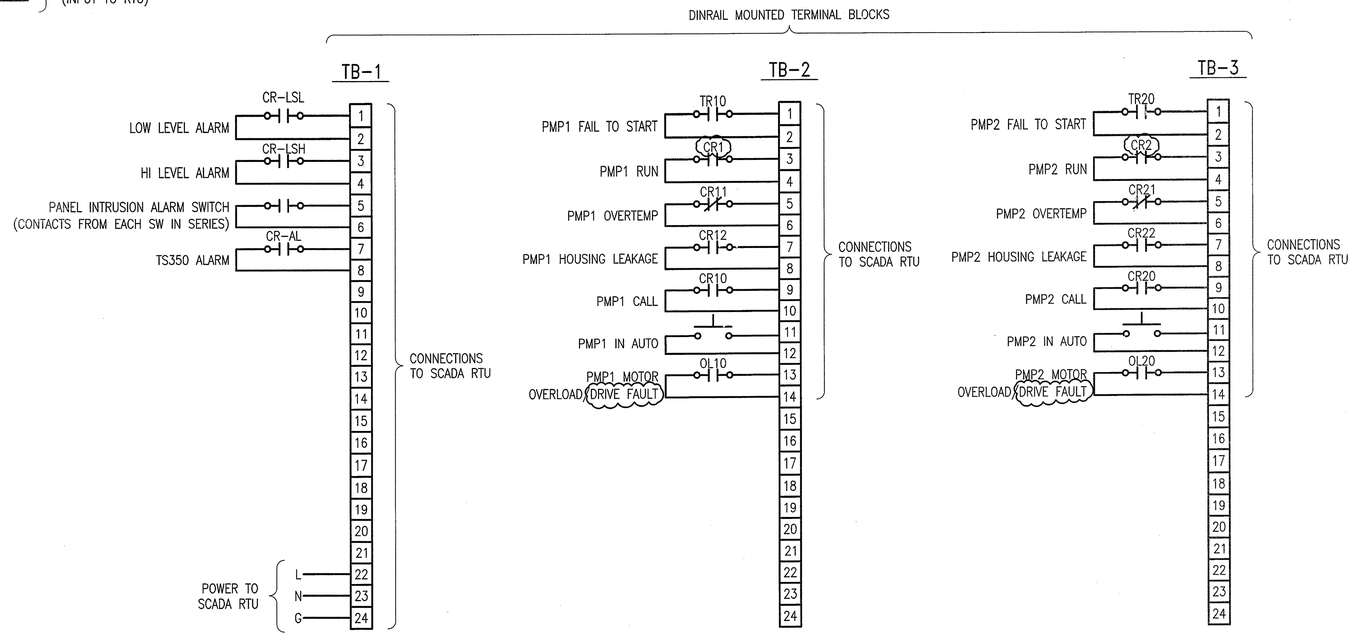
20 OF 49



PRIMARY LEVEL CONTROLLER



BACKUP LEVEL CONTROL



SCADA RTU TERMINATION POINTS

NO	REVISIONS	DATE	APPR
1	ADDENDUM #1	6/19/13	JH

REGISTERED PROFESSIONAL ENGINEER
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PROJECT NO. 11697-01

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS
YORKSHIRE-FRANCISCAN PUMP STATION
SCHEMATIC DIAGRAM

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	KM
DRAWN:	VM
CHECKED:	JH

DWG 9363 CASE 95

E2.2

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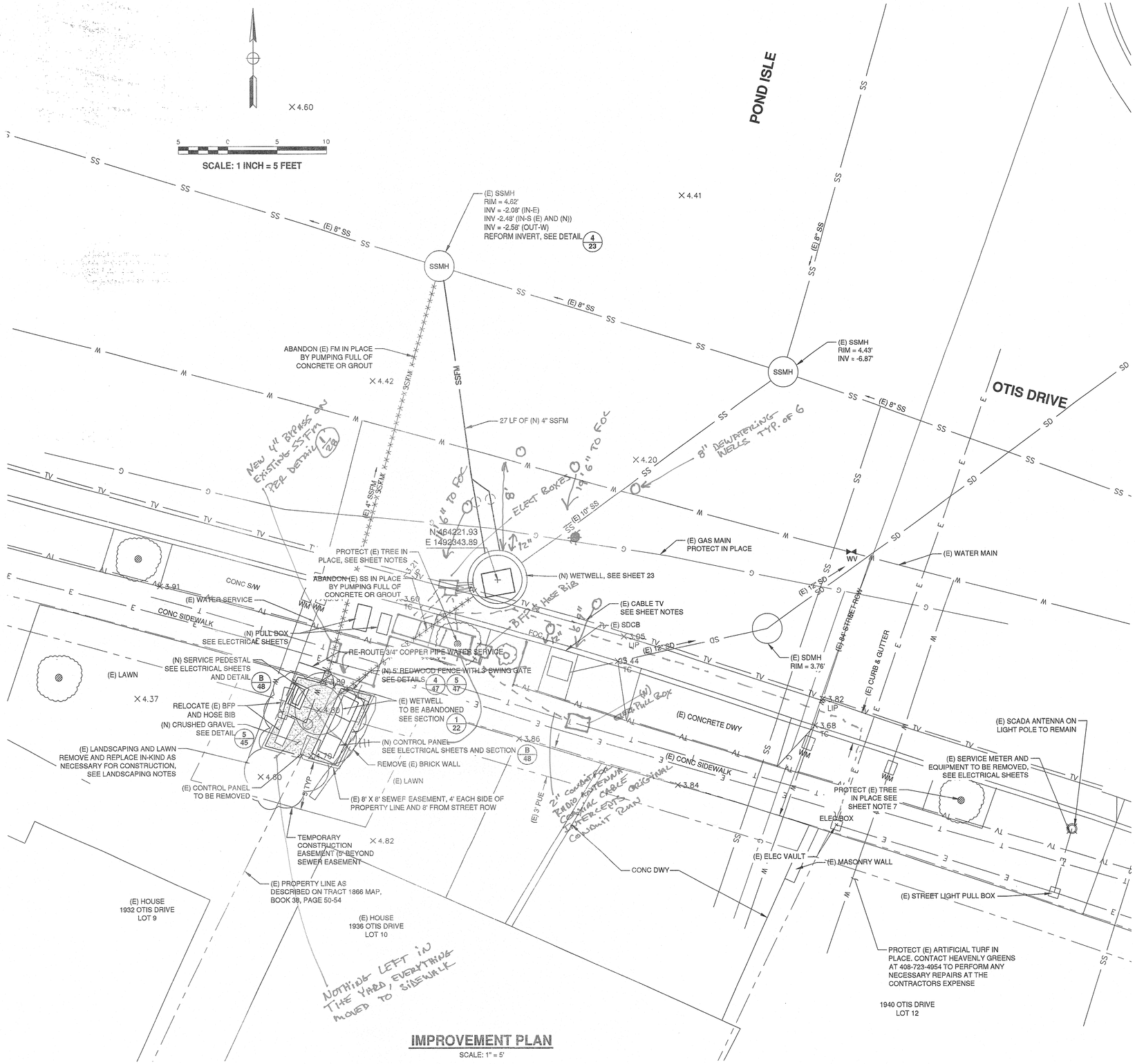
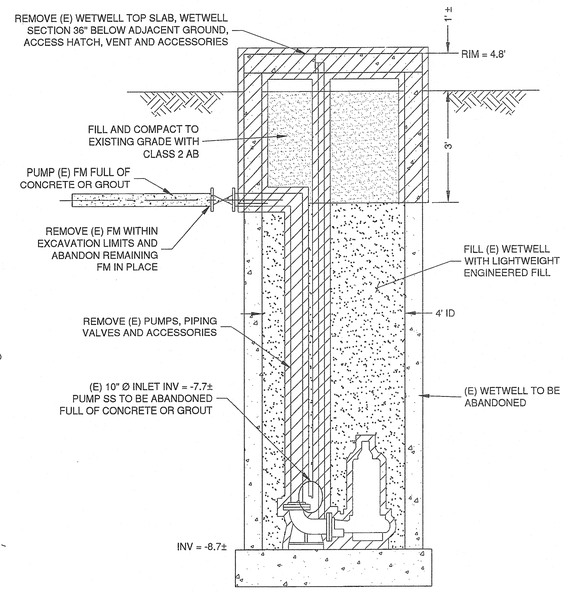
#20 POND-OTIS PUMP STATION



IMPROVEMENT PLAN

SCALE: 1" = 5'



DEMOLITION SECTION 1/22

SCALE:1/2" = 1'

SHEET NOTES:

1. ESTIMATED PEAK WET WEATHER FLOW RATE IS 158 GPM. SEE SPECIFICATIONS FOR BYPASS PUMPING REQUIREMENTS.
2. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AT ALL TIMES WHEN WORK IS TAKING PLACE IN THE ROADWAY.
3. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES AND IRRIGATION SYSTEMS PRIOR TO CONSTRUCTION AND NOTIFY THE CITY OF ANY POTENTIAL CONFLICTS.
4. SEE ELECTRICAL SHEETS FOR ADDITIONAL PUMP STATION IMPROVEMENTS.
5. PIPES TO BE ABANDONED IN PLACE SHALL BE FILLED WITH GROUT OR CONCRETE
6. CONTRACTOR SHALL COORDINATE WITH COMCAST TO HAVE EXISTING UNDERGROUND CABLE TV LINE RELOCATED. CONTACT CHRIS MORRISON AT (510) 377-5421 TO COORDINATE AND SCHEDULE RELOCATION.
7. EXISTING TREE ADJACENT TO NEW WETWELL SHALL BE PROTECTED IN PLACE. EXCAVATION SHALL REMAIN A MINIMUM DISTANCE OF THREE TIMES THE TREE DIAMETER AWAY FROM THE TREE TRUNK. ROOTS LARGER THAN 3 INCHES IN DIAMETER SHALL NOT BE CUT WITHOUT APPROVAL FROM THE CITY'S ARBORIST.
8. CONTRACTOR SHALL HAVE A LICENSED SURVEYOR SURVEY THE LIMITS OF THE EXISTING SEWER EASEMENT AND LOCATION OF PROPOSED IMPROVEMENTS TO ENSURE ALL IMPROVEMENTS ARE WITHIN THE EXISTING SEWER EASEMENT.
9. CONCRETE PADS FOR NEW CONTROL PANEL AND SERVICE PEDESTAL SHALL BE 2 INCHES ABOVE HIGHEST ADJACENT GROUND.
10. A 3 FOOT CLEARANCE IN FRONT OF SERVICE PEDESTAL AND CONTROL PANEL SHALL BE MAINTAINED.
11. CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES AT NEW WETWELL LOCATION PRIOR TO STARTING EXCAVATION FOR NEW WETWELL. CONTRACTOR SHALL NOTIFY THE CITY OF ANY POTENTIAL ISSUES OR UTILITY CONFLICTS.
12. A GEOTECHNICAL LETTER "GEOTECHNICAL CONSULTATION FOR THE CITY OF ALAMEDA SANITARY SEWER PUMP STATIONS IMPROVEMENTS" DATED MAY 24, 2011, WHICH DESCRIBES THE EXISTING CONDITIONS AND RECOMMENDATIONS IS AVAILABLE FROM THE CITY UPON REQUEST.

LANDSCAPING NOTES:
CONTRACTOR SHALL PROVIDE AND INSTALL THE FOLLOWING PLANTS SURROUNDING THE PUMP STATION. CONTRACTOR SHALL COORDINATE WITH THE CITY TO DETERMINE PLACEMENT LOCATION:
- SIX (6) 5 GALLON BUXUS JAPONICAS
- FOUR (4) 5 GALLON RAPHIOLEPIS INDICA CLARA
- ONE (1) 15 GALLON TRUMPET VINE
- TWO (2) 5 GALLON HEBE COEDS

POND-OTIS BASIS OF BEARING

HELD COORDINATES AND MAP BEARING OF POND ISLE MONUMENT LINE AS SHOWN ON TRACT 1866 MAP, BOOK 38, PAGE 50-54, TAKEN AS N 14° 53' 05" E (RJA PTS #5500 TO 5501)

POND-OTIS BENCHMARK

HELD SSMH 818 RIM AS SHOWN ON SYSTEM MAP ELEV. = 4.62 (RJA PT #5599)

NO	REVISIONS	DATE	APPR
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REGISTERED PROFESSIONAL ENGINEER — BENJAMIN L. SCHAAF — No. 58813 — CIVIL — STATE OF CALIFORNIA

Schaf & Wheeler
CONSULTING CIVIL ENGINEERS
1171 HOMESTEAD RD, STE. 255
SANTA CLARA, CA 95050
(408) 246-4848

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS

POND-OTIS SITE PLAN

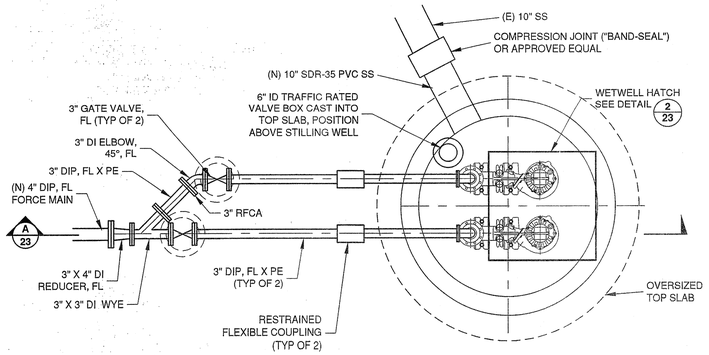
DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	GMA
DRAWN:	GMA
CHECKED:	BLS

DWG 9363 CASE 95

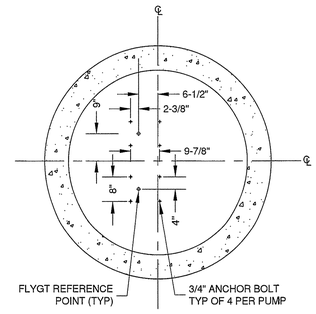
SHEET 22 OF 49

D:\JOBS\APWD\07-Phase 1 Pump Stations\Drawings\Phase 1_WORKING\Group 1\Group_1_052113.dwg, 6/3/2013 4:46 PM

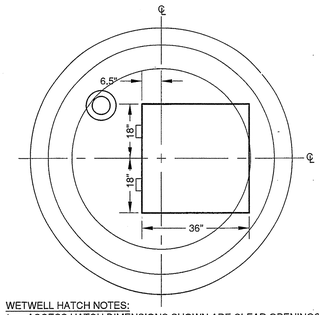
#20 POND-OTIS PUMP STATION



IMPROVEMENT PLAN
SCALE:1/2" = 1'

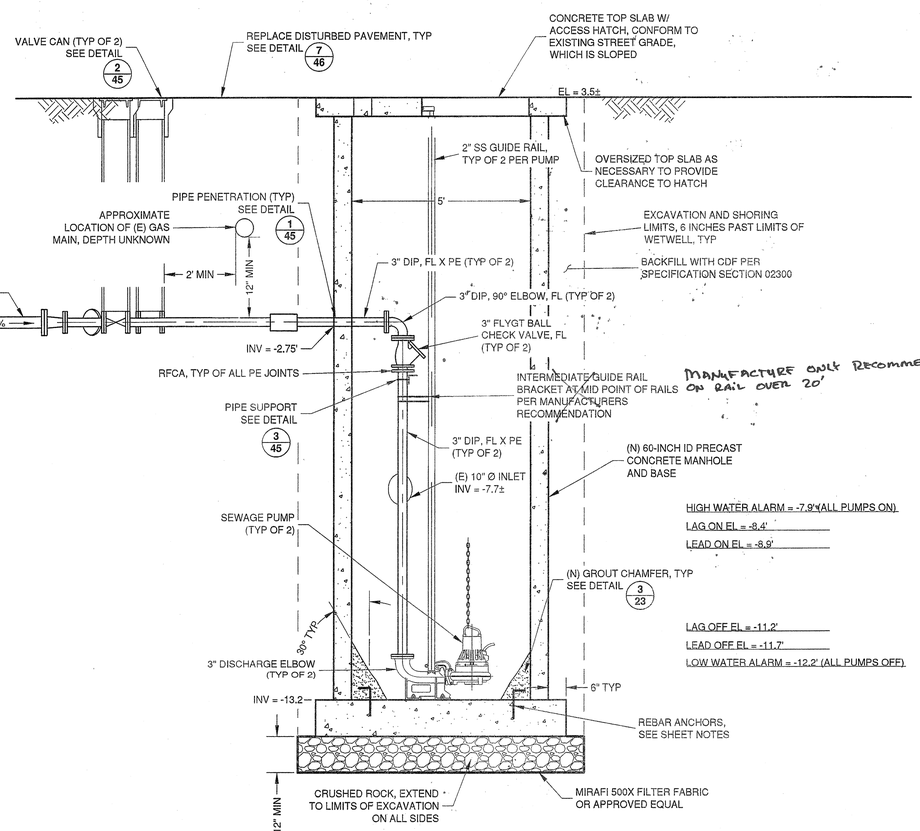


PUMP MOUNTING DETAIL 1/23
SCALE:1/2" = 1'

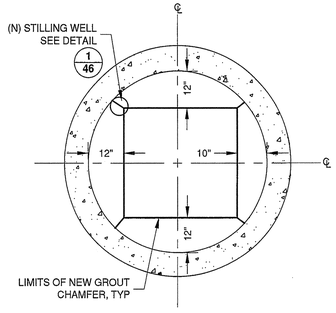


WETWELL HATCH NOTES:
1. ACCESS HATCH DIMENSIONS SHOWN ARE CLEAR OPENINGS.
2. OVERSIZE CONCRETE TOP SLAB AS NECESSARY TO PROVIDE H-20 RATED STRUCTURE AND REQUIRED CLEARANCES
3. ACCESS HATCH SHALL BE EQUIPPED WITH INTEGRAL FALL PROTECTION.
4. WETWELL ACCESS HATCH SHALL BE STREET RATED FOR CONTINUOUS H-20 LOADING.
5. HATCH SHALL BE EAST JORDAN IRON WORKS MODEL 8217 HD, EXTRA HEAVY DUTY HATCH, OR APPROVED EQUAL.
6. HATCH SHALL BE EQUIPPED WITH A SS SPRING ASSIST THAT REDUCES THE LIFTING FORCE TO LESS THAN 50 LBS.
7. HATCH SHALL HAVE BLACK ASPHALTIC COATING

WETWELL HATCH DETAIL 2/23
NO SCALE

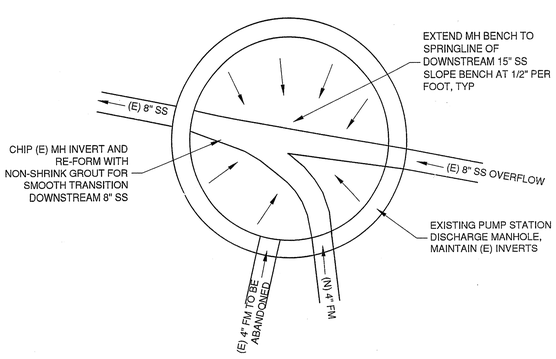


IMPROVEMENT SECTION A/23
SCALE:1/2" = 1'



DETAIL NOTES:
1. ALL NEW CHAMFERS SHALL BE ANCHORED WITH REBAR. SEE SHEET NOTES AND SECTION A/23.

LIMITS OF CHAMFER DETAIL 3/23
SCALE:1/2" = 1'



DISCHARGE MH DETAIL 4/23
SCALE: NTS

SHEET NOTES:
1. ALL FORCE MAIN CONNECTIONS SHALL BE RESTRAINED AGAINST THRUST.
2. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SIZES, MATERIALS, ELEVATIONS AND DISTANCES PRIOR TO ORDERING AND FABRICATING MATERIALS.
3. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF THE EXISTING GAS MAIN PRIOR TO CONSTRUCTION AND NOTIFY THE CITY OF ANY POTENTIAL CONFLICTS WITH THE PROPOSED IMPROVEMENTS.
4. EXISTING GAS MAIN AND TREE ADJACENT TO THE NEW WETWELL SHALL BE PROTECTED IN PLACE. CONTRACTOR'S EXCAVATION AND SHORING PLAN SHALL TAKE THIS INTO ACCOUNT. EXCAVATION BY DRILLING/BORING AND USE OF A TEMPORARY STEEL CASING MAY BE REQUIRED.
5. GROUNDWATER IS EXPECTED WITHIN WETWELL EXCAVATION. SEE SPECIFICATIONS FOR EXCAVATION AND DISPOSAL REQUIREMENTS.

POND-OTIS PUMP NOTES:
PUMP SHALL BE AN INDUSTRIAL SEWAGE PUMP, RATED FOR USE IN CLASS 1, DIVISION 1, GROUP D LOCATIONS. PUMP SHALL BE SUPPLIED WITH INTEGRAL MOISTURE AND TEMPERATURE SENSORS. PUMP SHALL BE FLYGT NP 3085 MT WITH THE FOLLOWING CHARACTERISTICS:

VOLTAGE: 230V, AC, 60 HZ
PHASES: THREE (3) 1
HORSEPOWER: 3
IMPELLER DIAMETER: 5.31 INCHES (135 MM)
FLYGT CURVE NO. 61-463-00-4506
RATING POINT: 270 GPM AT 15.6 FEET OF HEAD
DISCHARGE SIZE: 3 INCHES

THE CITY HAS STANDARDIZED THE PUMP MANUFACTURER, NO SUBSTITUTIONS WILL BE ACCEPTED.

NO	REVISIONS	DATE	APPR
1	ADDENDUM 1	6/19/13	

REGISTERED PROFESSIONAL ENGINEER BRIAN L. SCOTT No. 58813 CIVIL STATE OF CALIFORNIA

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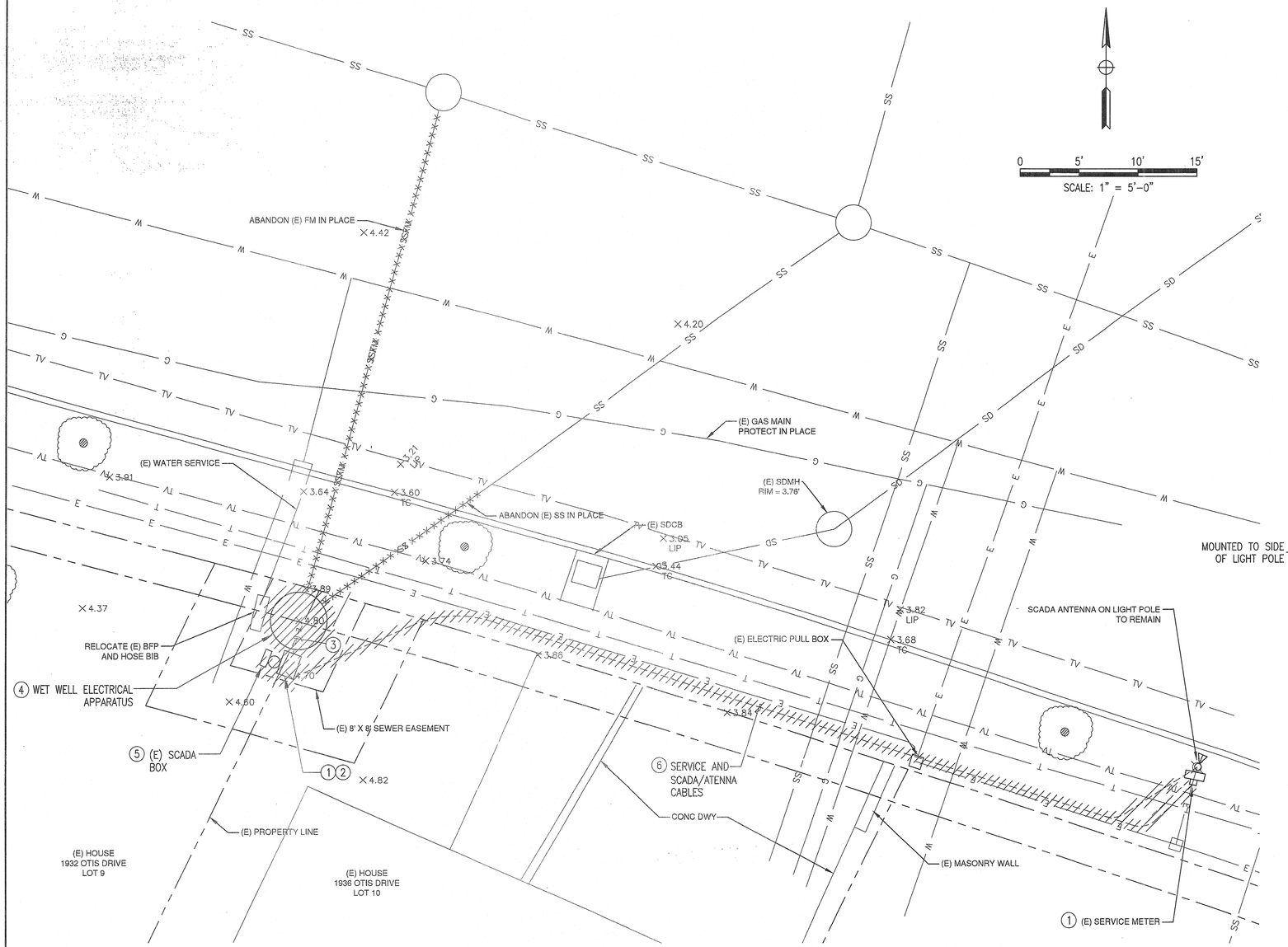
CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS
POND-OTIS SECTIONS

DATE:	SCALE:	DESIGN:	DRAWN:	CHECKED:
5/21/13	AS SHOWN	GMA	GMA	BLS

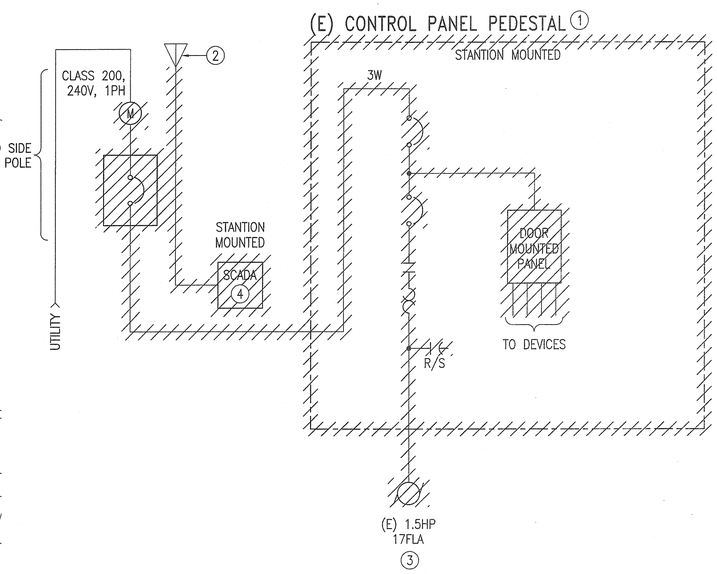
DWG 9363 CASE 95

SHEET 23 OF 49



GENERAL NOTES:

1. IT IS THE INTENTION OF THIS PROJECT TO LEAVE THE EXISTING WELL COMPLETELY CLEAR AND FREE OF ANY AND ALL EXISTING ELECTRICAL APPARATUS THAT IS NOT IN USE OR THAT IS BEING REPLACED BY THIS PROJECT. THIS INCLUDES DEVICES, CONDUIT, BOXES, IN GROUND BOXES SERVING THE WELL BUT LOCATED OUTSIDE THE WELL, AND ANY OTHER SYSTEMS THAT EXIST BUT WILL NOT BE USED OR REPLACED AT THE COMPLETION OF THIS PROJECT WHETHER SHOWN SPECIFICALLY ON THESE PLANS FOR REMOVAL OR NOT.



DETAIL 2 NOTES:

1. COORDINATE WITH ALAMEDA MUNICIPAL POWER FOR REMOVAL OF EXISTING METER AND ELECTRICAL SERVICE.
2. REMOVE (E) SERVICE AND CONTROL PANEL.
3. REMOVE (E) WIRES AND CONDUIT FROM CONTROL PANEL TO WET WELL.
4. REMOVE FROM WET WELL ALL CONDUIT, JUNCTION BOXES, WIRING AND DEVICES INCLUDING INTRUSION DETECTORS, LIGHTS, RECEPTACLES, WIRING, CONTROLS AND BUBBLER SYSTEM THAT MAY EXIST. DISCONNECT & REMOVE (E) PUMP.
5. REMOVE (E) SCADA SYSTEM AND RETAIN FOR RE-USE IN THE (N) CONSTRUCTION.
6. REMOVE (E) ANTENNA CABLE AND REMOVE (E) SERVICE CONDUCTORS. ABANDON CONDUIT IN-PLACE.

2 — POND/OTIS SITE PLAN
SCALE: 1" = 5'-0"

DETAIL 1 NOTES:

1. ADDITIONAL DEVICES IN PEDESTAL TO BE REMOVED INCLUDE RECEPTACLES, LTS, TERMINAL BLOCKS, CONTACTORS, RELAYS, PROGRAMMABLE CONTROLLERS, COMPRESSORS, ETC. CONNECTION DIAGRAM BASED ON FIELD OBSERVATION ONLY. VERIFY CONNECTIONS & EXISTING CONDITIONS TO THE EXTENT REQUIRED TO SAFELY REMOVE EQUIPMENT.
2. DISCONNECT AND REMOVE ANTENNA CABLE.
3. DISCONNECT & REMOVE (E) PUMP.
4. DISCONNECT AND RETAIN SCADA SYSTEM FOR RE-USE IN THE (N) CONSTRUCTION.

1 — POND/OTIS ONE-LINE DIAGRAM
NO SCALE

NO	REVISIONS	DATE	APPR
1			
2			
3			
4			
5			
6			
7			

REGISTERED PROFESSIONAL ENGINEER — JULIO C. HERDOCIA — No. 9580 Exp. 9/30/14 — ELECTRICAL — STATE OF CALIFORNIA

MH engineers, inc.
3350 scott blvd, bldg. 11
santa clara, ca 95054
(408) 986-8558
FAX (408) 986-9627
PROJECT NO. 11697-01

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS
POND-OTIS PUMP STATION
ONE-LINE & SITE PLAN - REMOVAL WORK

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	KM
DRAWN:	VM
CHECKED:	JH

DWG 9363 CASE 95

E1.1R

24 OF 49

FILE: M:\11697-01 Alameda Pumps \POT-E11R.dwg 06/01/11 15:44 by rcatris
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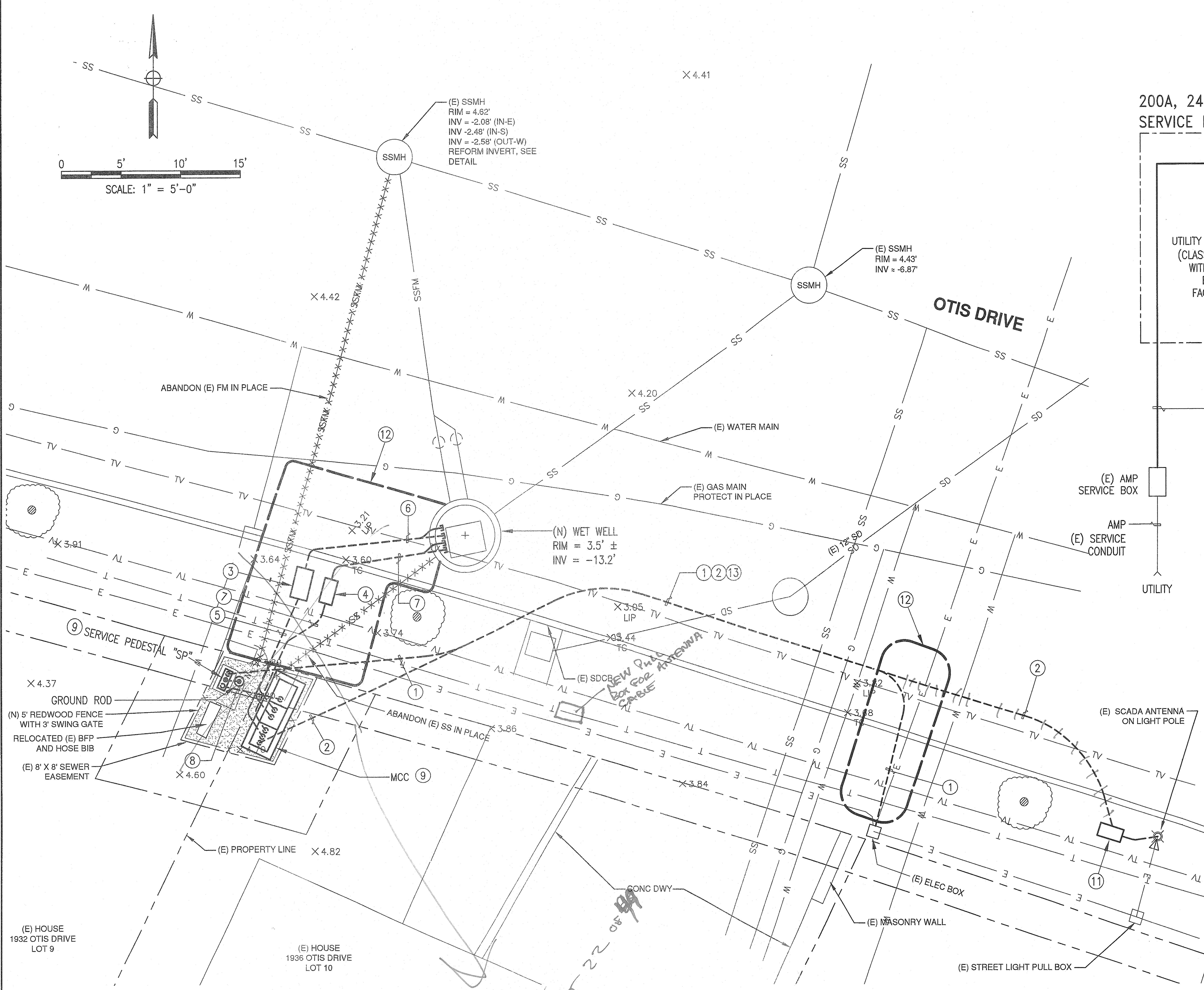
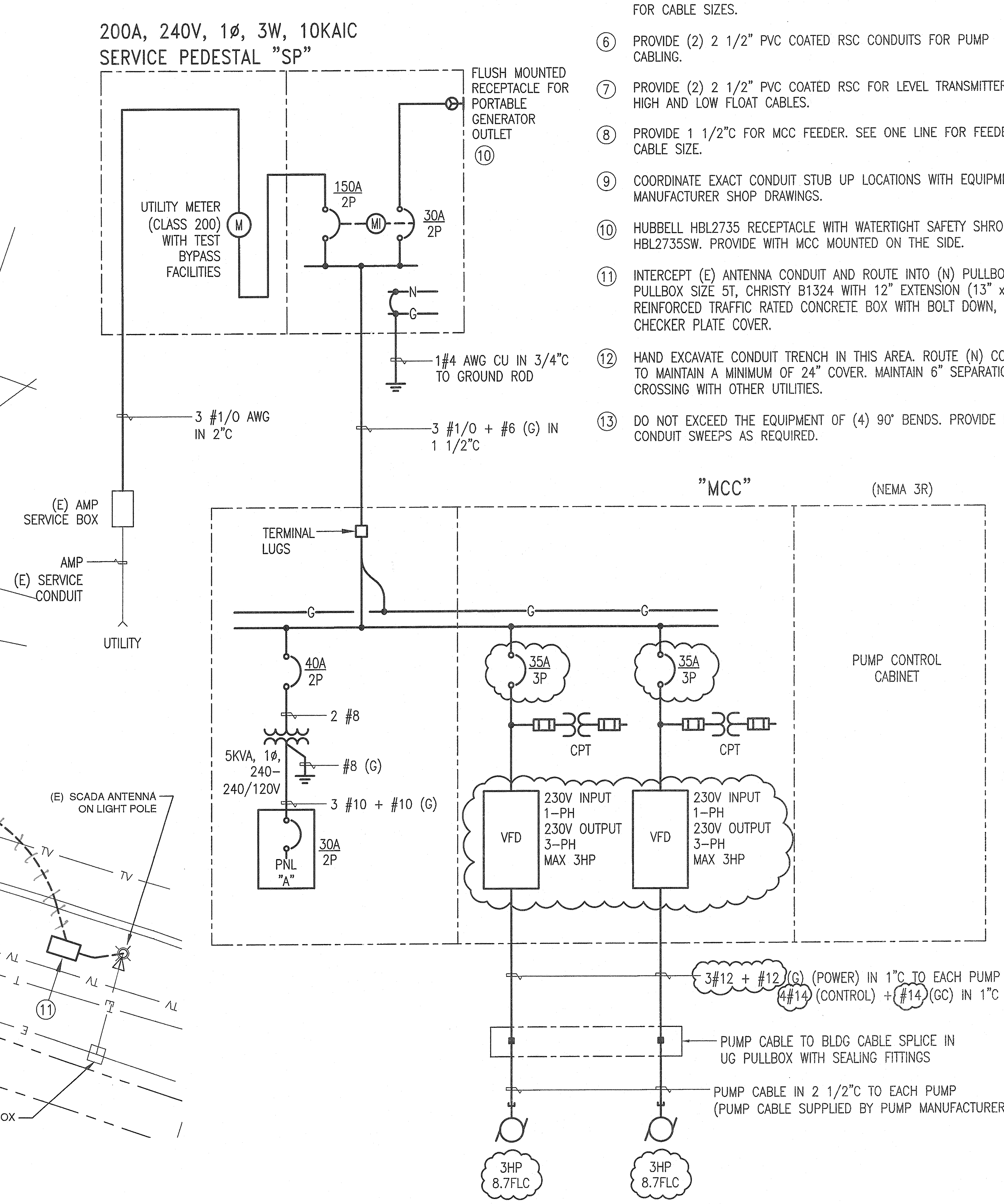
XREF: M:\11697-01 Alameda Pumps \X-BASE-APS.dwg
BORDER =
SCALE =

SHEET NOTES:

1. PROVIDE 2" PVC CONDUIT. INSTALL IN ACCORDANCE WITH ALAMEDA MUNICIPAL POWER (AMP) STANDARD DETAIL 1–L–142.
2. PROVIDE 2"C FOR COAX CABLE CONNECTION FROM (E) ANTENNA TO (R) SCADA SYSTEM.
3. PROVIDE IN GROUND PULLBOX FOR PUMP POWER AND MONITORING CONTROL CIRCUITS, SIZE 6T, CHRISTY B1730 WITH 12" EXTENSION (17" x 30") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATED COVER.
4. PROVIDE IN GROUND PULLBOX FOR CONTROLS, SIZE 5T, CHRISTY B1324 WITH 12" EXTENSION (13" x 24") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATED COVER.
5. PROVIDE (2) 1" PVC COATED RSC CONDUITS FOR PUMP POWER, (1) 1" PVC COATED RSC FOR MOISTURE AND TEMPERATURE MONITORING CONTROL CIRCUITS FOR WET WELL PUMPS. SEE ONE–LINE DIAGRAM FOR CABLE SIZES.
6. PROVIDE (2) 2 1/2" PVC COATED RSC CONDUITS FOR PUMP CABLING.
7. PROVIDE (2) 2 1/2" PVC COATED RSC FOR LEVEL TRANSMITTER AND HIGH AND LOW FLOAT CABLES.
8. PROVIDE 1 1/2"C FOR MCC FEEDER. SEE ONE LINE FOR FEEDER CABLE SIZE.
9. COORDINATE EXACT CONDUIT STUB UP LOCATIONS WITH EQUIPMENT MANUFACTURER SHOP DRAWINGS.
10. HUBBELL HBL2735 RECEPTACLE WITH WATERTIGHT SAFETY SHROUD HBL2735SW. PROVIDE WITH MCC MOUNTED ON THE SIDE.
11. INTERCEPT (E) ANTENNA CONDUIT AND ROUTE INTO (N) PULLBOX. PULLBOX SIZE 5T, CHRISTY B1324 WITH 12" EXTENSION (13" x 24") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATE COVER.
12. HAND EXCAVATE CONDUIT TRENCH IN THIS AREA. ROUTE (N) CONDUIT TO MAINTAIN A MINIMUM OF 24" COVER. MAINTAIN 6" SEPARATION AT CROSSING WITH OTHER UTILITIES.
13. DO NOT EXCEED THE EQUIPMENT OF (4) 90° BENDS. PROVIDE LONG CONDUIT SWEEPS AS REQUIRED.



2 POND/OTIS SITE PLAN
SCALE: 1" = 5'–0"



1 POND/OTIS ONE-LINE DIAGRAM
NO SCALE

NO	REVISIONS	DATE	APPR
1	ADDENDUM #1	6/19/13	JH
2			
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REGISTERED PROFESSIONAL ENGINEER
JULIO C. HERDOCIA
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Exp. 9/30/14
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PROJECT NO. 11697–01

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS
POND-OTIS PUMP STATION
ONE-LINE & SITE PLAN - NEW WORK

DATE: 5/21/13
SCALE: AS SHOWN
DESIGN: KM
DRAWN: VM
CHECKED: JH

DWG 9363 CASE 95

E1.1

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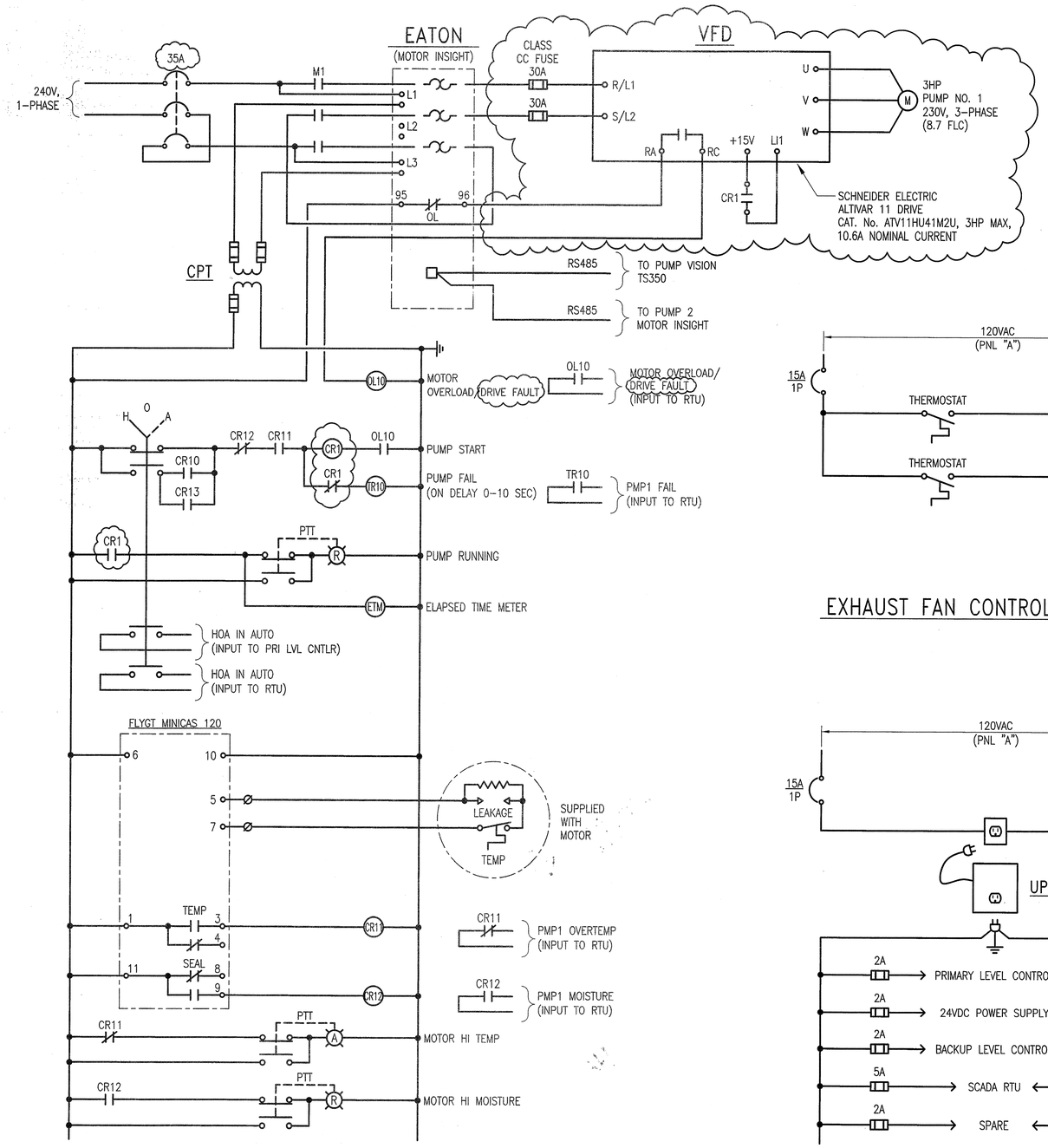
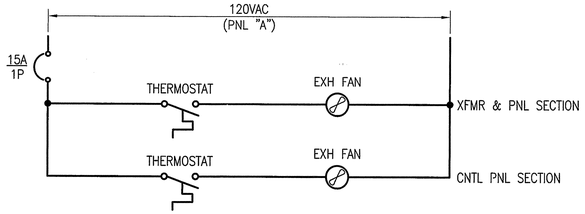
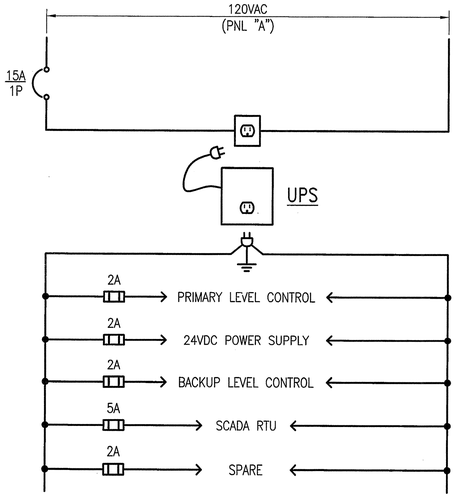


FVNR PUMP No. 1 CONTROL SCHEMATIC DIAGRAM

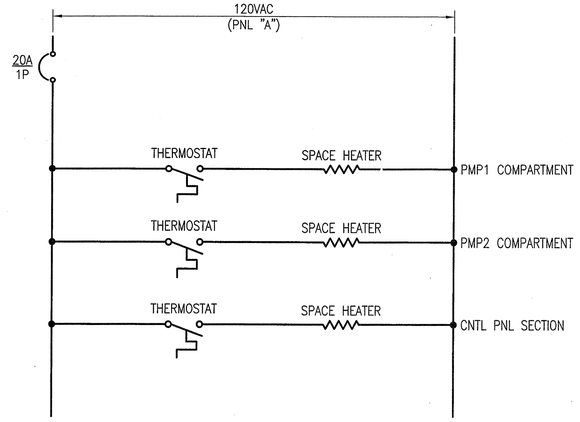
(SIMILAR FOR PUMP No. 2)



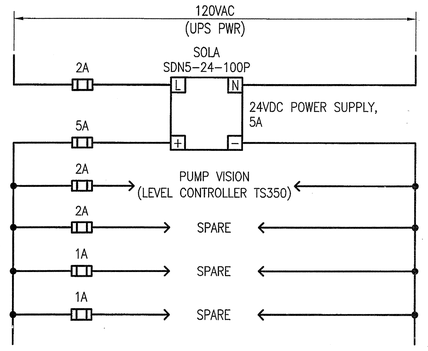
EXHAUST FAN CONTROL SCHEMATIC



120V UPS SYSTEM SCHEMATIC



SPACE HEATER CONTROL SCHEMATIC



24VDC SYSTEM SCHEMATIC

NO	REVISIONS	DATE	APPR
1	ADDENDUM #1	6/19/13	JH

REGISTERED PROFESSIONAL ENGINEER
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PROJECT NO. 11697-01

CITY OF ALAMEDA

GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS

POND-OTIS PUMP STATION

CONTROL SCHEMATIC DIAGRAM

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	KM
DRAWN:	VM
CHECKED:	JH

DWG 9363 CASE 95

E2.1

26 OF 49

FILE: M:\11697-01 Alemda Pumps I\POT-E21.dwg 06/07/11 13:34 by vuong
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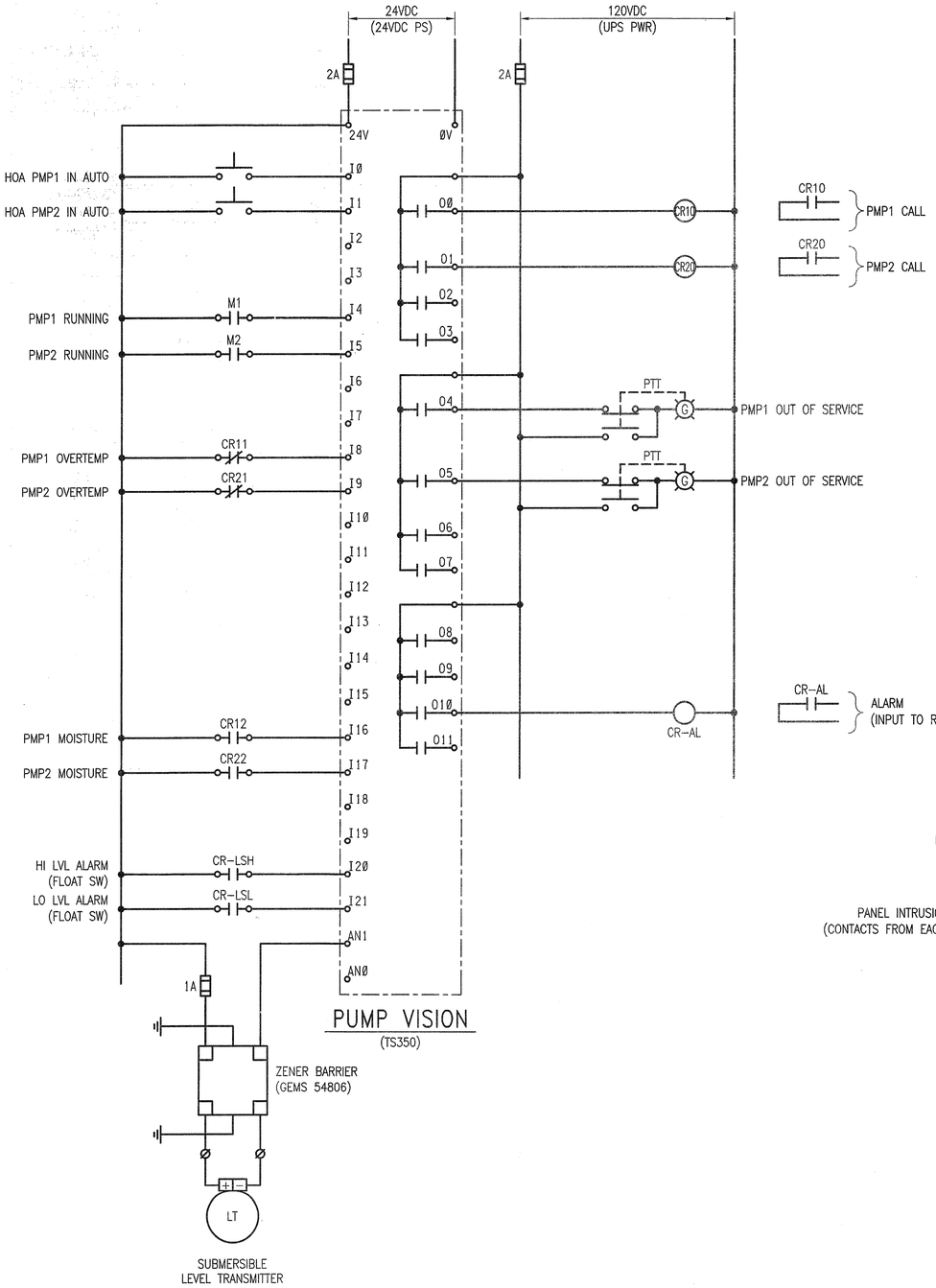
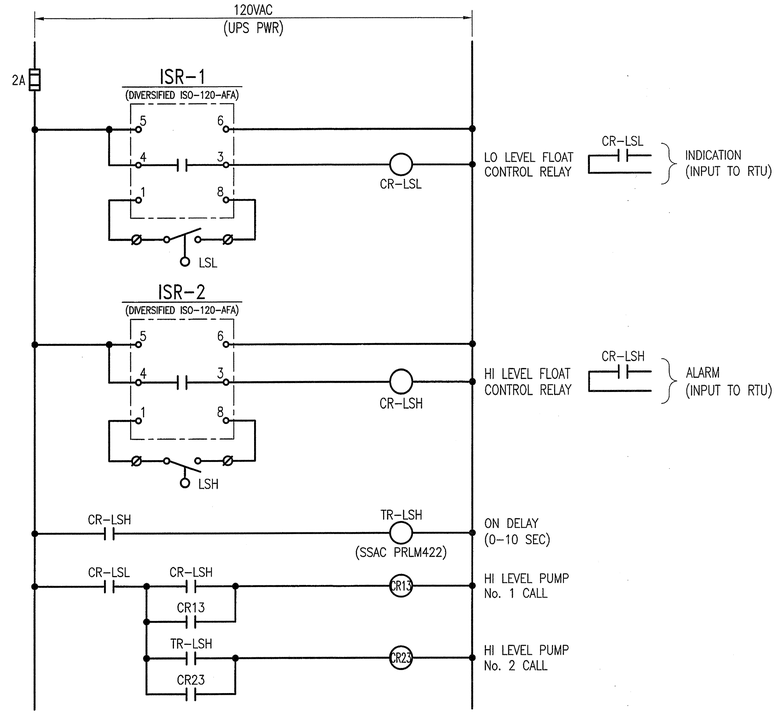
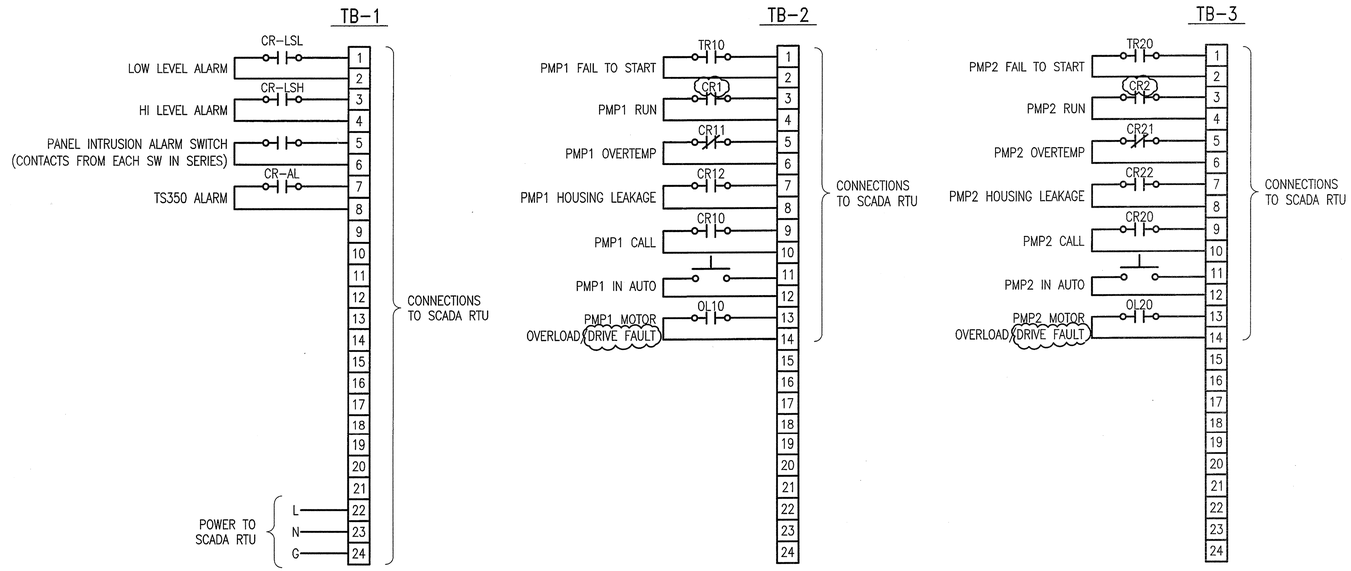


PUMP VISION
(TS350)

PRIMARY LEVEL CONTROLLER



BACKUP LEVEL CONTROL



SCADA RTU TERMINATION POINTS

NO	REVISIONS	DATE	APPR
1	ADDENDUM #1	6/19/13	JH
2			
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REGISTERED PROFESSIONAL ENGINEER
JULIO C. HERDOIZA
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PROJECT NO. 11697-01

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS

POND-OTIS PUMP STATION
SCHEMATIC DIAGRAM

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	KM
DRAWN:	VM
CHECKED:	JH

DWG 9363 CASE 95

E2.2

27 OF 49

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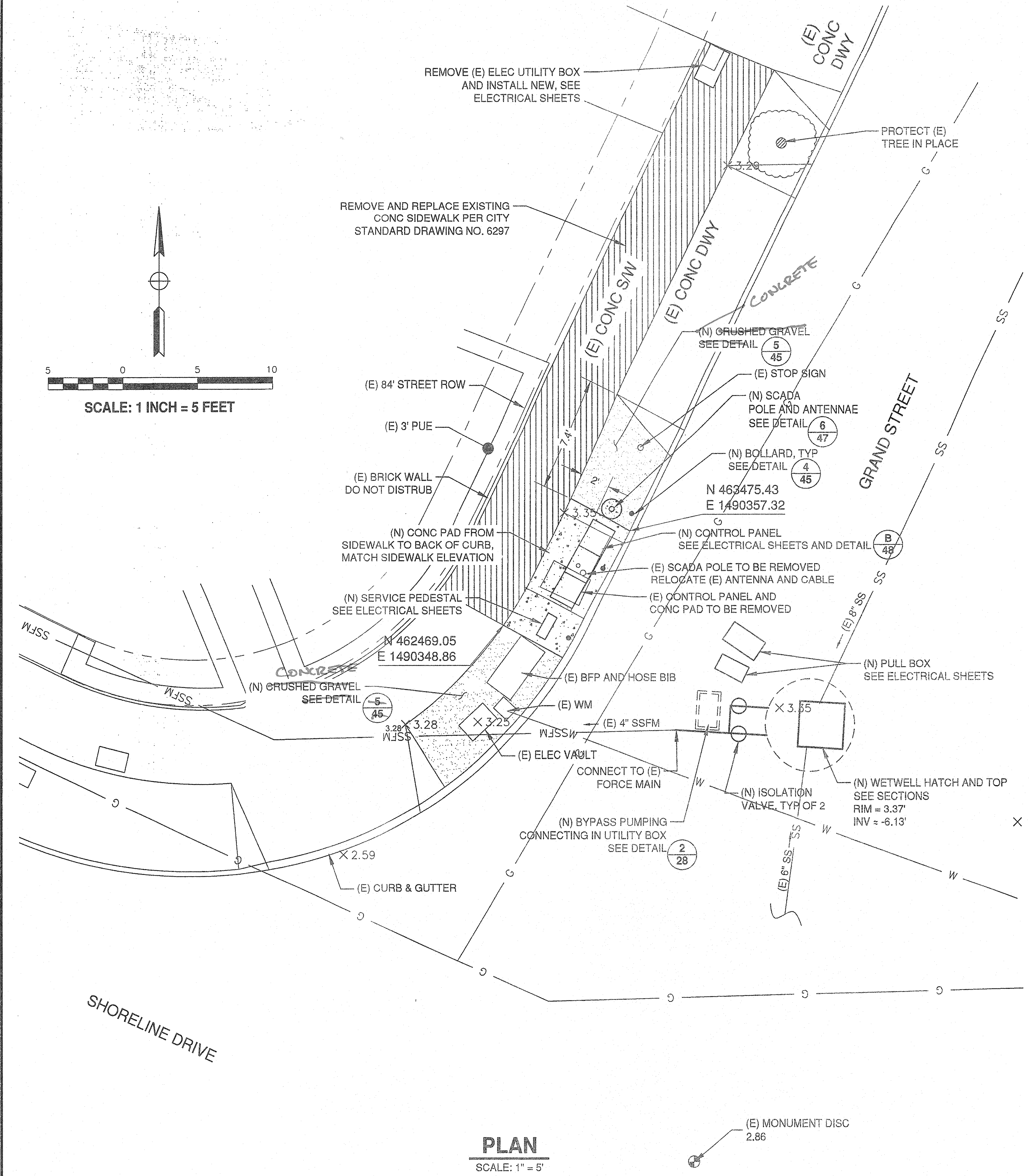
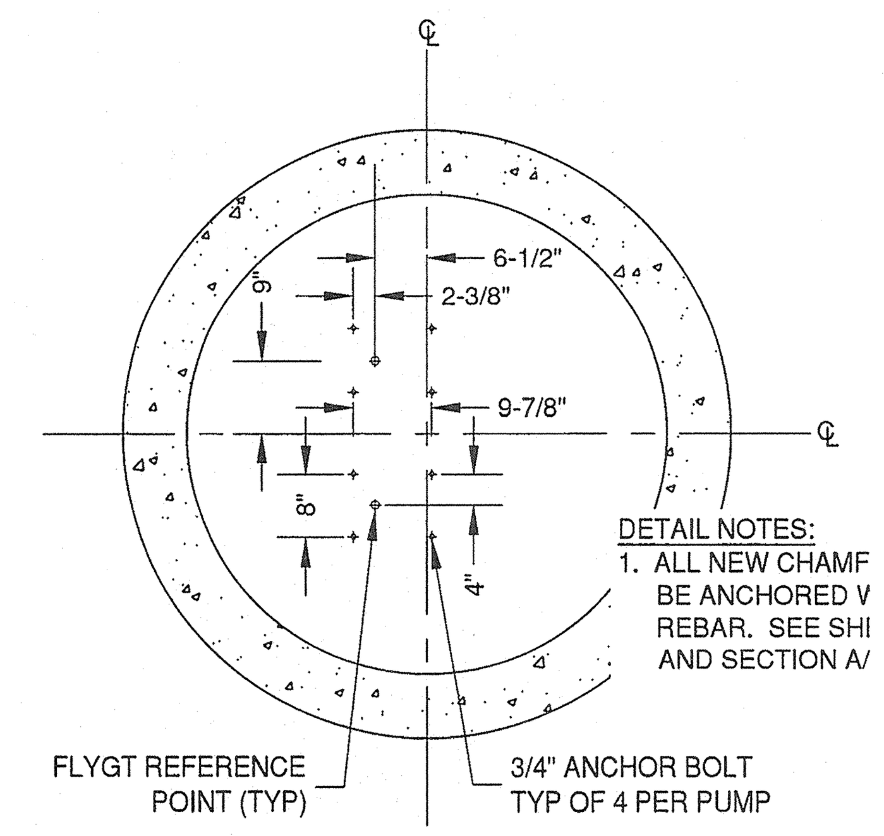
#21 GRAND-SHORELINE PUMP STATION

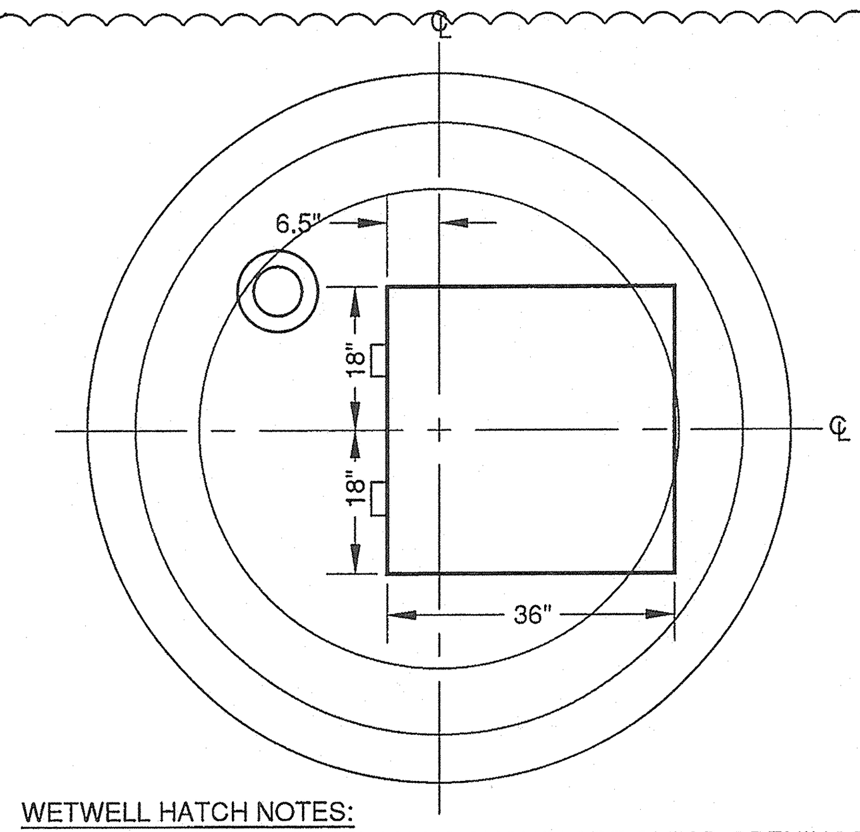


PLAN
SCALE: 1" = 5'



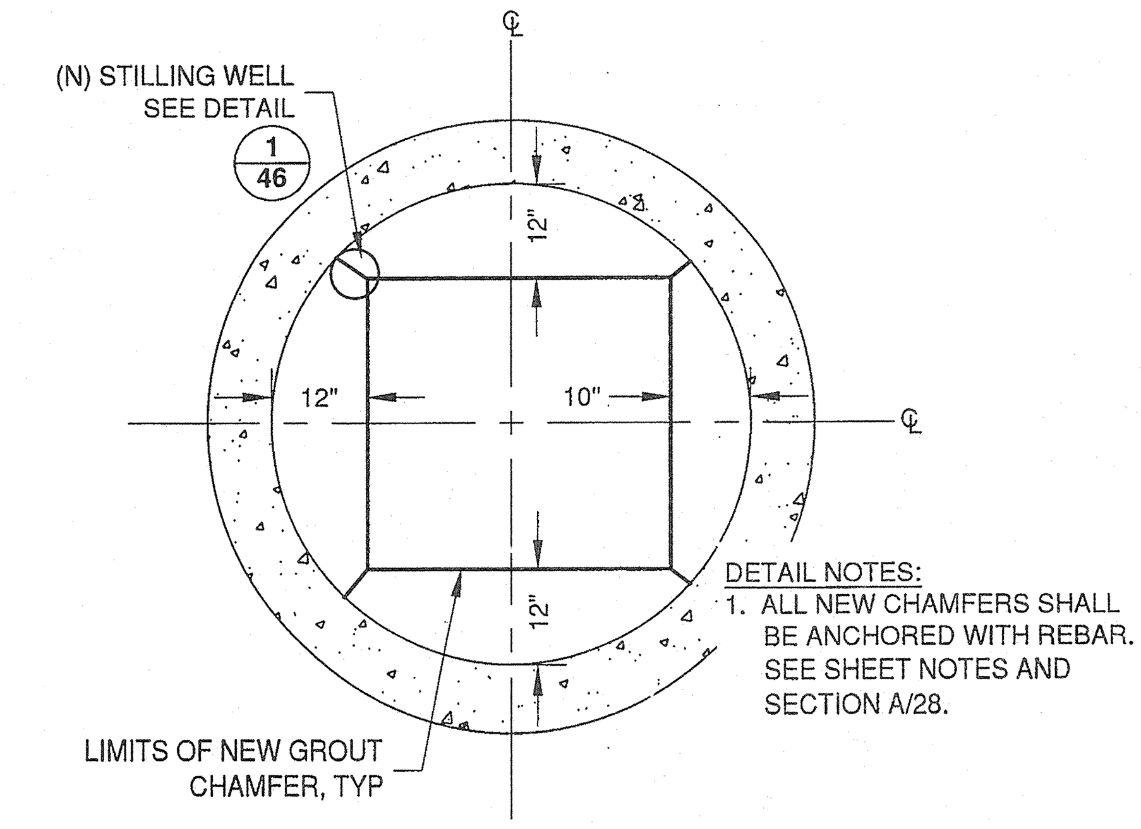
DETAIL NOTES:
1. ALL NEW CHAMF BE ANCHORED W REBAR. SEE SH AND SECTION A/

PUMP MOUNTING DETAIL (2/28)
NO SCALE



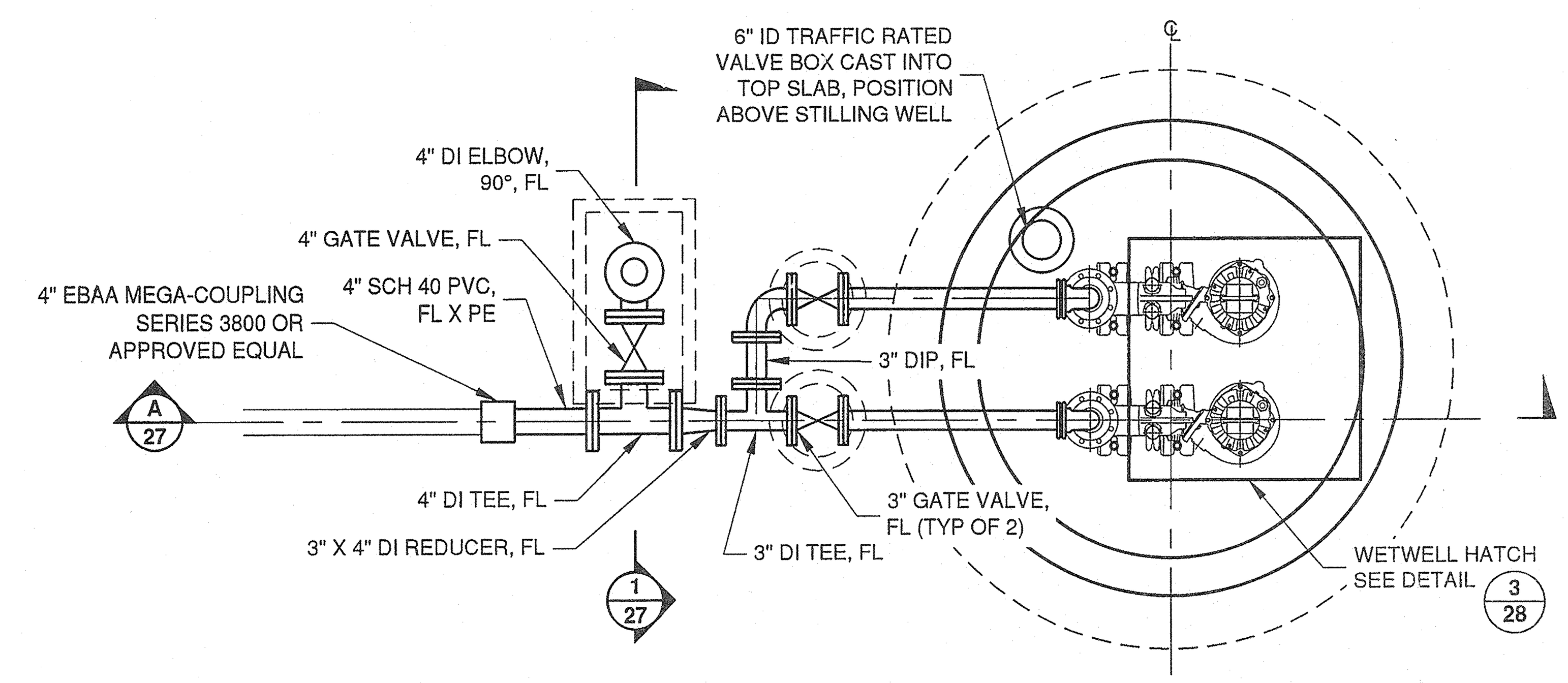
WETWELL HATCH NOTES:
1. ACCESS HATCH DIMENSIONS SHOWN ARE CLEAR OPENINGS.
2. OVERSIZE CONCRETE TOP SLAB AS NECESSARY TO PROVIDE H-20 RATED STRUCTURE AND REQUIRED CLEARANCES
3. ACCESS HATCH SHALL BE EQUIPPED WITH INTEGRAL FALL PROTECTION.
4. WETWELL ACCESS HATCH SHALL BE STREET RATED FOR CONTINUOUS H-20 LOADING.
5. HATCH SHALL BE EAST JORDAN IRON WORKS MODEL 8217 HD, EXTRA HEAVY DUTY HATCH, OR APPROVED EQUAL.
6. HATCH SHALL BE EQUIPPED WITH A SS SPRING ASSIST THAT REDUCES THE LIFTING FORCE TO LESS THAN 50 LBS.
7. HATCH SHALL HAVE BLACK ASPHALTIC COATING

WETWELL HATCH DETAIL (3/28)
NO SCALE

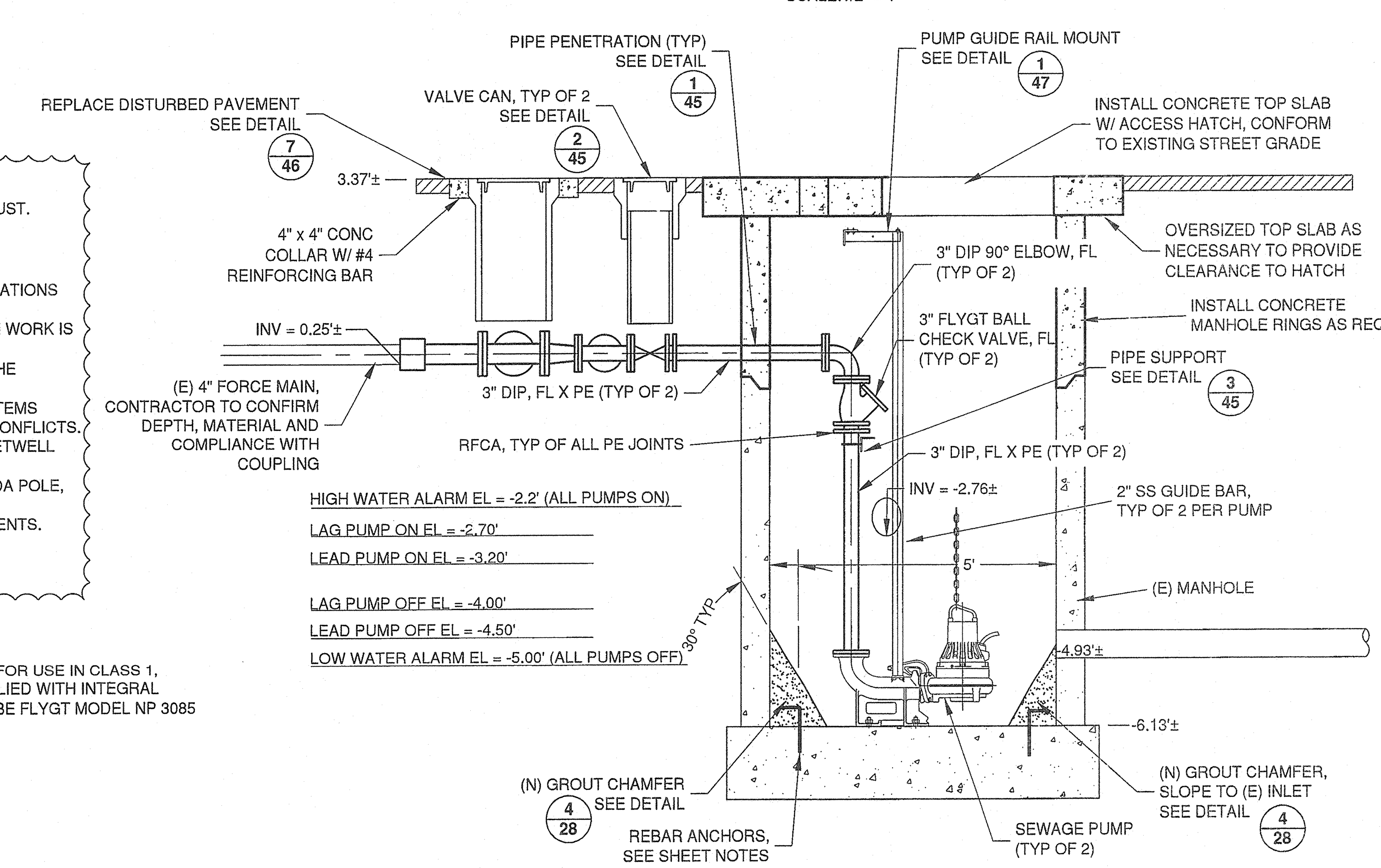


DETAIL NOTES:
1. ALL NEW CHAMFERS SHALL BE ANCHORED WITH REBAR. SEE SHEET NOTES AND SECTION A/28.

LIMITS OF CHAMFER DETAIL (4/28)
NO SCALE



IMPROVEMENT PLAN
SCALE:1/2" = 1'

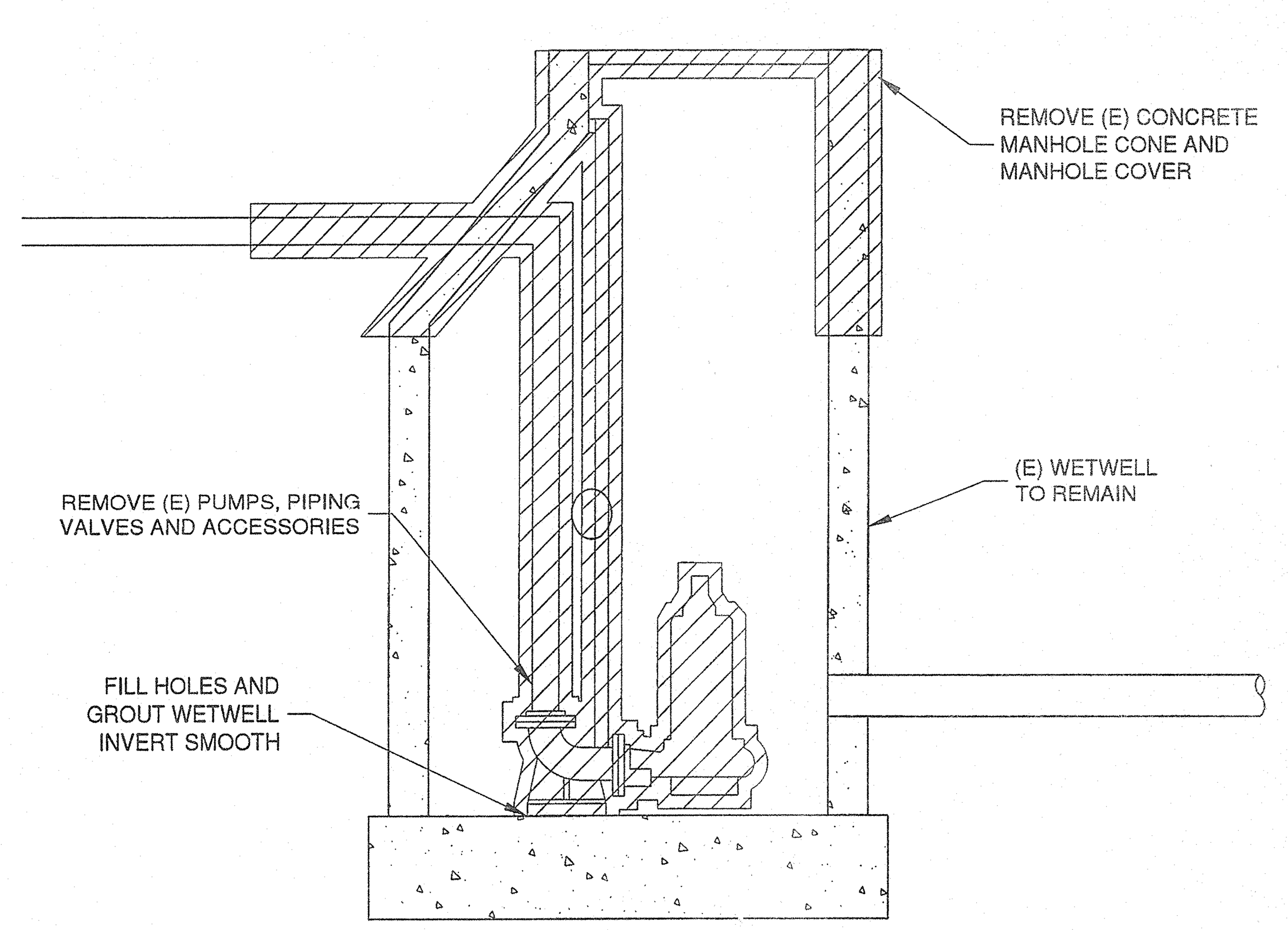


SHEET NOTES:
1. ALL FORCE MAIN CONNECTIONS SHALL BE RESTRAINED AGAINST THRUST.
2. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SIZES, MATERIALS, ELEVATIONS AND DISTANCES PRIOR TO ORDERING AND FABRICATING MATERIALS.
3. ESTIMATED PEAK WET WEATHER FLOW RATE IS 68 GPM. SEE SPECIFICATIONS FOR BYPASS PUMPING REQUIREMENTS.
4. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AT ALL TIMES WHEN WORK IS TAKING PLACE IN THE ROADWAY.
5. WHERE DEMOLITION OR REMOVAL OF EQUIPMENT LEAVES VOIDS IN THE CONCRETE STRUCTURE, FILL VOIDS WITH NON-SHRINK GROUT.
6. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING IRRIGATION SYSTEMS PRIOR TO CONSTRUCTION AND NOTIFY THE CITY OF ANY POTENTIAL CONFLICTS.
7. ADJUST PUMP CONTROL LEVELS BASED ON DISTANCE FROM FINAL WETWELL INVERT ELEVATION.
8. NEW SCADA POLE SHALL BE THE SAME HEIGHT AS THE EXISTING SCADA POLE, WHICH IS APPROXIMATELY 12 FEET ABOVE THE EXISTING GROUND.
9. SEE ELECTRICAL SHEETS FOR ADDITIONAL PUMP STATION IMPROVEMENTS.

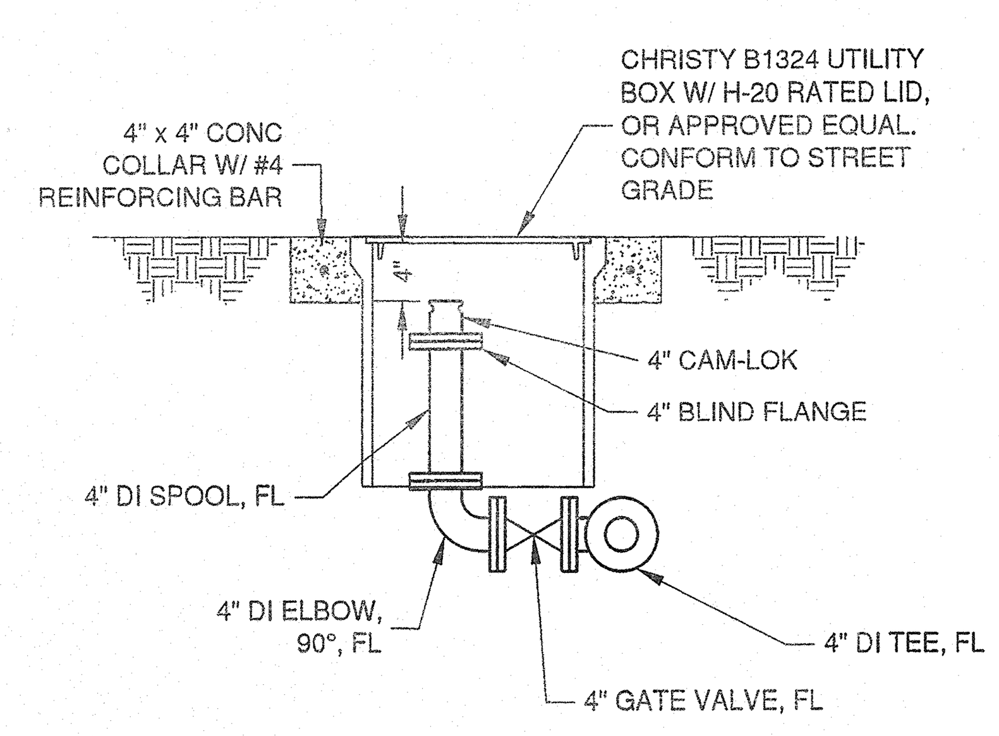
GRAND-SHORELINE PUMP NOTES:
PUMP SHALL BE AN INDUSTRIAL SEWAGE PUMP, RATED FOR USE IN CLASS 1, DIVISION 1, GROUP D LOCATIONS. PUMP SHALL BE SUPPLIED WITH INTEGRAL MOISTURE AND TEMPERATURE SENSORS. PUMP SHALL BE FLYGT MODEL NP 3085 MT WITH THE FOLLOWING CHARACTERISTICS:

VOLTAGE: 230V, AC, 60 HZ
PHASES: THREE (3)
HORSEPOWER: 3
IMPELLER DIAMETER: 4.69 INCHES (119 MM)
RATING POINT: 130 GPM AT 16 FEET OF HEAD
DISCHARGE SIZE: 3 INCHES

THE CITY HAS STANDARDIZED THE PUMP MANUFACTURER, NO SUBSTITUTIONS WILL BE ACCEPTED.



DEMOLITION SECTION (B/28)
SCALE:1/2" = 1'



BYPASS PUMP CONNECTION DETAIL (1/28)
NO SCALE

GRAND-SHORELINE BENCHMARK
EXISTING MONUMENT DISC ON THE SOUTH SIDE OF THE PUMP STATION = 2.86' AS SHOWN ON THE PLAN

IMPROVEMENT SECTION (A/28)
SCALE:1/2" = 1'

NO	REVISIONS	DATE	APPR
1	ADDENDUM 1	6/19/13	
2			
3			
4			
5			
6			
7			

REGISTERED PROFESSIONAL ENGINEER — BENJAMIN L. SHICK — No. 68813 — CIVIL — STATE OF CALIFORNIA

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CONSULTING CIVIL ENGINEERS
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CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS

GRAND-SHORELINE SITE PLAN

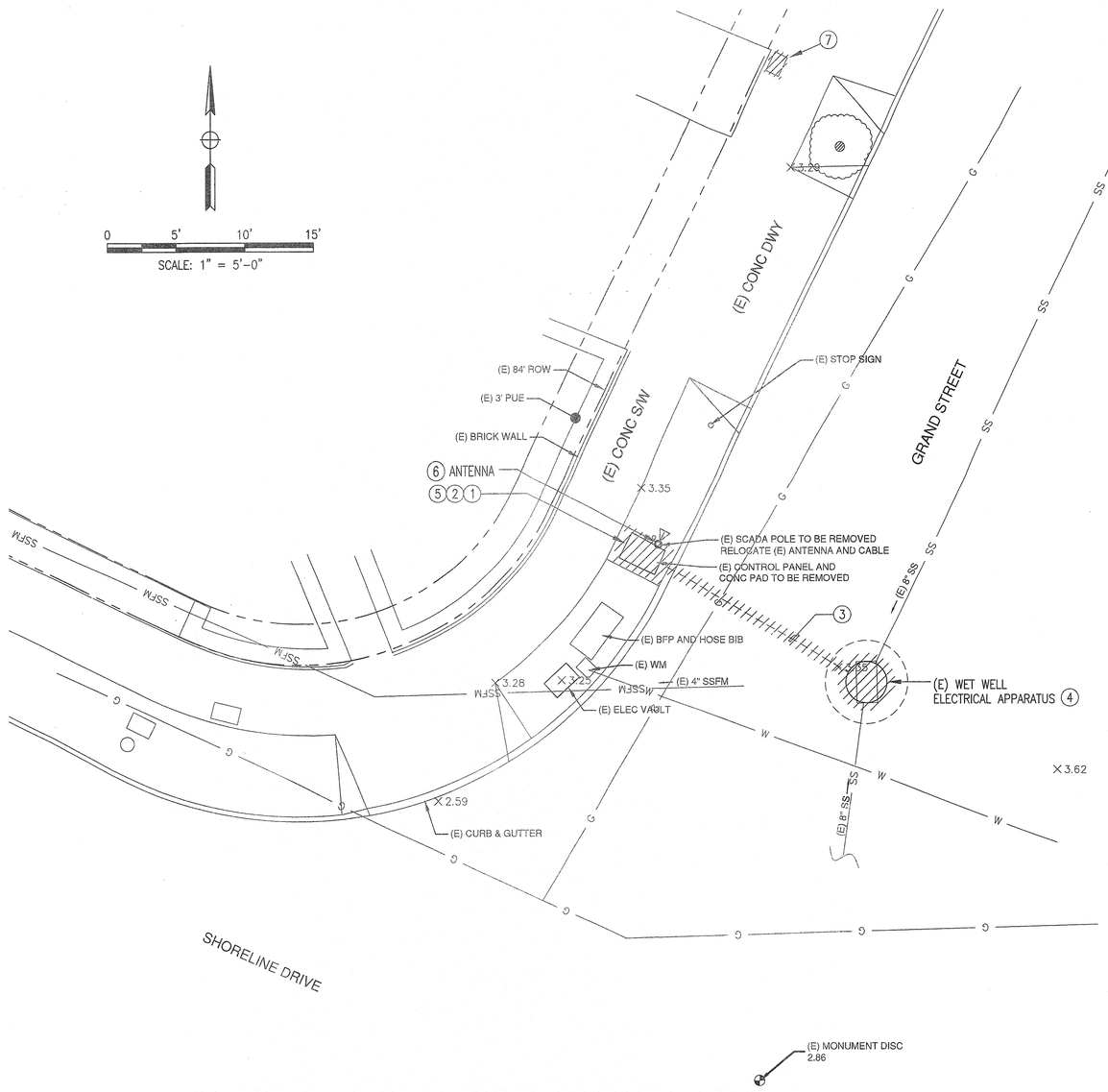
DATE: 5/21/13
SCALE: AS SHOWN
DESIGN: GMA
DRAWN: GMA
CHECKED: BLS

DWG 9363 CASE 95

D:\JOBS\APWD\07-Phase 1 Pump Stations\Drawings\Phase 1_WORKING\Group 1\FINAL SUBMITTAL 052213\Addendum 1 - Revised Pumps\Group_1_Addendum 1 061913.dwg , 8/15/2013 8:58 AM

GENERAL NOTES:

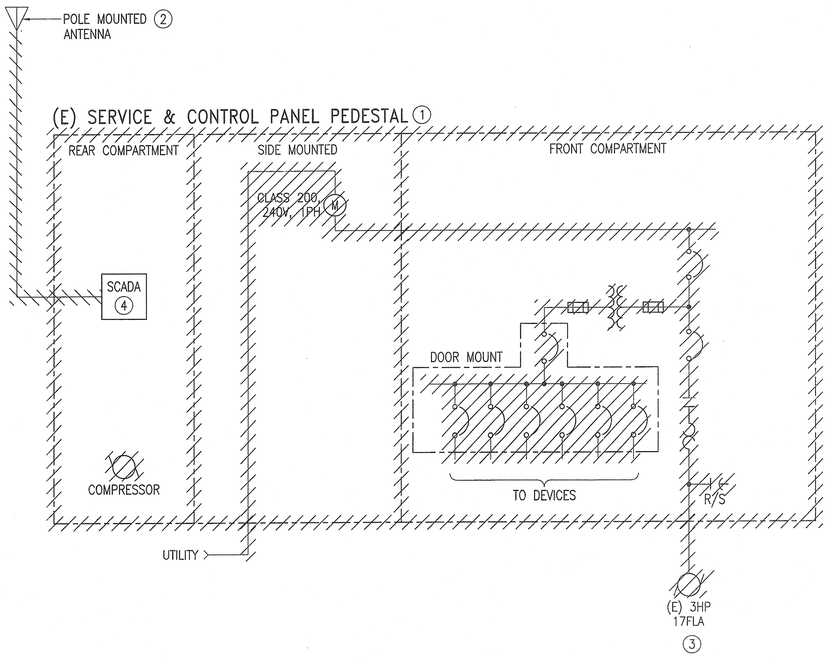
1. IT IS THE INTENTION OF THIS PROJECT TO LEAVE THE EXISTING WELL COMPLETELY CLEAR AND FREE OF ANY AND ALL EXISTING ELECTRICAL APPARATUS THAT IS NOT IN USE OR THAT IS BEING REPLACED BY THIS PROJECT. THIS INCLUDES DEVICES, CONDUIT, BOXES, IN GROUND BOXES SERVING THE WELL BUT LOCATED OUTSIDE THE WELL, AND ANY OTHER SYSTEMS THAT EXIST BUT WILL NOT BE USED OR REPLACED AT THE COMPLETION OF THIS PROJECT WHETHER SHOWN SPECIFICALLY ON THESE PLANS FOR REMOVAL OR NOT.



DETAIL 2 NOTES:

1. COORDINATE WITH ALAMEDA MUNICIPAL POWER (AMP) FOR REMOVAL OF EXISTING METER AND ELECTRICAL SERVICE.
2. REMOVE (E) SERVICE AND CONTROL PANEL.
3. REMOVE (E) WIRES FROM CONTROL PANEL TO WET WELL. ABANDON CONDUIT IN PLACE.
4. REMOVE FROM WET WELL ALL CONDUITS, JUNCTION BOXES, WIRING AND DEVICES, INCLUDING INTRUSION DETECTORS, LIGHTS, RECEPTACLES, CONTROLS AND BUBBLER SYSTEM THAT MAY EXIST. DISCONNECT AND REMOVE (E) PUMPS.
5. REMOVE (E) SCADA SYSTEM AND RETAIN FOR RE-USE IN THE NEW CONSTRUCTION.
6. RELOCATE (E) ANTENNA. SEE E1.1 (SHEET 30) FOR RELOCATED ANTENNA LOCATION. REMOVE (E) POLE AND FOUNDATION.
7. (E) AMP UTILITY BOX TO BE REMOVED. SEE E1.1 FOR NEW AMP UTILITY BOX INSTALLATION.

2 — GRAND/SHORELINE SITE PLAN
SCALE: 1" = 5'-0"



DETAIL 1 NOTES:

1. ADDITIONAL DEVICES IN PEDESTAL TO BE REMOVED INCLUDE RECEPTACLES, LTS, TERMINAL BLOCKS, CONTACTORS, RELAYS, PROGRAMMABLE CONTROLLERS, COMPRESSORS, ETC. CONNECTION DIAGRAM BASED ON FIELD OBSERVATION ONLY. VERIFY CONNECTIONS & EXISTING CONDITIONS TO THE EXTENT REQUIRED TO SAFELY REMOVE EQUIPMENT.
2. DISCONNECT AND RETAIN ANTENNA FOR LATER USE. REMOVE (E) POLE.
3. DISCONNECT & REMOVE (E) PUMP.
4. DISCONNECT AND RETAIN SCADA SYSTEM FOR RE-USE.

1 — GRAND/SHORELINE ONE-LINE DIAGRAM
NO SCALE

NO	REVISIONS	DATE	APPR
1			
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4			
5			
6			
7			

REGISTERED PROFESSIONAL ENGINEER
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PROJECT NO. 11697-01

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS
GRAND-SHORELINE PUMP STATION
ONE LINE & SITE PLAN - REMOVAL WORK

DATE:	SCALE:	DESIGN:	DRAWN:	CHECKED:
5/21/13	AS SHOWN	KM	VM	JH

DWG 9363 CASE 95

E1.1R

29 OF 49

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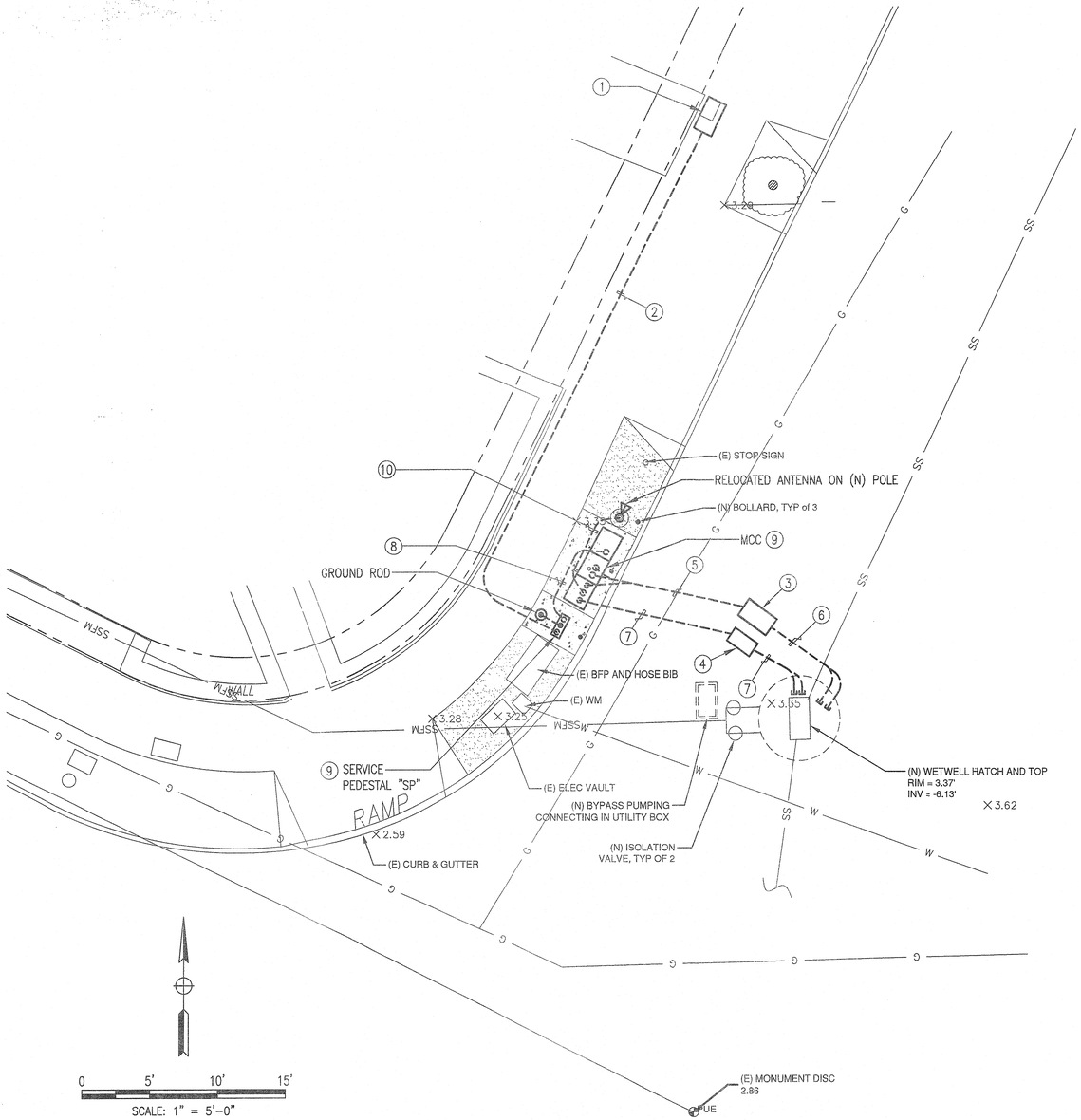
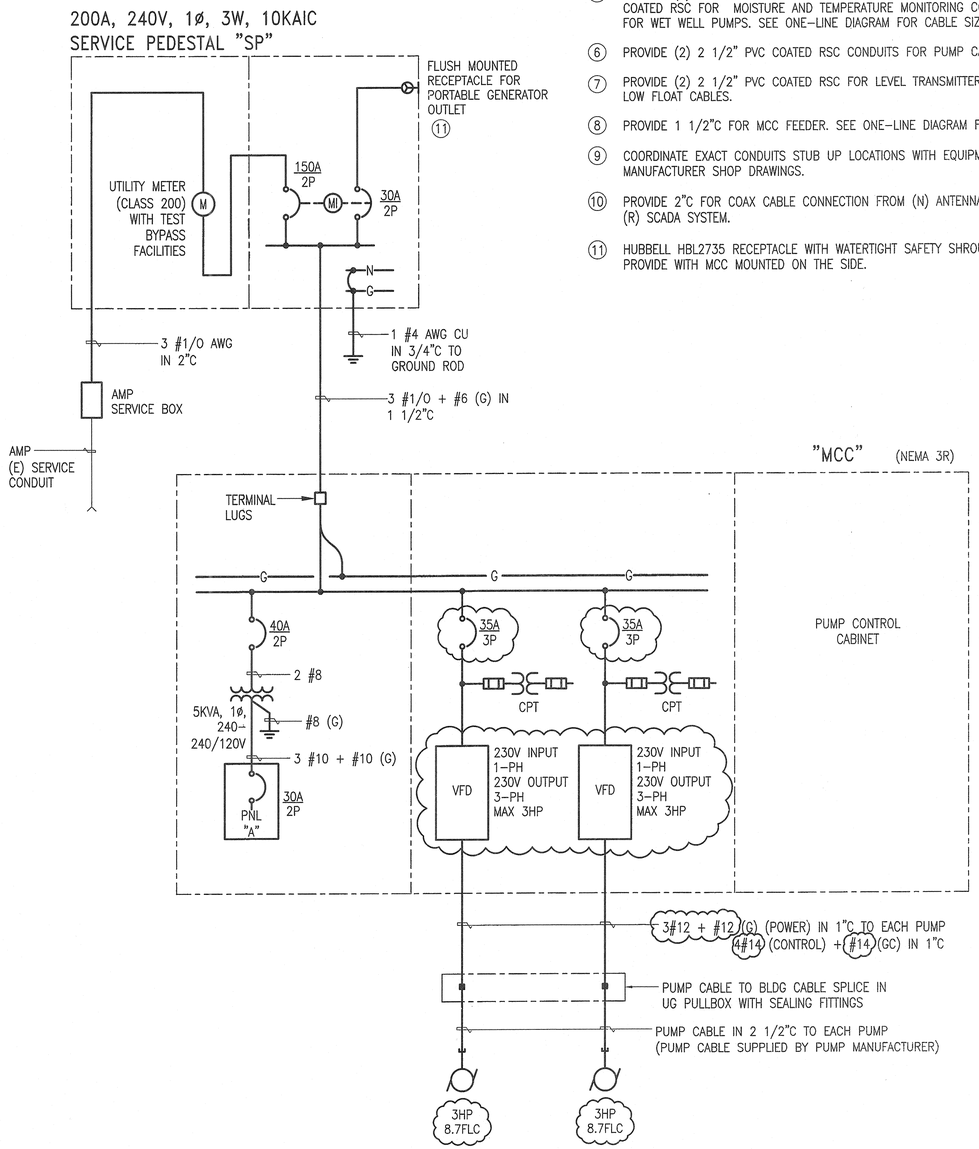


2 GRAND/SHORELINE SITE PLAN
SCALE: 1" = 5'-0"



1 GRAND/SHORELINE ONE-LINE DIAGRAM
NO SCALE

SHEET NOTES:

1. REMOVE (E) ALAMEDA MUNICIPAL POWER (AMP) UTILITY BOX AND REPLACE WITH AMP STANDARD 17" x 30" x 26" D UTILITY BOX PER AMP STANDARD DWG. 1-L-447.
2. PROVIDE 2" PVC CONDUIT. INSTALL IN ACCORDANCE WITH AMP STANDARD DETAIL 1-L-412.
3. PROVIDE IN GROUND PULLBOX FOR PUMP POWER AND MONOTORING CONTROL CIRCUITS, SIZE 6T, CHRISTY B1730 WITH 12" EXTENSION (17" x 30") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATE COVER.
4. PROVIDE IN GROUND PULLBOX SIZE 5T, CHRISTY B1324 WITH 12" EXTENSION (13" x 24") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATE COVER.
5. PROVIDE (2) 1" PVC COATED RSC CONDUITS FOR PUMP POWER, (1) 1" PVC COATED RSC FOR MOISTURE AND TEMPERATURE MONITORING CONTROL CIRCUITS FOR WET WELL PUMPS. SEE ONE-LINE DIAGRAM FOR CABLE SIZES.
6. PROVIDE (2) 2 1/2" PVC COATED RSC CONDUITS FOR PUMP CABLING.
7. PROVIDE (2) 2 1/2" PVC COATED RSC FOR LEVEL TRANSMITTER AND HIGH AND LOW FLOAT CABLES.
8. PROVIDE 1 1/2"C FOR MCC FEEDER. SEE ONE-LINE DIAGRAM FOR CABLE SIZE.
9. COORDINATE EXACT CONDUITS STUB UP LOCATIONS WITH EQUIPMENT MANUFACTURER SHOP DRAWINGS.
10. PROVIDE 2"C FOR COAX CABLE CONNECTION FROM (N) ANTENNA POLE TO (R) SCADA SYSTEM.
11. HUBBELL HBL2735 RECEPTACLE WITH WATERTIGHT SAFETY SHROUD HBL2735SW. PROVIDE WITH MCC MOUNTED ON THE SIDE.

NO	REVISIONS	DATE	APPR
1	ADDENDUM #1	6/19/13	JH

REGISTERED PROFESSIONAL ENGINEER JULIO C. HERDOCIA No. 9580 Exp. 9/30/14 ELECTRICAL STATE OF CALIFORNIA

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PROJECT NO. 11697-01

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS

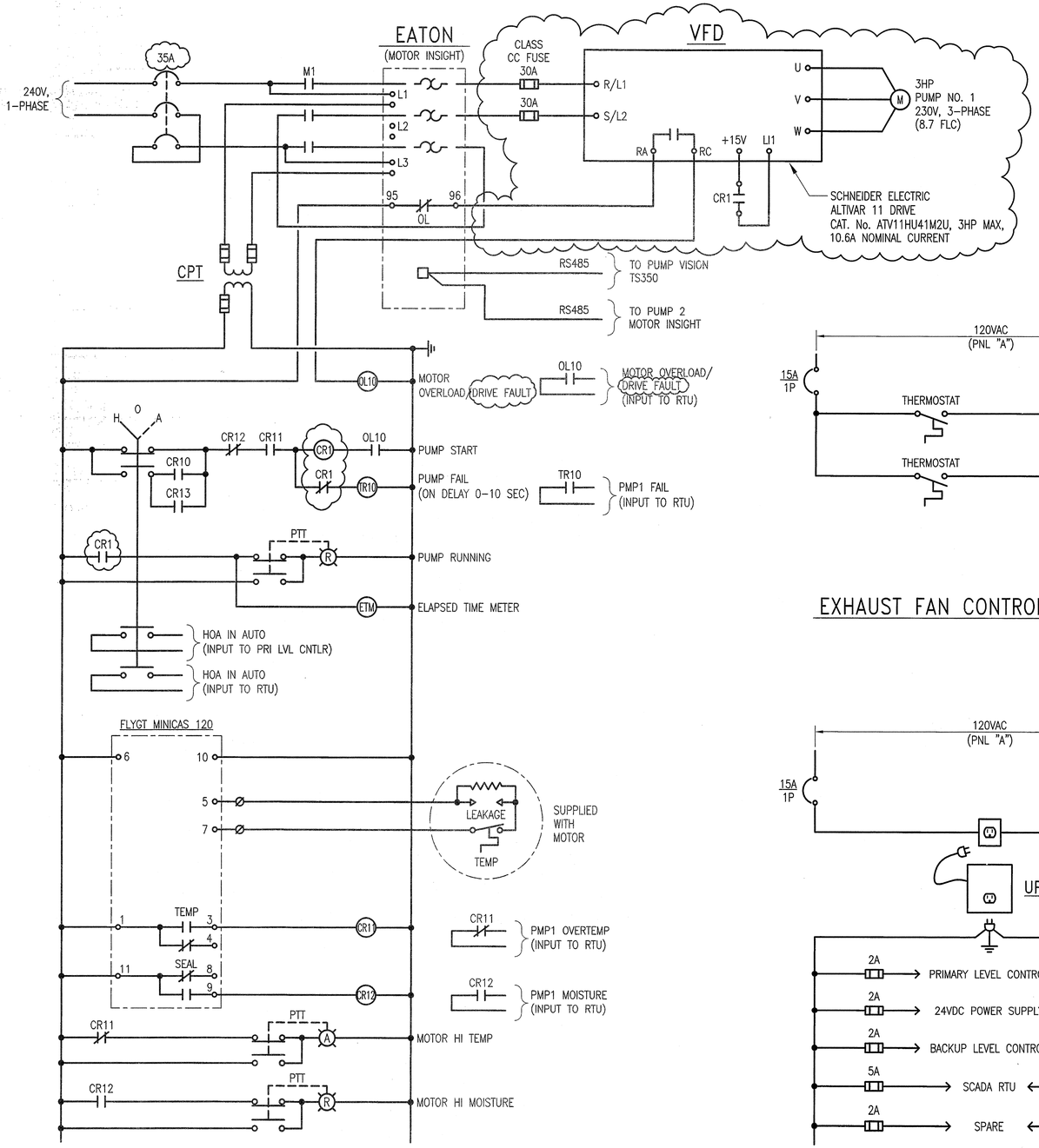
GRAND-SHORELINE PUMP STATION
ONE LINE & SITE PLAN - NEW WORK

DATE:	SCALE:	DESIGN:	DRAWN:	CHECKED:
5/21/13	AS SHOWN	KM	VM	JH

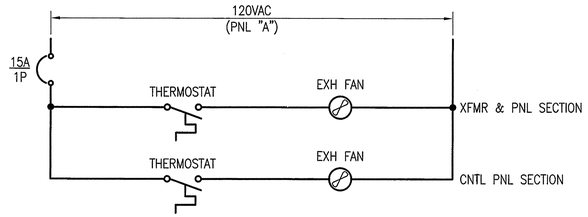
DWG 9363 CASE 95

E1.1

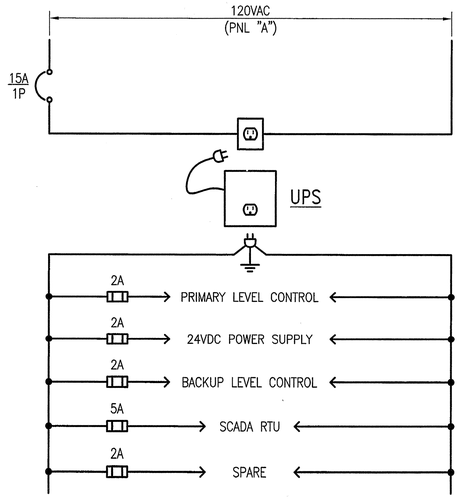
30 OF 49



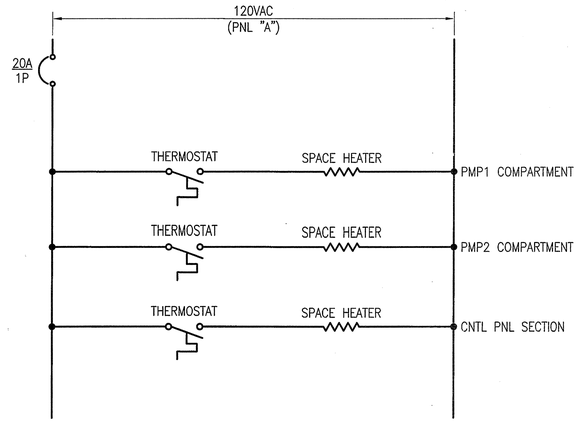
FVNR PUMP No. 1 CONTROL SCHEMATIC DIAGRAM
(SIMILAR FOR PUMP No. 2)



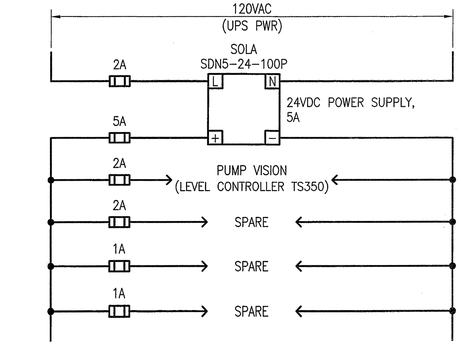
EXHAUST FAN CONTROL SCHEMATIC



120V UPS SYSTEM SCHEMATIC



SPACE HEATER CONTROL SCHEMATIC



24VDC SYSTEM SCHEMATIC

NO	REVISIONS	DATE	APPR
1	ADDENDUM #1	6/19/13	JH

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CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS
GRAND-SHORELINE PUMP STATION
CONTROL SCHEMATIC DIAGRAM

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	KM
DRAWN:	VM
CHECKED:	JH

DWG 9363 CASE 95

E2.1

31 OF 49

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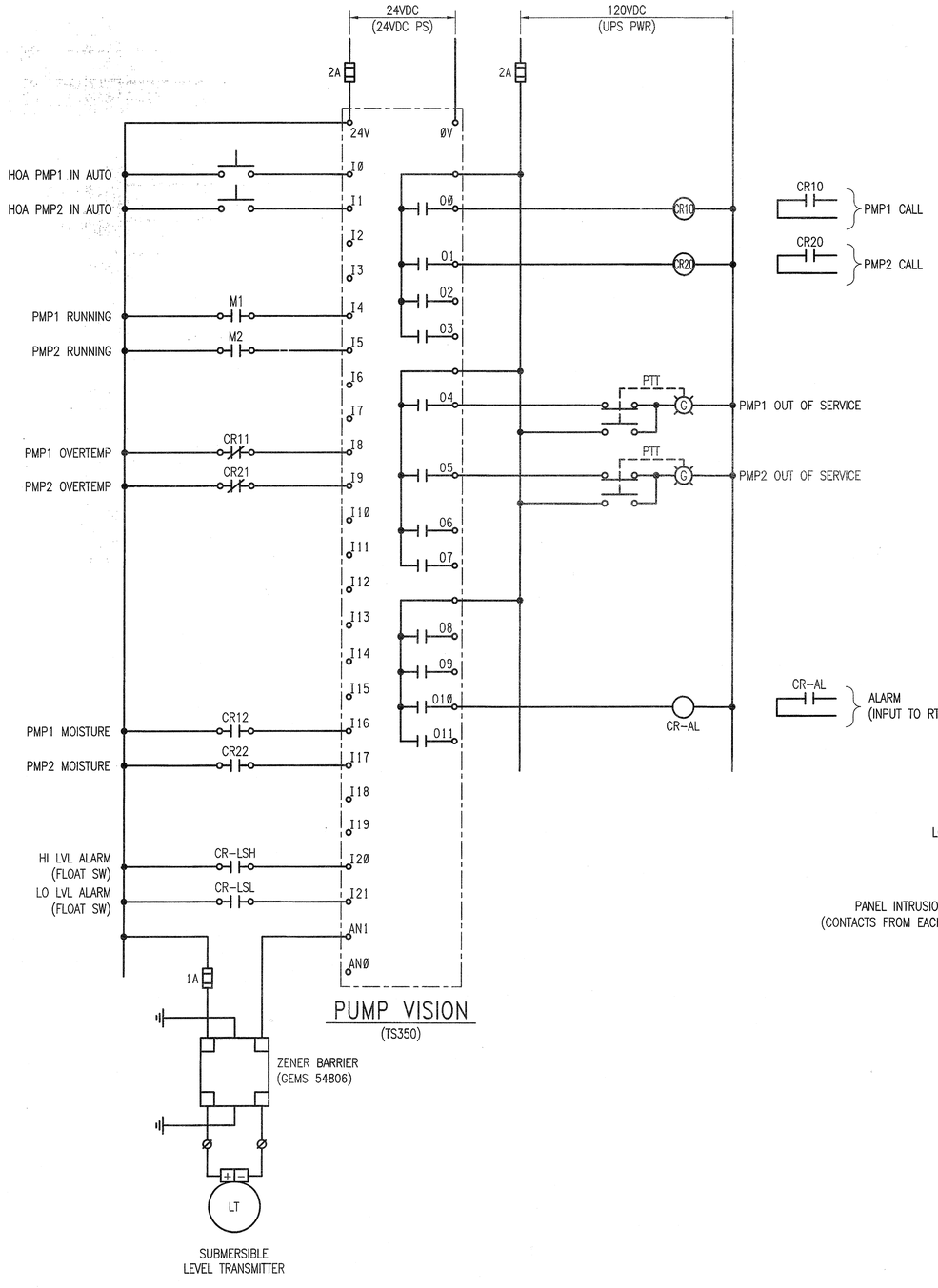
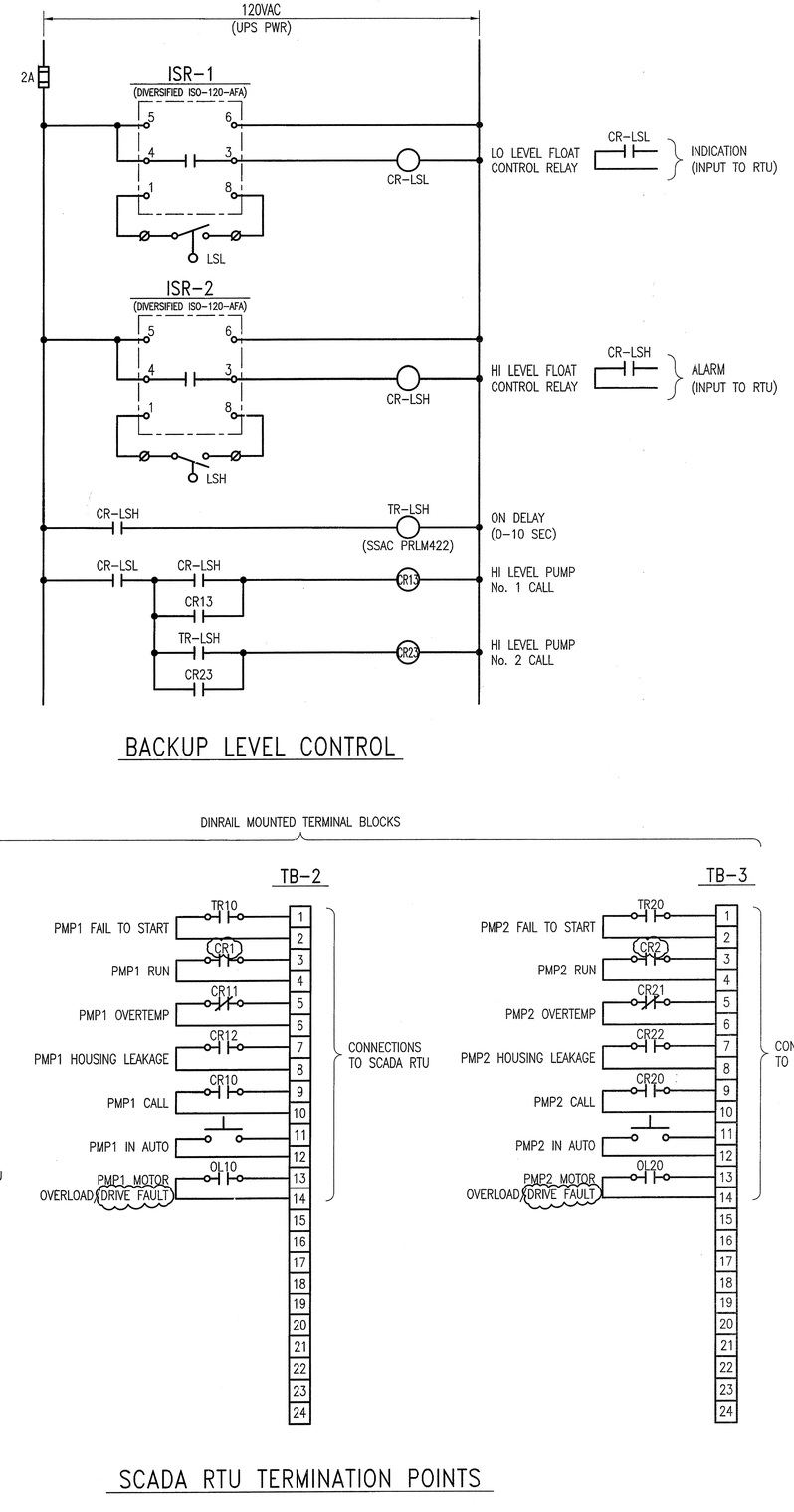
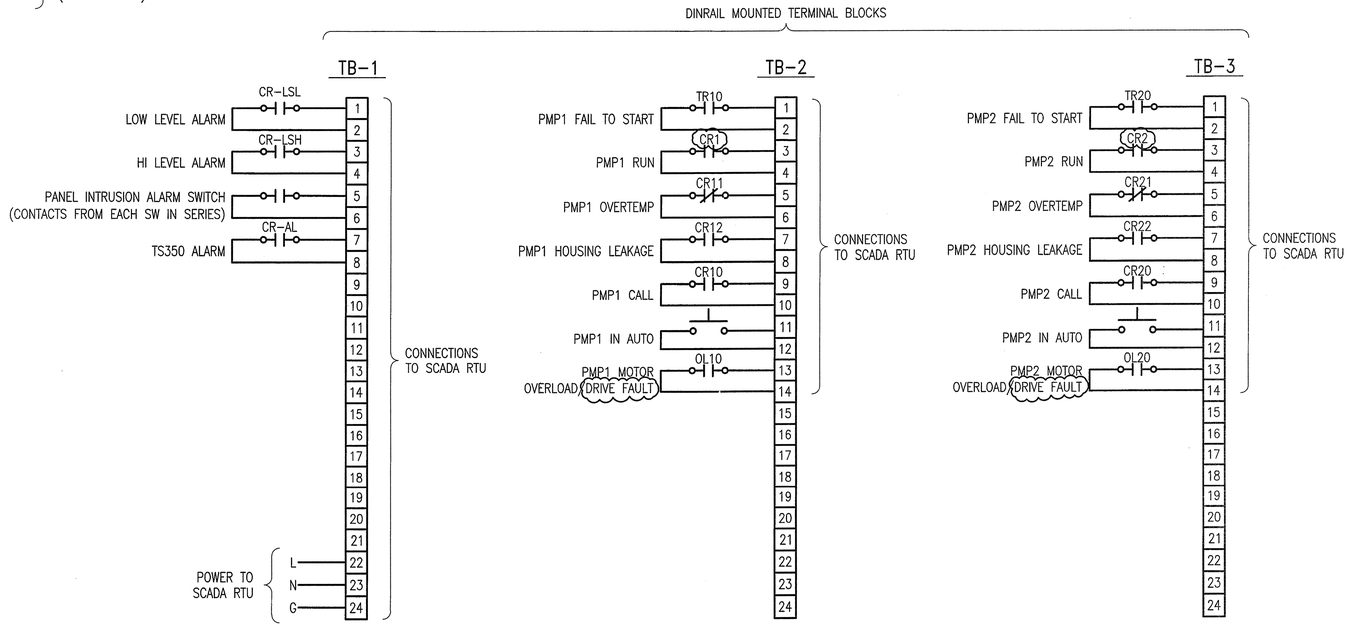


PRIMARY LEVEL CONTROLLER



BACKUP LEVEL CONTROL



SCADA RTU TERMINATION POINTS

NO	REVISIONS	DATE	APPR
1	ADDENDUM #1	6/19/13	JH

REGISTERED PROFESSIONAL ENGINEER
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PROJECT NO. 11697-01

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS
GRAND-SHORELINE PUMP STATION
SCHEMATIC DIAGRAM

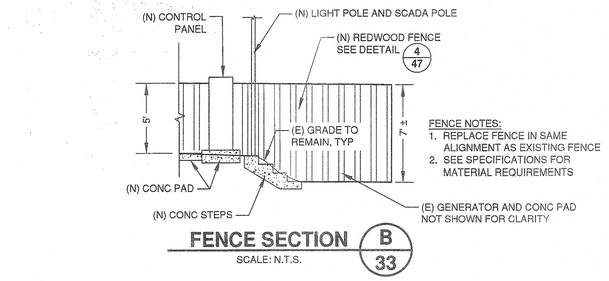
DATE:	SCALE:	DESIGN:	DRAWN:	CHECKED:
5/21/13	AS SHOWN	KM	VM	JH

DWG 9363 CASE 95

E2.2

32 OF 49

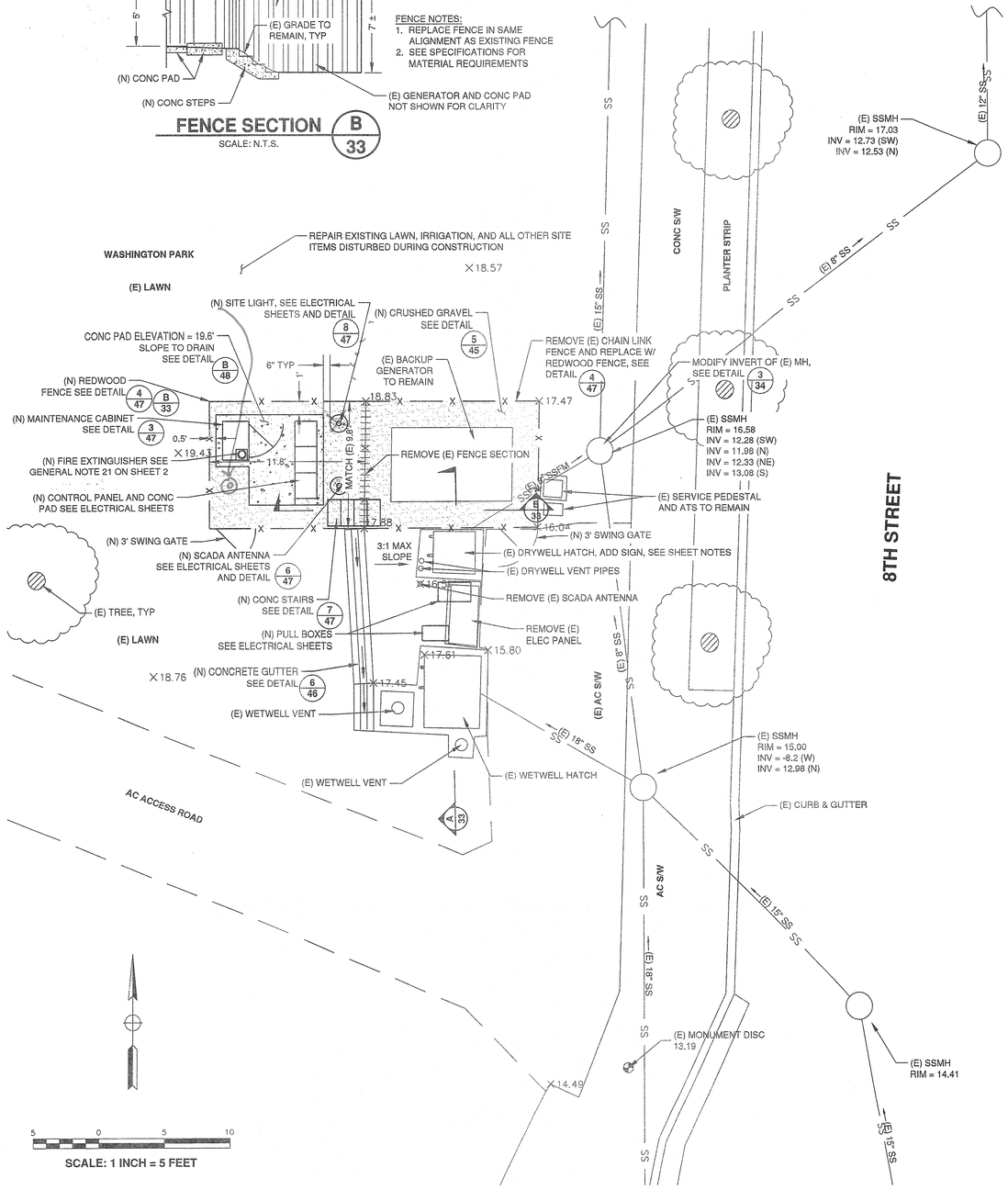
#25 EIGHTH-PORTOLA PUMP STATION

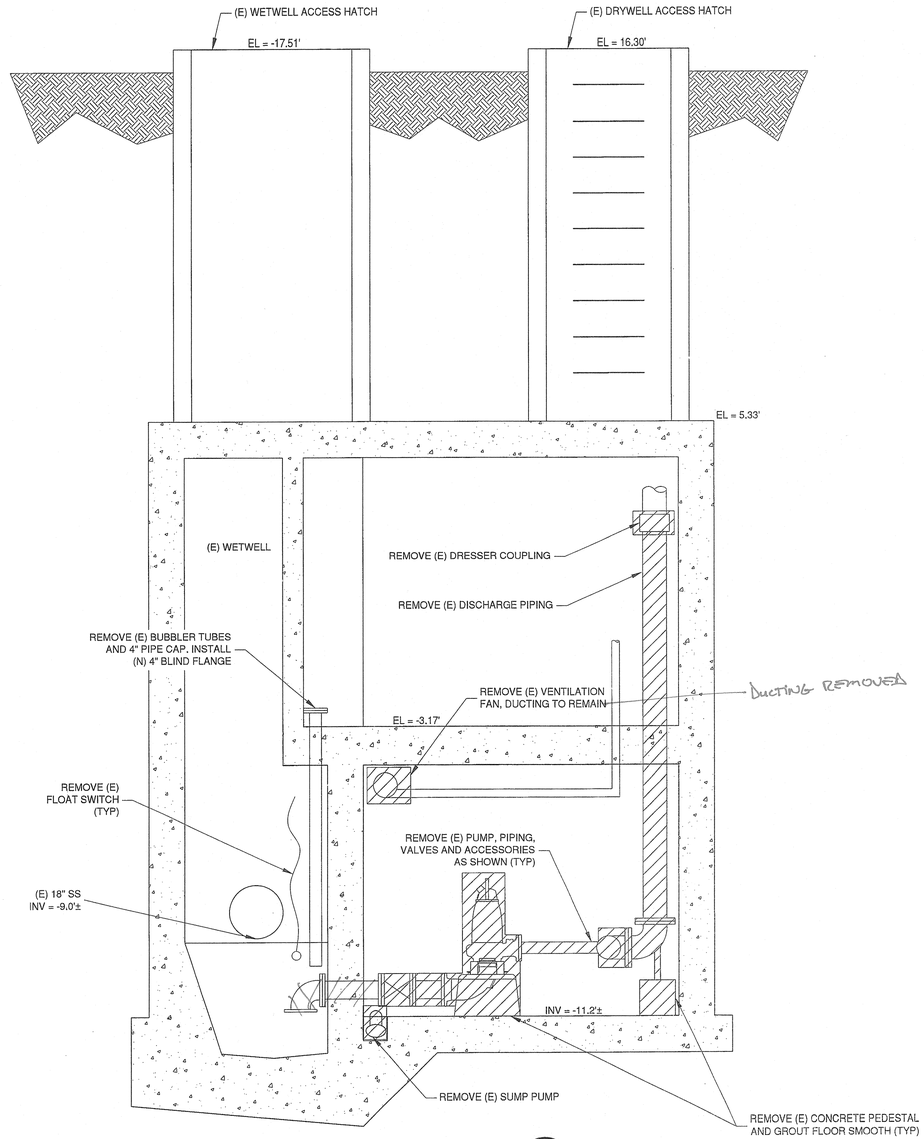


FENCE NOTES:
1. REPLACE FENCE IN SAME ALIGNMENT AS EXISTING FENCE
2. SEE SPECIFICATIONS FOR MATERIAL REQUIREMENTS

FENCE SECTION B/33

SCALE: N.T.S.





DEMOLITION SECTION A/33

SCALE:1/2" = 1'

SHEET NOTES:
1. CONTRACTOR SHALL PROVIDE CONTINUOUS PUMPING CAPACITY FROM THE TIME WHEN THE EXISTING STATION IS TAKEN OFFLINE UNTIL THE IMPROVEMENTS HAVE BEEN ACCEPTED BY THE CITY.
2. ESTIMATED PEAK WET WEATHER FLOW RATE IS 1190 GPM. SEE SPECIFICATIONS FOR BYPASS PUMPING REQUIREMENTS.
3. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AT ALL TIMES WHEN WORK IS TAKING PLACE IN THE ROADWAY.
4. WHERE DEMOLITION OR REMOVAL OF EQUIPMENT LEAVES VOIDS IN THE CONCRETE STRUCTURE, FILL VOIDS WITH NON-SHRINK GROUT.
5. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING IRRIGATION SYSTEMS PRIOR TO CONSTRUCTION AND NOTIFY THE CITY OF ANY POTENTIAL CONFLICTS.
6. SEE ELECTRICAL SHEETS FOR ADDITIONAL PUMP STATION IMPROVEMENTS.
7. ALL DISTURBED LANDSCAPING & LAWN SHALL BE REPLACED IN KIND.
8. ADDRESS SIGN SHALL BE MOUNTED TO THE CONTROL PANEL OR FENCING IN A LOCATION VISIBLE FROM THE STREET. SIGN SHALL SAY "1311 8th STREET". SEE GENERAL NOTE 22 ON SHEET 2 FOR ADDITIONAL INFORMATION.
9. ADD SIGN TO EXISTING DRYWELL HATCH THAT READS "DANGER, CONFINED SPACE ENTER BY PERMIT ONLY". SIGN SHALL MEET OSHA REQUIREMENTS FOR LABELING, SHALL BE POLYCARBONATE, AND SHALL BOLT TO HATCH.
10. CONTRACTOR SHALL PROVIDE A KEY LOCK BOX AT THE SITE, SEE GENERAL NOTE 23 ON SHEET 2.
11. NEW SCADA POLE SHALL BE THE SAME HEIGHT AS THE EXISTING SCADA POLE, WHICH IS APPROXIMATELY 20 FEET ABOVE THE EXISTING GROUND.

EIGHTH-PORTOLA BENCHMARK

EXISTING MONUMENT DISC ON THE SOUTH SIDE OF THE PUMP STATION = 13.19' AS SHOWN ON THE PLAN

NO	REVISIONS	DATE	APPR
1			
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REGISTERED PROFESSIONAL ENGINEER BRENTON A. SMITH No. 58813 CIVIL STATE OF CALIFORNIA

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CITY OF ALAMEDA

GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS

EIGHTH-PORTOLA SITE PLAN

DATE: 5/21/13
SCALE: AS SHOWN
DESIGN: GMA
DRAWN: GMA
CHECKED: BLS

DWG 9363 CASE 95

SHEET 33 OF 49

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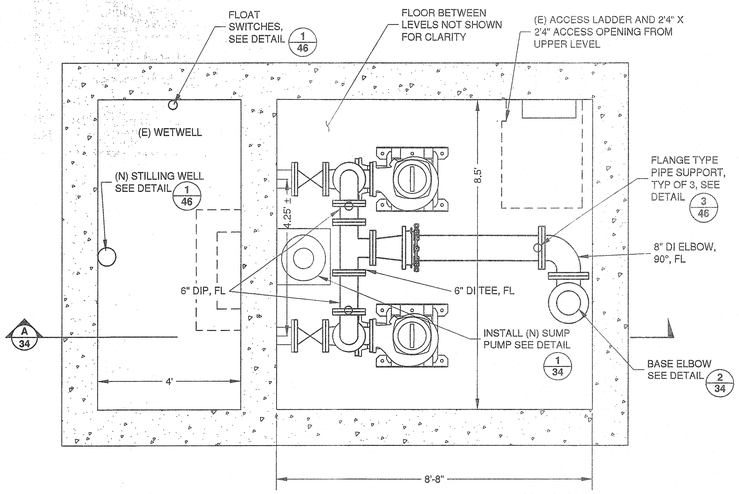
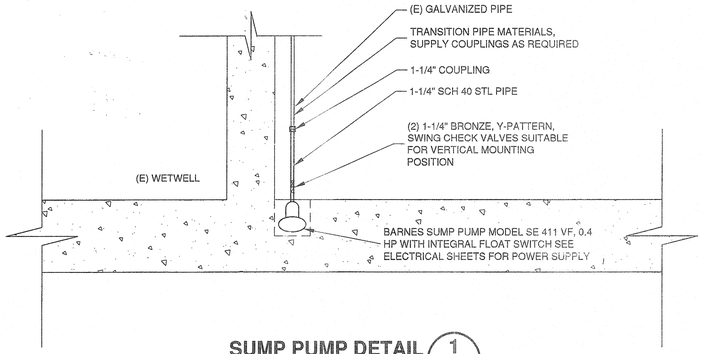
#25 EIGHTH-PORTOLA PUMP STATION



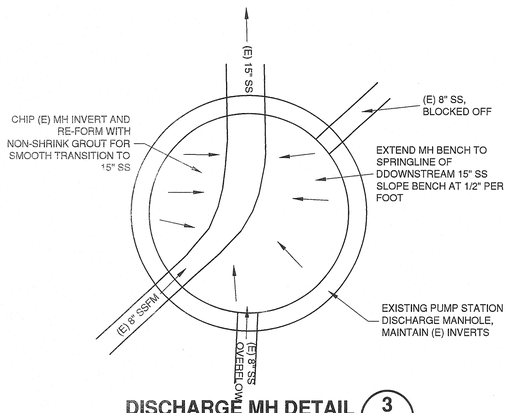
IMPROVEMENT PLAN

SCALE:1/2" = 1'



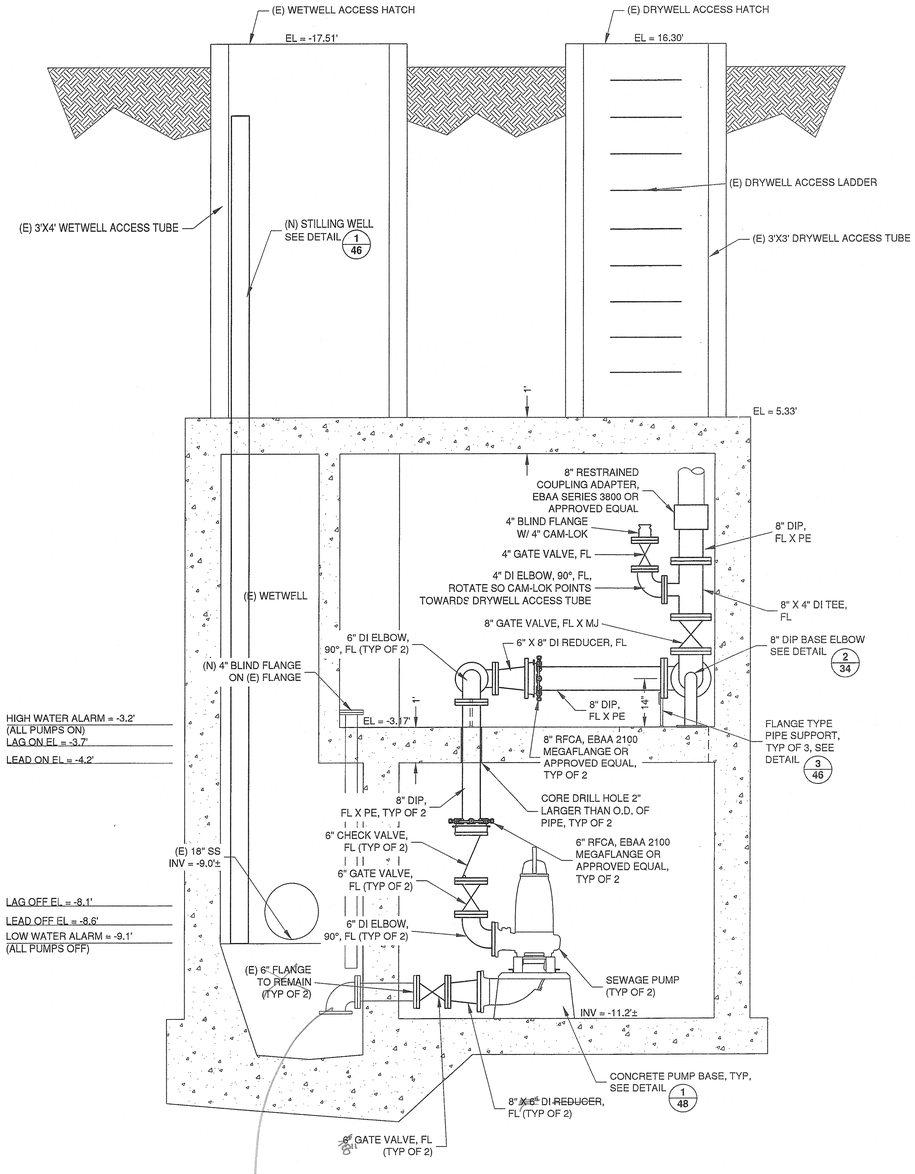
SUMP PUMP DETAIL 1/34

NTS



DISCHARGE MH DETAIL 3/34

NTS

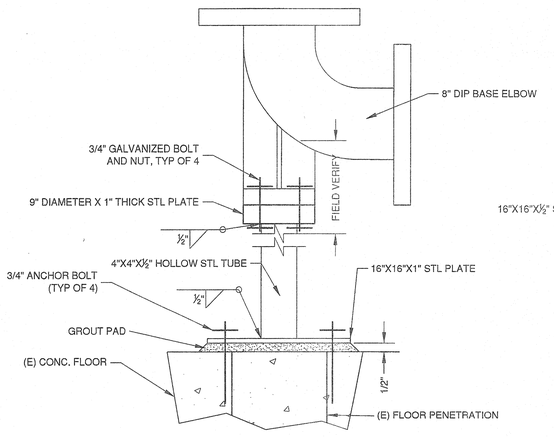


IMPROVEMENT SECTION A/34

SCALE:1/2" = 1'

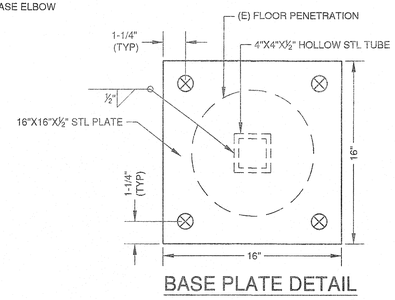
(E) 5" SUCTION BELL AND PIPE THROUGH WALL REPLACE WITH 8" I.D AND 8" SUCTION BELL

NOTES:
ANCHOR BOLTS SHALL BE EPOXY ADHESIVE ANCHOR BOLTS: SIMPSON STRONG-TIE "SET-XP" EPOXY, HILTI "HIT-RE-500-SD" EPOXY OR APPROVED EQUAL. SEE PROJECT SPECIFICATIONS.



BASE ELBOW DETAIL 2/34

NTS



BASE PLATE DETAIL

SHEET NOTES:
1. THERE IS LIMITED SPACE TO ENTER THE DRYWELL. CONTRACTOR SHALL VERIFY ALL EQUIPMENT AND MATERIALS WILL FIT THROUGH EXISTING ACCESS PRIOR TO ORDERING.
2. ALL FORCE MAIN CONNECTIONS SHALL BE RESTRAINED AGAINST THRUST.
3. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SIZES, MATERIALS, ELEVATIONS AND DISTANCES PRIOR TO ORDERING AND FABRICATING MATERIALS.

EIGHTH PORTOLA PUMP NOTES:
PUMP SHALL BE AN INDUSTRIAL SEWAGE PUMP, RATED FOR USE IN CLASS 1, DIVISION 1, GROUP D LOCATIONS. PUMP SHALL BE SUPPLIED WITH INTEGRAL MOISTURE AND TEMPERATURE SENSORS. PUMP SHALL BE FLYGT NT 3153 MT WITH THE FOLLOWING CHARACTERISTICS:

VOLTAGE: 230V, AC, 60 HZ
PHASES: THREE (3)
HORSEPOWER: 15
IMPELLER DIAMETER: 8.54 INCHES (217 MM)
FLYGT CURVE NO. 63-435-00-4530
RATING POINT: 1150 GPM AT 37.5 FEET OF HEAD
DISCHARGE SIZE: 6 INCHES
INTAKE SIZE: 8 INCHES

THE CITY HAS STANDARDIZED THE PUMP MANUFACTURER, NO SUBSTITUTIONS WILL BE ACCEPTED.

NO	REVISIONS	DATE	APPR
1			
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4			
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6			

REGISTERED PROFESSIONAL ENGINEER No. 38813 CIVIL STATE OF CALIFORNIA

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CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS

EIGHTH-PORTOLA SECTIONS

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	GMA
DRAWN:	GMA
CHECKED:	BLS

DWG 9363 CASE 95

SHEET 34 OF 49

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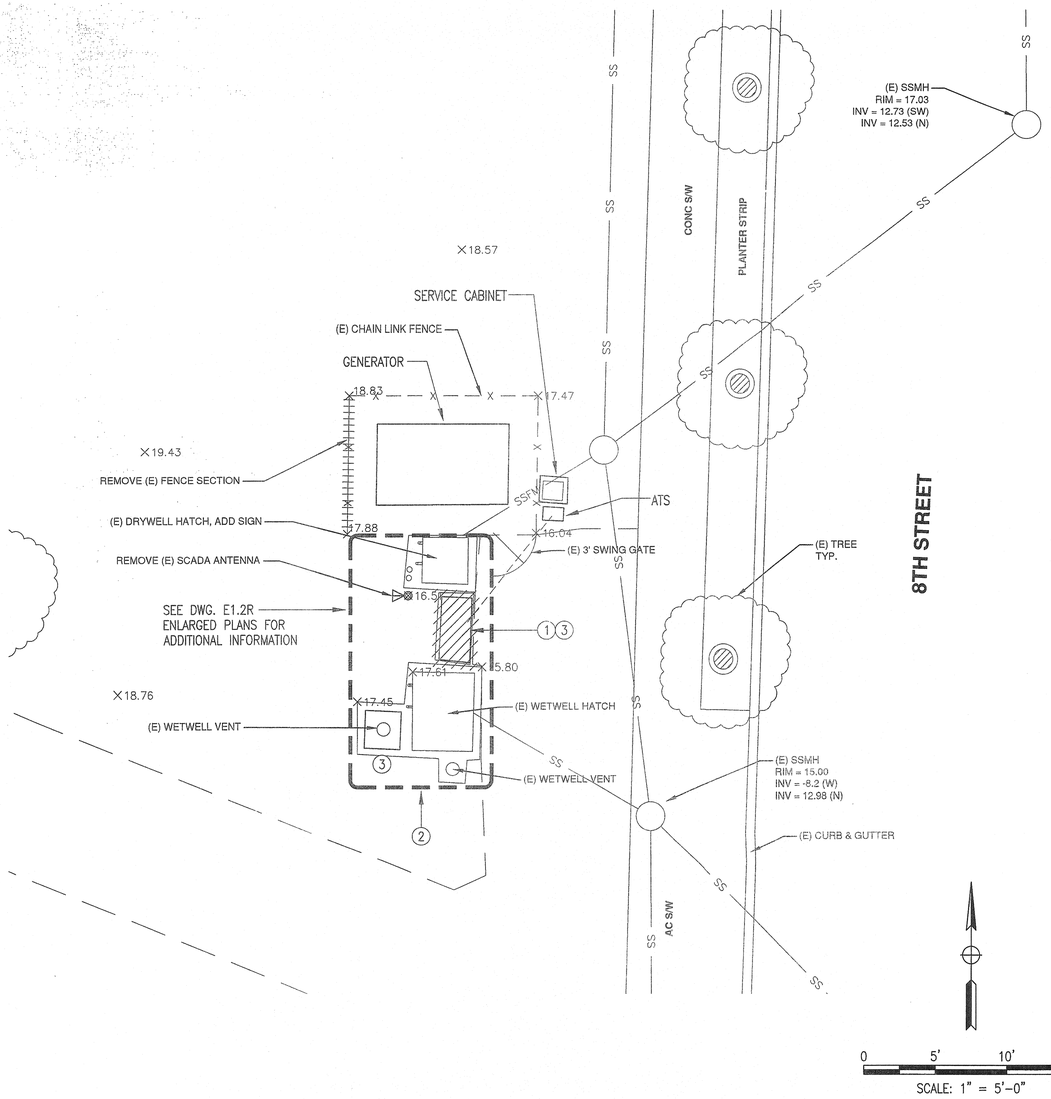


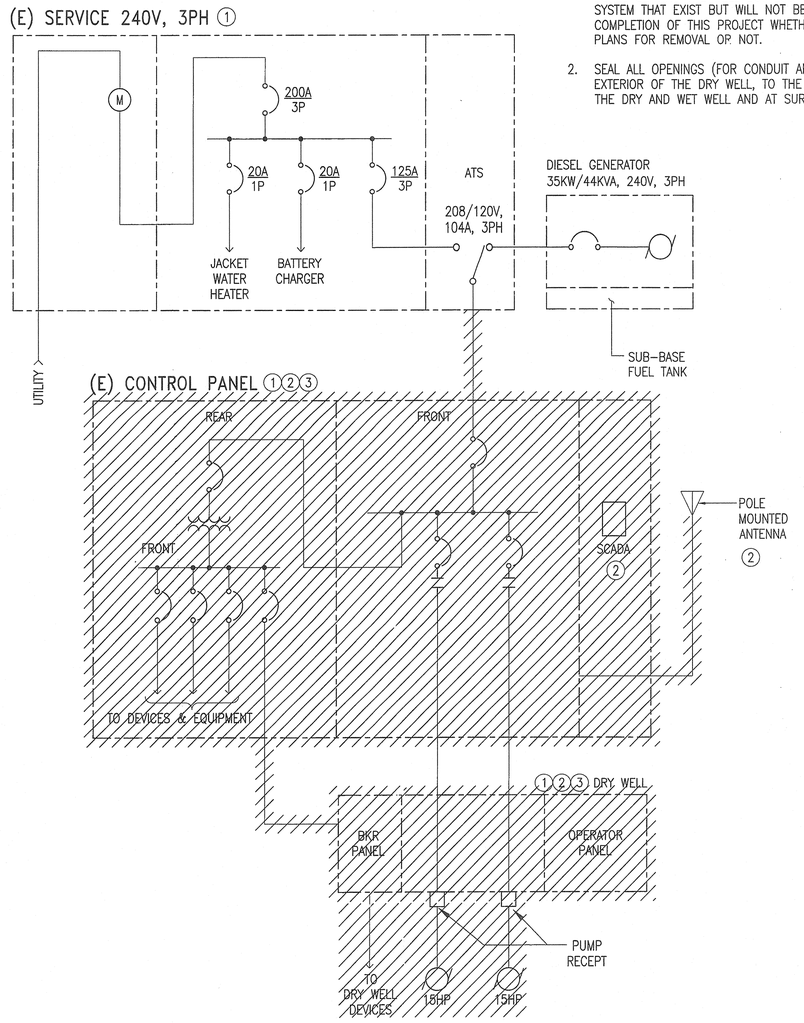
DETAIL 2 NOTES:

1. REMOVE CONTROL PANEL AND CONCRETE PAD.
2. REMOVE ALL CONDUIT, JUNCTION BOXES, DEVICES, WIRING, CONTROLS, AND BUBBLER SYSTEM FROM DRY AND WET WELL. SEAL OFF ALL OPENINGS TO EXTERIOR. REFER ALSO TO ENLARGED PLANS. DISCONNECT AND REMOVE (E) PUMPS.
3. REMOVE (E) SCADA SYSTEM AND RETAIN FOR RE-USE LATER. CONFIRM LOCATION OF EXISTING SCADA SYSTEM IN BACK OF CONTROL PANEL.

2 — 8th/PORTOLA SITE PLAN
SCALE: 1" = 5'-0"

GENERAL NOTES:

1. NOT ALL DEVICES OR CONDUIT OR OPENINGS TO THE EXTERIOR ARE NECESSARILY SHOWN. IT IS THE INTENTION OF THIS PROJECT TO LEAVE THE EXISTING WELL(S) COMPLETELY CLEAR AND FREE OF ANY AND ALL EXISTING ELECTRICAL APPARATUS THAT IS NOT IN USE OR THAT IS BEING REPLACED BY THIS PROJECT. THIS INCLUDES DEVICES, CONDUITS, BOXES, IN-GROUND BOXES SERVING THE WELL BUT LOCATED OUTSIDE THE WELL AND ANY OTHER SYSTEM THAT EXIST BUT WILL NOT BE USED OR REPLACED AT THE COMPLETION OF THIS PROJECT WHETHER SHOWN SPECIFICALLY ON THESE PLANS FOR REMOVAL OR NOT.
2. SEAL ALL OPENINGS (FOR CONDUIT AND ELECTRICAL DEVICES) TO THE EXTERIOR OF THE DRY WELL, TO THE EXTERIOR OF THE WET WELL, BETWEEN THE DRY AND WET WELL AND AT SURFACE OF ALL WALLS.



DETAIL 1 NOTES:

1. ADDITIONAL DEVICES IN PEDESTAL TO BE REMOVED INCLUDE RECEPTACLES, LTS, TERMINAL BLOCKS, CONTACTORS, RELAYS, PROGRAMMABLE CONTROLLERS, COMPRESSORS, ETC. CONNECTION DIAGRAM BASED ON FIELD OBSERVATION ONLY. VERIFY CONNECTIONS & EXISTING CONDITIONS TO THE EXTENT REQUIRED TO SAFELY REMOVE EQUIPMENT.
2. DISCONNECT AND REMOVE ANTENNA POLE.
3. ADDITIONAL COMPONENTS IN REAR COMPARTMENT NOT SHOWN MAY INCLUDE SCADA & COMPRESSOR, TRANSFORMER.
4. DISCONNECT AND RETAIN SCADA SYSTEM FOR RE-USE IN THE (N) CONSTRUCTION

1 — 8th/PORTOLA ONE-LINE DIAGRAM
NO SCALE

NO	REVISIONS	DATE	APPR
1			
2			
3			
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PROJECT NO. 11697-01

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS
EIGHT-PORTOLA PUMP STATION
ONE LINE & SITE PLAN - REMOVAL WORK

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	KM
DRAWN:	VM
CHECKED:	JH

DWG 9363 CASE 95

E1.1R

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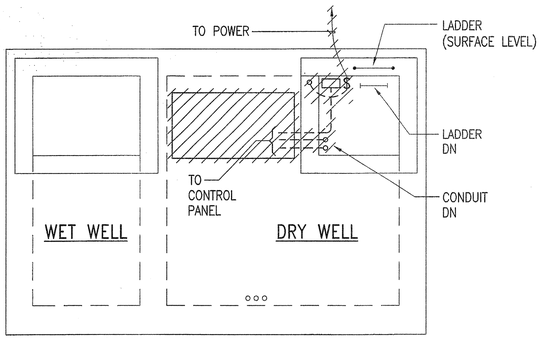
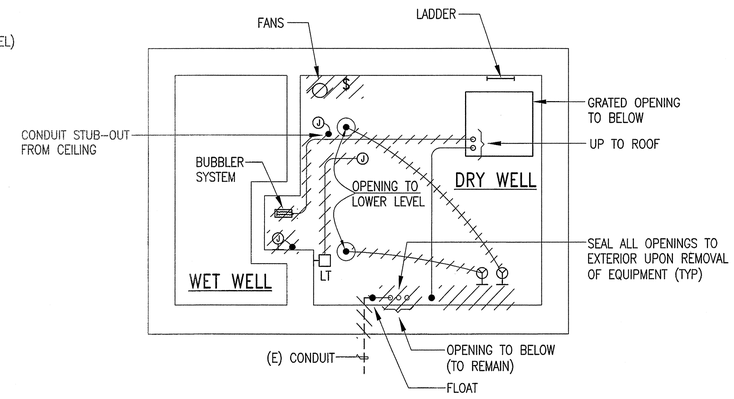


SEAL ALL EXISTING OPENING TO EXTERIOR UPON REMOVAL OF EQUIPMENT AND CONDUITS

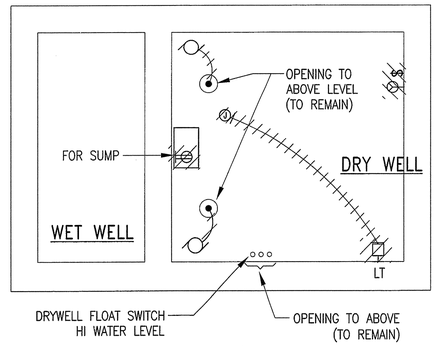
1 / – PUMP STATION – ROOF REMOVAL WORK

SCALE: 3/8"=1'-0" (GRADE LEVEL)



2 / – PUMP STATION – EQUIPMENT ROOM REMOVAL WORK

SCALE: 3/8"=1'-0" (APPROXIMATELY 19 FT. BELOW GRADE)



3 / – PUMP STATION – PUMP ROOM REMOVAL WORK

SCALE: 3/8"=1'-0" (APPROXIMATELY 27 FT. BELOW GRADE)

GENERAL NOTES:

1. NOT ALL DEVICES OR CONDUIT OR OPENINGS TO THE EXTERIOR ARE NECESSARILY SHOWN. IT IS THE INTENTION OF THIS PROJECT TO LEAVE THE EXISTING WELL(S) COMPLETELY CLEAR AND FREE OF ANY AND ALL EXISTING ELECTRICAL APPARATUS THAT IS NOT IN USE OR THAT IS BEING REPLACED BY THIS PROJECT. THIS INCLUDES DEVICES, CONDUITS, BOXES, IN-GROUND BOXES SERVING THE WELL BUT LOCATED OUTSIDE THE WELL AND ANY OTHER SYSTEM THAT EXIST BUT WILL NOT BE USED OR REPLACED AT THE COMPLETION OF THIS PROJECT WHETHER SHOWN SPECIFICALLY ON THESE PLANS FOR REMOVAL OR NOT.
2. SEAL ALL OPENINGS (FOR CONDUIT AND ELECTRICAL DEVICES) TO THE EXTERIOR OF THE DRY WELL, TO THE EXTERIOR OF THE WET WELL, BETWEEN THE DRY AND WET WELL AND AT SURFACE OF ALL WALLS.

NO	REVISIONS	DATE	APPR

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GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS
EIGHT-PORTOLA PUMP STATION
DRYWELL PLAN & DETAILS - REMOVAL WORK

DATE: 5/21/13
SCALE: AS SHOWN
DESIGN: KM
DRAWN: VM
CHECKED: JH

DWG 9363 CASE 95

E1.2R

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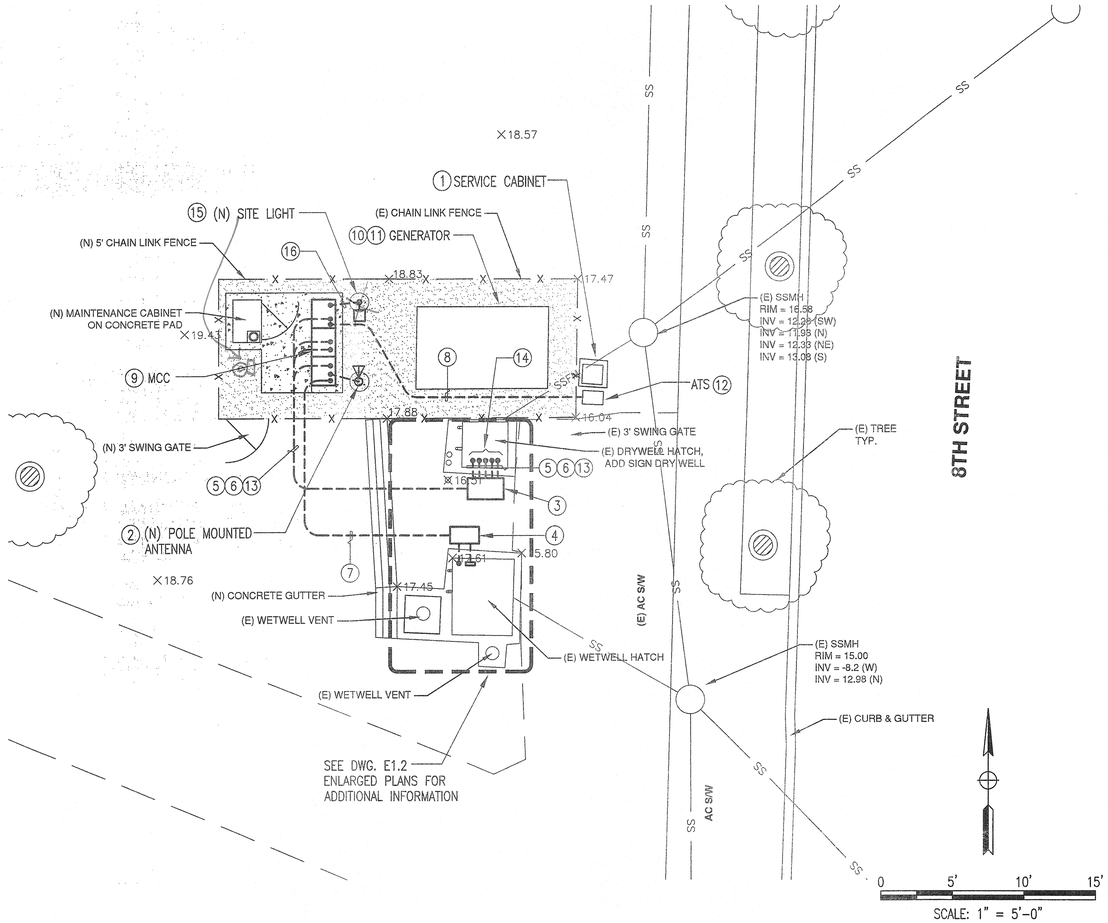
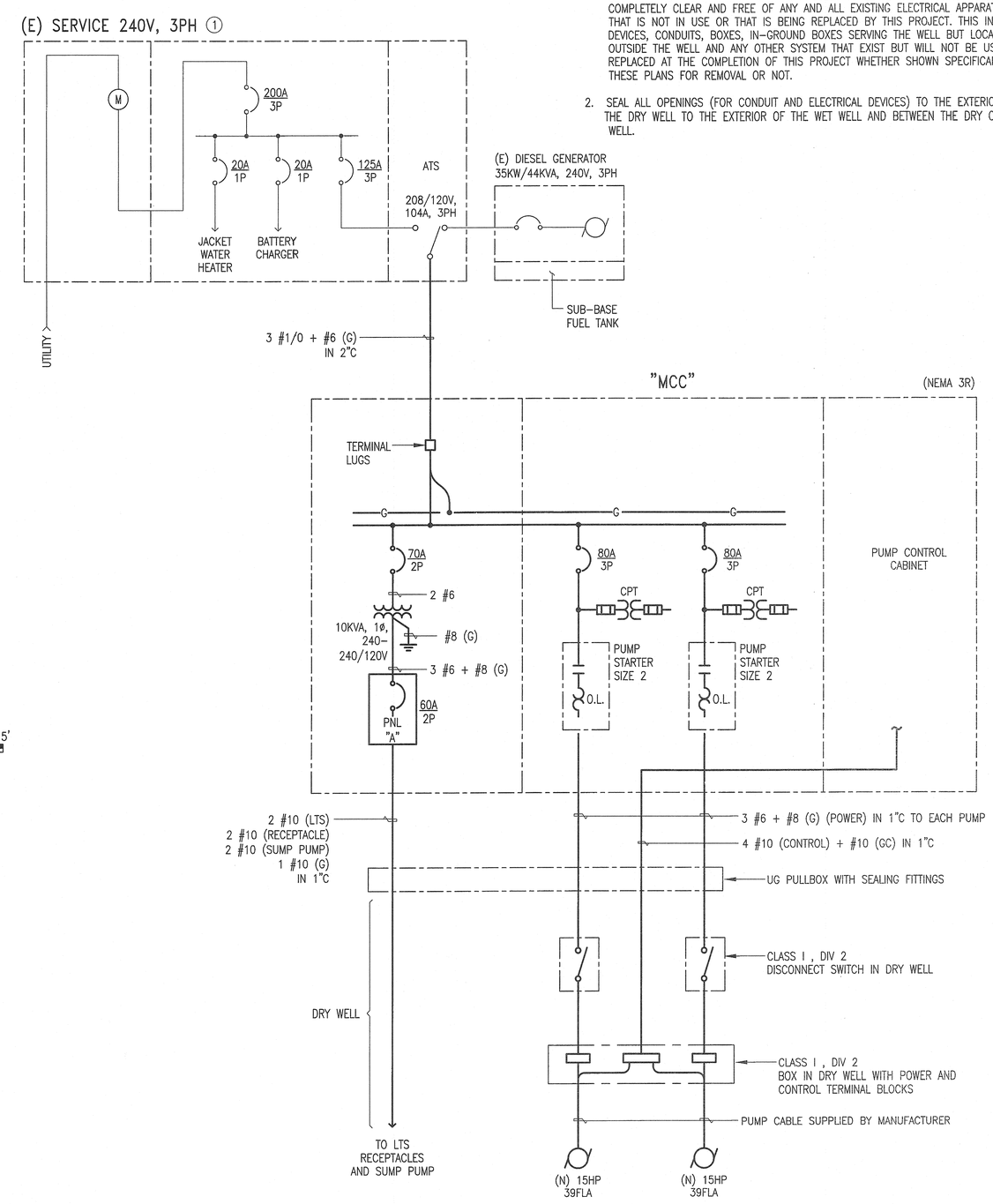


SHEET NOTES:

1. EXISTING ELECTRICAL SERVICE AND ATS TO REMAIN.
2. PROVIDE 2"C FOR COAX CABLE CONNECTION FROM (N) ANTENNA POLE TO (R) SCADA SYSTEM.
3. PROVIDE IN GROUND PULL BOX FOR PUMP POWER AND MOISTURE TEMPERATURE, MONITORING CONTROL CIRCUITS, SIZE 6T, CHRISTY B1730 WITH 12" EXTENSION (17" x 30") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATE COVER.
4. PROVIDE IN GROUND PULL BOX FOR CONTROLS, SIZE 5T, CHRISTY B1324 WITH 12" EXTENSION (13" x 24") REINFORCED TRAFFIC RATED CONCRETE BOX WITH BOLT DOWN, STEEL CHECKER PLATE COVER.
5. PROVIDE (2) 1" PVC COATED RSC CONDUITS FOR PUMP POWER, 1" PVC COATED RSC CONDUIT FOR MOISTURE AND TEMPERATURE MONITORING CONTROL CIRCUITS FOR WET WELL PUMPS. SEE ONE-LINE DIAGRAM FOR CABLE SIZES.
6. PROVIDE (1) 1" PVC COATED RSC FOR POWER TO DRY WELL DEVICES. SEE ONE-LINE DIAGRAM AND PANEL SCHEDULE FOR ADDITIONAL INFORMATION.
7. PROVIDE (2) 2 1/2" PVC COATED RSC FOR LEVEL TRANSMITTER AND HIGH LOW FLOAT CABLES. ~~PROVIDE 3/4" PVC COATED RSC WITH (2 #14 FOR~~ IN ONE OF 2½" INTRUSION DETECTION AT WET WELL HATCH.
8. PROVIDE 2"C FOR MCC FEEDER. SEE ONE-LINE DIAGRAM FOR FEEDER CABLE SIZE.
9. COORDINATE EXACT CONDUIT STUB-UP LOCATION WITH EQUIPMENT MANUFACTURER SHOP DRAWINGS.
10. MAINTAIN (E) GENERATOR JACKET HEATER AND BATTERY CHARGER CIRCUITS.
11. MAINTAIN (E) GENERATOR ATS START SIGNAL WIRES.
12. MAINTAIN (E) FEEDER FROM SERVICE PEDESTAL TO ATS.
13. PROVIDE (1) 3/4" PVC COATED RSC WITH 2 #14 FOR INTRUSION AND DETECTION AT DRY WELL HATCH. PROVIDE (1) ~~3/4" PVC COATED RSC~~ WITH 4 #14 FOR DRY WELL SUMP ULTRASONIC LEVEL SWITCH.
14. INSTALL CONDUIT SEALS WITHIN 10 FT. OF ENTRY TO DRY WELL.
15. LIGHTING FIXTURE MOUNTED ON POLE AT 10'-0".
    LIGHTING FIXTURE: KIM LIGHTING ARCHETYPE,
    CAT. # 1SA-SAR2-60L-4K-120-DB
    POLE: CAT. #PRA10-4125-SA-DB.
16. PROVIDE 1" PVC CONDUIT WITH 2 #12 + 1 #12 (G), PNL A, CKT. #17, VIA LIGHT SWITCH IN CONTROL PANEL FOR SITE LIGHTING.

2 — 8th/PORTOLA SITE PLAN
SCALE: 1" = 5'-0"



1 — 8th/PORTOLA ONE-LINE DIAGRAM
NO SCALE

GENERAL NOTES:

1. NOT ALL DEVICES OR CONDUIT OR OPENINGS TO THE EXTERIOR ARE NECESSARILY SHOWN. IT IS THE INTENTION OF THIS PROJECT TO LEAVE THE EXISTING WELL(S) COMPLETELY CLEAR AND FREE OF ANY AND ALL EXISTING ELECTRICAL APPARATUS THAT IS NOT IN USE OR THAT IS BEING REPLACED BY THIS PROJECT. THIS INCLUDES DEVICES, CONDUITS, BOXES, IN-GROUND BOXES SERVING THE WELL BUT LOCATED OUTSIDE THE WELL AND ANY OTHER SYSTEM THAT EXIST BUT WILL NOT BE USED OR REPLACED AT THE COMPLETION OF THIS PROJECT WHETHER SHOWN SPECIFICALLY ON THESE PLANS FOR REMOVAL OR NOT.
2. SEAL ALL OPENINGS (FOR CONDUIT AND ELECTRICAL DEVICES) TO THE EXTERIOR OF THE DRY WELL TO THE EXTERIOR OF THE WET WELL AND BETWEEN THE DRY OR WET WELL.

NO	REVISIONS	DATE	APPR
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CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS
EIGHT-PORTOLA PUMP STATION
ONE LINE & SITE PLAN - NEW WORK

DATE:	SCALE:	DESIGN:	DRAWN:	CHECKED:
5/21/13	AS SHOWN	KM	VM	JH

DWG 9363 CASE 95

E1.1

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File: M:\11697-01 Alameda Pumps I\$_Alameda_Phase-1_Group-1\37_8PO-E11.dwg, May. 21, 13 1:40 PM, Last saved: Vuong, PlotDate: 5/21/2013 2:36 PM By: Vuong Mai, Plot scale: 1:2.5849, Plot Size: ANSI A (8.50 x 11.00 Inches)
Xrefs: Group 1 Revised Layouts_052013 Group1_Electrical_New-work Group1_APS-BDR
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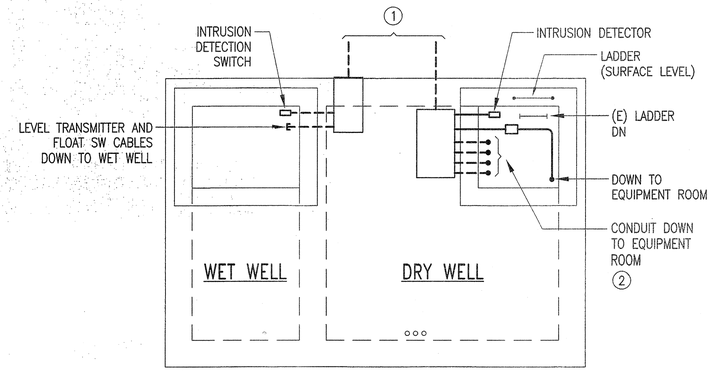
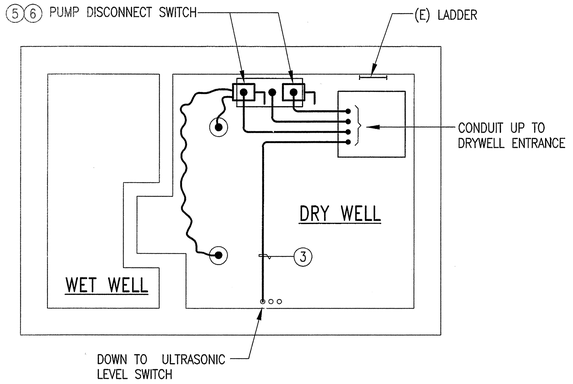


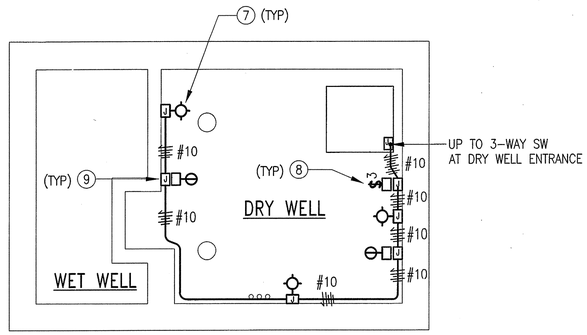
1 PUMP STATION – ROOF NEW WORK

SCALE: 3/8"=1'-0" (GRADE LEVEL)



2 POWER PLAN – EQUIPMENT ROOM

SCALE: 3/8"=1'-0"



3 LIGHTING AND RECEPTACLE POWER PLAN – EQUIPMENT ROOM

SCALE: 3/8"=1'-0"

4 POWER PLAN – PUMP ROOM

SCALE: 3/8"=1'-0"

5 LIGHTING AND RECEPTACLE POWER PLAN – PUMP ROOM

SCALE: 3/8"=1'-0"

SHEET NOTES:

1. TO MCC. SEE SITE PLAN FOR CONTINUATION. CORE DRILL DRY WELL WALL AS REQUIRED (12" THICK).
2. USE ALL PVC COATED RSC IN DRY WELL SURFACE ROUTED, TYPICAL. PROVIDE SEALS FOR ALL CONDUIT IN DRY WELL, LOCATE SEAL WITHIN 10 FT. OF ENTRY TO DRY WELL.
3. CONDUIT FOR DRY WELL HI WATER ALARM .
4. PROVIDE ULTRASONIC LEVEL SWITCH TO SENSE WATER ABOVE 3" OF PUMP ROOM FLOOR.
5. PROVIDE SEALS FOR ALL ENCLOSURE WITHIN 18" OF ENCLOSURE FOR ALL CONDUIT ENTERING OR EXITING THE ENCLOSURE INCLUDING LIGHT SWITCHES, RECEPTACLES, DISCONNECT SWITCHES, ETC.
6. SEE SHEET 44 FOR JUNCTION BOX AND DISCONNECT SWITCHES INSTALLATION DETAIL.
7. FLUORESCENT GLOBE LIGHT WITH GUARD, FACTORY SEALED, CLASS I, DIVISION 2 GROUP RATED, WALL MOUNTED WITH EXPLOSION PROOF J-BOX AND MOUNTING ADAPTOR AS REQUIRED. "HUBBELL" CAT. No. HLEBF26 1XG HLEZB3 J-BOX, WITH (2) 13W CFL LAMPS.
8. EXPLOSION PROOF LIGHTING SWITCH, "APPLETON" EDS SERIES TUMBLER SWITCH, FACTORY SEALED, 20A, 120-277V RATED.
9. EXPLOSION PROOF RECEPTACLE CLASS I, DIVISION 2, "APPLETON" U-LINE SERIES, DEAD FRONT CONSTRUCTION. RECEPTACLE AND BOX SHALL BE OF MALLEABLE IRON, BAKED GRAY EPOXY FINISH.

NO	REVISIONS	DATE	APPR

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CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS

EIGHT-PORTOLA PUMP STATION
DRYWELL PLAN & DETAILS - NEW WORK

DATE:	SCALE:	DESIGN:	DRAWN:	CHECKED:
5/21/13	AS SHOWN	KM	VM	JH

DWG 9363 CASE 95

E1.2

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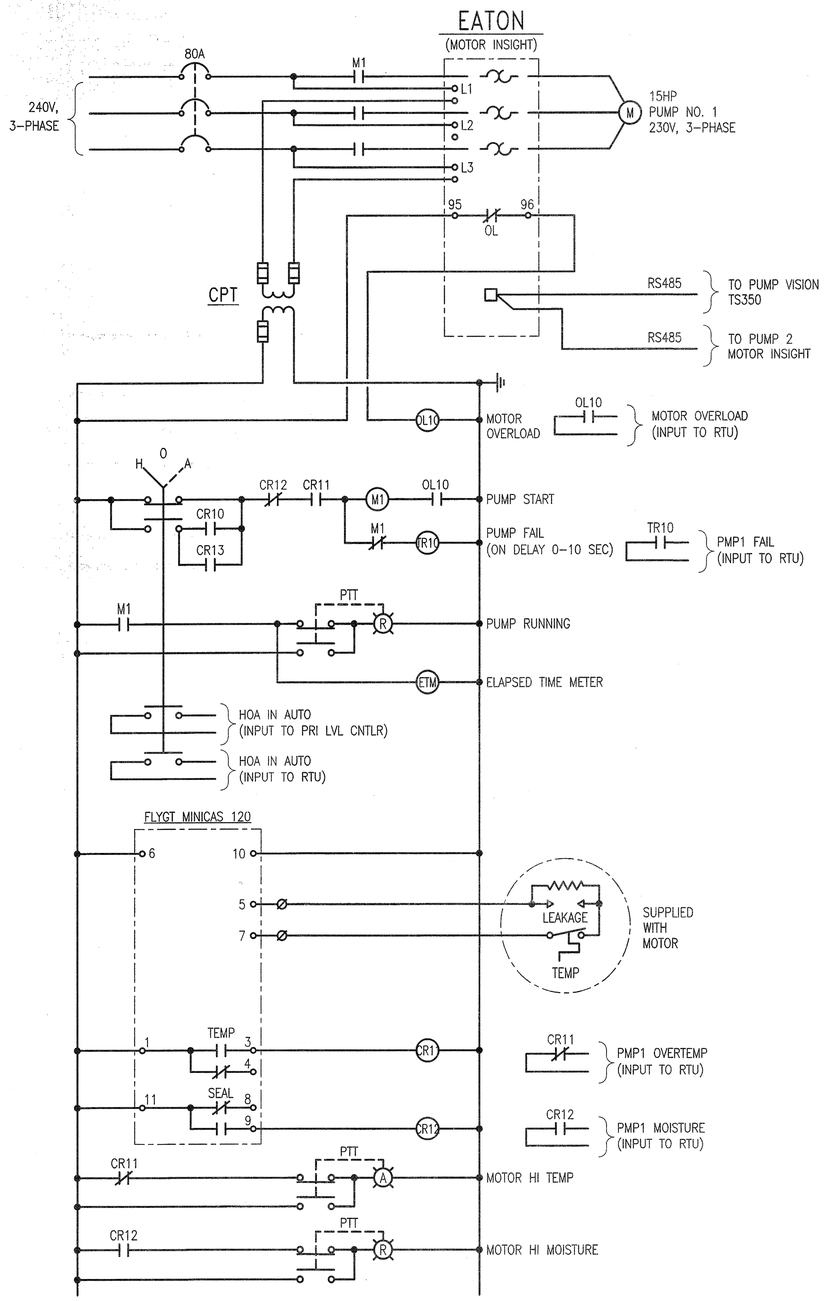
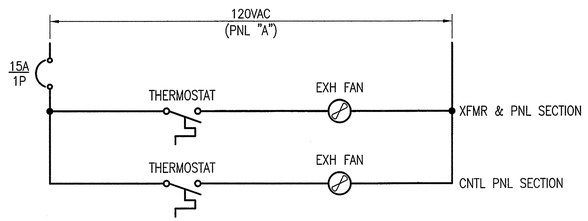
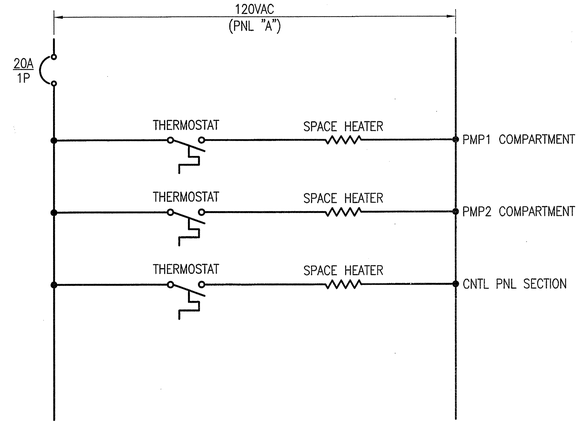


FVNR PUMP No. 1 CONTROL SCHEMATIC DIAGRAM

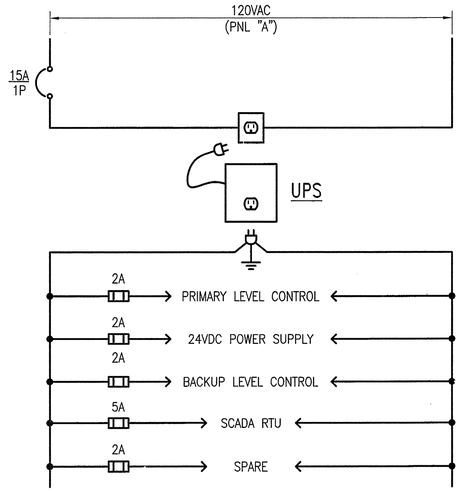
(SIMILAR FOR PUMP No. 2)



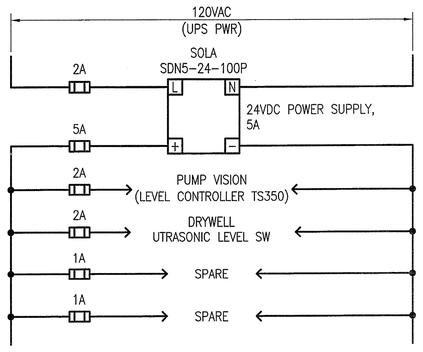
EXHAUST FAN CONTROL SCHEMATIC



SPACE HEATER CONTROL SCHEMATIC



120V UPS SYSTEM SCHEMATIC



24VDC SYSTEM SCHEMATIC

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CITY OF ALAMEDA

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FOR RELIABILITY AND SAFETY IMPROVEMENTS

EIGHT-PORTOLA PUMP STATION

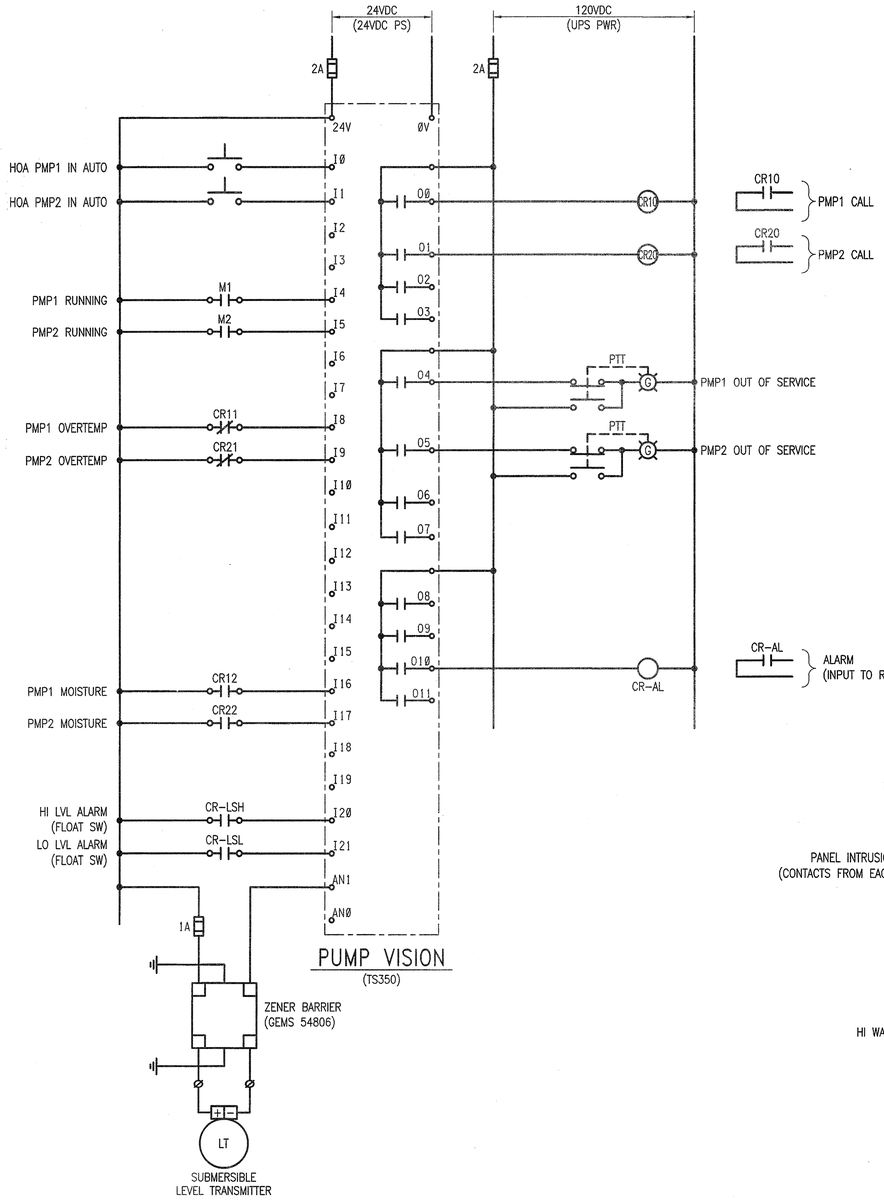
CONTROL SCHEMATIC DIAGRAM

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	KM
DRAWN:	VM
CHECKED:	JH

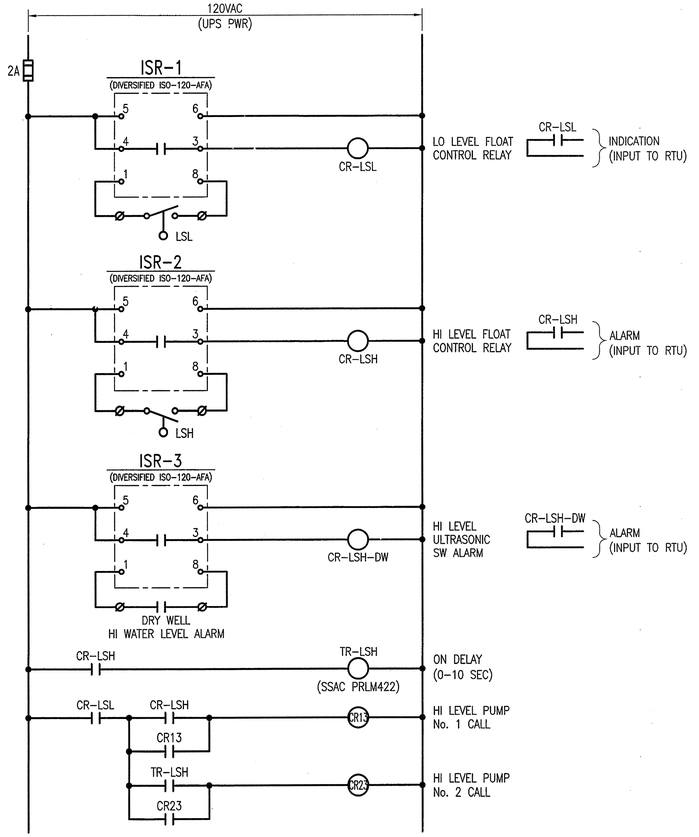
DWG 9363 CASE 95

E2.1

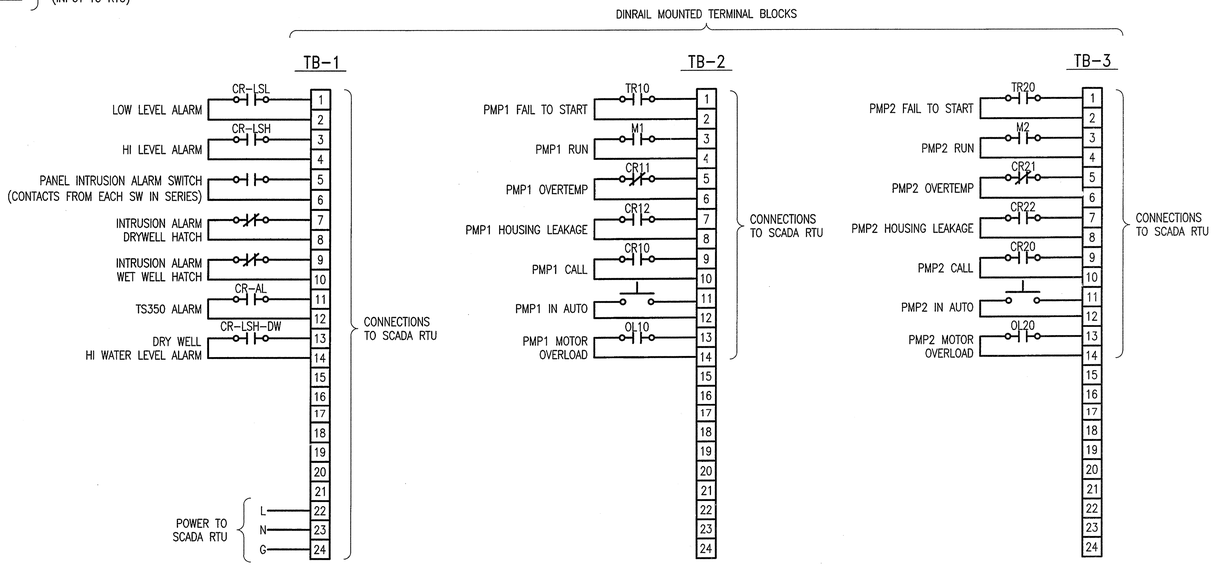
39 OF 49



PRIMARY LEVEL CONTROLLER



BACKUP LEVEL CONTROL



SCADA RTU TERMINATION POINTS

NO	REVISIONS	DATE	APPR
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FOR RELIABILITY AND SAFETY IMPROVEMENTS

EIGHT-PORTOLA PUMP STATION
SCHEMATIC DIAGRAM

DATE:	SCALE:	DESIGN:	DRAWN:	CHECKED:
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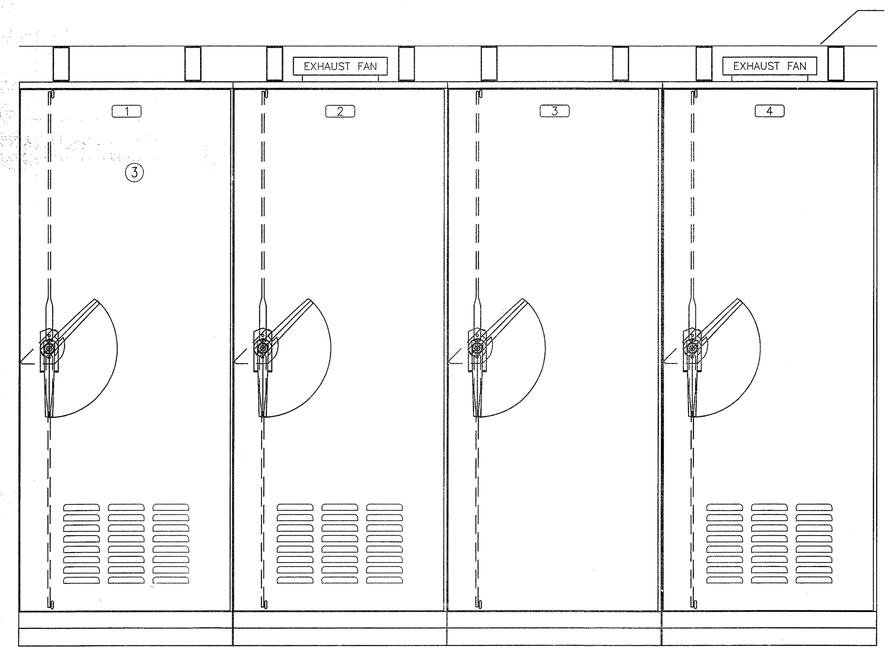
DWG 9363 CASE 95

E2.2

40 OF 49



PANEL ELEVATION

NAMEPLATE SCHEDULE			
TAG#	QTY	TYPE	INSCRIPTION
1	1	PLATE	ATS PANEL
2	1	PLATE	PANELBOARD AND TRANSFORMER
3	1	PLATE	PUMP STARTERS PANEL
(1) 4	1	PLATE	CONTROLS AND SCADA EQUIPMENT
5	1	PLATE	PUMP NO. 1 ELAPSED TIME METER
6	1	PLATE	PUMP NO. 2 ELAPSED TIME METER
7	1	PLATE	PUMP NO. 1 DISCONNECT
8	1	PLATE	PUMP NO. 2 DISCONNECT
9	1	PLATE	PANEL "A"
10			
11			
12			
A	1	RING	PUMP RUNNING
B	1	RING	PUMP FAILURE
C	1	RING	MOTOR HI TEMP
D			MOTOR HI MOISTURE
E			HAND – OFF – AUTO

(1) RED W/WHITE LETTERS

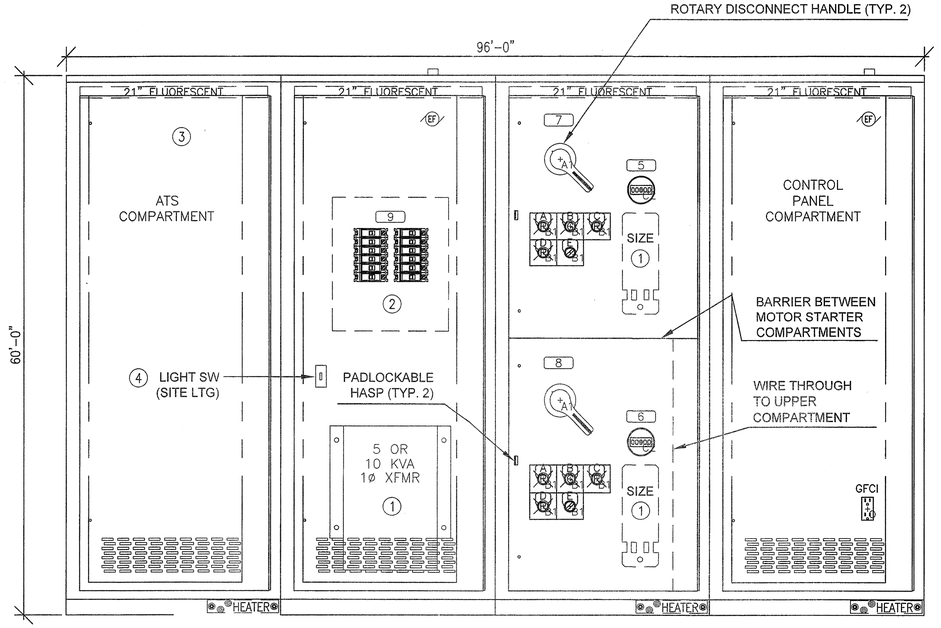
SHEET NOTES:

(1) REFER TO PUMP STATION SPECIFIC ONE–LINE DIAGRAM.

(2) REFER TO PANEL SCHEDULE FOR MCC DEVICE CIRCUIT NUMBERS (FANS, RECEPTACLES, HEATERS AND LIGHTS.

(3) PROVIDE ATS SECTION WHERE REQUIRED AS SHOWN ON PUMP STATION SPECIFIC ONE–LINE DIAGRAM.

(4) SEE PLANS FOR PUMP STATIONS WITH SITE LIGHTING.



INNER DEADFRONT DOOR

(SHOWN WITH OUTER DOORS, SUNSHIELDS AND FANS REMOVED)

POLY–PORC COATING SYSTEM

SHALL INCLUDE A FIVE STAGE DIP TANK METAL PREPARATION PROCESS:

1. ALKALINE CLEANER 160°F.
2. CLEAR WATER RINSE.
3. IRON PHOSPHATE APPLICATION 150°F.
4. CLEAR WATER RINSE.
5. INHIBITIVE RINSE TO SEAL PHOSPHATED SURFACES 120°F FINISHED WITH AN ELECTROSTATICALLY APPLIED DRY POLYESTER POWDER COATING THEN BAKED 380°F TO CURE.

ENCLOSURE CONSTRUCTION NOTES

1. EXTERIOR 12 GA. H.D. GALV. STEEL AND INTERIOR 14 GA. COLD ROLLED STEEL ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
2. NEMA 3R CONSTRUCTION..
3. ALL NUTS, BOLTS, SCREWS AND HINGES WILL BE STAINLESS STEEL.
4. NUTS, BOLTS & SCREWS SHALL NOT BE VISIBLE FROM OUTSIDE OF ENCLOSURE.
5. PLASTIC NAMEPLATES SHALL BE PROVIDED AS REQUIRED.
6. CONTROL WIRING SHALL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
7. A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
8. ENCLOSURE SHALL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA STANDARDS.
9. COLOR SHALL BE: TO BE DETERMINED
10. ENCLOSURE SHALL BE 20" DEEP.

NO	REVISIONS	DATE	APPR
1			
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MCC ELEVATION

DATE: 5/21/13	SCALE: AS SHOWN	DESIGN: KM	DRAWN: DW	CHECKED: JH

DWG 9363 CASE 95

E3.1

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TYPICAL PANEL "A" FOR WET WELL WITH GENERATOR

ENCLOSURE NEMA 1, INTERRUPTING DUTY 240/120 VOLT, 1 PHASE, 3 WIRE
MOUNTING IN MCC, BREAKER 10KAIC, (1) A. MAIN BREAKER, 100 A. BUS

DESCRIPTION	LOADS/VA A	LOADS/VA B	BKR./POLE	CKT. NO.	PHASE A	PHASE B	CKT. NO.	BKR./POLE	LOADS/VA A	LOADS/VA B	DESCRIPTION
UPS EQUIPMENT	1000		15/1	1			2	20/1	1500		GENERATOR JACKET HEATER
MCC CONV. GFCI		1100	20/1	3			4			1100	BATTERY CHARGER
MCC HEATERS	300			5			6		–		SPARE
MCC LIGHTS		200		7			8			–	
MCC FAN	100		15/1	9			10		–		
(4) SITE LIGHT		70	20/1	11			12			–	
SPARE	–			13			14		–		
		–		15			16			–	
	–			17			18		–		
		–		19			20			–	
	–			21			22		–		
		–		23			24			–	
	–			25			26		–		
		–		27			28			–	
	–			29			30		–		
		–		31			32			–	
	–			33			34		–		
		–		35			36			–	
	–			37			38		–		
		–		39			40			–	
	–			41			42		–		
	1400	1370							1500	1100	

(2)

TOTAL: 5.37 KVA (3) PANEL # "A" FEEDER SIZE (1)

TYPICAL PANEL "A" FOR WET WELL

ENCLOSURE NEMA 1, INTERRUPTING DUTY 240/120 VOLT, 1 PHASE, 3 WIRE
MOUNTING IN MCC, BREAKER 10KAIC A, (1) A. MAIN BREAKER, 100 A. BUS

DESCRIPTION	LOADS/VA A	LOADS/VA B	BKR./POLE	CKT. NO.	PHASE A	PHASE B	CKT. NO.	BKR./POLE	LOADS/VA A	LOADS/VA B	DESCRIPTION
UPS EQUIPMENT	1100		15/1	1			2	20/1	–		SPARE
MCC CONV. GFCI		1100	20/1	3			4			–	
MCC HEATERS	300			5			6		–		
MCC LIGHTS		200		7			8			–	
MCC FAN	100		15/1	9			10		–		
(4) SITE LIGHTING		70	20/1	11			12			–	
SPARE	–			13			14		–		
		–		15			16			–	
	–			17			18		–		
		–		19			20			–	
	–			21			22		–		
		–		23			24			–	
	–			25			26		–		
		–		27			28			–	
	–			29			30		–		
		–		31			32			–	
	–			33			34		–		
		–		35			36			–	
	–			37			38		–		
		–		39			40			–	
	–			41			42		–		
	1500	1370							–	–	

(2)

TOTAL: 2.87 KVA (3) PANEL # "A" FEEDER SIZE (1)

TYPICAL PANEL "A" FOR DRY WELL WITH GENERATOR

ENCLOSURE NEMA 1, INTERRUPTING DUTY 240/120 VOLT, 1 PHASE, 3 WIRE
MOUNTING IN MCC, BREAKER 10KAIC A, (1) A. MAIN BREAKER, 100 A. BUS

DESCRIPTION	LOADS/VA A	LOADS/VA B	BKR./POLE	CKT. NO.	PHASE A	PHASE B	CKT. NO.	BKR./POLE	LOADS/VA A	LOADS/VA B	DESCRIPTION
UPS EQUIPMENT	1000		15/1	1			2	20/1	1500		SPARE
MCC CONV. GFCI		1100	20/1	3			4			1000	
MCC HEATERS	300			5			6		–		
MCC LIGHTS		200		7			8			–	
MCC FAN	100		15/1	9			10		–		
DRY WELL LIGHTS		512	20/1	11			12			–	
DRY WELL RECEPTACLES	900			13			14		–		
DRY WELL SUMP		–		15			16			–	
(4) SITE LIGHT	70			17			18		–		
		–		19			20			–	
	–			21			22		–		
		–		23			24			–	
	–			25			26		–		
		–		27			28			–	
	–			29			30		–		
		–		31			32			–	
	–			33			34		–		
		–		35			36			–	
	–			37			38		–		
		–		39			40			–	
	–			41			42		–		
	2370	1812							1500	1000	

(2)

TOTAL: 6.68 KVA (3) PANEL # "A" FEEDER SIZE (1)

SHEET NOTES:

(1) REFER TO PUMP STATION SPECIFIC ONE-LINE DIAGRAM.

(2) REFER TO PLANS FOR ADDITIONAL CIRCUIT ASSIGNMENTS AS REQUIRED FOR SPECIFIC PUMP STATIONS.

(3) SUBMIT SEPARATE PANEL SCHEDULES FOR EACH PUMP STATION. INDICATE MAIN BREAKER SIZE AND SHOW ADDITIONAL CIRCUIT DESIGNATION WHERE REQUIRED ON PLANS.

(4) SEE PLANS FOR PUMP STATIONS WITH SITE LIGHTING.

NO	REVISIONS	DATE	APPR
1			
2			
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PROJECT NO. 11697-01

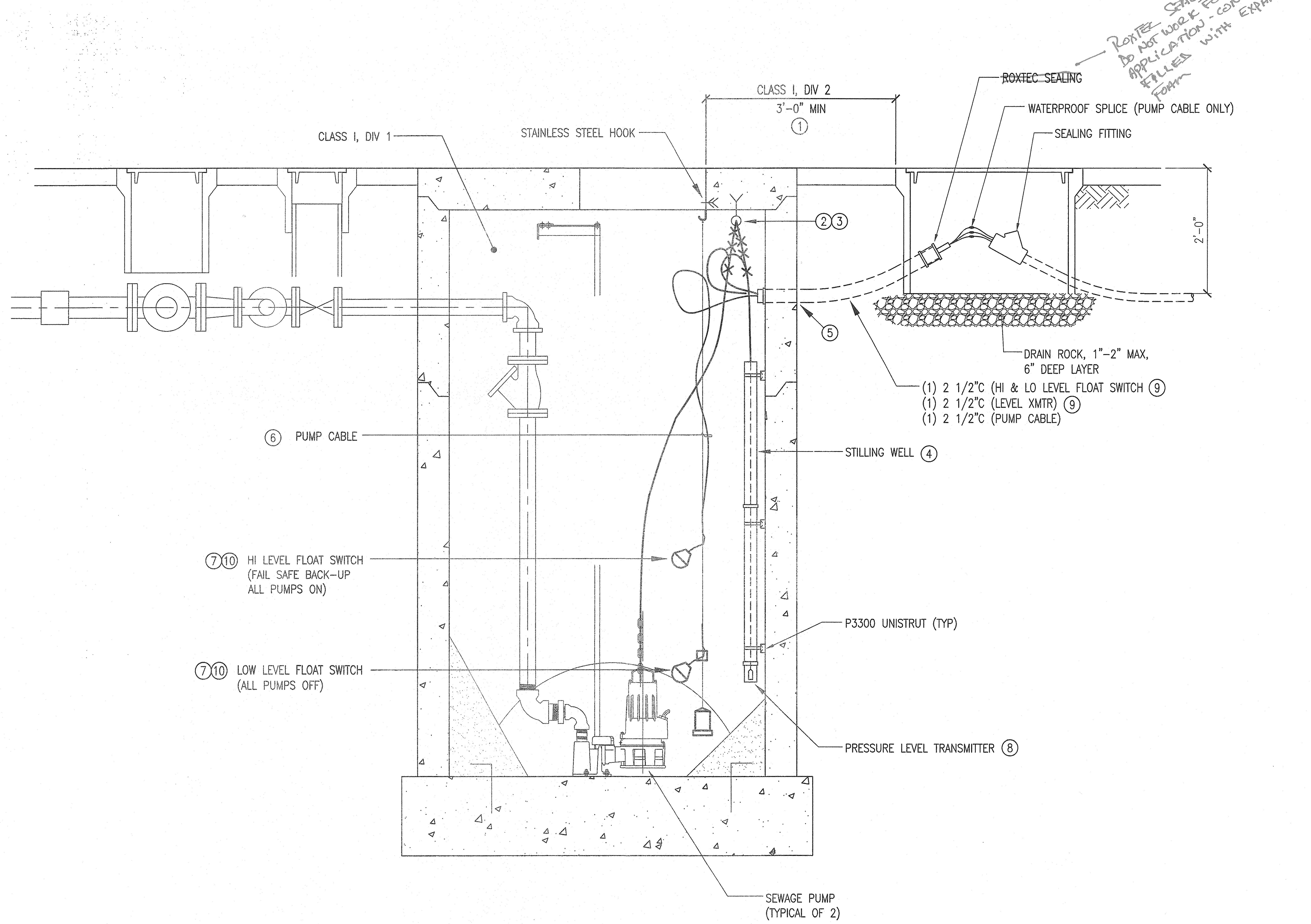
CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS

PANEL SCHEDULES

DATE: 5/21/13
SCALE: AS SHOWN
DESIGN: KM
DRAWN: VNG
CHECKED: JH

DWG 9363 CASE 95

E3.2
42 OF 49



1 TYPICAL WET WELL

SCALE: NOT TO SCALE

GENERAL NOTES:

1. REFER TO PUMP STATION SPECIFIC ELECTRICAL DRAWINGS FOE ADDITIONAL INFORMATION SUCH AS CONDUIT AND WIRE SIZES, ETC. REFER TO PUMP STATION SPECIFIC CIVIL DRAWINGS FOR PUMP STATION DIMENSION, DEPTH AND CONFIGURATION, LOCATION OF INLETS AND OVERFLOW OUTLETS. COORDINATE LOCATION OF ALL REQUIRED ITEMS WITH THE EXISTING AND NEW WELL CONFIGURATION AND OTHER REQUIREMENTS OF THE CONTRACT DOCUMENTS (SUCH AS THOSE IN CIVIL SPECIFICATION AND DRAWINGS).

SHEET NOTES:

(1) LOCATE IN-GROUND PULL BOXES OUTSIDE OF CLASS 1, DIV. 2 AREA, AT LEAST 3 FT. FROM WET WELL HATCH.

(2) PROVIDE STAINLESS STEEL HOOK BOLT AND STAINLESS STEEL CABLE GRIP. LOCATE WITHIN 6 INCHES OF ACCESS HATCH OR AS CLOSE AS POSSIBLE FOR FUTURE ACCESS.

(3) PROVIDE STAINLESS STEEL J-HOOK AND CABLE HOOK (PM&C CH10) FOR SECURING LEVEL TRANSMITTER CABLE.

(4) PROVIDE 6 INCH DIAMETER SCHED. 80 PVC STILLING WELL SECURED TO WET WELL WITH STAINLESS STEEL SUPPORTS AND USING STAINLESS STEEL PIPE CLAMPS. USE UNISTRUT P3300 SS OR EQUAL. LOCATE EVERY 4 FEET AND ROUTE LEVEL TRANSMITTER THROUGH STILLING WELL. SEE SHEET 46, DETAIL 1 FOR ADDITIONAL REQUIREMENTS.

(5) CORE THROUGH EXISTING AND NEW WET WELL WALLS AS REQUIRED. TERMINATE CONDUIT FLUSH WITH WALL WITH INSULATED BUSHINGS. SEAL CONDUITS END WITH SEALING PUTTY.

(6) PUMP CABLE (PER NEC 501.140) SUPPLIED WITH PUMP.

(7) MJK FLOAT SWITCH (MODEL 7030 PART #202810) WITH 39 FT. OF CABLE AND WITH COUNTER WEIGHT (PART #560917). PROVIDE ADDITIONAL CABLE WHERE REQUIRED. TYPICAL FOR HIGH AND LOW FLOAT CABLES.

(8) SUBMERSIBLE HYDROSTATIC, LEVEL TRANSMITTER, PMC VL200 SERIES.

(9) FLOAT SWITCH CABLE AND LEVEL XMTR CABLE SHALL BE RUN CONTINUOUS TO CONTROL PANEL.

(10) COORDINATE EXACT MOUNTING HEIGHT OF FLOATS AND SUBMERSIBLE LEVEL TRANSMITTER WITH CIVIL DRAWINGS AND PUMP STATION REQUIREMENTS. PROVIDE ADDITIONAL CABLE LENGTH AS REQUIRED.

NO	REVISIONS	DATE	APPR
1			
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CITY OF ALAMEDA

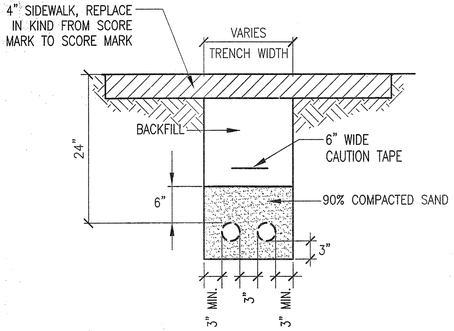
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS

TYPICAL WET WELL ELECTRICAL WORK

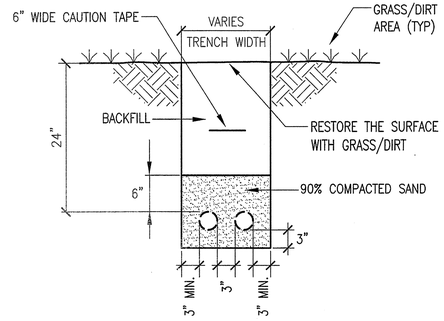
DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	KM
DRAWN:	VM
CHECKED:	JH

DWG 9363 CASE 95

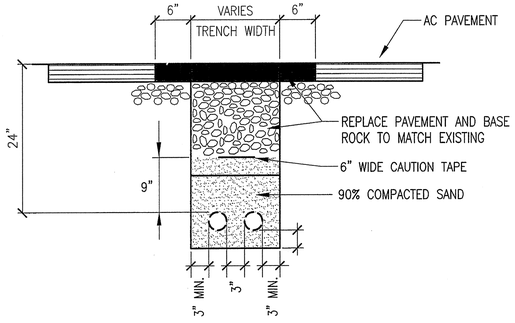
E3.3



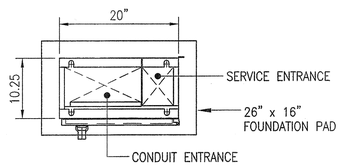
1 — TYPICAL TRENCH DETAIL
SCALE: N.T.S — SIDEWALK AREA



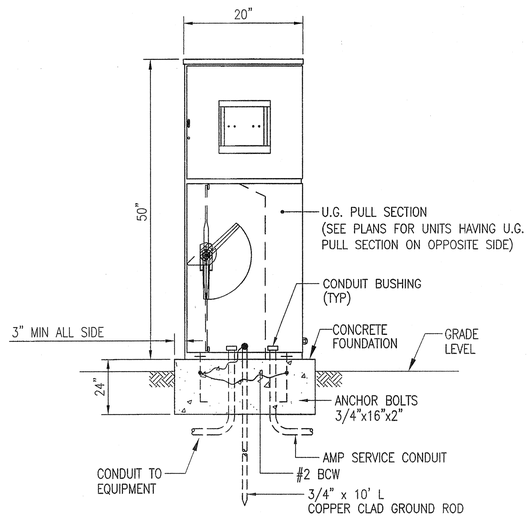
2 — TYPICAL TRENCH DETAIL
SCALE: N.T.S — GRASS/DIRT AREA



3 — TYPICAL TRENCH DETAIL
SCALE: N.T.S — PAVED AREA

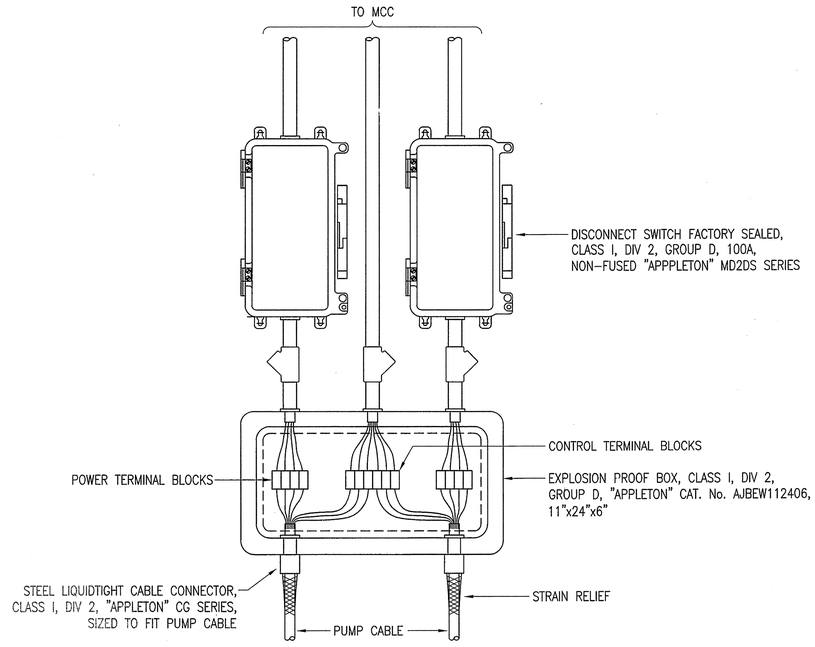


PLAN



ELEVATION

4 — SERVICE PEDESTAL DETAIL
SCALE: N.T.S



5 — DRY WELL PUMP DISCONNECT SW INSTALLATION
SCALE: N.T.S

REVISIONS

NO	DATE	APPR
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REGISTERED PROFESSIONAL ENGINEER
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CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS

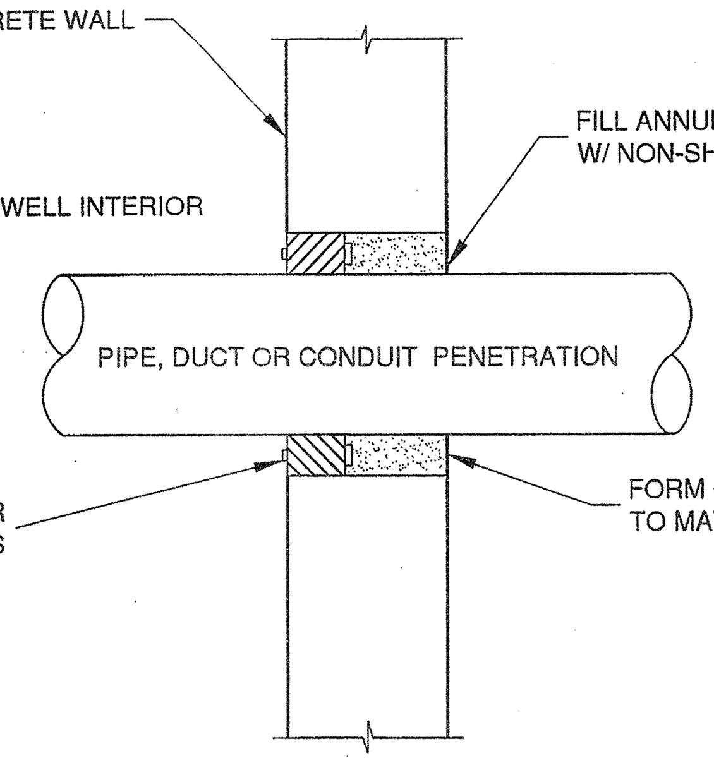
MISCELLANEOUS ELECTRICAL DETAILS

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	KM
DRAWN:	PM
CHECKED:	JH

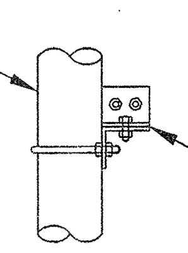
DWG 9363 CASE 95

E3.4

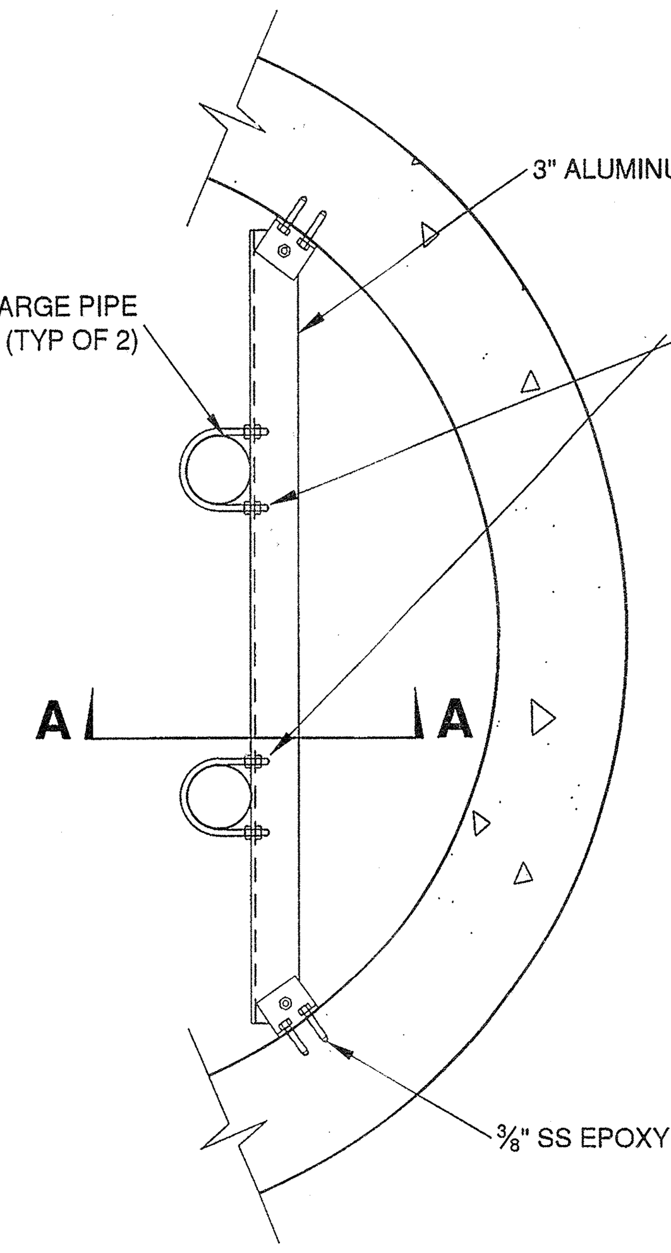
44 OF 49



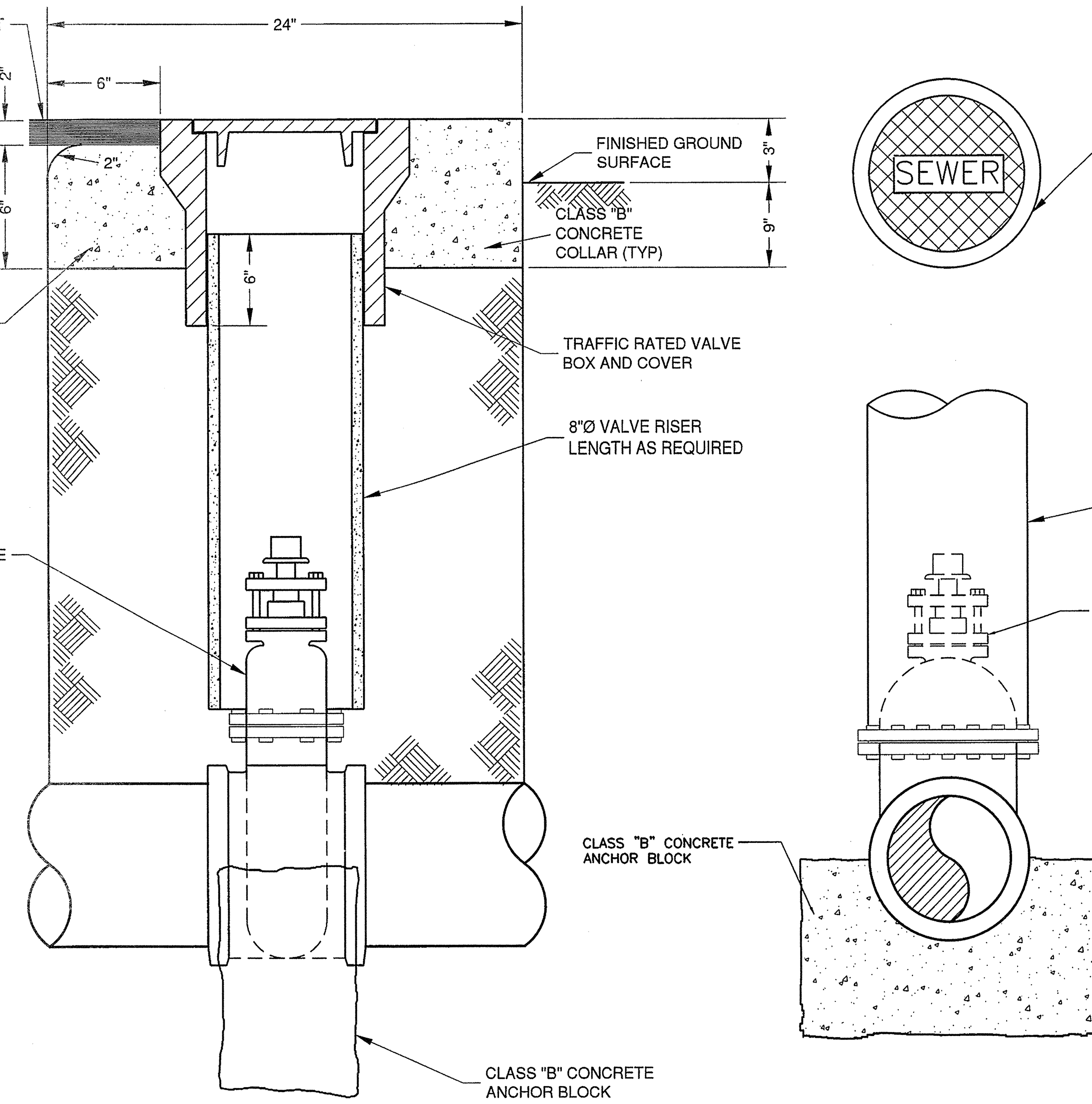
PIPE PENETRATION DETAIL 1/45
NO SCALE



SECTION A-A



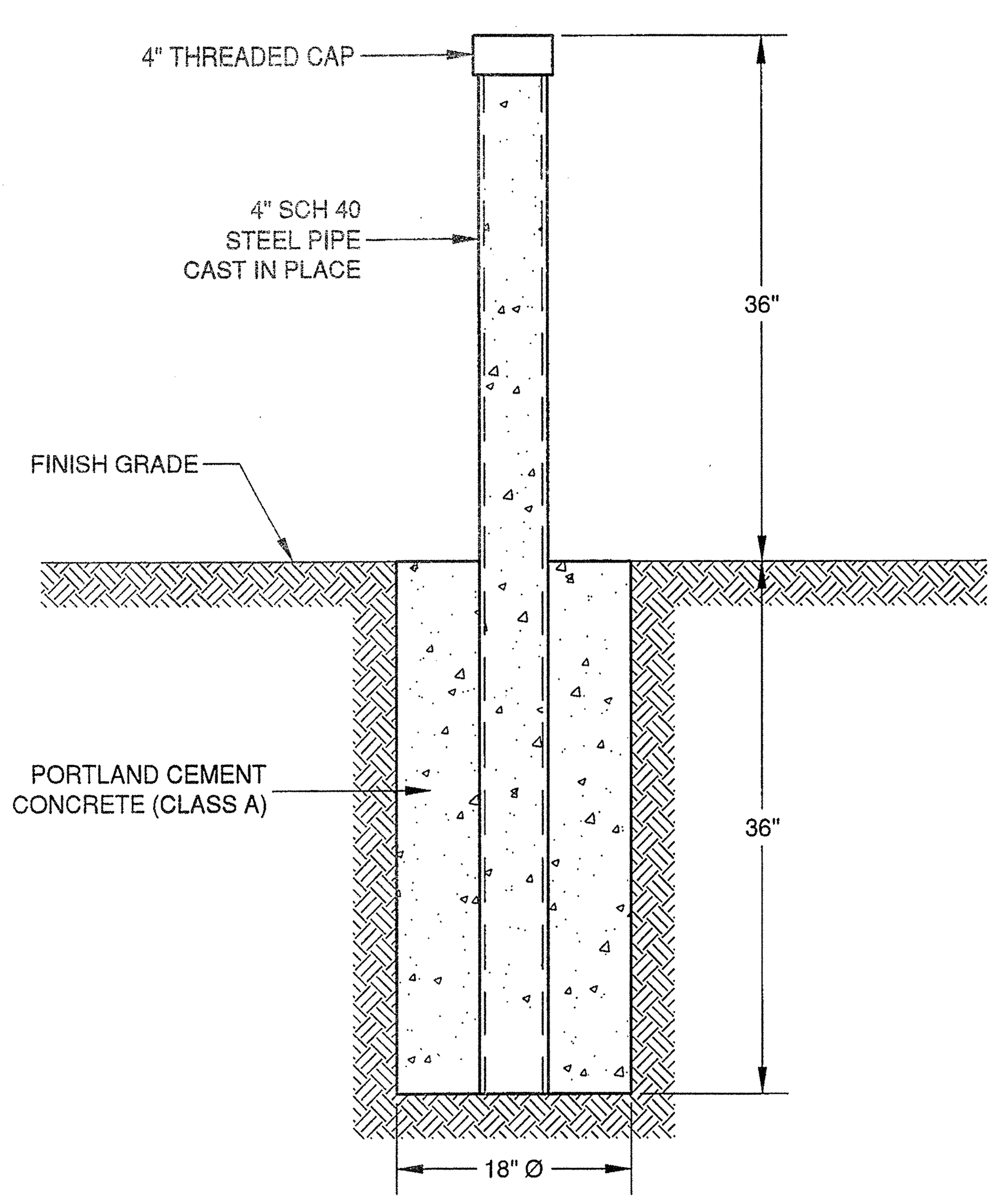
PIPE SUPPORT DETAIL 3/45
NO SCALE



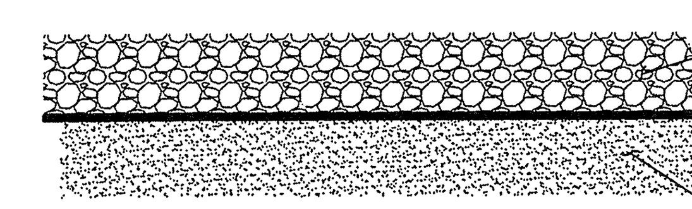
NOTES:

1. PROVIDE VALVE STEM EXTENSION IF DEPTH TO VALVE EXCEEDS FOUR (4) FEET.
2. SECURE CONCRETE ANCHOR BLOCKS TO VALVE BODY USING TWO (2) #4 REBAR SADDLES.
3. VALVES BOLTED TO FITTINGS WILL NOT REQUIRE ANCHOR BLOCKS.

VALVE BOX DETAIL 2/45
NO SCALE



BOLLARD DETAIL 4/45
NTS



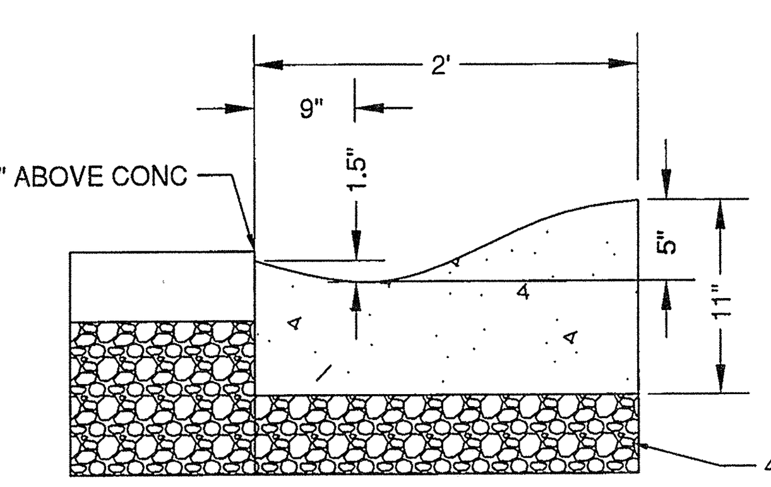
NOTES:

1. ALL EXISTING ROOTS FROM LANDSCAPING SHALL BE REMOVED FROM EXCAVATION. THIS MAY REQUIRE DEEPER EXCAVATION AND COMPACTION.

2. 1-1/2 INCH WASHED ROCK SHALL BE PLACED, GRADED, AND COMPACTED AS SHOWN AND DETAILED IN THE PLANS. ROCK SHALL MEET THE FOLLOWING SIEVE GRADATION:

SIEVE SIZE	PERCENT PASSING
1-1/2" SQUARE	100
1-1/4" SQUARE	90-100
3/4" SQUARE	0-20
3/8" SQUARE	0-2

GRAVEL DETAIL 5/45
NTS



ROLLED CURB DETAIL 6/45
NTS

NO	REVISIONS	DATE	APPR
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REGISTERED PROFESSIONAL ENGINEER BENJAMIN L. SHICK No. 68813 CIVIL STATE OF CALIFORNIA

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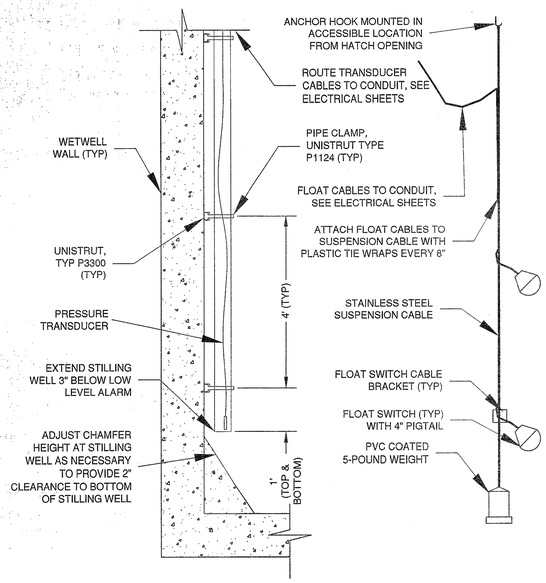
CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS

CIVIL DETAILS

DATE: 5/21/13
SCALE: AS SHOWN
DESIGN: GMA
DRAWN: GMA
CHECKED: BLS

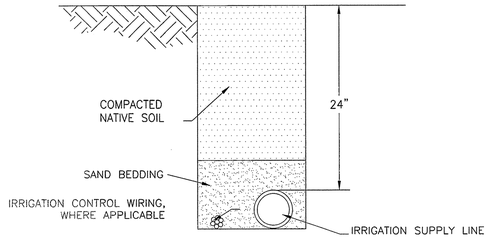
DWG 9363 CASE 95



NOTES:
1. LOCATE STILLING TUBE AS SHOWN ON PUMP STATION PLANS.
2. SUPPORT STILLING WELL AS SHOWN.
3. STILLING WELL SHALL BE 6" DIAMETER SCHEDULE 80 PVC.
4. ALL MOUNTING HARDWARE SHALL BE TYPE 316 STAINLESS STEEL.
5. EXTEND STILLING TUBE TO ONE (1) FOOT BELOW WETWELL CEILING.
6. ANCHOR UNISTRUT TO CONCRETE WALLS W/ ½" X 5" EPOXY ANCHORS.
7. PERFORATE BOTTOM 2 FEET OF STILLING TUBE WITH 1/2" HOLES 2" APART.
8. SEE ELECTRICAL SHEETS AND SPECIFICATIONS FOR TRANSDUCER AND FLOAT SWITCH REQUIREMENTS AND CABLE ROUTING

STILLING WELL AND FLOAT SWITCH MOUNTING DETAIL 1/46

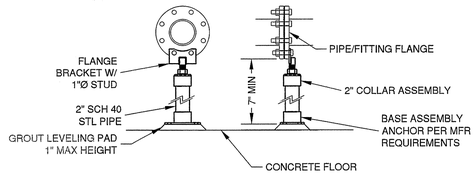
NO SCALE



NOTES:
1. WIRE AND PIPE SHALL MATCH EXISTING TYPE AND SIZE
2. BUNDLE AND TAPE WIRE EVERY TEN FEET

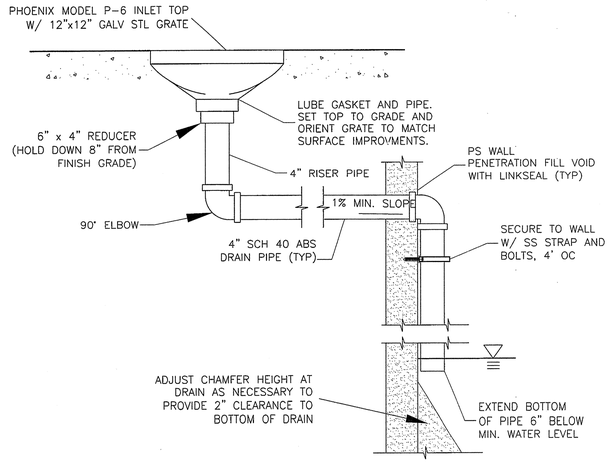
IRRIGATION TRENCH DETAIL 2/46

NO SCALE



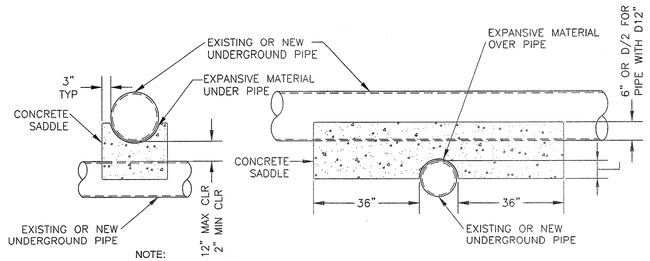
FLANGE PIPE SUPPORT DETAIL 3/46

NO SCALE



ODOR CONTROL DRAIN DETAIL 4/46

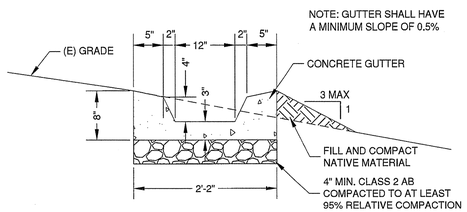
NO SCALE



NOTE:
INSTALL CONCRETE SADDLE AT EACH LOCATION WHERE A NEW UNDERGROUND UTILITY CROSSES IN EXISTING UNDERGROUND UTILITY WITH LESS THAN 12" CLEARANCE. MINIMUM ALLOWABLE CLEARANCE IS 2". A 6-SACKS MIX SHALL BE REQUIRED FOR CONCRETE.

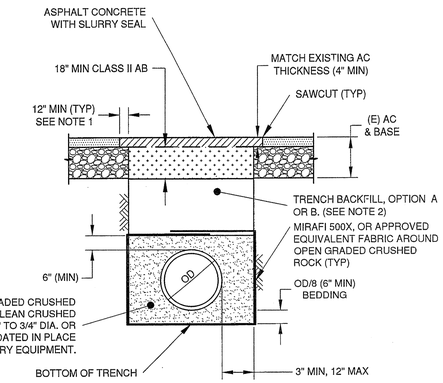
CONCRETE SADDLE DETAIL 5/46

NO SCALE



CONCRETE GUTTER DETAIL 6/46

NO SCALE



OPTION	DESCRIPTION
A	NATIVE MATERIAL WITH LESS THAN 3% ORGANIC CONTENT BY WEIGHT MEETING THE SPECIFICATION REQUIREMENTS, PLACED IN MAX 8" LIFTS, COMPACTED TO 90% MAX DRY DENSITY TO NEAR OPTIMUM MOISTURE CONTENT. UNDERLYING BAY MUD MAY NOT BE USED FOR FILL, AND MUST BE REMOVED FROM PROJECT SITE, IF ENCOUNTERED.
B	INORGANIC IMPORTED MATERIAL MEETING THE SPECIFICATION REQUIREMENTS. IMPORT MATERIALS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO ACCEPTANCE.

NOTES:
1- THE 12" BENCH SECTION FOR A.C. SHALL BE CUT AND REMOVED IMMEDIATELY PRIOR TO FINISH PAVING OPERATIONS.
2- UPPER 6" OF SOIL SUBGRADE MUST BE COMPACTED TO AT LEAST 95% OF MAX DRY DENSITY AND NEAR OPTIMUM MOISTURE CONTENT IN ACCORDANCE TO ASTM D1557.

TRENCH BACKFILL AND PAVEMENT REPLACEMENT DETAIL 7/46

NO SCALE

NO	REVISIONS	DATE	APPR
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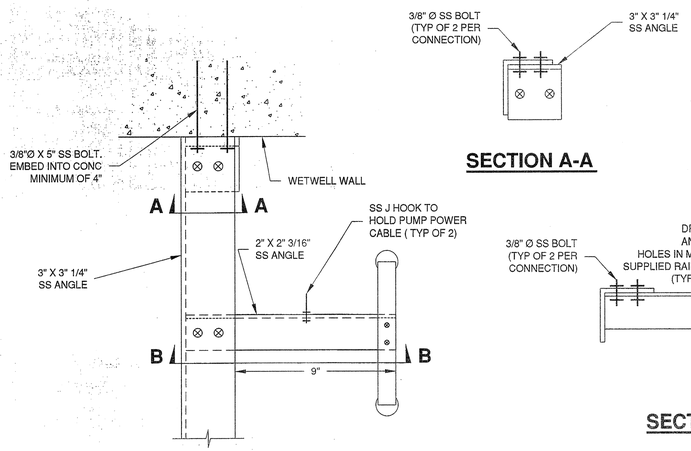
CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS

CIVIL DETAILS

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	GMA
DRAWN:	GMA
CHECKED:	BLS

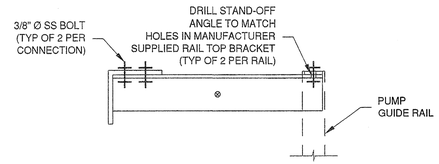
DWG 9363 CASE 95

SHEET 46 OF 49



PLAN

SECTION A-A

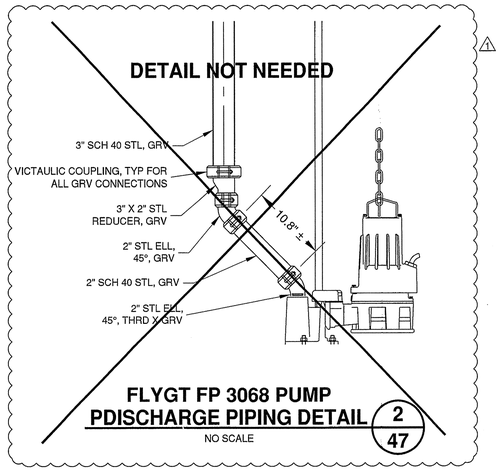


SECTION B-B

NOTES:
1. ALL METAL FABRICATIONS FOR USE IN WETWELL SHALL BE CONSTRUCTED OF TYPE 316 STAINLESS STEEL
2. LOCATE PUMP RAIL MOUNT 3 INCHES BELOW TOP OF WETWELL AND HATCH

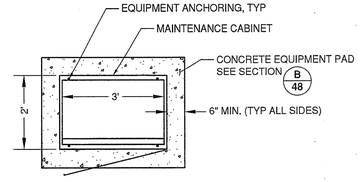
FLYGT FP 3068 PUMP GUIDE RAIL MOUNT DETAIL 1/47

NO SCALE



FLYGT FP 3068 PUMP PDISCHARGE PIPING DETAIL 2/47

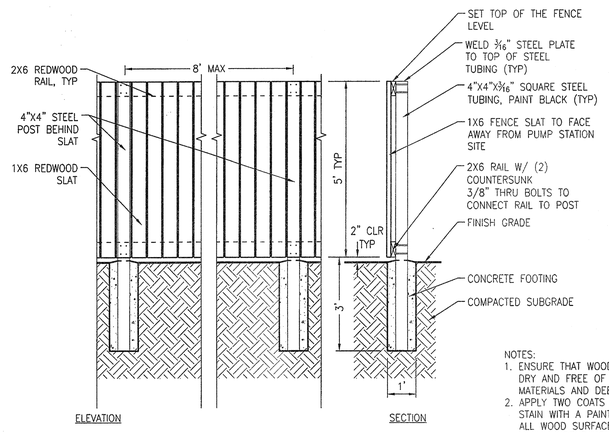
NO SCALE



NOTES:
1. MAINTENANCE CABINET SHALL BE 3 FEET TALL.
2. MAINTENANCE CABINET SHALL MEET THE SPECIFICATIONS OF THE CONTROL PANEL AS DESCRIBED IN SPECIFICATION SECTION 16901.
3. ANCHORAGE OF THE CABINET SHALL BE DESIGNED BY THE MANUFACTURER. MANUFACTURER SHALL SUBMIT DRAWINGS AND CALCULATIONS FOR THE EQUIPMENT ANCHORAGE FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION OF THE EQUIPMENT. SEE PROJECT SPECIFICATIONS FOR SEISMIC DESIGN CRITERIA.

MAINTENANCE CABINET DETAIL 3/47

NO SCALE

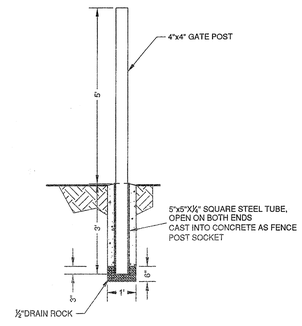


ELEVATION SECTION

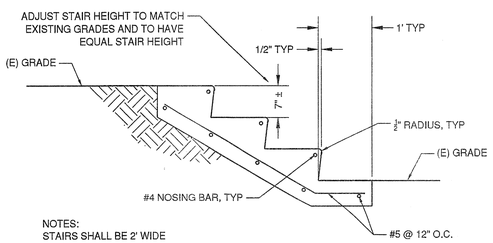
NOTES:
1. ENSURE THAT WOOD IS CLEAN, DRY AND FREE OF LOOSE MATERIALS AND DEBRIS
2. APPLY TWO COATS OF CLEAR STAIN WITH A PAINT BRUSH TO ALL WOOD SURFACES. WAIT A MINIMUM OF 8 HOURS BEFORE APPLYING SECOND COAT.

REDWOOD FENCE DETAIL 4/47

NO SCALE



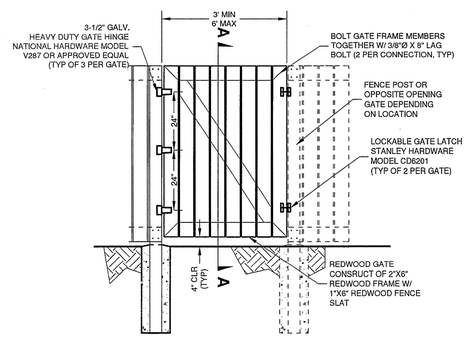
REMOVABLE FENCE POST BASE (WHERE NOTED ON PLANS)



NOTES:
STAIRS SHALL BE 2' WIDE

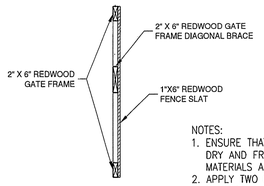
CONCRETE STAIRS DETAIL 7/47

NO SCALE



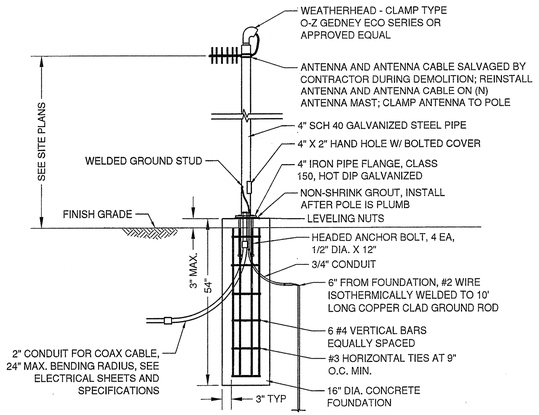
REDWOOD GATE DETAIL 5/47

NO SCALE



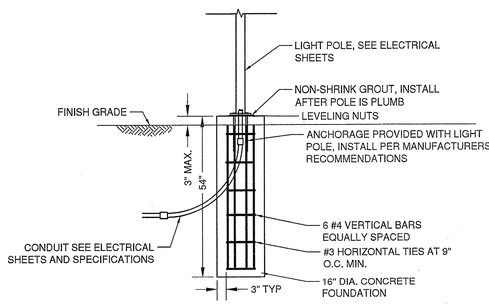
SECTION A-A

NOTES:
1. ENSURE THAT WOOD IS CLEAN, DRY AND FREE OF LOOSE MATERIALS AND DEBRIS
2. APPLY TWO COATS OF CLEAR STAIN WITH A PAINT BRUSH TO ALL WOOD SURFACES. WAIT A MINIMUM OF 8 HOURS BEFORE APPLYING SECOND COAT.



SCADA POLE DETAIL 6/47

NO SCALE



LIGHT POLE FOUNDATION DETAIL 8/47

NO SCALE

NO	DATE	APPR
1	6/19/13	
2		
3		
4		
5		
6		
7		

REVISIONS

ADDENDUM 1

REGISTERED PROFESSIONAL ENGINEER No. 58813 CIVIL STATE OF CALIFORNIA

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS
1171 HOMESTEAD RD, STE. 255
SANTA CLARA, CA 95050
(408) 246-4848

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS

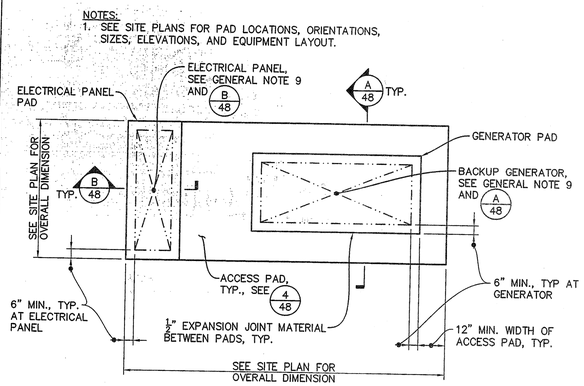
CIVIL DETAILS

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	GMA
DRAWN:	GMA
CHECKED:	BLS

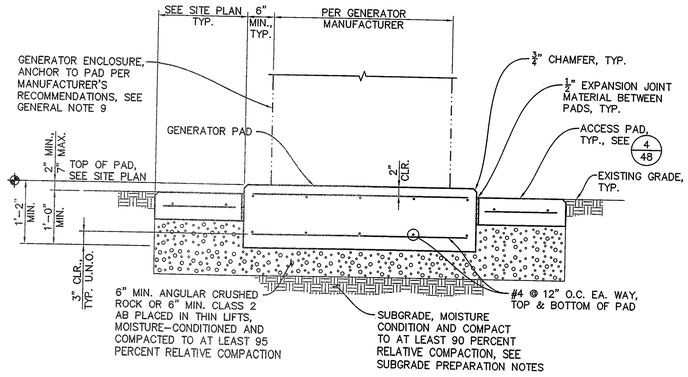
DWG 9363 CASE 95

SHEET 47 OF 49

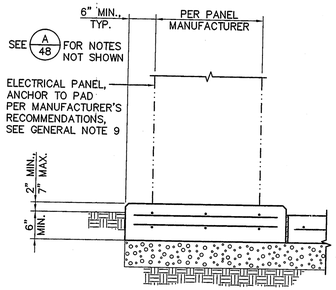
NOTES:
1. SEE SITE PLANS FOR PAD LOCATIONS, ORIENTATIONS, SIZES, ELEVATIONS, AND EQUIPMENT LAYOUT.



TYPICAL EQUIPMENT PAD PLAN
1/4" = 1'-0"



SECTION A / 48
3/4" = 1'-0"



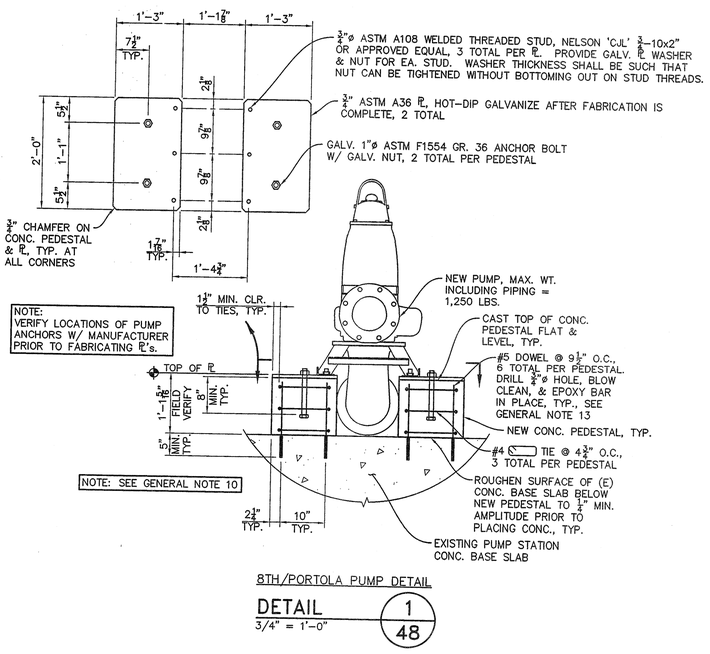
SECTION B / 48
3/4" = 1'-0"

GENERAL NOTES:

1. BASIS OF DESIGN: 2010 CALIFORNIA BUILDING CODE.
2. THESE DRAWINGS SHALL BE USED IN CONJUCTION WITH THE SEPARATELY BOUND PROJECT SPECIFICATIONS.
3. ALL MATERIALS, WORKMANSHIP, TESTING AND INSPECTION SHALL CONFORM TO THE CALIFORNIA BUILDING CODE, 2010 EDITION, AND LOCAL BUILDING CODES.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS ON THE JOBSITE WITH A COMPLETE SET OF THE LATEST DRAWINGS. OMISSIONS OR DISCREPANCIES BETWEEN THE VARIOUS ELEMENTS OF THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH WORK.
5. DETAILS SHOWN ARE TYPICAL, AND APPLY TO SIMILAR CONDITIONS, UNLESS NOTED OTHERWISE.
6. REFER TO SITE PLANS FOR SPECIFIC INFORMATION ON EACH PUMP STATION SITE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOBSITE SAFETY, INCLUDING SAFETY OF THE EXISTING STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, AND GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL ORDINANCES.
8. DRAWINGS SHALL NOT BE SCALED OR MEASURED FOR DIMENSIONS.
9. ANCHORAGE OF EQUIPMENT SHALL BE BY THE MANUFACTURER. MANUFACTURER SHALL SUBMIT DRAWINGS AND CALCULATIONS FOR THE EQUIPMENT ANCHORAGE FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION OF THE EQUIPMENT. SEE PROJECT SPECIFICATIONS FOR SEISMIC DESIGN CRITERIA.
10. EXISTING CONC. PUMP PADS SHALL BE REMOVED PRIOR TO INSTALLATION OF NEW PUMPS. PADS SHALL BE REMOVED FLUSH WITH EXISTING CONC. BASE SLABS WITHOUT DAMAGING BASE SLABS. IF BASE SLABS ARE DAMAGED, BASE SLABS SHALL BE REPAIRED WITH EITHER NON-SHRINK GROUT OR NON-SHRINK EPOXY GROUT. MIN. DEPTH OF REPAIR SHALL BE 1" FOR NON-SHRINK GROUT OR ½" FOR NON-SHRINK EPOXY GROUT. SURFACE PREPARATION, MIXING, APPLICATION, AND CURING OF GROUT SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
11. MATERIAL SPECIFICATIONS:
    A. CONCRETE: MIN. 28 DAY STRENGTH = 4,000 PSI.
    B. REINFORCING STEEL: ASTM A615, GRADE 60.
    C. EPOXY ADHESIVE ANCHOR BOLTS AND DOWELS: SIMPSON STRONG-TIE "SET-XP" EPOXY, HILTI "HIT-RE 500-SD" EPOXY OR APPROVED EQUAL. SEE PROJECT SPECIFICATIONS.
    D. EXPANSION ANCHORS: SIMPSON STRONG-TIE "STRONG-BOLT 2", HILTI "KWIK BOLT TZ" OR APPROVED EQUAL. SEE PROJECT SPECIFICATIONS.
12. DEFERRED SUBMITTALS/SHOP DRAWINGS SHALL BE SUBMITTED FOR THE FOLLOWING ITEMS:
    A. CONCRETE MIX DESIGNS.
    B. BAR REINFORCING STEEL SHOP DRAWINGS.
    C. ANCHORAGE OF EQUIPMENT (DRAWINGS & CALCULATIONS).
13. SPECIAL INSPECTIONS SHALL BE PERFORMED FOR THE FOLLOWING ITEMS:
    A. PLACEMENT OF REINFORCING STEEL.
    B. INSTALLATION OF CAST-IN-PLACE BOLTS AND EMBEDDED ITEMS.
    C. PLACEMENT OF REINFORCED CONCRETE.
    D. INSTALLATION OF POST-INSTALLED ANCHORS.

SUBGRADE PREPARATION NOTES:

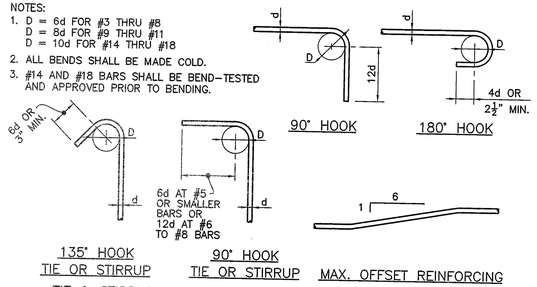
1. UPON COMPLETION OF EXCAVATION FOR EQUIPMENT AND ACCESS PADS, ENGINEER SHALL INSPECT THE EXPOSED SUBGRADE MATERIAL. IF THE SUBGRADE MATERIAL IS CLAY, CONTAINS SIGNIFICANT ROOTS, OR APPEARS POTENTIALLY UNSTABLE AS DETERMINED BY THE ENGINEER, OVEREXCAVATE AN ADDITIONAL 6 INCHES AND COMPACT THE EXPOSED SUBGRADE AT THE BOTTOM OF THE OVEREXCAVATION TO AT LEAST 90 PERCENT RELATIVE COMPACTION. SUBGRADE SHALL HAVE A FIRM, UNYIELDING CONDITION UPON COMPLETION OF COMPACTION. IF, IN THE OPINION OF THE ENGINEER, THE OVEREXCAVATED MATERIAL IS SUITABLE FOR USE AS BACKFILL MATERIAL, MOISTURE CONDITIAN AND RECOMPACT THE OVEREXCAVATED MATERIAL TO AT LEAST 90 PERCENT RELATIVE COMPACTION. IF, IN THE OPINION OF THE ENGINEER, THE OVEREXCAVATED MATERIAL IS NOT SUITABLE FOR USE AS BACKFILL MATERIAL, BACKFILL THE OVEREXCAVATION WITH EITHER ANGULAR CRUSHED ROCK OR CLASS 2 AB PLACED IN THIN LIFTS, MOISTURE-CONDITIONED, AND COMPACTED TO AT LEAST 90 PERCENT RELATIVE COMPACTION.
2. IF THE SUBGRADE MATERIAL AT THE BOTTOM OF THE 6-INCH OVEREXCAVATION STILL CONTAINS SIGNIFICANT ROOTS, APPEARS UNSTABLE, OR IS SIGNIFICANTLY OVER THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE ENGINEER, OVEREXCAVATE AN ADDITIONAL 12 INCHES AND COMPACT THE EXPOSED SUBGRADE AT THE BOTTOM OF THE OVEREXCAVATION TO AT LEAST 90 PERCENT RELATIVE COMPACTION. SUBGRADE SHALL HAVE A FIRM, UNYIELDING CONDITION UPON COMPLETION OF COMPACTION. PLACE TC MIRAFI 600X STABILIZATION FABRIC, OR APPROVED EQUAL, IN THE BOTTOM OF THE OVEREXCAVATION. THE FABRIC SHALL EXTEND UP THE SIDE WALLS OF THE OVEREXCAVATION. IF, IN THE OPINION OF THE ENGINEER, THE OVEREXCAVATED MATERIAL IS SUITABLE FOR USE AS BACKFILL MATERIAL, MOISTURE CONDITION AND RECOMPACT THE OVEREXCAVATED MATERIAL TO AT LEAST 90 PERCENT RELATIVE COMPACTION. IF, IN THE OPINION OF THE ENGINEER, THE OVEREXCAVATED MATERIAL IS NOT SUITABLE FOR USE AS BACKFILL MATERIAL, BACKFILL THE OVEREXCAVATION WITH EITHER ANGULAR CRUSHED ROCK OR CLASS 2 AB PLACED IN THIN LIFTS, MOISTURE-CONDITIONED, AND COMPACTED TO AT LEAST 90 PERCENT RELATIVE COMPACTION.
3. COMPACTION SHALL BE PERFORMED WITH A WACKER 'BPU2540A' VIBRATORY PLATE COMPACTOR OR EQUAL. A MINIMUM OF 4 PASSES ACROSS THE SURFACE BEING COMPACTED SHALL BE PERFORMED. ADDITIONAL PASSES MAY BE NECESSARY AS DIRECTED BY THE ENGINEER.
4. ANY NECESSARY OVEREXCAVATION, COMPACTION, AND BACKFILL WILL BE PAID ON A TIME AND MATERIALS BASIS IN ADDITION TO THE BASE BID.



8TH/PORTOLA PUMP DETAIL

DETAIL 1 / 48
3/4" = 1'-0"

NOTES:
1. D = 6d FOR #3 THRU #8
   D = 8d FOR #9 THRU #11
   D = 10d FOR #14 THRU #18
2. ALL BENDS SHALL BE MADE COLD.
3. #14 AND #18 BARS SHALL BE BEND-TESTED AND APPROVED PRIOR TO BENDING.



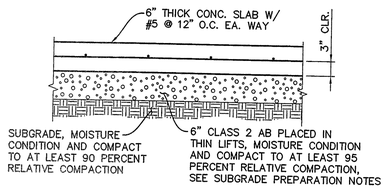
DETAIL 2 / 48
NTS

REINFORCING LAP SPLICES		
CONCRETE STRENGTH	f'_c = 4000 PSI	
BAR SIZE	TOP BARS	OTHER BARS
#3	1'-4"	1'-4"
#4	1'-8"	1'-4"
#5	2'-1"	1'-7"
#6	2'-5"	1'-11"
#7	3'-7"	2'-9"
#8	4'-1"	3'-1"
#9	4'-7"	3'-6"
#10	5'-2"	3'-11"
#11	5'-8"	4'-5"

NOTES:
1. LAP SPLICE LENGTHS SHALL BE INCREASED BY 50% WHERE BAR CLEAR COVER IS LESS THAN 2 BAR DIAMETERS OR WHERE SPACING BETWEEN BARS BEING SPLICED IS LESS THAN 5 BAR DIAMETERS.
2. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.

DETAIL 3 / 48
NTS

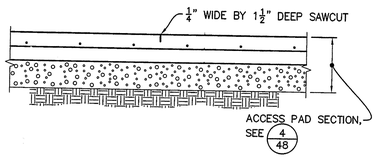
SEE 5 / 48 FOR ACCESS PAD JOINTING REQUIREMENTS



TYPICAL ACCESS PAD SECTION

DETAIL 4 / 48
3/4" = 1'-0"

NOTES:
1. SAW-CUTTING SHALL BE COMPLETED NO MORE THAN 12 HOURS AFTER PLACING CONCRETE SLAB.
2. JOINTS SHALL BE LOCATED AT 10'-0" O.C. MAX.
3. IN LIEU OF SAW-CUTTING, CONTRACTOR MAY EMBED. A 1½" DEEP ZIP STRIP IN SLAB.



WEAKENED PLANE JOINT

DETAIL 5 / 48
3/4" = 1'-0"

NO	REVISIONS	DATE	APPR
1			
2			
3			
4			
5			
6			

REGISTERED PROFESSIONAL ENGINEER JEFFREY A. FINN C 43928 CIVIL STATE OF CALIFORNIA

Finn Design Group, Inc.
Structural Engineers
5000 Hopyard Road, Suite 300
Pleasanton, CA 94588
OFFICE (925) 737-1600
FAX (925) 737-1601
FDG

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS FOR RELIABILITY AND SAFETY IMPROVEMENTS
STRUCTURAL DETAILS

DATE:	5/21/13
SCALE:	AS SHOWN
DESIGN:	TEE
DRAWN:	REM
CHECKED:	JAF

DWG 9363 CASE 95

SHEET 48 OF 49

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GENERAL REQUIREMENTS

ALAMEDA MUNICIPAL POWER
A Department of the City of Alameda

Project Requirements Checklist
General Requirements

Questions? Contact the AMP Engineering Department at 510-748-3996, FAX: 510-748-3993

SUMMARY OF GENERAL REQUIREMENTS

Customer/Contractor is responsible for ensuring that final installations meet all City of Alameda and Alameda Municipal Power (AMP) requirements.

☒ 1. To ensure that all substructure contract work is done per AMP standards, AMP will assign an inspector during construction.

☒ 2. The owner/developer's electrical consultant shall coordinate power requirements with AMP. Failure to do so may delay project implementation.

☒ 3. AMP will charge the owner/developer for the actual cost of all expenses associated with the utility duct system engineering design, plan review, and construction inspection. An estimate of this cost for this project is $ 5245 . To initiate a work order, AMP will require a check or a purchase order from the developer/customer.

☐ 4. Per AMP's Rules and Regulations, the owner/developer shall be responsible for 60% of the installed costs of the required primary trunk cables and pad-mounted switches.

☐ 5. AMP will require a Transformer Capacity Utilization Agreement and deposit from the customer when the new service request requires a 750 kVA or larger capacity transformer, prior to purchase of the transformer. The service size indicated will require a _____ kVA transformer and a $ 00 deposit. (For projects requiring large transformers and/or switches, developer/customer must allow for a 4 to 6-month leadtime).

☒ 6. Developer's contractor shall obtain an electrical permit from the City's Permit Center. The City of Alameda's Combination Inspector must approve electrical installation before any service will be energized.

☐ 7. Streetlight system on public streets shall be subject to AMP's review and approval. Developer may enter into an agreement with AMP regarding maintenance and future replacement of private streetlights.

☐ 8. AMP is presently the telephone service provider at Alameda Point. Please contact the Telecom Operations Supervisor at (510)-814-5631 for inquiries.

☐ 9. Other Comments:
_____

#3 CHANNING PUMP STATION

ALAMEDA MUNICIPAL POWER
A Department of the City of Alameda

Project Requirements Checklist
Service Equipment Requirements

Questions? Contact the AMP Engineering Department at 510-748-3996, FAX: 510-748-3993

SUMMARY OF SERVICE EQUIPMENT REQUIREMENTS

Customer/Contractor is responsible for ensuring that final installations meet all City of Alameda and Alameda Municipal Power (AMP) requirements.

AMP will furnish and install the necessary metering CT's, PT's, and test switch. For service equipment approval, contractor/vendor must comply with all AMP and City of Alameda requirements, including those summarized below. All Service Equipment will have provisions for sealing the Meter per EUSERC requirements.

Customer/Contractor should provide Service Equipment shop drawings to AMP for review, prior to manufacture, to avoid delays due to field modifications. Final Service Equipment Submittals must be provided to, and approved by, the City of Alameda Permit Center and AMP prior to installation and connection to AMP's electrical system.

1. Service Equipment: ☐ Indoor (NEMA 1 or better) ☒ Outdoor (NEMA 3R or better)
2. Service Rating: 200 Amperes 240/120 Volts 1 Phase 4 Wires
3. Bus Bar Dimensions: Phase - _____; Neutral - _____.
   (Current density shall be based on 1000 A/sq. inch for copper bus and 750 A/sq. inch for aluminum bus. The minimum required current density shall apply to the main bus upstream of the meter(s) including up to the first disconnect after each meter).
4. Main Disconnect: ☒ Circuit Breaker ☐ Fused Switch
5. Interrupting or Short Circuit Rating: 10,000 Amperes, RMS Sym.
6. CT Compartment (per EUSERC #320 or #322, whichever is applicable)
7. Meter Plate (per EUSERC #332)
8. Pull Section (per EUSERC #345)
9. Line Termination (per EUSERC #347)
10. Copper Ground Bus
11. Factory-installed bolt-type test by-pass/disconnect block (for self contained meters only)
12. Meter Socket with _____ Jaws
13. Remote Metering Required: ☐ Yes; ☐ No

NOTE: Please contact the Electrical Equipment Supervisor, at (510) 814-5692 as soon as the equipment arrives at the job site to schedule the installation of AMP-furnished instrument transformers and other metering devices.

The service equipment will also have to be inspected and approved by the City of Alameda's Electrical Inspector, (510) 747-6830, before it can be energized. **For projects under Federal, State, or County inspection jurisdiction, a City inspection of service equipment up to and including the main disconnect, at a minimum, is required before the service can be energized.**

#5 AUGHINBAUGH PUMP STATION

ALAMEDA MUNICIPAL POWER
A Department of the City of Alameda

Project Requirements Checklist
Service Equipment Requirements

Questions? Contact the AMP Engineering Department at 510-748-3996, FAX: 510-748-3993

SUMMARY OF SERVICE EQUIPMENT REQUIREMENTS

Customer/Contractor is responsible for ensuring that final installations meet all City of Alameda and Alameda Municipal Power (AMP) requirements.

AMP will furnish and install the necessary metering CT's, PT's, and test switch. For service equipment approval, contractor/vendor must comply with all AMP and City of Alameda requirements, including those summarized below. All Service Equipment will have provisions for sealing the Meter per EUSERC requirements.

Customer/Contractor should provide Service Equipment shop drawings to AMP for review, prior to manufacture, to avoid delays due to field modifications. Final Service Equipment Submittals must be provided to, and approved by, the City of Alameda Permit Center and AMP prior to installation and connection to AMP's electrical system.

1. Service Equipment: ☐ Indoor (NEMA 1 or better) ☒ Outdoor (NEMA 3R or better)
2. Service Rating: 200 Amperes 208/120 Volts 3 Phase 4 Wires
3. Bus Bar Dimensions: Phase - _____; Neutral - _____.
   (Current density shall be based on 1000 A/sq. inch for copper bus and 750 A/sq. inch for aluminum bus. The minimum required current density shall apply to the main bus upstream of the meter(s) including up to the first disconnect after each meter).
4. Main Disconnect: ☒ Circuit Breaker ☐ Fused Switch
5. Interrupting or Short Circuit Rating: 35,000 Amperes, RMS Sym.
6. CT Compartment (per EUSERC #320 or #322, whichever is applicable)
7. Meter Plate (per EUSERC #332)
8. Pull Section (per EUSERC #345)
9. Line Termination (per EUSERC #347)
10. Copper Ground Bus
11. Factory-installed bolt-type test by-pass/disconnect block (for self contained meters only)
12. Meter Socket with _____ Jaws
13. Remote Metering Required: ☐ Yes; ☐ No

NOTE: Please contact the Electrical Equipment Supervisor, at (510) 814-5692 as soon as the equipment arrives at the job site to schedule the installation of AMP-furnished instrument transformers and other metering devices.

The service equipment will also have to be inspected and approved by the City of Alameda's Electrical Inspector, (510) 747-6830, before it can be energized. **For projects under Federal, State, or County inspection jurisdiction, a City inspection of service equipment up to and including the main disconnect, at a minimum, is required before the service can be energized.**

#19 YORKSHIRE-FRANCISCAN PUMP STATION

ALAMEDA MUNICIPAL POWER
A Department of the City of Alameda

Project Requirements Checklist
Service Equipment Requirements

Questions? Contact the AMP Engineering Department at 510-748-3996, FAX: 510-748-3993

SUMMARY OF SERVICE EQUIPMENT REQUIREMENTS

Customer/Contractor is responsible for ensuring that final installations meet all City of Alameda and Alameda Municipal Power (AMP) requirements.

AMP will furnish and install the necessary metering CT's, PT's, and test switch. For service equipment approval, contractor/vendor must comply with all AMP and City of Alameda requirements; including those summarized below. All Service Equipment will have provisions for sealing the Meter per EUSERC requirements.

Customer/Contractor should provide Service Equipment shop drawings to AMP for review, prior to manufacture, to avoid delays due to field modifications. Final Service Equipment Submittals must be provided to, and approved by, the City of Alameda Permit Center and AMP prior to installation and connection to AMP's electrical system.

1. Service Equipment: ☐ Indoor (NEMA 1 or better) ☒ Outdoor (NEMA 3R or better)
2. Service Rating: 200 Amperes 240/120 Volts 1 Phase 4 Wires
3. Bus Bar Dimensions: Phase - _____; Neutral - _____.
   (Current density shall be based on 1000 A/sq. inch for copper bus and 750 A/sq. inch for aluminum bus. The minimum required current density shall apply to the main bus upstream of the meter(s) including up to the first disconnect after each meter).
4. Main Disconnect: ☒ Circuit Breaker ☐ Fused Switch
5. Interrupting or Short Circuit Rating: 10,000 Amperes, RMS Sym.
6. CT Compartment (per EUSERC #320 or #322, whichever is applicable)
7. Meter Plate (per EUSERC #332)
8. Pull Section (per EUSERC #345)
9. Line Termination (per EUSERC #347)
10. Copper Ground Bus
11. Factory-installed bolt-type test by-pass/disconnect block (for self contained meters only)
12. Meter Socket with _____ Jaws
13. Remote Metering Required: ☐ Yes; ☐ No

NOTE: Please contact the Electrical Equipment Supervisor, at (510) 814-5692 as soon as the equipment arrives at the job site to schedule the installation of AMP-furnished instrument transformers and other metering devices.

The service equipment will also have to be inspected and approved by the City of Alameda's Electrical Inspector, (510) 747-6830, before it can be energized. **For projects under Federal, State, or County inspection jurisdiction, a City inspection of service equipment up to and including the main disconnect, at a minimum, is required before the service can be energized.**

#20 POND-OTIS PUMP STATION

ALAMEDA MUNICIPAL POWER
A Department of the City of Alameda

Project Requirements Checklist
Service Equipment Requirements

Questions? Contact the AMP Engineering Department at 510-748-3996, FAX: 510-748-3993

SUMMARY OF SERVICE EQUIPMENT REQUIREMENTS

Customer/Contractor is responsible for ensuring that final installations meet all City of Alameda and Alameda Municipal Power (AMP) requirements.

AMP will furnish and install the necessary metering CT's, PT's, and test switch. For service equipment approval, contractor/vendor must comply with all AMP and City of Alameda requirements, including those summarized below. All Service Equipment will have provisions for sealing the Meter per EUSERC requirements.

Customer/Contractor should provide Service Equipment shop drawings to AMP for review, prior to manufacture, to avoid delays due to field modifications. Final Service Equipment Submittals must be provided to, and approved by, the City of Alameda Permit Center and AMP prior to installation and connection to AMP's electrical system.

1. Service Equipment: ☐ Indoor (NEMA 1 or better) ☒ Outdoor (NEMA 3R or better)
2. Service Rating: 200 Amperes 240/120 Volts 1 Phase 4 Wires
3. Bus Bar Dimensions: Phase - _____; Neutral - _____.
   (Current density shall be based on 1000 A/sq. inch for copper bus and 750 A/sq. inch for aluminum bus. The minimum required current density shall apply to the main bus upstream of the meter(s) including up to the first disconnect after each meter).
4. Main Disconnect: ☒ Circuit Breaker ☐ Fused Switch
5. Interrupting or Short Circuit Rating: 10,000 Amperes, RMS Sym.
6. CT Compartment (per EUSERC #320 or #322, whichever is applicable)
7. Meter Plate (per EUSERC #332)
8. Pull Section (per EUSERC #345)
9. Line Termination (per EUSERC #347)
10. Copper Ground Bus
11. Factory-installed bolt-type test by-pass/disconnect block (for self contained meters only)
12. Meter Socket with _____ Jaws
13. Remote Metering Required: ☐ Yes; ☐ No

NOTE: Please contact the Electrical Equipment Supervisor, at (510) 814-5692 as soon as the equipment arrives at the job site to schedule the installation of AMP-furnished instrument transformers and other metering devices.

The service equipment will also have to be inspected and approved by the City of Alameda's Electrical Inspector, (510) 747-6830, before it can be energized. **For projects under Federal, State, or County inspection jurisdiction, a City inspection of service equipment up to and including the main disconnect, at a minimum, is required before the service can be energized.**

#21 GRAND-SHORELINE PUMP STATION

ALAMEDA MUNICIPAL POWER
A Department of the City of Alameda

Project Requirements Checklist
Service Equipment Requirements

Questions? Contact the AMP Engineering Department at 510-748-3996, FAX: 510-748-3993

SUMMARY OF SERVICE EQUIPMENT REQUIREMENTS

Customer/Contractor is responsible for ensuring that final installations meet all City of Alameda and Alameda Municipal Power (AMP) requirements.

AMP will furnish and install the necessary metering CT's, PT's, and test switch. For service equipment approval, contractor/vendor must comply with all AMP and City of Alameda requirements, including those summarized below. All Service Equipment will have provisions for sealing the Meter per EUSERC requirements.

Customer/Contractor should provide Service Equipment shop drawings to AMP for review, prior to manufacture, to avoid delays due to field modifications. Final Service Equipment Submittals must be provided to, and approved by, the City of Alameda Permit Center and AMP prior to installation and connection to AMP's electrical system.

1. Service Equipment: ☐ Indoor (NEMA 1 or better) ☒ Outdoor (NEMA 3R or better)
2. Service Rating: 200 Amperes 240/120 Volts 1 Phase 4 Wires
3. Bus Bar Dimensions: Phase - _____; Neutral - _____.
   (Current density shall be based on 1000 A/sq. inch for copper bus and 750 A/sq. inch for aluminum bus. The minimum required current density shall apply to the main bus upstream of the meter(s) including up to the first disconnect after each meter).
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11. Factory-installed bolt-type test by-pass/disconnect block (for self contained meters only)
12. Meter Socket with _____ Jaws
13. Remote Metering Required: ☐ Yes; ☐ No

NOTE: Please contact the Electrical Equipment Supervisor, at (510) 814-5692 as soon as the equipment arrives at the job site to schedule the installation of AMP-furnished instrument transformers and other metering devices.

The service equipment will also have to be inspected and approved by the City of Alameda's Electrical Inspector, (510) 747-6830, before it can be energized. **For projects under Federal, State, or County inspection jurisdiction, a City inspection of service equipment up to and including the main disconnect, at a minimum, is required before the service can be energized.**

NO	REVISIONS	DATE	APPR
1			
2			
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REGISTERED PROFESSIONAL ENGINEER No. 28313 CIVIL STATE OF CALIFORNIA

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS
1171 HOMESTEAD RD. STE 255
SANTA CLARA, CA 95050
(408) 246-4848

CITY OF ALAMEDA
GROUP 1 - SEWERAGE PUMP STATION RENOVATIONS
FOR RELIABILITY AND SAFETY IMPROVEMENTS

ALAMEDA POWER SERVICE REQ.

DATE: 5/21/13
SCALE: AS SHOWN
DESIGN: GMA
DRAWN: GMA
CHECKED: BLS

DWG 9363 CASE 95

SHEET 49 OF 49

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