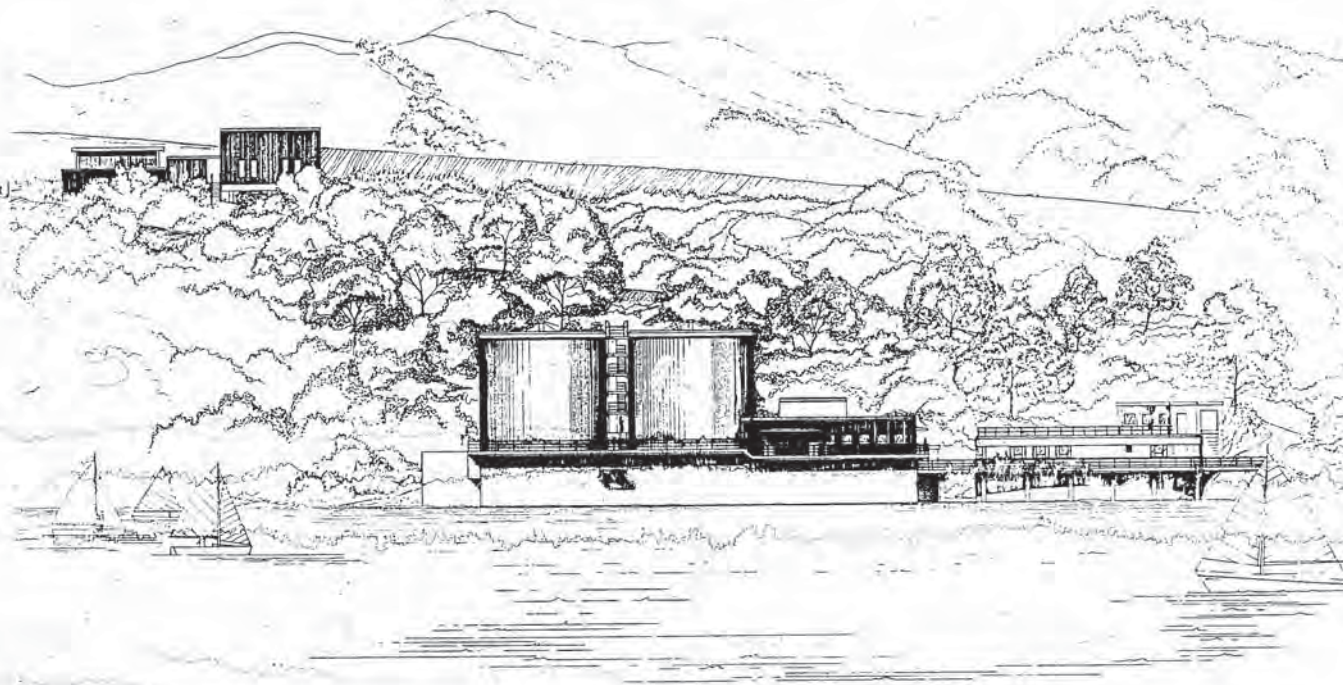


SAUSALITO - MARIN CITY SANITARY DISTRICT

WASTEWATER PLANT IMPROVEMENTS

C-06-2464



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Record Drawing
These record drawings have been prepared in accordance with the provisions of the San Francisco Public Works Department, Chapter 22, Section 22.01, and are to be used for the purpose of construction. The Engineer is not responsible for any errors or omissions in this document or in the result of information provided by others.
Date: 1-29-81

Record
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Date: 1-29-81

Reference Information and Notes:

Designed: JHF
Drawn: RAB
Checked: JHF
Date: 1-29-81

Wastewater Plant Improvements C-06-2464
Sausalito - Marin City Sanitary District

KennedyJenks Engineers

San Francisco

Submitted: [Signature]
Date: 1-29-81

Approved: [Signature]
Date: 1-29-81

VICINITY
AND LIST OF

ABBREVIATIONS

A.C.	ASBESTOS CEMENT, ASPHALTIC CONCRETE	PCA	FLANGED COUPLING ADAPTER	N.T.C.	NOT IN CONTRACT	SHT.	SHEET
A.C.I.	AMERICAN CONCRETE INSTITUTE	FCO	FLOOR CLEANOUT	NO.	NUMBER	SIM.	SIMILAR
ADDIT.	ADDITIONAL	FD	FLOOR DRAIN	NOM.	NOMINAL	S.P.	STATIC PRESSURE
ADJ.	ADJACENT	PFR	FIXED FILM REACTOR	N.T.S.	NOT TO SCALE	SPEC., SPECIF.	SPECIFICATION
AL.-ALUM.	ALUMINUM	PH	FLAT HEAD	O.C.	ON CENTERS	SP, SP'S	SPACE OR SPACES
ANCH.	ANCHOR	PHMS	FLAT HEAD MACHINE SCREW	O.D.	OUTSIDE DIAMETER	SQ	SQUARE
APPROX.	APPROXIMATE	PHPS	FLAT HEAD PHILLIPS SCREW	OF	OUTSIDE FACE	S.S.	STAINLESS STEEL
ARCH. ARCHIT'L	ARCHITECTURAL	PHMS	FLAT HEAD SHEET METAL SCREW	OPER.	OPERATOR	STA.	STATION
AUTO	AUTOMATIC	FIN.	FINISHED	OPNG., OPN'G.	OPENING	ST.	STEEL
B.C.	BOLT CIRCLE	FL.	FLOOR	OPP.	OPPOSITE	STRUCT.	STRUCTURAL
B.H.S.M.C.	BUTTON HEAD SHEET METAL SCREW	FLD. CK.	FIELD CHECK	O.S.F.W.	OUTSIDE FACE OF WALL	SUPP., S.	SUPPORT
B.LD'G.	BUILDING	FLEX.	FLEXIBLE	P.	PIPE	SW	SEAL WATER
B.M.	BEAM, BENCH MARK	FLG.	FLANGE	PH	PHASE	SXT	SOCKETS X THREAD
BOT., BOTTL., B.M.	BOTTOM	FOR	FUEL OIL RETURN	PL	PLATE	T	TOP, TREAD TYPE
C.C., C/C	CENTER TO CENTER	FOS	FUEL OIL SUPPLY	PREF.	PREFORMED	T&B	TOP AND BOTTOM
CFH	CUBIC FEET PER HOUR	GA.	GAUGE	PRESS.	PRESSURE	T/	TOP
CFM	CUBIC FEET PER MINUTE	GA., GALV.	GALVANIZED	PROJ.	PROJECTION	TKS	TYPE K SUPPORT
CHK'D.	CHECKERED	GAL.	GALLONS	P.R.V.	PRESSURE REDUCING VALVE	THK., TK.	THICK
CHLOR.	CHLORINE	GPM	GALLONS PER MINUTE	P.S.I.	POUNDS PER SQUARE INCH	TM-2P	TYPE M-2 PIPE - SEE PIPE SCHEDULE
C.I.	CAST IRON	GR.	GRADE, GROUND	PT	POINT	TYP.	TYPICAL
CK-PL	CHECKERED PLATE	G.V.	GATE VALVE	PVMT.	PAVEMENT	VD	VOLUME DAMPER
CLR.	CLEAR, CLEARANCE	H., HT.	HEIGHT	R.	RADIUS, RISER	VERT.	VERTICAL
COL.	COLUMN	H.B.	HOSE BIBB	RAD.	RADIUS	W.	WIDTH
CONC.	CONCRETE	HEX.	HEXAGONAL	R.D.	ROOF DRAIN	W/	WITH
CONST.	CONSTRUCTION	H.M.	HOLLOW METAL	RED.	REDUCER	WR	WALL REGISTER
CONT.	CONTINUOUS, CONTINUATION	HORIZ., HOR.	HORIZONTAL	REF	REFERENCE		
CPLG.	COUPLING	HP.	HORSEPOWER	REG.	REGISTER		
CTRSK.	COUNTERSUNK	HPSG	HIGH PRESSURE SLUDGE GAS	REINF.	REINFORCING		
CW	COLD WATER	HTG.	HEATING	REQ'D	REQUIRED		
DBLE.	DOUBLE	HWR	HOT WATER RETURN	RHWS	ROUND HEAD WOOD SCREW		
DET.	DETAIL	HWS	HOT WATER SUPPLY	RM	ROOM		
D.F.	DOUGLAS FIR	I.D.	INSIDE DIAMETER	R.O.	ROUGH OPENING		
DIA.	DIAMETER	I.E.	INVERT ELEVATION	RPM	REVOLUTIONS PER MINUTE		
DISCH.	DISCHARGE	IP	INSIDE FACE	RT	RIGHT		
DN.	DOWN	IN.	INCH	R.V.	RELIEF VALVE		
DR.	DOOR, DRAIN	INSUL., INSUL'T'N.	INSULATION	RWD	REDWOOD		
DWG.	DRAWING	INV.	INVERT	RWL	RAIN WATER LEADER		
EA.	EACH	JT.	JOINT	SAN.	SANITARY		
EF.	EACH FACE	L	LENGTH OF CURVE	SCH., SCHED.	SCHEDULE		
EFPL.	EFFLUENT	L.W.	LOW WATER	S.E.	SOUTHEAST		
EL.	ELEVATION	MACH.	MACHINE	SEC.	SECONDARY		
ELECT.	ELECTRICAL	MAT'L.	MATERIAL	SED.	SEDIMENTATION		
ENCL.	ENCLOSURE	MAX.	MAXIMUM	SG	SLUDGE GAS		
E.P.	EDGE OF PAVEMENT	M.B.	MACHINE BOLT				
EQ.	EQUAL	M.C.C.	MOTOR CONTROL CENTER				
EQUIP.	EQUIPMENT	MECH.	MECHANICAL				
E.W.	EACH WAY	MED.	MEDIUM				
EXIST.	EXISTING	MFR., MANUF.	MANUFACTURER				
EXP., EXPA.	EXPANSION	M.H.	MANHOLE				
EXT.	EXTERIOR, EXTENSION	MIN.	MINIMUM				
		MISC.	MISCELLANEOUS				
		MTG.	MOUNTING				

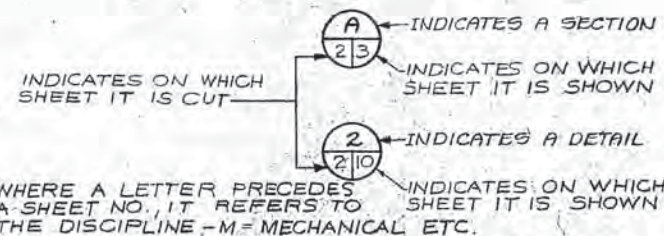
GENERAL SYMBOLS

DESCRIPTION	SINGLE LINE	DOUBLE LINE
JOINTS		
FLANGED		
JOINT AS DESCRIBED IN PERTINENT PIPE SPECIFICATION		
VALVES		
GATE		
GLOBE		
PLUG		
SWING OR BALL CHECK		
SPECIAL VALVES (INCLUDES SOLENOID VALVE)		
BALL		
NEEDLE VALVE		
BUTTERFLY (FLANGED)		
RELIEF VALVE		
THREE-WAY VALVE		
FITTINGS		
ELBOW-STRAIGHT		
ELBOW-REDUCING		
REDUCER (CONCENTRIC SHOWN)		
TEE		
CROSS		
STRAINER		
UNION		
FLEXIBLE COUPLING		
FLANGED COUPLING ADAPTER		
VICTAULIC COUPLING		
EXISTING PIPING ETC.		

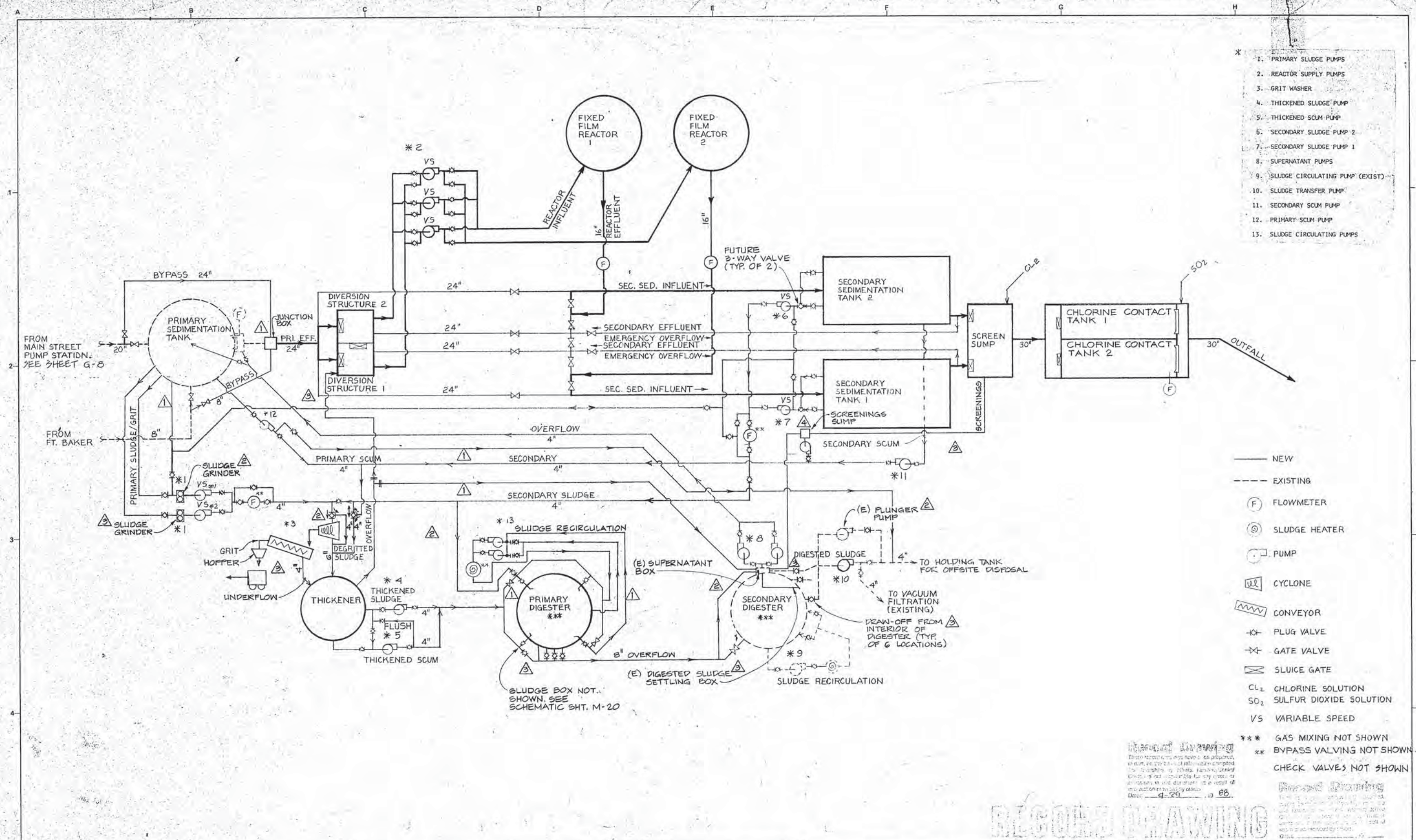
OTHER

CONCRETE IN SECTION		HANDRAIL OR GUARDRAIL	
STEEL IN SECTION		WATER SURFACE	
WOOD IN SECTION		STRUCTURAL STEEL ANGLE	
GRATING		STRUCTURAL STEEL CHANNEL C4x5.4	
CHECKERED PLATE		EXISTING FENCE	
GRAVELED AREA		NEW FENCE	
FINISHED GRADE		EXISTING STRUCTURE OR PIPE (HIDDEN LINES)	
CENTERLINE		PROPERTY LINE	
EXISTING CONTOUR			
FINISHED GRADE CONTOUR			
SOILS BORING WITH IDENTIFICATION NO.			

REFERENCE SYMBOLS



Reference Information and Notes:				Designed: J.A.F. Drawn: A.M. Checked: J.H.F. Date: 1-29-81		Wastewater Plant Improvements C-06-2484 Sausalito - Marin City Sanitary District Kennedy/Jenks Engineers San Francisco Submitted: [Signature] Approved: [Signature] Date: 1-29-81		NOTES, SYMBOLS AND ABBREVIATIONS		Scale: NONE Job No.: 0112 Sheet: G-2
Revised:	Designation:	Submit:	App'd:	Date:	Record Drawing These record drawings have been prepared in accordance with the information provided and furnished by others. Kennedy/Jenks Engineers is not responsible for any errors or omissions in this document as a result of information provided by others. Date: 1-29-81					



Revised	Description	Submit	App'd.	Date
1	CO NO. 24			
2	CLARIFICATION			
3	CO NO. 45			
4	FIELD CHANGE			

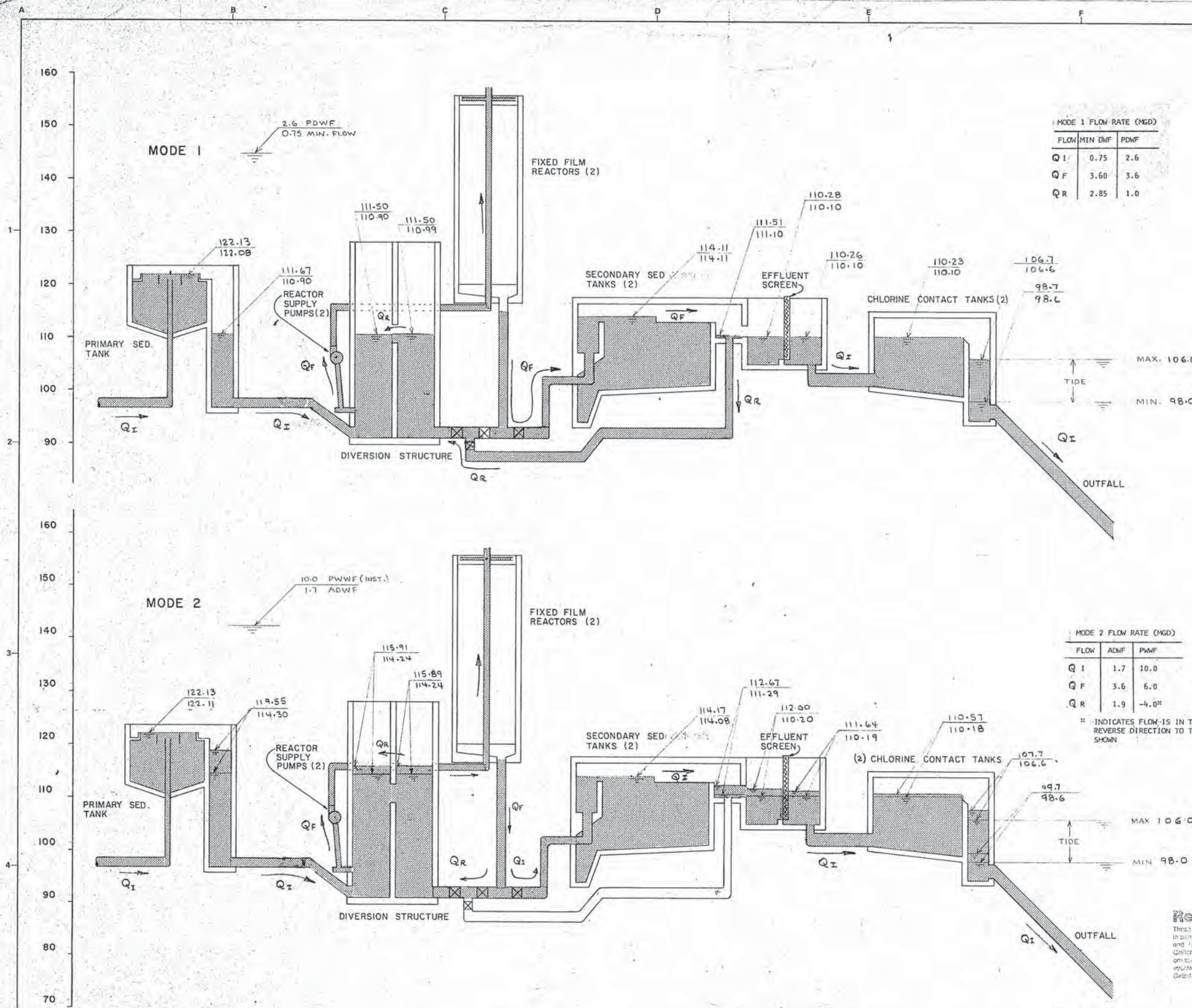
Reference Information and Notes:

Designed
JHF
Drawn
JHF
Checked
JHF
Date
1-29-81

Wastewater Plant Improvements C-06-2464
Sausalito - Marin City Sanitary District
Kennedy/Jenks Engineers
Submitted: *Walter J. Jenks* C-6-70
San Francisco
Approved: *Robert J. Ames*

PROCESS FLOW DIAGRAM

Scale
NONE
Job No.
0112
Sheet
G-3
of



MODE 1 FLOW RATE (MGD)

FLOW	MIN DMF	PWF
Q I	0.75	2.6
Q F	3.60	3.6
Q R	2.85	1.0

MODE 2 FLOW RATE (MGD)

FLOW	ADWF	PWF
Q I	1.7	10.0
Q F	3.6	6.0
Q R	1.9	-4.0

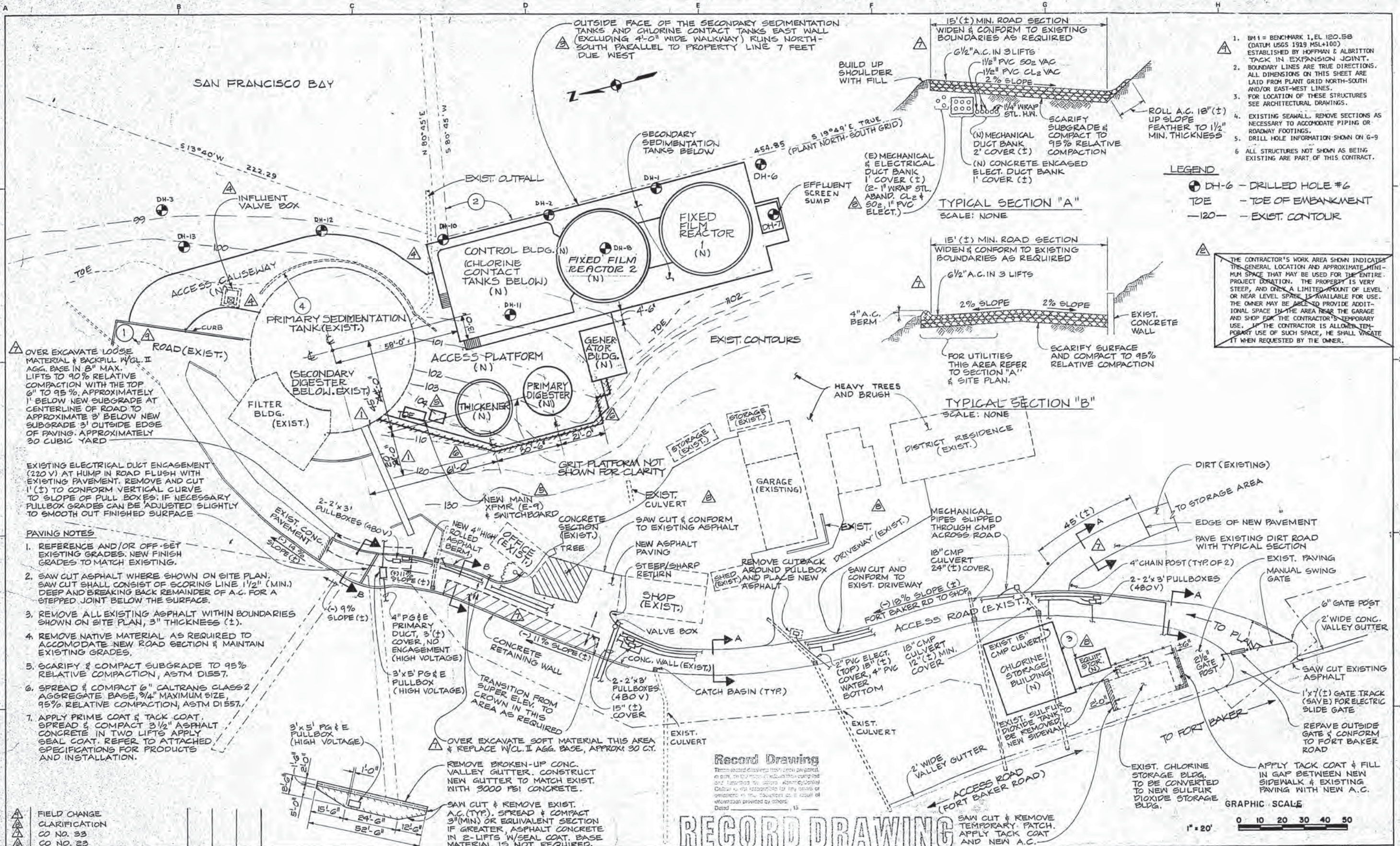
* INDICATES FLOW IS IN THE REVERSE DIRECTION TO THAT SHOWN

DESIGN CRITERIA

ITEM	ADWF	PWF
BASIC DATA		
ADWF (MGD)	1.7	
PWF (MGD)	2.6	
PWF (MGD)	5.5	
PWF, INSTANTANEOUS (MGD)	10.0	
BIOCHEMICAL OXYGEN-DEMAND (BOD'S) (MG/L)	30	
SUSPENDED SOLIDS (SS) (MG/L)	826	
" (LBS./DAY)	826	
PRIMARY CLARIFIER (EXISTING)		
NUMBER	1	
DIAMETER (FT.)	55	
SIDE WATER DEPTH (FT.)	9.5	
SURFACE LOADING RATE (GAL/DAY/SQ.FT.)	716	2315
DETENTION TIME (HOURS)	2.38	0.74
FIXED FILM REACTORS		
NUMBER	2	
DIAMETER (FT.)	40	
DEPTH (FT.)	32	
DESIGN LOADING RATE (LBS. BOD'S/1000 CF/DAY)	30	
HYDRAULIC LOADING RATE (MIN.) (GPM/SQ.FT.)	0.71	
(MAX.) (GPM/SQ.FT.)	3.0	
RECIRCULATION RATE @ PUMPED RATE 4200 GPM (%)	255	6
REACTOR FEED PUMPS 2 (+ 1 STANDBY)		
MAX. FLOW (GPM) EACH	900	
MAX. FLOW (GPM) EACH	2100	
SECONDARY SEDIMENTATION TANKS		
NUMBER	2	
WIDTH (FT.)	20	
LENGTH (FT.)	88	
SIDE WATER DEPTH (FT.)	14	
TOTAL WEIR LENGTH (FT.)	288	
SURFACE LOADING RATE (GAL/DAY/SQ.FT.)	483	1563
OVERFLOW RATE (GAL/DAY/LIN. FT.)	5902	19097
DETENTION TIME (HRS.)	5.2	1.6
CHLORINE CONTACT TANKS		
NUMBER	2	
LENGTH (FT.)	110	
WIDTH (FT.)	5.4	
DEPTH (FT.)	10	
DETENTION TIME (MIN.)	75	23
CHLORINATORS	2	
MAX. FLOW (LBS/DAY)	4000	
SULFONATORS	2	
MAX. FLOW (LBS./DAY)	1000	
SLUDGE THICKENER		
NUMBER	1	
DIAMETER (FT.)	20	
LOADING RATE (LBS./SQ.FT./HR.)	0.35	
PRIMARY DIGESTER		
NUMBER	1	
DIAMETER	20	
SIDE WATER DEPTH	45	
LOADING (LBS./CF DAY)	0.16	
DETENTION TIME (DAYS)	23	
SECONDARY DIGESTER (EXISTING)		
NUMBER	1	
DIAMETER	75	
DEPTH	12.5	
DETENTION TIME (DAYS)	91	
VACUUM FILTER (EXISTING)		
NUMBER	1	
FILTER DRUM AREA IN (SQ. FT.)	113	
SOLIDS LOADING (LBS./SQ. FT./HR.)	2.3	

Record Drawing
 These record drawings have been prepared in accordance with the provisions of the San Francisco Public Works Department and the California Public Works Department. They are not to be used for any other purpose without the written consent of the Engineer.

Reference Information and Notes: Refer to Tracing for Latest Revision				Designed: JHF Drawn: JHF Checked: JHF Date: 1-29-81	Wastewater Plant Improvements C-06-2464 Sausalito - Marin City Sanitary District Kennedy/Jenks Engineers Submitted: [Signature] C9370 San Francisco Approved: [Signature]	HYDRAULIC PROFILE AND DESIGN CRITERIA	Scale: NONE Job No.: 0112 Sheet: G-4 of: 4
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1. BM1 = BENCHMARK 1, EL. 120.58 (DATUM USGS 1929 MSL+100) ESTABLISHED BY HOFFMAN & ALBRITTON TACK IN EXPANSION JOINT.
2. BOUNDARY LINES ARE TRUE DIRECTIONS. ALL DIMENSIONS ON THIS SHEET ARE LAID FROM PLANT GRID NORTH-SOUTH AND/OR EAST-WEST LINES.
3. FOR LOCATION OF THESE STRUCTURES SEE ARCHITECTURAL DRAWINGS.
4. EXISTING SEAWALL. REMOVE SECTIONS AS NECESSARY TO ACCOMMODATE PIPING OR ROADWAY FOOTINGS.
5. DRILL HOLE INFORMATION SHOWN ON G-9
6. ALL STRUCTURES NOT SHOWN AS BEING EXISTING ARE PART OF THIS CONTRACT.

LEGEND

- DH-6 - DRILLED HOLE #6
- TOE — - TOE OF EMBANKMENT
- 120- - EXIST. CONTOUR

THE CONTRACTOR'S WORK AREA SHOWN INDICATES THE GENERAL LOCATION AND APPROXIMATE MINIMUM SPACE THAT MAY BE USED FOR THE ENTIRE PROJECT DURATION. THE PROPERTY IS VERY STEEP, AND ONLY A LIMITED AMOUNT OF LEVEL OR NEAR LEVEL SPACE IS AVAILABLE FOR USE. THE OWNER MAY BE REQUIRED TO PROVIDE ADDITIONAL SPACE IN THE AREA NEAR THE GARAGE AND SHOP FOR THE CONTRACTOR'S TEMPORARY USE. IF THE CONTRACTOR IS ALLOWED TEMPORARY USE OF SUCH SPACE, HE SHALL VACATE IT WHEN REQUESTED BY THE OWNER.

OVER EXCAVATE LOOSE MATERIAL & BACKFILL W/CL. II AGG. BASE IN 8" MAX. LIFTS TO 90% RELATIVE COMPACTION WITH THE TOP 6" TO 95% APPROXIMATELY 1' BELOW NEW SUBGRADE AT CENTERLINE OF ROAD TO APPROXIMATE 3' BELOW NEW SUBGRADE 3' OUTSIDE EDGE OF PAVING. APPROXIMATELY 30 CUBIC YARD

EXISTING ELECTRICAL DUCT ENGAGEMENT (220 V) AT HUMP IN ROAD FLUSH WITH EXISTING PAVEMENT. REMOVE AND CUT 1" (±) TO CONFORM VERTICAL CURVE TO SLOPE OF PULL BOXES. IF NECESSARY PULLBOX GRADES CAN BE ADJUSTED SLIGHTLY TO SMOOTH OUT FINISHED SURFACE

PAVING NOTES

1. REFERENCE AND/OR OFF-SET EXISTING GRADES. NEW FINISH GRADES TO MATCH EXISTING.
2. SAW CUT ASPHALT WHERE SHOWN ON SITE PLAN. SAW CUT SHALL CONSIST OF SCORING LINE 1 1/2" (MIN.) DEEP AND BREAKING BACK REMAINDER OF A.C. FOR A STEPPED JOINT BELOW THE SURFACE.
3. REMOVE ALL EXISTING ASPHALT WITHIN BOUNDARIES SHOWN ON SITE PLAN, 3" THICKNESS (±).
4. REMOVE NATIVE MATERIAL AS REQUIRED TO ACCOMMODATE NEW ROAD SECTION & MAINTAIN EXISTING GRADES.
5. SCARIFY & COMPACT SUBGRADE TO 95% RELATIVE COMPACTION, ASTM D1557.
6. SPREAD & COMPACT 6" CALTRANS CLASS 2 AGGREGATE BASE, 3/4" MAXIMUM SIZE, 95% RELATIVE COMPACTION, ASTM D1557.
7. APPLY PRIME COAT & TACK COAT. SPREAD & COMPACT 3 1/2" ASPHALT CONCRETE IN TWO LIFTS APPLY SEAL COAT. REFER TO ATTACHED SPECIFICATIONS FOR PRODUCTS AND INSTALLATION.

FIELD CHANGE	CLARIFICATION			
CO NO. 33				
CO NO. 23				
CO NO. 8				
CO NO. 3				
ADD. NO. 3				
ADD. NO. 2				
ADD. NO. 1				
Revised	Description	Submit	App'd	Date
Refer to Tracing for Latest Revision				

Reference Information and Notes:
○ REFER TO THE NOTE WITH THIS NUMBER

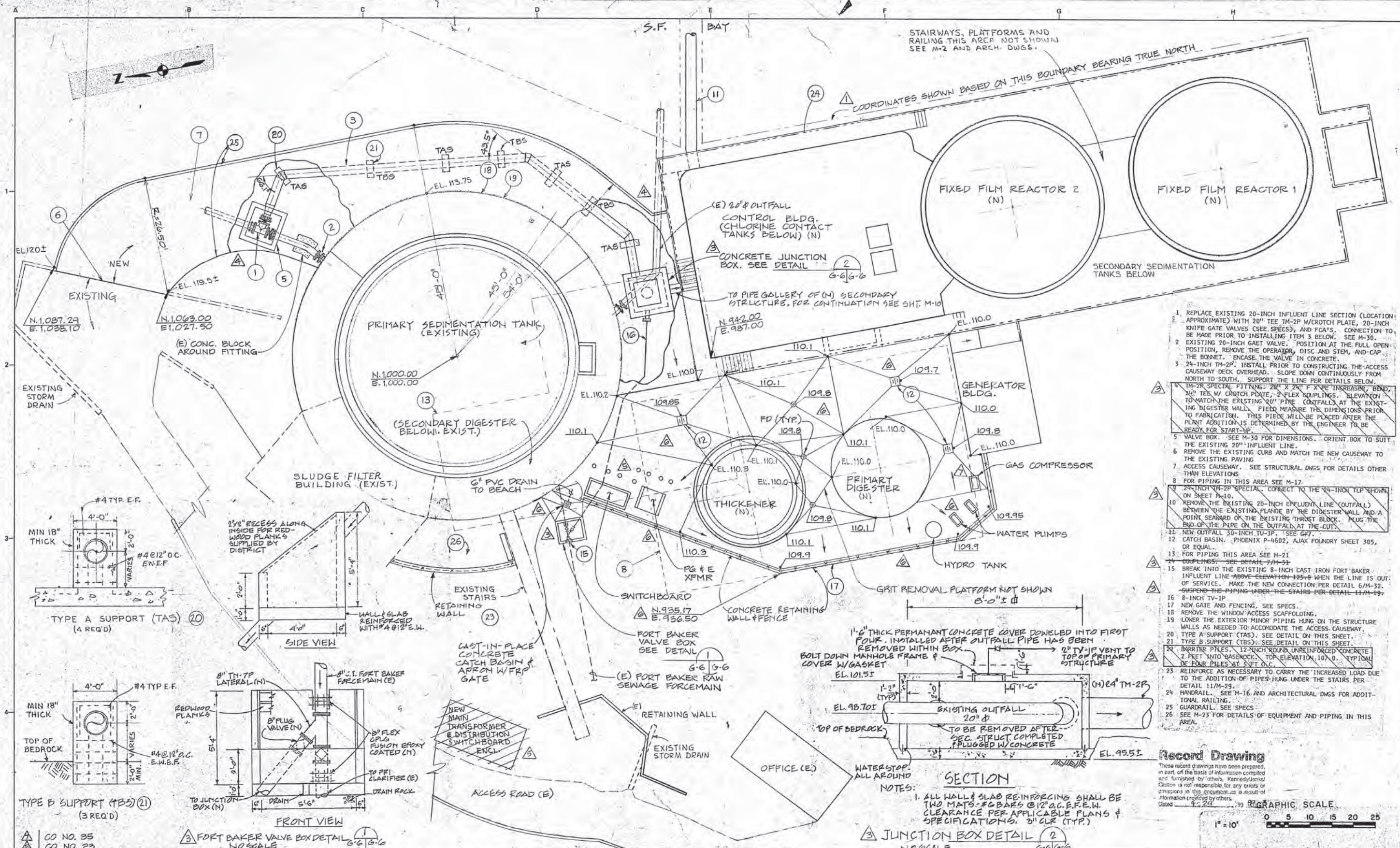
Record Drawing
These record drawings have been prepared, in part, on the basis of information compiled and furnished by others. Kennedy/Jenks Engineers is not responsible for any errors or omissions in this document as a result of information provided by others.
Date: 8-29-88

Record Drawing
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Date: 8-29-88

RECORD DRAWING

Designed	JHF	Wastewater Plant Improvements	C-06-2464
Drawn	JHF	Sausalito - Marin City Sanitary District	
Checked	JHF	Kennedy/Jenks Engineers	San Francisco
Date	1-29-89	Submitted: <i>Walter J. Hoffman</i>	Approved: <i>Phil J. Arvey</i>
		C9370	

PLANT ACCESS ROAD RESTORATION REQUEST FOR QUOTE NO 37 PLANT SITE		Scale 1"=20'
		Job No. 0112
		Sheet G-5
		of



1. REPLACE EXISTING 20-INCH INFLUENT LINE SECTION (LOCATION APPROXIMATE) WITH 20" TEE TH-2P W/CATCH PLATE, 20-INCH KNIFE GATE VALVES (SEE SPECS), AND FCA'S. CONNECTION TO BE MADE PRIOR TO INSTALLING ITEM 3 BELOW. SEE M-30.
2. EXISTING 20-INCH GATE VALVE. POSITION AT THE FULL OPEN POSITION, REMOVE THE OPERATOR, DISC AND STEM, AND CAP THE BONNET. ENCASE THE VALVE IN CONCRETE.
3. 24-INCH TH-2P. INSTALL PRIOR TO CONSTRUCTING THE ACCESS CAUSEWAY DECK OVERHEAD. SLOPE DOWN CONTINUOUSLY FROM NORTH TO SOUTH. SUPPORT THE LINE PER DETAILS BELOW.
4. TH-2P SPECIAL FITTING: 20" X 24" F XEE INCREASE, BEND, 24" TEE W/ CATCH PLATE, 2 FLEX COUPLINGS. ELEVATION TO MATCH THE EXISTING 20" PIPE. CONFALLS AT THE EXISTING DIGESTER WALL. FIELD MEASURE THE DIMENSIONS PRIOR TO FABRICATION. THIS PIECE WILL BE PLACED AFTER THE PLANT ADDITION IS DETERMINED BY THE ENGINEER TO BE READY FOR START-UP.
5. VALVE BOX: SEE M-30 FOR DIMENSIONS. ORIENT BOX TO SUIT THE EXISTING 20" INFLUENT LINE.
6. REMOVE THE EXISTING CURB AND MATCH THE NEW CAUSEWAY TO THE EXISTING PAVING.
7. ACCESS CAUSEWAY. SEE STRUCTURAL DWGS FOR DETAILS OTHER THAN ELEVATIONS.
8. FOR PIPING IN THIS AREA SEE M-17.
9. 24-INCH TH-2P SPECIAL. CONNECT TO THE 24-INCH TLP SHOWN ON SHEET M-10.
10. REMOVE THE EXISTING 20-INCH EFFLUENT LINE (OUTFALL) BETWEEN THE EXISTING FLANGE BY THE DIGESTER WALL AND A POINT SEAWARD ON THE EXISTING THRUST BLOCK. PLUG THE END OF THE PIPE ON THE OUTFALL AT THE CUT.
11. NEW OUTFALL 30-INCH TH-3P. SEE GP-7.
12. CATCH BASIN. PHOENIX P-4602, AJAX FOUNDRY SHEET 305, OR EQUAL.
13. FOR PIPING IN THIS AREA SEE M-21.
14. COUPLINGS: SEE DETAIL 7/M-31.
15. BREAK INTO THE EXISTING 8-INCH CAST IRON FORT BAKER INFLUENT LINE ABOVE ELEVATION 125.0 WHEN THE LINE IS OUT OF SERVICE. MAKE THE NEW CONNECTION PER DETAIL 6/M-32. SUSPEND THE PIPING UNDER THE STAIRS PER DETAIL 11/M-29.
16. 8-INCH TH-2P.
17. NEW GATE AND FENCING. SEE SPECS.
18. REMOVE THE WINDOW ACCESS SCAFFOLDING.
19. LOWER THE EXTERIOR MINOR PIPING HUNG ON THE STRUCTURE WALLS AS NEEDED TO ACCOMMODATE THE ACCESS CAUSEWAY.
20. TYPE A SUPPORT (TAS). SEE DETAIL ON THIS SHEET.
21. TYPE B SUPPORT (TBS). SEE DETAIL ON THIS SHEET.
22. BARRIER PILES. 12-INCH ROUND UNREINFORCED CONCRETE 2 FEET INTO BASE ROCK. TOP ELEVATION 107.0. TYPICAL OF FOUR PILES AT SFT O.C.
23. REINFORCE AS NECESSARY TO CARRY THE INCREASED LOAD DUE TO THE ADDITION OF PIPES HUNG UNDER THE STAIRS PER DETAIL 11/M-29.
24. HANDRAIL. SEE M-16 AND ARCHITECTURAL DWGS FOR ADDITIONAL RAILING.
25. GUARDRAIL. SEE SPECS.
26. SEE M-23 FOR DETAILS OF EQUIPMENT AND PIPING IN THIS AREA.

Record Drawing

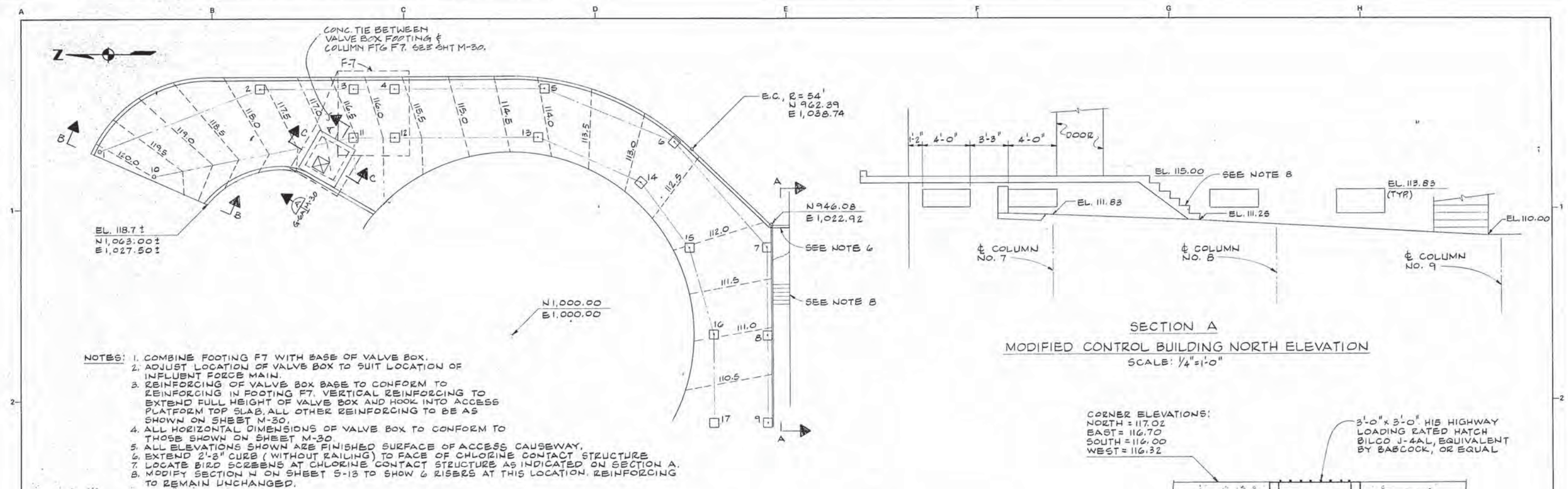
These record drawings have been prepared, in part, on the basis of information compiled and furnished by others. Kennedy/Jenks Division is not responsible for any errors or omissions in this document as a result of information provided by others.

Dated 6-29-81 GRAPHIC SCALE

1" = 10'

0 5 10 15 20 25

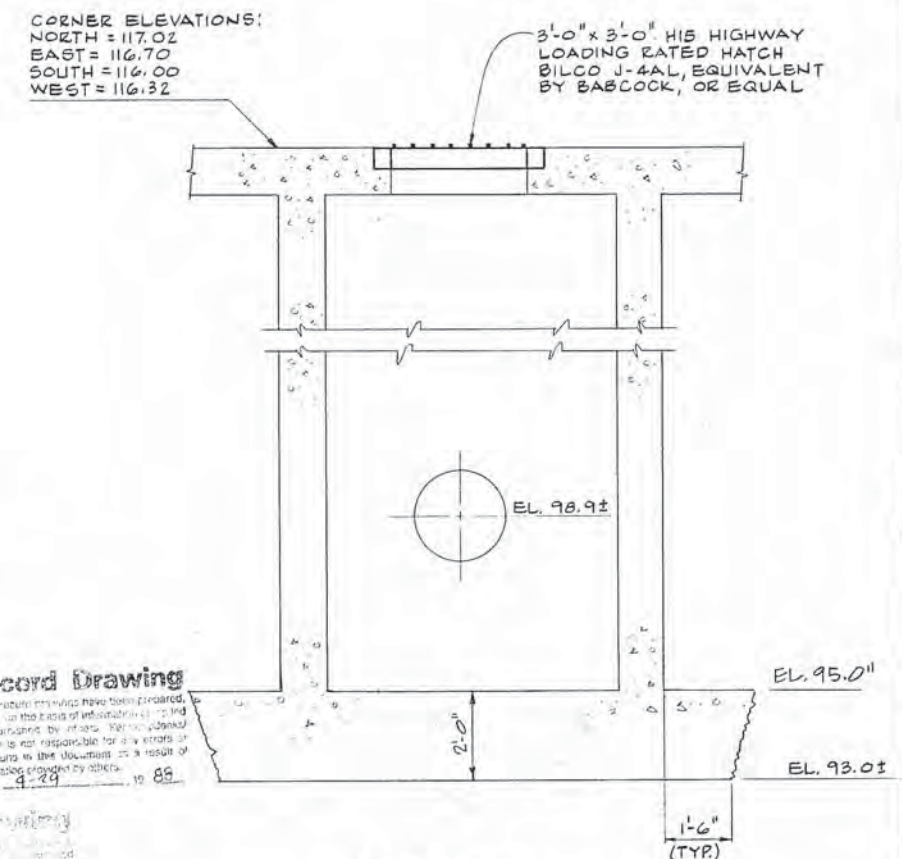
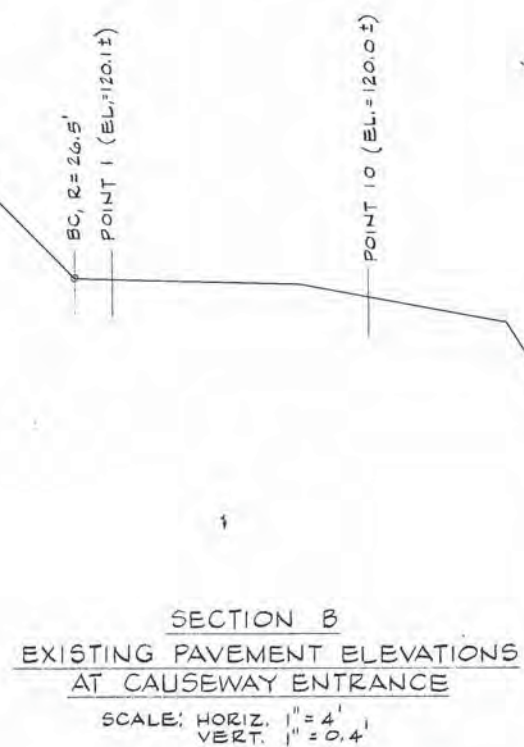
CO NO. 35 CO NO. 23 CO NO. 8 CO NO. 3 FIELD CHANGE CLARIFICATION ADD. NO. 1						Reference Information and Notes: Record Drawing These record drawings have been prepared, in part, on the basis of information compiled and furnished by others. Kennedy/Jenks Division is not responsible for any errors or omissions in this document as a result of information provided by others. Dated 6-29-81		REFER TO THE NOTE WITH THIS NUMBER 		Designed JHF Drawn JHF Checked JHF Date 1-29-81		Wastewater Plant Improvements C-06-2464 Sausalito - Marin City Sanitary District Kennedy/Jenks Engineers San Francisco Submitted:  C9370 Approved: 		Scale 1" = 10' Job No. 0112 Sheet G-6 of	
Revised	Description				Submit.	App'd.	Date								
Refer to Tracing for Latest Revision															



R.F.Q. NO.2 - ACCESS CAUSEWAY MODIFICATIONS
SCALE: 1"=10'

COORDINATES AND FINISH GRADE ELEVATIONS AT ACCESS CAUSEWAY COLUMN CENTERS							
POINT	COORDINATE		ELEV.*	POINT	COORDINATE		ELEV.*
	N	E			N	E	
1	1085.31	1038.87	120.10	10	1074.77	1034.27	120.00
2	1052.42	1051.50	117.62				
3	1032.92	1051.50	116.24	11	1032.92	1041.50	116.51
4	1024.33	1051.50	115.64	12	1024.33	1041.50	115.80
5	993.08	1051.50	113.97	13	994.33	1041.50	114.13
6	966.08	1040.51	112.67	14	973.14	1032.08	112.84
7	946.92	1018.50	111.83	15	962.92	1018.50	111.99
8	946.92	1000.00	110.92	16	957.75	1000.00	111.03
9	946.92	981.50	110.00	17	957.75	981.50	110.11

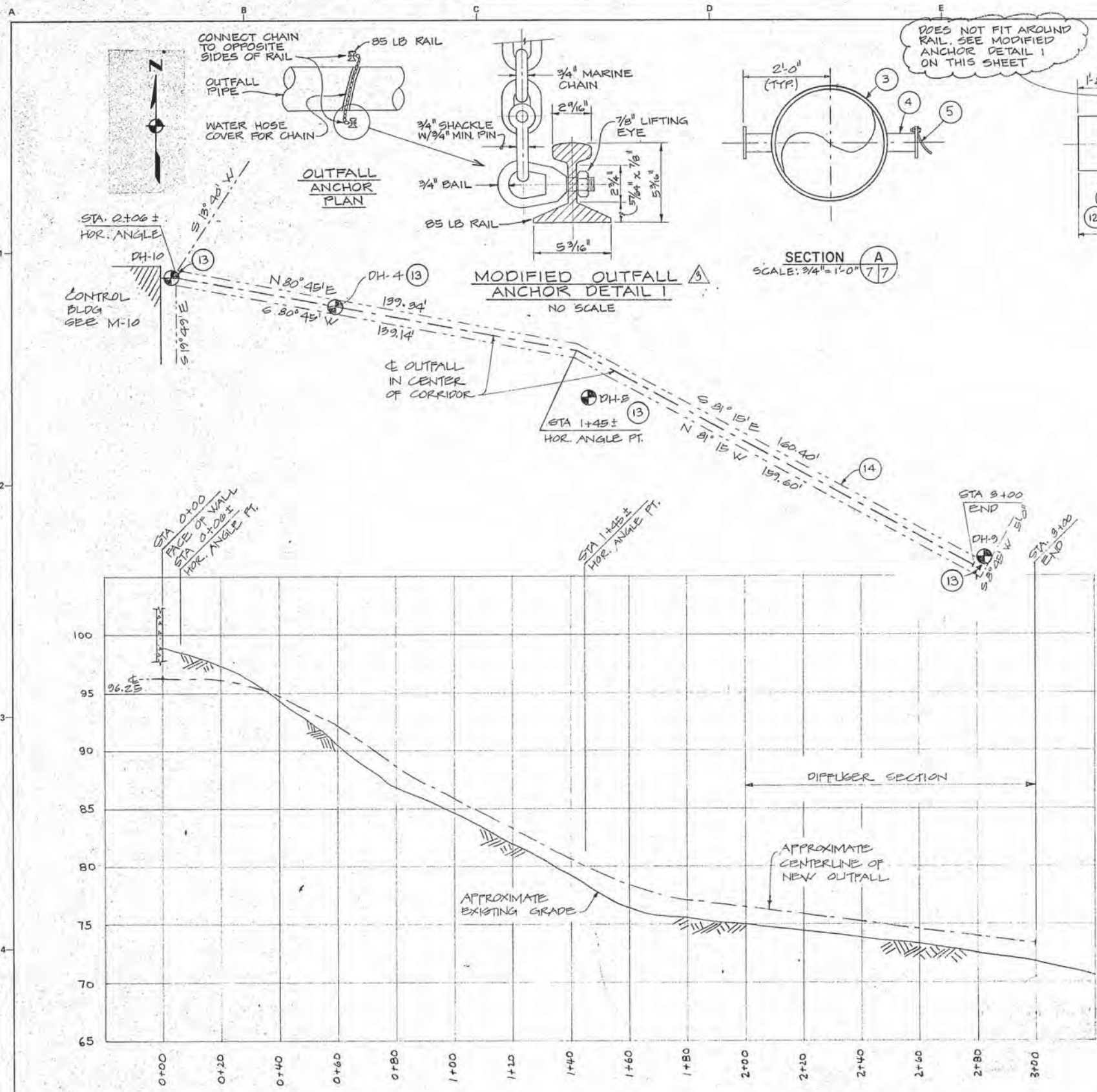
* See Note 5



SECTION C
SCALE: 1" = 2'-0"

NOTE: FOR REINFORCING DIMENSIONS, DETAILS SEE SHT M-30.

				Reference Information and Notes:		Designed RED Drawn NDL Checked RED Submitted: _____ Approved: _____ Date 1-15-85		WASTEWATER TREATMENT PLANT IMPROVEMENTS C-06-2464 SAUSALITO-MARIN CITY SANITARY DISTRICT KennedyJenks Engineers San Francisco Submitted: _____ Approved: _____ Date 1-15-85		Scale AS SHOWN Job No. 4067 Sheet G-GA of	
Revised _____ Description _____ Submit _____ App'd _____ Date _____ Refer to Tables for Latest Revision								ACCESS CAUSEWAY AND INFLUENT VALVE BOX MODIFICATIONS C.O. NO. 3			



- 1 ANCHORAGE TYPE 1. SEE DETAIL 1/6-7
- 2 ANCHORAGE TYPE 2. SEE DETAIL 2/6-7
- 3 30-INCH TU-3P
- 4 4" TU-3P NOZZLE W/4" TU-3P 150# FLANGE
- 5 9" ROUND 3/8" THICK COMPOSITION NEOPRENE IMPREGNATED NYLON FLAPPER FOR BACKFLOW PREVENTION. ATTACH TO FLANGE W/ TWO 1/2" MIN. BOLT, NUT AND WASHER SETS OF ASTM B150 ALUMINUM BRONZE AT THE TOP OF THE FLANGE. FLAPPER TYPICAL AT ALL SIDE NOZZLES.
- 6 MANUFACTURER'S STANDARD END CLOSURE.
- 7 TU-3P BLIND FLANGE. ATTACH W/ ONE 1/2" MIN. BOLT, NUT AND WASHER SET OF ASTM B150 ALUMINUM BRONZE AT BOTH THE TOP AND THE BOTTOM. NO GASKET REQUIRED.
- 8 85-LB RAIL.
- 9 7/8" DIAMETER MARINE CLEVIS.
- 10 3/4" DIAMETER LINK MARINE ANCHOR CHAIN. COVER W/ GARDEN TYPE HOSE FOR PROTECTION OF THE OUTFALL PIPE.
- 11 CHANCE TYPE HELICAL ANCHOR SET (2 ANCHORS PER SET) OF AISI TYPE 316 SS, SIZED TO RESIST ALL FORCES INCLUDING 10 KNOT TIDAL ACTION AND SURFACE WAVE ACTIVITY FROM STORM OR VESSEL WAVE.
- 12 ANCHORAGE LOCATION IS AS SHOWN FOR THE 100 FEET OF DIFFUSER SECTIONS. SHOREWARD OF THE DIFFUSER, ANCHORAGE SHALL BE AT 10 FOOT CENTERS, STARTING 5 FEET FROM THE DIFFUSER TO PIPELINE JOINT AND CONTINUING SHOREWARD.
- 13 DRILL HOLE INFORMATION IS SHOWN ON SHEET G-9.
- 14 CONTRACTOR SHALL REMOVE ALL ROCKS, DEBRIS AND OTHER MATERIAL THAT COULD DAMAGE THE OUTFALL FROM WITHIN THE OUTFALL ALIGNMENT PROPERTY LIMITS. PRIOR TO COMMENCING PIPE LAYING OPERATIONS, THE CONTRACTOR SHALL INSPECT THE ENTIRE OUTFALL ROUTE WITH QUALIFIED DIVERS TO DETERMINE THE PRESENCE OR ABSENCE OF MATERIAL NOTED ABOVE.
15. At the midpoint between anchors, provide suitable square or rectangular reinforced concrete weights of sufficient size to produce a negative pipe buoyancy of not less than 1.1. Weight will be designed to distribute load to the pipe without damaging pipe. Provide a protective wrapping of 1/4-inch thick neoprene between the weights and the pipe. Neoprene wrapping shall extend a minimum of 2 inches beyond the ends of each weight. All hardware required to hold the weights together shall be Type 316 stainless steel. Weight shall be attached so it will not move along the length of the pipe, but not so tightly as to damage the pipe. Minimum thickness of any stainless steel fasteners shall be 1/2 inch. The Contractor shall submit for favorable review details of the weight construction, method of attachment, and net negative buoyancy calculations.
16. In Detail 1 (Type 1 - Anchorage), the note "Drive to refusal" shall mean 30 blows per foot with a pile hammer rated at 15,000 foot pounds of energy (Engineering News Record Formula), or 20 feet, whichever comes first.

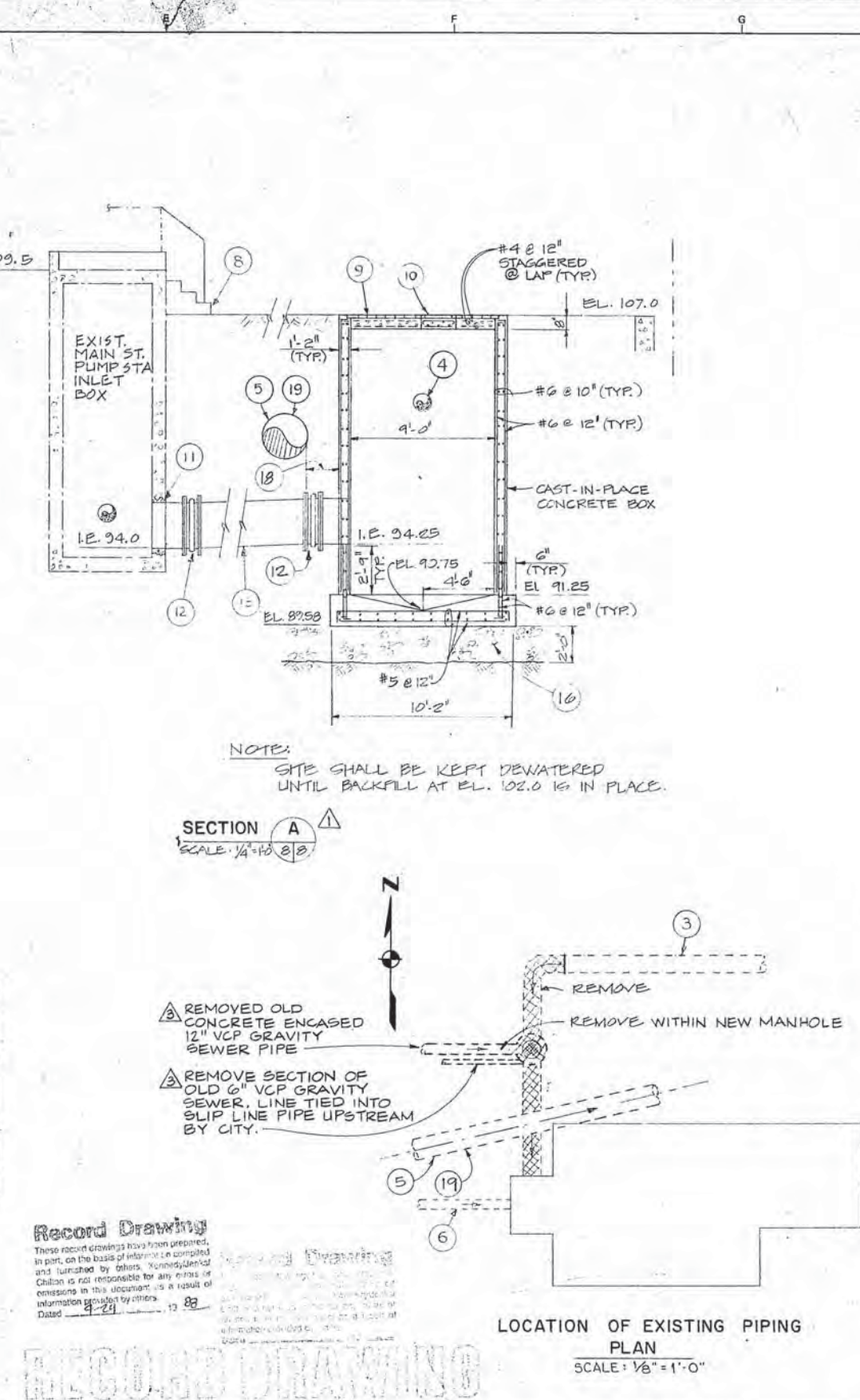
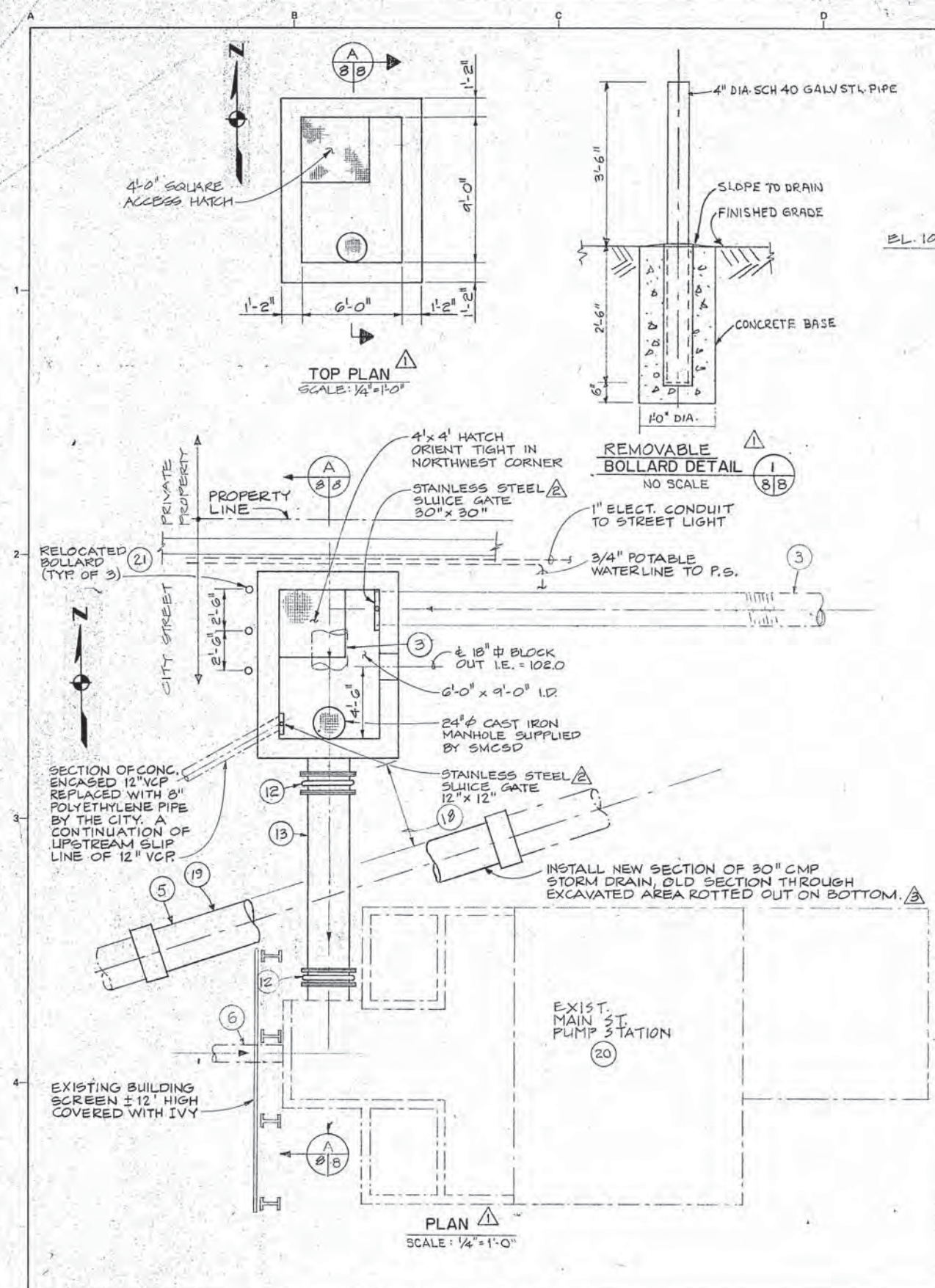
* CONTRACTOR SHALL SELECT ALTERNATIVE METHOD OF ANCHORAGE & INSTALL ON BOTH SIDES OF PIPE.

Record Drawing
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Dated 4-29-81 BY 88

 CO NO. 17 ADDENDUM NO. 2 METHOD SELECTED	Reference Information and Notes: DIRECTIONS SHOWN ARE TRUE EXCEPT NORTH ARROW WHICH INDICATES PLANT GRID NORTH			Designed JHF	Wastewater Plant Improvements C-06-2464 Sausalito - Marin City Sanitary District		Scale AS SHOWN Job No. 0112 Sheet G-7 of
				Drawn JHF	Kennedy/Jenks Engineers San Francisco		
				Checked JHF	Submitted: Walter J. Jenks C9370		
				Date 1-29-81	Approved: Phil J. O'Quinn		

Refer to Tracing for Latest Revision

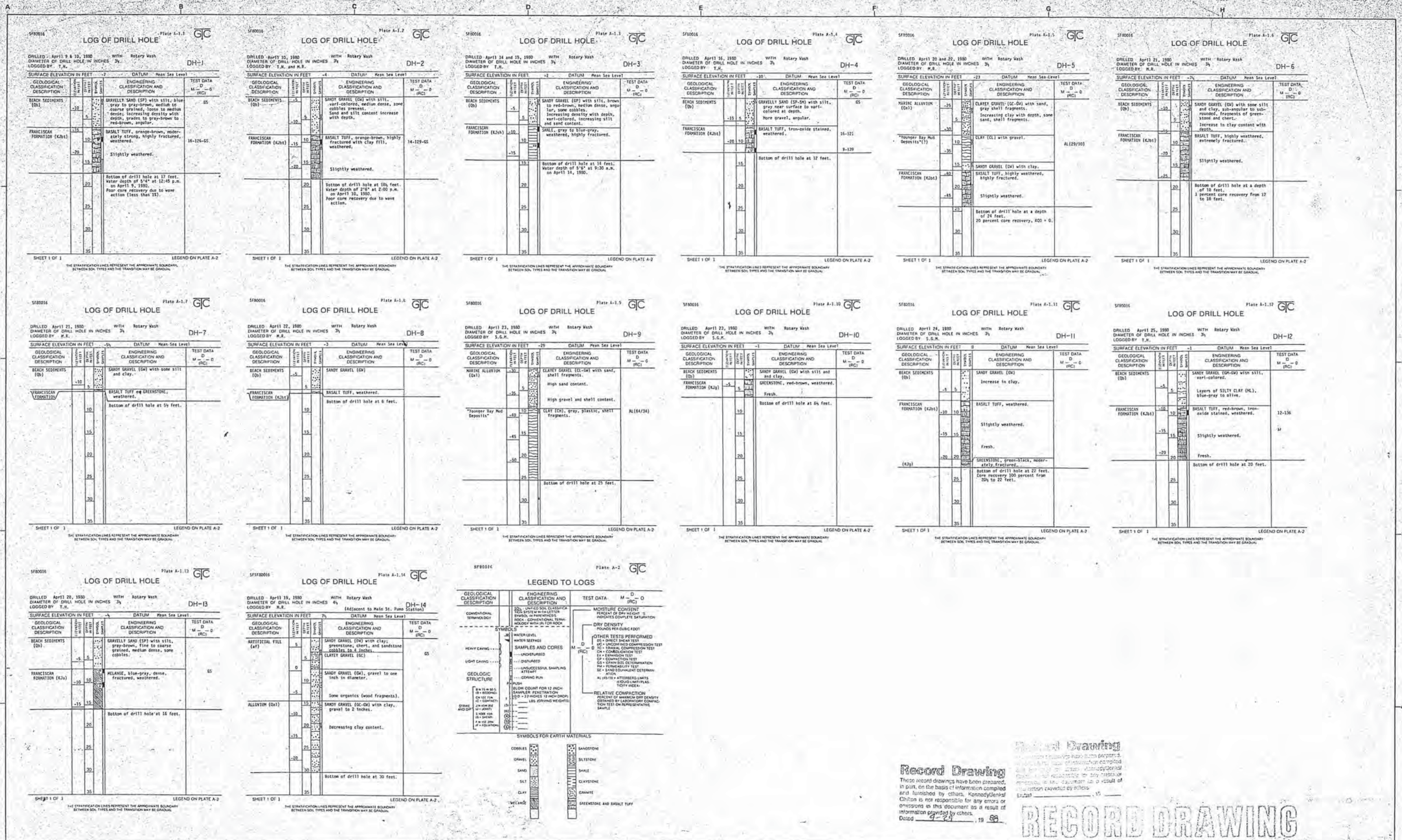
REFER TO THE NOTE WITH THIS NUMBER



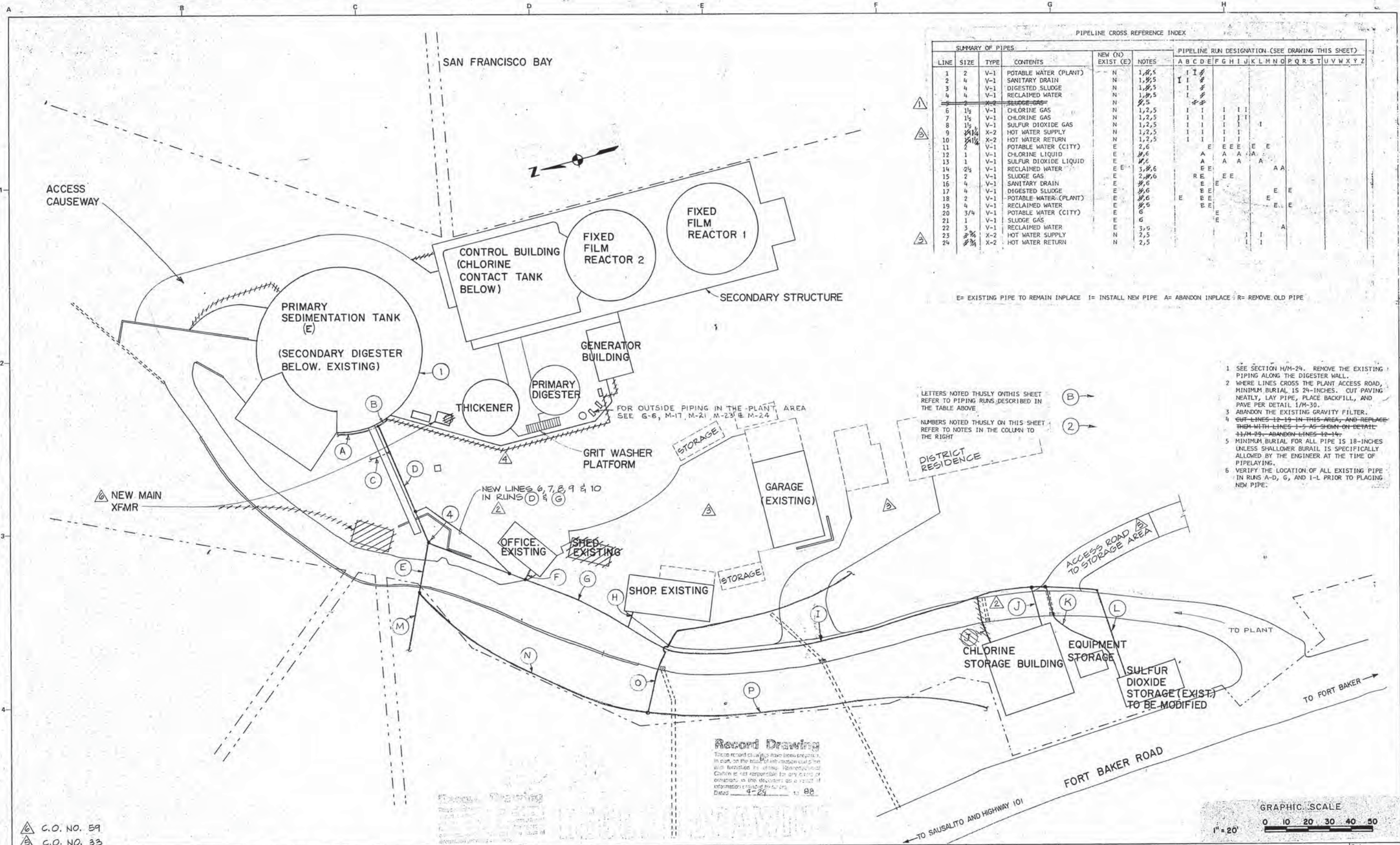
1. EXIST. 24\"/>

Record Drawing
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 Date: 4-24-88

CO NO. 50 CO NO. 30 FIELD CHANGE		Reference Information and Notes:		Designed: JHF Drawn: JHF Checked: JHF Date: 1-29-81	Wastewater Plant Improvements C-06-2464 Sausalito - Marin City Sanitary District Kennedy/Jenks Engineers San Francisco Approved: [Signature] Date: 1-29-81	MAIN STREET PUMP STATION MODIFICATIONS	Scale: AS SHOWN Job No.: 0112 Sheet: G-8 of
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Revised	Description	Submit	App'd	Date
	Refer to Tracing for Latest Revision			
Reference Information and Notes:				
DATA ON THIS SHEET TAKEN FROM "GEOTECHNICAL INVESTIGATION - PROPOSED IMPROVEMENTS TO THE SAUSALITO-MARIN CITY SANITARY DISTRICT WATER RECLAMATION PLANT - JULY 1980" BY GEOTECHNICAL CONSULTANTS, INC., SAN FRANCISCO, CALIFORNIA. COPY AVAILABLE FOR REFERENCE AT THE SNA FRANCISCO OFFICE OF THE ENGINEER.				
Designed	JHF	Wastewater Plant Improvements	C-06-2464	Scale NONE
Drawn	JHF	Sausalito - Marin City Sanitary District		Job No. 0112
Checked	JHF	Kennedy/Jenks Engineers	San Francisco	Sheet G-9
Submitted	Walter Z. Hanna	Approved	Robert J. Owen	of
Date	1-29-81	G9370		



SUMMARY OF PIPES						PIPELINE RUN DESIGNATION (SEE DRAWING THIS SHEET)																										
LINE	SIZE	TYPE	CONTENTS	NEW (N)	EXIST (E)	NOTES	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	V-1	POTABLE WATER (PLANT)	N		1, 8, 5																										
2	4	V-1	SANITARY DRAIN	N		1, 8, 5																										
3	4	V-1	DIGESTED SLUDGE	N		1, 8, 5																										
4	4	V-1	RECLAIMED WATER	N		1, 8, 5																										
5	2	X-2	SLUDGE GAS	N		8, 5																										
6	1 1/2	V-1	CHLORINE GAS	N		1, 2, 5																										
7	1 1/2	V-1	CHLORINE GAS	N		1, 2, 5																										
8	1 1/2	V-1	SULFUR DIOXIDE GAS	N		1, 2, 5																										
9	2 1/4	X-2	HOT WATER SUPPLY	N		1, 2, 5																										
10	2 1/4	X-2	HOT WATER RETURN	N		1, 2, 5																										
11	2	V-1	POTABLE WATER (CITY)	N		2, 6																										
12	1	V-1	CHLORINE LIQUID	E		8, 6																										
13	1	V-1	SULFUR DIOXIDE LIQUID	E		8, 6																										
14	2 1/2	V-1	RECLAIMED WATER	E		3, 8, 6																										
15	2	V-1	SLUDGE GAS	E		2, 8, 6																										
16	4	V-1	SANITARY DRAIN	E		8, 6																										
17	4	V-1	DIGESTED SLUDGE	E		8, 6																										
18	2	V-1	POTABLE WATER (PLANT)	E		8, 6																										
19	4	V-1	RECLAIMED WATER	E		8, 6																										
20	3/4	V-1	POTABLE WATER (CITY)	E		6																										
21	1	V-1	SLUDGE GAS	E		6																										
22	3	V-1	RECLAIMED WATER	E		3, 5																										
23	3/4	X-2	HOT WATER SUPPLY	N		2, 5																										
24	3/4	X-2	HOT WATER RETURN	N		2, 5																										

E= EXISTING PIPE TO REMAIN IN PLACE I= INSTALL NEW PIPE A= ABANDON IN PLACE R= REMOVE OLD PIPE

- 1 SEE SECTION H/M-24. REMOVE THE EXISTING PIPING ALONG THE DIGESTER WALL.
- 2 WHERE LINES CROSS THE PLANT ACCESS ROAD, MINIMUM BURIAL IS 24-INCHES. CUT PAVING NEATLY, LAY PIPE, PLACE BACKFILL, AND PAVE PER DETAIL 1/M-30.
- 3 ABANDON THE EXISTING GRAVITY FILTER.
- 4 CUT LINES 12-15 IN THIS AREA, AND REPLACE THEM WITH LINES 1-5 AS SHOWN ON DETAIL 11/M-29. ABANDON LINES 12-15.
- 5 MINIMUM BURIAL FOR ALL PIPE IS 18-INCHES UNLESS SHALLOWER BURIAL IS SPECIFICALLY ALLOWED BY THE ENGINEER AT THE TIME OF PIPELAYING.
- 6 VERIFY THE LOCATION OF ALL EXISTING PIPE IN RUNS A-D, G, AND I-L PRIOR TO PLACING NEW PIPE.

Revised	Description	Submit	App'd	Date
1	C.O. NO. 59			
2	C.O. NO. 33			
3	C.O. NO. 23			
4	CLARIFICATION			
5	FIELD CHANGE			
6	CO NO. 35			

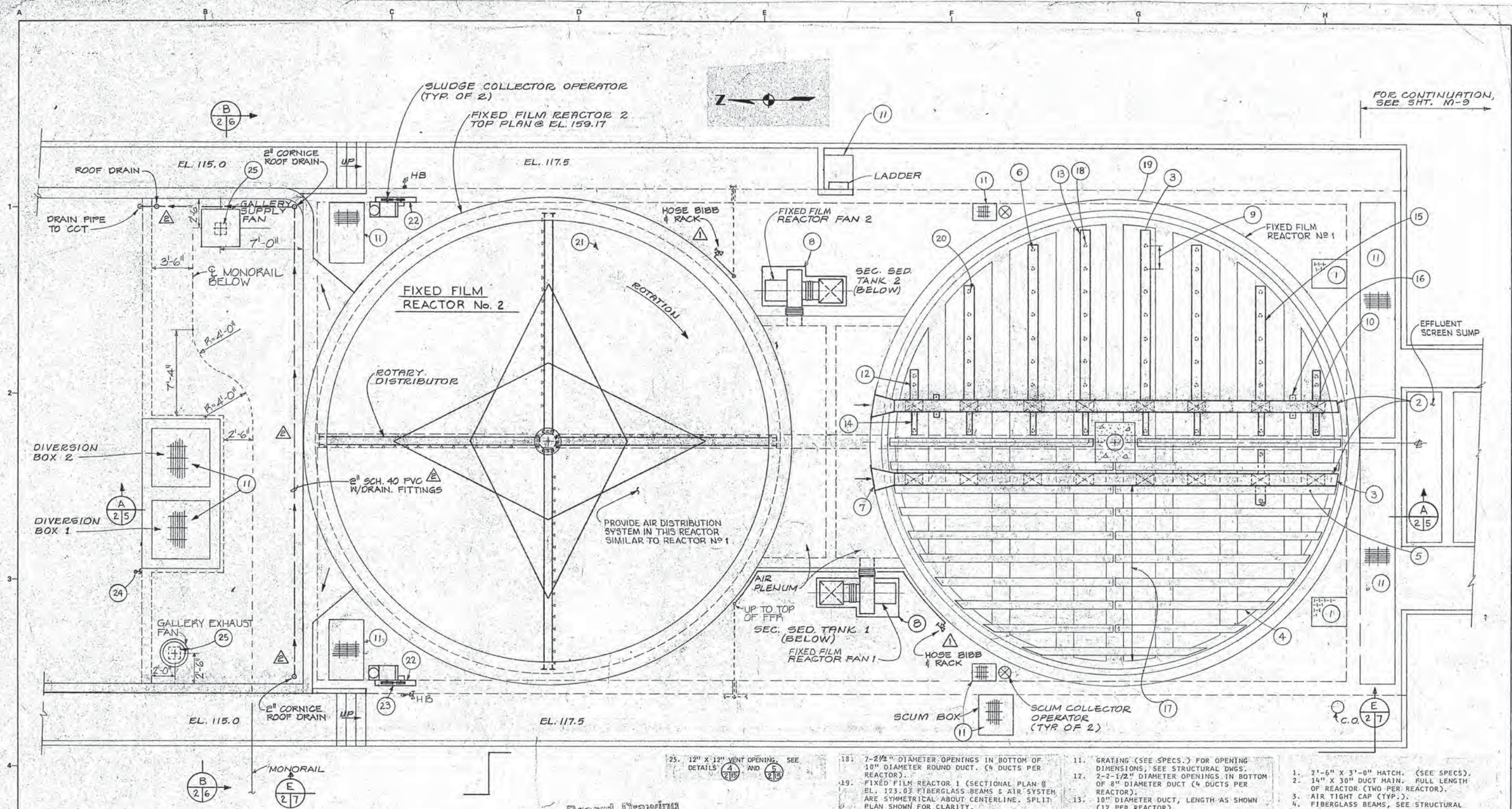
Reference Information and Notes:

REFER TO THE NOTE WITH THIS NUMBER

Designed JHF	Wastewater Plant Improvements C-06-2464	
Drawn JHF	Sausalito - Marin City Sanitary District	
Checked JHF	Kennedy/Jenks Engineers	San Francisco
Submitted:		
Date 1-29-81	Walter J. Jenks C-9370	Robert J. Jenks

OUTSIDE PIPING

Scale 1" = 20'
Job No. 0112
Sheet M-1



Record Drawing
 These record drawings have been prepared, in part, on the basis of information compiled and furnished by others. Kennedy/Jenks Chilton is not responsible for any errors or omissions in this document as a result of information provided by others.
 Date 4-24-88

Record Drawing
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 Date 4-24-88

RECORD DRAWING

GRAPHIC SCALE

- 1. 2'-6" X 3'-0" HATCH. (SEE SPECS).
- 2. 14" X 30" DUCT MAIN. FULL LENGTH OF REACTOR (TWO PER REACTOR).
- 3. AIR TIGHT CAP (TYP.).
- 4. FIBERGLASS BEAMS, SEE STRUCTURAL DWGS.
- 5. FIBERGLASS BEAMS, SUPPORT ALL ROUND PVC DUCT FROM BEAM. SEE DETAIL 5/M-33.
- 6. 7-2 1/2" DIAMETER OPENINGS IN BOTTOM OF 10" DIAMETER ROUND DUCT (4 DUCTS PER REACTOR).
- 7. DUCT THRU CONCRETE WALL. SEE DETAIL 5/M-33.
- 8. SEE DETAIL 5/M-33.
- 9. AIR DISCHARGE OPENING IN BOTTOM OF 10" DIAMETER DUCT 2'-0" O.C. TYP.
- 10. 14" X 18" DEEP DUCT DROP (16 PER REACTOR).
- 11. GRATING (SEE SPECS.) FOR OPENING DIMENSIONS, SEE STRUCTURAL DWGS.
- 12. 2'-2 1/2" DIAMETER OPENINGS IN BOTTOM OF 8" DIAMETER DUCT (4 DUCTS PER REACTOR).
- 13. 10" DIAMETER DUCT, LENGTH AS SHOWN (12 PER REACTOR).
- 14. 6" DIAMETER DUCT (16 DUCTS PER REACTOR), 2 1/2" DIAMETER OPENING IN BOTTOM OF EACH.
- 15. FOR TYPICAL BRANCH DUCT SUPPORT, SEE DETAIL 5/M-33.
- 16. 1/4" X 4" X 4" X 6" LONG PVC ANGLES CONTINUOUS WELDED TO DUCT AND BOLT TO CONCRETE BEAM W/1/4" DIAMETER 5.5. BOLTS, 4 PER DUCT MAIN.
- 17. DUCTWORK IN THIS AREA SIMILAR BUT MIRROR IMAGE TO THAT SHOWN FOR EASTERN HALF OF FIXED FILM REACTOR (ABOVE).
- 18. 7-2 1/2" DIAMETER OPENINGS IN BOTTOM OF 10" DIAMETER ROUND DUCT. (4 DUCTS PER REACTOR).
- 19. FIXED FILM REACTOR 1 (SECTIONAL PLAN @ EL. 123.0) FIBERGLASS BEAMS & AIR SYSTEM ARE SYMMETRICAL ABOUT CENTERLINE. SPLIT PLAN SHOWN FOR CLARITY.
- 20. 5-2 1/2" DIAMETER OPENINGS IN BOTTOM OF 10" DIAMETER ROUND (4 DUCTS PER REACTOR).
- 21. PROVIDE DUCTWORK SIMILAR (BUT OPPOSITE HAND) TO THAT SHOWN FOR FIXED FILM REACTOR NO. 1.
- 22. GATE/SHA GUARD (TYP. AT ALL DRIVES).
- 23. SEE COLLECTOR MANUFACTURER'S DWGS. FOR SIZE OF OPENING AND RECESS. RECESS NOT TO EXCEED 5-1/2".
- 24. 1/4" TV-1P FROM AIR RECEIVER TO BUBBLER PANEL 1. SEE ELECTRICAL DWGS.
- 25. 12" X 12" VENT OPENING. SEE DETAILS 4/215 AND 5/215.

Rev'd	Description	Submit	App'd	Date
1	CO NO. 28 FIELD CHANGE			
Refer to Tracing for Latest Revision				

Reference Information and Notes:

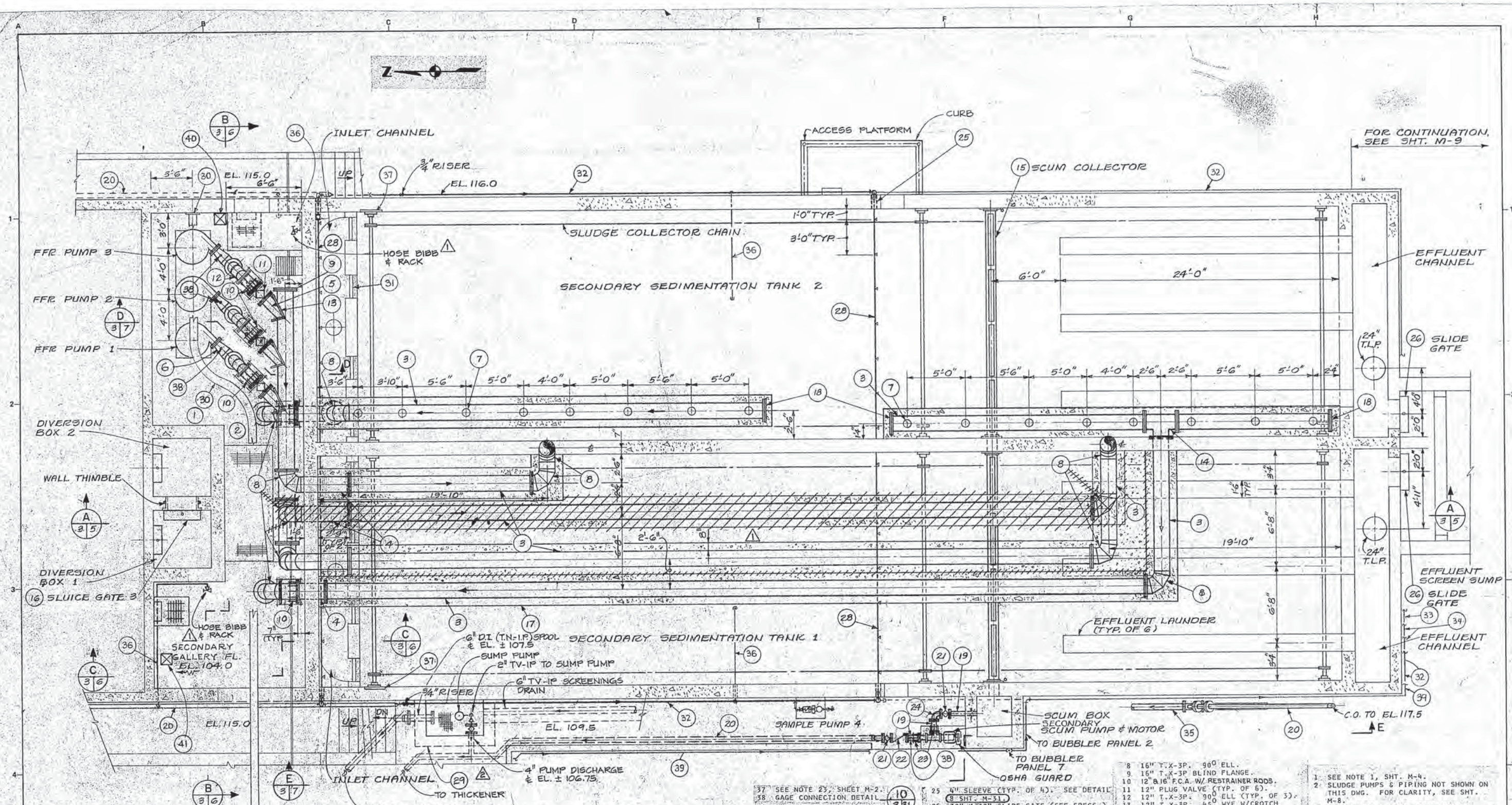
1/4" = 1'-0"

FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-2A
 REFER TO THE NOTE WITH THIS NUMBER

Designed J.A.F.	Wastewater Plant Improvements C-06-2464
Drawn A.M.	Sausalito - Marin City Sanitary District
Checked J.H.F.	Kennedy/Jenks Engineers San Francisco
Date 1-24-81	Submitted: <i>Walter Harman</i> C9370 Approved: <i>F. J. Ames</i>

SECONDARY STRUCTURE
TOP PLAN

Scale
1/4" = 1'-0"
 Job No.
0112
 Sheet
M-2
 of



PLAN AT ELEVATION 116.5
SCALE: 1/4" = 1'-0"

Record Drawing
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Date: 4-24-81

RECORD DRAWING

- 37 SEE NOTE 23, SHEET M-2.
- 38 GAGE CONNECTION DETAIL.
- 39 1" TV-IP INSTRUMENT AIR TO BUBBLER PANELS 2 AND 7.
- 40 12" X 12" SUPPLY AIR DUCT.
- 41 12" X 12" EXHAUST AIR DUCT. PROVIDE 10" X 10" RETURN. REGISTERS AT EL. 107.5 AND 122.0 ON EAST SIDE OF DUCT.

- 25 4" SLEEVE (TYP. OF 4). SEE DETAIL 8 SHT. M-31.
- 26 30" X 30" SLIDE GATE (SEE SPECS.).
- 28 1" T.V.-IP SPRAY LINE W/ADJUSTABLE NOZZLES. SEE DETAIL 3 SHT. 7.
- 29 FOR CONTINUATION, SEE SHT. M-21.
- 30 MONORAIL SEE M-2 AND STRUCTURAL DWGS. SEE SPECS. FOR HOIST.
- 31 CRATING.
- 32 3" TV-IP.
- 33 1" TV-IP SAMPLE J.
- 34 2" TV-IP CHLORINE SOLUTION.
- 35 6" TV-IP SKIMMER DRAIN.
- 36 3/4" TV-IP RECLAIMED WATER.

- 8 16" T.X-3P. 90° ELL.
- 9 16" T.X-3P. BLIND FLANGE.
- 10 12" B.16" F.C.A. W/ RESTRAINER RODS.
- 11 12" PLUG VALVE (TYP. OF 6).
- 12 12" T.X-3P. 90° ELL (TYP. OF 3).
- 13 12" T.X-3P. 45° WYE W/CROTCH PLATE (TYP. OF 3).
- 14 16" T.X-3P. TEE.
- 15 12" SLOTTED PIPE, SEE SPECS.
- 16 30" X 30" MEDIUM DUTY SLUICE GATE.
- 17 PIPE ENCASUREMENT (TYP.). SEE STRUCTURAL DWGS.
- 18 16" T.X-3P. BLIND FLANGE (TYP. OF 3).
- 19 4" T.N-7P.
- 20 4" T.V-1P.
- 21 4" PLUG VALVE.
- 22 4" BALL CHECK VALVE.
- 23 8" F.C.A.
- 24 4" T.N-7P. 90° ELL.

- 1 SEE NOTE 1, SHT. M-4.
- 2 SLUDGE PUMPS & PIPING NOT SHOWN ON THIS DWG. FOR CLARITY, SEE SHT. M-8.
- 3 16" T.X-3P. CONTRACTOR MAY USE FUSION EPOXY LINED PIPE ONLY, AT HIS OPTION, FOR PIPE TO BE CONCRETE ENCASED. ADDITIONAL FLANGES TO THOSE SHOWN MAY BE REQUIRED TO ENABLE LINING & COATING OF THE PIPE, AND SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- 4 16" T.X-3P.
- 5 12" T.X-3P. (TYP. OF 3).
- 6 12" X 8" T.X-3P. REDUCER (TYP. OF 3).
- 7 8" T.X-3P. (TYP. OF 16).

Revised	Description	Submit	App'd	Date
CO NO. 24	FIELD CHANGE			
Refer to Tracing for Latest Revision				

Reference Information and Notes:

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Date: 4-24-81

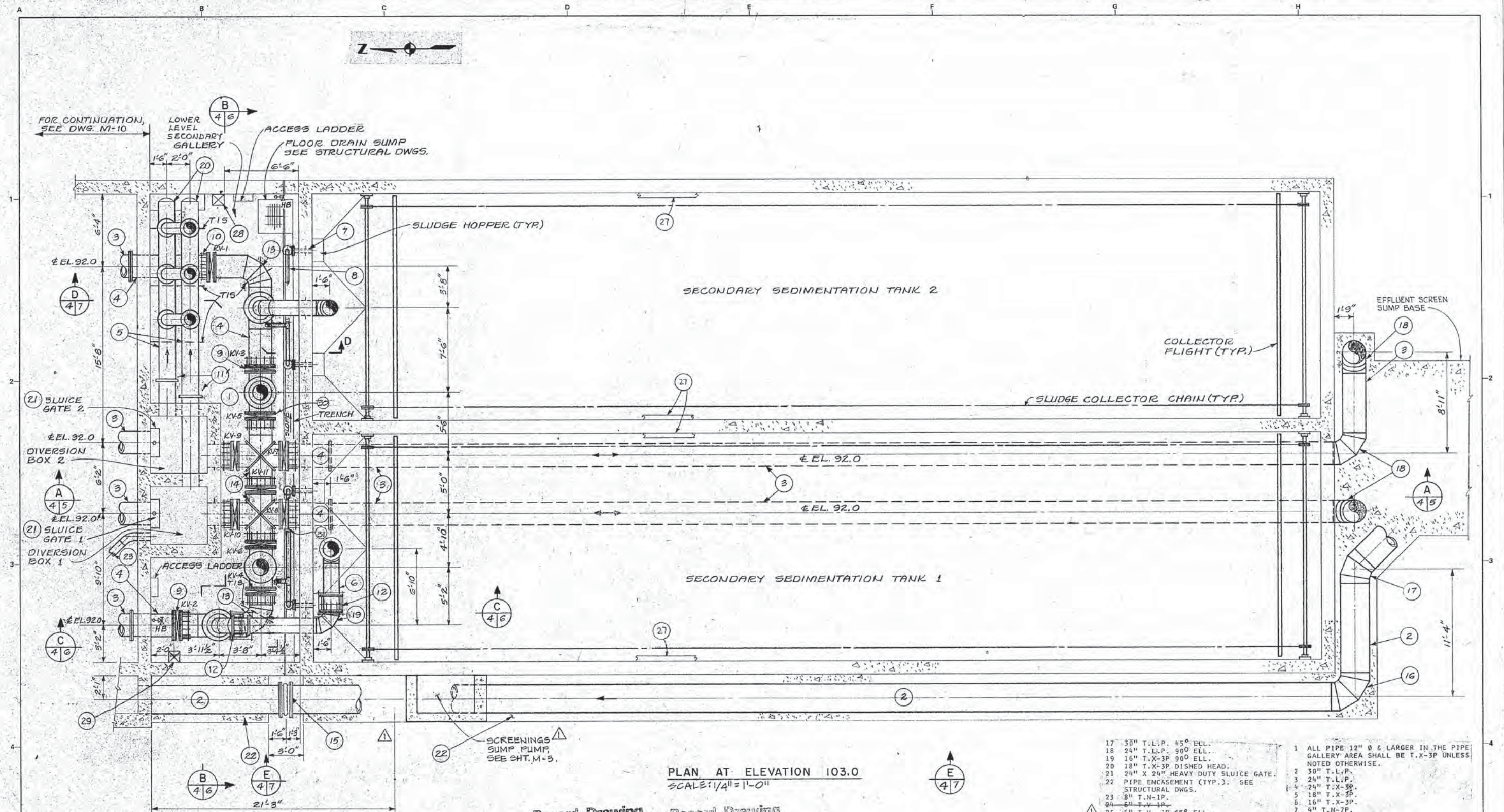
FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24.
REFER TO THE NOTE WITH THIS NUMBER

Designed
J.A.F.
Drawn
A.M.
Checked
J.H.F.
Date
1-24-81

Wastewater Plant Improvements C-06-2464
Sausalito - Marin City Sanitary District
Kennedy/Jenks Engineers San Francisco
Submitted: *Walter G. ...* C9370
Approved: *Robert J. ...*

SECONDARY STRUCTURE
INTERMEDIATE PLAN

Scale
1/4" = 1'-0"
Job No.
0112
Sheet
M-3
of



PLAN AT ELEVATION 103.0
SCALE: 1/4" = 1'-0"

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Date 4-29-98

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Date 4-29-98

GRAPHIC SCALE

1/4" = 1'-0"

REFER TO THE NOTE WITH THIS NUMBER

- 17 30" T.L.P. 45° ELL.
- 18 24" T.L.P. 90° ELL.
- 19 16" T.X-3P 90° ELL.
- 20 18" T.X-3P DISHED HEAD.
- 21 24" X 24" HEAVY DUTY SLUICE GATE.
- 22 PIPE ENCASUREMENT (TYP.). SEE STRUCTURAL DWGS.
- 23 8" T.N-1P.
- 24 6" T.V-1P.
- 25 6" T.V-1P 45° ELL.
- 26 6" T.N-7P SPOOL.
- 27 CONCRETE FILLET. SEE STRUCTURAL DWGS.
- 28 12" X 12" SUPPLY AIR DUCT.
- 29 12" X 12" EXHAUST AIR DUCT DOWN TO EL 91.0 W/10" X 10" RETURN REGISTER AT BOTTOM.

- 1 ALL PIPE 12" Ø & LARGER IN THE PIPE GALLERY AREA SHALL BE T.X-3P UNLESS NOTED OTHERWISE.
- 2 30" T.L.P.
- 3 24" T.L.P.
- 4 24" T.X-3P.
- 5 18" T.X-3P.
- 6 16" T.X-3P.
- 7 4" T.N-7P.
- 8 4" T.V-4P.
- 9 24" KNIFE GATE VALVE (TYP. OF 11).
- 10 24" F.C.A. (TYP. OF 11).
- 11 18" METALLIC COUPLING.
- 12 16" F.C.A. W/RESTRAINING RODS.
- 13 24" T.X-3P 90° ELL.
- 14 24" T.X-3P CROSS W/CROTCH PLATE.
- 15 30" RUBBER COUPLING.
- 16 30" T.L.P. 90° ELL.

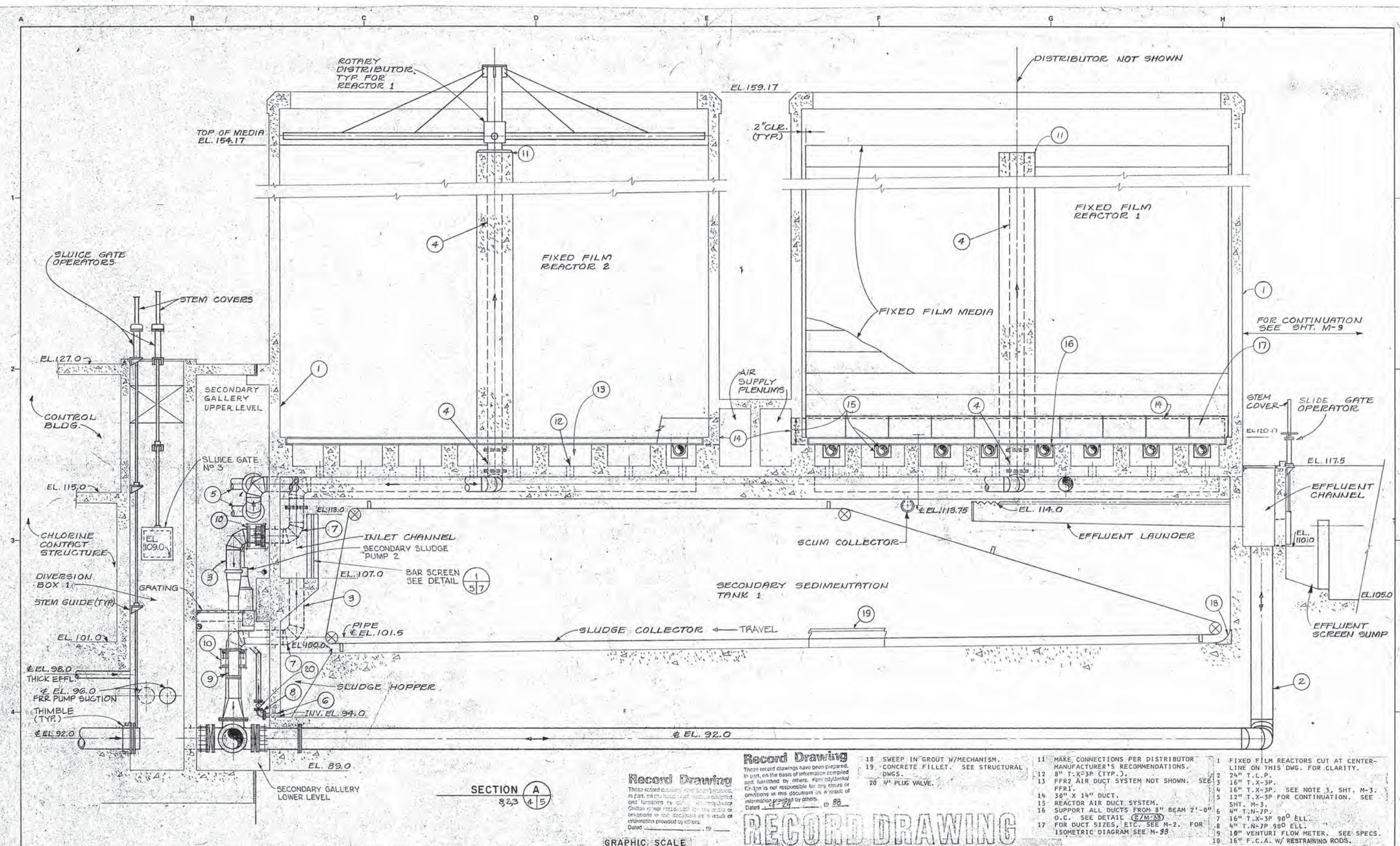
Revised	Description	Submit	App'd.	Date
CO NO. 24				
Refer to Tracing for Latest Revision				

Reference Information and Notes:
30. 24" KNIFE GATE VALVES KV-5, 6, 7 & 8 HAVE ELECTRIC OPERATORS. SEE SPECIFICATIONS.
31. 24" F.C.A.'s FOR VALVES KV-7, 8, 9 & 10 SHALL BE DESIGNED TO FIT IN THE LIMITED SPACE AVAILABLE WITH SUFFICIENT CLEARANCE TO FACILITATE REMOVAL OF VALVE.

Designed J.A.F.	Wastewater Plant Improvements Sausalito - Marin City Sanitary District	C-06-2464
Drawn A.M.	Kennedy/Jenks Engineers	San Francisco
Checked JMF	Submitted:	Approved: Robert J. Casey
Date 1-29-98	Walter J. Gassman	C9370

SECONDARY STRUCTURE
BOTTOM PLAN

Scale
1/4" = 1'-0"
Job No.
0112
Sheet
M-4
of



SECTION A
823 4 5

Record Drawing
These record drawings have been prepared, in part, on the basis of information compiled and furnished by others. Kennedy/Jenks Engineers is not responsible for any errors or omissions in this document as a result of information provided by others.
Date: 4-27-86

Record Drawing
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Date: 4-27-86

- 18 SWEEP IN GROUT W/MECHANISM.
- 19 CONCRETE FILLET. SEE STRUCTURAL DWGS.
- 20 4" PLUG VALVE.

- 11 MAKE CONNECTIONS PER DISTRIBUTOR MANUFACTURER'S RECOMMENDATIONS.
- 12 8" T.X-3P (TYP.).
- 13 FFR2 AIR DUCT SYSTEM NOT SHOWN. SEE FFR1.
- 14 30" X 14" DUCT.
- 15 REACTOR AIR DUCT SYSTEM.
- 16 SUPPORT ALL DUCTS FROM 8" BEAM 2'-0" O.C. SEE DETAIL E/M-33.
- 17 FOR DUCT SIZES, ETC. SEE M-2. FOR ISOMETRIC DIAGRAM SEE M-23.

- 1 FIXED FILM REACTORS CUT AT CENTER-LINE ON THIS DWG. FOR CLARITY.
- 2 24" T.L.P.
- 3 16" T.X-3P.
- 4 16" T.X-3P. SEE NOTE 3, SHT. M-3.
- 5 12" T.X-3P FOR CONTINUATION. SEE SHT. M-3.
- 6 4" T.N-7P.
- 7 16" T.X-3P 90° ELL.
- 8 4" T.N-7P 90° ELL.
- 9 10" VENTURI FLOW METER. SEE SPECS.
- 10 16" F.C.A. W/ RESTRAINING RODS.

GRAPHIC SCALE
1/4" = 1'-0"

Wastewater Plant Improvements C-06-2464
Sausalito - Marin City Sanitary District

Kennedy/Jenks Engineers
San Francisco
Submitted: *Walter J. Harrison* C9370
Approved: *Robert J. O'Neil*

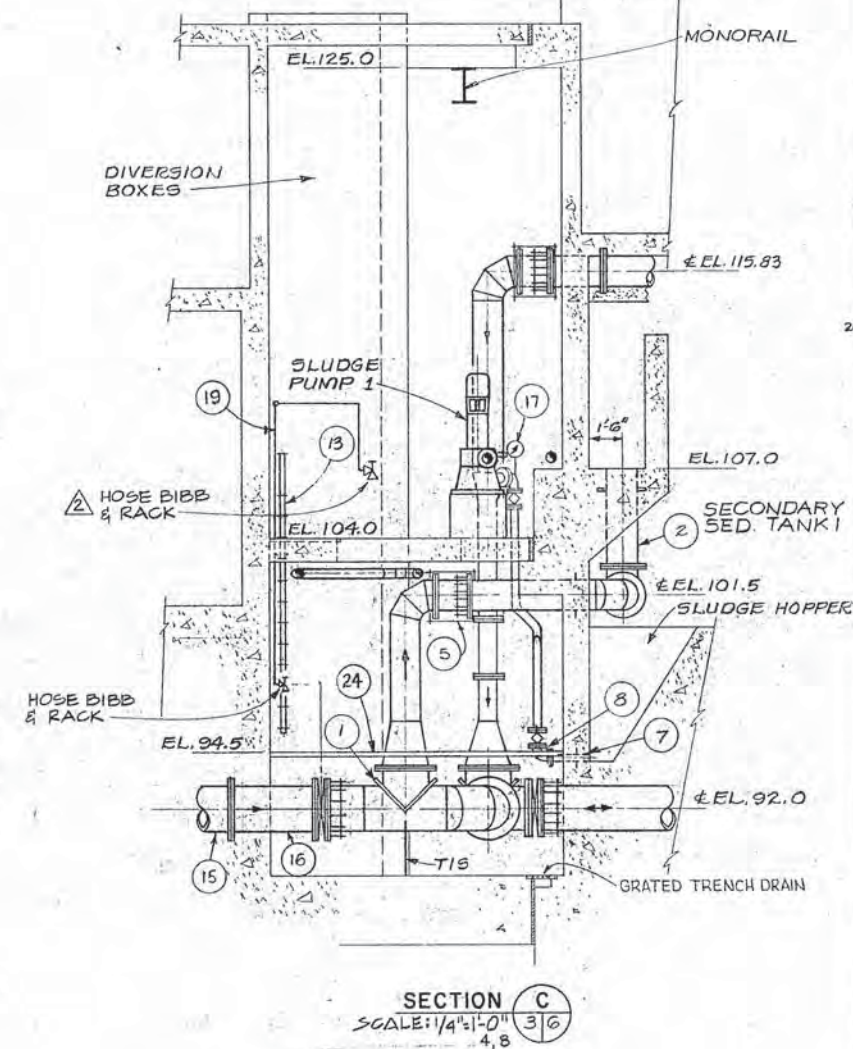
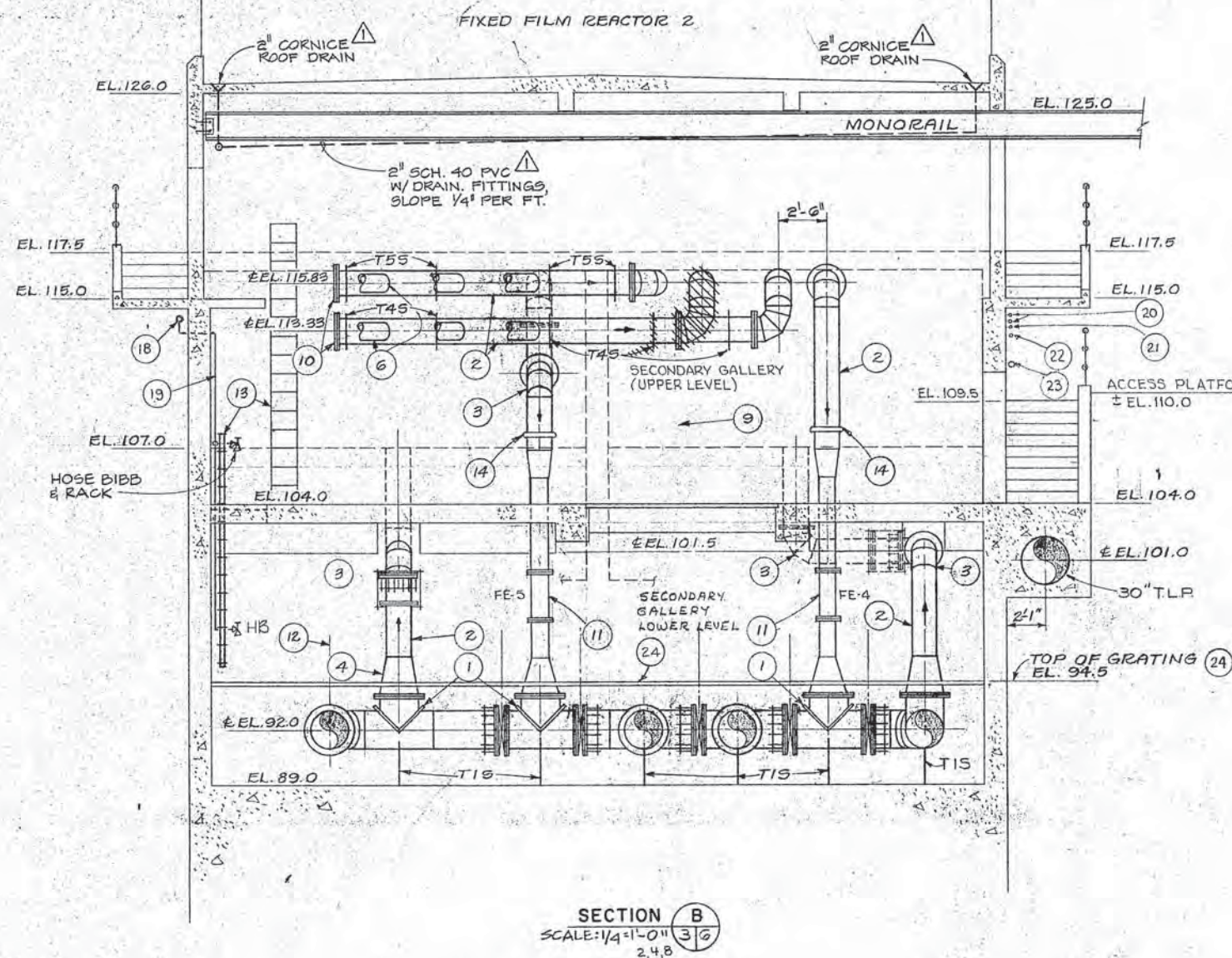
**SECONDARY STRUCTURE
LONGITUDINAL SECTION**

Scale: 1/4" = 1'-0"
Job No.:
Sheet: **M-5**
of

Revised	Description	Submit	App'd.	Date
Refer to Tracing for Latest Revision				

Reference Information and Notes:

REFER TO THE NOTE WITH THIS NUMBER



- 1 24" T.X-3P TEE W/CROTCH PLATE.
- 2 16" T.X-3P
- 3 16" T.X-3P 90° ELL.
- 4 24" X 16" T.X-3P REDUCER (TYP. OF 4).
- 5 16" F.C.A.
- 6 12" T.X-3P FOR CONTINUATION SEE SHT. M-3
- 7 4" T.N-7P
- 8 4" T.N-7P 90° ELL.
- 9 SLUDGE PUMPS NOT SHOWN. FOR CLARITY, SEE SHT. M-8.
- 10 16" T.X-3P BLIND FLANGE.
- 11 10" VENTURI FLOW METER, SEE SPECS.
- 12 VALVE OPERATORS NOT SHOWN FOR CLARITY. (TYP. ALL 24" VALVES).
- 13 ACCESS LADDER. FOR DETAILS, SEE ARCH. DWGS.
- 14 16" VICTAULIC COUPLING.
- 15 24" T.L.P.
- 16 24" 7X-3P
- 17 SEE DETAIL (LD/M-3)
- 18 4" TV-1P RECLAIMED WATER @ EL. 114.50.
- 19 3/4" TV-1P RECLAIMED WATER
- 20 2" TV-1P CHLORINE SOLUTION
- 21 1/2" TV-1P SAMPLE 4
- 22 1" TV-1P SAMPLE 3
- 23 4" TV-1P RECLAIMED WATER
- 24 CONTRACTOR SHALL SUPPLY & INSTALL GALV. STEEL GRATING & SUPPORT MEMBERS TO SUPPORT A LIVE LOAD OF 150 PSF WITH A DEFLECTION NOT TO EXCEED 1/4". CONTRACTOR SHALL ALSO SUPPLY & INSTALL GRATING SUPPORT MEMBERS AROUND THE PERIPHERY OF ALL OPENING IN THE GRATING WHICH ARE SQUARE OR RECTANGULAR IN SHAPE.

Record Drawing
These record drawings have been prepared from the field data and are not to be used for construction purposes. The Engineer is not responsible for any errors or omissions in this document as a result of information provided by others.
10/20/88

Record Drawing
These record drawings have been prepared from the field data and are not to be used for construction purposes. The Engineer is not responsible for any errors or omissions in this document as a result of information provided by others.
10/20/88

RECORD DRAWING

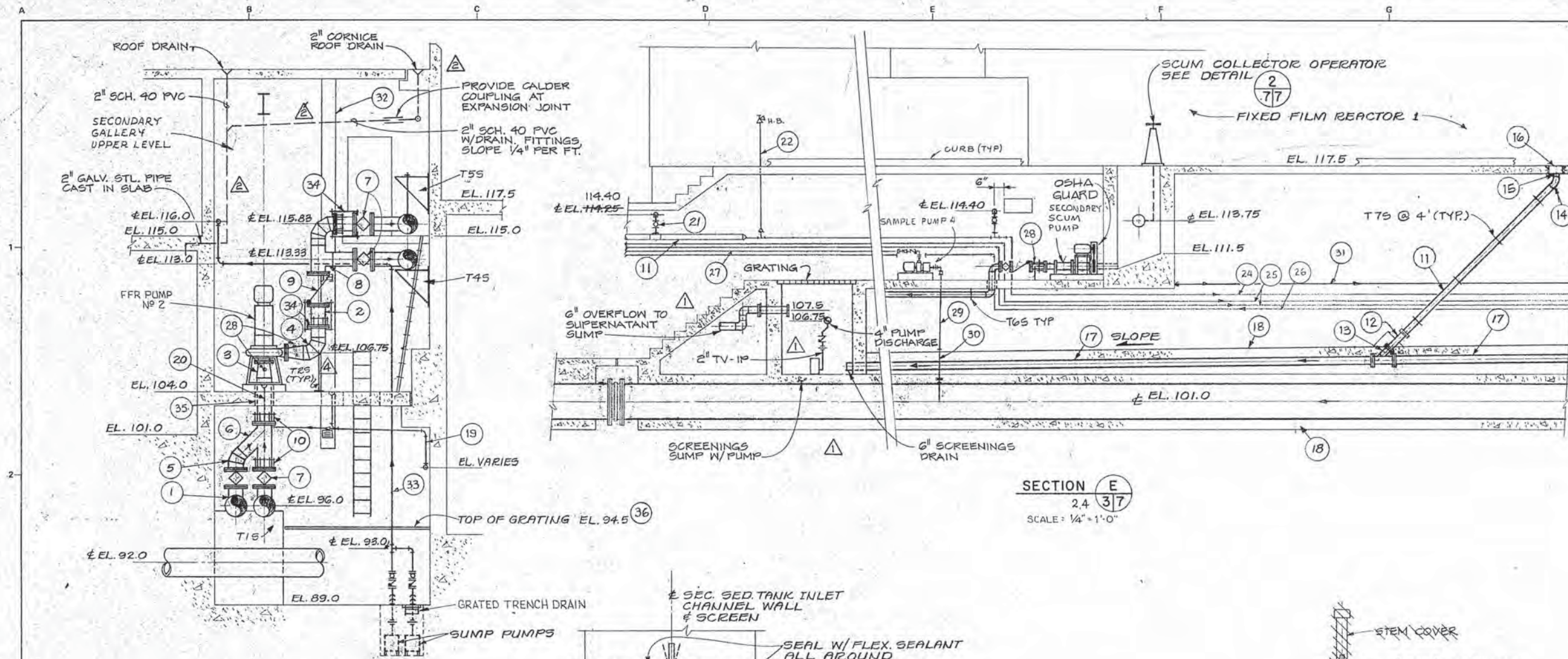
GRAPHIC SCALE
1/4" = 1'-0"

Revised	Description	Submit	App'd	Date
1	FIELD CHANGE CO NO. 28			

Reference Information and Notes:	
FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24	
REFER TO THE NOTE WITH THIS NUMBER	

Designed J.A.F.	Wastewater Plant Improvements C-06-2464
Drawn A.M.	Sausalito - Marin City Sanitary District
Checked J.H.F.	KennedyJenks Engineers San Francisco
Date 1-29-81	Submitted: <i>Walter J. Jensen</i> 09370 Approved: <i>Robert J. Conroy</i>

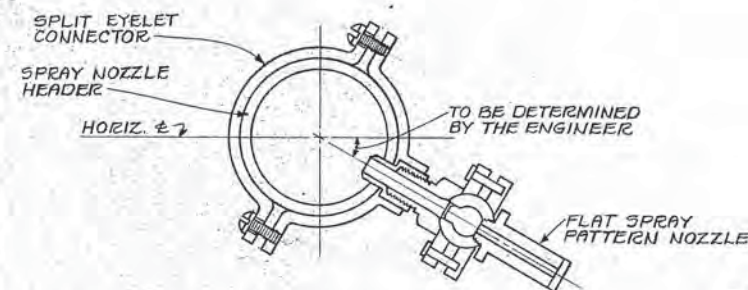
PIPE GALLERY SECTIONS	
Scale 1/4" = 1'-0"	Job No. 0112
Sheet M-6	of



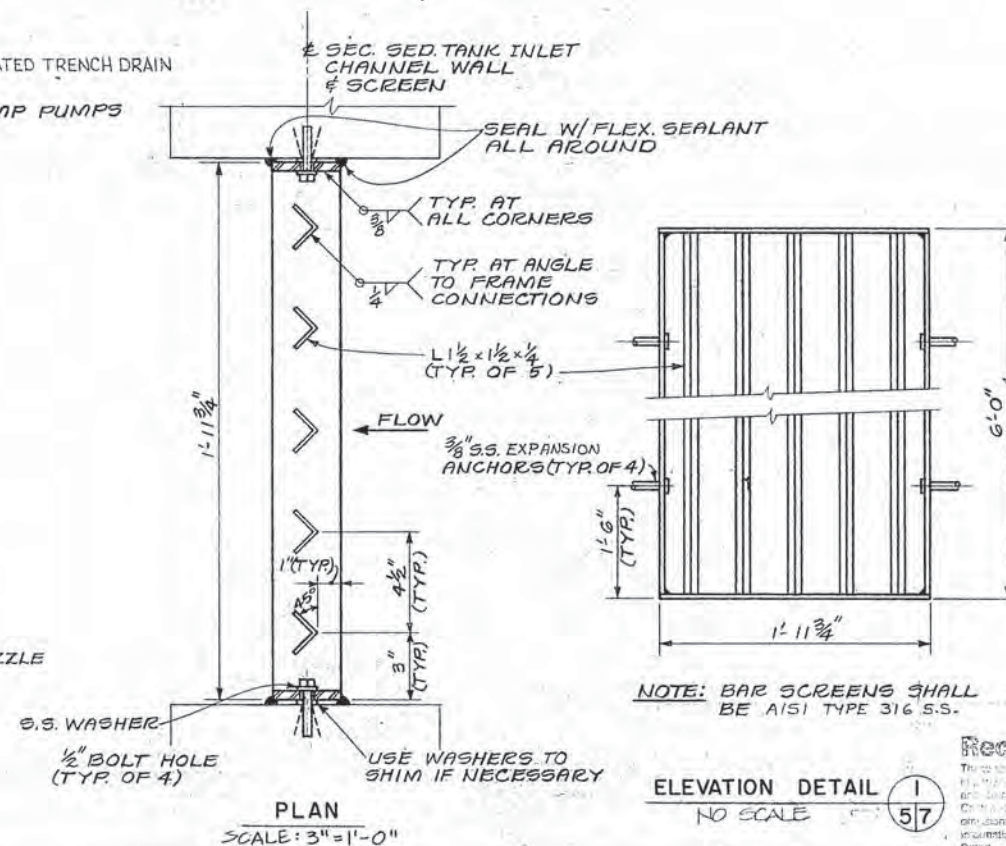
- 1 18" X 18" X 12" TEE W/CROUCH PLATE (TYP. OF 2).
- 2 12" T.X-3P.
- 3 12" X 10" T.X-3P REDUCER.
- 4 12" T.X-3P 90° ELL.
- 5 12" T.X-3P 45° ELL.
- 6 12" T.X-3P 45° LATERAL.
- 7 12" PLUG VALVE (TYP. OF 2).
- 8 12" T.X-3P TEE.
- 9 12" BALL CHECK VALVE.
- 10 12" F.C.A.
- 11 4" T.V-1P.
- 12 4" X 18" T.N-7P SPOOL.
- 13 6" X 6" X 4" T.N-7P LATERAL.
- 14 4" T.V-1P 45° ELL.
- 15 4" T.V-1P SXT NIPPLE.
- 16 4" CLEANOUT W/COVER.
- 17 6" T.V-1P.
- 18 PIPE ENCASUREMENT (TYP.). SEE STRUCTURAL DWGS.
- 19 3" T.N-4P.
- 20 2" T.N-4P.
- 21 1" PVC TRUE UNION BALL VALVE (TYP. OF 2).
- 22 3/4" TV-1P.
- 23
- 24 3" TV-1P RECLAIMED WATER.
- 25 2" TV-1P CHLORINE SOLUTION.
- 26 1" TV-1P SAMPLE 3.
- 27 1" TV-1P SAMPLE 4.
- 28 GAGE CONNECTION DETAIL (10/3/81).
- 29 2" TV-1P SAMPLE 3.
- 30 2" TV-3P SAMPLE 3.
- 31 1" TV-1P INSTRUMENT AIR TO BUBBLER PANEL 2.
- 32 12" X 12" SUPPLY AIR DUCT DOWN TO EL 100 W/10" X 10" 500 CFM REGISTER AT EL 112.0 AND 10" X 6" 325 CFM REGISTER AT EL 101.0.
- 33 2" TV-1P SUMP PUMP DISCHARGE.
- 34 12" FLANGED COUPLING ADAPTOR W/RESTRAINING RODS. SEE DETAIL, SHT. M-30.
- 35 HOLE THROUGH FLOOR TO ALLOW 12" TX-3P W/CLEARANCE.
- 36 CONTRACTOR SHALL SUPPLY & INSTALL GALV. STEEL GRATING & SUPPORT MEMBERS TO SUPPORT A LIVE LOAD OF 150 PSF WITH A DEFLECTION NOT TO EXCEED 1/4". CONTRACTOR SHALL ALSO SUPPLY & INSTALL GRATING SUPPORT MEMBERS AROUND THE PERIPHERY OF ALL OPENING IN THE GRATING WHICH ARE SQUARE OR RECTANGULAR IN SHAPE.

SECTION D
4.8 3/7
SCALE: 1/4" = 1'-0"

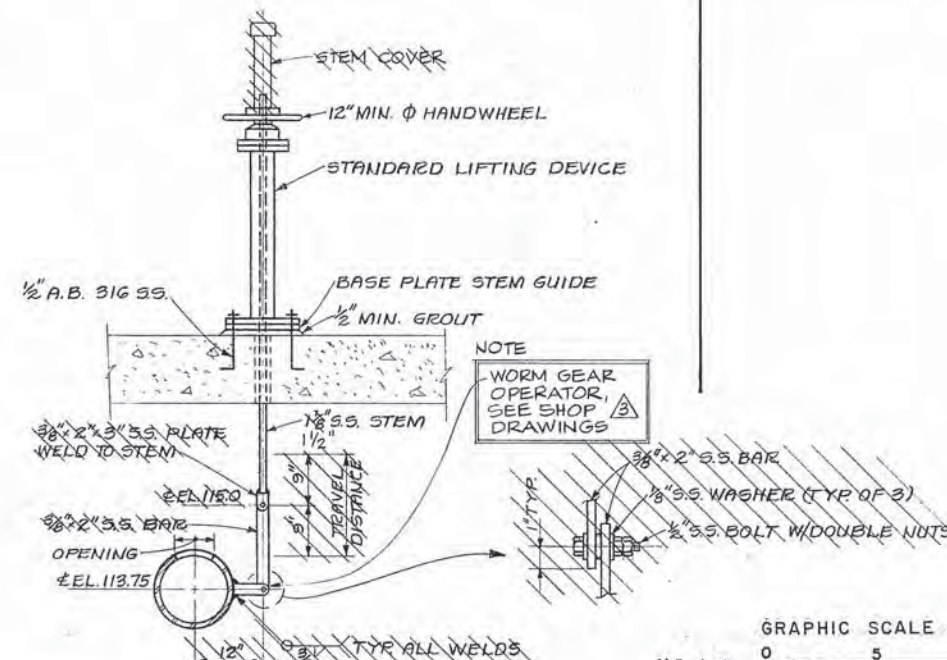
SECTION E
2.4 3/7
SCALE: 1/4" = 1'-0"



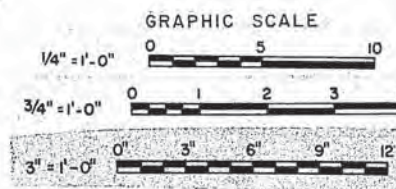
SPRAY NOZZLE DETAIL
NO SCALE
3/7



PLAN
SCALE: 3" = 1'-0"



SCUM COLLECTOR OPERATOR DETAIL
SCALE: 3/4" = 1'-0"
2/7

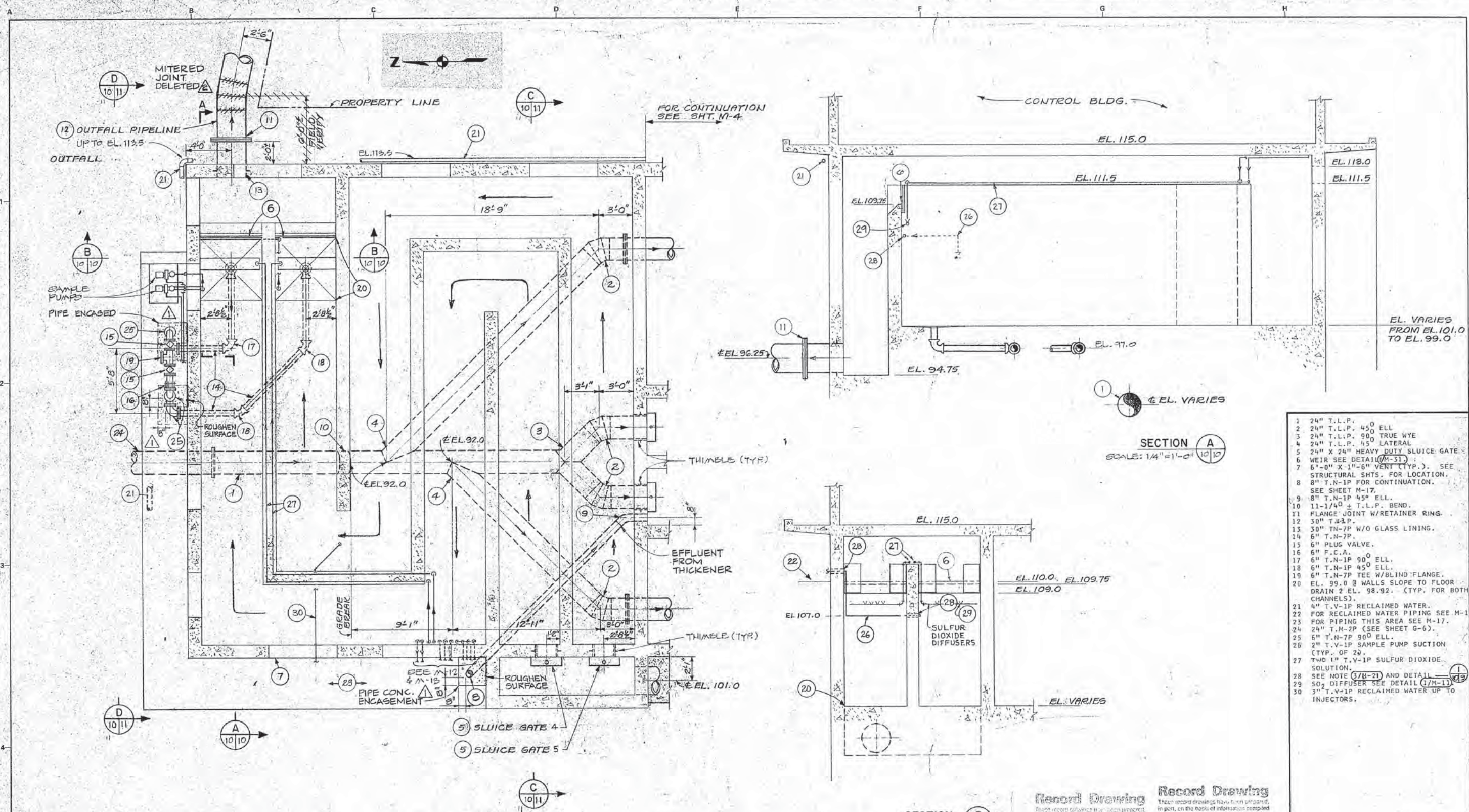


▲	C.O. NO. 29			
▲	SUBSTITUTION			
▲	CO NO. 28			
▲	CO NO. 24			
Revised	Description	Submit.	App'd.	Date
	Refer to Tracing for Latest Revision			

Reference Information and Notes:	
RECORD DRAWING FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24 REFER TO THE NOTE WITH THIS NUMBER	

Designed J.H.F.	Wastewater Plant Improvements	C-06-2464
Drawn J.H.F.	Sausalito - Marin City Sanitary District	
Checked J.H.F.	Kennedy/Jenks Engineers	San Francisco
Date 1-29-81	Submitted: <i>Walter J. Jenks</i>	Approved: <i>Robert J. Jenks</i>

PIPE GALLERY SECTIONS	
Scale AS SHOWN	Sheet M-7
Job No. 0112	of



PLAN AT ELEVATION 111.0 ±
SCALE: 1/4" = 1'-0"

SECTION A
SCALE: 1/4" = 1'-0"

SECTION B
SCALE: 1/4" = 1'-0"

- 1 24" T.L.P. 45° ELL
- 2 24" T.L.P. 90° TRUE WYE
- 3 24" T.L.P. 45° LATERAL
- 4 24" X 24" HEAVY DUTY SLUICE GATE
- 5 WEIR SEE DETAIL (1/M-31)
- 6 6'-0" X 1'-6" VENT (TYP.). SEE STRUCTURAL SHTS. FOR LOCATION.
- 7 8" T.N-1P FOR CONTINUATION. SEE SHEET M-17.
- 8 8" T.N-1P 45° ELL.
- 9 11-1/4" ± T.L.P. BEND.
- 10 30" T.W.P.
- 11 FLANGE JOINT W/RETAINER RING.
- 12 30" T.W.P.
- 13 30" T.N-7P W/O GLASS LINING.
- 14 6" T.N-7P.
- 15 6" PLUG VALVE.
- 16 6" F.C.A.
- 17 6" T.N-1P 90° ELL.
- 18 6" T.N-1P 45° ELL.
- 19 6" T.N-7P TEE W/BLIND FLANGE.
- 20 EL. 99.0 @ WALLS SLOPE TO FLOOR DRAIN 2 EL. 98.92. (TYP. FOR BOTH CHANNELS).
- 21 4" T.V-1P RECLAIMED WATER.
- 22 FOR RECLAIMED WATER PIPING SEE M-12.
- 23 FOR PIPING THIS AREA SEE M-17.
- 24 24" T.M-2P (SEE SHEET G-6).
- 25 6" T.N-7P 90° ELL.
- 26 2" T.V-1P SAMPLE PUMP SUCTION (TYP. OF 2).
- 27 TWO 1" T.V-1P SULFUR DIOXIDE SOLUTION.
- 28 SEE NOTE (1/M-21) AND DETAIL (1/M-11).
- 29 50% DIFFUSER SEE DETAIL (1/M-11).
- 30 3" T.V-1P RECLAIMED WATER UP TO INJECTORS.

Record Drawing
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Dated APR. 29, 1988

Record Drawing
These record drawings have been prepared, in part, on the basis of information compiled and furnished by others. Kennedy/Jenks Chilton is not responsible for any errors or omissions in this document as a result of information provided by others.
Dated APR. 29, 1988

GRAPHIC SCALE
0 5 10
1/4" = 1'-0"

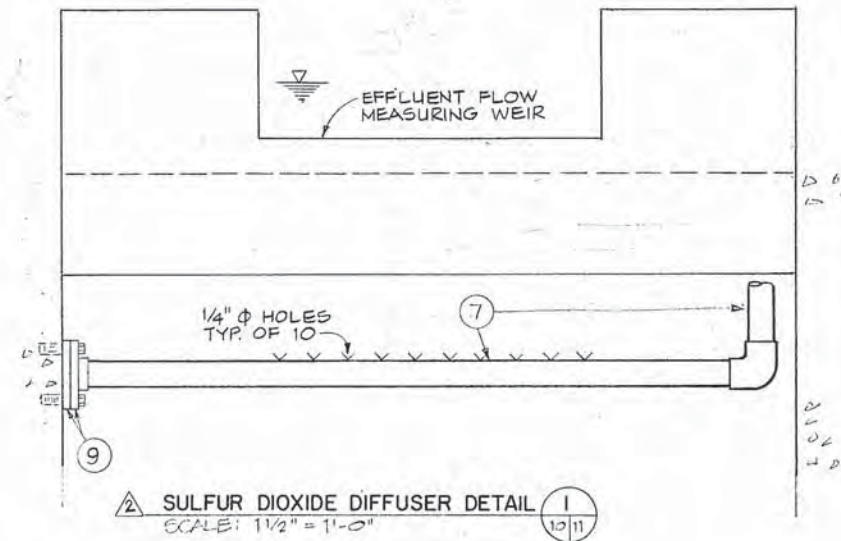
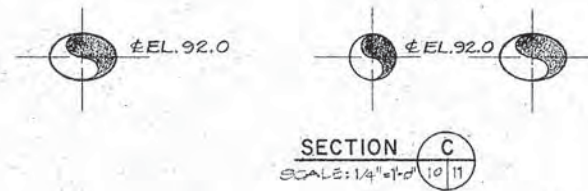
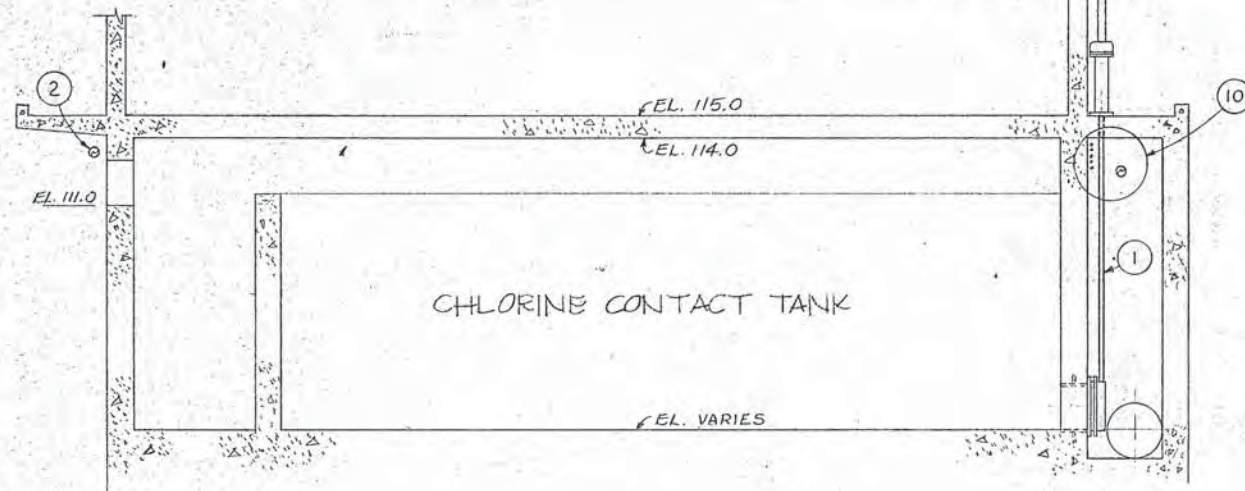
Revised	Description	Submit	App'd.	Date
1	FIELD CHANGE CO NO. 34			
Refer to Tracing for Latest Revision				

Reference Information and Notes:
FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-74
REFER TO THE NOTE WITH THIS NUMBER

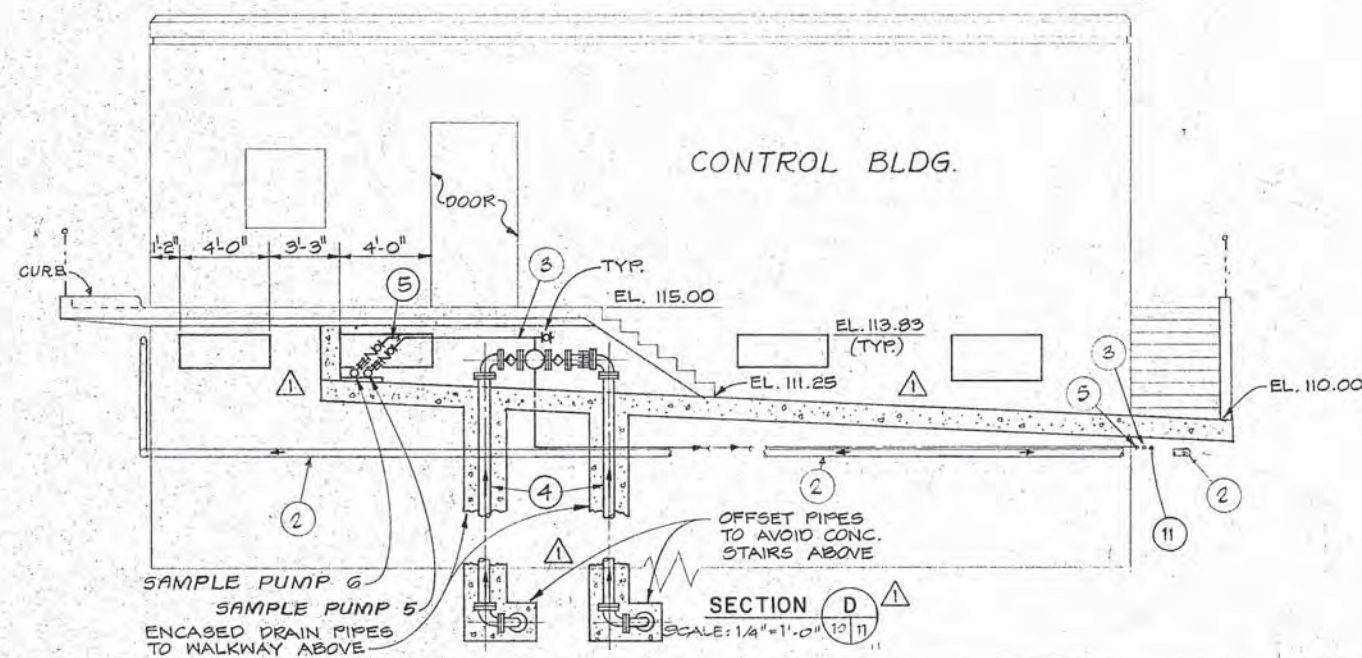
Designed: JHF/JAF
Drawn: AM/JHF
Checked: JHF
Date: 1-29-81
Wastewater Plant Improvements C-06-2464
Sausalito - Marin City Sanitary District
Kennedy/Jenks Engineers
Submitted: Walter J. Hanna C9370
San Francisco
Approved: Robert J. [Signature]

CHLORINE CONTACT STRUCTURE
PLAN AND SECTIONS

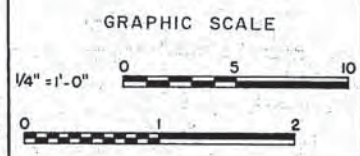
Scale: 1/4" = 1'-0"
Job No.: 0112
Sheet: M-10
of



- 1 30" X 30" SLUICE GAGE W/WALL THIMBLE. SEE SPECS.
- 2 4" T.V-1P REC. WATER.
- 3 3/4" T.V-1P SAMPLE 5.
- 4 6" T.N-7P TANK DRAIN.
- 5 3/4" T.V-1P SAMPLE 6.
- 6 SEE NOTE 3/M-21 AND DETAIL 10/11
- 7 2" T.V-1P
- 8 3/16" Ø IN BOTTOM OF PIPE. TYPICAL
- 9 2" T.V-1P. SOLVENT WELD BLIND FLANGE TO FLANGE. ATTACH TO WALL W/4 - 1/4"
- 10 316 SS SLEEVE ANCHORS. FOR PIPING SEE M-12.
- 11 1/4" TV-1P. INSTRUMENT AIR TO BUBBLER PANEL 3. SEE ELECTRICAL DWGS.



Record Drawing
These record drawings have been prepared, in part, on the basis of information compiled and furnished by others. Kennedy/Jenks/Chilton is not responsible for any errors or omissions in this document as a result of information provided by others.
Date: APR 29, 1982



Revised	Description	Submit	App'd.	Date
2	FIELD CHANGE CO NO. 34			
Refer to Tracing for Latest Revision				

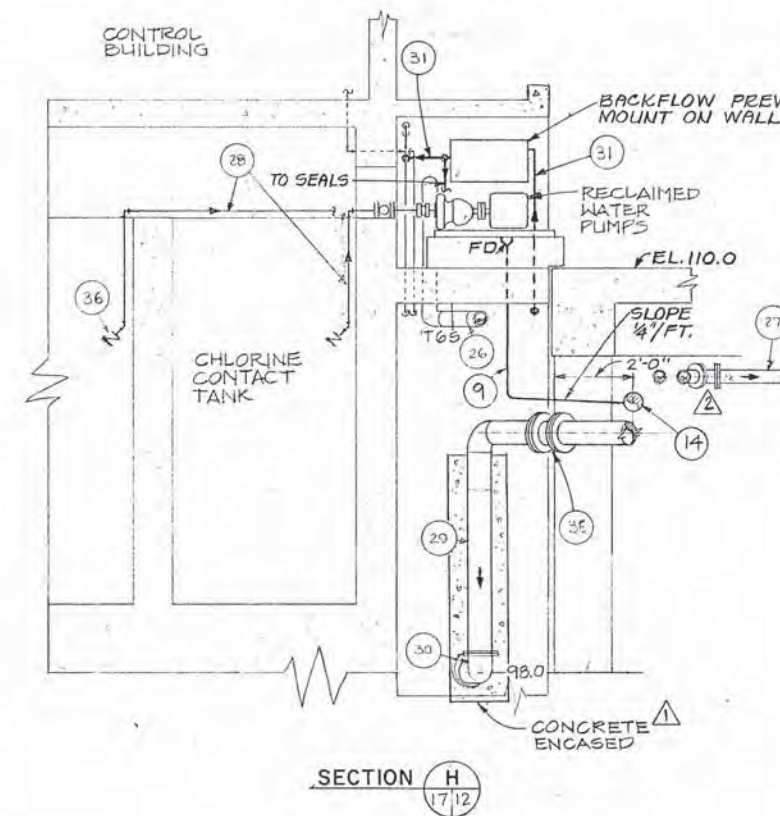
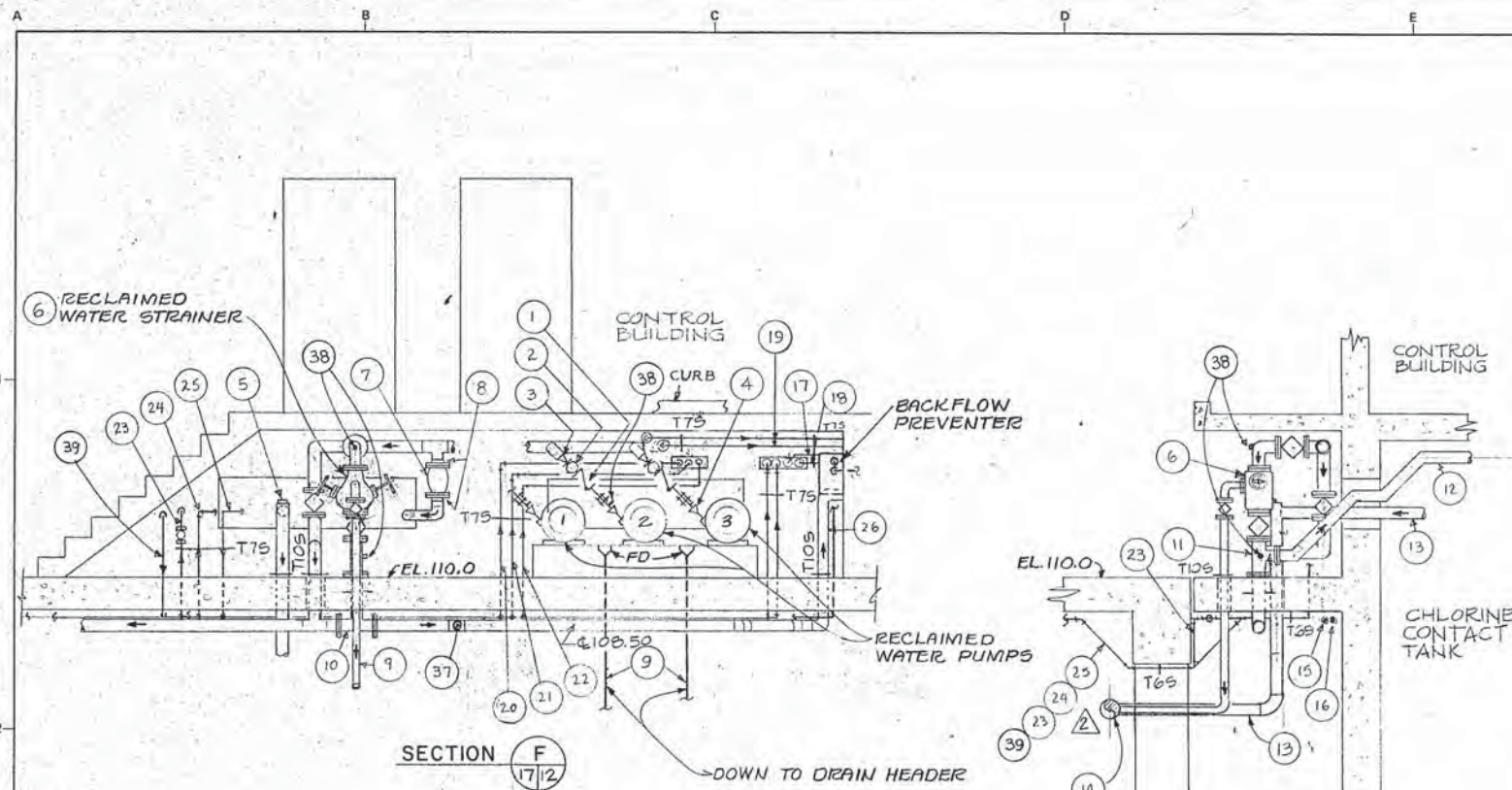
Reference Information and Notes:

FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24
REFER TO THE NOTE WITH THIS NUMBER

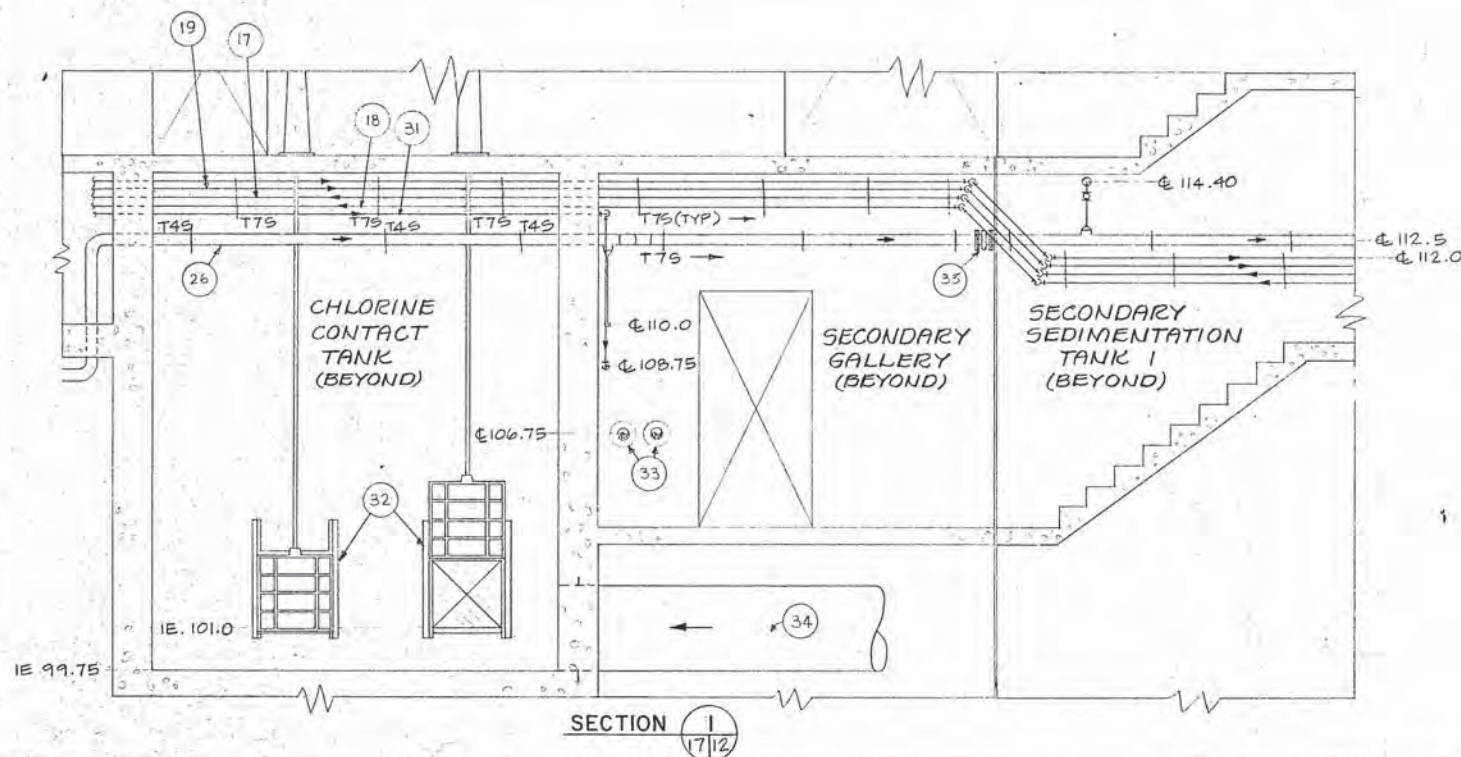
Designed JHF/JAF	Wastewater Plant Improvements Sausalito - Marin City Sanitary District	C-06-2464
Drawn AM/JHF	Kennedy/Jenks Engineers	San Francisco
Checked JHF	Submitted: Walter J. Hammer	Approved: Robert J. Ames
Date 1-29-81	C9330	

CHLORINE CONTACT STRUCTURE
SECTIONS

Scale 1/4" = 1'-0"
Job No. 0112
Sheet M-11
of



- 1 2" THREADED CHECK VALVE
- 2 2" TRUE UNION BALL VALVE (TYP. OF 9)
- 3 2 X 4 INCREASER
- 4 1-1/2" X 2" INCREASER
- 5 4" TEE W/BLIND FLANGE AND 4" PLUG
- 6 STRAINER (SEE SPECS.)
- 7 3" PRV (SEE SPECS.)
- 8 3 X 4 REDUCER
- 9 2" TV-1P DRAIN
- 10 4" TN-7P SPECIAL TEE W/CUTOFF FLANGE
- 11 4" TN-7P TEE. GROUT AROUND LOWER FLANGE
- 12 4" TV-1P RECLAIMED WATER
- 13 4" TV-1P DRAIN
- 14 6" TV-1P SCREEN DRAIN
- 15 3/4" TV-1P SAMPLE 5
- 16 3/4" TV-1P SAMPLE 6
- 17 3/4" TV-1P SAMPLE 4
- 18 3/4" TV-1P SAMPLE 3
- 19 2" TV-1P CHLORINE SOLUTION
- 20 1-1/2" TV-1P SULFUR DIOXIDE VACUUM
- 21 1-1/2" TV-1P CHLORINE VACUUM
- 22 1-1/2" TV-1P CHLORINE VACUUM
- 23 1-1/2" TV-1P POTABLE WATER
- 24 3/4" TV-1P HOT WATER RETURN
- 25 3/4" TV-1P HOT WATER SUPPLY
- 26 4" TV-1P RECLAIMED WATER
- 27 4" TV-1P PRIMARY/SECONDARY SLUDGE
- 28 2" TV-1P PUMP SUCTION
- 29 8" TV-1P THICKENER OVERFLOW
- 30 8" TN-7P 90° ELL
- 31 3/4" TV-1P
- 32 30 X 30 SLUICE GATE W/WALL THIMBLE
- 33 4" TV-1P SLUDGE
- 34 30" TL-P SECONDARY EFFLUENT
- 35 RUBBER COUPLING. SEE SPECS.
- 36 FOOT VALVE. SEE SPECS.
- 37 4" TEE W/REDUCER TO 1-1/2"
- 38 T.V-1P
- 39 1/2" TV-1P INSTRUMENT AIR FROM AIR RECEIVER TO BUBBLER PANELS 1-7 AND HYDRO-PNEUMATIC TANK



Record Drawing
 This drawing is a record of the work done on the project. It is not to be used for construction purposes. It is the responsibility of the engineer to ensure that the work is done in accordance with the specifications and the approved plans. The engineer is not responsible for any errors or omissions in this drawing. The date of the drawing is 1-29-81.

GRAPHIC SCALE

3/8" = 1'-0"

Revised	Description	Submit	Appr'd	Date
2	FIELD CHANGE CO NO. 34			
Refer to Tracing for Latest Revision				

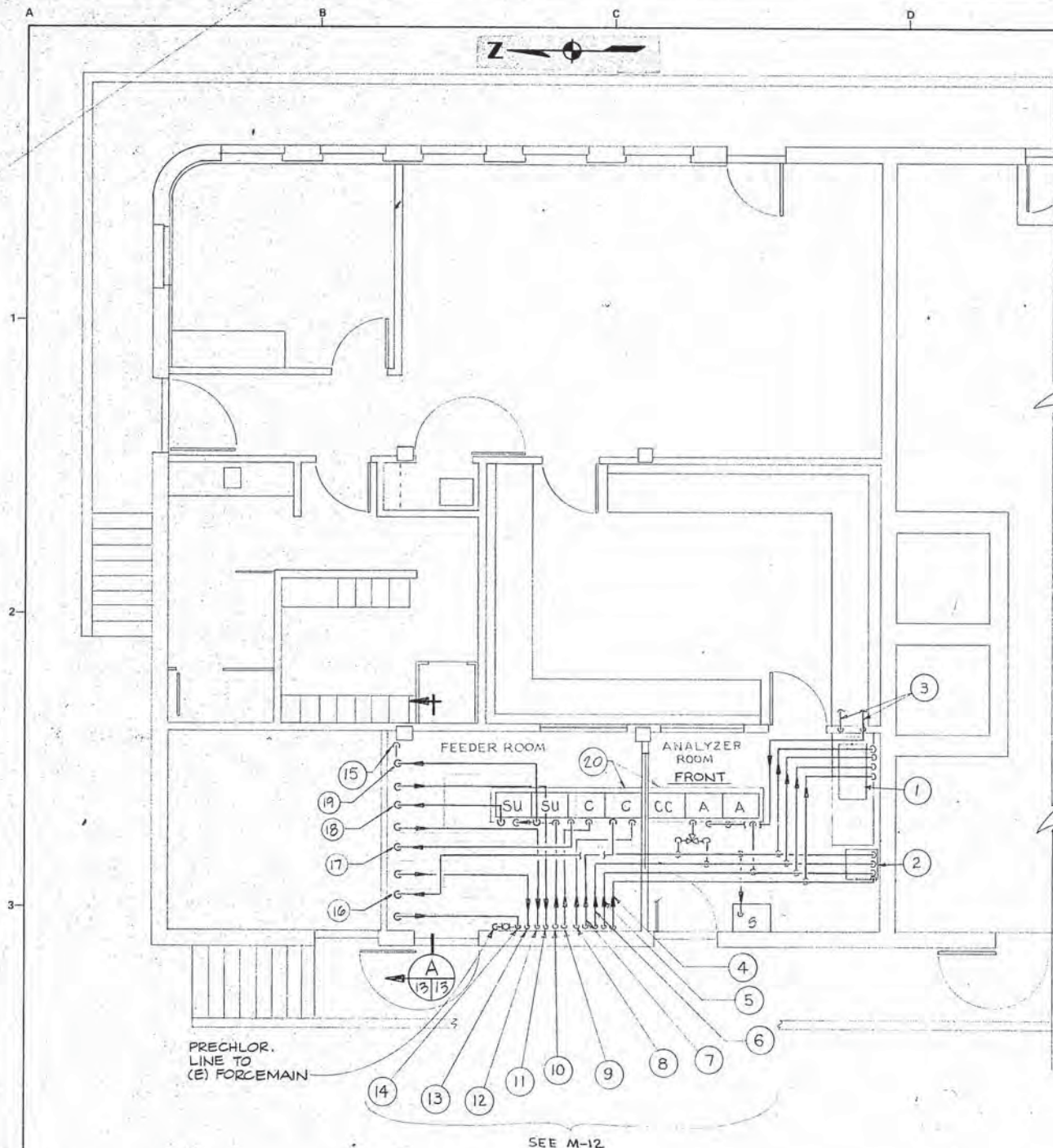
Reference Information and Notes:

FOR TYPICAL EQUIPMENT ANCHORAGE, SEE SHEET M-24
 REFER TO THE NOTE WITH THIS NUMBER

Designed JHF	Wastewater Plant Improvements Sausalito - Marin City Sanitary District	C-06-2464
Drawn JHF	Kennedy/Jenks Engineers	San Francisco
Checked JHF	Submitted	
Date 1-29-81	Walter H. Hanna	1-29-81

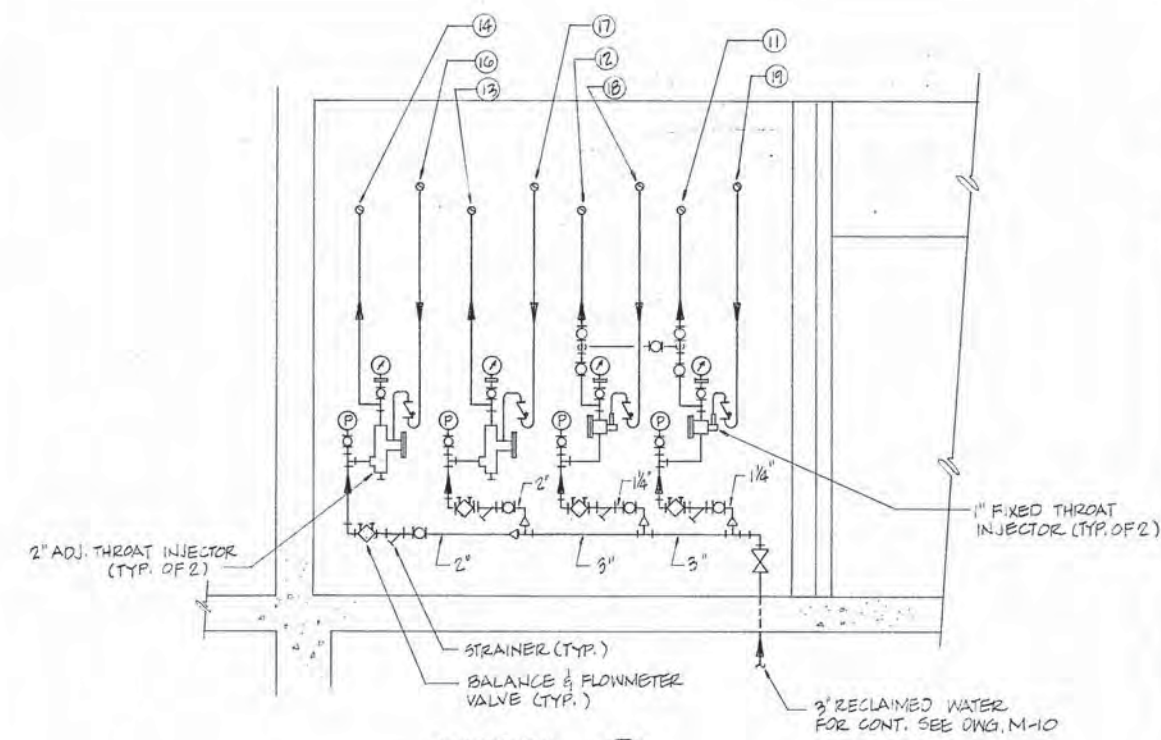
CHLORINE CONTACT STRUCTURE
 SECTIONS

Scale 3/8" = 1'-0"
Job No. 0112
Sheet M-12

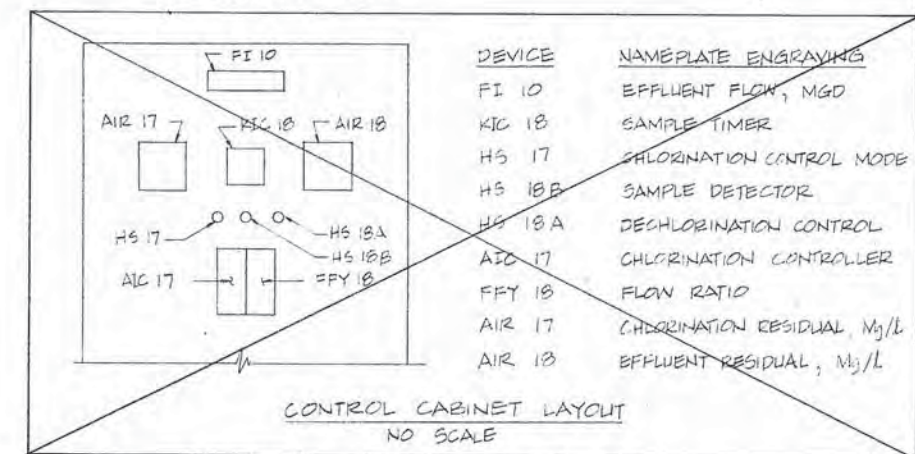


PLAN
SCALE: 1/4" = 1'-0"

SU = SULFONATOR
C = CHLORINATOR
A = ANALYZER
CC = CONTROL CABINET
S = SAMPLER

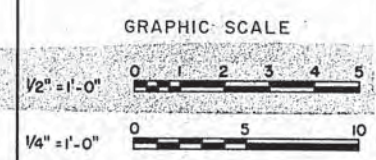


SECTION A
SCALE: 1/2" = 1'-0"



CONTROL PANEL SHOWN ON SHT. I-5

Record Drawing
These record drawings have been prepared in part, on the basis of information supplied and checked by others. Kennedy/Jenks Engineers is not responsible for any errors or omissions in this document as a result of information provided by others.
Date: APR 29, 1988



ADDENDUM NO. 3				
Revised	Description	Submit.	Appr'd.	Date
Refer to Tracing for Latest Revision				

Reference Information and Notes:
FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24
REFER TO THE NOTE WITH THIS NUMBER

Designed ML	Wastewater Plant Improvements C-06-2464	
Drawn MI	Sausalito - Marin City Sanitary District	
Checked JHF	Kennedy/Jenks Engineers	San Francisco
Date 1-29-81	Submitted: Walter J. Hammer	Approved: Robert J. Quirk

CONTROL BUILDING
PLAN

Scale
AS SHOWN
Job No.
0112
Sheet
M-13



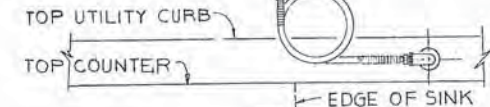
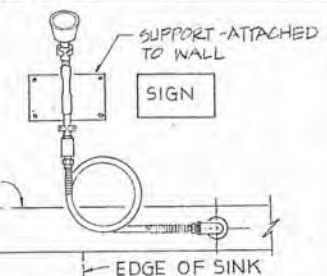
PIPING LEGEND

---	COLD WATER (CW)
---	HOT WATER (HW)
-V-	VENT
W	WASTE
S	SOIL
HB	HOSE BIBB

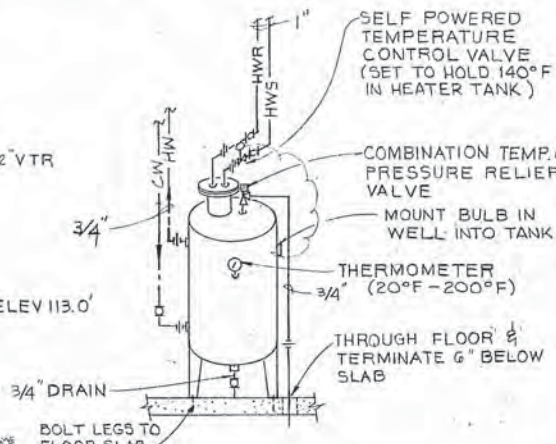
LOCAL PLUMBING FIXTURE CONNECTION SCHED.

(PIPE SIZES)

SYMBOL	FIXTURE	CW	HW	DRAIN	VENT
WC	WATER CLOSET	1/2"	—	4"	4"
UR	URINAL	3/4"	—	2"	1 1/2"
LAV	LAVATORY	1/2"	1/2"	1 1/2"	1 1/2"
SHR	SHOWER	1/2"	1/2"	2"	1 1/2"
SS	SERVICE SINK	1/2"	1/2"	3"	1 1/2"
LS	LAB SINK	1/2"	1/2"	1 1/2"	1 1/2"
	SAMPLE SINK	1/2"	1/2"	3"	1 1/2"
KU	KITCHEN UNIT	1/2"	1/2"	1 1/2"	1 1/2"
FD	FLOOR DRAINS	1/2"	—	AS SHOWN	—
HB	HOSE BIBB	3/4"	—	—	—

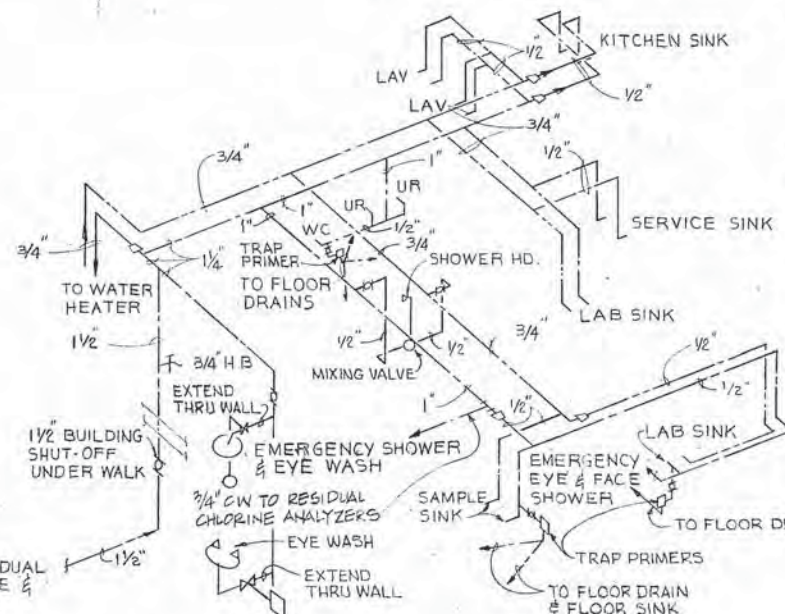


EMERGENCY DUAL PURPOSE EYE & FACE SPRAY DET. 1
SCALE: NONE

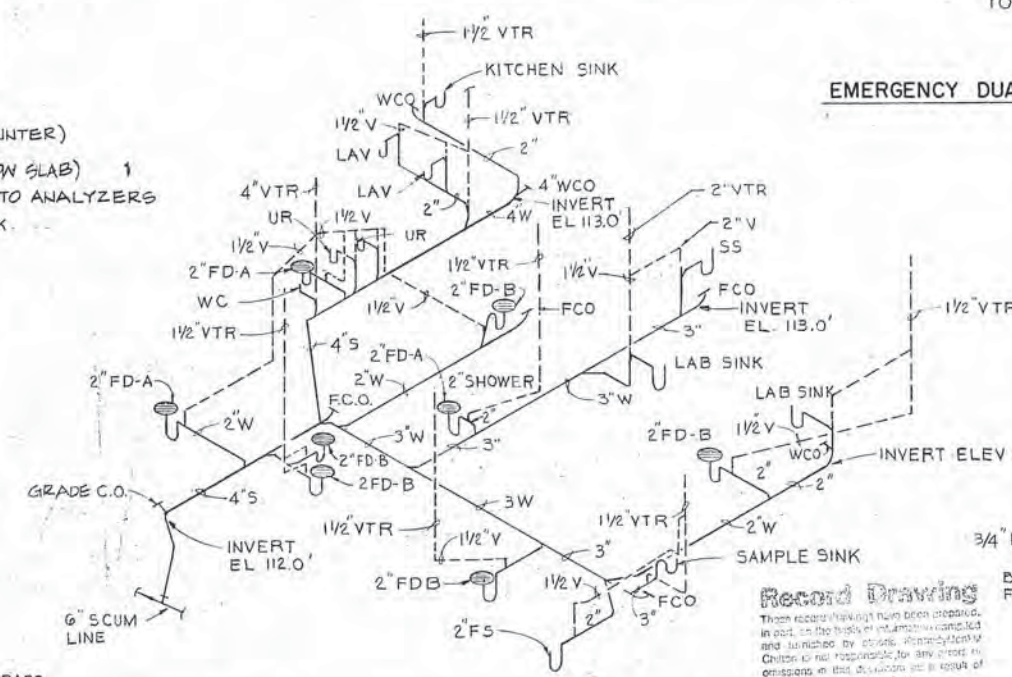


SCHEMATIC DETAIL 2
NO SCALE

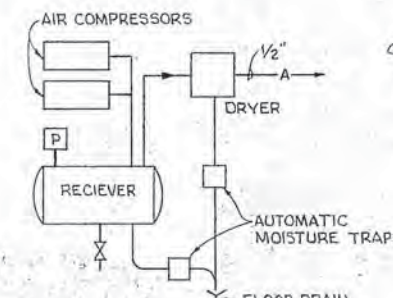
INDIRECT WATER HEATER
SCALE: NONE



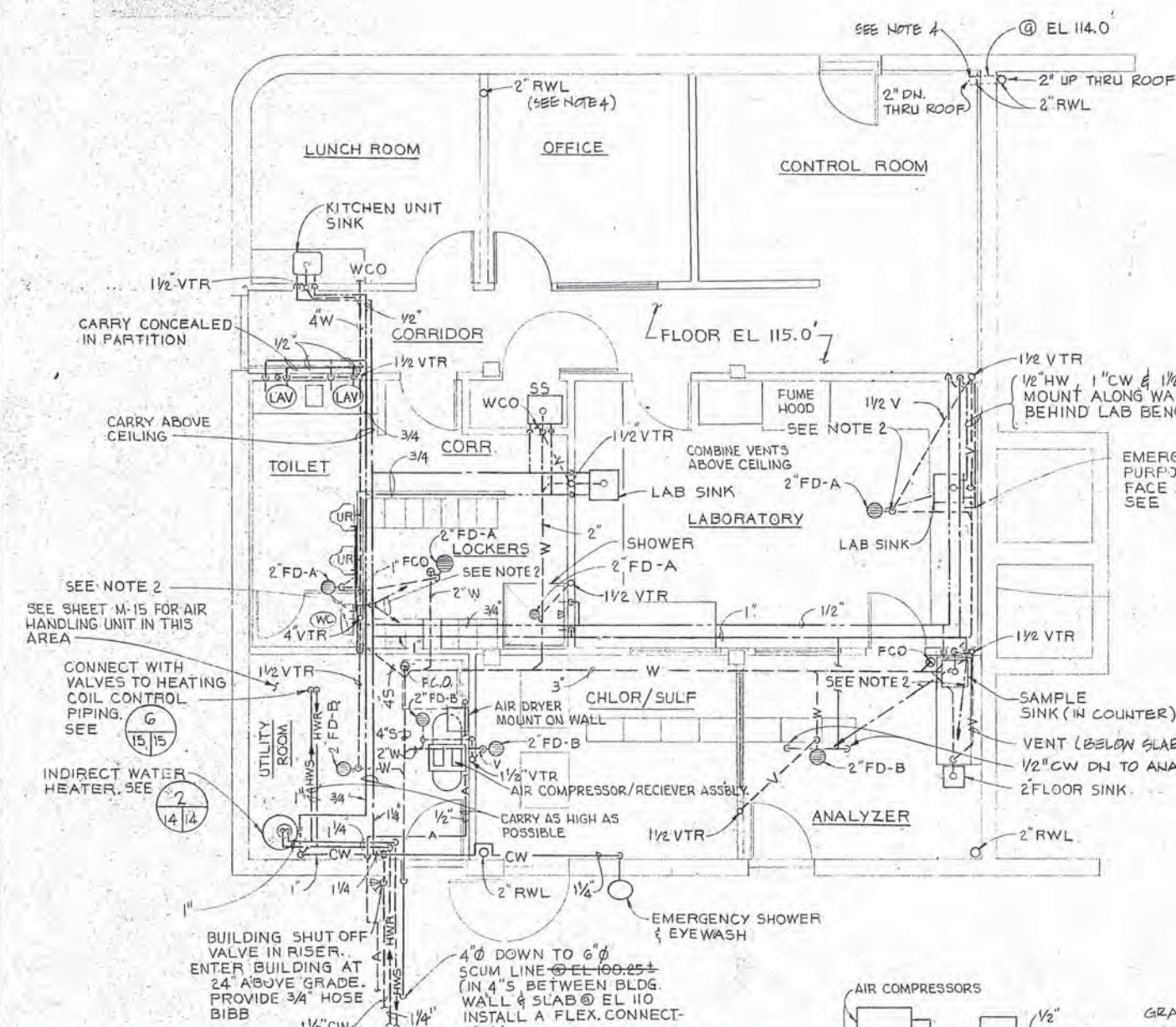
COLD AND HOT WATER SCHEMATIC DIAGRAM
SCALE: NONE



SOIL, WASTE AND VENT SCHEMATIC DIAGRAM
SCALE: NONE



AIR COMPRESSOR SCHEMATIC
SCALE: NONE



CONTROL BUILDING
SCALE: 1/4"=1'-0"

PIPE MATERIAL TYPES

(REFER TO SPECIFICATIONS FOR DETAILS)

SERVICE

PIPE TYPE
SOIL
DRAIN OR WASTE (ABOVE FLOOR)
DRAIN OR WASTE (BELOW FLOOR)
VENT (ABOVE FLOOR)
VENT (BELOW FLOOR)
COLD WATER
HOT WATER
RAINWATER LEADERS (RWL)

* PROVIDE DRAINAGE PATTERN FITTINGS

Reference Information and Notes:

1. CW, HW PIPING SHALL BE RUN CONCEALED ABOVE CEILING OR IN PARTITIONS EXCEPT IN UTILITY ROOM UNLESS OTHERWISE NOTED.
2. FLOOR DRAIN AND FLOOR SINK TRAPS SHALL BE PRIMED USING AUTOMATIC TRAP PRIMERS WHERE INDICATED, RUN 1/2" CW IN SLAB FROM PRIMER (BELOW SINK OR

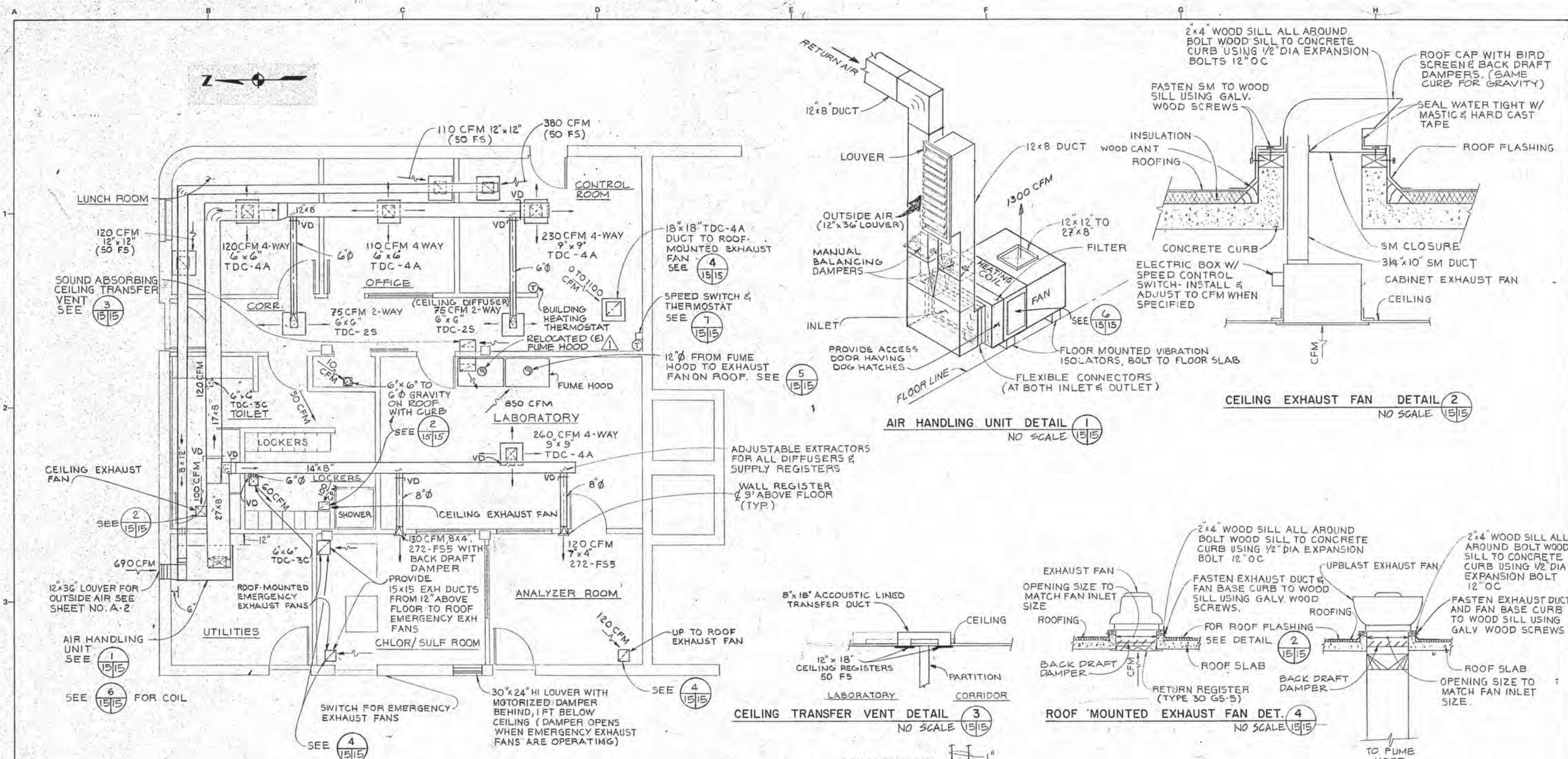
- WATER CLOSET) TO CONNECTION ON TRAP.
3. SEE SCHEMATIC SOIL, WASTE & VENT DIAGRAM & HOT & COLD WATER DIAGRAM FOR DETAILS
4. PROVIDE 2" ROOF DRAINS ON ROOF (WHERE INDICATED ON BUILDING ROOF PLAN) EXTEND 2" RWL'S TO BELOW BOTTOM OF FLOOR SLAB AND THEN DISCHARGE.

Designed
MSA
Drawn
L. SANTOS
Checked
JHF
Date
1-24-81

Wastewater Plant Improvements C-06-2464
Sausalito - Marin City Sanitary District
Kennedy/Jenks Engineers
Submitted:
Walter J. Hennessey C-9370
San Francisco
Approved:
Paul J. O'Connell

CONTROL BUILDING
PLUMBING AND DRAINAGE

Scale
1/4"=1'-0"
Job No.
0112
Sheet
M-14
of



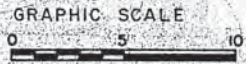
NOTES:

- 1) MODEL NUMBERS SHOWN FOR CEILING AND WALL REGISTERS AND GRILLES ARE THOSE OF TITUS. REFER TO SPECIFICATIONS FOR OTHER MANUFACTURES.
- 2) LOCATE DUCTWORK ABOVE CEILING.
- 3) PROVIDE ADJUSTABLE EXTRACTORS AT EACH BRANCH TAKE-OFF TO A SUPPLY OUTLET.

CONTROL BUILDING
SCALE: 1/4" = 1'-0"

Record Drawing
These record drawings have been prepared, in part, on the basis of information compiled and furnished by others. Kennedy/Jenks Engineers is not responsible for any errors or omissions in this document as a result of information provided by others.
Dated: APR. 22, 1988

RECORD DRAWING



HEATING COIL PIPING SCHEMATIC DETAIL 6
NO SCALE 15/15

CONTROL ROOM FAN CONTROLS DETAIL 7
NO SCALE 15/15

FUME HOOD EXHAUST FAN DETAIL 5
NO SCALE 15/15

ROOF MOUNTED EXHAUST FAN DET. 4
NO SCALE 15/15

CEILING TRANSFER VENT DETAIL 3
NO SCALE 15/15

AIR HANDLING UNIT DETAIL 1
NO SCALE 15/15

CEILING EXHAUST FAN DETAIL 2
NO SCALE 15/15

Revised	Description	Submit	App'd.	Date

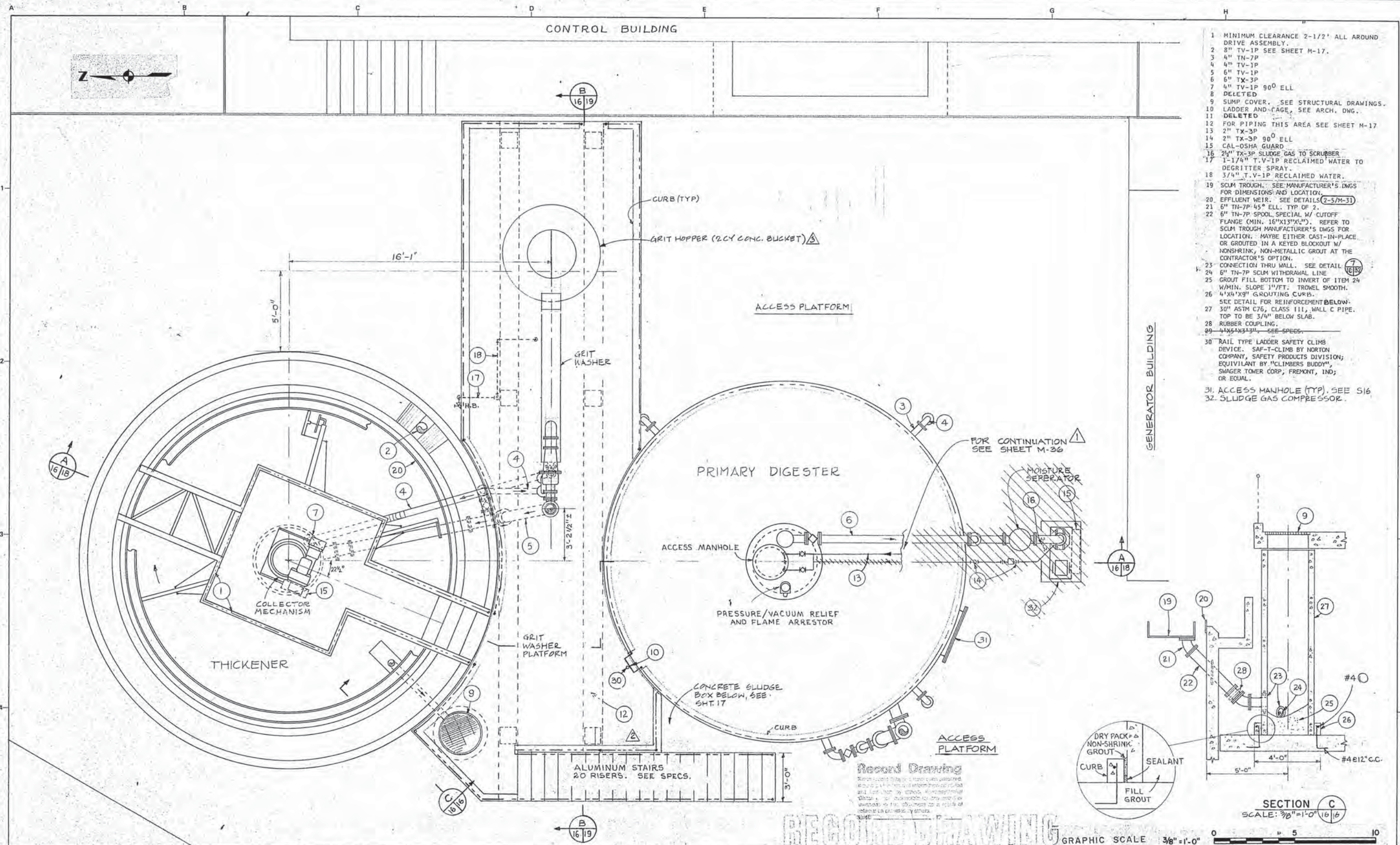
Reference Information and Notes:

Record Drawing
These record drawings have been prepared, in part, on the basis of information compiled and furnished by others. Kennedy/Jenks Engineers is not responsible for any errors or omissions in this document as a result of information provided by others.
Dated: APR. 22, 1988

Designed: MSA
Drawn: LCS
Checked: JHF
Date: 1-29-81

Wastewater Plant Improvements C-06-2464
Sausalito - Marin City Sanitary District
Kennedy/Jenks Engineers
Submitted: *Walter J. Jenks* C9370
Approved: *Robert J. Conroy*
San Francisco

CONTROL BUILDING
HEATING AND VENTILATING
Scale: 1/4" = 1'-0"
Job No. 0112
Sheet **M-15**
of 1



- 1 MINIMUM CLEARANCE 2-1/2' ALL AROUND DRIVE ASSEMBLY.
- 2 8" TV-1P SEE SHEET M-17.
- 3 4" TN-7P
- 4 4" TV-1P
- 5 6" TV-1P
- 6 6" TX-3P
- 7 4" TV-1P 90° ELL
- 8 DELETED
- 9 SUMP COVER. SEE STRUCTURAL DRAWINGS.
- 10 LADDER AND RAGE. SEE ARCH. DWG.
- 11 DELETED
- 12 FOR PIPING THIS AREA SEE SHEET M-17
- 13 2" TX-3P
- 14 2" TX-3P 90° ELL
- 15 CAL-OSHA GUARD
- 16 2 1/2" TX-3P SLUDGE GAS TO SCRUBBER
- 17 1-1/4" T.V-1P RECLAIMED WATER TO DEGRITTER SPRAY.
- 18 3/4" T.V-1P RECLAIMED WATER.
- 19 SCUM TROUGH. SEE MANUFACTURER'S DWGS FOR DIMENSIONS AND LOCATION.
- 20 EFFLUENT WEIR. SEE DETAILS (2-5/M-31)
- 21 6" TN-7P 45° ELL. TYP OF 2.
- 22 6" TN-7P SPOOL SPECIAL W/ CUTOFF FLANGE (MIN. 16"x13"x1/2"). REFER TO SCUM TROUGH MANUFACTURER'S DWGS FOR LOCATION. MAYBE EITHER CAST-IN-PLACE OR GROUTED IN A KEYED BLOCKOUT W/ NONSHRINK, NON-METALLIC GROUT AT THE CONTRACTOR'S OPTION.
- 23 CONNECTION THRU WALL. SEE DETAIL (7/16/37)
- 24 6" TN-7P SCUM WITHDRAWAL LINE
- 25 GROUT FILL BOTTOM TO INVERT OF ITEM 24 W/MIN. SLOPE 1/4" FT. TROCKEL SMOOTH.
- 26 4"x4"x9" GROUTING CURB. SEE DETAIL FOR REINFORCEMENT BELOW.
- 27 30" ASTM C76, CLASS III, WALL C PIPE. TOP TO BE 3/4" BELOW SLAB.
- 28 RUBBER COUPLING.
- 29 4"x5"x13 1/2" SEE SPECS.
- 30 RAIL TYPE LADDER SAFETY CLIMB DEVICE. SAF-T-CLIMB BY NORTON COMPANY, SAFETY PRODUCTS DIVISION; EQUIVILANT BY "CLIMBERS BUDDY", SWAGER TOWER CORP, FREMONT, IND; OR EQUAL.
- 31 ACCESS MANHOLE (TYP). SEE S16
- 32 SLUDGE GAS COMPRESSOR.

SUBSTITUTION FIELD CHANGE CO NO. 35				
Revised	Description	Submit.	Appr'd.	Date
	Refer to Tracing for Latest Revision			

Reference Information and Notes:

Record Drawing
These record drawings have been prepared, in part, on the basis of information compiled and furnished by others. Kennedy/Jenks & Chilton is not responsible for any errors or omissions in this document as a result of information provided by others.
Date: APR 24, 1988

FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24
REFER TO THE NOTE WITH THIS NUMBER

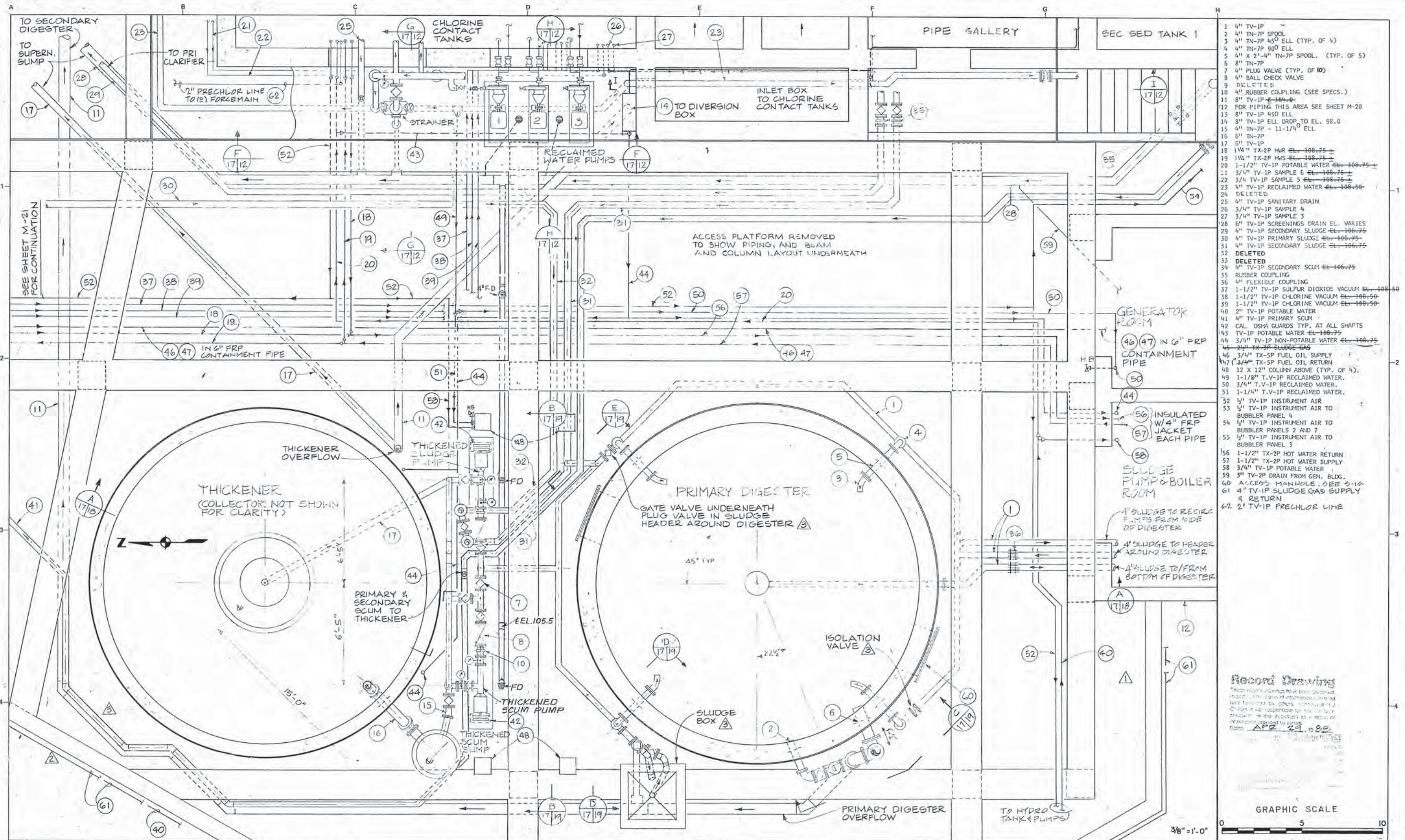
Designed JHF	Wastewater Plant Improvements Sausalito - Marin City Sanitary District	C-06-2464
Drawn JHF		
Checked JHF	Kennedy/Jenks Engineers	San Francisco
Submitted Date: 1-29-81	Submitted: Walter J. Jenks	Approved: Robert J. Jenks
	C9370	

THICKENER AND PRIMARY DIGESTER
TOP PLAN

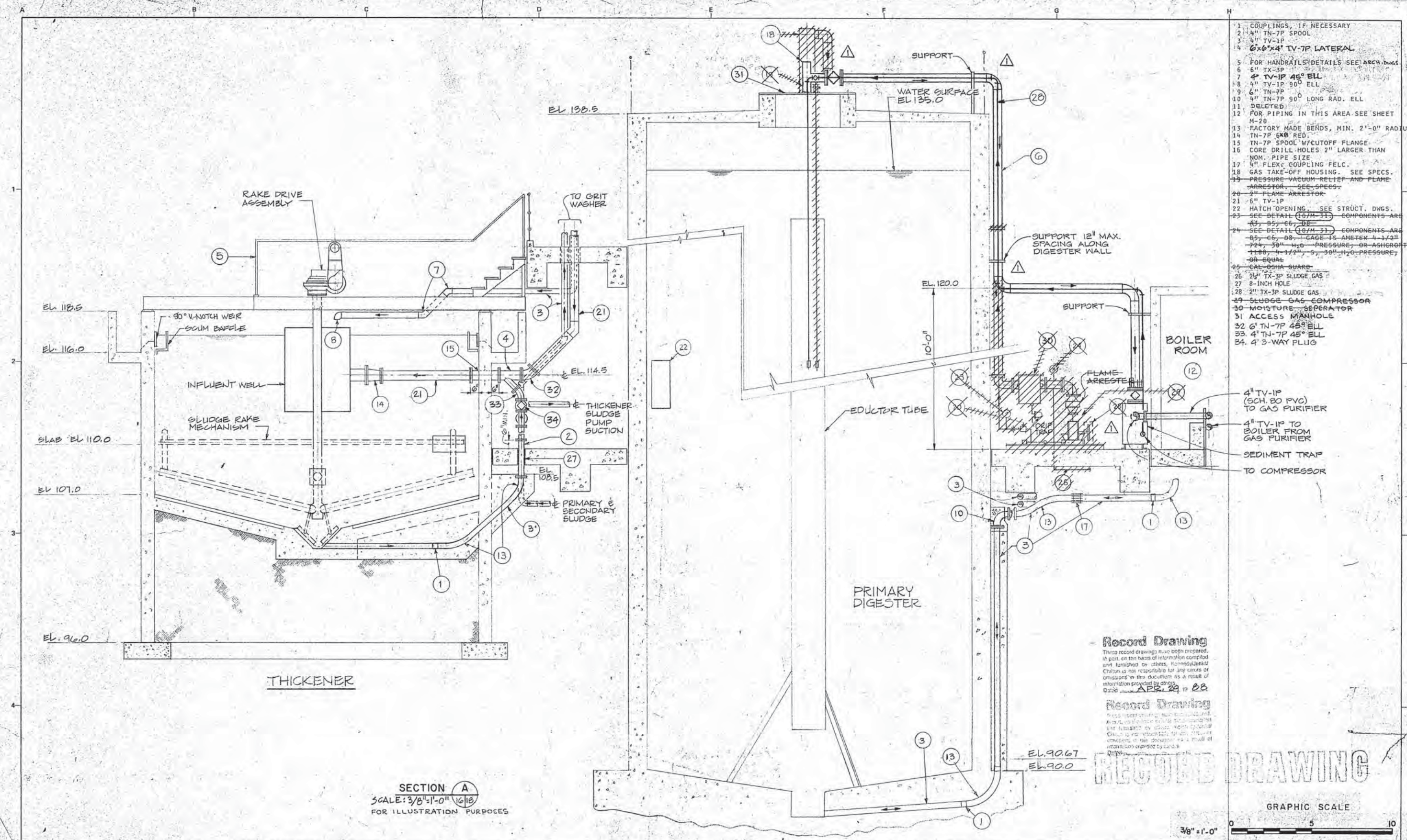
Scale: 3/8" = 1'-0"

Job No. 0112

Sheet M-16

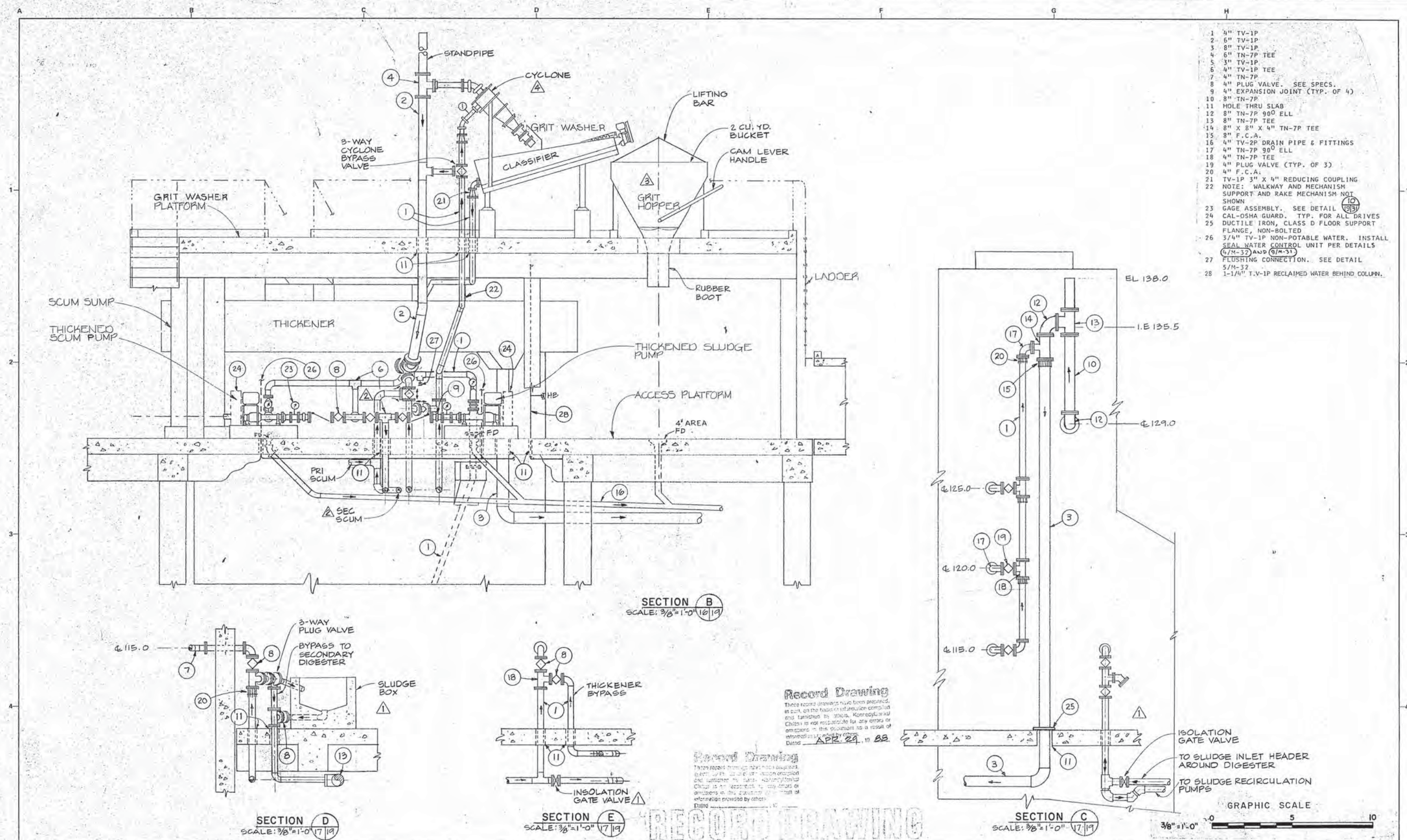


FIELD CHANGE CO NO. 23 CO NO. 35 Revised Description Submit App'd Date Refer to Tracing for Latest Revision	Reference Information and Notes: PIPING LAYOUT CHANGED THROUGHOUT BY CONTRACTOR TO CONSOLIDATE SUPPORTS AND AVOID CONFLICTS. THE MAJORITY OF THE CHANGES ARE NOTED ABOVE. FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24 REFER TO THE NOTE WITH THIS NUMBER	Designed JHF Drawn JHF Checked JHF Date 1-24-81 Wastewater Plant Improvements C-06-2464 Sausalito - Marin City Sanitary District Kennedy Jenks Engineers San Francisco Submitted: [Signature] Approved: [Signature]	THICKENER AND PRIMARY DIGESTER BOTTOM PLAN Scale 3/8" = 1'-0" Job No. 0112 Sheet M-17
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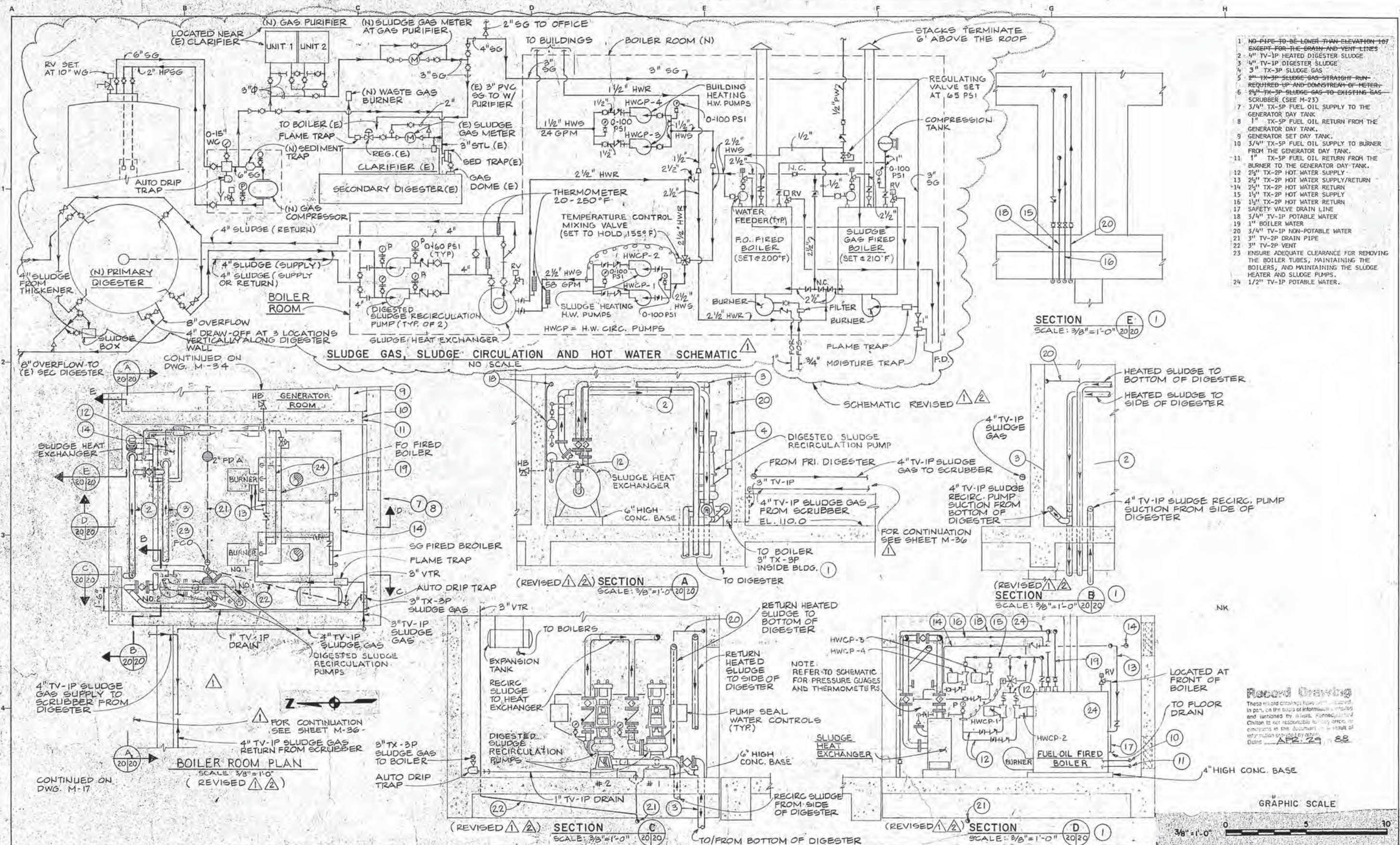
1. COUPLINGS, IF NECESSARY
2. 4" TN-7P SPOOL
3. 4" TV-1P
4. 6"x4" TV-7P LATERAL
5. FOR HANDRAILS DETAILS SEE ARCH. Dwg.
6. 6" TX-3P
7. 4" TV-1P 45° ELL
8. 4" TV-1P 90° ELL
9. 6" TN-7P
10. 4" TN-7P 90° LONG RAD. ELL
11. DELETED
12. FOR PIPING IN THIS AREA SEE SHEET M-20
13. FACTORY MADE BENDS, MIN. 2'-0" RADIUS
14. TN-7P 6X8 RED
15. TN-7P SPOOL W/CUTOFF FLANGE
16. CORE DRILL HOLES 2" LARGER THAN NOM. PIPE SIZE
17. 4" FLEX. COUPLING FELC.
18. GAS TAKE-OFF HOUSING. SEE SPECS.
19. PRESSURE VACUUM RELIEF AND FLAME ARRESTOR. SEE SPECS.
20. 2" FLAME ARRESTOR
21. 6" TV-1P
22. HATCH OPENING. SEE STRUCT. DWGS.
23. SEE DETAIL (10/11-31) COMPONENTS ARE 45, 85, 65, 25
24. SEE DETAIL (10/11-31) COMPONENTS ARE 85, 65, 25, 45, 1/2" 724, 30" H₂O PRESSURE, OR ASHEROFF 1188, 4-1/2", 5, 30" H₂O PRESSURE, OR EQUAL
25. CAL. OSHA GUARD
26. 2 1/2" TX-3P SLUDGE GAS
27. 8-INCH HOLE
28. 2" TX-3P SLUDGE GAS
29. SLUDGE GAS COMPRESSOR
30. MOISTURE SEPARATOR
31. ACCESS MANHOLE
32. 6" TN-7P 45° ELL
33. 4" TN-7P 45° ELL
34. 4" 3-WAY PLUG

CO NO. 35 Revised Description Submit App'd Date Refer to Tracing for Latest Revision		Reference Information and Notes: FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24 REFER TO THE NOTE WITH THIS NUMBER		Designed: RDB/JAF Drawn: CD/SHF Checked: JHF Date: 1-29-81	Wastewater Plant Improvements C-06-2464 Sausalito - Marin City Sanitary District Kennedy/Jenks Engineers Submitted: Walter J. Hanna C9370 San Francisco Approved: Fred J. Ames	Scale: 3/8"=1'-0" Job No.: 0112 Sheet: M-18 of
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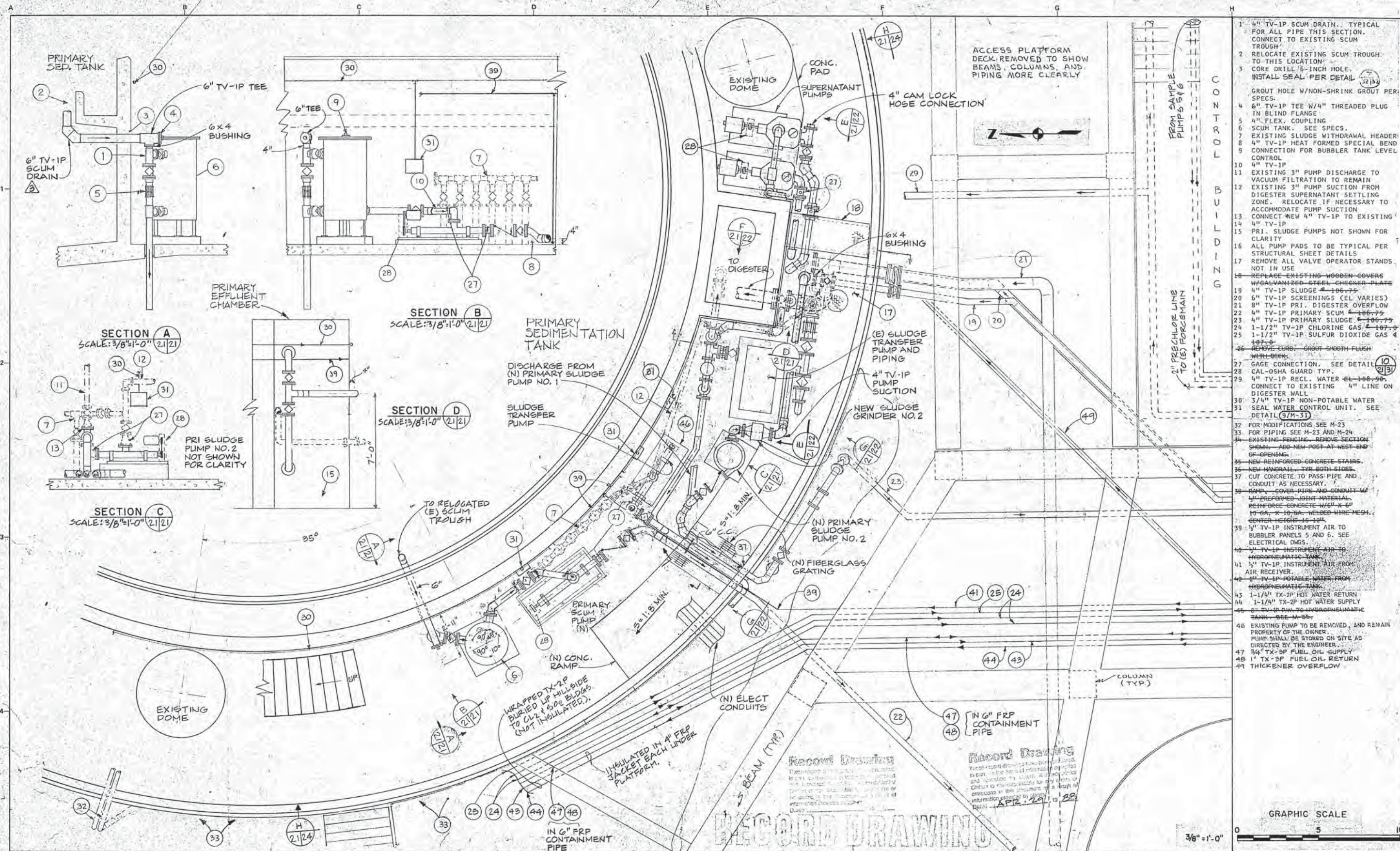


- 1 4" TV-1P
- 2 6" TV-1P
- 3 8" TV-1P
- 4 6" TN-7P TEE
- 5 3" TV-1P
- 6 4" TV-1P TEE
- 7 4" TN-7P
- 8 4" PLUG VALVE. SEE SPECS.
- 9 4" EXPANSION JOINT (TYP. OF 4)
- 10 8" TN-7P
- 11 HOLE THRU SLAB
- 12 8" TN-7P 90° ELL
- 13 8" TN-7P TEE
- 14 8" X 8" X 4" TN-7P TEE
- 15 8" F.C.A.
- 16 4" TV-2P DRAIN PIPE & FITTINGS
- 17 4" TN-7P 90° ELL
- 18 4" TN-7P TEE
- 19 4" PLUG VALVE (TYP. OF 3)
- 20 4" F.C.A.
- 21 TV-1P 3" X 4" REDUCING COUPLING
- 22 NOTE: WALKWAY AND MECHANISM SUPPORT AND RAKE MECHANISM NOT SHOWN
- 23 GAGE ASSEMBLY. SEE DETAIL 10/85
- 24 CAL-OSHA GUARD. TYP. FOR ALL DRIVES
- 25 DUCTILE IRON, CLASS D FLOOR SUPPORT FLANGE, NON-BOLTED
- 26 3/4" TV-1P NON-POTABLE WATER. INSTALL SEAL WATER CONTROL UNIT PER DETAILS 4/M-32 AND 6/M-31
- 27 FLUSHING CONNECTION. SEE DETAIL 5/M-32
- 28 1-1/4" T.V-1P RECLAIMED WATER BEHIND COLUMN.

AS-BUILT CONFIGURATION SUBSTITUTION C.O. 3B FIELD CHANGE Revised Description Submit. App'd. Date Refer to Tracing for Latest Revision	Reference Information and Notes: FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24 REFER TO THE NOTE WITH THIS NUMBER	Designed JHF Drawn JHF Checked JHF Date 1-29-81 Wastewater Plant Improvements C-06-2464 Sausalito - Marin City Sanitary District Kennedy/Jenks Engineers San Francisco Submitted: <i>Walter Chasman</i> CS370 Approved: <i>Robert J. Jones</i>	THICKENER AND PRIMARY DIGESTER-SECTIONS Scale 3/8"=1'-0" Job No. 0112 Sheet M-19 of
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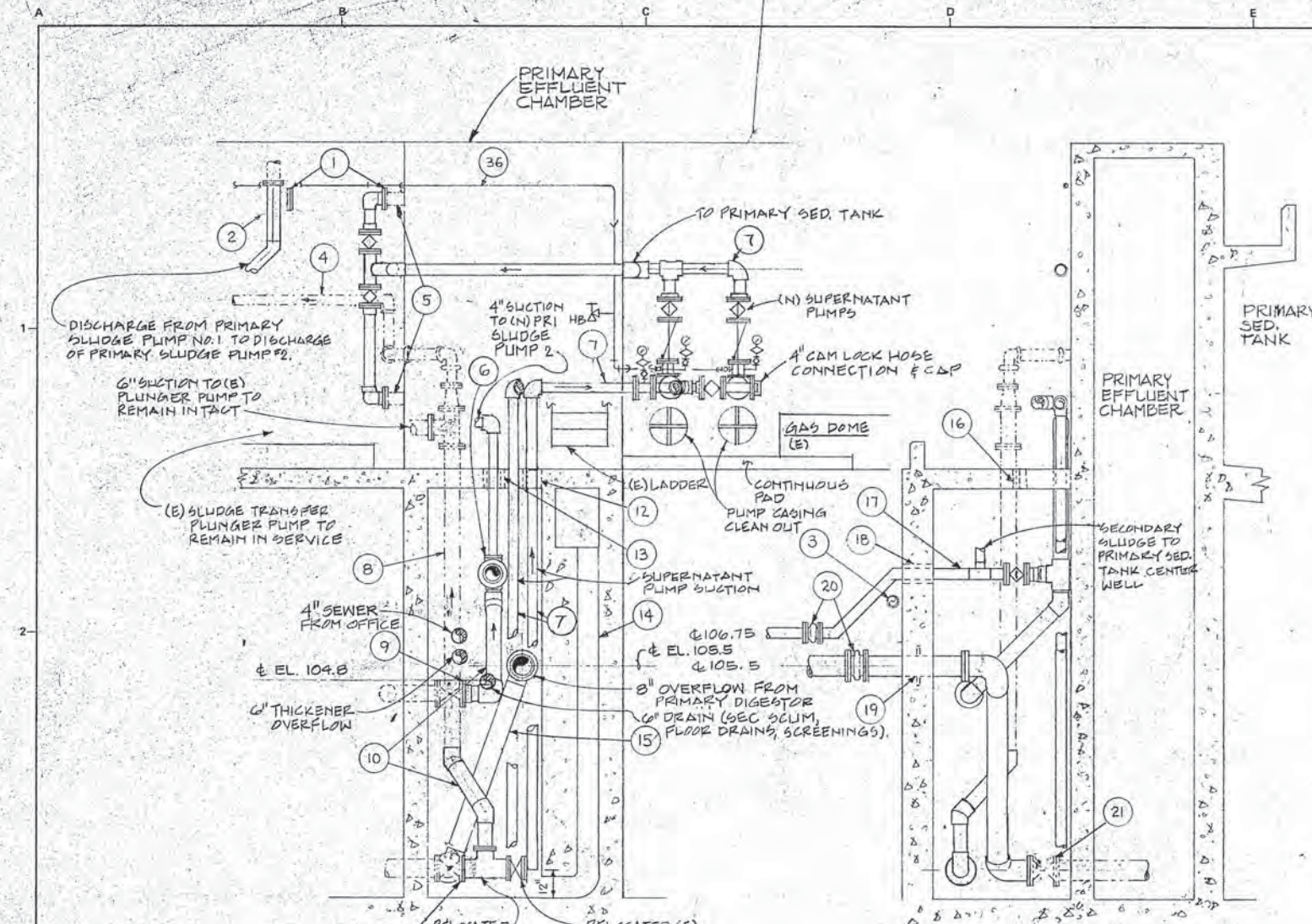


FIELD CHANGE CO NO. 35 Revised Description Submit App'd Date Refer to Tracing for Latest Revision		Reference Information and Notes: Record Drawing FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24 REFER TO THE NOTE WITH THIS NUMBER		Designed MSA Drawn EJY Checked JHF Date 1-29-81 Submitted: <i>Walter J. Chapman</i> C9370 Approved: <i>Robert J. Conroy</i>		Wastewater Plant Improvements C-06-2464 Sausalito - Marin City Sanitary District Kennedy/Jenks Engineers San Francisco		BOILER ROOM PLAN AND SECTIONS AS SHOWN Job No. 0112 Sheet M-20 of	
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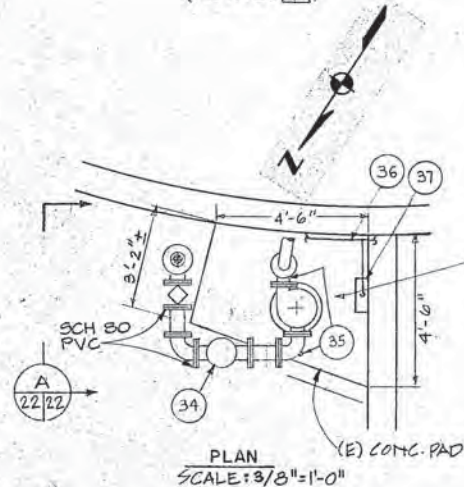


- 1 4" TV-1P SCUM DRAIN. TYPICAL FOR ALL PIPE THIS SECTION. CONNECT TO EXISTING SCUM TROUGH.
- 2 RELOCATE EXISTING SCUM TROUGH TO THIS LOCATION.
- 3 CORE DRILL 6-INCH HOLE. INSTALL SEAL PER DETAIL (2/13).
- 4 GROUT HOLE W/NON-SHRINK GROUT PER SPECS.
- 5 6" TV-1P TEE W/4" THREADED PLUG IN BLIND FLANGE.
- 6 4" FLEX. COUPLING.
- 7 SCUM TANK. SEE SPECS.
- 8 EXISTING SLUDGE WITHDRAWAL HEADER.
- 9 4" TV-1P HEAT FORMED SPECIAL BEND CONNECTION FOR BUBBLER TANK LEVEL CONTROL.
- 10 4" TV-1P.
- 11 EXISTING 3" PUMP DISCHARGE TO VACUUM FILTRATION TO REMAIN.
- 12 EXISTING 3" PUMP SUCTION FROM DIGESTER SUPERNATANT SETTLING ZONE. RELOCATE IF NECESSARY TO ACCOMMODATE PUMP SUCTION.
- 13 CONNECT NEW 4" TV-1P TO EXISTING 4" TV-1P.
- 14 PRI. SLUDGE PUMPS NOT SHOWN FOR CLARITY.
- 15 ALL PUMP PADS TO BE TYPICAL PER STRUCTURAL SHEET DETAILS.
- 16 REMOVE ALL VALVE OPERATOR STANDS. NOT IN USE.
- 17 REPLACE EXISTING WOODEN COVERS W/GALVANIZED STEEL CHECKER PLATE.
- 18 4" TV-1P SLUDGE 106-75.
- 19 6" TV-1P SCREENINGS (EL VARIES).
- 20 8" TV-1P PRI. DIGESTER OVERFLOW.
- 21 4" TV-1P PRIMARY SCUM 106-75.
- 22 4" TV-1P PRIMARY SLUDGE 106-75.
- 23 1-1/2" TV-1P CHLORINE GAS 107-0.
- 24 1-1/2" TV-1P SULFUR DIOXIDE GAS 107-0.
- 25 REMOVE CURB. GROUT SMOOTH FLUSH WITH DECK.
- 26 GAGE CONNECTION. SEE DETAIL (10/21).
- 27 CAL-OSHA GUARD TYP.
- 28 4" TV-1P RECL. WATER EL 108-50. CONNECT TO EXISTING 4" LINE ON DIGESTER WALL.
- 29 3/4" TV-1P NON-POTABLE WATER SEAL WATER CONTROL UNIT. SEE DETAIL (9/M-31).
- 30 FOR MODIFICATIONS SEE M-23.
- 31 FOR PIPING SEE M-23 AND M-24.
- 32 EXISTING FENCING. REMOVE SECTION SHOWN. ADD NEW POST AT WEST END OF OPENING.
- 33 NEW REINFORCED CONCRETE STAIRS.
- 34 NEW HANDRAIL. TWO BOTH SIDES.
- 35 CUT CONCRETE TO PASS PIPE AND CONDUIT AS NECESSARY.
- 36 RAMP. COVER PIPE AND CONDUIT W/ 1/4" PREFORMED JOINT MATERIAL. REINFORCE CONCRETE W/ 6" X 6" 10 GA. X 10 GA. WELDED WIRE MESH. CENTER HEIGHT IS 10".
- 37 1/4" TV-1P INSTRUMENT AIR TO BUBBLER PANELS 5 AND 6. SEE ELECTRICAL DWGS.
- 38 1/4" TV-1P INSTRUMENT AIR TO HYDRO-PNEUMATIC TANK.
- 39 1/4" TV-1P INSTRUMENT AIR FROM AIR RECEIVER.
- 40 1/4" TV-1P POTABLE WATER FROM HYDRO-PNEUMATIC TANK.
- 41 1-1/8" TX-2P HOT WATER RETURN.
- 42 1-1/4" TX-2P HOT WATER SUPPLY.
- 43 2" TV-1P DW TO HYDRO-PNEUMATIC TANK. SEE M-25.
- 44 EXISTING PUMP TO BE REMOVED, AND REMAIN PROPERTY OF THE OWNER. PUMP SHALL BE STORED ON SITE AS DIRECTED BY THE ENGINEER.
- 45 3/4" TX-3P FUEL OIL SUPPLY.
- 46 1" TX-3P FUEL OIL RETURN.
- 47 THICKENER OVERFLOW.

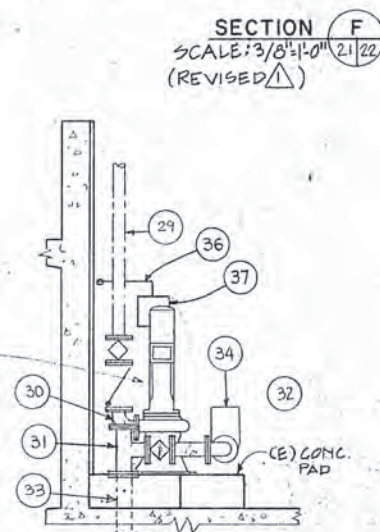
Revised Description Submit App'd Date Refer to Tracing for Latest Revision	Reference Information and Notes: ▲ PIPING & PUMPS AROUND (E) PLANT CHANGED THROUGHOUT, THE MAJORITY OF THE CHANGES ARE NOTED ABOVE. ▲ PIPING UNDER ACCESS PLATFORM CHANGED BY CONTRACTOR TO CONSOLIDATE SUPPORTS & AVOID CONFLICTS. THE MAJORITY OF THE CHANGES ARE NOTED ABOVE. FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24 REFER TO THE NOTE WITH THIS NUMBER	Designed JHF Drawn JHF Checked THF Date 1-29-81 Wastewater Plant Improvements Sausalito - Marin City Sanitary District Kennedy Jenks Engineers San Francisco Submitted: Walter J. Jenks C9370 Approved: [Signature] APR 29 1981	Scale 3/8"=1'-0" Job No. 0112 Sheet M-21 of 1 PRIMARY STRUCTURE MODIFICATIONS
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SECTION E
SCALE: 3/8"=1'-0" (21/22)
(REVISED)

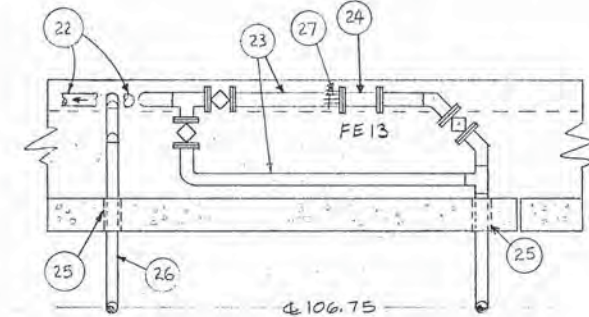


PRIMARY SLUDGE PUMP I
SCALE: 3/8"=1'-0"

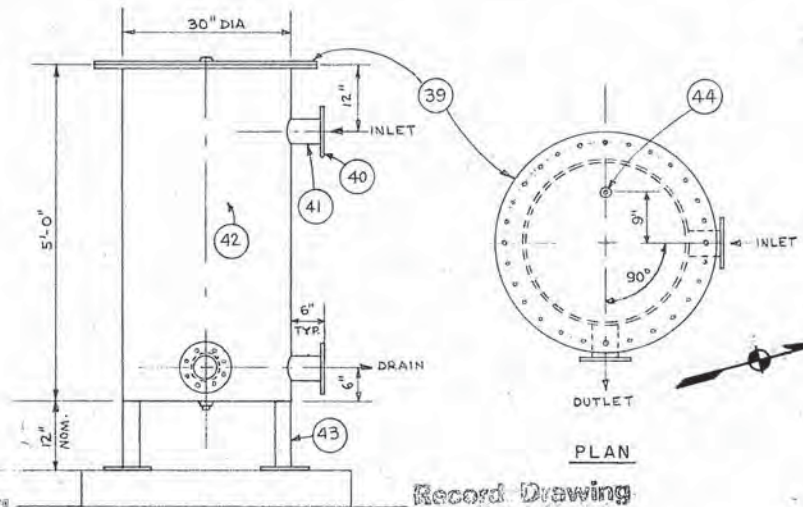


SECTION F
SCALE: 3/8"=1'-0" (21/22)
(REVISED)

SECTION A
SCALE: 3/8"=1'-0" (22/22)



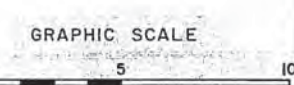
SECTION G
SCALE: 3/8"=1'-0" (21/22)



ELEVATION

PRIMARY SCUM TANK DETAIL
SCALE: 3/8"=1'-0" (22/22)

- 1 REMOVE PIPING BETWEEN THESE POINTS. AT SIDE TEE OUTLET INSTALL 4" D.I. BLIND FLANGE AT EACH END.
- 2 REMOVE EXISTING PIPING BELOW THIS POINT
- 3 4" TV-IP, RELOCATED RECLAIMED WATER LINE, EL 107.75
- 4 EXISTING 4" DIGESTED SLUDGE TRANSFER PUMP SUCTION
- 5 EXISTING 4" CONNECTIONS TO PRI. EFF. WELL (TOP) AND PST INLET (BOTTOM)
- 6 6" X 4" TV-IP BUSHING
- 7 4" TV-IP
- 8 EXISTING 6" PVC LINE
- 9 EXISTING 6" GATE VALVE TO P.S.T. SLUDGE HOPPER CONNECT NEW PIPING TO IT.
- 10 6" TV-IP
- 11 EXISTING 6" GATE VALVE TO DIGESTED SLUDGE DRAFF IN SUPERNATANT STORAGE PORTION OF SECONDARY DIGESTER. CONNECT NEW PIPING TO IT
- 12 CUT SLAB AND MAKE 8 X 18" OPENING.
- 13 CORE DRILL 9" HOLE
- 14 EXISTING 8" CMP SUPERNATANT OVERFLOW
- 15 8" TV-IP PRI. DIGESTER OVERFLOW
- 16 CORE DRILL HOLE FOR VALVE THIMBLE
- 17 4" TV-IP SECONDARY SLUDGE
- 18 CORE DRILL 6" HOLE
- 19 MAKE WALL OPENING FOR 8" TN-7P. GROUT IN PIPE W/APPROVED NON-SHRINK GROUT
- 20 RUBBER COUPLING
- 21 CONNECT NEW 8" TV-IP TO EXISTING 8" GATE VALVE FOR PRIMARY DIGESTER OVERFLOW FEED TO SECONDARY DIGESTER
- 22 CONNECT TO EXISTING DIGESTED SLUDGE TRANSFER PIPING 4" TV-IP
- 23 4" TV-IP PRIMARY SLUDGE
- 24 FLOW METER
- 25 MAKE 6" HOLE
- 26 4" TV-IP PRIMARY SCUM
- 27 4" F.C.A.: FUSION EPOXY LINED AND COATED
- 28 REMOVE EXISTING PAD AND CONSTRUCT NEW PAD. HEIGHT TO SUIT PUMP
- 29 CONNECT TO EXISTING 4" PVC
- 30 4" TN-7P ELL
- 31 6 X 4" TN-7P TEE
- 32 ALL SUCTION PIPING IS TN-7P
- 33 EXISTING 6" SLUDGE WITHDRAWAL EXISTING COMMITTEE TO BE SUPPLIED BY THE OWNER
- 34 GAGE CONNECTIONS. SEE DETAIL (10/M-3)
- 35 3/4" TV-IP NON-POTABLE WATER
- 36 SEAL WATER CONTROL UNIT. SEE DETAIL (8/M-31)
- 37 1/2" TV-IP INSTRUMENT AIR TO BUBBLER PANEL 6
- 38 COVER PLATE. 3/16" AISI TYPE 316 SS PLATE, 39-3/4" DIAMETER, DRILLED FOR ANSI B16.5 FLANGE, 30-INCH SIZE.
- 39 AISI TYPE 316 SS, 4-INCH, CLASS B FLANGE PER ANSI B16.5 (TYPE OF 3)
- 40 AISI TYPE 316 SS, 4-INCH, SCHED 40 PIPE. USE WRAPPER PLATES TO WELD THESE PIPES TO THE TANK (ITEM 42)
- 41 AISI TYPE 316 SS TANK, 30-INCH DIAMETER, 3/16-INCH WALL THICKNESS. WELD BOSS TO THE BOTTOM CENTER OF THE TANK EXTERIOR. DRILL AND TAP FOR 1/2-INCH NPT PLUG. SCREW IN 1/2-INCH PVC PLUG.
- 42 PROVIDE SUPPORT LEGS AS NECESSARY TO RESIST ALL LOADS, INCLUDING ZONE 4 SEISMIC. TANK COULD BE FILLED TO THE TOP WITH SCUM (S.G.=1.0) SUPPORT LEGS TO BE BOLTED TO THE PAD ONLY.
- 43 BUBBLER TUBE CONNECTION. WELD BOSS TO THE TOP AND BOTTOM SIDES OF ITEM 39 AT THE LOCATION SHOWN. DRILL THROUGH AND TAP FOR 1/4-INCH NPT STAINLESS STEEL BUBBLER TUBE.
- 44 ALL BOLTS, NUTS AND WASHERS TO BE AISI TYPE 316 SS.



Revised	Description	Submit	App'd	Date
	C.O. NO. 45			
Refer to Tracing for Latest Revision				

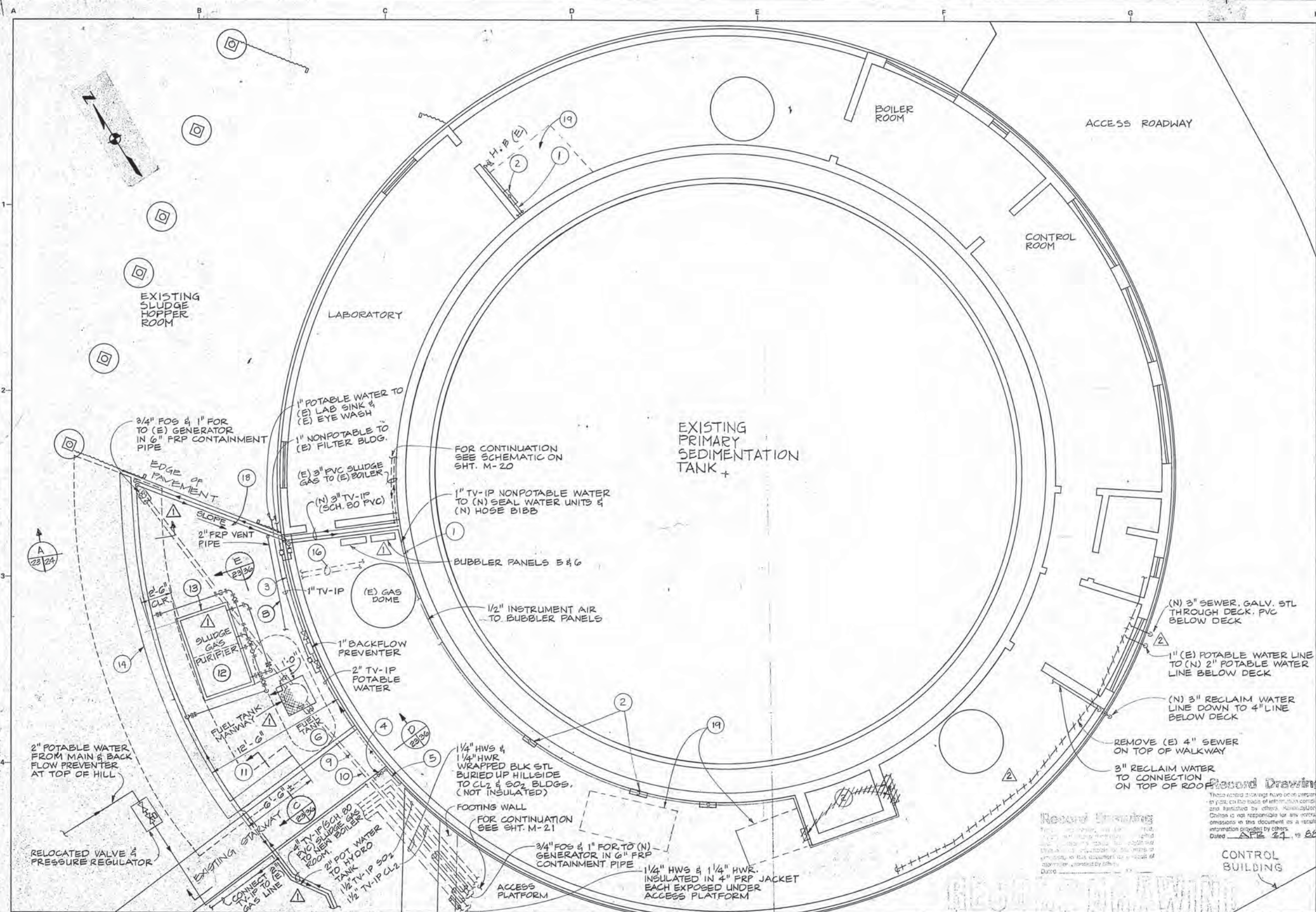
Reference Information and Notes:

FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24
REFER TO THE NOTE WITH THIS NUMBER

Designed JHF	Wastewater Plant Improvements Sausalito - Marin City Sanitary District	C-06-2464
Drawn JHF	Kennedy/Jenks Engineers	San Francisco
Checked JHF	Submitted:	
Date 1-29-81	Walter J. Jenks	C9370

PRIMARY STRUCTURE
MODIFICATIONS

Scale 3/8"=1'-0"
Job No. 0112
Sheet M-22



- 1 1" TV-IP NON-POTABLE WATER. FOR CONTINUATION SEE M-24.
- 2 SEAL WATER CONTROL UNIT TYPICAL. SEE DETAIL (9/M-31) LOCATIONS APPROXIMATE.
- 3 1" TV-IP POTABLE WATER. FOR CONTINUATION SEE M-24.
- 4 2" TV-IP POTABLE WATER FROM STAIRWAY SEE DETAIL (11/M-29).
- 5 2" TV-IP POTABLE WATER. SEE SECTION H/M-24.
- 6 FUEL TANK. SEE DETAILS ON M-35.
- 7 3" TX-IP FUEL FILL LINE. BURIED 1 FT. BELOW SURFACE.
- 8 2" TX-IP VENT LINE TO EL 120.0.
- 9 3/4" TX-5P FUEL SUPPLY.
- 10 1" TX-5P FUEL RETURN.
- 11 BACKFILL THE ENTIRE AREA TO THE PLATFORM WALL W/STRUCTURAL BACKFILL MATERIAL.
- 12 EXISTING GAS SCRUBBER. RELOCATED TO NEW POSITION. CHANGE PIPING TO FIT NEW ALIGNMENT.
- 13 NEW CONCRETE SUPPORT PAD. GROUT UP GAS SCRUBBER MIN. 1/4 IN. ABOVE PAD CONNECT WITH 3/4" A.B. H.D. GALVANIZED.
- 14 NEW REINFORCED CONCRETE RETAINING WALL. HEIGHT TO BE 1 FOOT MINIMUM ABOVE HILL ON BACKSIDE OF WALL. CLEAR STAIRS AND BUILDING WALL BY 6 INCHES. REMOVE EXISTING TIMBER RETAINING WALL.
- 15 2" TX-5P SLUDGE GAS CROSS CONNECTION. CONNECT TO GAS SCRUBBER-DISCHARGE TO THE EXISTING DRYER.
- 16 EXISTING SLUDGE GAS LINES. TO BE REMOVED. SEE NOTE 12.
- 17 PAINT YELLOW WARNING STRIPES ON THE FLOOR UNDER THE EXISTING SLUDGE HOPPER.
- 18 CONCRETE PAVEMENT. 6 INCHES OF CONCRETE REINFORCED W/4 REBAR @ 12" E.W. ON TOP OF 6 INCHES OF AGGREGATE BASE. LEAVE HOLE FOR TANK ACCESS PER FUEL OIL TANK DETAILS, ON M-35.
- 19 EXISTING PUMPS TO BE REMOVED. REPLACE W/NEW PUMPS & CONCRETE PADS.
- 20 SEE THIS ON M-29.

Record Drawing
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 Dated APR 24, 1988



CO NO. 45				
CO NO. 35				
Revised	Description	Submit	App'd	Date
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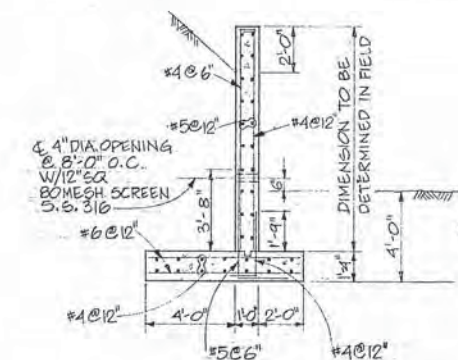
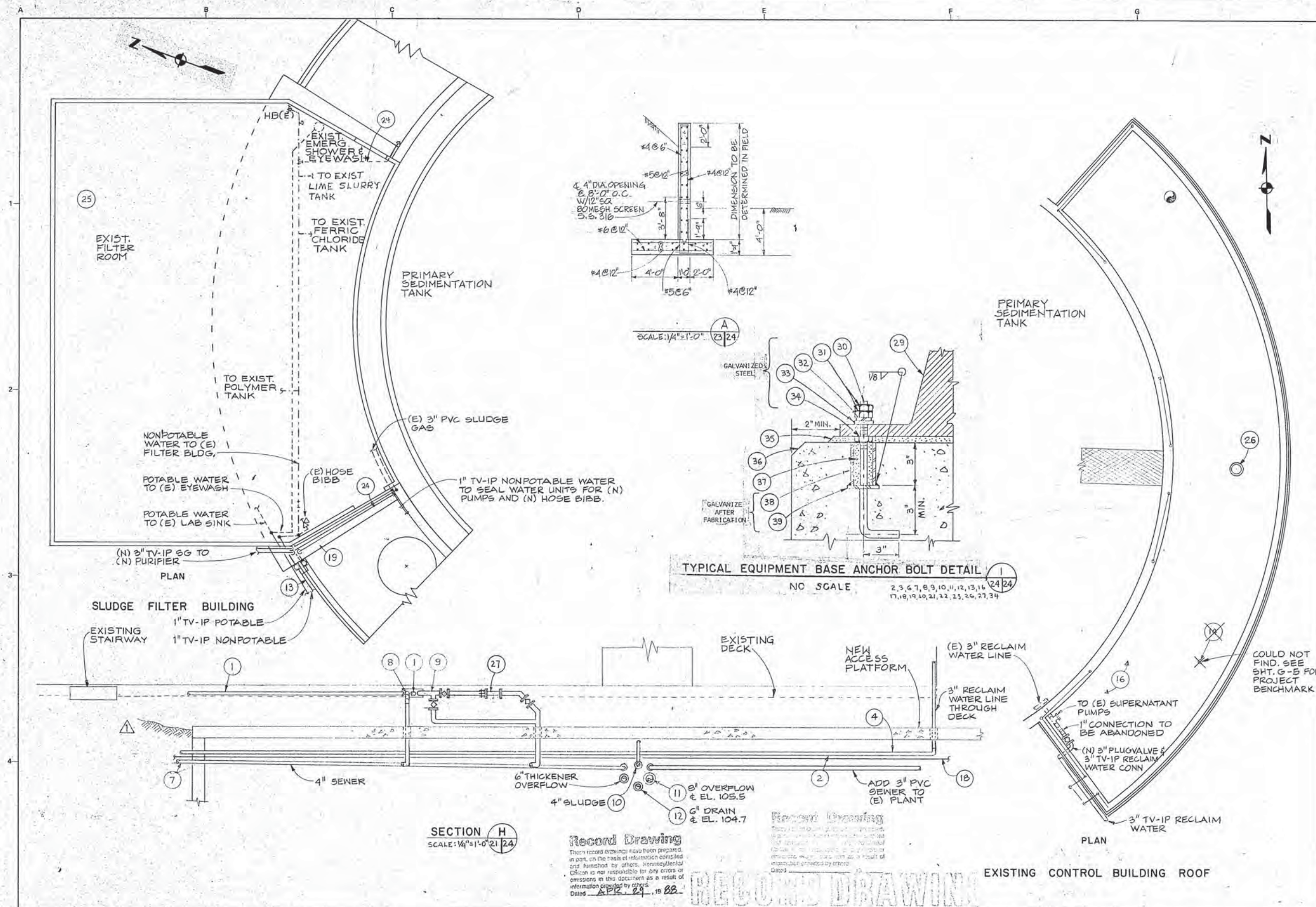
Reference Information and Notes:

FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24

REFER TO THE NOTE WITH THIS NUMBER

Designed JHF	Wastewater Plant Improvements C-06-2464 Sausalito - Marin City Sanitary District Kennedy/Jenks Engineers Submitted: <i>Victor J. Chilton</i> C9370 Date: 1-29-81	San Francisco Approved: <i>Robert J. Coney</i>
Drawn JHF		
Checked JHF		
Date 1-29-81		

PRIMARY STRUCTURE MODIFICATIONS AND DELETIONS		Scale 1/4" = 1'-0" Job No. 0112 Sheet M-23 of
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TYPICAL EQUIPMENT BASE ANCHOR BOLT DETAIL
 NO SCALE
 2, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 26, 27, 34

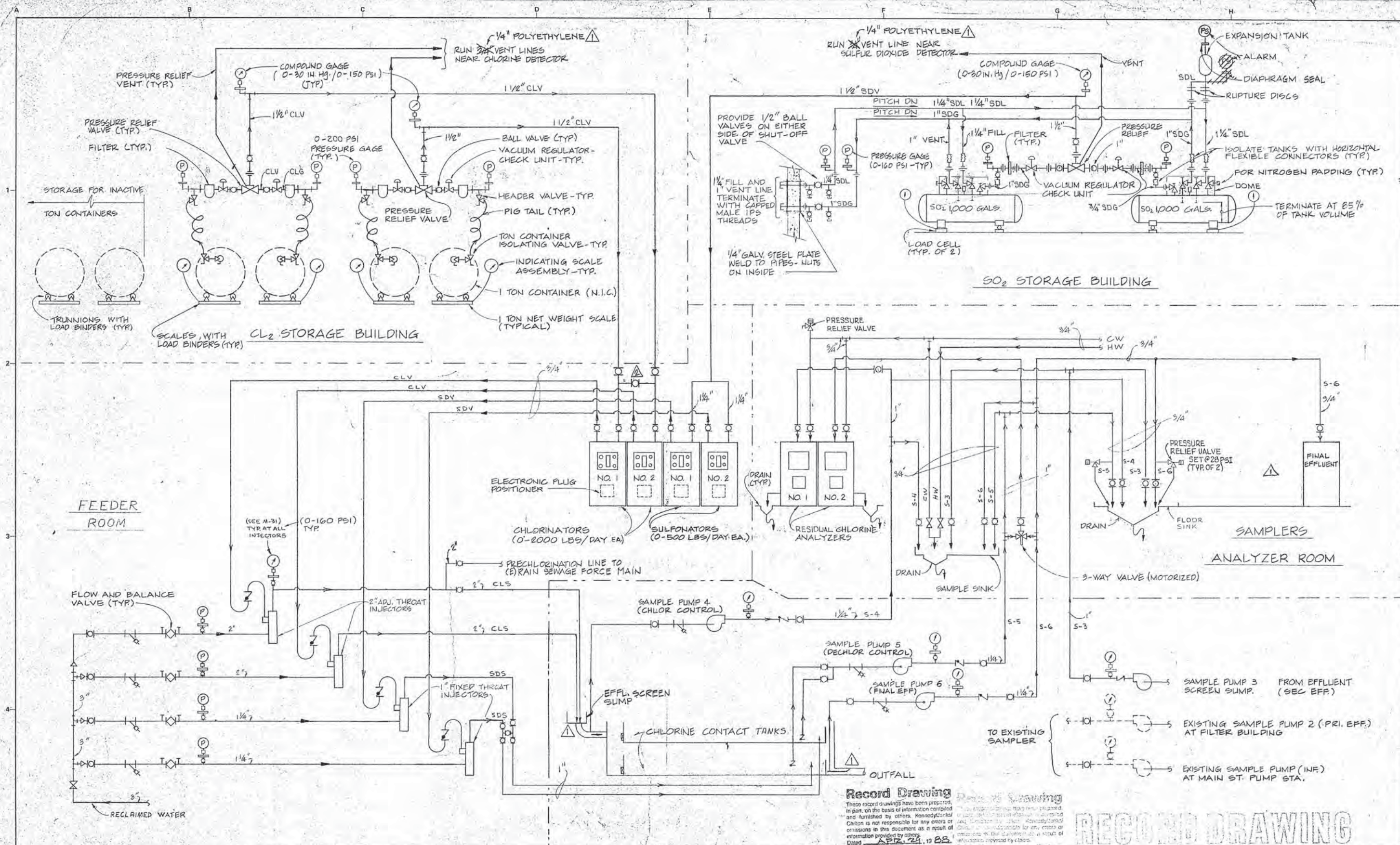
SECTION H
 SCALE: 1/4" = 1'-0" 21 24

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 Date: APR. 24, 1988

- 1 4" TV-IP DIGESTED SLUDGE
- 2 4" TV-IP RECLAIMED WATER
- 3 1 1/2" TX-2P HOT WATER SUPPLY
- 4 1 1/2" TX-2P HOT WATER RETURN
- 5 1 1/2" TV-IP SULFUR DIOXIDE GAS
- 6 1 1/2" TV-IP CHLORINE GAS
- 7 4" TV-IP SANITARY DRAIN
- 8 4" TV-IP PRIMARY SCUM
- 9 4" TV-IP PRIMARY SLUDGE
- 10 4" TV-IP SECONDARY SLUDGE
- 11 8" TV-IP SUPERNATANT
- 12 6" TV-IP SKIMMINGS
- 13 2" TV-IP POTABLE WATER
- 14 BENCHMARK 3. EL 123.22 USGS 1929 MSL + 100. BY HOFFMAN & ALBRITTON, 1988
- 15 CUT EXISTING 4" PVC RECLAIMED WATER LINE OUTSIDE OF HANDRAIL. CONNECT IT WITH TV-IP TO EXISTING 3" PVC LINE ON THE INSIDE OF THE PRI. SED. TANK WALL AND TO THE 1" PVC LINE ON THE OUTSIDE OF THAT WALL.
- 16 DISCONNECT EXISTING RECLAIMED WATER PUMPS. ABANDON IN PLACE.
- 17 8" TV-IP FORT BAKER INFLUENT. HORIZONTAL RUN ELEVATION TO SUIT CONNECTION POINT. SLOPE TO CONNECTION AT TEE SPECIAL WITH 1/4" MINIMUM SLOPE.
- 18 2" TV-IP POTABLE WATER. CONNECT TO EXISTING LINE AT EXISTING CONTROL BUILDING.
- 19 NEW BACKFLOW PREVENTER. SEE M-18.
- 20 NEW 1" TV-IP NON-POTABLE WATER. CONNECT TO EXISTING 1" LINE UNDER THE FLOOR.
- 21 EXISTING WATER SUPPLY RISER. DISCONNECT AND CAP. REMOVE EXISTING PIPING BETWEEN THIS AND THE HILLSIDE STAIRS.
- 22 NEW 3/4" TV-IP POTABLE WATER UNDER FLOOR. CONNECT TO EXISTING SHOWER EYEWASH.
- 23 DISCONNECT FROM EXISTING 1" PVC LINE AND CAP LINE. CONNECT TO NEW 3/4" TV-IP POTABLE WATER LINE.
- 24 NEW 3/4" TV-IP NON-POTABLE WATER. CONTINUATION SEE SHEETS M-21 THRU M-23.
- 25 REMOVE ALL EXISTING CHLORINE AND SO PIPING AND APPURTENANCES. LEAVE EQUIPMENT DISCONNECTED BUT IN PLACE.
- 26 REPLACE THE EXISTING WASTE GAS BURNER. SEE SPECS.
- 27 NEW FLOW METER.
- 28 REMOVE EXISTING FENCING BETWEEN THESE POINTS. INSTALL NEW FENCE POST AT WEST END OF OPENING. SEE SHEET M-21.
- 29 EQUIPMENT BASE.
- 30 ANCHOR BOLT. SIZE AND LOCATION TO CONFORM TO THE EQUIPMENT MANUFACTURER'S REQUIREMENTS.
- 31 HEXAGONAL NUTS.
- 32 LOCK WASHER.
- 33 FLAT WASHER.
- 34 NUT FOR LEVELING.
- 35 3/4-INCH LEVELING GROUT.
- 36 CONCRETE EQUIPMENT BASE. HEIGHT AS SHOWN OR TO MATCH EQUIPMENT ELEVATION REQUIREMENTS. SEE STRUCTURAL DWGS FOR REINFORCEMENT. WHERE THE BASE IS LESS THAN 8-INCHES THICK, PROVIDE A RECESS IN THE FLOOR TO ACCOMMODATE THE ANCHOR BOLT(S). CHAMFER THE EDGES.
- 37 FILL W/ NON-METALLIC, NON-SHRINK GROUT AFTER THE EQUIPMENT HAS BEEN SET AND LEVELING HAS BEEN DONE.
- 38 SCHED. 40 STEEL PIPE, MIN. 1.0 ONE INCH GREATER THAN THE ANCHOR BOLT DIAMETER.
- 39 3/16-INCH STEEL PLATE, 2-1/2" SQUARE.



FIELD CHANGE Revised: _____ Description: _____ Submit: _____ App'd: _____ Date: _____ Refer to Tracing for Latest Revision				Reference Information and Notes: REFER TO THE NOTE WITH THIS NUMBER		Designed: JHF Drawn: JHF Checked: JHF Date: 1-29-81		Wastewater Plant Improvements C-06-2464 Sausalito - Marin City Sanitary District Kennedy/Jenks Engineers Submitted: <i>Walter J. Harman</i> C9370 Approved: <i>Robert J. Ames</i> San Francisco		Scale: 1/4" = 1'-0" Job No.: 0112 Sheet: M-24 of:	
						PRIMARY STRUCTURE MODIFICATIONS AND DELETIONS					



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 Dated APR 24, 1988

RECORD DRAWING

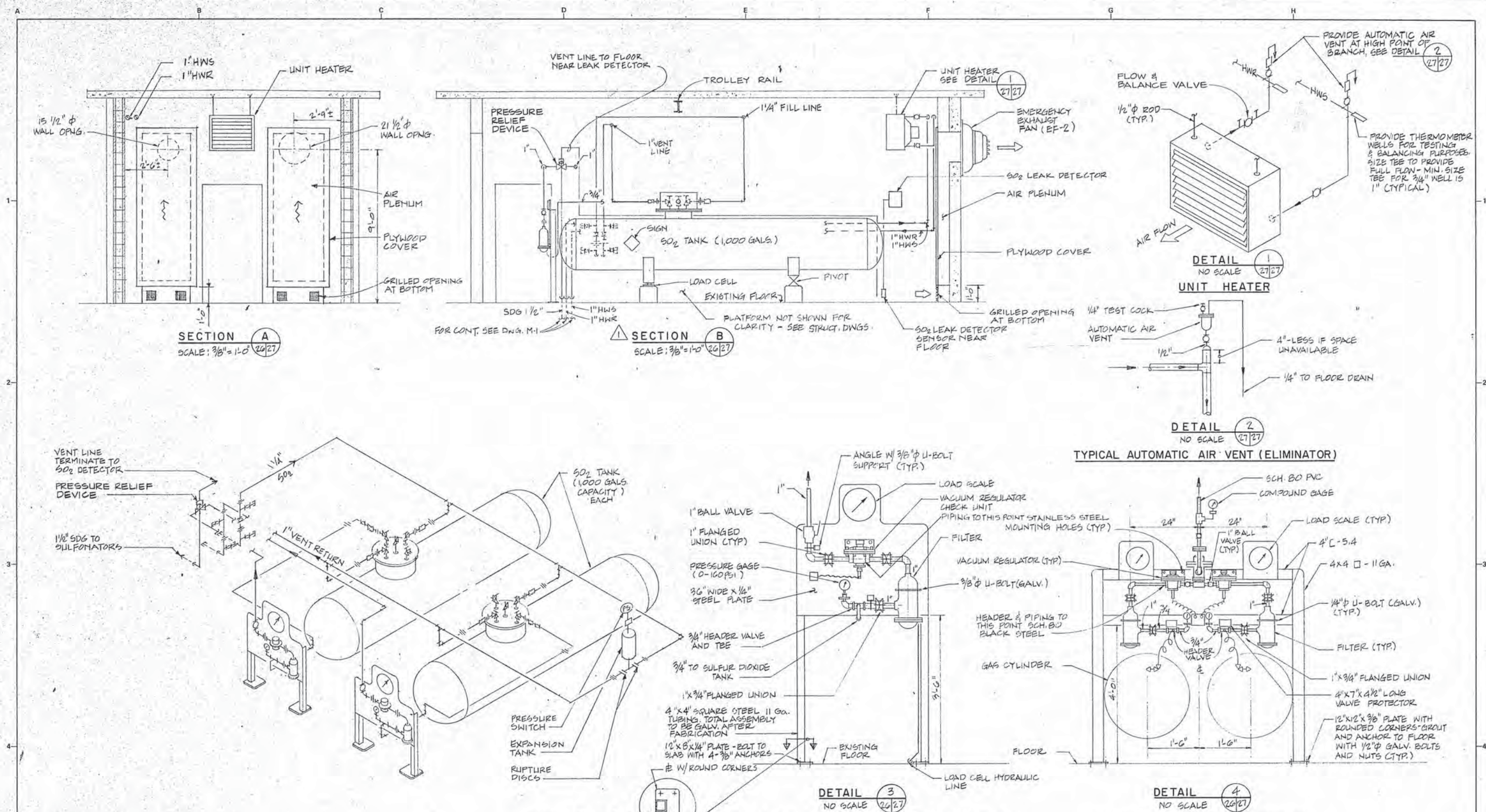
Revised	Description	Submit	App'd	Date
1	CHANGE ORDER NO. 30 FIELD CHANGE			

Reference Information and Notes:
 CLG — CHLORINE GAS
 CLV — CHLORINE VACUUM
 CLS — CHLORINE SOLUTION
 SDG — SULFUR DIOXIDE GAS
 SDV — SULFUR DIOXIDE VACUUM
 SDS — SULFUR DIOXIDE SOLUTION
 SDL — SULFUR DIOXIDE LIQUID

Designed ML	Wastewater Plant Improvements Sausalito - Marin City Sanitary District	C-06-2464
Drawn WJP	Kennedy/Jenks Engineers	San Francisco
Checked JHF	Submitted: <u>Walter J. Jenks</u>	Approved: <u>Robert J. O'Connell</u>
Date 1-29-81	C9370	

Scale NONE	Job No. 0112
Sheet M-25	of 1

**CHLORINATION/DECHLORINATION
SCHEMATIC DIAGRAM**



SULFUR DIOXIDE PIPING ISOMETRIC
NO SCALE

Record Drawing
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Date: APR-29, 1988

Record Drawing
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Date: APR-29, 1988

Revised	Description	Submit	App'd	Date

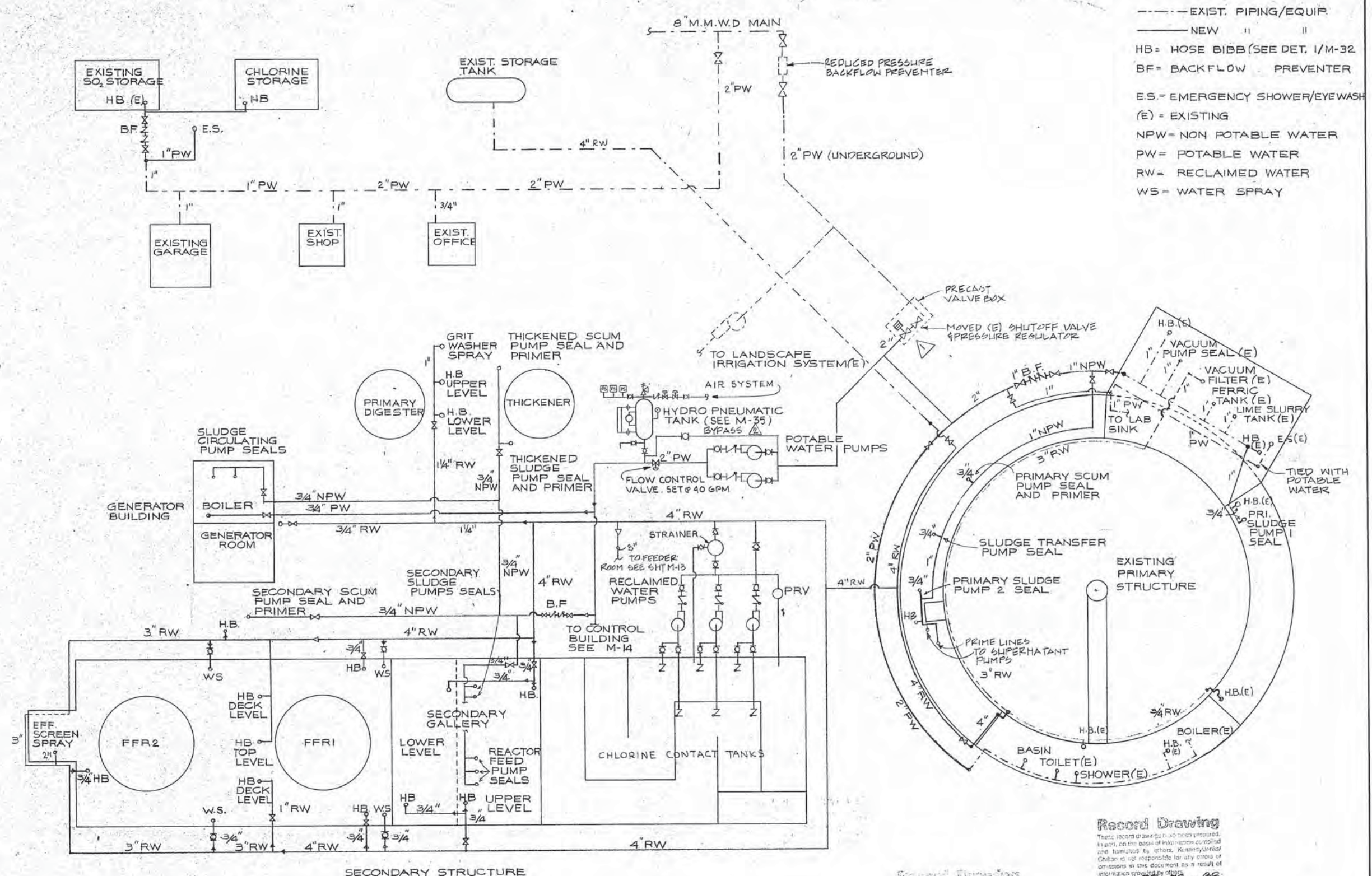
Reference Information and Notes:

FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24
REFER TO THE NOTE WITH THIS NUMBER.

Designed ML/MSA	Wastewater Plant Improvements C-06-2464 Sausalito - Marin City Sanitary District	
Drawn AT	Kennedy/Jenks Engineers San Francisco	
Checked JHF	Submitted: Walter J. Jenks	Approved: [Signature]
Date 1-29-81	C9370	

CHLORINE AND SULFUR DIOXIDE STORAGE
SECTIONS AND DETAILS

Scale 3/8"=1'-0"
Job No. 0112
Sheet M-27
of

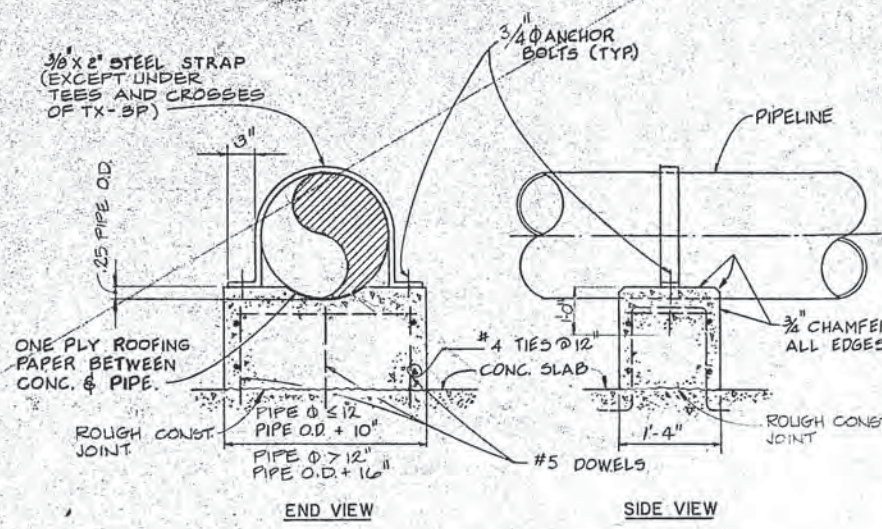


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 Dated APR. 22, 1998 by BB

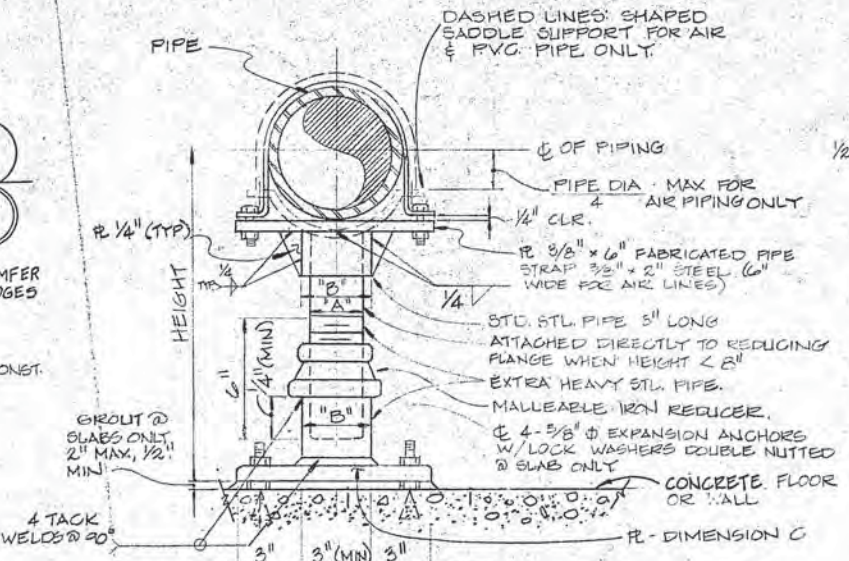
Reference Information and Notes: C.O. NO. 35 FIELD CHANGE Refer to Tracing for Latest Revision		Designed: JHF Drawn: JHF Checked: JHF Date: 1-29-91		Wastewater Plant Improvements C-06-2464 Sausalito - Marin City Sanitary District Submitted: <u>Walter J. Williams</u> C9370 Approved: <u>Robert J. Arney</u>		Scale: NONE Job No.: 0112 Sheet: M-28 of	
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TABLE 1				
SUPPORT T8S, T2S			PIPE	
A	B	R.C.	SIZE	HEIGHT
2"	3"	3/8" R.F.	≤ 6" Ø	≤ 2'-0"
3"	4"	1/2" R.F.	7" Ø	7'-0"

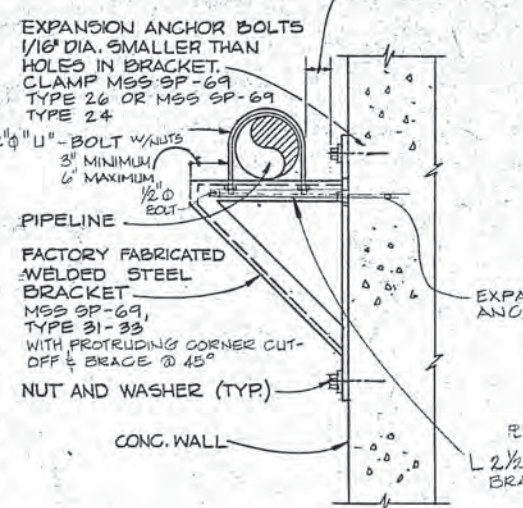
* ANY COMBINATION HEIGHT DETERMINES SIZE OF SUPPORT
NOTE: F.P. DIMENSIONS "A" "B" & "C" SEE TABLE 1



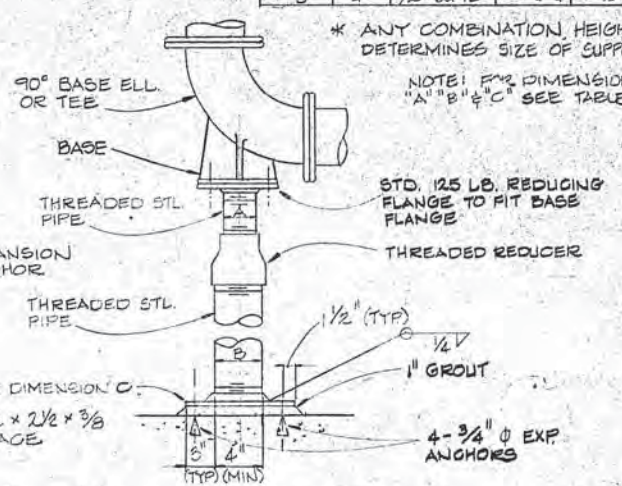
TYPE 1 PIPE SUPPORT (T1S)
SCALE: NONE



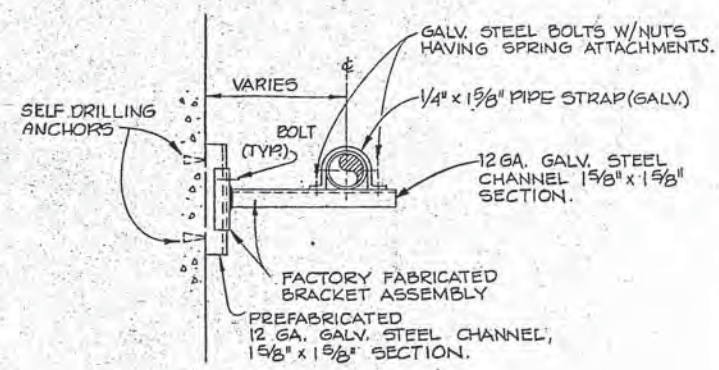
TYPE 3 PIPE SUPPORT (T3S)
NO SCALE



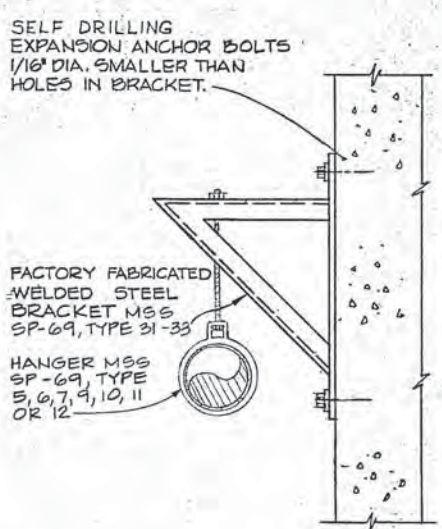
TYPE 4 PIPE SUPPORT (T4S)
NO SCALE



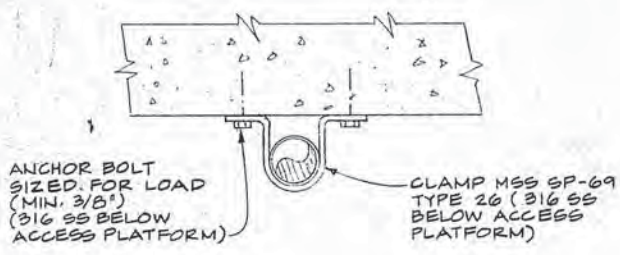
TYPE 2 PIPE SUPPORT (T2S)
NO SCALE



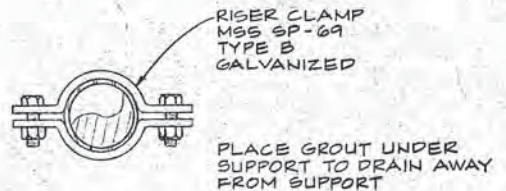
TYPE 8 PIPE SUPPORT (T8S)
NO SCALE



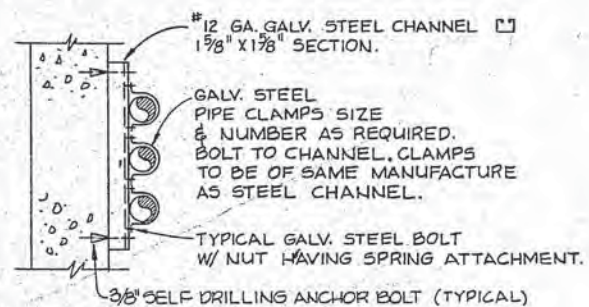
TYPE 5 PIPE SUPPORT (T5S)
NO SCALE



TYPE 6 PIPE SUPPORT (T6S)
NO SCALE



TYPE 10 PIPE SUPPORT (T10S)
NO SCALE



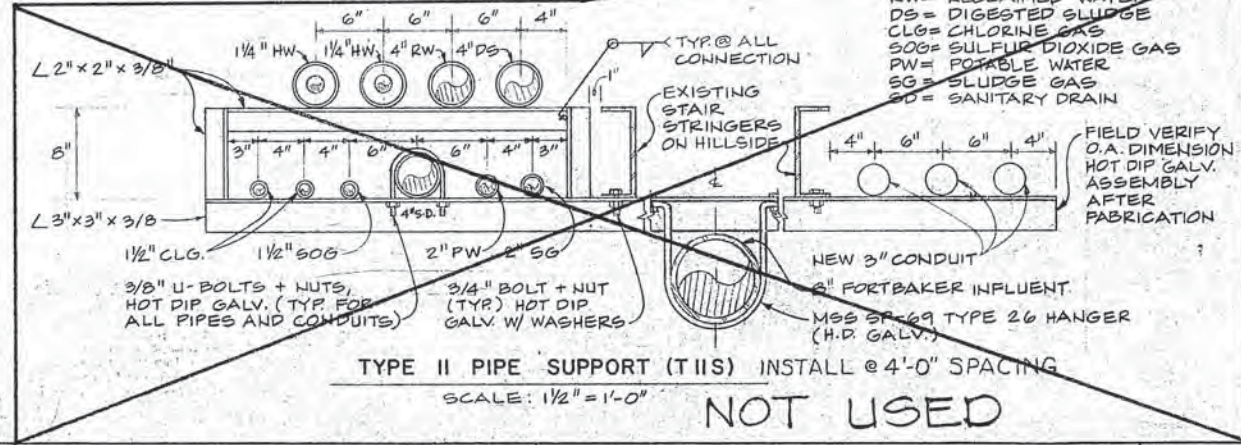
TYPE 7 PIPE SUPPORT (T7S)
SCALE: NONE

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Date: APR 29, 1988

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Date: APR 29, 1988

RECORD DRAWING

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



TYPE 11 PIPE SUPPORT (T11S) INSTALL @ 4'-0" SPACING
SCALE: 1/2" = 1'-0"

NOT USED

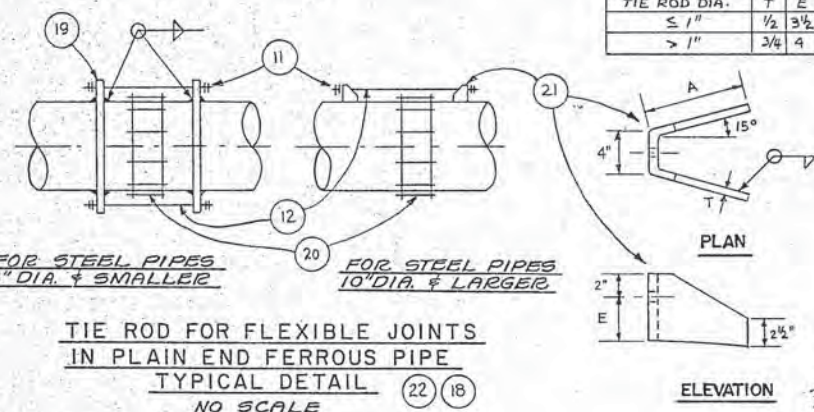
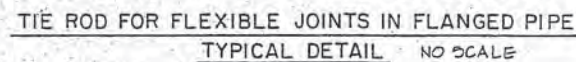
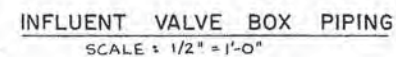
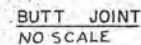
Revised	Description	Submit	App'd	Date

Reference Information and Notes:
1. FOR TYPE 9 PIPE SUPPORT SEE 2

Designed: JHF/JAF	Wastewater Plant Improvements	C-06-2464
Drawn: AM	Sausalito - Marin City Sanitary District	
Checked: JHF	Kennedy/Jenks Engineers	San Francisco
Date: 1-29-81	Submitted: <u>Walter J. Harman</u>	Approved: <u>Ed J. O'Connell</u>
	C9370	

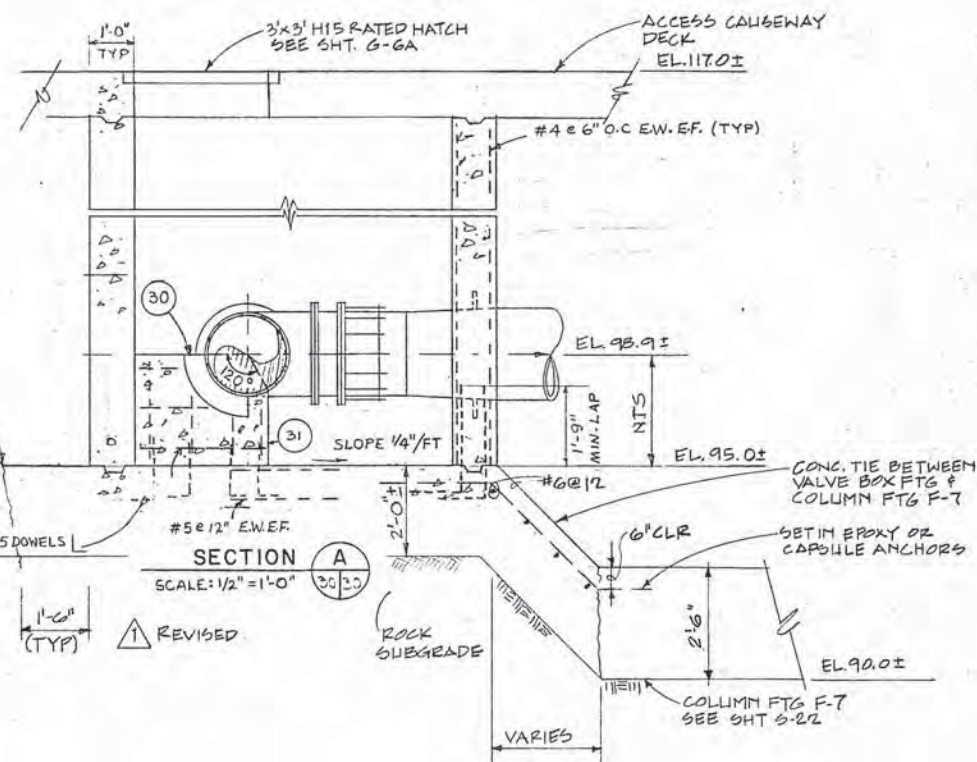
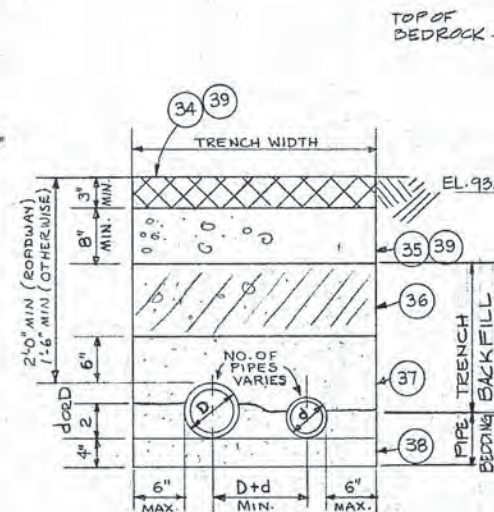
PIPE SUPPORTS AND
MISCELLANEOUS DETAILS

Scale: AS SHOWN
Job No.: 0112
Sheet: M-29



DIMENSIONS IN INCHES			
TIE ROD DIA.	T	E	A
≤ 1"	1/2	3 1/2	6
> 1"	3/4	4	9

NOMINAL PIPE SIZE ↙ TEST PRESSURE →	NUMBER/SIZE				
	12 P51	25 P51	50 P51	100 P51	150 P51
4"	2-5/8"	2-5/8"	2-5/8"	2-5/8"	2-5/8"
6"	2-5/8"	2-5/8"	2-5/8"	2-5/8"	2-5/8"
8"	2-5/8"	2-5/8"	2-5/8"	2-3/4"	2-3/4"
10"	2-5/8"	2-5/8"	2-5/8"	2-3/4"	3-3/4"
12"	2-5/8"	2-5/8"	2-5/8"	3-3/8"	3-7/8"
14"	2-5/8"	2-5/8"	2-3/4"	3-7/8"	3-1"
16"	2-5/8"	2-5/8"	3-3/4"	3-7/8"	3-1 1/8"
18"	2-5/8"	2-5/8"	3-3/4"	3-"	3-1 1/4"
20"	2-5/8"	2-3/4"	3-7/8"	3-1 1/8"	3-1 1/4"
24"	2-5/8"	3-3/4"	3-1"	3-1 1/4"	3-1 1/2"



Record Drawing
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Dated: APR. 29, 19 88

1. BUTT STRAP... THICKNESS SAME AS PIPE CYLINDER.
2. WIRE MESH.
3. FIELD APPLIED CEMENT MORTAR.
4. PIPE CEMENT MORTAR LINING AND COATING.
5. OPTIONAL WELD TO WELD SHOWN
6. ONE SIDE MAY BE SHOP WELDED.
7. DIMENSION VARIES WITH PIPE SIZE.
8. 5/8" STEEL PLATE.
9. SEE TIE ROD TABLE FOR ROD SIZE.
10. DRILL HOLES TO MATCH FLANGE.
11. DOUBLE NUT (TYPICAL).
12. TIE ROD. SEE TIE ROD TABLE.
13. SPOOL FXPE.
14. FLANGED COUPLING ADAPTER.
15. TIE RODS AND RUBBER COUPLINGS ARE SIMILAR.
16. SPACE RODS EQUALLY AROUND PERIMETER.
17. FCA'S SMALLER THAN 12" MAY HAVE ANCHOR STUDS IN LIEU OF TIE RODS.
18. FCA'S 12" AND LARGER AND ALL FLEX COUPLINGS TO HAVE TIE RODS WHERE SHOWN OR WHERE REQUIRED FOR PIPE RESTRAINT.
19. FLANGE FOR PIPE ONE SIZE LARGER.
20. FLEXIBLE COUPLING.
21. STEEL LUG.
22. FOR DUCTILE IRON PIPE. USE FRICTION CLAMPS AND SPOT WELDS IN LIEU OF FLANGE OR LUGS WELDED TO PIPE, OR USE DETAIL SHOWN FOR FLANGED PIPE.
23. KRISTINE 20 LINE. CUT, LEAVING 1" MIN. GAP AT THE FLANGED COUPLING ADAPTERS. WELD CUT-OFF FLANGES AT WALLS, 1" THICK, MIN. DIAMETER 26". COAT CUT ENDS WITH MASTIC COATING.
24. 20" FLANGED COUPLING ADAPTERS, FUSION EPOXY LINED AND COATED, 316 SS HARDWARE.
25. 20" KNIFE GATE VALVE (SEE SPECS.).
26. 20" X 24" TM-2P INCREASER W/CUTOFF FLANGE. PROVIDE TESTING TAP ON PIPE CROWN. COAT AND COAT WITH MORTAR AFTER SUCCESSFUL HYDROSTATIC TEST.
27. NEW 24" TM-2P BYPASS LINE.
28. 20" TM-2P TEE. SUPPORT WITH TIE 1 SUPPORT.
29. BILCO J-44L HATCH, EQUIVILANT BY BABCOCK, OR EQUAL. LOCATED IN PLATFORM ABOVE. 3'-0" X 3'-0" OPENING FOR VALVE INSTALLATION AND REMOVAL.
30. 3/8" X 6" QUARTER-RING FOR THRUST; WELD ALL AROUND.
31. THRUST BLOCK.
32. FIBERGLASS GRATING. SEE SPECS.
33. 6 INCH DEEP SLUMP
34. PAVING (IN ROADWAY ONLY) SEE SPECS. MATCH THE THICKNESS OF THE EXISTING PAVEMENT. SAW CUT THE EXISTING PAVEMENT BEFORE TRENCHING.
35. CALTRANS SPEC AGGREGATE BASE, CLASS 2, 3/4" MAXIMUM. COMPACT TO 95% RELATIVE DENSITY.
36. CALTRANS SPEC AGGREGATE SUBBASE, CLASS 1.
37. STRUCTURAL FILL SAND COVER FOR PIPE. HAND TAMP IN PLACE TO AVOID DAMAGING PIPE.
38. SAND BEDDING FOR PIPE. SPREAD EVENLY AND SMOOTH OUT BEFORE LAYING PIPE IN THE TRENCH. MAKE FITTING OR BELL HOLES AS NECESSARY TO ENSURE EVEN BEARING OF THE PIPE ON THE SAND.
39. WHERE PIPE IS NOT IN A ROADWAY, THE PAVING AND AGGREGATE BASE MATERIAL, ITEMS 34 AND 35 ARE OMITTED, AND ARE TO BE REPLACED BY ITEM 36 COMPACTED TO A MINIMUM DENSITY OF 91%.

GRAPHIC SCALE

$V_2' = 1.0$ 0 1 2 3 4 5

PIPING AND MISCELLANEOUS DETAILS

Scale	A5 SHOWN
Job No.	0112
Sheet	M-30

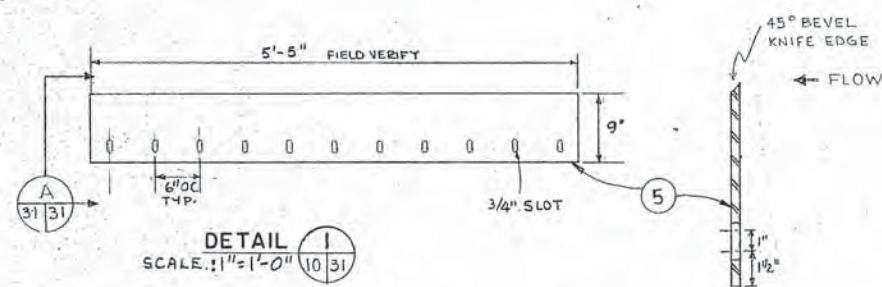
	C.O. NO. 3			
Revised	Description	Submit.	Appr'd.	Date
Refer to Tracing for Latest Revision				

Reference Information and Notes

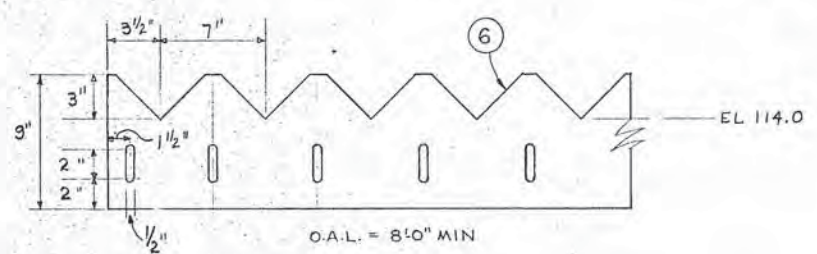
REFER TO THE NOTE WITH THIS NUMBER

Designed JHF	Wastewater Plant Improvements C-06-2464 Sausalito - Marin City Sanitary District	
Drawn JHF		
Checked JHF	Kennedy/Jenks Engineers	San Francisco
Date 1-29-81	Submitted: <i>Walter J. Harrison</i> C9370	Approved: <i>L. J. [Signature]</i>

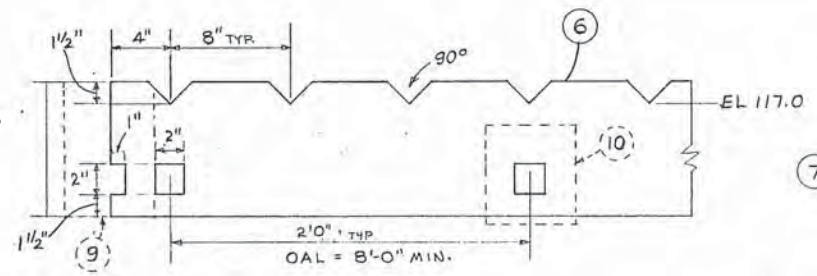
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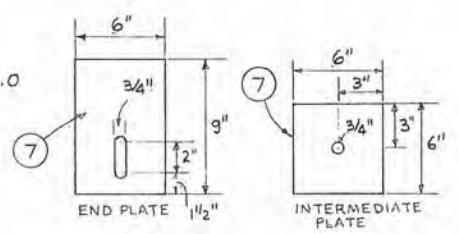
SECTION A
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DETAIL 6
SCALE: 2"=1'-0"

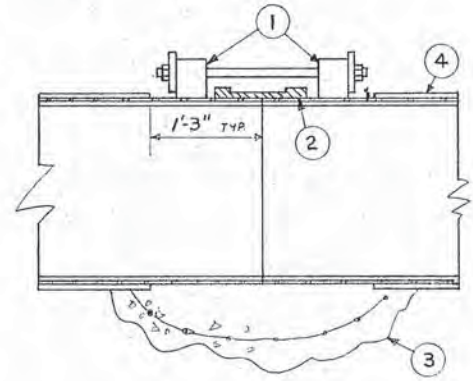


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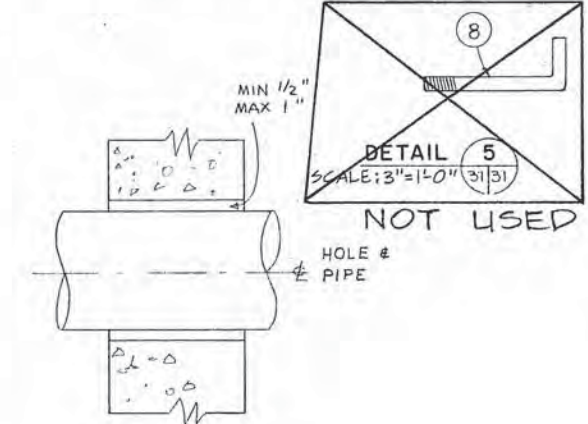


DETAIL 3
SCALE: 2"=1'-0"

DETAIL 4
SCALE: 2"=1'-0"

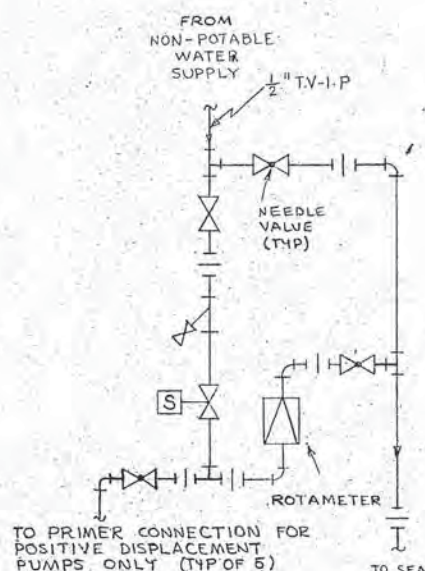


DETAIL 7
SCALE: 1"=1'-0"

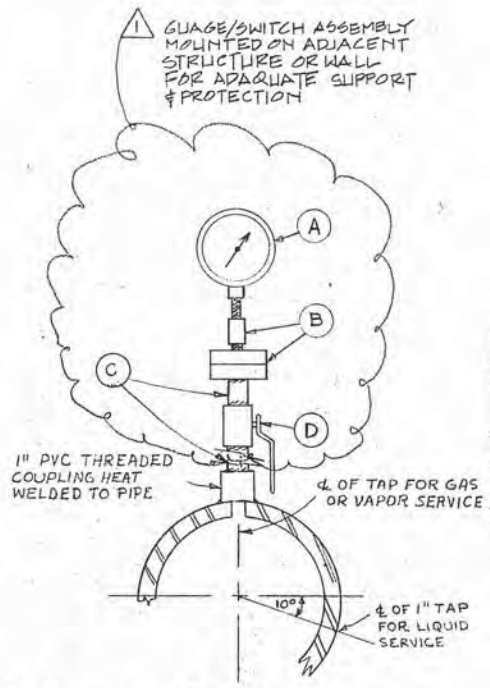


DETAIL 8
NO SCALE

1. U-TYPE HARNESS ANWA M-11, TABLES 19.10 AND 19.11, FIGURE 19.18 FOR 50 PSI
2. 7-INCH MIDDLE RING
3. 1/2" WALL THICKNESS FLEX COUPLING, BAKER SERIES 200, ROCKWELL 411, OR EQUAL
4. CONCRETE COATING ALL AROUND, MINIMUM THREE INCHES. LAP AT ENDS AND COVERAGE OVERALL STEEL SURFACES. WRAP FIRST WITH WIRE MESH EQUAL TO MESH FOR MORTAR COATING OF PIPE
5. 24" T.M-2P. HOLD BACK MORTAR COATING 15 INCHES. COAT EXPOSED SURFACES WITH 15 MILS COAL TAR EPOXY
6. 316 SS PLATE, 3/16" THICK. INSTALL WITH BEVEL DOWNSTREAM.
7. PVC PLATE, 3/16" THICK.
8. 316 SS PLATE, 3/16" THICK.
9. SEE DETAIL 3/M-31.
10. SEE DETAIL 4/M-31.



DETAIL 9
NO SCALE



DETAIL 10
SCALE: 3"=1'-0"

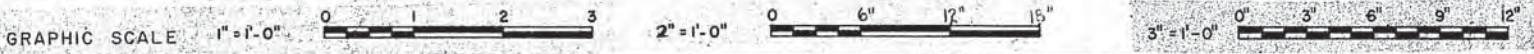
PRESSURE GAGE/SWITCH ASSEMBLY SELECTION

ITEM	CHOICE	DESCRIPTION	MANUFACTURER/MODEL NUMBER
A	1	INDICATING PRESSURE SWITCH	ROBERTSHAW SP212A AMETEK 3050, OR EQUAL
	2	PRESSURE GAUGE 1/2 INCH	ROBERTSHAW 371 AMETEK 1980, OR EQUAL
	3	PRESSURE GAUGE	ROBERTSHAW 771 AMETEK 1981, OR EQUAL
B	4	DIAPHRAGM SEAL W/SNUBER	CHEMEQUIP 200; ROBERTSHAW D-26W CHEMEQUIP 1409, OR EQUAL
	5	PVC SCHED. 80 REDUCING BUSHINGS	LENGTH TO SUIT VALVE D.
C	6	AISI TYPE 316 SS 1-INCH NPT SCH. 80	
	7	PVC SCHED. 80 1-INCH NPT	
D	8	BALL VALVE AISI TYPE 316 SS 1-INCH THREADED	JAMESBURY 2000 WALWORTH 3050-B, OR EQUAL
	9	BALL VALVE PVC 1-INCH THREADED	CHEMROL JGF+, OR EQUAL

* ALL GAUGES SHALL HAVE THE UNITS OF MEASUREMENT (I.E. PSI, IN-H₂O, ETC.) ON THE GAUGE FACE.

PRESSURE GAGE/SWITCH ASSEMBLY CHART

PUMP NAME	INLET (1) DISCH (2)	A	B	C	D	GAUGE/SWITCH RANGE
REACTOR SUPPLY PUMPS 1-3	1 D	2 2	4 4	6 6	8 8	30-0-15 0-60
PRIMARY SLUDGE PUMPS 1-2	1 D	3 3	4 4	6 6	8 8	30-0-15 0-30
SECONDARY SLUDGE PUMPS 1-2	1 D	2 2	4 4	7 7	9 9	30-0-15 0-30
PRIMARY/SECONDARY SCUM PUMPS 1	1 D	NONE 3	NONE 4	NONE 6	NONE 8	30-0-15 0-100
THICKENED SLUDGE/SCUM PUMPS 1	1 D	NONE 1	NONE 4	NONE 6	NONE 8	30-0-15 0-100
SLUDGE CIRCULATING PUMPS 1-2	1 D	2 2	4 4	7 7	9 9	30-0-15 0-30
SUPERNATANT PUMPS 1-2	1 D	3 3	4 4	7 7	9 9	30-0-15 0-30
RECLAIMED WATER PUMPS 1-3	1 D	3 3	4 4	7 7	9 9	30-0-15 0-100
POTABLE WATER PUMPS	1 D	3 3	5 5	7 7	9 9	0-30 0-160



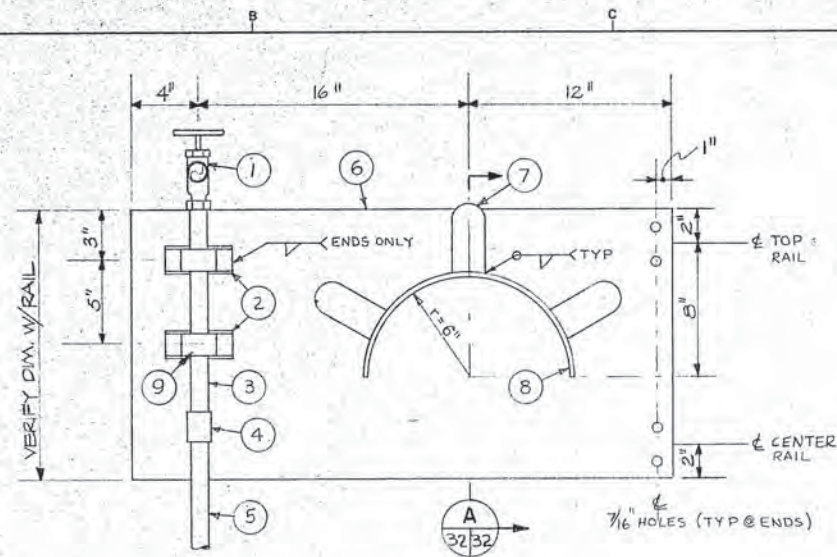
Revised	Description	Submit	App'd	Date
1	C.O. NO. 46			

Reference Information and Notes:
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Dated: APR 24, 1982

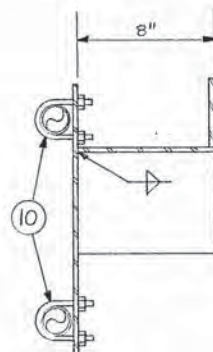
Wastewater Plant Improvements
Sausalito - Marin City Sanitary District
Kennedy/Jenks Engineers
San Francisco
Submitted: Walter J. Jenks
Approved: Robert J. Jenks
Date: 1-29-81

Scale: AS SHOWN
Job No. 0112
Sheet M-31
of

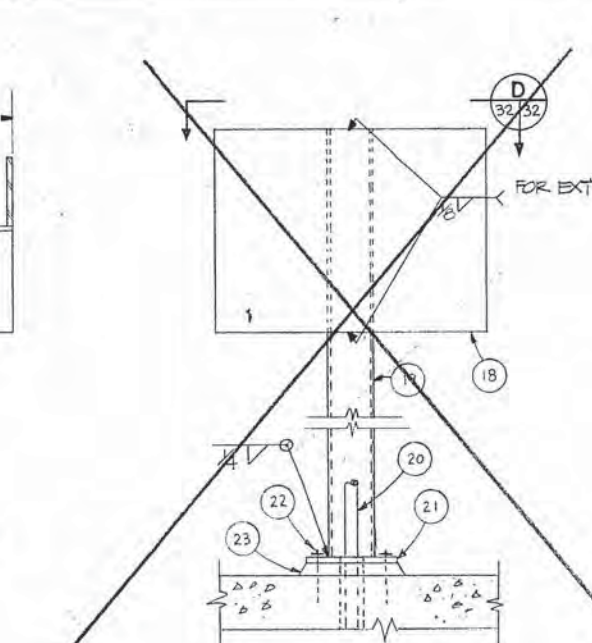
PIPING AND
MISCELLANEOUS DETAILS



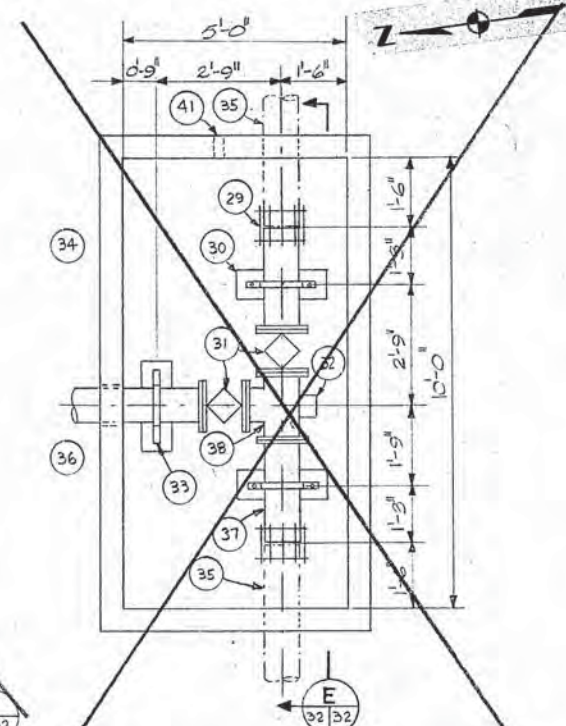
HOSE RACK DETAIL 1
NO SCALE 32/32
VARIOUS



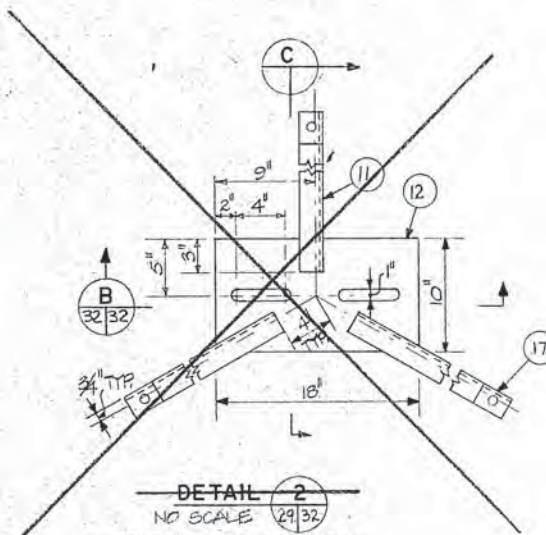
SECTION A
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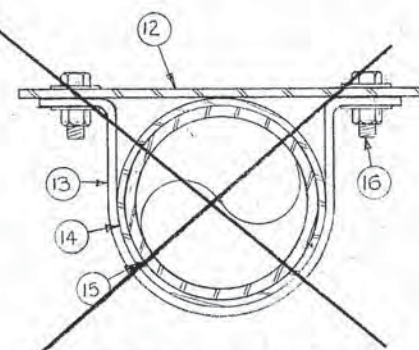
SEAL WATER CONTROL UNIT MOUNTING DETAIL 4
NO SCALE 32/32



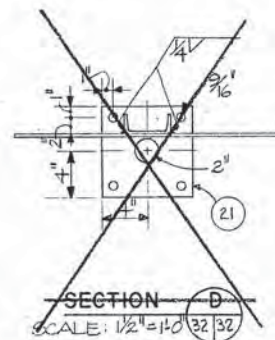
FORT BAKER INFLUENT VALVE BOX DETAIL 6
SCALE: 1/2" = 1'-0" 32/32



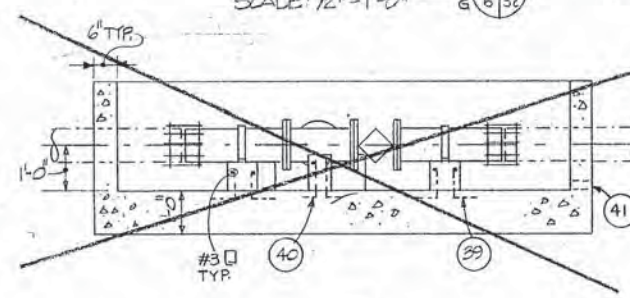
DETAIL 2
NO SCALE 29/32
TYPE 3 PIPE SUPPORT



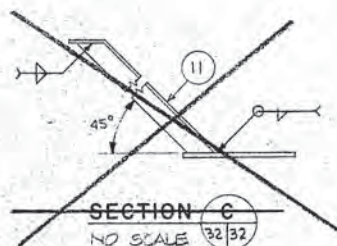
SECTION B
NO SCALE 32/32



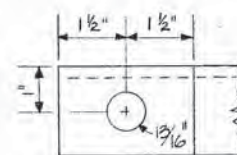
SECTION D
SCALE: 1/2" = 1'-0" 32/32



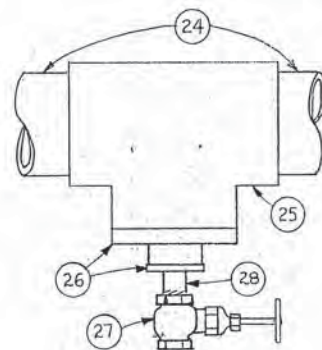
SECTION E
SCALE: 1/2" = 1'-0" 32/32



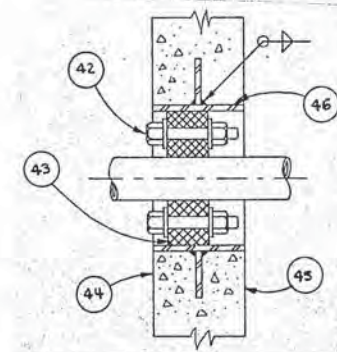
SECTION C
NO SCALE 32/32



DETAIL 3
NO SCALE 32/32



FLUSHING CONNECTION DETAIL 5
NO SCALE 13/32



WALL PENETRATION DETAIL 7
NO SCALE 11, 16, 21 9/32

- 1 3/4" BRONZE ANGLE HOSE VALVE (GARDEN HOSE)
- 2 1-5/8" X 4" CHANNEL STRUT, 6063-T6 ALUMINUM
- 3 1/4" BRASS PIPE, THREADED, 12" MIN. LENGTH
- 4 3/4" ADAPTER COUPLER PVC
- 5 3/4" TV-IP
- 6 1/4" 6061-T6 PLATE
- 7 1/4" X 2" X 4" 6061-T6 PLATE
- 8 1/4" X 8" 6061-T6 PLATE
- 9 6063-T52 PIPE CLAMP, DOUBLE WRAP PIPE W/POLYETHYLENE 10-MIL TAPE TO ELECTRICALLY ISOLATE IT FROM THE CLAMP
- 10 3/8" U-BOLT 6061-T6 ALUM. SIZE TO MATCH NEW HANDRAIL
- 11 2 1/4" X 2" X 2" 316 SS. LENGTH TO FIT. FASTEN TO OVERHEAD W/316 SS 3/4" DRILLED IN ANCHORS
- 12 3/8" PLATE, 316 SS
- 13 3/8" PLATE. WIDTH = 1/2 NOM. PIPE DIA. BEND TO SUIT PIPE
- 14 ATTACH TV-IP PIPE COUPLING, CENTERED AT STRAP
- 15 TV-IP
- 16 316 SS BOLT, NUTS, AND WASHERS, 3/4-INCH
- 17 SEE DETAIL 1
- 18 3/16" STEEL PLATE. SIZE TO SUIT SEAL WATER ENCLOSURE
- 19 4 X 5.4 CHANNEL LENGTH 48" MIN.
- 20 NON-POTABLE WATER PIPE
- 21 1/2 X 8 X 8 BASE PLATE. HOT DIP GALVANIZE, 18, 19, AND 21 AFTER FABRICATION
- 22 1/2" GALVANIZED DRILLED ANCHORS, MIN. 4" LONG
- 23 DRY PACK GROUT MIN. 1/2" UNDER BASE PLATE. KEEP 2" HOLE CLEAR. TV-IP (4" SHOWN)
- 24 TV-IP TEE
- 25 TV-IP REDUCER BUSHINGS 5X5
- 26 3/4" BRONZE 125 LB. GATE VALVE, UNION BONNET, RISING STEM, THREADED SOLID DISC
- 27 TV-IP 3/4" SXT NIPPLE
- 28 8" FLEX. COUPLING (TYP.) FUSION EPOXY LINED AND COATED
- 29 8 X 8 X 24" SUPPORT BLOCK (TYP. OF 3)
- 30 8" PLUG VALVE. ALL HARDWARE TO BE 316 SS
- 31 6 X 8 X 12" SUPPORT BLOCK. HSS SP-69 TYPE 25 SUPPORT H.D. GALV. W/GALV. ANCHOR BOLTS EMBEDDED IN SLAB MIN. 3 INCHES DEEP. (TYP. OF 3)
- 32 FORT BAKER INFLUENT VALVE BOX TOP OF WALL TO BE SLOPED AND 6 INCHES ABOVE HILL GRADE. REINFORCE 4 E.W. WALLS AND FLOOR. CONSTRUCT BOX PRIOR TO MAKING PIPING MODIFICATIONS. MODIFICATIONS TO BE MADE WHEN AUTHORIZED BY THE ENGINEER
- 33 EXISTING FORT BAKER 8" C.I. INFLUENT LINE. CUT 7'-1" ± SECTION OUT TO FIT NEW PIPING
- 34 NEW 8" T.V-IP FORT BAKER PRIMARY BYPASS LINE. WRAP LINE W/MIN. 1" POLYURETHANE FOR EXPANSION THROUGH WALL
- 35 8" T.N-7P SPOOL F X PE TYP. OF 2
- 36 8" T.N-7P TEE. CAST SUPPORT BLDG. AFTER INSTALLATION
- 37 #3 REBAR 6" X 8" TYP. OF 8 PER SUPPORT BLOCK FOR THREE BLOCKS
- 38 #3 REBAR 6" X 8" TYP. OF 6 PER SUPPORT BLOCK FOR ONE BLOCK
- 39 3" Ø DRAIN HOLE. PROVIDE PEA- GRAVEL DRAINAGE CHANNEL DOWN HILL
- 40 BOLTS, NUTS AND WASHERS TO BE A193 TYPE 316 SS OR NAVAL BRONZE. TIGHTEN FROM THE DRY SIDE
- 41 LINK TYPE SEAL
- 42 DRY SIDE OF THE WALL
- 43 WET SIDE OF THE WALL
- 44 PIPE SLEEVE MIN 1/4" WALL W/1/4" X 3" (MIN) WIDE FLANGE AT CENTER OF WALL. HOT DIP GALVANIZE AFTER FABRICATION. IF HOLE IS CORE DRILLED, SLEEVE IS OMITTED

GRAPHIC SCALE
1/2" = 1'-0"
0 1 2 3 4 5

Revised	Description	Submit	App'd	Date
	Refer to Tracing for Latest Revision			

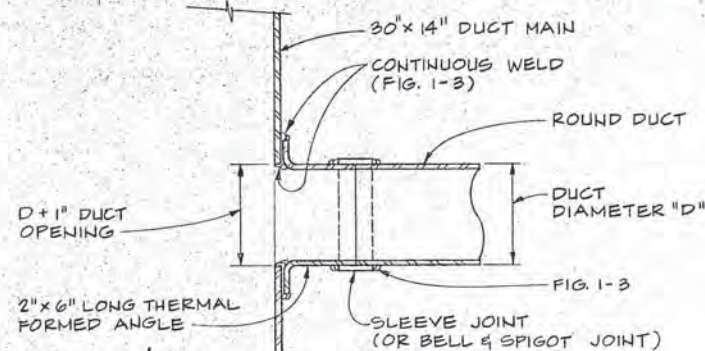
Reference Information and Notes:

REFER TO THE NOTE WITH THIS NUMBER

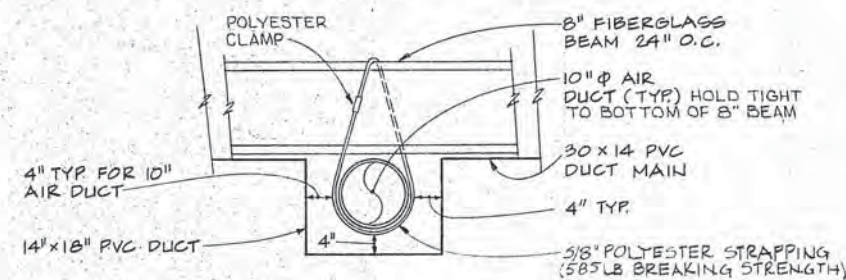
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Drawn JHF	KennedyJenks Engineers	San Francisco
Checked JHF	Submitted:	
Date 1-29-81	Walter J. Jensen	C-9370

MISCELLANEOUS DETAILS

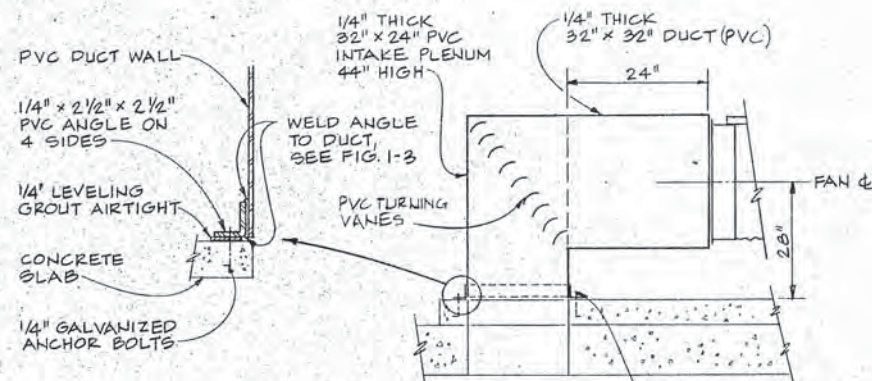
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AS SHOWN
Job No.
0112
Sheet
M-32
of



BANCH-DUCT CONNECTION DETAIL (1)
NO SCALE 2/33



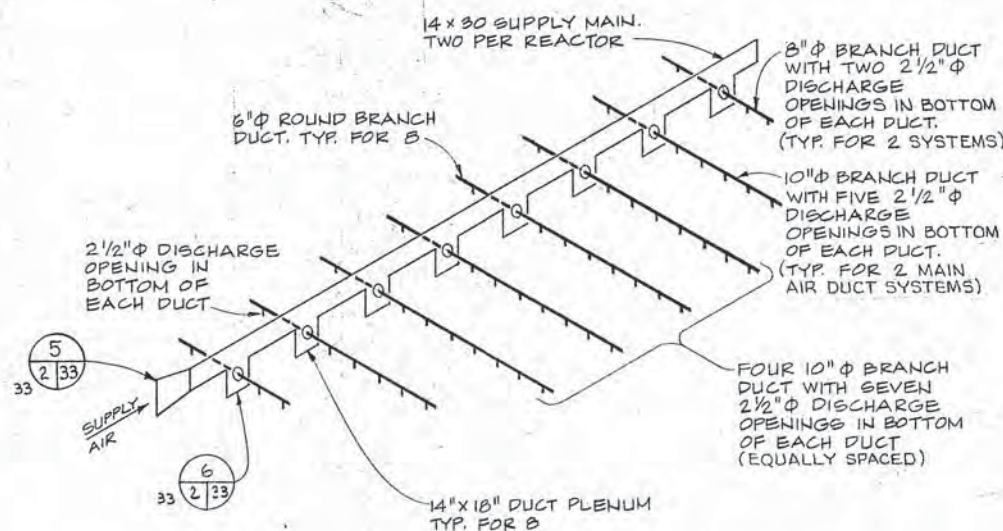
DUCT HANGER DETAIL (2)
NO SCALE 33/33



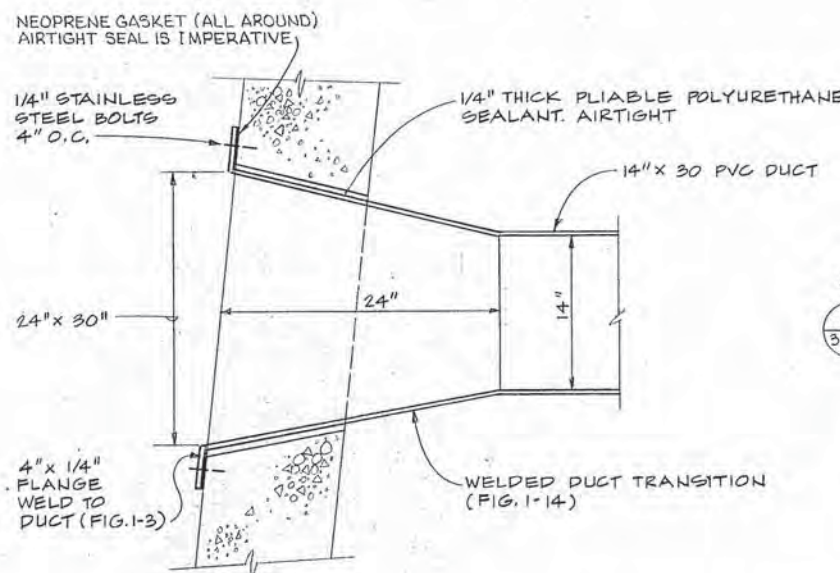
SECTION A (33/33)
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NOTE

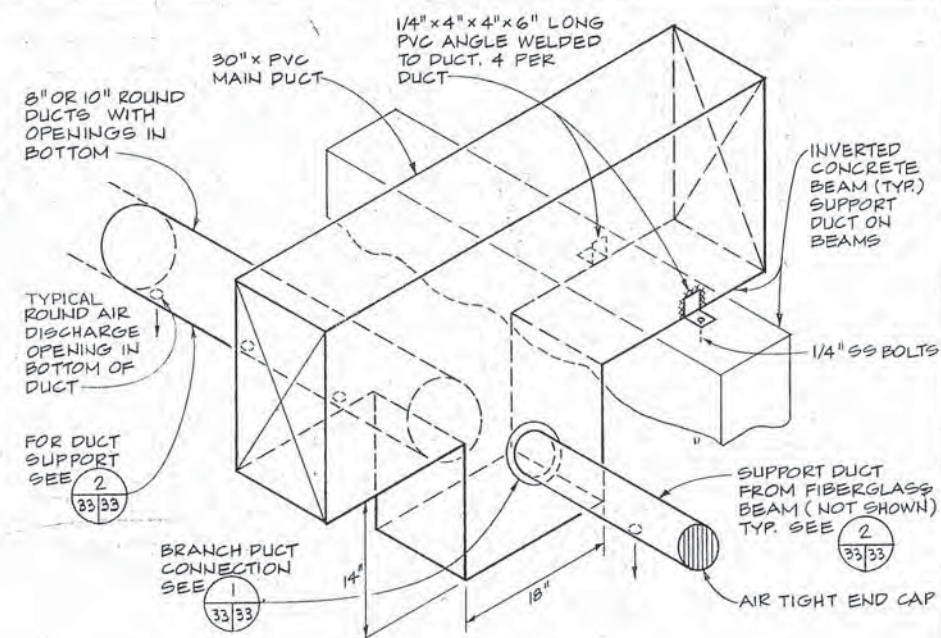
1. SEE SMACNA, THERMOPLASTIC DUCT (PVC) CONSTRUCTION MANUAL FOR ALL FIG. SHOWN ON THIS SHEET. EXAMPLE: (FIG. 1-14)



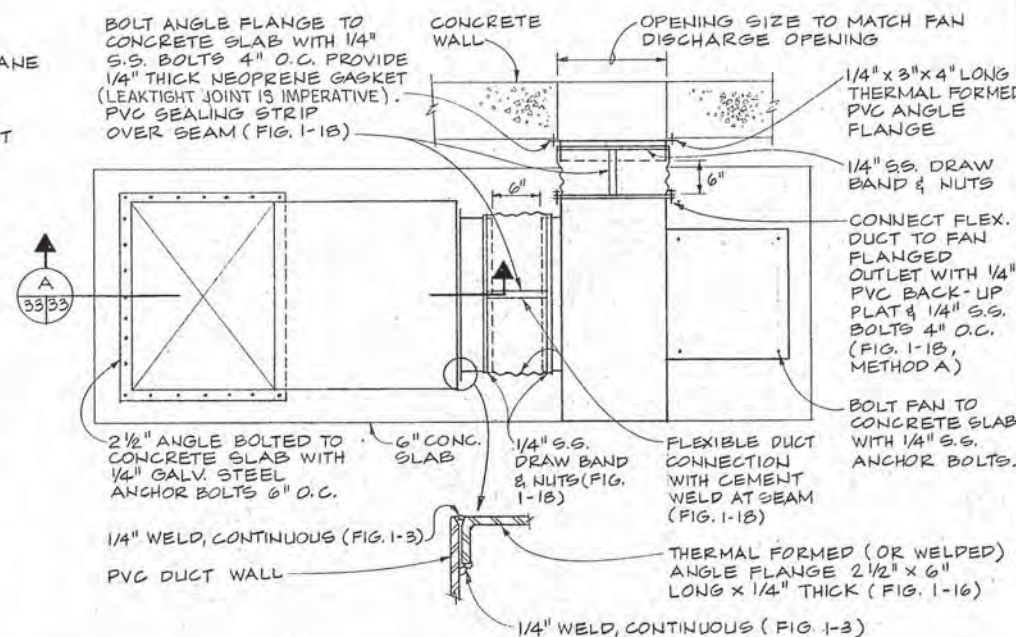
AIR FLOW DIAGRAM
NO SCALE



PVC DUCT THRU CONCRETE WALL DETAIL (5)
NO SCALE 2/33



ISOMETRIC DIAGRAM DETAIL (6)
NO SCALE 2/33



PLAN-FAN INSTALLATION DETAIL (7)
(TYP OF 2) NO SCALE 2/33

Record Drawing

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Date: APR 29, 1988

Record Drawing
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Date: APR 29, 1988

RECORD DRAWING

Revised	Description	Submit	App'd	Date

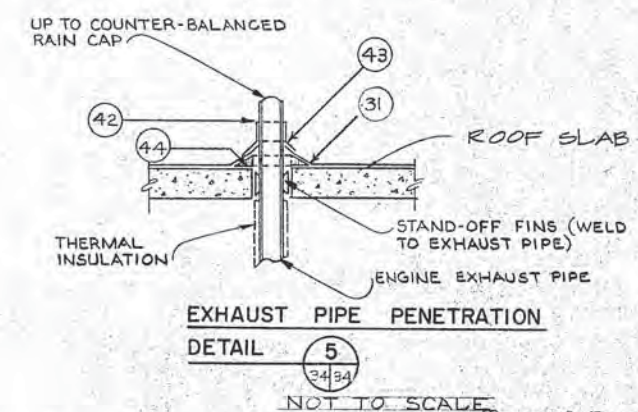
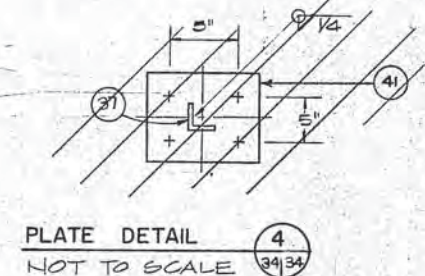
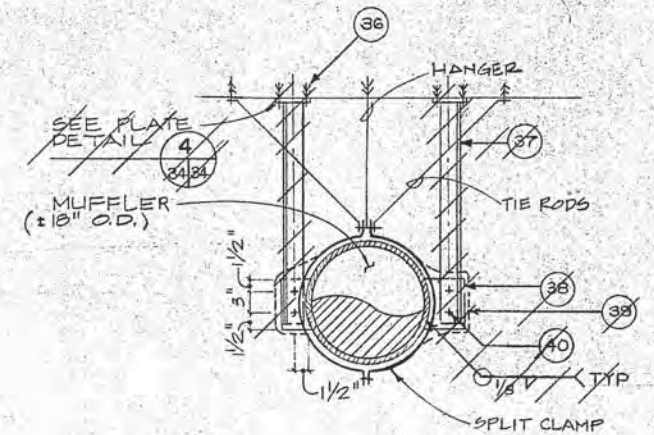
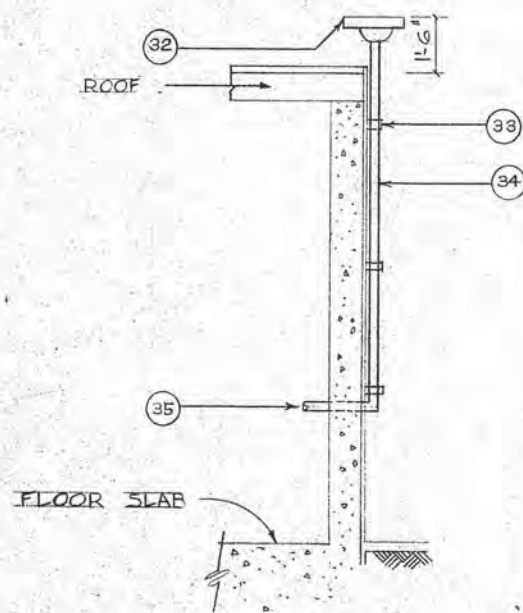
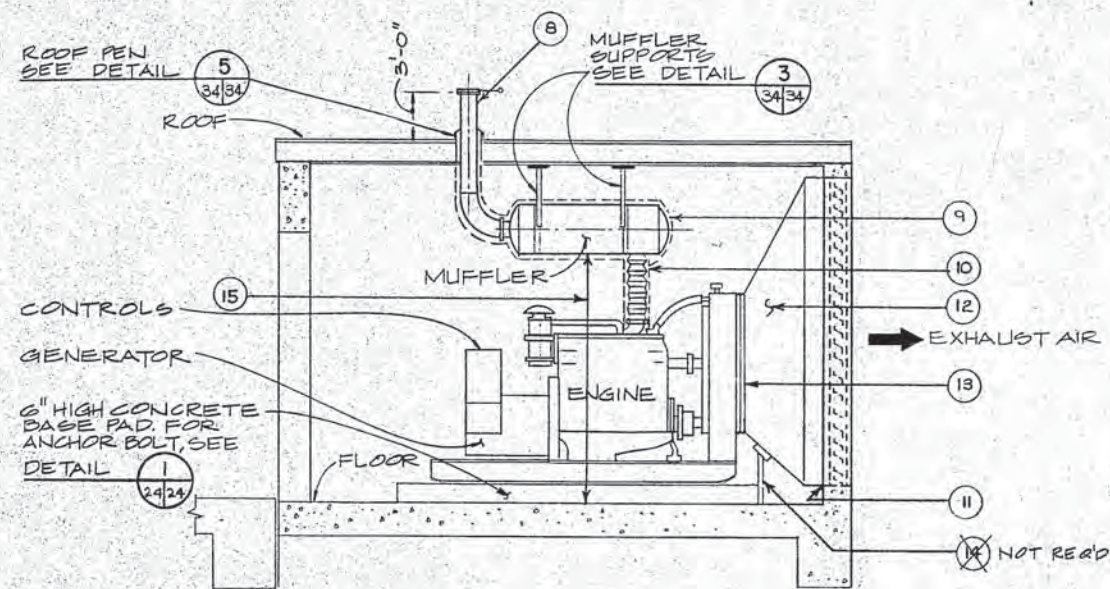
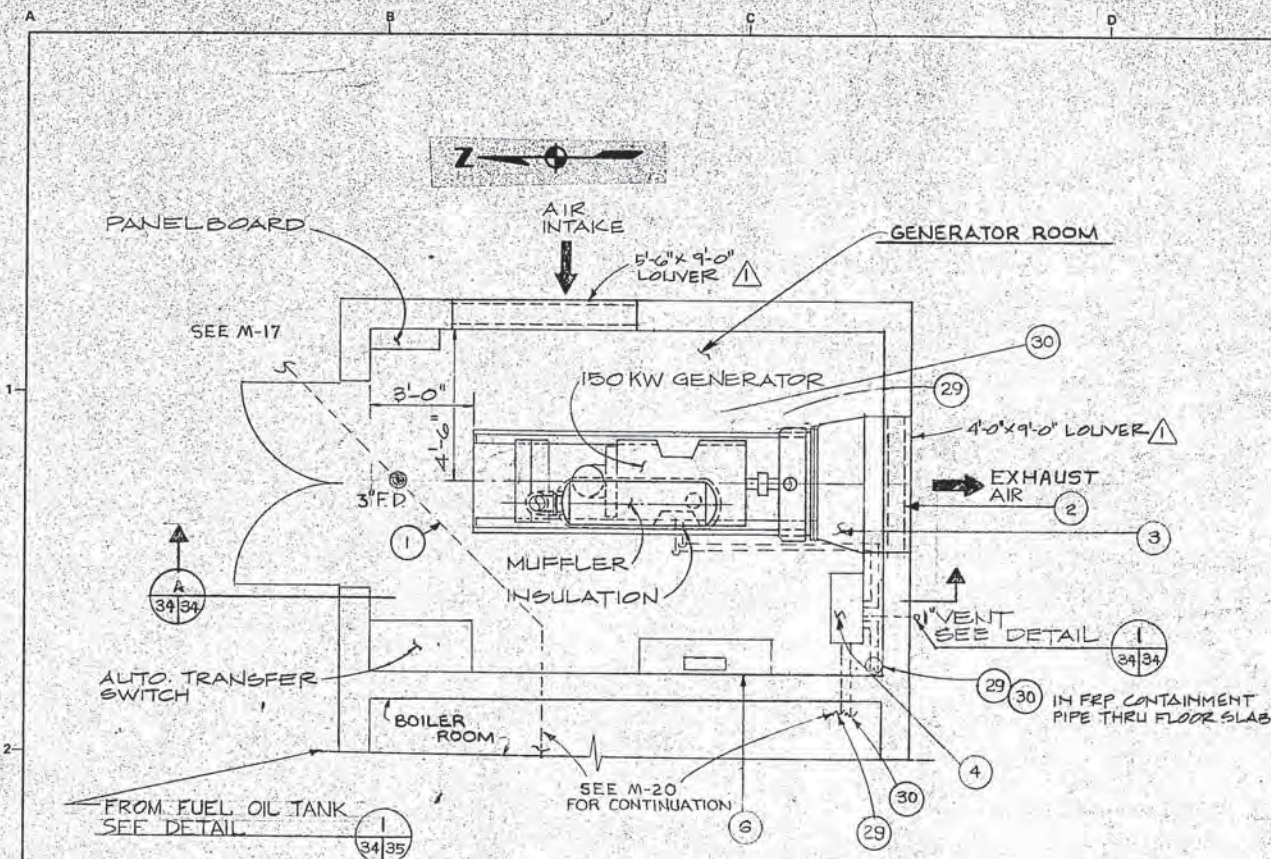
Reference Information and Notes:

FOR TYPICAL EQUIPMENT ANCHORAGE, SEE SHEET M-24

Designed ML	Wastewater Plant Improvements Sausalito - Marin City Sanitary District	C-06-2464
Drawn EJV	Kennedy/Jenks Engineers	San Francisco
Checked JHF	Submitted:	Approved:
Date 1-29-81	Walter J. Harman C9370	Robert J. Conley

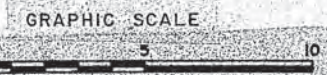
FIXED FILMED REACTORS
AIR SYSTEM DETAILS

Scale
NONE
Job No.
0112
Sheet
M-33
of



1. 3" TV-2P DRAIN
2. 8" X 12" LOUVER OF 18 GA. GALV. STEEL
3. RADIATOR AIR DISCHARGE DUCT (MAKE AIR TIGHT)
4. 10 GALLON DAY TANK AND TRANSFER PUMP ASSEMBLY STANDING ON 4" HIGH BASE PAD. SECURE WITH 1/2" EXPANSION ANCHORS.
5. WALL MOUNTED DAY TANK LEVEL GAUGE (4" GA. ABOVE FLOOR)
6. BATTERIES AND CHARGER STANDING ON 4" HIGH CONCRETE BASE PAD. SECURE 1/2" EXPANSION ANCHORS. RAISE WOOD BASE UNDER BATTERIES
7. EXHAUST PIPE
8. EXHAUST PIPE W/COUNTER BALANCED RAIN CAP.
9. INSULATION
10. FLEXIBLE EXHAUST
11. MAKE AIR TIGHT JOINT ALL AROUND
12. RADIATOR AIR DISCHARGE DUCT
13. FLEXIBLE NEOPRENE CONNECTION
14. 1/2" X 1/4" X 1/4" GALV. STEEL ANGLE DUCT SUPPORT LEG. SECURE TO FLOOR SLAB W/ EXPANSION BOLTS.
15. PROVIDE MAXIMUM HEIGHT. DELETED
16. "
17. "
18. "
19. "
20. "
21. "
22. "
23. "
24. "
25. "
26. "
27. "
28. "
29. 1" TX-5P FUEL OIL RETURN
30. 3/4" TX-5P FUEL OIL SUPPLY
31. ROOFING
32. DAY TANK VENT
33. PIPE CLAMP (TYPICAL)
34. 1" SCHED. 40 GALVANIZED STEEL VENT PIPE
35. VENT FROM DAY TANK
36. FOUR 3/4" EXPANSION ANCHORS (TYPICAL)
37. 3/4" X 3/4" X 3/8" GALV. STEEL ANGLE
38. 3/4" STEEL PLATE
39. THREE STAND-OFFS AT 120° FABRICATE FROM 1/2" STEEL PLATE
40. 3/4" H.S. BOLT IN 13/16" DIA. HOLES IN PLATE AND 13/16" X 1 5/8" VERTICAL SLOTTED HOLES IN ANGLE
41. 8" X 8" X 3/8" PLATE
42. WELD WATER TIGHT
43. UMBRELLA
44. CANT

Record Drawing
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Dated: APR. 29, 1988



Revised	Description	Submit	App'd	Date
1	SUBSTITUTION			
2	C.O. NO. 50			

Reference Information and Notes:

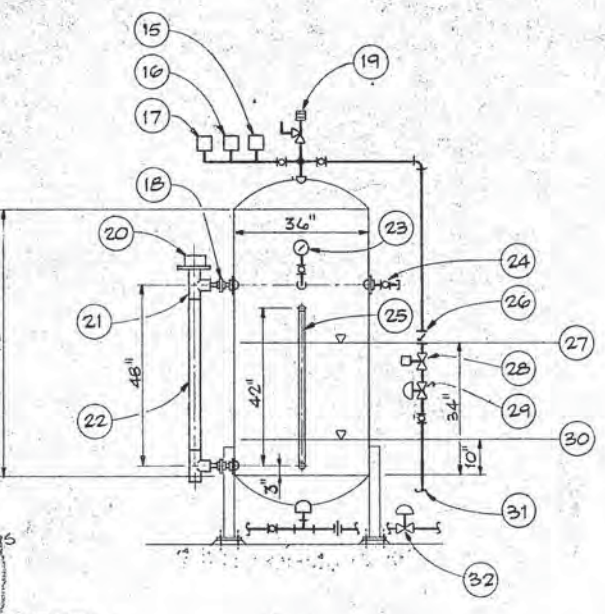
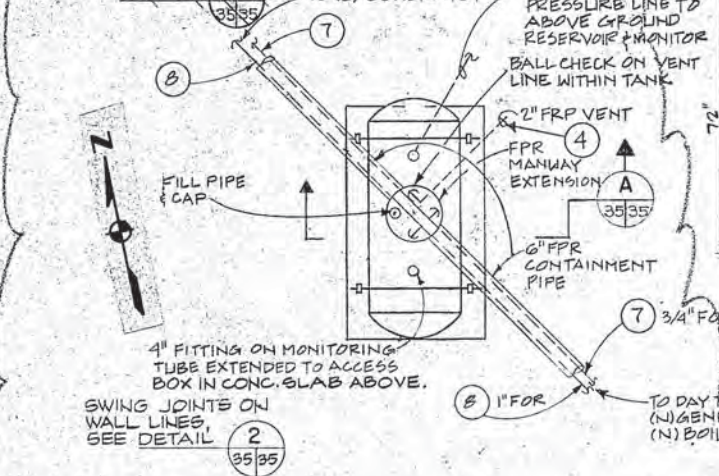
FOR TYPICAL EQUIPMENT ANCHORAGE SEE SHEET M-24
REFER TO THE NOTE WITH THIS NUMBER

Designed EB	Wastewater Plant Improvements Sausalito - Marin City Sanitary District	C-06-2464
Drawn CB/NL	Kennedy/Jenks Engineers	San Francisco
Checked JHF	Submitted Walter Johnson	Approved Reddy
Date 1-29-81	C9370	

ENGINE GENERATOR ROOM

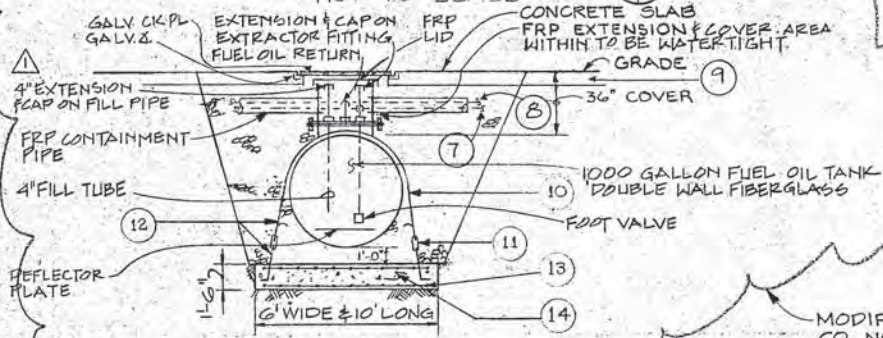
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Job No.
0112
Sheet
M-34
of

TYPICAL SWING JOINT DETAIL

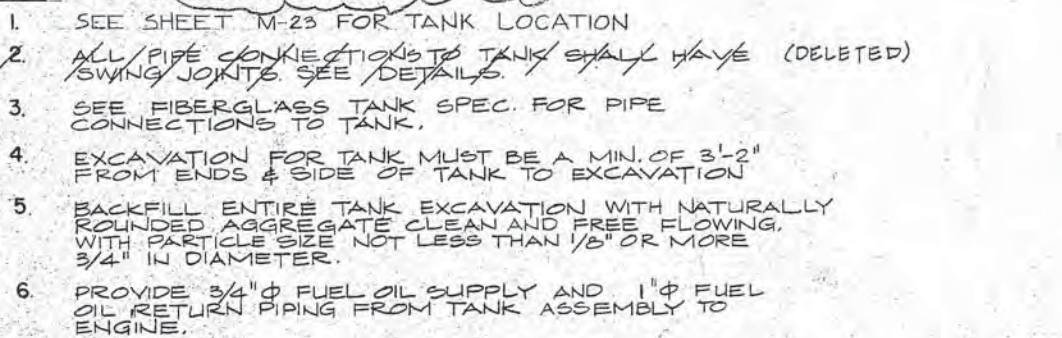


HYDROPNEUMATIC TANK DETAIL
SCALE: 1/2" = 1'-0"

FUEL OIL TANK PLAN NOT TO SCALE

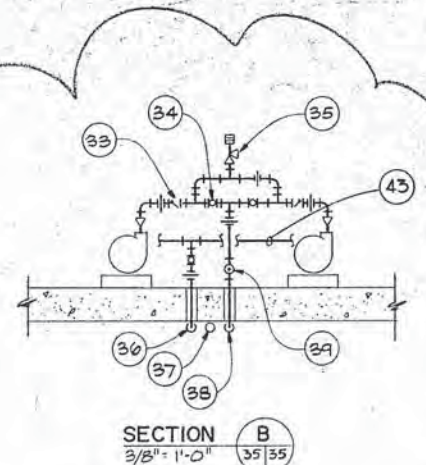


FUEL OIL TANK SECTION NOT TO SCALE

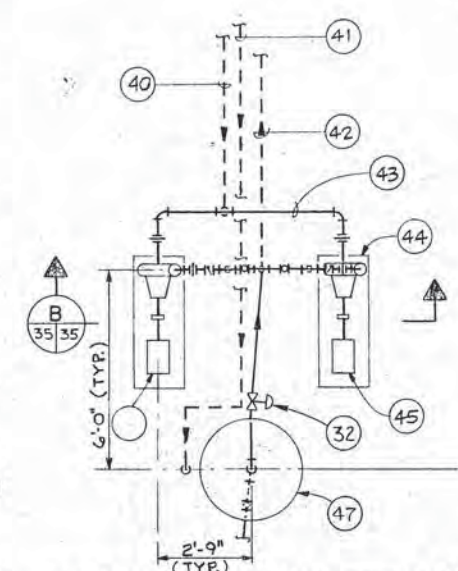


NOTES

- SEE SHEET M-23 FOR TANK LOCATION
- ALL PIPE CONNECTIONS TO TANK SHALL HAVE SWING JOINTS SEE DETAILS (DELETED)
- SEE FIBERGLASS TANK SPEC. FOR PIPE CONNECTIONS TO TANK.
- EXCAVATION FOR TANK MUST BE A MIN. OF 3'-2" FROM ENDS & SIDE OF TANK TO EXCAVATION
- BACKFILL ENTIRE TANK EXCAVATION WITH NATURALLY ROUNDED AGGREGATE CLEAN AND FREE FLOWING, WITH PARTICLE SIZE NOT LESS THAN 1/8" OR MORE 3/4" IN DIAMETER.
- PROVIDE 3/4" FUEL OIL SUPPLY AND 1" FUEL OIL RETURN PIPING FROM TANK ASSEMBLY TO ENGINE.



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



P.W. HYDROPNEUMATIC SYSTEM PLAN
SCALE: 3/8" = 1'-0"

- TANK CONNECTION
- THREADED UNION
- THREADED 90° ELBOWS (TYP)
- 2" FRP VENT LINE (SEE M-23 FOR RISER LOCATION. RISER IS SIMILAR TO DETAIL 1/8-35)
- DIP STICK BOX. POUR CONCRETE PERIPHERAL SLAB FOR MANHOLE VAULT W/ DIPSTICK BOX IN THE SLAB.
- 4" TX-IP TANK FILL LINE TO FILL LOCATION
- 3/4" TX-5P FUEL SUPPLY
- 1" TX-5P FUEL RETURN
- CONCRETE PERIPHERAL SLAB
- FIBERGLASS STRAPS AS REQUIRED BY THE TANK MANUFACTURER
- INVERT ELEVATION 104.0
- 3/4" B HOOKED BAR W/ STAINLESS STEEL TURNBUCKLE (TYP)
- 15 AT 12" O.C.
- CONCRETE BASE
- ADD AIR PS
- LAG PUMP "ON" P.S. (42 P.S.I.)
- LEAD PUMP "ON" P.S. (45 P.S.I.)
- ELECTRODE PROBES
- PRESSURE RELIEF VALVE (SET @ 75 P.S.I., 20 CFM AIR)
- 1" TY-IP W/ UNION AND 3" X 1" BUSHING (TYP.)
- 3" X 3" TY-IP TEE
- 3" TY-IP PROBE HOLDER
- PRESSURE GAGE (0-100 P.S.I.)
- 3/4" CAPPED STUB W/ BALL VALVE (AIR INLET-MANUAL VENT)
- SITE GLASS LEVEL GAGE
- CHECK VALVE
- PUMP OFF LEVEL
- SOLENOID VALVE
- PRESSURE REGULATING VALVE (SET @ 67 P.S.I., 5CFM AIR)
- LOW LEVEL ALARM
- 1/2" AIR SUPPLY
- FLOW REGULATING VALVE (SET @ 40 GPM MAX.)
- 2" SILENT CHECK VALVE (TYP. OF 2)
- 2" BALL VALVE (TYP. OF 2)
- PRESSURE RELIEF VALVE (SET @ 80 P.S.I.)
- PUMP SUCTION
- INSTRUMENT AIR TO HYDROPNEUMATIC TANK
- TO P.W. SYSTEM
- TO HYDROPNEUMATIC TANK
- 2" TV-IP P.W. SUCTION
- 1/2" TV-IP INSTRUMENT AIR
- 2" TV-IP P.W. DISCHARGE
- 2" TV-IP P.W. PUMP SUCTION
- 4' L. X 1'-6" W. X 4" THICK CONC. PAD (TYP. OF 2)
- PUMP NO. 2
- PUMP NO. 1
- HYDROPNEUMATIC TANK, SEE DETAIL, THIS SHEET

Record Drawing
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Revised	Description	Submit	App'd	Date
1	CO NO. 35			
2	CO NO. 4			

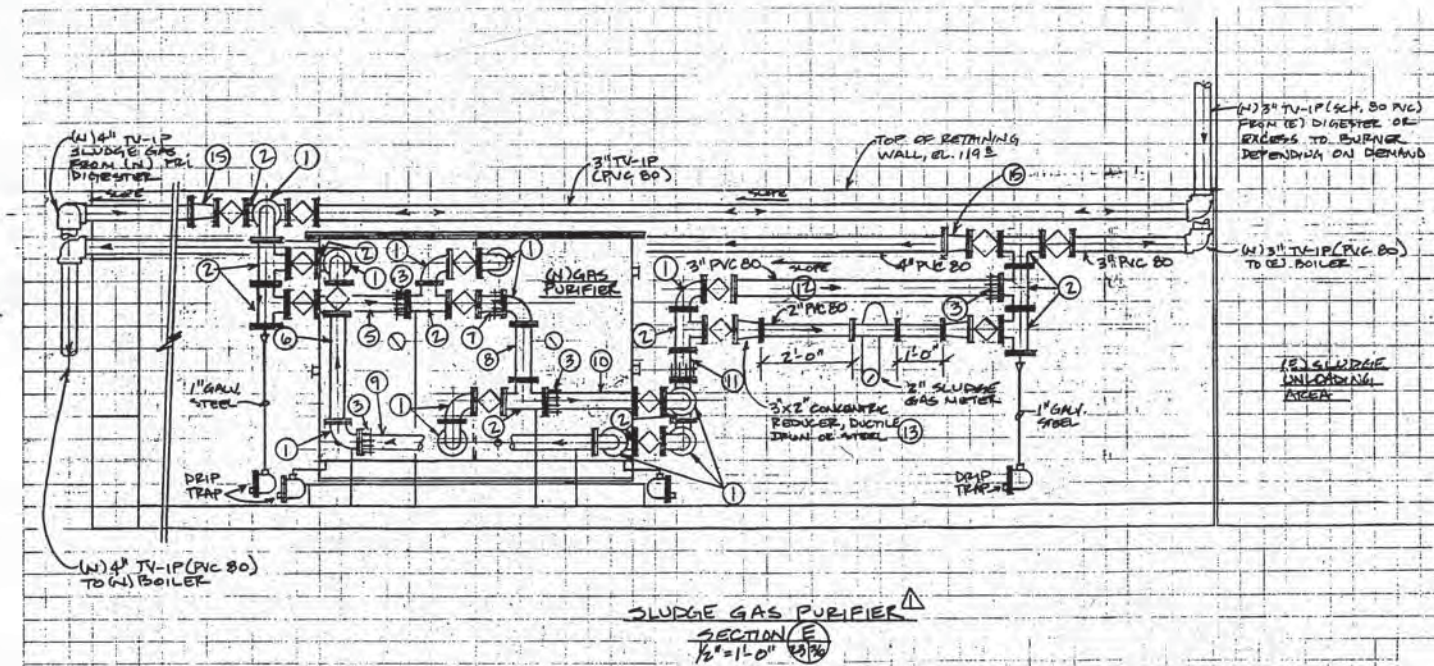
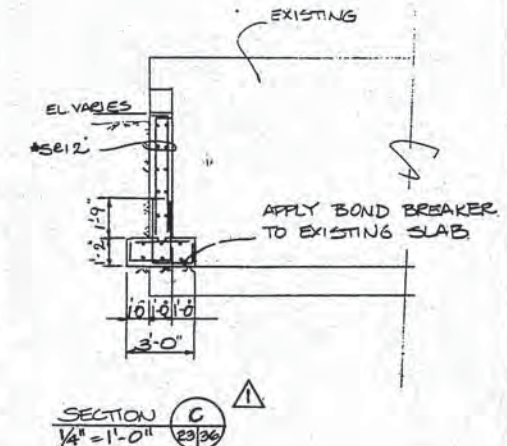
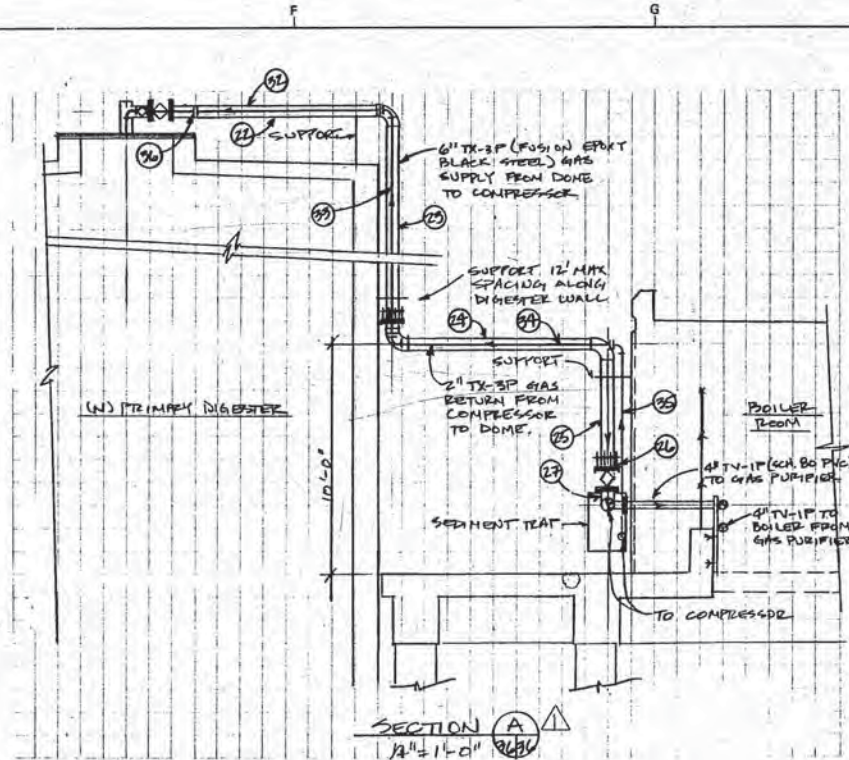
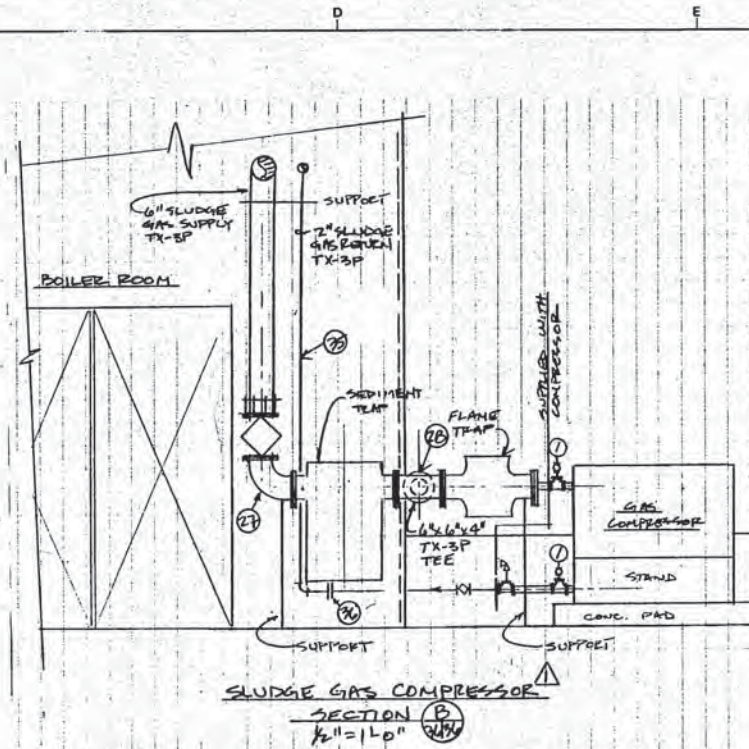
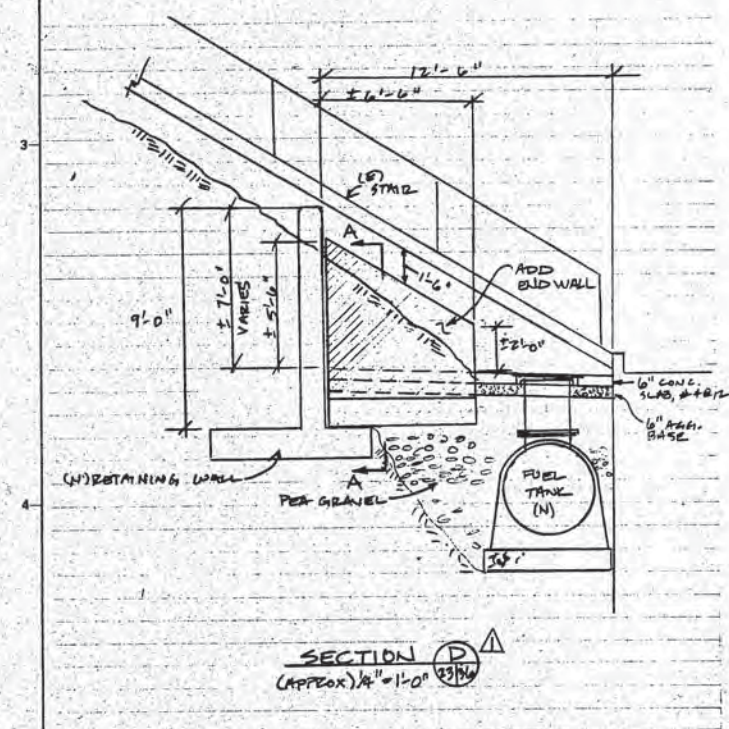
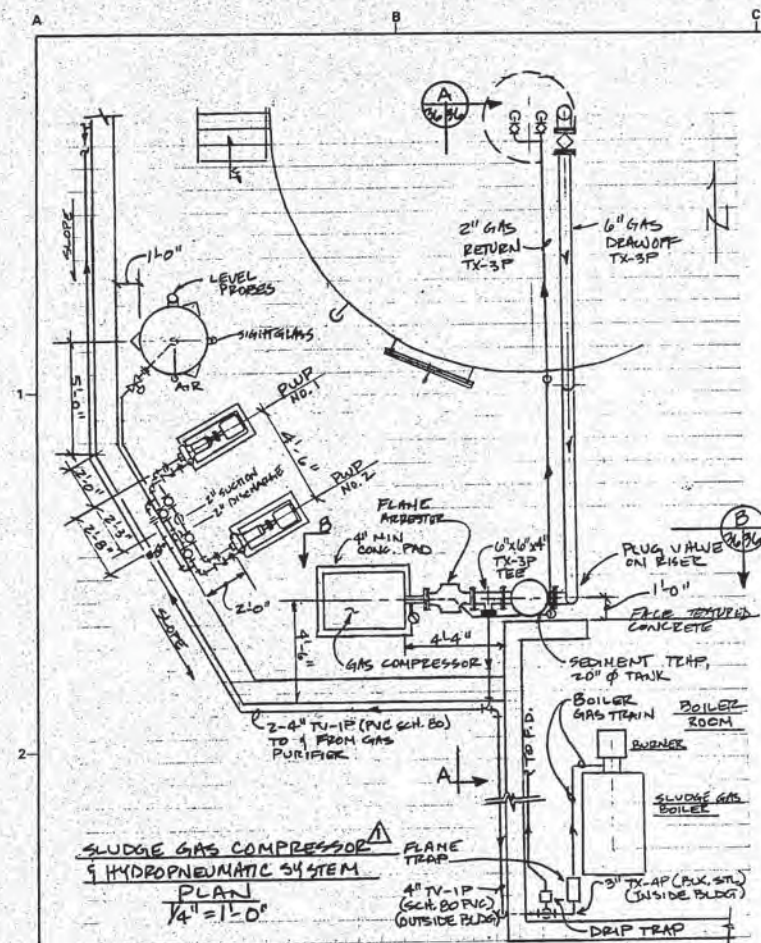
Reference Information and Notes:

REFER TO THE NOTE WITH THIS NUMBER

Designed EB	Wastewater Plant Improvements Sausalito - Marin City Sanitary District	C-06-2464
Drawn JD CB/NL	KennedyJenks Engineers	San Francisco
Checked JHF	Submitted:	Approved:
Date 1-29-81	Walter J. Hanna C9370	Robert J. Hanna

FUEL OIL TANK
AND
P.W. HYDROPNEUMATIC SYSTEM

Scale NONE
Job No. 0112
Sheet M-35



NOTES

1. INTERCONNECTING PIPING ON PURIFIER AND TRANSPORT GAS LINES SHALL BE TV-IP (SCH. 80) OR F.P.C. (SCH. 40) PIPE.
2. FLANGE & FLANGE FITTINGS ON PURIFIER SHALL BE DUCTILE IRON (EXCEPT FITTINGS SHALL BE UNLINED).
3. PROVIDE SUPPORTS WHERE SHOWN & AS REQUIRED TO SUPPORT PIPING & VALVES.

Record Drawing
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Date: 2/11/88

ITEM	QUAN	SIZE	DESCRIPTION	MATERIAL
1	16	3"	90 DEGREE ELBOW-FL X FL	CAST IRON
2	10	3"	TEE-FL X FL X FL	CAST IRON
3	5	3"	FCA-SUIT D.I. PIPE O.D.	MANF STND COATING
4	2	3"	FCA-SUIT STEEL PIPE O.D.	MANF STND COATING
5	1	3"	1'-11" FL X PE SPOOL	DUCTILE IRON
6	1	3"	2'-4 5/8" FL X FL SPOOL	DUCTILE IRON
7	1	3"	0'-6 7/8" FL X FL SPOOL	DUCTILE IRON
8	1	3"	1'-2 1/2" FL X FL SPOOL	DUCTILE IRON
9	1	3"	5'-2 1/4" FL X PE SPOOL	DUCTILE IRON
10	1	3"	1'-11" FL X PE SPOOL	DUCTILE IRON
11	1	3"	0'-6" FL X PE SPOOL	DUCTILE IRON
12	1	3"	5'-7 5/8" FL X PE SPOOL	DUCTILE IRON
13	2	3"	3" X 3" FL X FL CONC RED	CAST IRON
14	4	2"	COMPANION FLANGE	CAST IRON
15	2	4"	4" X 3" FL X FL CONC RED	CAST IRON
16	57	3"	1/8" FULL FACED GASKETS	BLACK NEOPRENE
17	244	5/8"	5/8" X 2 1/2" BOLTS	ELECTROPLATED
18	244	5/8"	5/8" NUTS	ELECTROPLATED
19	2	4"	1/8" FULL FACED GASKETS	BLACK NEOPRENE
20	6	3"	COMPANION FLANGE	CAST IRON
21	6	3"	1/8" FULL FACED GASKETS	BLACK NEOPRENE
22	1	6"	FL X FL STEEL PIPE SPOOL	F.E.C. & L.
23	1	6"	FL X FL STEEL PIPE SPOOL	F.E.C. & L.
24	1	6"	FL X FL STEEL PIPE SPOOL	F.E.C. & L.
25	1	6"	FL X PE STEEL PIPE SPOOL	F.E.C. & L.
26	1	6"	FCA TO SUIT STEEL PIPE O.D.	MANF STND COATING
27	1	6"	FL X FL STEEL 90 DEGREE ELBOW	F.E.C. & L.
28	1	6"	6" X 6" X 4" FL X FL TEE	F.E.C. & L.
29	11	6"	1/8" FULL FACED GASKETS	BLACK NEOPRENE
30	88	3/4"	3/4" X 3 1/4" BOLTS	ELECTROPLATED
31	88	3/4"	NUTS	ELECTROPLATED
32	1	2"	FL X FL STEEL PIPE SPOOL	F.E.C. & L.
33	1	2"	FL X FL STEEL PIPE SPOOL	F.E.C. & L.
34	1	2"	FL X FL STEEL PIPE SPOOL	F.E.C. & L.
35	1	2"	FL X FL STEEL PIPE SPOOL	F.E.C. & L.
36	2	2"	COMPANION FLANGE	CAST IRON
37	5	2"	1/8" FULL FACED GASKET	BLACK NEOPRENE
38	20	5/8"	5/8" X 2 1/4" BOLTS	ELECTROPLATED
39	20	5/8"	NUTS	ELECTROPLATED

RECORD DRAWING

Revised	Description	Submit	App'd	Date
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Designed
JAF
Drawn
JAF
Checked
JAF
Date
2/11/88

Wastewater Plant Improvements C-06-2484
Sausalito - Marin City Sanitary District
Kennedy/Jenks Engineers San Francisco
Submitted: Approved:

SLUDGE GAS PLANS, SECTIONS & SCHEMATICS
Scale
AS SHOWN
Job No.
0112
Sheet
M-36
of