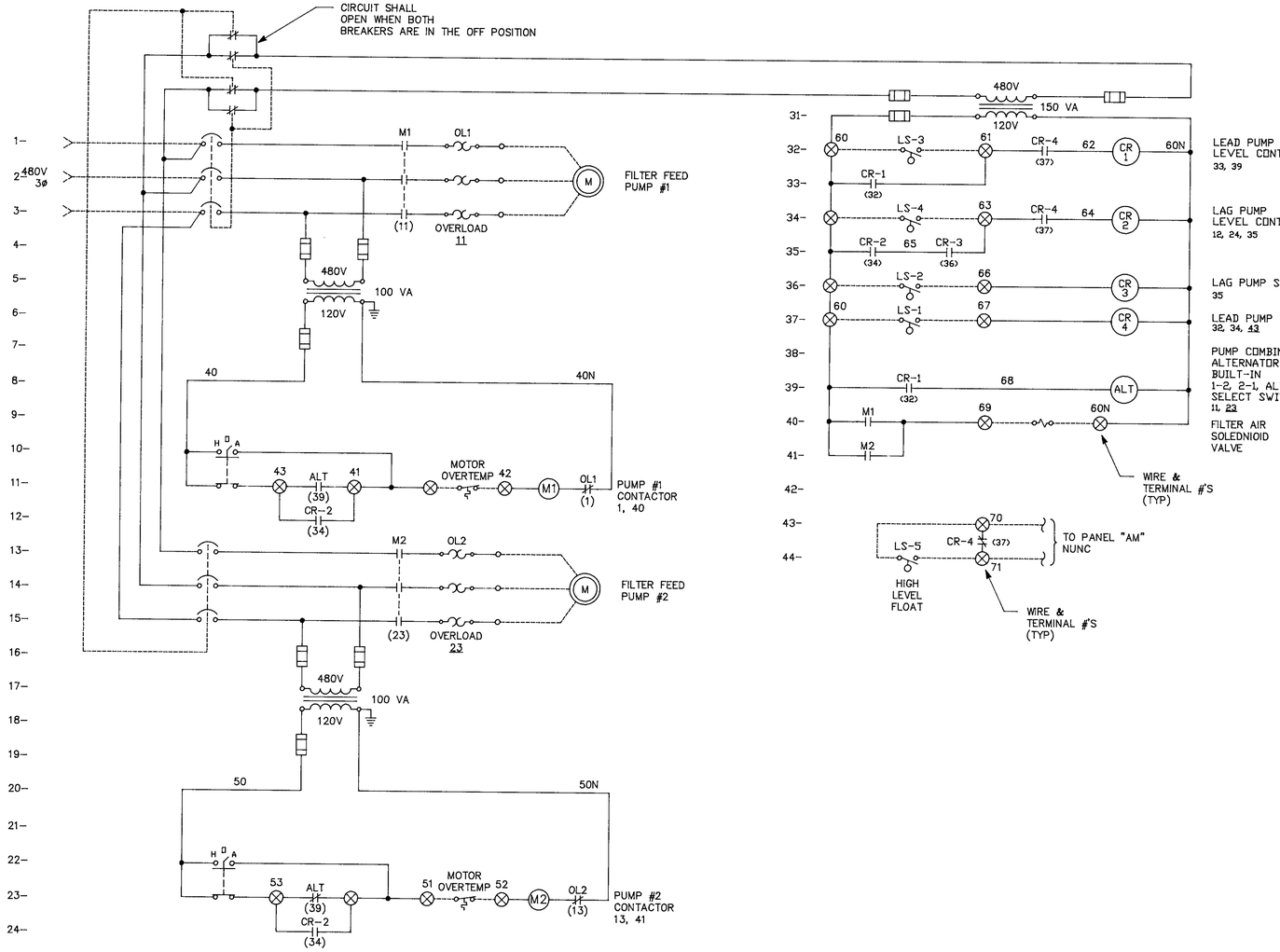
REVISION	DESCRIPTION	BY	APP	DATE

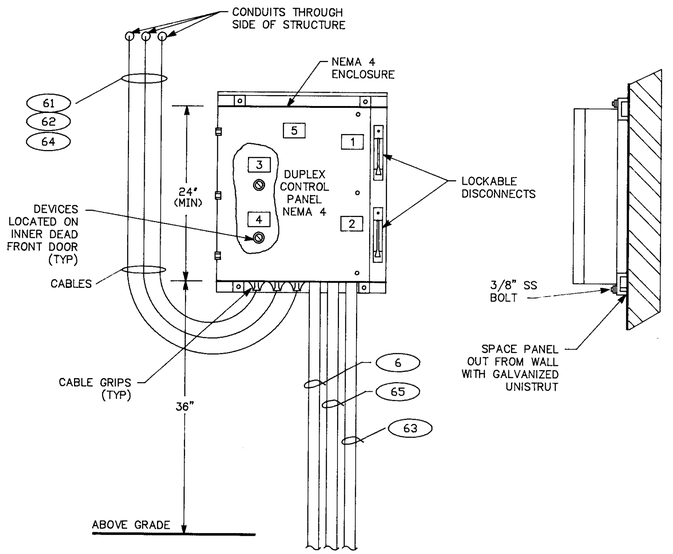


CONTROL PANEL "FFP" ELEMENTARY

(PROVIDE WIRES #S ON ALL PANEL WIRES)

NAMEPLATE SCHEDULE

NUMBER	ENGRAVING	SIZE LTRS
1	FILTER FEED PUMP #1 DISCONNECT	1/8"
2	FILTER FEED PUMP #2 DISCONNECT	1/8"
3	FILTER FEED PUMP #1 HOA	1/8"
4	FILTER FEED PUMP #2 HOA	1/8"
5	CONTROL PANEL "FFP"	1/2"



CONTROL PANEL "FFP" ELEVATION

FILTER PUMP CONTOL		
DESCRIPTION	ON	OFF
LEAD PUMP	14.0	2.0
LAG PUMP	14.5	13.0
HIGH LEVEL FLOAT	14.5	—
ALL LEVELS ARE LISTED IN FEET FROM BOTTOM OF WETWELL		

REGISTERED PROFESSIONAL ENGINEER
RICHARD KYCLER
NO. 11840
Exp. 9-30-96
ELECTRICAL
STATE OF CALIFORNIA

SU-2858

FILE: 9404CE14

SCALE	DATE	DESIGNED	SUBMITTED
NONE	AUGUST 1994	DRAWN ZK	RECOMMENDED
	FILE	CHECKED RLV	APPROVED

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

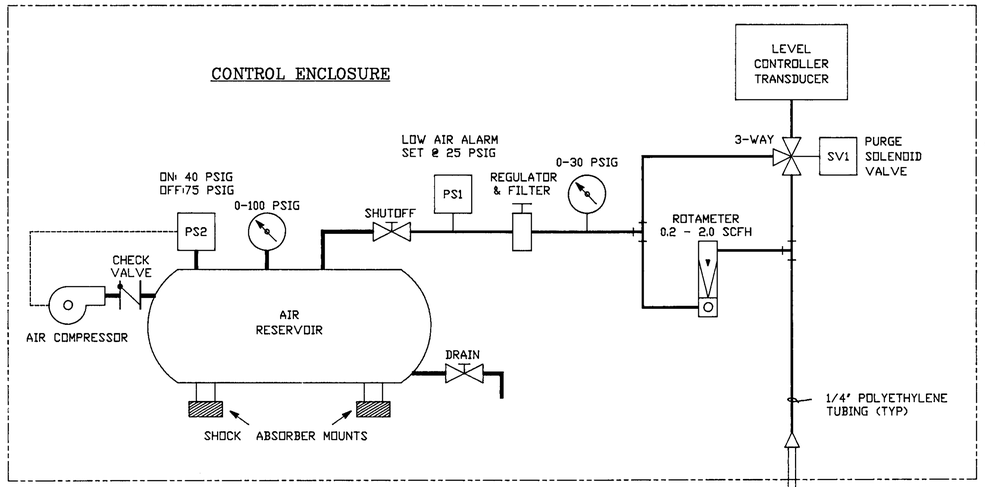
FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

FILTER FEED PUMPS CONTROL PANEL "FFP"

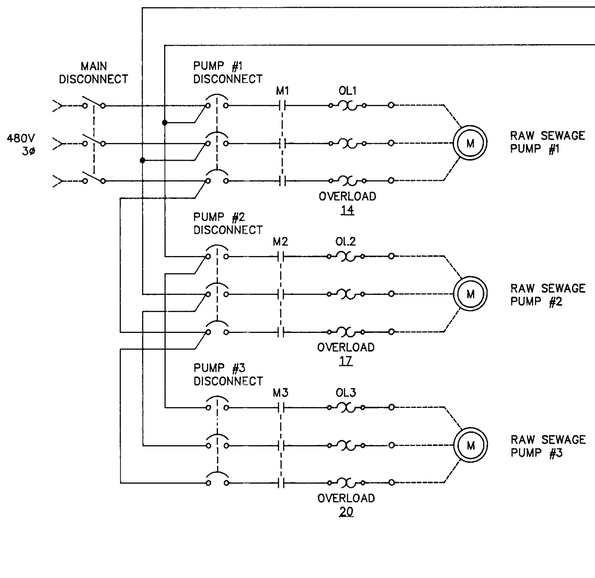
3123 BROADWAY
SACRAMENTO, CA. 95817
916-457-8144

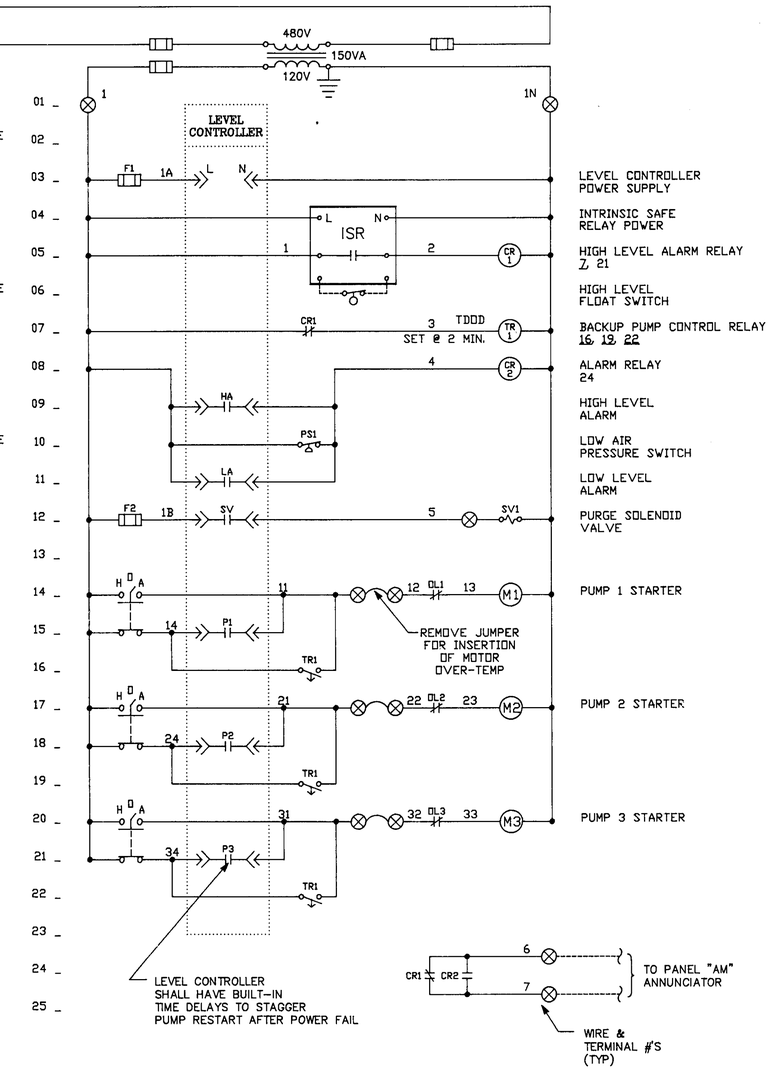
DRAWING NUMBER	SHEET NUMBER
E-14	44 OF 44

REVISION	DESCRIPTION	BY	APP	DATE



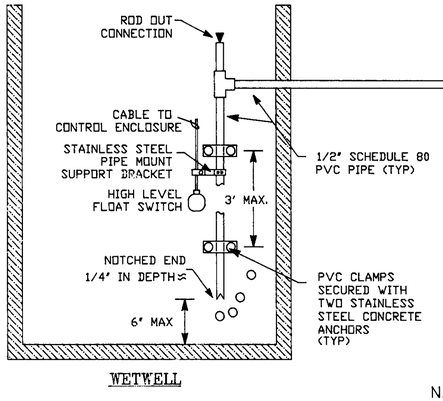
PNEUMATIC DIAGRAM





LEVEL CONTROLLER POWER SUPPLY
INTRINSIC SAFE RELAY POWER
HIGH LEVEL ALARM RELAY 7, 21
HIGH LEVEL FLOAT SWITCH
BACKUP PUMP CONTROL RELAY 16, 19, 22
ALARM RELAY 24
HIGH LEVEL ALARM
LOW AIR PRESSURE SWITCH
LOW LEVEL ALARM
PURGE SOLENOID VALVE
PUMP 1 STARTER
PUMP 2 STARTER
PUMP 3 STARTER

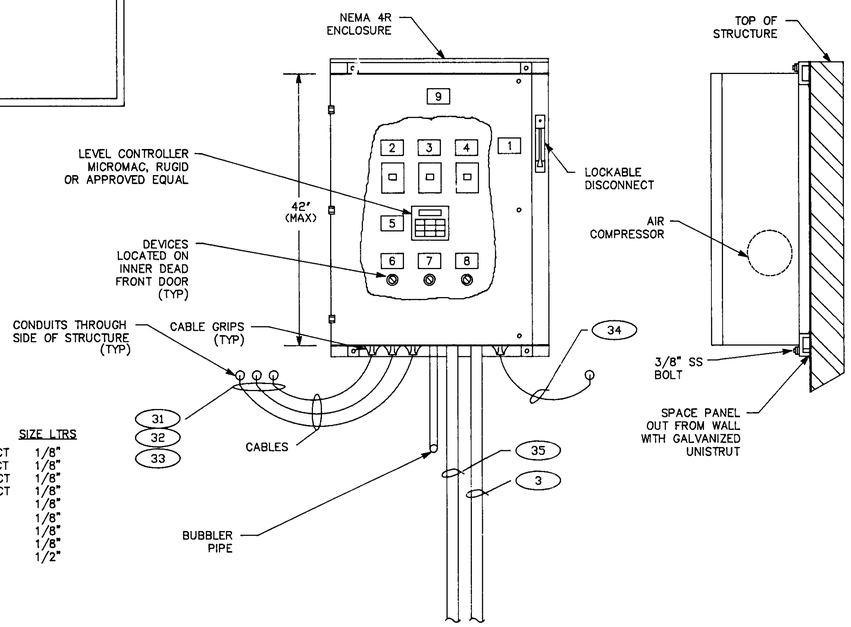
CONTROL PANEL "RSP" ELEMENTARY



WETWELL

NAMEPLATE SCHEDULE

NUMBER	ENGRAVING	SIZE LTRS
1	CONTROL PANEL "RSP" DISCONNECT	1/8"
2	RAW SEWAGE PUMP #1 DISCONNECT	1/8"
3	RAW SEWAGE PUMP #2 DISCONNECT	1/8"
4	RAW SEWAGE PUMP #3 DISCONNECT	1/8"
5	LEVEL CONTROLLER	1/8"
6	RAW SEWAGE PUMP #1 HOA	1/8"
7	RAW SEWAGE PUMP #2 HOA	1/8"
8	RAW SEWAGE PUMP #3 HOA	1/8"
9	CONTROL PANEL "RSP"	1/2"



CONTROL PANEL "RSP" ELEVEATION

(PROVIDE WIRE #'S ON ALL PANEL WIRES)

RAW SEWAGE PUMP CONTROL		
DESCRIPTION	ON	OFF
LEAD PUMP	2.5	1.0
LAG PUMP	3.8	1.8
FOLLOW PUMP	4.3	3.3
HIGH LEVEL FLOAT	6.0	---
ALL LEVELS ARE LISTED IN FEET FROM BOTTOM OF WETWELL		

REGISTERED PROFESSIONAL ENGINEER — RICHARD L. VOGLER — NO. 11540 — Exp. 9-30-96 — ELECTRICAL — STATE OF CALIFORNIA

RECORD DRAWING

T.E.E.M.
3123 BROADWAY
SACRAMENTO, CA. 95817
916-457-8144

SU-2859

FILE: 9404CE13

SCALE	DATE	DESIGNED	DRAWN	CHECKED	SUBMITTED	RECOMMENDED	APPROVED
NONE	AUGUST 1994	RLV	ZKV	RLV			
	FILE						

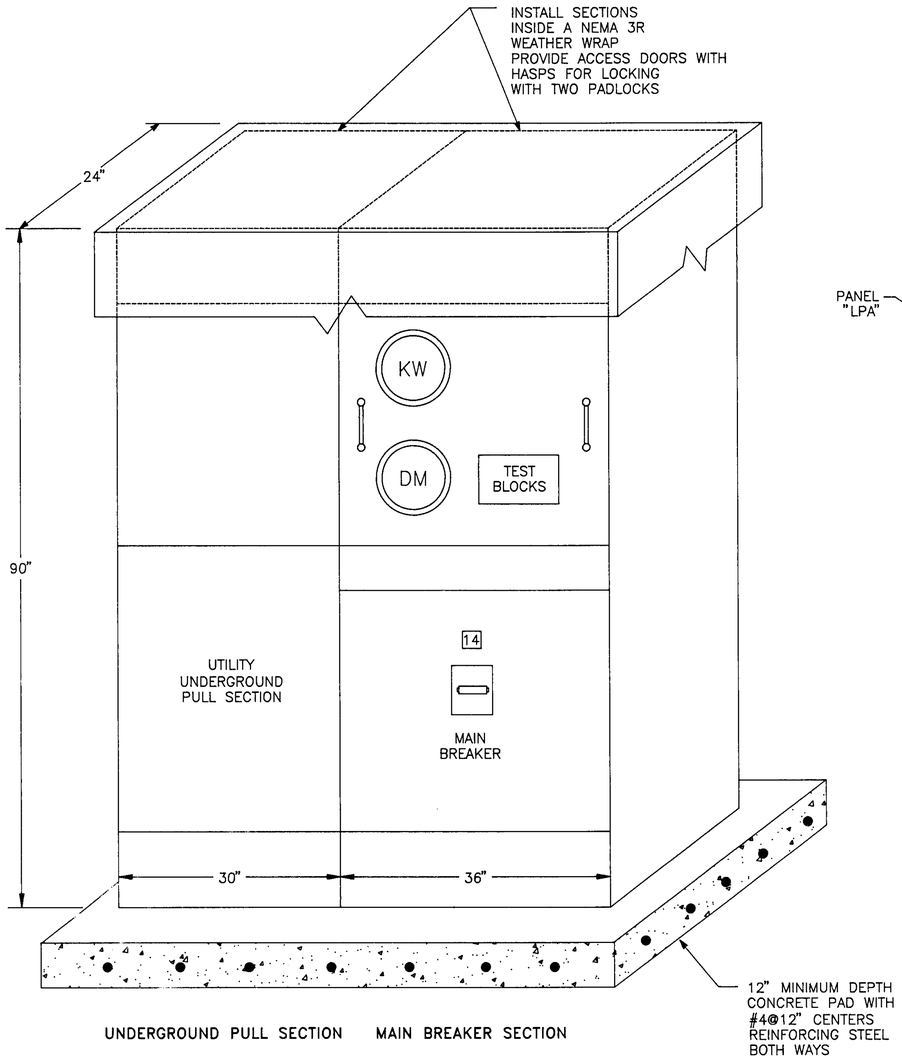
DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

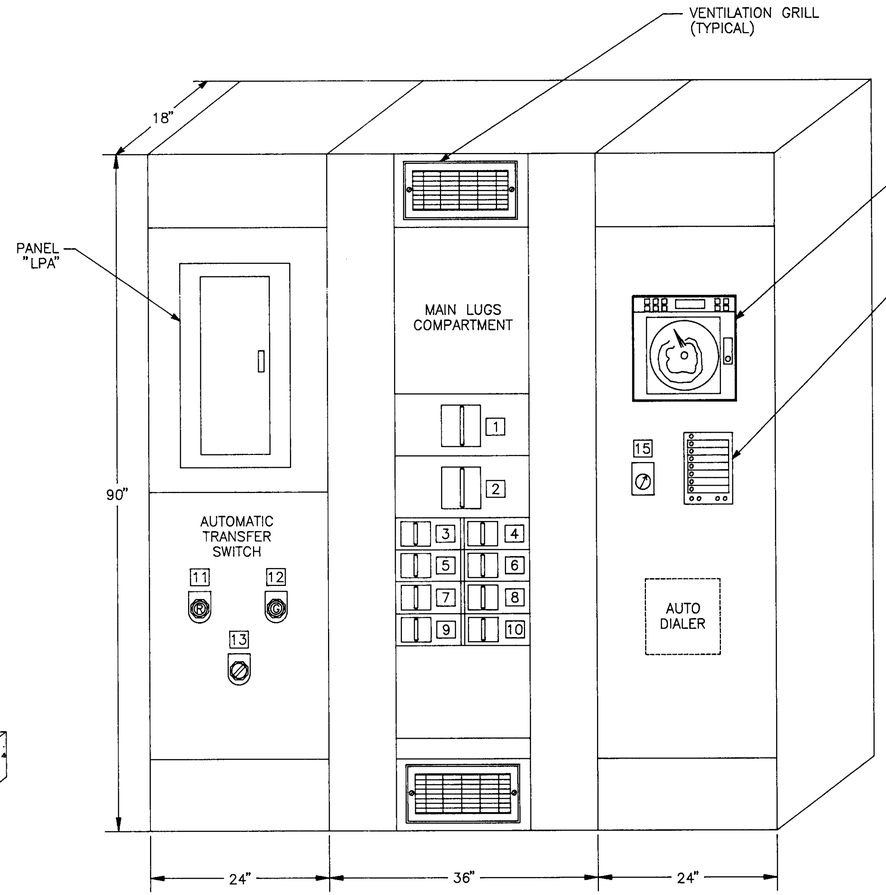
RAW SEWAGE PUMPS
CONTROL PANEL "RSP"

DRAWING NUMBER	SHEET NUMBER
E-13	43 OF 44

REVISION	DESCRIPTION	BY	APP	DATE
4	RECORD DWG. CHANGES INCORP.	DCL	RMD	6-95



MAIN SWITCHBOARD "MS" ELEVATION



KEY	ENGRAVED NAMEPLATE
1	BLOWER 1 & 2 CP "AB"
2	BLANK (FUTURE BLOWER #3)
3	RAW WATER PUMP STATION CP "RSP"
4	TRANSFORMER "A" DISCONNECT
5	EMERGENCY STORAGE RETURN PUMP CP "ESRP"
6	FILTER FEED PUMP PANEL CP "FFP"
7	TRANSFORMER "B" DISCONNECT
8	TRANSFORMER "C" DISCONNECT
9	TRANSFORMER "D" DISCONNECT
10	~~BLANK (SPARE)~~ FINAL EFFLUENT PUMPS 4
11	STANDBY GENERATOR POWER
12	NORMAL POWER
13	NORMAL/STANDBY TEST
14	MAIN BREAKER
15	INTRUSION BYPASS TIMER

KEY	ANNUNCIATOR LEGEND
1	RAW WATER PUMP STATION ALARM
2	FILTER PUMP STATION ALARM
3	INTRUSION
4	STORAGE BASIN LEVEL HIGH
5	GENERATOR ALARM
6	UTILITY POWER FAIL
7	(FUTURE)
8	(FUTURE)
9	(FUTURE)
10	(FUTURE)

CONTROL/ELECTRICAL ROOM PANEL ELEVATIONS

REGISTERED PROFESSIONAL ENGINEER RICHARD L. VOLKER NO. 17840 Exp. 6-30-98 ELECTRICAL STATE OF CALIFORNIA

SU-2860

FILE: 9404CE12

RECORD DRAWING

T.E.E.M. 3123 BROADWAY SACRAMENTO, CA. 95817 916-457-8144

SCALE	DATE	DESIGNED	SUBMITTED
NONE	AUGUST 1994	DRAWN ZKV	RECOMMENDED
	FILE	CHECKED RLV	APPROVED

DEWANTE AND STOWELL CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

MAIN SWITCHBOARD "MS" & PANEL ELEVATIONS

DRAWING NUMBER E-12

SHEET NUMBER 42 OF 44

REVISION	DESCRIPTION	BY	APP	DATE

STANDBY GENERATOR
150 KW
188 KVA
226 A
480V, 3ø
225/3
1

1004

ATS
400A
AUTOMATIC TRANSFER SWITCH
22 KAIC

1002

1003

MAIN SWITCHGEAR "MS'
POWER FAIL RELAY
PFR
M
UTILITY METER
MAIN BREAKER
400/3 TM
NEUTRAL BUS
GROUND BUS
22 KAIC
COLD WATER PIPE GROUND
UFFER GROUND

1001

UTILITY TRANSFORMER
Y
480/277V 3ø, 4W
1

1000

PG&E UNDERGROUND SERVICE

POWER PANEL "PDP"
480V, 400A, 3ø, 3W, 22 KAIC

200/3 TM
150/3 TM
30/3 TM
100/2 TM
20/3 TM
20/3 TM
35/2 TM
35/2 TM
35/2 TM
35/2 TM

1
2
3
4
5
6
7
8
9
10

AREATION BLOWER #3 (FUTURE)

XMFR "A"
480V PRI
37.5 KVA
240/120V SEC

XMFR "B"
480V PRI
15 KVA
240/120V SEC

XMFR "C"
480V PRI
15 KVA
240/120V SEC

XMFR "D"
480V PRI
15 KVA
240/120V SEC

SLUDGE POLYMER STORAGE (FUTURE)

CP "AB"
480V, 3ø
/3
/3
1
11
12
50 HP
65 FLA AERATION BLOWER #1
50 HP
65 FLA AERATION BLOWER #2

CP "RSP"
480V, 3ø
15/3 MCP
15/3 MCP
15/3 MCP
1
31
32
33
4 HP
6 FLA RAW SEWAGE PUMP #1
4 HP
6 FLA RAW SEWAGE PUMP #2
4 HP
6 FLA RAW SEWAGE PUMP #3

40
PNL "LPA"

CP "ESRP"
7/3 MCP
1
51
1 HP
1.8 FLA EMERGENCY STORAGE RETURN PUMP

CP "FFP"
480V, 3ø
7/3 MCP
7/3 MCP
1
61
62
63
1 HP
1.8 FLA FILTER FEED PUMP #1
1 HP
1.8 FLA FILTER FEED PUMP #2
SV
FILTER AIR SOLENOID VALVE

70
PNL "LPB"
1
EFFLUENT POLYMER STORAGE

80
PNL "LPC"
1
SLUDGE POLYMER STORAGE

90
PNL "LPD"
1
CHLORINATION BUILDING

73

81

POLYMER MAKEUP UNIT CONTROL PANEL
CP "PMU"
1
82
TO SLUDGE DEWATERING FACILITIES

CP "SRP"
230V, 1ø
/2
/2
1
43
41
42
1.5 HP
10 FLA SURGE RETURN PUMP #1
1.5 HP
10 FLA SURGE RETURN PUMP #2

44
CLARIFIER PNEUMATIC CONTROL PANEL
CP "CPCP"
1
1/4 HP
5.8 FLA AIR COMPRESSOR

GFI
1/20 HP
2 FLA EFFLUENT POLYMER MIXER
HP
2.3 FLA EFFLUENT POLYMER FEED PUMP

CP "FC"
230V, 1ø
/2
/2
1
74
71
72
1
AIR DRYER
1.5 HP
10 FLA FILTER COMPRESSOR #1
1.5 HP
10 FLA FILTER COMPRESSOR #2

GFI
1/6 HP
4.4 FLA DEWATERING POLYMER MIXER
1.5 HP
20 FLA SLUDGE PUMP
HP
2.3 FLA DEWATERING POLYMER SOLUTION PUMP

GFI
HP
2.3 FLA DECHLORINATION FEED PUMP #1
GFI
HP
2.3 FLA DECHLORINATION FEED PUMP #2
GFI
HP
2.3 FLA HYPOCHLORINATION FEED PUMP #1
GFI
HP
2.3 FLA HYPOCHLORINATION FEED PUMP #2

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. VOGLER
NO. 11540
Exp. 9-30-96
ELECTRICAL
STATE OF CALIFORNIA

NOTE: 1 INDICATES PACKAGES SUPPLIED BY OTHERS

FILE: 9404C-09

3123 BROADWAY
SACRAMENTO, CA. 95817
916-457-8144
T.E.M.

SCALE	DATE	DESIGNED	SUBMITTED
NONE	AUGUST 1994	DRAWN ZKV	RECOMMENDED
	FILE	CHECKED RLV	APPROVED

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

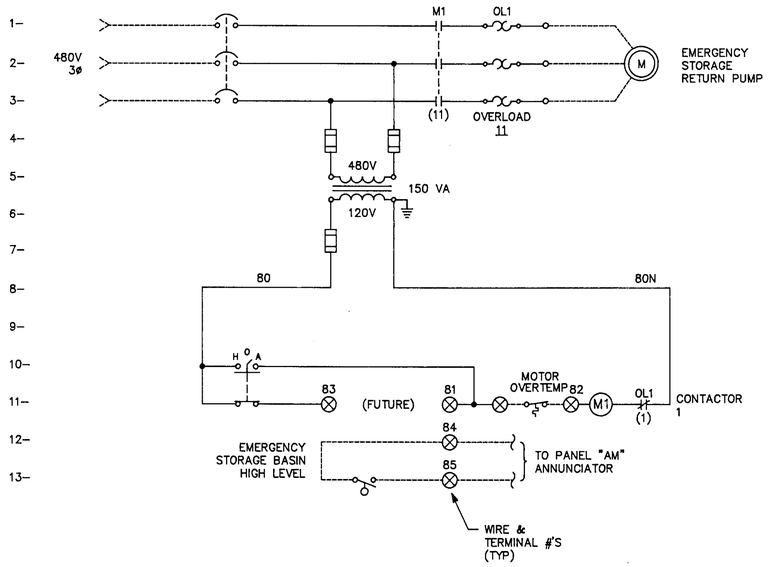
SINGLE LINE DIAGRAM

DRAWING NUMBER: E-11

SHEET NUMBER: 41 OF 44

SU-2861

REVISION	DESCRIPTION	BY	APP	DATE

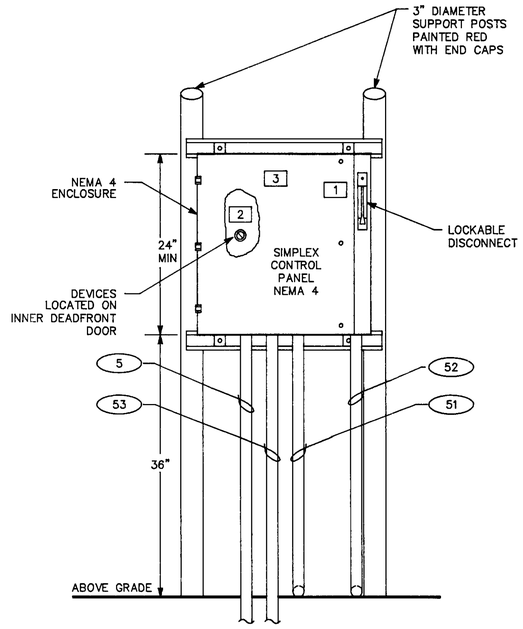


CONTROL PANEL "ESRP" ELEMENTARY

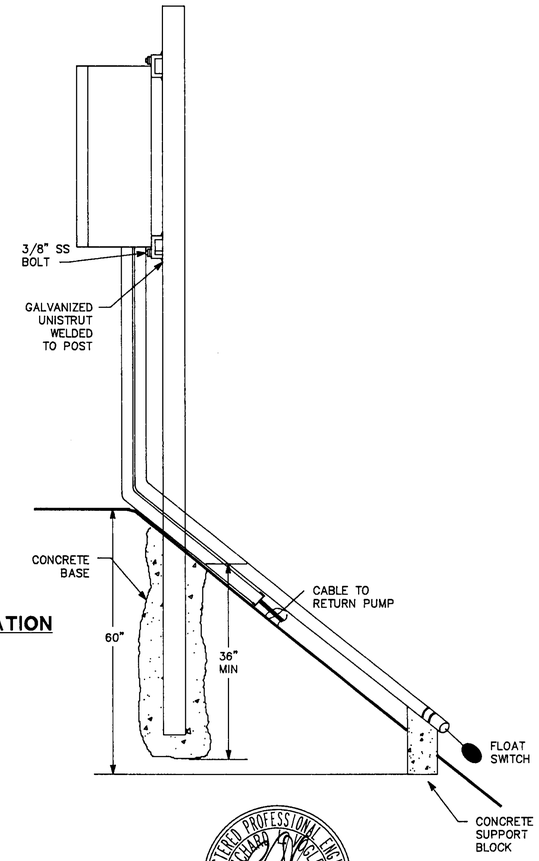
(PROVIDE WIRE #S ON ALL PANEL WIRES)

NAMEPLATE SCHEDULE

NUMBER	ENGRAVING	SIZE LTRS
1	EMERGENCY STORAGE RETURN PUMP DISCONNECT	1/8"
2	EMERGENCY STORAGE RETURN PUMP HOA	1/8"
3	CONTROL PANEL "ESRP"	1/2"



CONTROL PANEL "ESRP" ELEVATION



REGISTERED PROFESSIONAL ENGINEER
RICHARD L. VOGLER
NO. 11840
Exp. 3-30-96
ELECTRICAL
STATE OF CALIFORNIA

RECORD DRAWING

3123 BROADWAY
SACRAMENTO, CA. 95817
916-457-8144

SU-2862

FILE: 9404CE10

SCALE	DATE	DESIGNED	SUBMITTED
NONE	AUGUST 1994	DRAWN ZK	RECOMMENDED
	FILE	CHECKED RLV	APPROVED

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

EMERGENCY STORAGE RETURN PUMP CONTROL PANEL "ESRP"

DRAWING NUMBER: E-10

SHEET NUMBER: 40 OF 44

REVISION	DESCRIPTION	BY	APP	DATE

LPA

VOLTS 120 /240 | PHASE 1 | WIRE 3 | PANEL LPA | BUS AMPS 150A | MAIN BKR 150A | LOCATION CONTROL BUILDING | ENCLOSURE SURFACE | AIC RATING 10,000

LEGEND	LOAD VA	20	LINE AMPS	1	2	LINE AMPS	50	LOAD VA	LEGEND
AC/HEAT	2400		20			38		4500	WATER HEATER
	2400			20			38	4500	
FUME HOOD	250	20	2	5	6	2	20	250	INCUBATOR
SURGE RETURN PUMP CP "SRP"	2500	30	21	7	8	3	20	400	ALARM PANEL CP "AM"
	2500		21	9	10	8	20	1000	CLARIFIER CP "CPCP"
CONTROL ROOM LIGHTS	399	15	3	11	12	4	15	532	LABORATORY & WORKSHOP LIGHTS
BLOWER ROOM & RESTROOM LIGHTS CONTROL ROOM RECEPT.	450	15	4	13	14	2	15	200	DOOR ENTRY LIGHTS
	540	20	5	15	16	7	20	800	DRYING OVEN RECEPT.
LAB PLUG STRIP	800	20 GFI	7	17	18	2	20	180	RESTROOM RECEPT.
MUFFLE FURNACE RECEPT.	1200	20	10	19	20	3	20	360	LAB RECEPT.
WORKSHOP PLUG STRIP	800	20 GFI	7	21	22	5	20	540	BLOWER ROOM RECEPT.
VACUUM PUMP RECEPT.	500	20	4	23	24	2	20	180	TELEPHONE BOARD RECEPT.
AREA LIGHTS	500	20	4	25	26	4	20	500	GENERATOR JACKET HEATER
SAMPLER AT CL2 CONTACT BASIN CHEMICAL STRG AREA RECEPT.	180	20	2	27	28	10	20	1200	GENERATOR BATTERY CHARGER
	360	20	3	29	30	0	20	0	SPARE

PHASE	A	B		A	B	PHASE
LEFT SIDE AMPS	67	64		60	66	RIGHT SIDE AMPS
LEFT SIDE KVA	8.06	7.72	NEUTRAL	7.17	7.97	RIGHT SIDE KVA
				8.06	7.72	LEFT SIDE KVA
TOTAL KVA	30.92		GROUND	15.23	15.69	TOTAL PHASE KVA
TOTAL AMPS	258			127	131	TOTAL PHASE AMPS
				99	101	% OF AVERAGE

NOTE: MEANS OF WIRE COLOR CODING SHALL BE POSTED ON PANELBOARD PER NEC 210-4(d)

LPB

VOLTS 120 /240 | PHASE 1 | WIRE 3 | PANEL LPB | BUS AMPS 100A | MAIN BKR NONE | LOCATION EFFLUENT POLYMER STORAGE | ENCLOSURE SURFACE | AIC RATING 10,000

LEGEND	LOAD VA	15	LINE AMPS	1	2	LINE AMPS	15	LOAD VA	LEGEND
LIGHT, FAN, RECEPT	350		3			13		1500	HEATER
EFFLUENT POLYMER MIXER/FEED PUMP AIR DRYER	* 550	20	5	3	4	21	30	2500 *	FILTER COMPRESSOR CP "FC"
	* 800	20	7	5	6	21		2500 *	
SPACE	0		0	7	8	0		0	SPACE
SPACE	0		0	9	10	0		0	SPACE
SPACE	0		0	11	12	0		0	SPACE

PHASE	A	B		A	B	PHASE
LEFT SIDE AMPS	10	5		33	21	RIGHT SIDE AMPS
LEFT SIDE KVA	1.15	0.55	NEUTRAL	4.00	2.50	RIGHT SIDE KVA
				1.15	0.55	LEFT SIDE KVA
TOTAL KVA	8.20		GROUND	5.15	3.05	TOTAL PHASE KVA
TOTAL AMPS	68			43	25	TOTAL PHASE AMPS
				126	74	% OF AVERAGE

NOTE: MEANS OF WIRE COLOR CODING SHALL BE POSTED ON PANELBOARD PER NEC 210-4(d)

* - INSTALL NEW BREAKERS

LPC

VOLTS 120 /240 | PHASE 1 | WIRE 3 | PANEL LPC | BUS AMPS 100A | MAIN BKR NONE | LOCATION SLUDGE POLYMER STORAGE | ENCLOSURE SURFACE | AIC RATING 10,000

LEGEND	LOAD VA	15	LINE AMPS	1	2	LINE AMPS	15	LOAD VA	LEGEND
LIGHT, FAN, RECEPT	350		3			13		1500	HEATER
SLUDGE POLYMER CP "PMU"	* 3250	40	27	3	4	0		0	SPACE
SPACE	0		0	5	6	0		0	SPACE
SPACE	0		0	7	8	0		0	SPACE
SPACE	0		0	9	10	0		0	SPACE
SPACE	0		0	11	12	0		0	SPACE

PHASE	A	B		A	B	PHASE
LEFT SIDE AMPS	3	27		13	0	RIGHT SIDE AMPS
LEFT SIDE KVA	0.35	3.25	NEUTRAL	1.50	0.00	RIGHT SIDE KVA
				0.35	3.25	LEFT SIDE KVA
TOTAL KVA	5.10		GROUND	1.85	3.25	TOTAL PHASE KVA
TOTAL AMPS	43			15	27	TOTAL PHASE AMPS
				73	127	% OF AVERAGE

NOTE: MEANS OF WIRE COLOR CODING SHALL BE POSTED ON PANELBOARD PER NEC 210-4(d)

* - INSTALL NEW BREAKERS

LPD

VOLTS 120 /240 | PHASE 1 | WIRE 3 | PANEL LPD | BUS AMPS 100A | MAIN BKR NONE | LOCATION CHLORINATION BUILDING | ENCLOSURE SURFACE | AIC RATING 10,000

LEGEND	LOAD VA	15	LINE AMPS	1	2	LINE AMPS	15	LOAD VA	LEGEND
LIGHT, FAN, RECEPT	350		3			13		1500	HEATER
DECHLORINATION FEED PUMP #1	* 300	20	3	3	4	3	20	300 *	HYPOCHLORINATION FEED PUMP #1
DECHLORINATION FEED PUMP #2	* 300	20	3	5	6	3	20	300 *	HYPOCHLORINATION FEED PUMP #2
SPACE	0		0	7	8	0		0	SPACE
SPACE	0		0	9	10	0		0	SPACE
SPACE	0		0	11	12	0		0	SPACE

PHASE	A	B		A	B	PHASE
LEFT SIDE AMPS	5	3		15	3	RIGHT SIDE AMPS
LEFT SIDE KVA	0.65	0.30	NEUTRAL	1.80	0.30	RIGHT SIDE KVA
				0.65	0.30	LEFT SIDE KVA
TOTAL KVA	3.05		GROUND	2.45	0.60	TOTAL PHASE KVA
TOTAL AMPS	25			20	5	TOTAL PHASE AMPS
				161	39	% OF AVERAGE

NOTE: MEANS OF WIRE COLOR CODING SHALL BE POSTED ON PANELBOARD PER NEC 210-4(d)

* - INSTALL NEW BREAKERS

REGISTERED PROFESSIONAL ENGINEER RICHARD L. VOGLER NO. 11840 Exp. 9-30-96 ELECTRICAL STATE OF CALIFORNIA

3123 BROADWAY
SACRAMENTO, CA. 95817
916-457-8144

FILE: 9404CE9A

SCALE	DATE	DESIGNED	SUBMITTED
NONE	AUGUST 1994	DRAWN ZKV	RECOMMENDED
	FILE	CHECKED RLV	APPROVED

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

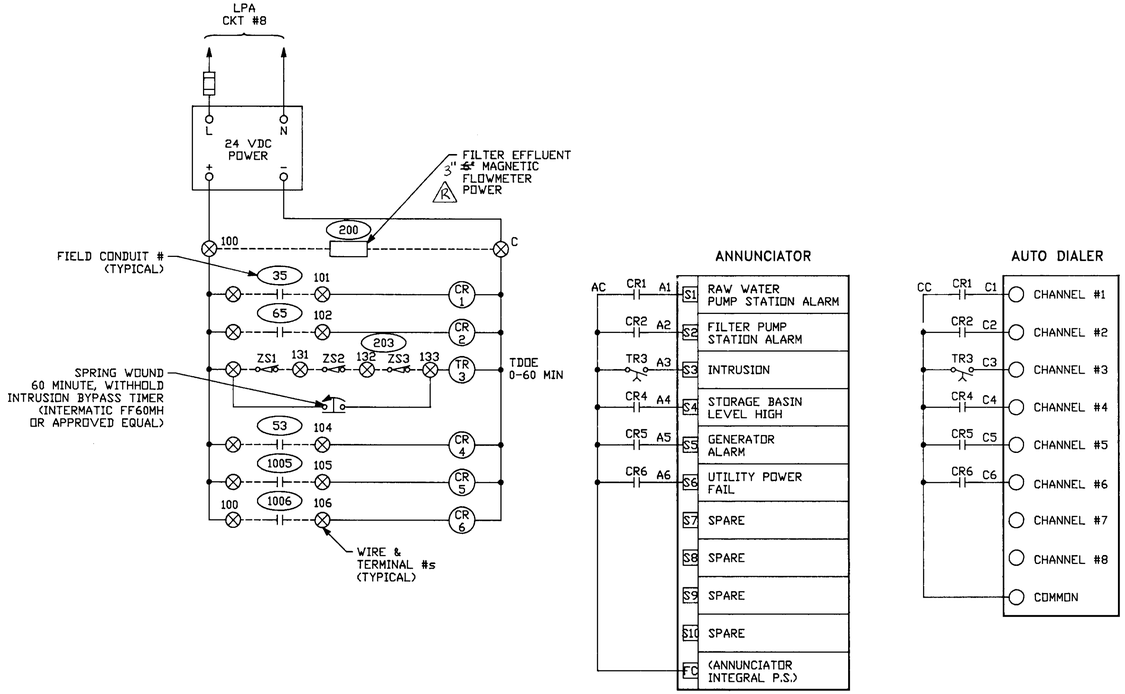
FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

PANELBOARD SCHEDULES

DRAWING NUMBER E-9A

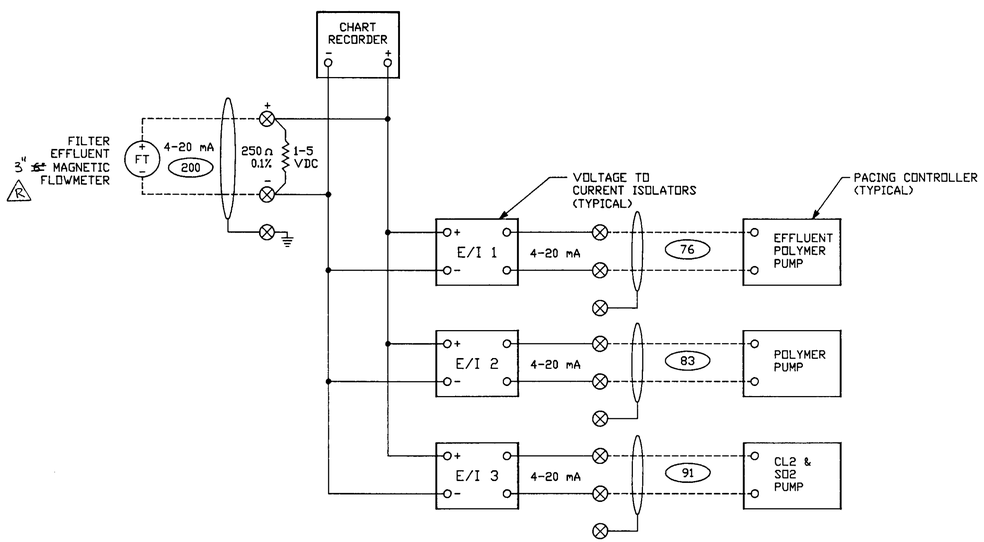
SHEET NUMBER 39A OF 44

REVISION	DESCRIPTION	BY	APP	DATE
2	RECORD DWG. CHANGES INCORP.	DCL	RMD	6-95



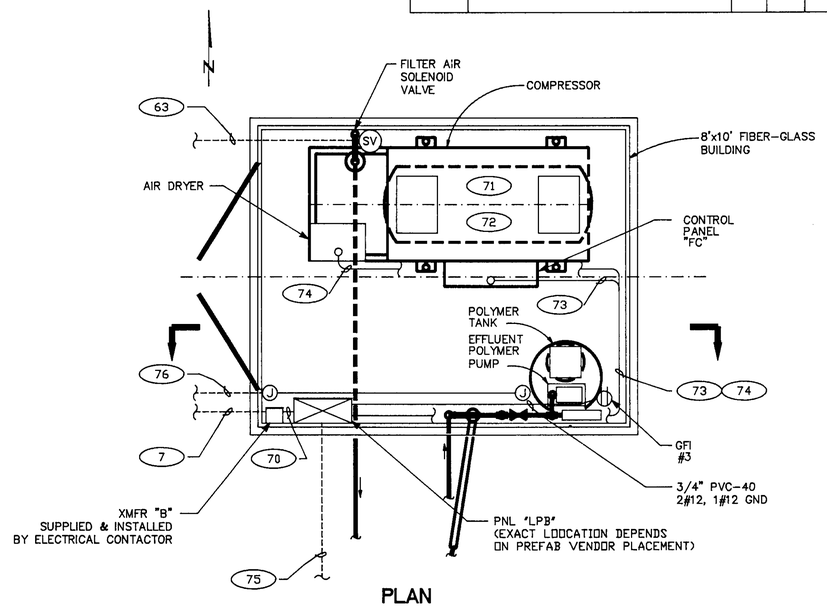
ANNUNCIATOR + AUTODIALER WIRING SCHEMATIC

NOT TO SCALE

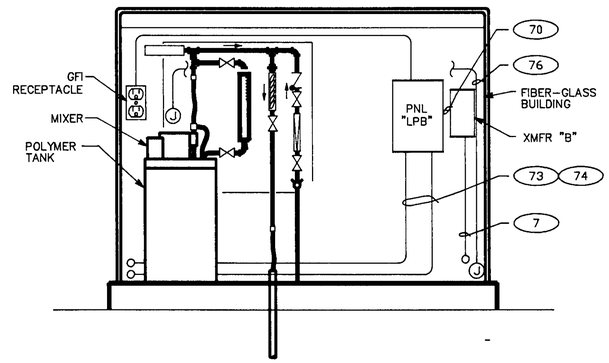


CHEMICAL PACING WIRING SCHEMATIC

NOT TO SCALE



PLAN



SECTION

EFFLUENT POLYMER STORAGE

SCALE: 1/2" = 1'

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. VOGLER
NO. 11840
Exp 9-30-96
ELECTRICAL
STATE OF CALIFORNIA

RECORD DRAWING

E.E.M.
3123 BROADWAY
SACRAMENTO, CA. 95817
916-457-8144

FILE: 9404C-E9

SU-2864

SCALE	DATE	DESIGNED	DRAWN	CHECKED	SUBMITTED	RECOMMENDED	APPROVED
1/2" = 1'	AUGUST 1994	RLV	ZKV	RLV			
	FILE						

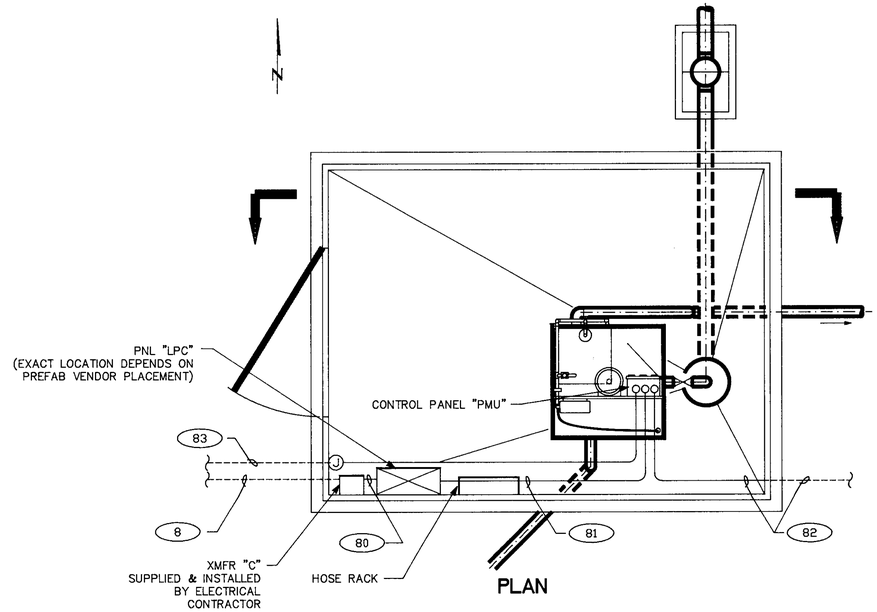
DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

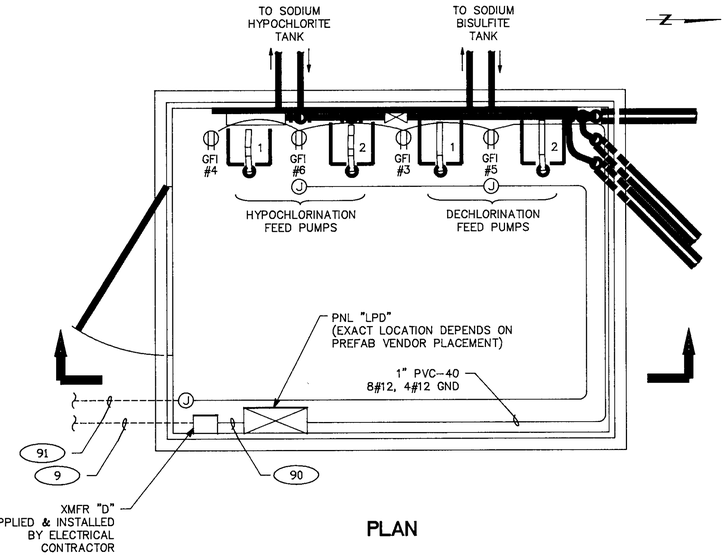
EFFLUENT POLYMER STORAGE & PANEL "AM" WIRING SCHEMATICS

DRAWING NUMBER	SHEET NUMBER
E-9	39 OF 44

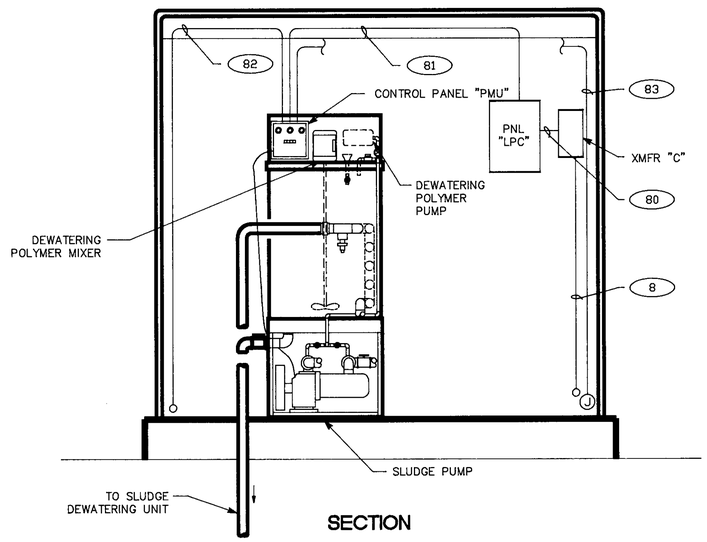
REVISION	DESCRIPTION	BY	APP	DATE



PLAN

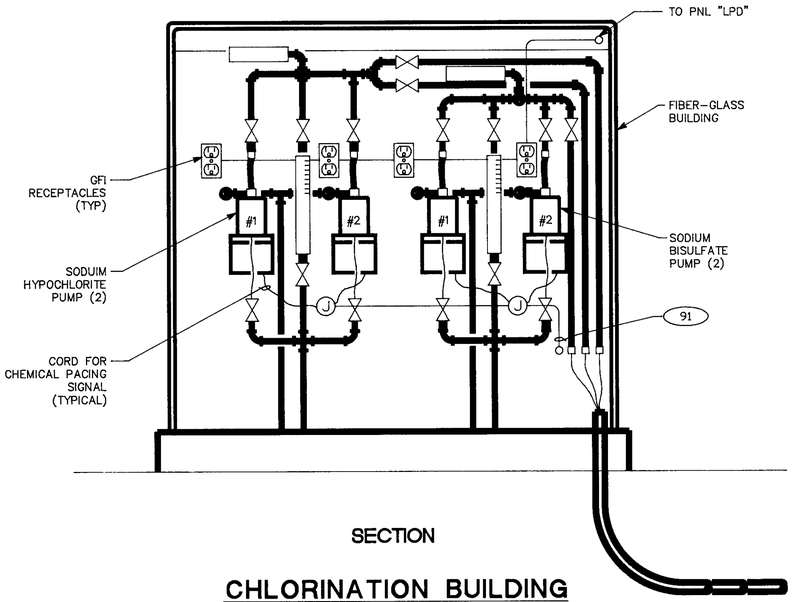


PLAN



SECTION

SLUDGE POLYMER STORAGE



SECTION

CHLORINATION BUILDING

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. ZOGLER
NO. 11840
Exp. 9-30-96
ELECTRICAL
STATE OF CALIFORNIA

FILE: 9404C-E8

SCALE	DATE	DESIGNED	SUBMITTED
NONE	AUGUST 1994	DRAWN ZK	RECOMMENDED
	FILE	CHECKED RLV	APPROVED

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

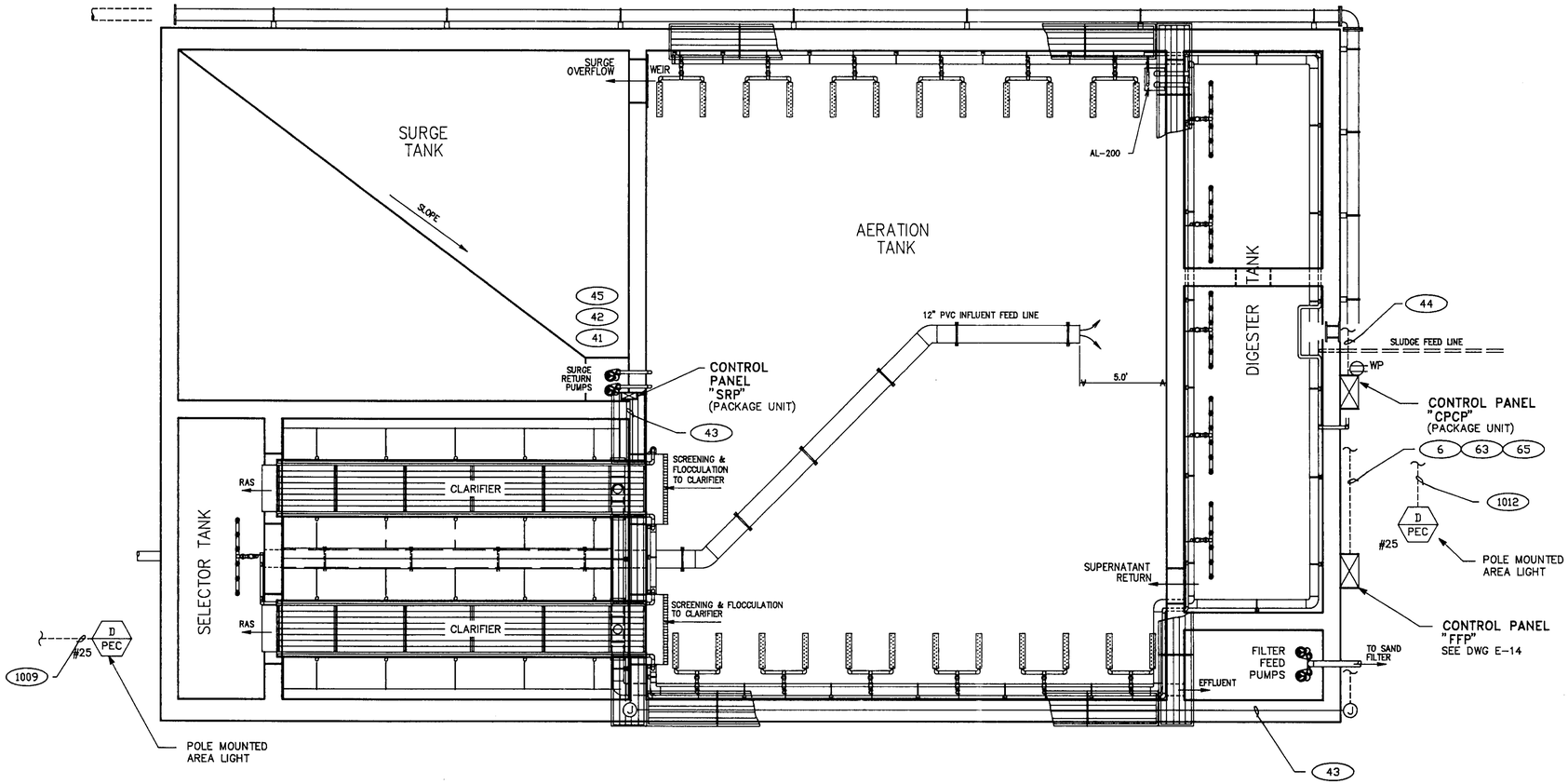
SLUDGE POLYMER STORAGE/
CHLORINATION BUILDING

DRAWING NUMBER	SHEET NUMBER
E-8	38 OF 44

T.E.E.M.
3123 BROADWAY
SACRAMENTO, CA. 95817
916-457-8144

SU 2865

REVISION	DESCRIPTION	BY	APP	DATE



PLAN VIEW

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. FOSLER
NO. 11840
Exp. 9-30-96
ELECTRICAL
STATE OF CALIFORNIA

SU - 2966

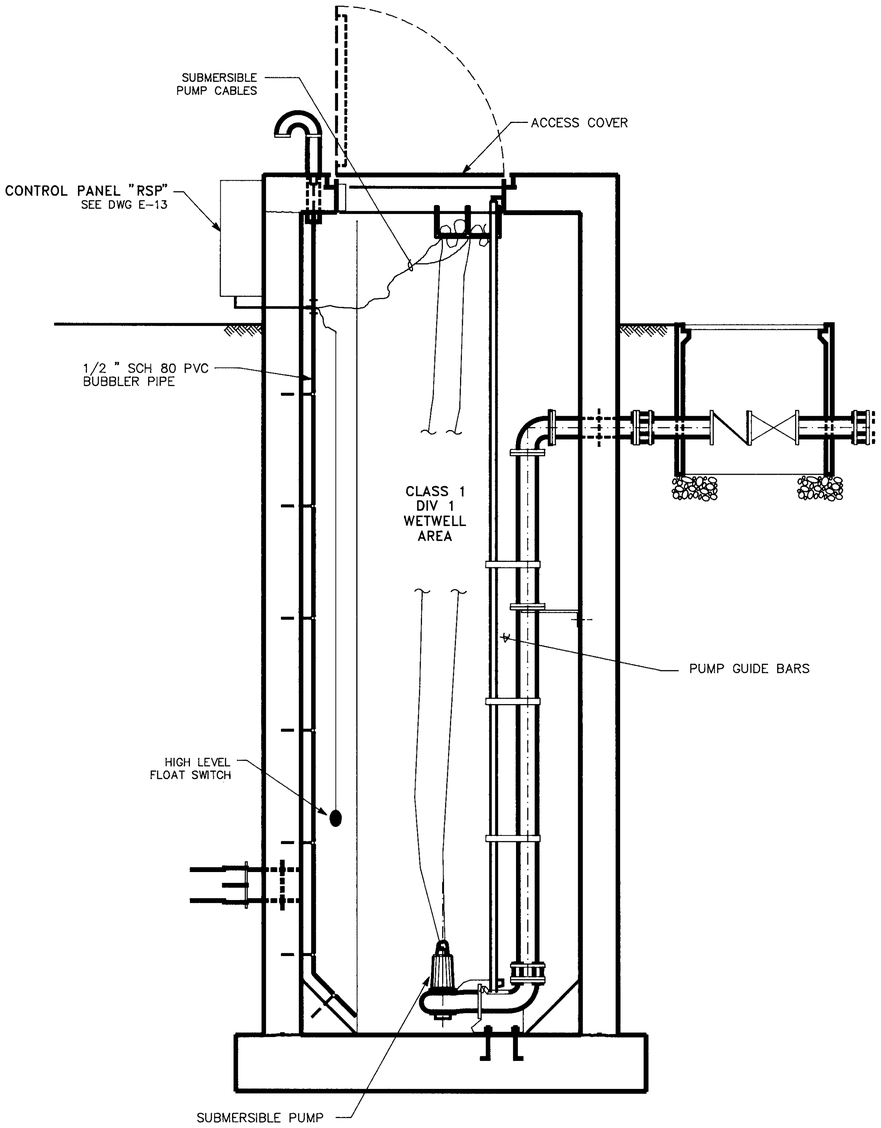
FILE: 9404C-E7

RECORD DRAWING

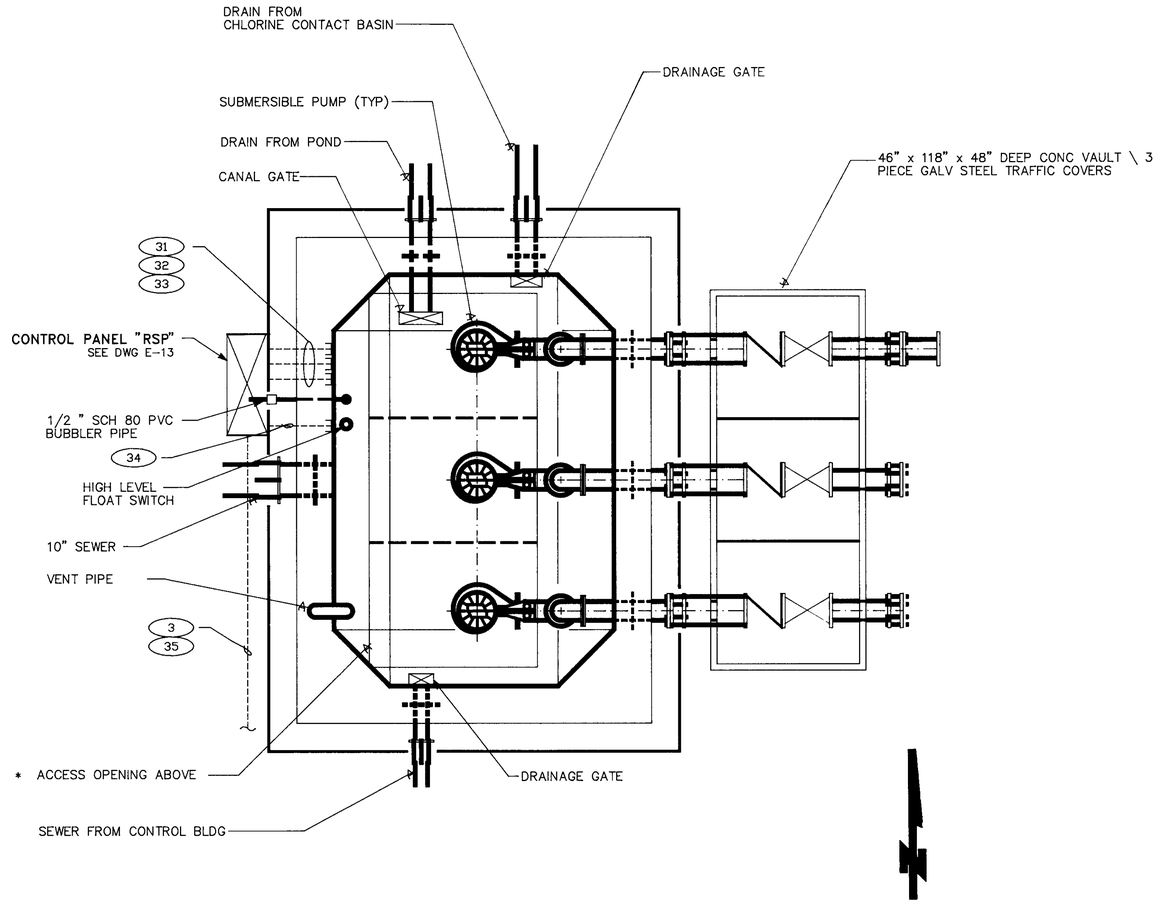
T.E.E.M.
3123 BROADWAY
SACRAMENTO, CA. 95817
916-457-8144

SCALE	DATE					DRAWING NUMBER	SHEET NUMBER
1/4" = 1'	AUGUST 1994	DESIGNED RLV	SUBMITTED	DEWANTE AND STOWELL CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	FLAG CITY SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES	AREATION BASIN AREA PLAN	E-7	37 OF 44
	FILE	DRAWN ZKV	RECOMMENDED					
		CHECKED RLV	APPROVED					

REVISION	DESCRIPTION	BY	APP	DATE



SECTION



* LOCATION MAY VARY TO SUIT PUMP MFR REC

PLAN

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. KOELLER
NO. 11840
Exp.9-30-96
ELECTRICAL
STATE OF CALIFORNIA

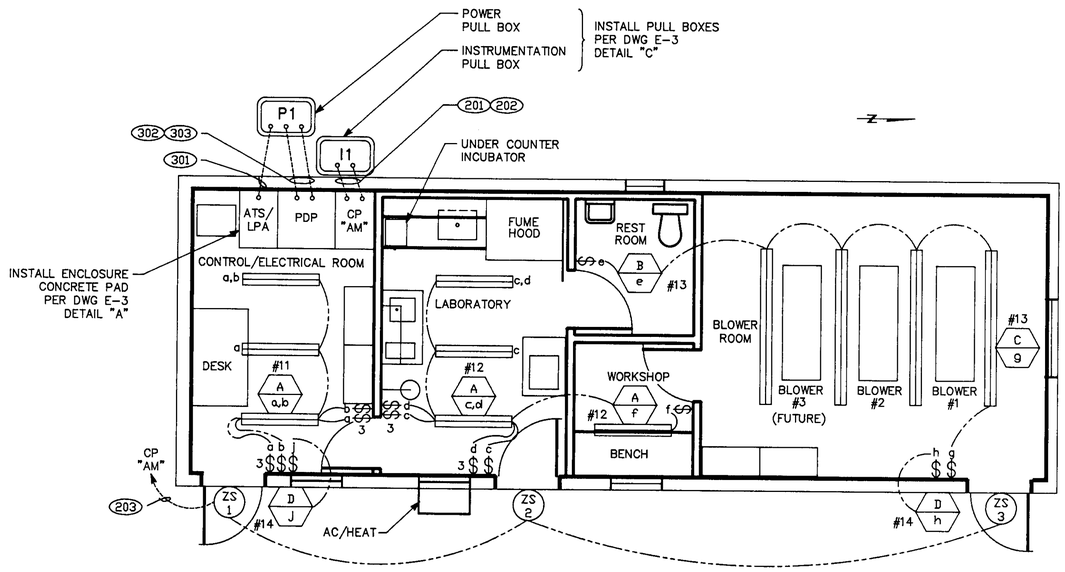
SU-2867

FILE: 9404C-E6

3123 BROADWAY
SACRAMENTO, CA. 95817
916-457-8144

SCALE	DATE					DRAWING NUMBER	SHEET NUMBER
1/2" = 1'	AUGUST 1994	DESIGNED RLV	SUBMITTED	DEWANTE AND STOWELL CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	FLAG CITY SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES	RAW SEWAGE PUMP STATION PLAN	E-6	36 OF 44
	FILE	DRAWN ZKV	RECOMMENDED					
		CHECKED RLV	APPROVED					

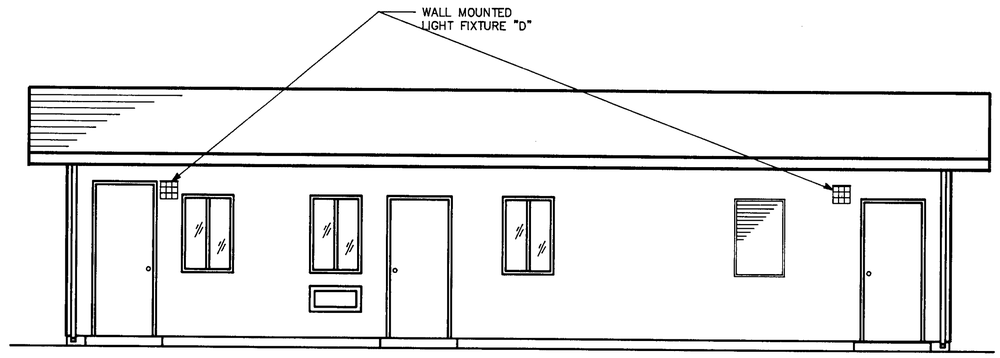
REVISION	DESCRIPTION	BY	APP	DATE



ELECTRICAL LIGHTING PLAN

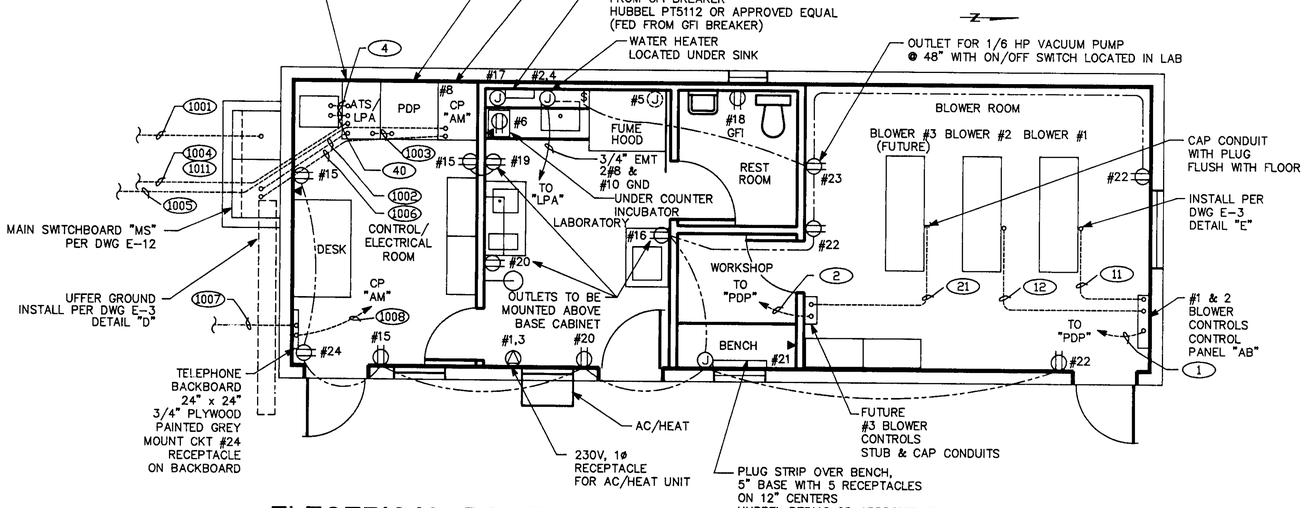
SCALE: 1/4" = 1'-0"

NOTE:
1. PROVIDE NECESSARY #12 WIRES IN EMT CONDUIT FOR LIGHTING CIRCUIT ARRANGEMENT AS SHOWN.
2. HOMERUNS SHALL BE PROVIDED FOR ALL PANEL LPA CIRCUITS.



ELEVATION

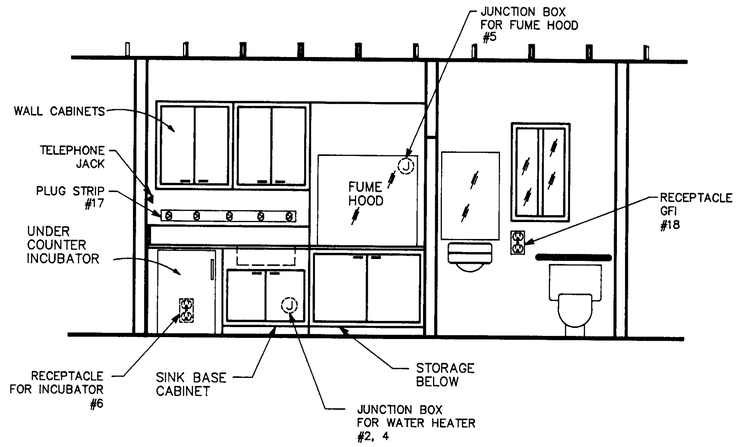
SCALE: 1/4" = 1'-0"



ELECTRICAL POWER PLAN

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

NOTE:
1. PROVIDE NECESSARY #12 WIRES IN EMT CONDUIT FOR RECEPTACLES CIRCUIT ARRANGEMENT AS SHOWN.
2. HOMERUNS SHALL BE PROVIDED FOR ALL PANEL LPA CIRCUITS.
1. INSTALL EACH TELEPHONE JACK WITH TELEPHONE CABLE RAN TO TELEPHONE BACKBOARD.



LAB/BATH ELEVATIONS

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

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. VOGLER
NO. 11840
Exp. 9-30-96
ELECTRICAL
STATE OF CALIFORNIA

FILE: 9404C-E5

RECORD DRAWING

3123 BROADWAY
SACRAMENTO, CA. 95817
916-457-8144

SCALE	DATE			
NONE	AUGUST 1994	DESIGNED RLV	SUBMITTED	
	FILE	DRAWN ZKV	RECOMMENDED	
		CHECKED RLV	APPROVED	

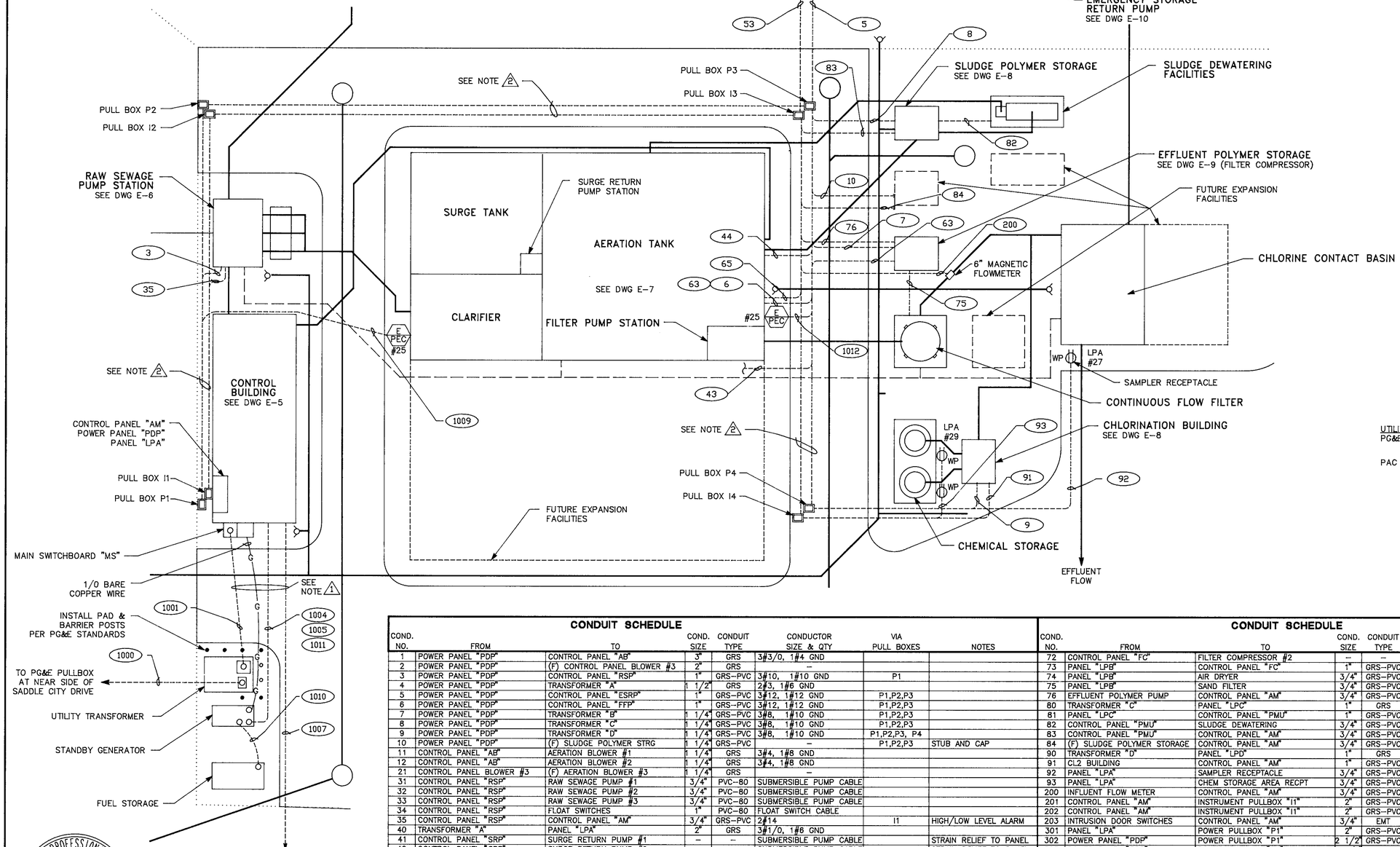
DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

CONTROL BUILDING LIGHTING & POWER PLAN

DRAWING NUMBER	SHEET NUMBER
E-5	35 OF 44

REVISION	DESCRIPTION	BY	APP	DATE



UTILITY CONTACTS:
PG&E: FRANK SALADY (209) 942-1407
PAC BELL: BILL CHELSETH (916) 811-4745

CONDUIT SCHEDULE

COND. NO.	FROM	TO	COND. SIZE	CONDUIT TYPE	CONDUCTOR SIZE & QTY	VIA PULL BOXES	NOTES
1	POWER PANEL "PDP"	CONTROL PANEL "AB"	3"	GRS	3#3/0, 1#4 GND		
2	POWER PANEL "PDP"	(F) CONTROL PANEL BLOWER #3	2"	GRS	–		
3	POWER PANEL "PDP"	CONTROL PANEL "RSP"	1"	GRS-PVC	3#10, 1#10 GND	P1	
4	POWER PANEL "PDP"	TRANSFORMER "A"	1 1/2"	GRS	2#3, 1#6 GND		
5	POWER PANEL "PDP"	CONTROL PANEL "ESRP"	1"	GRS-PVC	3#12, 1#12 GND	P1,P2,P3	
6	POWER PANEL "PDP"	CONTROL PANEL "FFP"	1"	GRS-PVC	3#12, 1#12 GND	P1,P2,P3	
7	POWER PANEL "PDP"	TRANSFORMER "B"	1 1/4"	GRS-PVC	3#8, 1#10 GND	P1,P2,P3	
8	POWER PANEL "PDP"	TRANSFORMER "C"	1 1/4"	GRS-PVC	3#8, 1#10 GND	P1,P2,P3	
9	POWER PANEL "PDP"	TRANSFORMER "D"	1 1/4"	GRS-PVC	3#8, 1#10 GND	P1,P2,P3, P4	
10	POWER PANEL "PDP"	(F) SLUDGE POLYMER STRG	1 1/4"	GRS-PVC	–	P1,P2,P3	STUB AND CAP
11	CONTROL PANEL "AB"	AERATION BLOWER #1	1 1/4"	GRS	3#4, 1#8 GND		
12	CONTROL PANEL "AB"	AERATION BLOWER #2	1 1/4"	GRS	3#4, 1#8 GND		
21	CONTROL PANEL BLOWER #3	(F) AERATION BLOWER #3	1 1/4"	GRS	–		
31	CONTROL PANEL "RSP"	RAW SEWAGE PUMP #1	3/4"	PVC-80	SUBMERSIBLE PUMP CABLE		
32	CONTROL PANEL "RSP"	RAW SEWAGE PUMP #2	3/4"	PVC-80	SUBMERSIBLE PUMP CABLE		
33	CONTROL PANEL "RSP"	RAW SEWAGE PUMP #3	3/4"	PVC-80	SUBMERSIBLE PUMP CABLE		
34	CONTROL PANEL "RSP"	FLOAT SWITCHES	1"	PVC-80	FLOAT SWITCH CABLE		
35	CONTROL PANEL "RSP"	CONTROL PANEL "AM"	3/4"	GRS-PVC	2#14	I1	HIGH/LOW LEVEL ALARM
40	TRANSFORMER "A"	PANEL "LPA"	2"	GRS	3#1/0, 1#6 GND		
41	CONTROL PANEL "SRP"	SURGE RETURN PUMP #1	–	–	SUBMERSIBLE PUMP CABLE		STRAIN RELIEF TO PANEL
42	CONTROL PANEL "SRP"	SURGE RETURN PUMP #2	–	–	SUBMERSIBLE PUMP CABLE		STRAIN RELIEF TO PANEL
43	PANEL "LPA"	CONTROL PANEL "SRP"	1"	GRS-PVC	2#10, 1#12 GND	P1, P2, P3	
44	PANEL "LPA"	CONTROL PANEL "CPCP"	3/4"	GRS-PVC	2#12, 1#12 GND	P1, P2, P3	
45	CONTROL PANEL "SRP"	FLOAT SWITCHES	–	–	FLOAT SWITCH CABLES		STRAIN RELIEF TO PANEL
51	CONTROL PANEL "ESRP"	EMERG. STRG RTN PUMP	3/4"	GRS-PVC	SUBMERSIBLE PUMP CABLE		
52	CONTROL PANEL "ESRP"	FLOAT SWITCH	3/4"	GRS-PVC	FLOAT SWITCH CABLE		
53	CONTROL PANEL "ESRP"	CONTROL PANEL "AM"	3/4"	GRS-PVC	2#14	I1, I2, I3	HIGH LEVEL ALARM
61	CONTROL PANEL "FFP"	FILTER FEED PUMP #1	3/4"	PVC-80	SUBMERSIBLE PUMP CABLE		
62	CONTROL PANEL "FFP"	FILTER FEED PUMP #2	3/4"	PVC-80	SUBMERSIBLE PUMP CABLE		
63	CONTROL PANEL "FFP"	FILTER AIR SOLENOID VALVE	3/4"	GRS-PVC	2#14, 1#14 GND		
64	CONTROL PANEL "FFP"	FLOAT SWITCHES	2"	PVC-80	FLOAT SWITCH CABLES		
65	CONTROL PANEL "FFP"	CONTROL PANEL "AM"	3/4"	GRS-PVC	2#14	I1, I2, I3	HIGH/LOW LEVEL ALARM
70	TRANSFORMER "B"	PANEL "LPB"	1"	GRS	3#6, 1#8 GND		
71	CONTROL PANEL "FC"	FILTER COMPRESSOR #1	–	–	–		

CONDUIT SCHEDULE

COND. NO.	FROM	TO	COND. SIZE	CONDUIT TYPE	CONDUCTOR SIZE & QTY	VIA PULL BOXES	NOTES
72	CONTROL PANEL "FC"	FILTER COMPRESSOR #2	–	–	–		PACKAGE UNIT
73	PANEL "LPB"	CONTROL PANEL "FC"	1"	GRS-PVC	3#10, 1#10 GND		
74	PANEL "LPB"	AIR DRYER	3/4"	GRS-PVC	2#12, 1#12 GND		
75	PANEL "LPB"	SAND FILTER	3/4"	GRS-PVC	–		STUB AND CAP
76	EFFLUENT POLYMER PUMP	CONTROL PANEL "AM"	3/4"	GRS-PVC	1#16 T.S.PR.	I1, I2, I3	CHEMICAL PACING
80	TRANSFORMER "C"	PANEL "LPC"	1"	GRS	3#6, 1#8 GND		
81	PANEL "LPC"	CONTROL PANEL "PMU"	1"	GRS-PVC	2#8, 1#12 GND		
82	CONTROL PANEL "PMU"	SLUDGE DEWATERING	3/4"	GRS-PVC	4#14, 1#14 GND		
83	CONTROL PANEL "PMU"	CONTROL PANEL "AM"	3/4"	GRS-PVC	1#16 T.S.PR.	I1, I2, I3	CHEMICAL PACING
84	(F) SLUDGE POLYMER STORAGE	CONTROL PANEL "AM"	3/4"	GRS-PVC	–	I1, I2, I3	(F) CHEMICAL PACING
90	TRANSFORMER "D"	PANEL "LPD"	1"	GRS	3#6, 1#8 GND		
91	CL2 BUILDING	CONTROL PANEL "AM"	1"	GRS-PVC	1#16 T.S.PR.	I1, I2, I3, I4	CHEMICAL PACING
92	PANEL "LPA"	SAMPLER RECEPTACLE	3/4"	GRS-PVC	2#12, 1#12 GND	P1, P2, P3, P4	
93	PANEL "LPA"	CHEM STORAGE AREA RECPT	3/4"	GRS-PVC	2#12, 1#12 GND	P1, P2, P3, P4	
200	INFLUENT FLOW METER	CONTROL PANEL "AM"	3/4"	GRS-PVC	1#16 T.S.PR., 2#14, 1#14 GND	I1, I2, I3, I4	
201	CONTROL PANEL "AM"	INSTRUMENT PULLBOX "I1"	2"	GRS-PVC	–		FOR FUTURE EXPANSION
202	CONTROL PANEL "AM"	INSTRUMENT PULLBOX "I1"	2"	GRS-PVC	–		FOR FUTURE EXPANSION
203	INTRUSION DOOR SWITCHES	CONTROL PANEL "AM"	3/4"	EMT	6#14		
301	PANEL "LPA"	POWER PULLBOX "P1"	2"	GRS-PVC	–		FOR FUTURE EXPANSION
302	POWER PANEL "PDP"	POWER PULLBOX "P1"	2 1/2"	GRS-PVC	–		FOR FUTURE EXPANSION
303	POWER PANEL "PDP"	POWER PULLBOX "P1"	2 1/2"	GRS-PVC	–		FOR FUTURE EXPANSION
1000	POWER PULLBOX "P1"	UTILITY TRANSFORMER	4"	PVC-120	3/8" NYLON PULL ROPE		
1001	UTILITY TRANSFORMER	MAIN SWITCHBOARD "MS"	4"	PVC-120	3/8" NYLON PULL ROPE		
1002	MAIN SWITCHBOARD "MS"	ATS	3 1/2"	GRS	3#600, 1#2 GND		
1003	ATS	POWER PANEL "PDP"	3 1/2"	GRS	3#600, 1#2 GND		
1004	GENERATOR	ATS	2 1/2"	GRS-PVC	3#4/0, 1#6 GND, 1#1/0 NEU		
1005	GENERATOR	CONTROL PANEL "AM"	3/4"	GRS-PVC	4#14		ATS GEN START & GEN ALARM
1006	MAIN SWITCHBOARD "MS"	CONTROL PANEL "AM"	3/4"	GRS-PVC	2#14		POWER FAIL ALARM
1007	TELEPHONE BACKBOARD	TELEPHONE UTILITY	2"	PVC-40	3/8" NYLON PULL ROPE		
1008	TELEPHONE BACKBOARD	CONTROL PANEL "AM"	3/4"	GRS	PHONE CABLE		AUTO DIALER
1009	PANEL "LPA"	AREA LIGHTS	3/4"	GRS-PVC	2#12, 1#12 GND	P1	
1010	FUEL STORAGE	GENERATOR	3/4"	GRS-PVC	2#14		LOW FUEL SWITCH
1011	PANEL "LPA"	GEN. HEATER & CHARGER	3/4"	GRS-PVC	4#12, 2#12 GND		
1012	PANEL "LPA"	AREA LIGHTS	3/4"	GRS-PVC	2#12, 1#12 GND	P1, P2, P3	

REGISTERED PROFESSIONAL ENGINEER RICHARD L. ROSE NO. 11840 Exp. 9-30-96 ELECTRICAL STATE OF CALIFORNIA

NOTES:
1. INSTALL ALL UNDERGROUND CONDUITS PER DWG E-3, DETAIL "B"
2. INSTALL CONDUITS BETWEEN PULL BOXES PER DWG E-3, DETAIL "F"

FILE: 9404C-03

T.E.E.M.
3123 BROADWAY
SACRAMENTO, CA. 95817
916-457-8144

Su-2869

SCALE	DATE	DESIGNED	DRAWN	CHECKED	SUBMITTED	RECOMMENDED	APPROVED
1" = 10'	AUGUST 1994	RLV	ZKV	RLV			
	FILE						

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

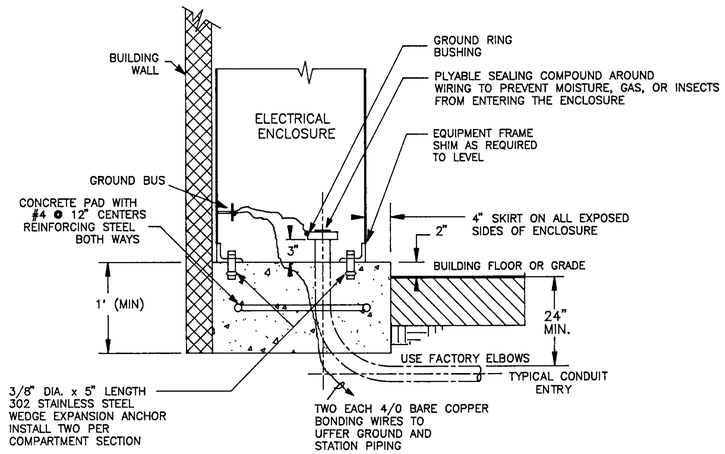
FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

ELECTRICAL SITE PLAN

DRAWING NUMBER: E-4

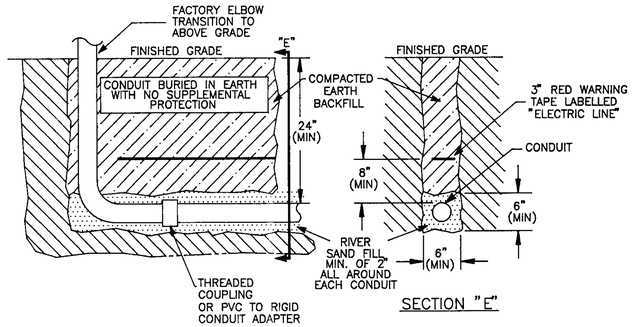
SHEET NUMBER: 34 OF 44

REVISION	DESCRIPTION	BY	APP	DATE



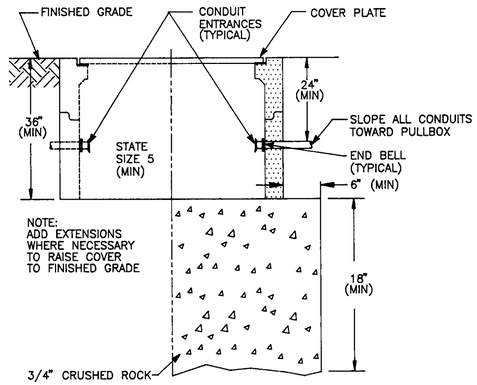
CONCRETE PAD DETAIL "A"

NOT TO SCALE



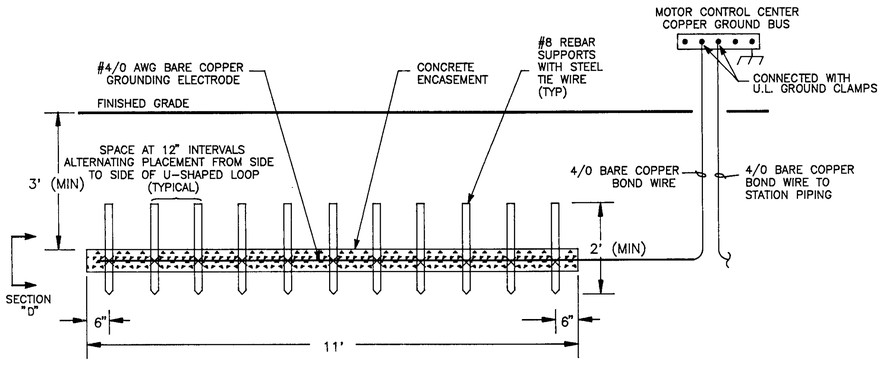
UNDERGROUND CONDUIT TRENCH DETAIL "B"

NOT TO SCALE



PULL BOX DETAIL "C"

NOT TO SCALE

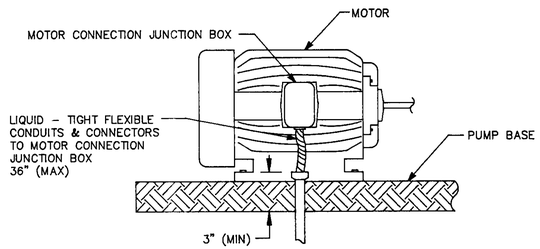


UFFER GROUND DETAIL "D"

NOT TO SCALE

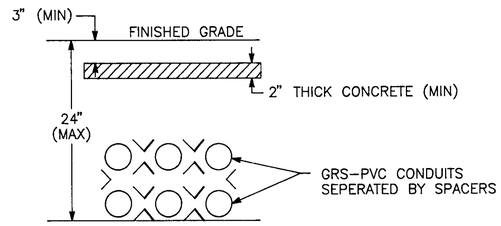
ENCASEMENT

SECTION "D"



MOTOR CONNECTION DETAIL "E"

NOT TO SCALE



UNDERGROUND CONDUITS DETAIL "F"

(FOR CONDUITS BETWEEN PULL BOXES)

NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. VOGLER
NO. 11840
Exp. 9-30-96
ELECTRICAL
STATE OF CALIFORNIA

SU-2870

FILE: 9404C-E3

RECORD DRAWING

T.E.E.M.
3123 BROADWAY
SACRAMENTO, CA. 95817
916-457-8144

SCALE	DATE	DESIGNED	SUBMITTED
NONE	AUGUST 1994	DRAWN ZKV	RECOMMENDED
	FILE	CHECKED RLV	APPROVED

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

MISCELLANEOUS DETAILS

DRAWING NUMBER	SHEET NUMBER
E-3	33 OF 44

REVISION	DESCRIPTION	BY	APP	DATE

P & I DIAGRAM INSTRUMENT IDENTIFICATION

CODE LETTER	FIRST LETTER(S)		SUCCEEDING LETTER(S)		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		1ST IN SEQUENCE
B	BURNER FLAME			CONTROL	2ND IN SEQUENCE
C	CONDUCTIVITY				3RD IN SEQUENCE
D	DENSITY	DOWN			4TH IN SEQUENCE
E	VOLTAGE		ELEMENT		5TH IN SEQUENCE
F	FLOW	RATIO			
G	GENERAL		GLASS		
H	HAND				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN		CONTROL STATION	
K	TIME				
L	LEVEL		LIGHT		LOW
M	MOISTURE				MIDDLE
N	STATUS				
O	OPERATOR		ORIFICE POINT		
P	PRESSURE				
Q	EVENT	TOTALIZE	RECORD		
R	RESET			SWITCH TRANSMIT	
S	SPEED	SAFETY			
T	TEMPERATURE				
U	MULTIVARIABLE	UP	MULTIFUNCTION	VALVE	
V	VISCOSITY				
W	WEIGHT		WELL		
X	SWITCH				
Y	MISCELLANEOUS			COMPUTE ACTUATE	
Z	POSITION				

MISCELLANEOUS ABBREVIATIONS

A	AMBER, AMPERES
AC	ALTERNATING CURRENT
AI	ANALOG INPUT
AIC	AMP INTERRUPTING CAPACITY SYMMETRICAL
ALT	ALTERNATOR
AM	AMMETER
AO	ANALOG OUTPUT
AR	ALARM RELAY
AWG	AMERICAN WIRE GAUGE
B	BLUE
BC	BARE COPPER
BOD	BIOLOGICAL OXYGEN DEMAND
C	CONDUIT
CAP	CAPACITOR
CB	CIRCUIT BREAKER
CKT	CIRCUIT
COAX	COAXIAL CABLE
COMM	COMMUNICATION PORT
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DET	DETAIL
DI	DIGITAL INPUT
DIAG	DIAGRAM
DISC	DISCONNECT
DO	DIGITAL OUTPUT
DPDT	DOUBLE POLE DOUBLE THROW
DWG	DRAWING
ELEV	ELEVATION
EMT	ELECTRICAL METALLIC TUBING
ETM	ELLAPSED TIME METER
(E)	EXISTING
F	FRAME
FC	FAIL CLOSED
FLA	FULL LOAD AMPS
FLP	FAIL LAST POSITION
FO	FAIL OPEN
FLR	FLASHER RELAY
FLEX	FLEXIBLE, METAL LIQUID TIGHT CONDUIT
FS	FLOW SWITCH
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
FWD	FORWARD
(F)	FUTURE
G	GREEN
GALV	GALVANIZED
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL CONDUIT
GRS-PVC	PVC COATED GRS CONDUIT
HI	HIGH
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HTR	HEATER
HZ	HERTZ (CYCLES PER SECOND)
HZD	HAZARDOUS AREA, EXPLOSION PROOF
I	INTERLOCK
I/O	INPUT/OUTPUT
ICR	INSTRUMENTATION CONTROL RELAY
INST	INSTANTANEOUS
ISR	INTRINSICALLY SAFE RELAY
J	JUNCTION BOX
K	KILO, PREFIX
LA	LIGHTNING ARRESTER
LC	LIGHTING CONTACTOR
LEL	LOWER EXPLOSIVE LIMIT
LO	LOW
LOS	LOCK-OUT STOP SWITCH
LPU	LINE PROTECTION UNIT
LR	LATCHING RELAY
LS	LEVEL SWITCH
M	MOTOR CONTACTOR
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILLS
MCP	MOTOR CIRCUIT PROTECTOR
MD	MOISTURE DETECTION
MH	MANHOLE
MIN	MINIMUM
MINS	MINUTES
MODEM	MODULATOR/DEMODULATOR
MOV	MOTOR OPERATED VALVE
MTR	MOTOR
MUX	MULTIPLEXER
N	NEUTRAL
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NP	NAMEPLATE
NTS	NOT TO SCALE
(N)	NEW
OL	OVERLOAD
ORP	OXIDATION REDUCTION POTENTIAL
P	PHASE, POLE
PB	PUSHBUTTON
PBX	PULL BOX
PEC	PHOTO ELECTRIC CELL
PF	POWER FACTOR
PFR	POWER (PHASE) FAIL RELAY
PH	HYDROGEN ION CONCENTRATION
PLC	PROGRAMMABLE LOGIC CONTROLLER
PMP	PUMP
PNL	PANEL
POT	POTENTIOMETER
PR	PAIR, TWISTED & SHIELDED CABLE
PRESS	PRESSURE
PRI	PRIMARY
PROVIDE	FURNISH, INSTALL & CONNECT
PRR	POWER RELAY
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PTT	PUSH TO TEST
PV	PROCESS VARIABLE
PVC	POLYVINYLCHLORIDE
PWR	POWER
R	RED
RCT	REPEAT CYCLE TIMER
REF	REFERENCE
RMS	ROOT MEAN SQUARED
RT	RESET TIMER
RTD	RESISTANCE TEMPERATURE DETECTOR
RTM	RUN TIME METER
RVNR	REDUCED VOLTAGE NON-REVERSING
(R)	REWIRE, RELOCATE, REVISE, REUSE
S	SWITCH
SCH	SCHEDULE
SEC	SECONDARY
SECS	SECONDS
SEL	SELECTOR
SP	SET POINT
SR	SENSING RELAY
SS	SOFT STARTER
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
T	TRIP
TB	TERMINAL BLOCK
TC	TIME CLOCK
TDOD	TIME DELAY ON DE-ENERGIZATION
TDOE	TIME DELAY ON ENERGIZATION
TEL	TELEMETRY
TELCO	TELEPHONE COMPANY
TM	THERMAL MAGNETIC
TEMP	TEMPERATURE
TOC	TOTAL ORGANIC CARBON
TR	TIME DELAY RELAY
TRIAD	TWISTED & SHIELDED 3 CONDUCTOR
TS	TEMPERATURE SWITCH
TSPR	TWISTED & SHIELDED PAIR
TYP	TYPICAL
UG	UNDERGROUND
V	VOLTAGE
VA	VOLT AMPS
VAR	VOLT AMP REACTIVE
VFD	VARIABLE FREQUENCY DRIVE
VLV	VALVE
VM	VOLTMETER
W	WHITE, WATTS
WHM	WATT HOURMETER
WM	WATTMETER
WP	WEATHER PROOF
WS	TORQUE SWITCH
XFMR	TRANSFORMER
XS	MISCELLANEOUS SWITCH
Y	YELLOW
Z	IMPEDANCE
ZS	LIMIT SWITCH

LIGHT FIXTURE SCHEDULE

CODE LETTER	FIXTURE TYPE	FIXTURE LAMPS	WATTS/ FIXTURE	MANUFACTURER OR APPROVED EQUAL	MOUNTING ARRANGEMENT	NOTES
A	FLUORESCENT, 4' WRAP AROUND, ACRYLIC, PRISMATIC DIFFUSER RAPID START / U.L. LISTED	F40T12/CW 4 EACH	133	LITHONIA LB-440-A ENERGY SAVER	CEILING SURFACE	WHERE INDICATED, TWO LAMPS ARE TO BE CONTROLLED BY ONE SWITCH, AND THE OTHER TWO ARE TO BE SWITCHED INDEPENDENTLY
B	INCANDESCENT, ROUND DRUM, 13", PUSHBUTTON RELEASE DOOR U.L. LISTED	75W A19 2 EACH	150	LITHONIA SP13	CEILING SURFACE	
C	FLUORESCENT, 8' INDUSTRIAL STANDARD CHANNEL U.L. LISTED	F96T12/CW	75	LITHONIA C-196	CEILING SURFACE	
D	INCANDESCENT, 5" x 8" WALL UNIT VANDAL RESISTANT	100W A19	100	LUMINAIRE WVP	OUTDOOR WALL MOUNT	
E	OUTDOOR AREA LIGHT STANDARD CANOPY 16" REFRACTOR WITH PHOTOCELL UNIT	250 HPS	40	HOLOPHANE CW-3A250HP POLE: CA-RT-16	ROUND TAPERED ALUMINUM POLE 16' HEIGHT	PROVIDE BASE ANCHOR BOLTS AND BASE CAPS

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. VOSBER
NO. 11840
Exp. 6-30-96
ELECTRICAL
STATE OF CALIFORNIA

T.E.M.
3123 BROADWAY
SACRAMENTO, CA. 95817
916-457-8144

FILE: 9404C-E2

SCALE	DATE			
NONE	AUGUST 1994	DESIGNED RLV	SUBMITTED	
	FILE	DRAWN ZKV	RECOMMENDED	
		CHECKED RLV	APPROVED	

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

ELECTRICAL & INSTRUMENTATION ABBREVIATIONS

DRAWING NUMBER	SHEET NUMBER
E-2	32 OF 44

SD-2877

REVISION	DESCRIPTION	BY	APP	DATE

SWITCHES - PROCESS

SYMBOL	DESCRIPTION
FS	FLOW SWITCH - CLOSES UPON INCREASING FLOW
FS	FLOW SWITCH - OPENS UPON INCREASING FLOW
LS	LEVEL SWITCH - CLOSES UPON INCREASING LEVEL
LS	LEVEL SWITCH - OPENS UPON INCREASING LEVEL
PS	PRESSURE SWITCH - CLOSES UPON INCREASING PRESSURE (INCREASING VACUUM)
PS	PRESSURE SWITCH - OPENS UPON INCREASING PRESSURE (INCREASING VACUUM)
TS	TEMPERATURE SWITCH - CLOSES UPON INCREASING TEMPERATURE
TS	TEMPERATURE SWITCH - OPENS UPON INCREASING TEMPERATURE
ZS	LIMIT SWITCH - CLOSES AT SET LIMIT
ZS	LIMIT SWITCH - OPENS AT SET LIMIT
ZS	PROXIMITY SWITCH - CLOSES UPON DECREASING DISTANCE
ZS	PROXIMITY SWITCH - OPENS UPON DECREASING DISTANCE
WS	TORQUE SWITCH - CLOSES UPON INCREASING TORQUE
WS	TORQUE SWITCH - OPENS UPON INCREASING TORQUE

DEVICES - RELAY

SYMBOL	DESCRIPTION
CR1 28, 111	CONTROL RELAY CR1 WITH NORMALLY OPEN CONTACT ON LINE 28 & NORMALLY CLOSED CONTACT ON LINE 111
TR2	TIME DELAY RELAY TR2 - ADJUSTABLE TIME DELAY RANGE & SETTING AS SHOWN
TDOE	TIME DELAY ON ENERGIZATION
TDOD	TIME DELAY ON DE-ENERGIZATION
M1	CONTACTOR OR STARTER M1
SV	SOLENOID
CR1 (105)	NORMALLY OPEN, RELAY CONTACT - ACTUATED BY RELAY CR1 COIL LOCATED ON LINE 105
CR1	NORMALLY CLOSED, RELAY CONTACT - ACTUATED BY RELAY CR1
TR2	NORMALLY OPEN, TIME DELAY RELAY CONTACT - CONTACT CLOSES AFTER TR2 IS ENERGIZED
TR2	NORMALLY CLOSED, TIME DELAY RELAY CONTACT - CONTACT OPENS AFTER TR2 IS ENERGIZED
TR2	NORMALLY OPEN, TIME DELAY RELAY CONTACT - CONTACT OPENS AFTER TR2 IS DE-ENERGIZED
TR2	NORMALLY CLOSED, TIME DELAY RELAY CONTACT - CONTACT CLOSES AFTER TR2 IS DE-ENERGIZED

COMPONENTS

SYMBOL	DESCRIPTION
RES	RESISTOR
	POTENTIOMETER
	CAPACITOR, FIXED
	CAPACITOR, ADJUSTABLE
	DIODE
	DIODE, ZENER
	VARISTOR TRANSIENT VOLTAGE SUPPRESSOR
	VOLTAGE SURGE SUPPRESSOR, AC
	LIGHT EMITTING DIODE
	TRANSISTOR
	RESISTANCE TEMPERATURE DETECTOR (RTD)
	THERMOCOUPLE (T/C)
	THERMISTER

DEVICES - MISCELLANEOUS

SYMBOL	DESCRIPTION
	AUDIBLE ALARM
TG	TACHOMETER GENERATOR
+	BATTERY
HTR	HEATER
	3 PHASE HEATER
# HP	3 PHASE MOTOR # = MOTOR HP
# HP	SINGLE PHASE MOTOR
	TRANSFORMER

WIRING - CONNECTIONS

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

PLAN - SYMBOLS

SYMBOL	DESCRIPTION
	CONDUIT, EXPOSED
	CONDUIT, IN SLAB OR BELOW GRADE
	CONDUIT, EXISTING
	CONDUIT, CONCEALED IN WALL OR CEILING
	CONDUIT STUBBED OUT & CAPPED
	CONDUIT BENDS TOWARD OBSERVER
	CONDUIT BENDS AWAY FROM OBSERVER
	CONDUIT ENDS
	CONDUIT CHANGE IN ELEVATION
G	BARE COPPER GROUND WIRE
	GROUND CONNECTION BOLTED TYPE
	GROUND CONNECTION EXOTHERMIC WELD TYPE
	DISCONNECT SWITCH
	FIELD MOUNTED DEVICE
	SPECIAL RECEPTACLE
J	JUNCTION BOX
	CONTROL STATION
# A a	LIGHTING FIXTURE # - CIRCUIT BREAKER NUMBER A - FIXTURE SCHEDULE REF. a - CONTROL SWITCH REFERENCE PEC - PHOTO ELECTRIC CELL
#	DUPLEX RECEPTACLE # - CIRCUIT BREAKER NUMBER
# $\frac{2}{a}$	TOGGLE SWITCH # - CIRCUIT BREAKER NUMBER SUBSCRIPT - CIRCUIT CONTROLLED SUPERSCRIPT - BLANK = 1 POLE 2 = 2 POLE 3 = 3 WAY
	TELEPHONE JACK

SWITCHES - OPERATOR

SYMBOL	DESCRIPTION
SW	TOGGLE OR DISCONNECT SWITCH
PB	PUSHBUTTON - NORMALLY OPEN, MOMENTARY ACTION
PB	PUSHBUTTON - NORMALLY CLOSED, MOMENTARY ACTION
PB	PUSHBUTTON, MECHANICALLY INTERLOCKED, DOUBLE CIRCUIT - NORMALLY CLOSED AND NORMALLY OPEN, MAINTAINED ACTION
H O A	SELECTOR SWITCH, 3 POSITION - CONTACT STATUS SHOWN EXISTS AT POSITION OF H-HAND, O-OFF, OR A-AUTO
1-2 2-1 1-2	SELECTOR SWITCH, 2 POSITION - CONTACT STATUS SHOWN EXISTS AT POSITION AS SHOWN

DEVICES - FRONT PANEL

SYMBOL	DESCRIPTION
X	INDICATING LIGHT, LETTER 'X' INDICATES COLOR: R=RED G=GREEN, A=AMBER, W=WHITE Y=YELLOW, B=BLUE
PTT X	INDICATING LIGHT, PUSH TO TEST
AM	AMP METER
V/M	VOLT METER
ETM	ELAPSED TIME METER
RTM	RUN TIME METER
XS	MULTI-POSITION SWITCH WHERE LETTER 'X' IS FUNCTION: A=AMP, V=VOLT

DEVICES - PROTECTIVE

SYMBOL	DESCRIPTION
	DISCONNECT, 3 POLE
	CIRCUIT BREAKER, 3 POLE THERMAL MAGNETIC (TM) OR MOTOR CIRCUIT PROTECT (MCP)
OL	THERMAL OVERLOAD CONTACT
	THERMAL OVERLOAD ELEMENT
	FUSE WITH BLOWN FUSE INDICATING LIGHT
	FUSE

REGISTERED PROFESSIONAL ENGINEER RICHARD L. VOGEL NO. 11840 Exp 6-30-96 ELECTRICAL STATE OF CALIFORNIA

SU-2873

FILE: 9404C-E1

SCALE	DATE	DESIGNED	DRAWN	CHECKED	SUBMITTED	RECOMMENDED	APPROVED
NONE	AUGUST 1994	RLV	ZKV	RLV			

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

3123 BROADWAY
SACRAMENTO, CA. 95817
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FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

ELECTRICAL & INSTRUMENTATION SYMBOLS

DRAWING NUMBER	SHEET NUMBER
E-1	31 OF 44

REVISION	DESCRIPTION	BY	APP	DATE
R	RECORD DWG. CHANGES INCORP.	DCL	RMD	6-95

SCALE	DATE			
AS SHOWN	AUGUST 1994	DESIGNED STH	SUBMITTED	
	FILE 93423	DRAWN RRR	RECOMMENDED	
		CHECKED WHR	APPROVED	

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

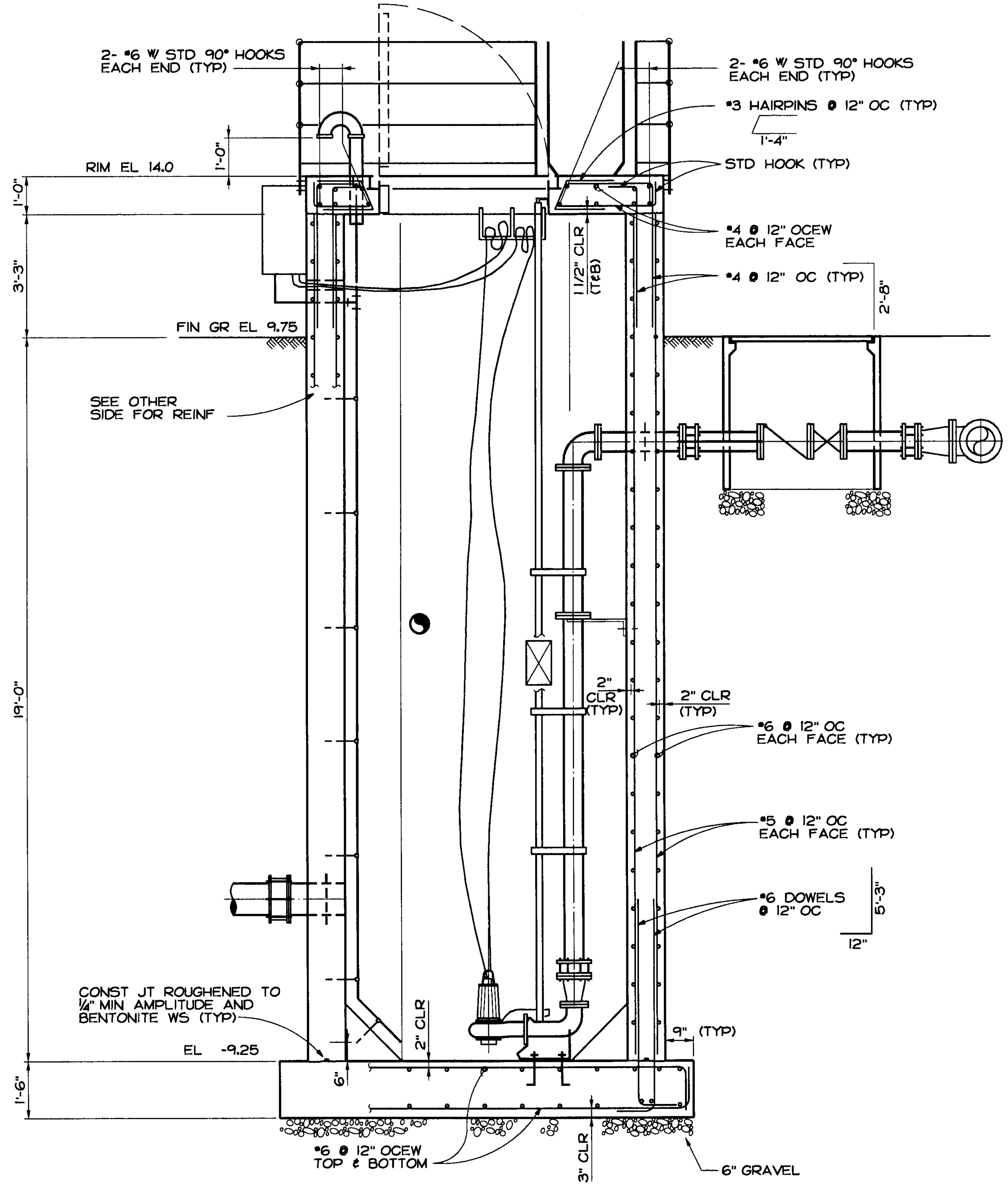
FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

CONTROL BUILDING
STRUCTURAL PLANS & SECTIONS

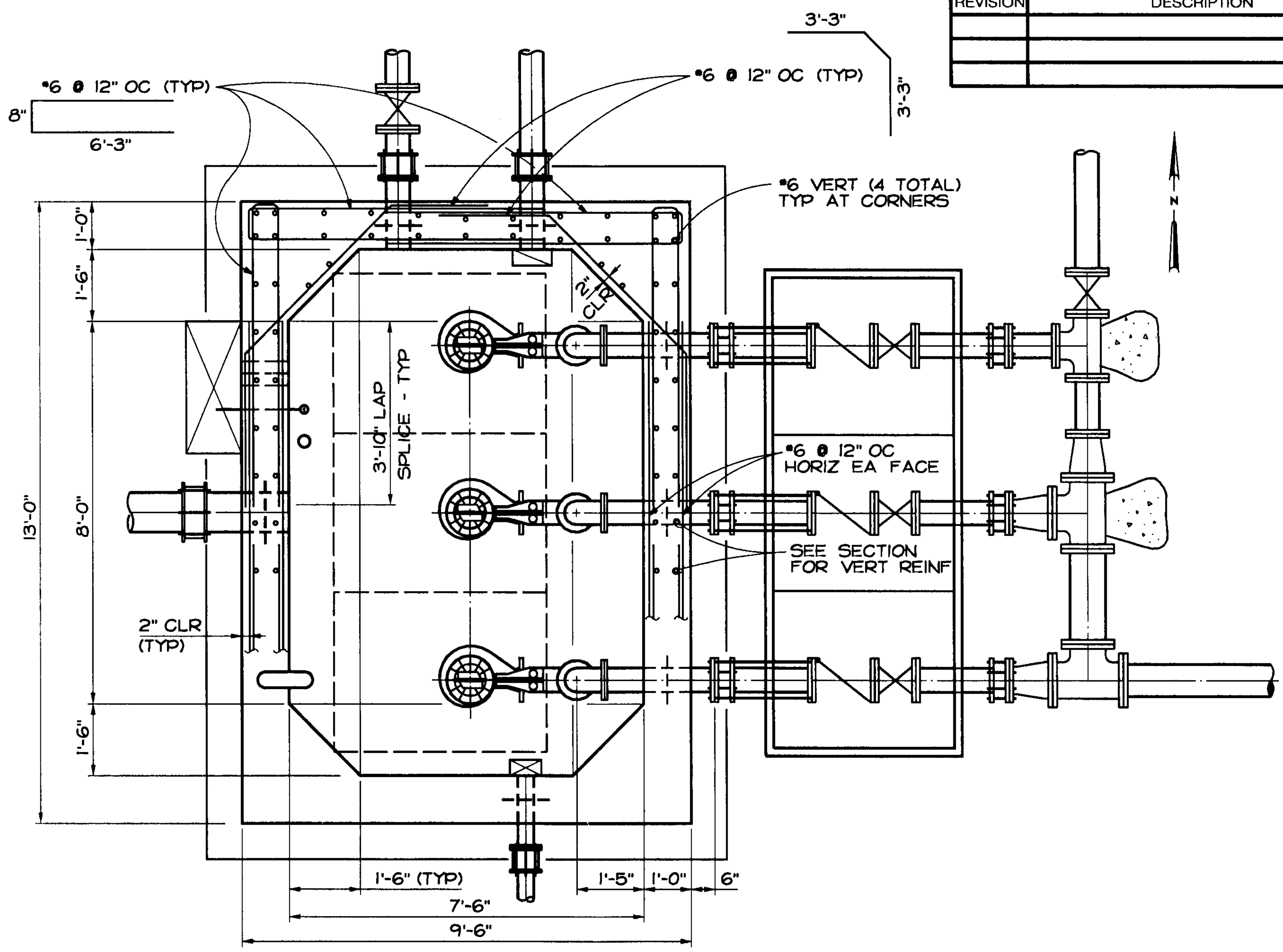
DRAWING NUMBER

SHEET NUMBER 30 OF 44

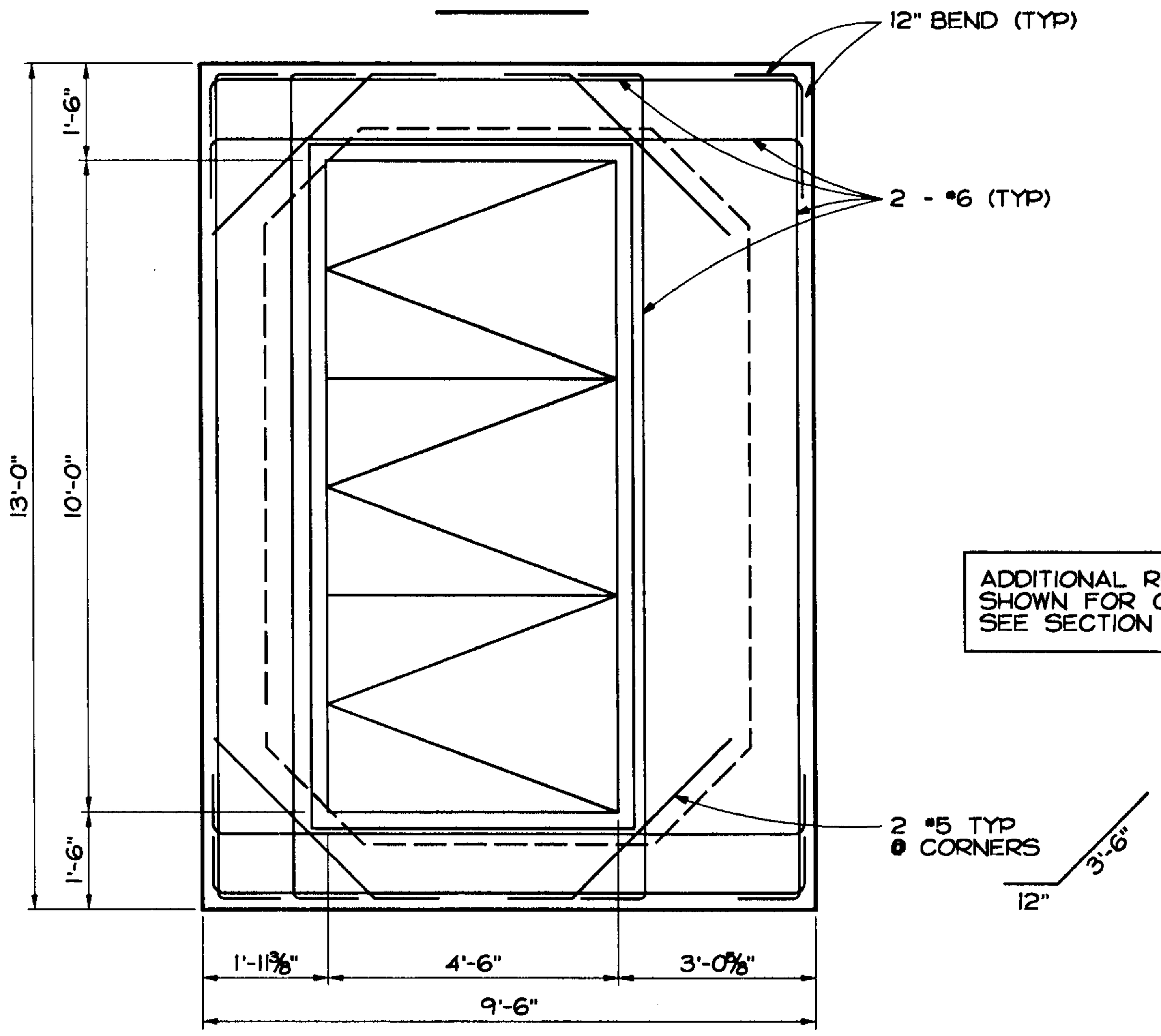
SU-2873



SECTION



PLAN



TOP PLAN

ADDITIONAL REINF NOT SHOWN FOR CLARITY SEE SECTION

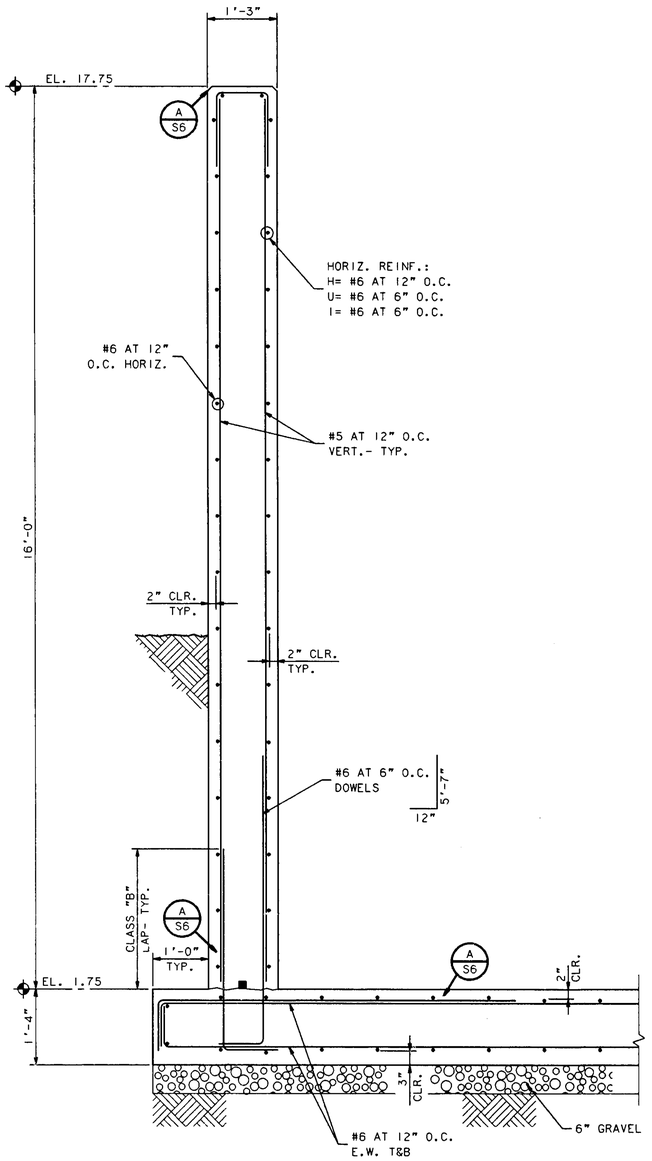
William H. Richards
RECORD DRAWING

REVISION	DESCRIPTION	BY	APP	DATE

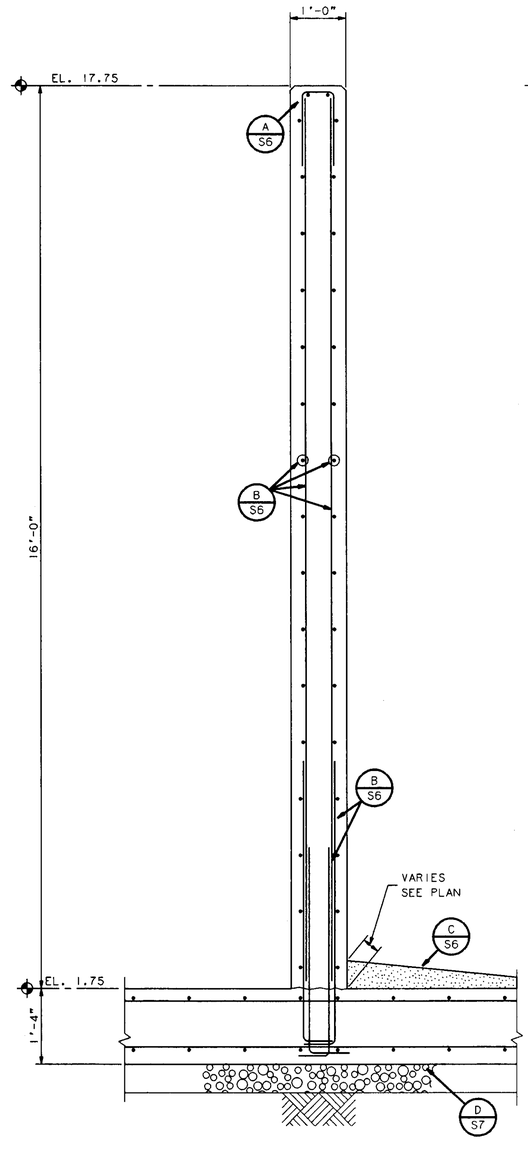
SCALE	DATE						DRAWING NUMBER	SHEET NUMBER
1/2" = 1'-0"	AUGUST 1994 FILE 93423	DESIGNED STH DRAWN MVW CHECKED WHR	SUBMITTED RECOMMENDED APPROVED	DEWANTE AND STOWELL CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	FLAG CITY SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES	RAW SEWAGE PUMP STATION STRUCTURAL PLAN AND SECTION		29 OF 44

SU-2874

REVISION	DESCRIPTION	BY	APP	DATE
R	RECORD DWG. CHANGES INCORP.	DCL	RMD	6-95



SECTION D S5
TGDSFILE.940551SX3, SECTD
3/4"=1'-0"



SECTION E S5
TGDSFILE.940551SX3, SECTE
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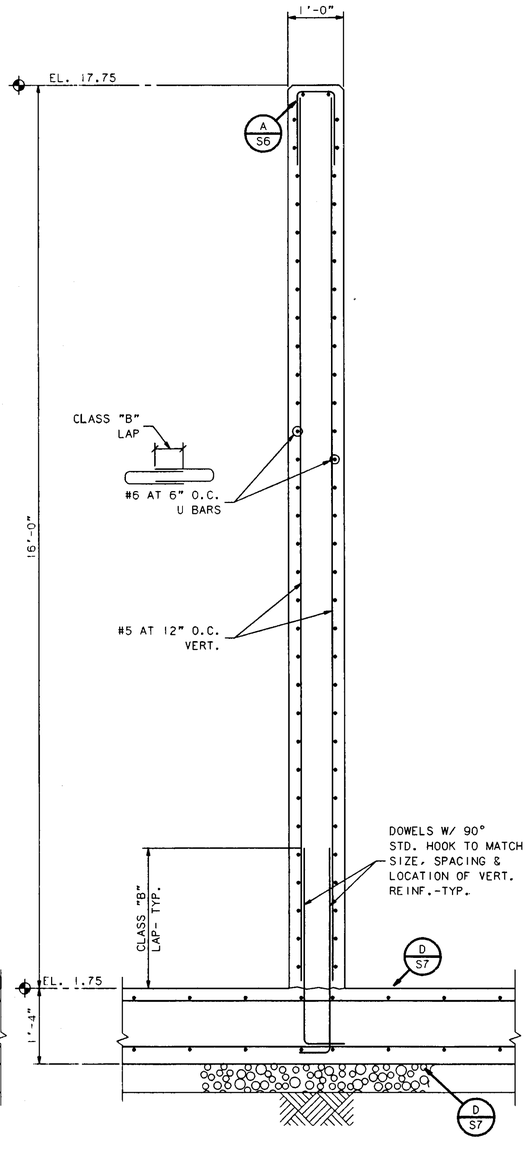
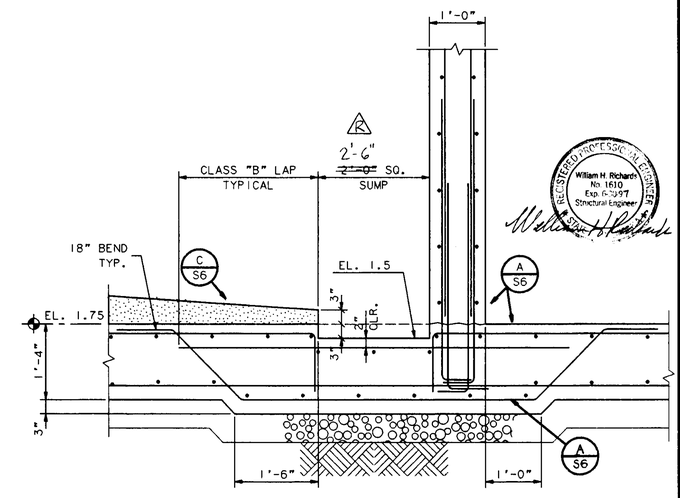


SECTION F S5
TGDSFILE.940551SX3, SECTF
3/4"=1'-0"



SECTION G S5
TGDSFILE.940551SX3, SECTG
3/4"=1'-0"

REGISTERED PROFESSIONAL ENGINEER
William H. Richards
No. 1610
Exp. 6-30-97
Structural Engineer

Cole/Yee/Schubert & Associates
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Sacramento, Ca. 95833 (916) 920-2020

RECORD DRAWING

SU-2875

SCALE	DATE	DESIGNED	SUBMITTED
AS NOTED	AUGUST 1994	DRAWN LEL	RECOMMENDED
	FILE 93423	CHECKED WHR	APPROVED

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

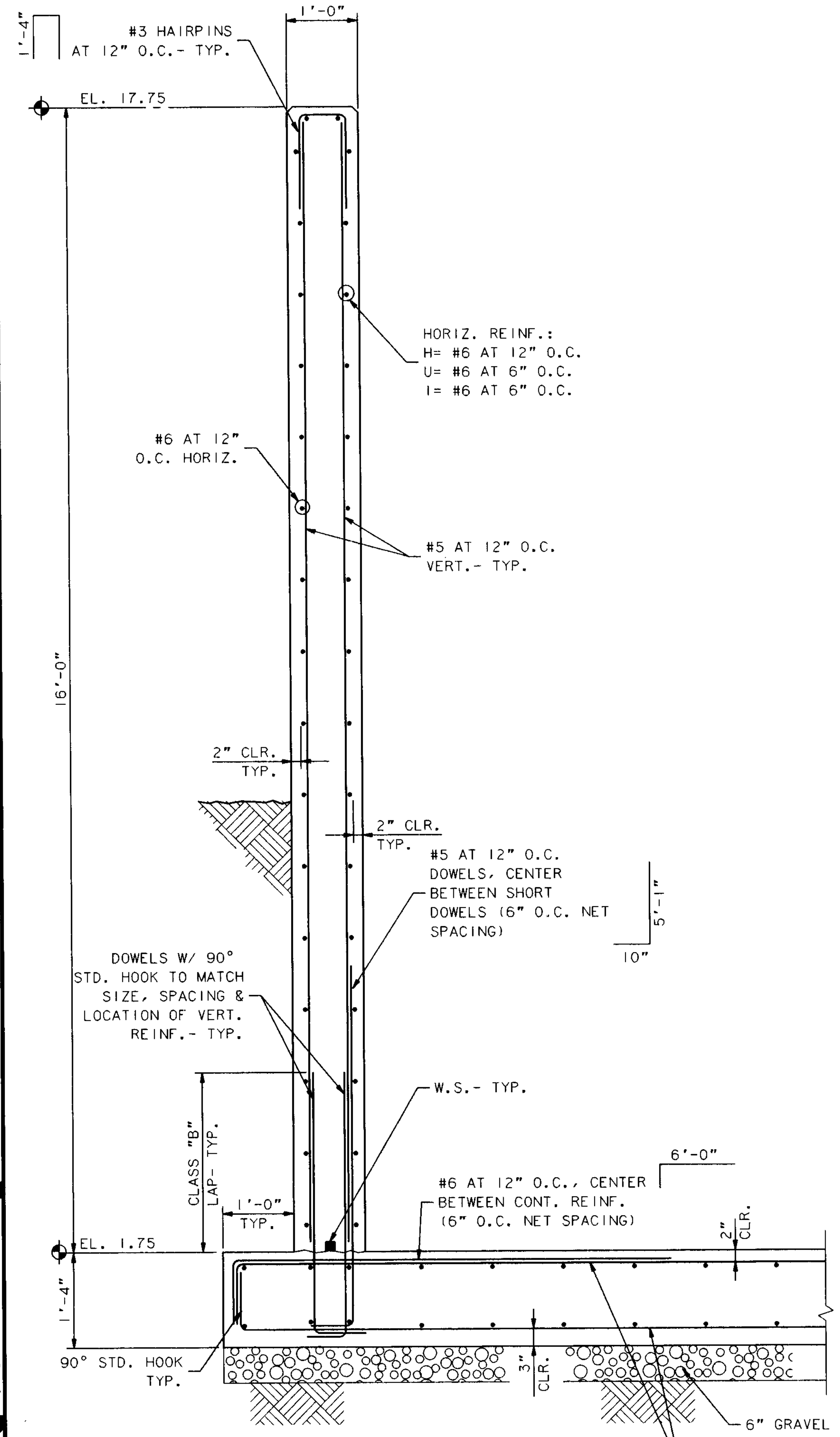
FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

AERATION BASIN, CLARIFIER, SURGE BASIN AND AEROBIC DIGESTER SECTIONS

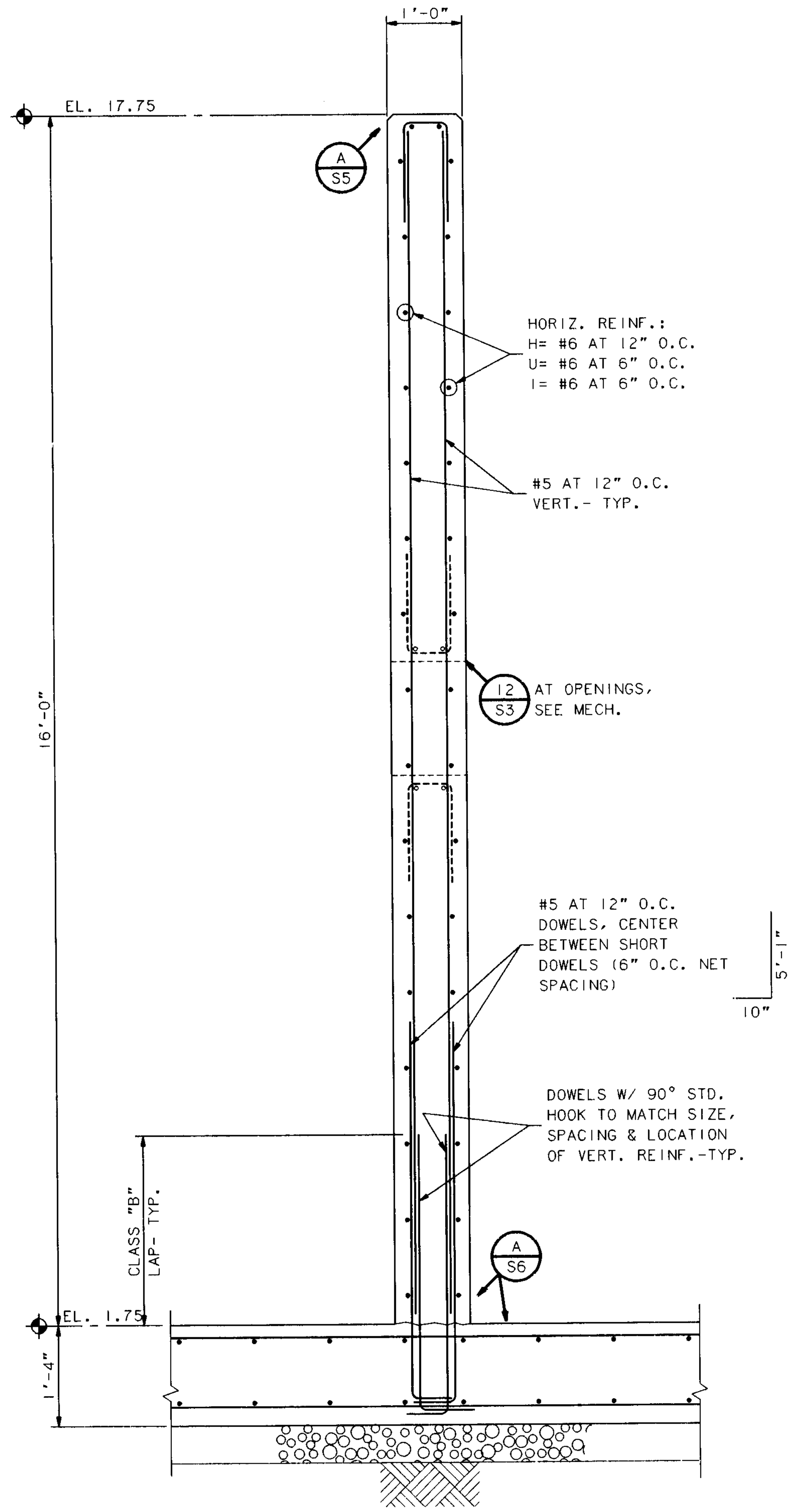
DRAWING NUMBER: **S7**

SHEET NUMBER: 28 OF 44

REVISION	DESCRIPTION	BY	APP	DATE



SECTION A/S5
(GDSFILE.9405535X2, ASECTA) $\frac{3}{4}$"=1'-0"



SECTION B/S5
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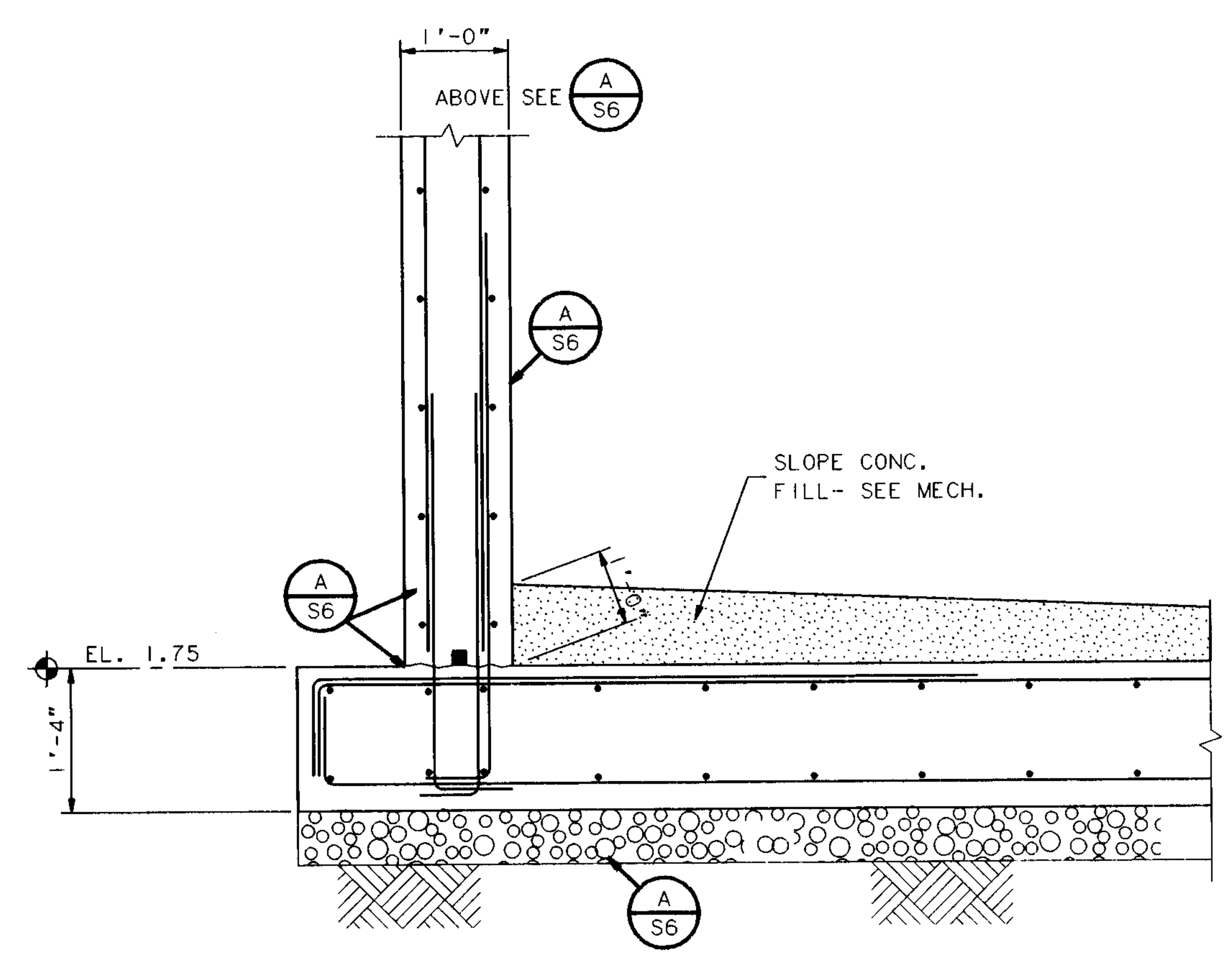

SECTION C/S5
(GDSFILE.9405535X2, ASECTC) $\frac{3}{4}$"=1'-0"

Cole/Yee/Schubert & Associates
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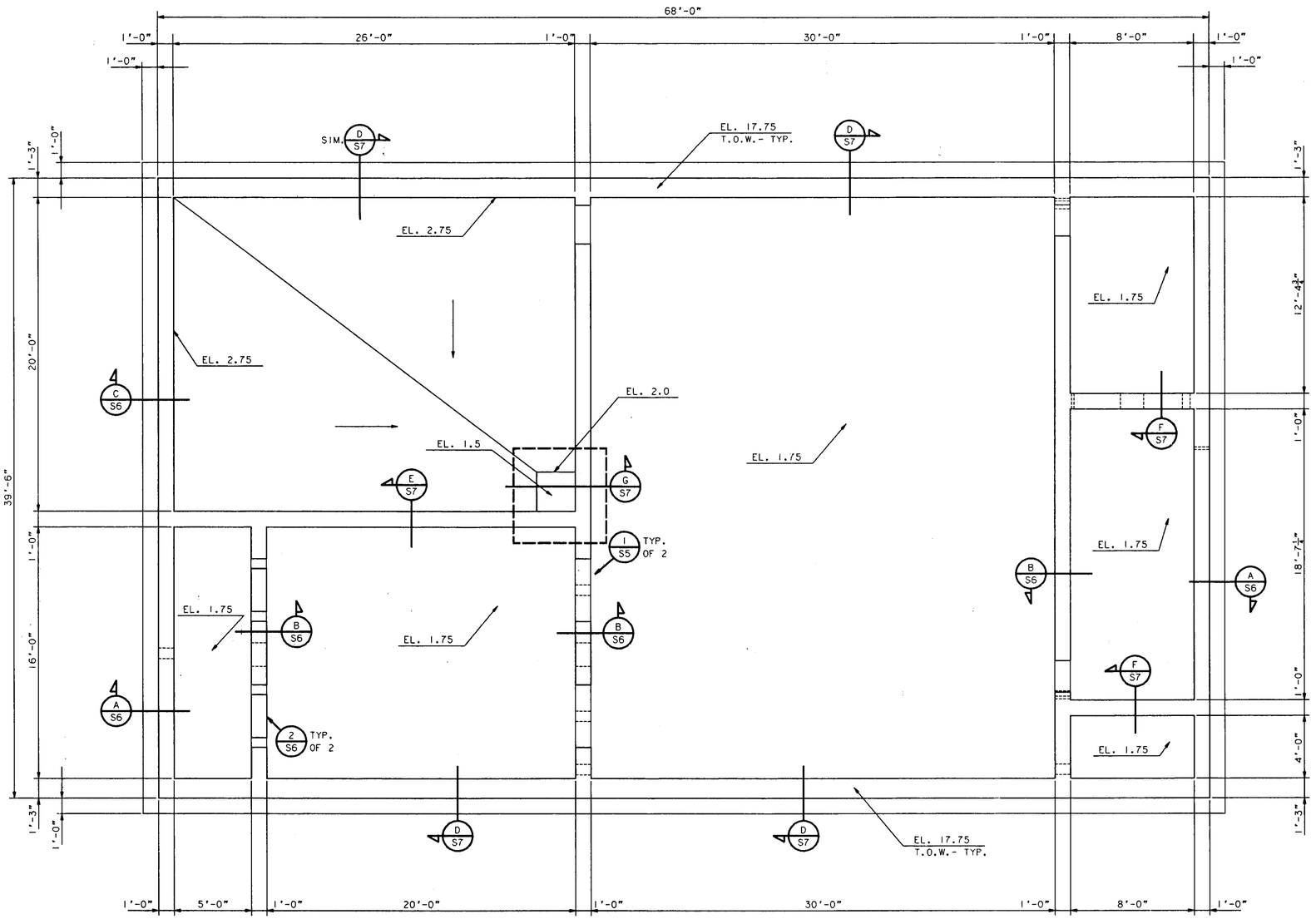
Sacramento, Ca. 95833 916/920-2020

SCALE	DATE	DESIGNED STH	SUBMITTED	DEWANTE AND STOWELL	FLAG CITY	AERATION BASIN, CLARIFIER, SURGE BASIN AND AEROBIC DIGESTER SECTIONS	DRAWING NUMBER	SHEET NUMBER
AS NOTED	AUGUST 1994	DRAWN LEL	RECOMMENDED	CONSULTING ENGINEERS	SAN JOAQUIN CO., CALIFORNIA		S6	27 OF 44
	FILE 93423	CHECKED WHR	APPROVED	SACRAMENTO, CALIFORNIA	WASTEWATER TREATMENT FACILITIES			

SU-2876

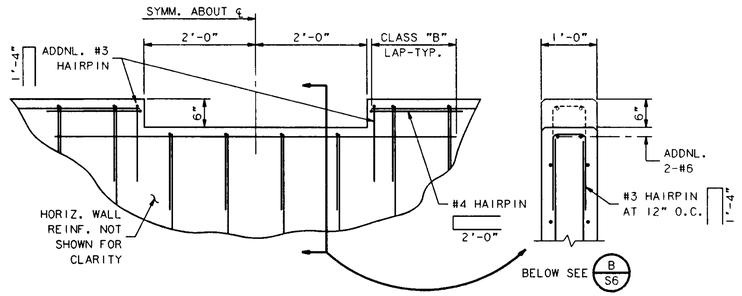
REVISION	DESCRIPTION	BY	APP	DATE



FOUNDATION PLAN

LGDSFILE,940553SX1, FNDN

1/4"=1'-0"

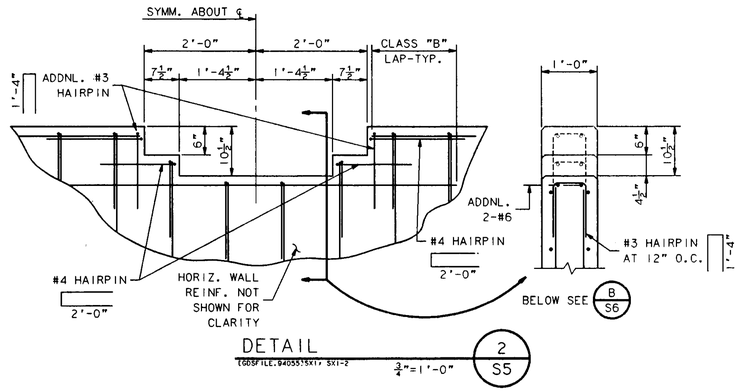


DETAIL

LGDSFILE,940553SX1, SX1-1

¾"=1'-0"

I S5



DETAIL

LGDSFILE,940553SX1, SX1-2

¾"=1'-0"

2 S5

SU-2877

RECORD DRAWING

William H. Richards
No. 1610
Exp. 6-30-97
Structural Engineer

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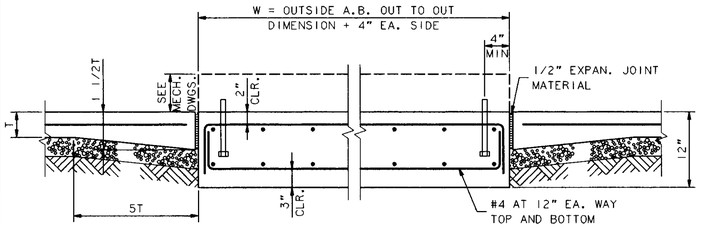
Structural Engineers, Incorporated
Suite 200 2500 Venture Oaks Way
Sacramento, Ca. 95833 916/920-2020

SCALE	DATE	DESIGNED	SUBMITTED	DEWANTE AND STOWELL	FLAG CITY	AERATION BASIN, CLARIFIER, SURGE BASIN AND AEROBIC DIGESTER	DRAWING NUMBER	SHEET NUMBER
AS NOTED	AUGUST 1994	STH		CONSULTING ENGINEERS	SAN JOAQUIN CO., CALIFORNIA	FOUNDATION PLAN AND DETAILS	S5	26 OF 44
	FILE 93423	DRAWN LEL	RECOMMENDED	SACRAMENTO, CALIFORNIA	WASTEWATER TREATMENT FACILITIES			
		CHECKED WHR	APPROVED					

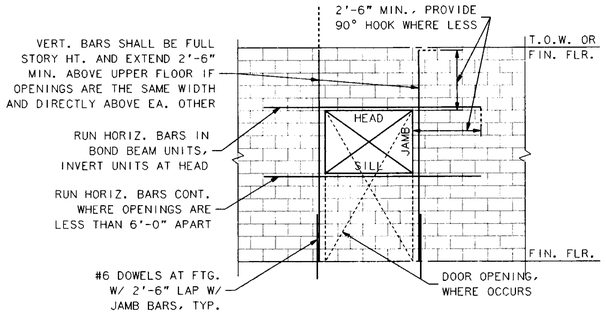
REVISION	DESCRIPTION	BY	APP	DATE



NOTE: SEE ARCH. AND MECH. DRAWINGS FOR SIZE AND LOCATION OF PADS.

TYPICAL CONCRETE PAD DETAIL

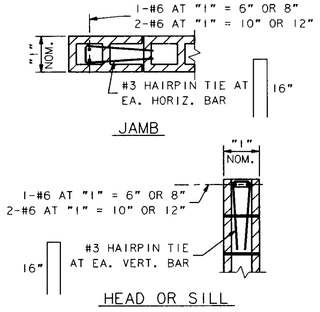
(GDSFILE.94055154, DET17) NO SCALE — 17 / S4



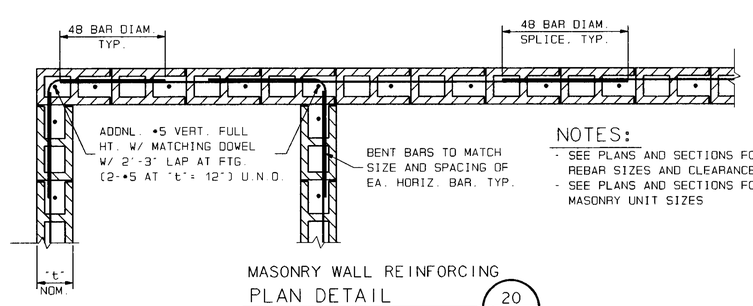
FOR TYP. HOOKS AND BENDS, SEE DETAIL 2 / S2

OPENINGS IN MASONRY WALLS DETAIL

(GDSFILE.94055154, DET19) NO SCALE — 19 / S4



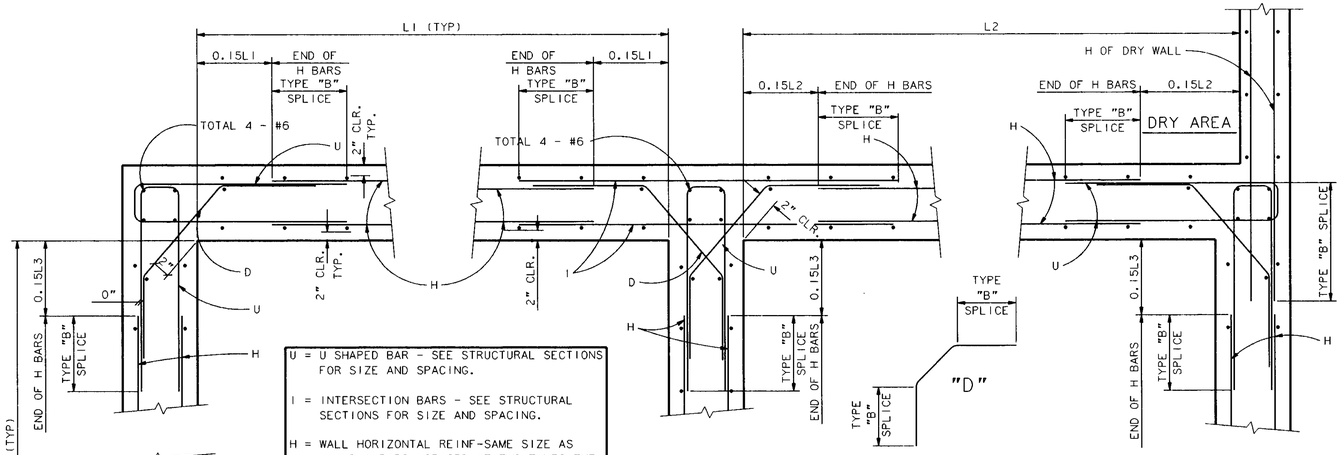
AT WALL CORNERS AND INTERSECTIONS SEE DETAIL 20 / S4



NOTES:
- SEE PLANS AND SECTIONS FOR REBAR SIZES AND CLEARANCES
- SEE PLANS AND SECTIONS FOR MASONRY UNIT SIZES

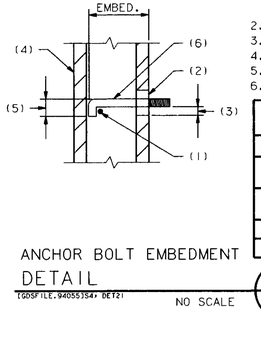
MASONRY WALL REINFORCING PLAN DETAIL

(GDSFILE.94055154, DET20) NO SCALE — 20 / S4



TYPICAL TANK WALL REINFORCING SPLICES DETAIL

(GDSFILE.94055154, DET18) NO SCALE — 18 / S4

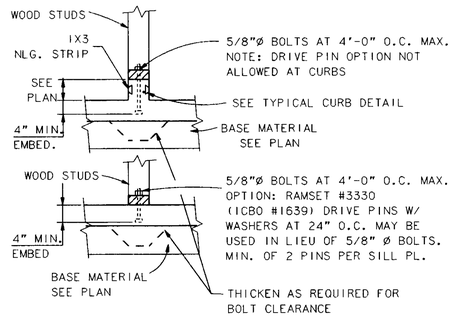


1. HOOK OVER CONT. REINF. OR #4 X 2'-0" LONG.
2. DRYPACK OR GROUT.
3. 1" CLR. AROUND BOLT, TYP.
4. MASONRY WALL.
5. 4 DIAMETER, TYPICAL.
6. ANCHOR BOLT PER SCHEDULE.

MINIMUM EMBEDMENT FOR ALL BOLTS IN CONCRETE OR MASONRY	
BOLT SIZE	EMBEDMENT
1/2"	4" AT 6" CMU 5" AT 8" CMU
5/8"	4" AT 6" CMU 5" AT 8" CMU
3/4"	6" IN CONCRETE
7/8"	6" IN CONCRETE

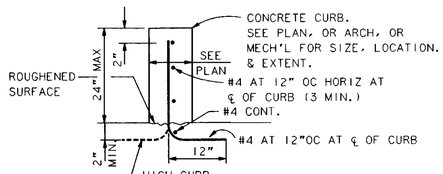
ANCHOR BOLT EMBEDMENT DETAIL

(GDSFILE.94055154, DET21) NO SCALE — 21 / S4



NON-BEARING INTERIOR PARTITION DETAIL

(GDSFILE.94055154, DET22) NO SCALE — 22 / S4



TYP. CURB/PAD DETAIL

(GDSFILE.94055154, DET23) NO SCALE — 23 / S4

William H. Richards No. 1910 6-30-97 REGISTERED STRUCTURAL ENGINEER

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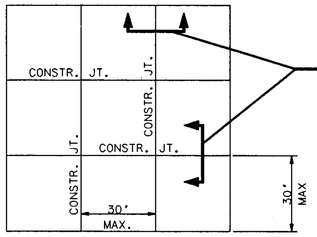
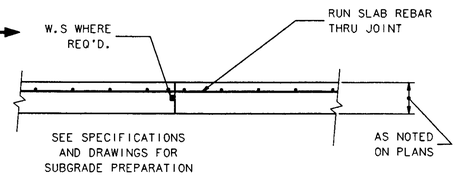
SU-2878

SCALE	DATE	DESIGNED	SUBMITTED	DEWANTE AND STOWELL	FLAG CITY	DRAWING NUMBER	SHEET NUMBER
NONE	AUGUST 1994	STH		CONSULTING ENGINEERS	SAN JOAQUIN CO., CALIFORNIA	S4	25 OF 44
	FILE 93423	DRAWN LEL	RECOMMENDED	SACRAMENTO, CALIFORNIA	WASTEWATER TREATMENT FACILITIES		
		CHECKED WHR	APPROVED		TYPICAL DETAILS III		

REVISION	DESCRIPTION	BY	APP	DATE

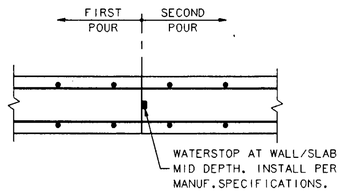


PLAN

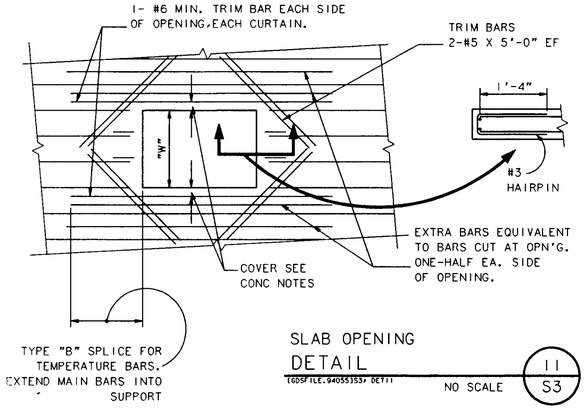


WET STRUCTURE

SLAB ON GRADE CONSTRUCTION JOINT DETAIL
(GDSFILE.94055353, DET9) NO SCALE — 9 / S3



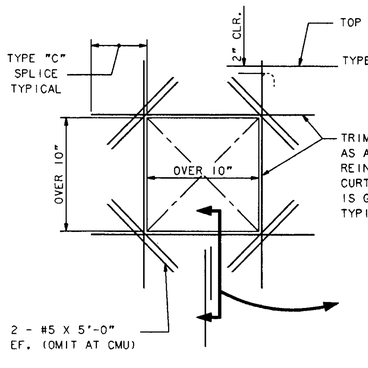
WATERSTOP JOINT (W.S.) DETAIL
(GDSFILE.94055353, DET10) NO SCALE — 10 / S3

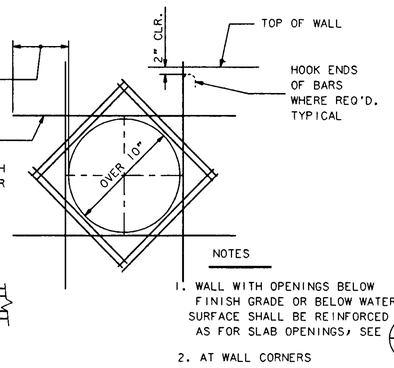


SLAB OPENING DETAIL
(GDSFILE.94055353, DET11) NO SCALE — 11 / S3

NOTES

1. REINFORCEMENT IN OTHER DIRECTION IS NOT SHOWN BUT SHALL BE TREATED IN SAME MANNER AS BARS SHOWN.
2. FOR ROUND OPENINGS A SIMILIAR DETAIL SHALL BE USED EXCEPT THAT THE DIAMETER OF THE ROUND OPENING SHALL REPLACE W.
3. THIS DETAIL SHALL ALSO APPLY TO WALLS BELOW WATER OR FINISH GRADE.

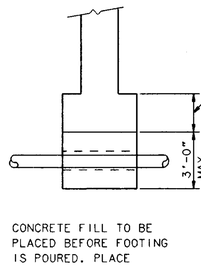


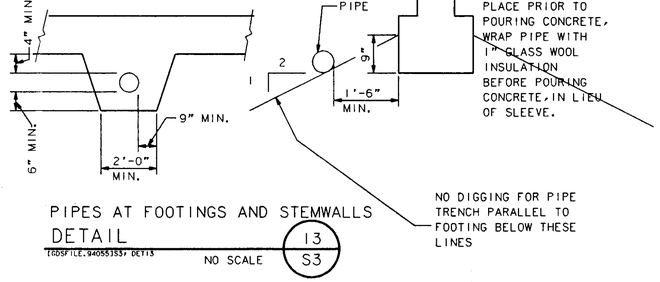


NOTES

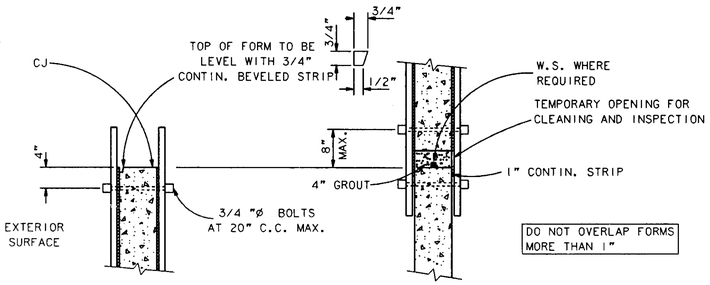
1. WALL WITH OPENINGS BELOW FINISH GRADE OR BELOW WATER SURFACE SHALL BE REINFORCED AS FOR SLAB OPENINGS, SEE 11 / S3
2. AT WALL CORNERS AND INTERSECTIONS BEND BARS AS IN DETAIL 3 / S2

OPENINGS IN CONC. WALLS DETAIL
(GDSFILE.94055353, DET12) NO SCALE — 12 / S3





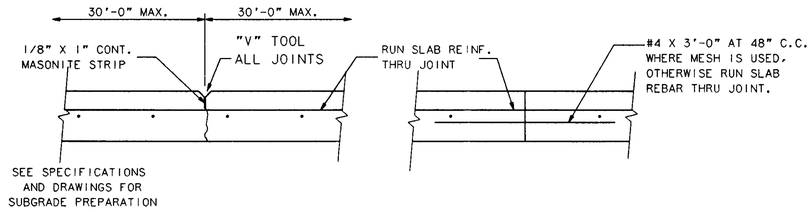
PIPES AT FOOTINGS AND STEMWALLS DETAIL
(GDSFILE.94055353, DET13) NO SCALE — 13 / S3



FIRST STAGE

SECOND STAGE

HORIZONTAL CONSTRUCTION JOINTS DETAIL
(GDSFILE.94055353, DET14) NO SCALE — 14 / S3

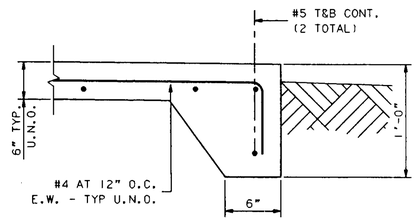


CONTROL JOINT

CONSTRUCTION JOINT

DRY STRUCTURE

SLAB ON GRADE JOINTS DETAIL
(GDSFILE.94055353, DET15) NO SCALE — 15 / S3



DETAIL
(GDSFILE.94055353, DET16) 1-1/2"=1'-0" — 16 / S3

RECORD DRAWING

William H. Richards, No. 1610, Exp. 6-30-97, Structural Engineer, REGISTERED PROFESSIONAL ENGINEER, STATE OF CALIFORNIA

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Structural Engineers, Incorporated
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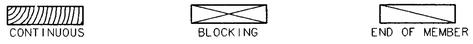
SU-2879

SCALE	DATE	DESIGNED	SUBMITTED	DEWANTE AND STOWELL	FLAG CITY	TYPICAL DETAILS II	DRAWING NUMBER	SHEET NUMBER
NONE	AUGUST 1994	DRAWN LEL	RECOMMENDED	CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES		S3	24 OF 44
	FILE 93423	CHECKED WHR	APPROVED					

WOOD

[GDSFILE.94055352, WOOD]

1. ALL STRUCTURAL WOOD SHALL CONFORM WITH THE FOLLOWING SPECIFICATIONS:
   - DOUGLAS FIR - LARCH COAST REGION ---------- U.B.C. STANDARD 25-4, STANDARD GRADING RULES (1981) OF W.W.P.A.
   - SILL PLATES ---------- U.B.C. STANDARD 26-12.
   - STRUCTURAL PLYWOOD (S.P.) ---- U.S. PRODUCT STANDARD P.S. 1-83 FOR SOFTWOOD PLYWOOD.
   - STRUCTURAL PLYWOOD (S.P.) ---- U.S. PRODUCT STANDARD P.S. 1-83 FOR SOFTWOOD STRUCTURAL PLYWOOD (S.P.).
2. MINIMUM GRADES SHALL BE:
   - STRUCTURAL FRAMING ---------- D.F. NO. 1- FREE OF HEART CENTER. U.O.N. ON DRAWINGS.
   - STRUCTURAL PLYWOOD (S.P.) ---- AT ROOFS : APA C-D WITH EXTERIOR GLUE.
   - SILL PLATES ---------- PRESSURE TREATED D.F. NO.1, FREE OF HEART CENTER EA. PIECE SHALL BEAR THE A.W.P.B. STAMP.
3. PROVIDE SOLID BLOCKING BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS.
4. NOTCHES OR HOLES IN WOOD JOIST ARE NOT PERMITTED UNLESS FULLY DETAILED ON DRAWINGS. CUTTING OF WOOD JOISTS SHALL BE LIMITED TO CUTS AND BORED HOLES NOT DEEPER THAN ONE-FIFTH THE JOIST DEPTH FROM THE TOP, AND LOCATED NOT FARTHER FROM THE END THAN THREE TIMES THE JOIST DEPTH. SEE TYPICAL DETAIL 7/S2.
5. HOLES FOR BOLTS IN WOOD SHALL BE BORED WITH A BIT OF THE SAME NOMINAL DIAMETER AS THE BOLT + 1/16".
6. ALL BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH METAL WASHERS UNDER HEADS AND NUTS WHICH BEAR ON WOOD. APPLIES ALSO TO INSERTED EXPANDING FASTENERS - RED HEAD, WEJ-IT, ETC. USE USS STANDARD CUT FLAT WASHERS.
7. ALL BOLT AND LAG SCREWS SHALL BE TIGHTENED AT TIME OF INSTALLATION AND RETIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.
8. LAY ALL STRUCTURAL PLYWOOD ON ROOF AND FLOORS WITH FACE GRAIN PERPENDICULAR TO SUPPORTS.
9. BLOCK S.P. JOINTS WITH 2 X 4 FLAT BLOCKING WHERE NOTED ON FRAMING PLANS AND WITH BLOCKING SAME SIZE AS STUDS AT WALLS.
10. CROSS BRIDGING BETWEEN JOISTS OR RAFTERS - SEE FRAMING PLANS AND TYPICAL DETAIL.
11. WOOD SYMBOLS:



12. ALL METAL HARDWARE SHALL BE SIMPSON OR EQUIVALENT U.O.N.
13. ANCHOR BOLTS WITH UPSET THREADS SHALL NOT BE USED.

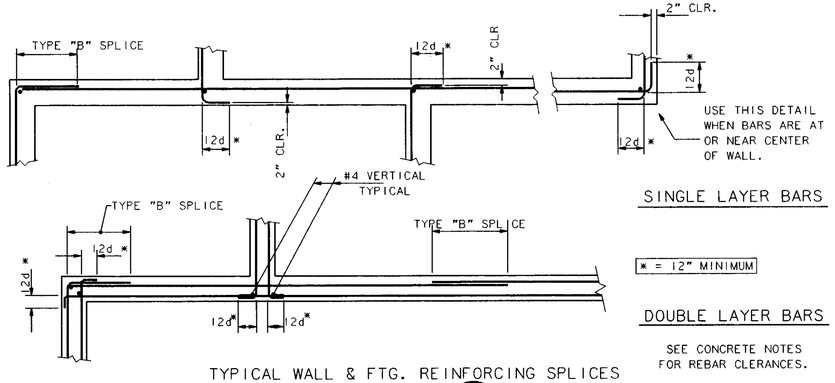
NAILING SCHEDULE

[GDSFILE.94055352, NAIL]

ALL NAILS FOR STRUCTURAL WORK SHALL BE COMMON WIRE NAILS. HOLES SHALL BE PRE-DRILLED WHERE NECESSARY TO PREVENT SPLITTING. NAILING NOT NOTED BELOW OR ON DRAWINGS SHALL BE A MINIMUM OF TWO NAILS AT EACH CONTACT: 8d FOR 1X MATERIAL AND 16d FOR 2X MATERIAL.

1. JOISTS OR RAFTERS	TO SIDES OF STUDS	8" JOIST OR LESS	3-16d
		EA. ADDNL. 4" DEPTH	1-16d
	AT ALL BEARINGS	TOENAIL EA. SIDE	2-10d
3. BLOCKING	BETW. JOISTS, RAFTERS OR STUDS	T.N. EA. SIDE EA. END	2-10d
		IN PLACE OF T.N.	2-16d
	BETW. JOIST OR RAFTER BEARINGS (PLATES)	T.N. EA. SIDE	3-10d
3. BUILT-UP BEAMS	10" OR LESS IN DEPTH: EA. SIDE STAGGERED 16d AT 12" C.C.		
	MORE THAN 10" IN DEPTH: 1/2" DIAM. BOLTS AT 24" C.C. STAGGERED		
4. STRUCTURAL PLYWOOD (S.P.) - SEE DETAILS			
5. NON-STRUCTURAL PLYWOOD (USE FINISH NAILS) -		AT SUPPORTED EDGES 6d AT 6" C.C.	
		AT INTERIOR BRG.S 6d AT 12" C.C.	
6. CROSS-BRIDGING	EA. END		2-10d

7. FOR ANY NAILING NOT SHOWN SEE TABLE NO. 25-O 1991 U.B.C.



SINGLE LAYER BARS

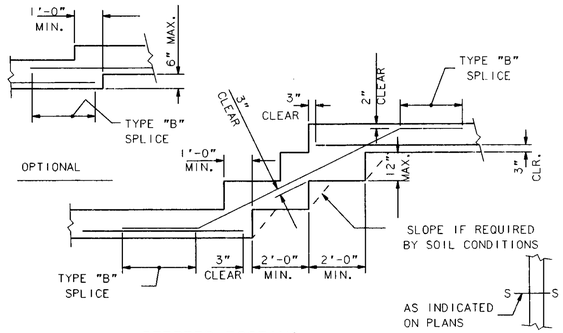
* = 12" MINIMUM

DOUBLE LAYER BARS

SEE CONCRETE NOTES FOR REBAR CLERANCES.

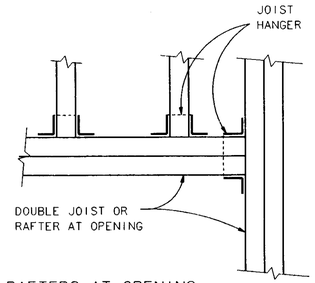
TYPICAL WALL & FTG. REINFORCING SPLICES DETAIL — NO SCALE — 3/S2

[GDSFILE.94055352, DET3]



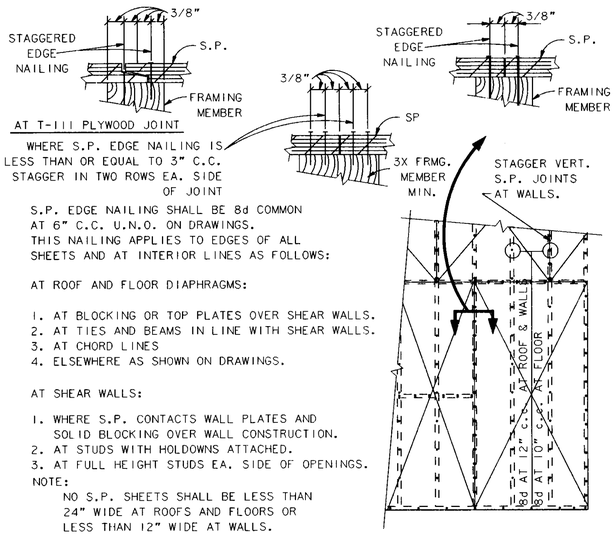
STEPPED FOOTING DETAIL — NO SCALE — 4/S2

[GDSFILE.94055352, DET4]



RAFTERS AT OPENING DETAIL — NO SCALE — 5/S2

[GDSFILE.94055352, DET5]



S.P. EDGE NAILING SHALL BE 8d COMMON AT 6" C.C. U.N.O. ON DRAWINGS. THIS NAILING APPLIES TO EDGES OF ALL SHEETS AND AT INTERIOR LINES AS FOLLOWS:

AT ROOF AND FLOOR DIAPHRAGMS:

1. AT BLOCKING OR TOP PLATES OVER SHEAR WALLS.
2. AT TIES AND BEAMS IN LINE WITH SHEAR WALLS.
3. AT CHORD LINES
4. ELSEWHERE AS SHOWN ON DRAWINGS.

AT SHEAR WALLS:

1. WHERE S.P. CONTACTS WALL PLATES AND SOLID BLOCKING OVER WALL CONSTRUCTION.
2. AT STUDS WITH HOLDOWNS ATTACHED.
3. AT FULL HEIGHT STUDS EA. SIDE OF OPENINGS.

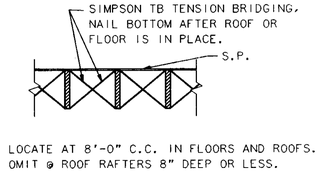
NOTE:
NO S.P. SHEETS SHALL BE LESS THAN 24" WIDE AT ROOFS AND FLOORS OR LESS THAN 12" WIDE AT WALLS.

STRUCTURAL PLYWOOD NAILING DETAIL — NO SCALE — 6/S2

[GDSFILE.94055352, DET6]

RAFTER NOTCH DETAIL — NO SCALE — 7/S2

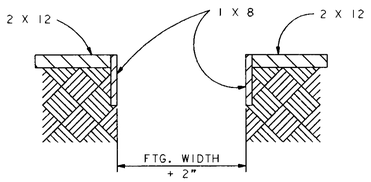
[GDSFILE.94055352, DET7]



LOCATE AT 8'-0" C.C. IN FLOORS AND ROOFS. OMIT @ ROOF RAFTERS 8" DEEP OR LESS.

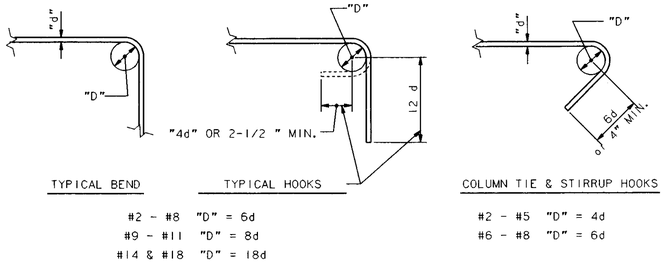
CROSS BRIDGING DETAIL — NO SCALE — 8/S2

[GDSFILE.94055352, DET8]



FOOTING POUR OPTION DETAIL — NO SCALE — 1/S2

[GDSFILE.94055352, DET1]



#2 - #8 "D" = 6d
#9 - #11 "D" = 8d
#14 & #18 "D" = 18d

#2 - #5 "D" = 4d
#6 - #8 "D" = 6d

TYPICAL REINFORCING BEND DETAIL — NO SCALE — 2/S2

[GDSFILE.94055352, DET2]

PRE-ENGINEERED ROOF TRUSSES

[GDSFILE.94055352, TRUSS]

1. TRUSS DESIGN SHALL BE PROVIDED BY THE SUPPLIER TO MEET THIS CRITERIA, 1991 UBC REQUIREMENTS AND UBC STANDARD NO. 25-17, PART V FOR LOADS AS FOLLOWS:
   TRUSS LOADING:
   TOP CHORD: 11.0 PSF DEAD LOAD AND 20.0 PSF LIVE LOAD (REDUCIBLE)
   BOTTOM CHORD: 6.0 PSF DEAD LOAD AND 10.0 PSF LIVE LOAD & 100# POINT LOAD @ ANY LOCATION.
   LIVE LOADS DO NOT ACT SIMULTANEOUSLY.
   * TRUSS TOP CHORDS SHALL BE DESIGNED WITH AN ADDITION AXIAL COMPRESSION AND TENSION FORCE OF 1100 LBS (SUB-DIAPHRAGM CHORD FORCE DUE TO SEISMIC/WIND LOADS).
2. MINIMUM GRADE LUMBER - #2 HEM FIR.
3. CONNECTIONS SHALL BE IN ACCORDANCE WITH PUBLISHED APPROVALS OF I.C.B.O.
4. MINIMUM MEMBER SIZES: TOP CHORD 2X6; BOTTOM CHORD 2X4; WEB 2X3 (REGRADED IF RIPPED FROM 2X6 LUMBER).
5. TRUSS DRAWINGS, CALCULATIONS AND COPIES OF I.C.B.O. APPROVALS FOR METAL CONNECTOR PLATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
6. HEEL JOINT DESIGN SHALL CONSIDER THE EFFECTS OF ECCENTRIC LOADING IN ACCORDANCE WITH UBC STANDARD 25-17, PART V.
7. MAXIMUM ALLOWABLE LOAD DURATION STRESS INCREASE IS TO BE 15%.
8. INCREASE IN ALLOWABLE STRESS FOR ASSEMBLIES OF REPETITIVE FRAMING SHALL NOT BE PERMISSIBLE UNLESS THE TRUSSES ARE JOINED BY TRANSVERSE LOAD DISTRIBUTING ELEMENTS ADEQUATE TO SUPPORT THE DESIGN LOAD AS PROVIDED FOR IN UBC SECTION 2504 (a).
9. PROVIDE COMBINED STRESS CALCULATIONS. WHEN EVALUATING COMBINED STRESS RATIO, THE MOMENT CONTRIBUTION SHALL BE CHECKED USING SIMPLE SPAN MOMENT FORMULAS. CONTINUOUS SPAN MOMENTS WILL NOT BE ALLOWED.
10. DESIGN CAMBER FOR 1-1/2 TIMES ESTIMATED DEAD LOAD DEFLECTION.
11. PROVIDE COMPLETE ROOF TRUSS LAYOUT PLAN(S) WITH TRUSS IDENTIFICATION NUMBERS CLEARLY IDENTIFIED ON PLANS AND CALCULATIONS. INDICATE TRUSS MANUFACTURER ON TRUSS DRAWINGS AND PLANS.
12. CLEARLY INDICATE ALL BRACING AND BRIDGING. MEMBERS SHALL BE ADEQUATELY BRACED BEFORE ERECTION. MEMBERS SHALL BE ALIGNED AND ALL CONNECTIONS COMPLETED BEFORE REMOVAL OF BRACING.
13. TRUSS DRAWINGS, TRUSS LAYOUT PLANS AND CALCULATIONS SHALL ALL BE SIGNED BY A CIVIL ENGINEER LICENSED BY THE STATE OF CALIFORNIA.

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Suite 200 2500 Venture Oaks Way
Sacramento, Ca. 95833 916/920-2020

REVISION	DESCRIPTION	BY	APP	DATE

SU-2880

SCALE	DATE	DESIGNED	SUBMITTED
NONE	AUGUST 1994	STH	
	FILE 93423	DRAWN LEL	RECOMMENDED
		CHECKED WHR	APPROVED

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

TYPICAL NOTES & DETAILS I

DRAWING NUMBER S2

SHEET NUMBER 23 OF 44

GENERAL NOTES

(GDSFILE.94055351, GEN)

1. TYPICAL DETAILS AND NOTES SHALL APPLY UNLESS OTHERWISE SHOWN OR NOTED ON PLANS.
2. DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITION.
3. CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CODES AND REGULATIONS.
4. PRIOR TO FABRICATION, SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY THE ENGINEER ON ALL STRUCTURAL STEEL AND REINFORCING STEEL.
   SHOP DRAWINGS: CONTRACTOR AGREES THAT SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS AND THAT THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT BY INDICATING WHICH MATERIAL HE INTENDS TO FURNISH AND INSTALL AND BY DETAILING THE FABRICATION AND INSTALLATION METHODS HE INTENDS TO USE.
5. SAFETY NOTE:
   A) IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA, LATEST EDITION, AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
   B) THE ENGINEER AND THE OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
   C) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS AND SHORING REQUIRED.
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
7. CONTRACTOR SHALL NOTIFY THE ENGINEER WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DRAWINGS OR DOCUMENTS. CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF STRUCTURES THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED WITH THE AFFECTED PARTIES.

CONSTRUCTION LOADS

(GDSFILE.94055351, LOADS)

STRUCTURES HAVE BEEN DESIGNED FOR OWNER'S OPERATIONAL LOADS ON THE FINISHED STRUCTURES. DURING CONSTRUCTION, THE STRUCTURES SHALL BE PROTECTED BY BRACING AND BALANCING WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR. BACKFILL SHALL BE PLACED AROUND STRUCTURES SYMMETRICALLY AND UNIFORMLY SO THAT LOADS AGAINST STRUCTURES ARE INTRODUCED IN BALANCE. LIQUID-CONTAINING STRUCTURES SHALL BE TESTED FOR WATER-TIGHTNESS BEFORE BACKFILLING - SEE SPECS.

INSPECTION NOTES

(GDSFILE.94055351, INSP)

1. GENERAL: INSPECTOR SHALL BE PRESENT DURING THE OPERATIONS LISTED BELOW.
2. CONCRETE: DURING THE TAKING OF TEST SPECIMENS AND PLACING OF ALL REINFORCED CONCRETE AND PNEUMATICALLY PLACED CONCRETE.
3. REINFORCING STEEL:
   A) DURING THE PLACING OF REINFORCING STEEL FOR ALL STRUCTURAL CONCRETE.
   B) DURING PLACING OF ALL INSERTS.
4. WELDING: DURING ALL STRUCTURAL WELDING, INCLUDING WELDING OF REINFORCING STEEL.

FOUNDATIONS

(GDSFILE.94055351, FOUND)

1. REFER TO RECOMMENDATIONS IN GEOTECHNICAL REPORT BY J.H. KLEINFELDER & ASSOCIATES, FILE NO. 20-2662-04, DATED DECEMBER 20, 1988.
2. BEARING SOIL IS CLASSIFIED AS ENGINEERED FILL WITH AN ALLOWABLE BEARING PRESSURE OF 3500 PSF D.L. + L.L.
   3000 PSF D.L. + L.L. ..... ELECTRICAL BUILDING
   8000 PSF D.L. + L.L. ..... PUMP STATION
3. BOTTOM ELEVATION OF FOOTINGS NOTED THUS ON FOUNDATION PLAN: -(2'-0")
4. THE FOOTINGS SHALL BEAR ON FIRM, DRY OR ENGINEERED FILL WITH A MINIMUM PENETRATION OF 18 INCHES. SEE GEOTECH REPORT.
5. EXCAVATIONS SHALL BE CLEANED OF ALL DEBRIS. STANDING WATER SHALL BE REMOVED.
6. ALL FOOTINGS SHALL BE FORMED. FOUNDATIONS MAY BE PLACED IN NEAT EXCAVATIONS PROVIDED WRITTEN PERMISSION IS OBTAINED FROM THE ENGINEER AND FOOTINGS ARE INCREASED 2" IN WIDTH. SEE TYPICAL DETAIL.
7. NOTIFY THE ENGINEER 48 HOURS BEFORE PLACING FOUNDATIONS.

WATER STOPS FOR CONCRETE CONST.

(GDSFILE.94055351, WATER)

1. ALL WATER STOPS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURERS SPECIFICATIONS TO GIVE A WATERTIGHT JOINT.
2. WATER STOPS SHALL BE CAREFULLY POSITIONED IN PLACE AND SUPPORTED AS REQUIRED TO REMAIN IN PLACE DURING OPERATIONS.
3. WATERSTOPS MUST BE USED WHERE LIQUID OR EARTH RETAINING STRUCTURES ARE ADJACENT TO DRY AREAS OF THE STRUCTURE AND WHERE LIQUID RETAINING STRUCTURES ARE EXPOSED TO THE EXTERIOR.
4. LIQUID RETAINING STRUCTURES MUST BE TESTED FOR WATER TIGHTNESS (SEE SPECS). WATERSTOPS MAY BE USED TO ASSURE WATERTIGHTNESS AT CONTRACTOR'S OPTION.

CONCRETE AND REINFORCING STEEL

(GDSFILE.94055351, CONC)

1. CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318-89.
2. THE MINIMUM 28 DAY STRENGTH AND TYPE OF CONCRETE SHALL BE AS FOLLOWS:
   ALL NON-STRUCTURAL CONCRETE .....150 PCF, F'c = 2500 PSI
   CONCRETE FOR LIQUID-CONTAINING STRUCTURES .. 150 PCF, F'c = 3500 PSI
   ALL OTHER STRUCTURAL CONCRETE..... 150 PCF, F'c = 3000 PSI
3. CEMENT SHALL CONFORM TO ASTM C-150 TYPE II.
4. CONCRETE AGGREGATES: NATURAL SAND AND ROCK AGGREGATES CONFORMING TO ASTM C-33.
5. REINFORCING SHALL CONFORM TO ASTM A615 GRADE 60, EXCEPT STIRRUPS AND TIES SHALL BE GRADE 40.
6. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D1.4 USING PROPER LOW HYDROGEN ELECTRODES. TACK WELDING TO REBAR IS STRICTLY PROHIBITED. SEE "REBAR WELDING".
7. REINFORCING STEEL SHALL BE DETAILED, FABRICATED, AND INSTALLED ACCORDING TO MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION" BY WCRSI.
8. WIRE FABRIC SHALL CONFORM TO ASTM A-185.
9. DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO THE FACE OF MAIN BARS AND DENOTE CLEAR COVERAGE. UNLESS OTHERWISE NOTED, CONCRETE COVERAGE SHALL BE AS FOLLOWS:
   CONCRETE DEPOSITED DIRECTLY AGAINST GROUND
   (EXCEPT SLABS) ..... 3"
   FORMED CONCRETE EXPOSED TO WEATHER OR GROUND OR
   LIQUID -- #6 AND LARGER ..... 2"
   #5 AND SMALLER ..... 1-1/2"
   BEAMS (TOP BARS)..... 1-1/2"
   BEAMS (ALL OTHER MAIN REINFORCING)..... 2"
   COLUMN MAIN REINFORCING ..... 2"
   WALLS AND SLABS (INTERIOR DRY FACES)..... 3/4"
   SLABS ON GROUND WITH ONE LAYER OF
   REINFORCEMENT ..... POSITION IN CENTER OF SLAB.
10. A) ALL BARS SHALL HAVE A CLASS B MINIMUM SPLICE LAP UNLESS OTHERWISE NOTED. SEE "REINFORCEMENT LAP SPLICES IN INCHES".
    B) DOWEL ALL VERTICAL REBARS IN WALLS AND COLUMNS FROM FOUNDATION WITH SAME SIZE BAR.
    C) SPLICES IN ADJACENT BARS SHALL BE NOT LESS THAN 5'-0" APART.
    D) SPLICE CONTINUOUS BARS IN SOIL-BEARING GRADE BEAMS AS FOLLOWS: BOTTOM BARS AT MID-SPAN, TOP BARS AT CENTERLINE OF SUPPORT, UNLESS NOTED OTHERWISE.
    E) SPLICE CONTINUOUS BARS IN BEAMS, SPANDRELS, WALL BEAMS ETC. AS FOLLOWS: BOTTOM BARS AT CENTERLINE OF SUPPORT, TOP BARS AT MIDSPAN, UNLESS NOTED OTHERWISE.
    F) REINFORCING BARS SHALL BE RUN IN A MANNER THAT FORMS A CONTINUOUS SYSTEM OF BARS TYING ALL PARTS OF THE STRUCTURE TOGETHER. EXTEND ALL REINFORCING BARS AS FAR AS POSSIBLE IN EACH CONCRETE MEMBER AND TERMINATE BAR TO PROVIDE 2" OF CONCRETE COVER OVER END OF BAR OR FACE OF BEND.
    G) BEAM STIRRUPS AND COLUMN TIES SHALL HOOK 135 DEGREES AROUND A CORNER BAR UNLESS OTHERWISE SHOWN.
11. GENERAL:
    A) NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE SLABS, BEAMS, WALLS OR GRADE BEAMS UNLESS SPECIFICALLY DETAILED.
    B) REFER TO ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS FOR ALL OPENINGS, FLANGES, MOULDS, GROOVES, CLIPS AND GROUNDS TO BE CAST IN CONCRETE.
12. CONSTRUCTION JOINTS SHALL BE MADE ROUGH AND ALL LAITANCE REMOVED FROM THE SURFACE. CONCRETE MAY BE ROUGHENED BY CHIPPING THE ENTIRE SURFACE, SANDBLASTING, OR HOSING THE SURFACE 4 TO 6 HOURS AFTER THE POUR WITH A FINE SPRAY.
13. REMOVE ALL DEBRIS FROM THE FORMS BEFORE PLACING ANY CONCRETE.
14. REINFORCING, DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE SHALL BE SECURELY POSITIONED BEFORE PLACING CONCRETE. OBTAIN APPROVAL OF ALL AFFECTED TRADES PRIOR TO PLACING CONCRETE.
15. MAXIMUM FREE FALL OF CONCRETE SHALL BE 4'-0".
16. WALLS SHALL BE PLACED IN HORIZONTAL LAYERS OF 2'-0" MAX. DEPTH.
17. CONCRETE IN WALLS, PIERS, OR COLUMNS SHALL SET AT LEAST 2 HOURS BEFORE PLACING CONCRETE IN BEAMS, SPANDRELS, OR SLABS SUPPORTED THEREON.
18. REINFORCE ALL SLABS ON GRADE AS SHOWN ON DRAWINGS.
19. HORIZONTAL WALL BARS IN DOUBLE LAYER WALLS SHALL BE STAGGERED. USE #2 SPREADERS APPROXIMATELY EVERY THIRD INTERSECTION EACH DIRECTION FOR ALL DOUBLE LAYER WALLS. PLACE SPREADERS IN VERTICAL LINES WITH FORM TIES.
20. NO WOOD SPREADERS ARE ALLOWED. NO WOOD STAKES ARE ALLOWED IN AREAS TO BE CONCRETED.
21. MINIMUM WALL REINFORCING SHALL BE:

WALL THICKNESS	SINGLE LAYER	DOUBLE LAYER
7" OR LESS	#4 AT 12" cc E.W.	
8"	#4 AT 10" cc E.W.	
9" AND 10"		#4 AT 16" cc E.W.
11" AND 12"		#4 AT 12" cc E.W.

22. CONCRETE MIX DESIGN SHALL BE SUBMITTED FOR ENGINEER'S REVIEW PRIOR TO PLACING CONCRETE.
23. NOTIFY THE ENGINEER 48 HOURS PRIOR TO PLACING CONCRETE.

REBAR WELDING

(GDSFILE.94055351, REWELD)

ALL REBAR TO BE WELDED SHALL BE CONTINUOUSLY INSPECTED BY A QUALIFIED LABORATORY. CONTRACTOR MUST FURNISH TO THE LABORATORY MILL CERTIFICATES SHOWING CHEMICAL ANALYSIS. ALL PREHEATING AND WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.4 STANDARDS (LATEST EDITION).

MASONRY

(GDSFILE.94055351, MAS)

1. CONCRETE BLOCK UNITS SHALL CONFORM TO ASTM C-90 GRADE N, TYPE I WITH 1900 PSI MIN. COMPRESSIVE STRENGTH. F'm = 1500 PSI.
2. MORTAR SHALL BE TYPE S CONFORMING TO UBC STANDARD 24-20, 1800 PSI.
3. GROUT SHALL CONFORM TO UBC 1991 WITH 2000 PSI MINIMUM.
4. REINFORCING STEEL SHALL BE THE SAME AS NOTE 5 UNDER CONCRETE.
5. LAP ALL BARS 48 BAR DIAMETERS.
6. DRILL THROUGH STEEL BEAMS TO PASS REBAR (1" DIA. MAXIMUM).
7. BEFORE BLOCK IS PLACED ON CONCRETE, THOROUGHLY CLEAN CONCRETE OF ALL LAITANCE AND ALL LOOSE MATERIAL. ROUGHEN AS IN A CONCRETE CONSTRUCTION JOINT.
8. CONCRETE BLOCK MASONRY SHALL BE BUILT TO PRESERVE THE UNOBSTRUCTED CONTINUITY OF THE VERTICAL CELLS. WALLS AND CROSS WEBS SHALL BE FULL BEDDED IN MORTAR GROUT. ALL HEAD OR END JOINTS SHALL BE SOLIDLY FILLED WITH MORTAR FOR A DISTANCE IN FROM THE FACE OF THE WALL OR UNIT NOT LESS THAN THE THICKNESS OF THE LONGITUDINAL FACE SHELLS.
9. VERTICAL CELLS SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR UNOBSTRUCTED, CONTINUOUS VERTICAL CELL MEASURING NOT LESS THAN 2" x 3".
10. CLEAN OUT OPENINGS SHALL BE PROVIDED AT THE BOTTOMS OF ALL CELLS TO BE FILLED AT EACH LIFT OR POUR OF GROUT WHERE SUCH LIFT OR POUR OF GROUT IS IN EXCESS OF 4'-0" IN HEIGHT. ANY OVERHANGING MORTAR OR OTHER OBSTRUCTION OR DEBRIS SHALL BE REMOVED FROM INSIDE OF SUCH CELLS. THE CLEANOUTS SHALL BE SEALED AFTER INSPECTION AND BEFORE GROUTING.
11. VERTICAL REINFORCING SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 BAR DIAMETERS.
12. WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE POUR 1-1/2" BELOW THE TOP OF THE UPPERMOST UNIT.
13. PLACE ALL HORIZONTAL BARS IN BOND BEAM UNITS. WHEN 2 BARS ARE USED, STAGGER LAPS 6'-0" MINIMUM.
14. PROVIDE DOWEL TO FOUNDATION OF EQUAL DIAMETER AND 48 BAR DIAMETER LAP TO EACH VERTICAL BAR IN WALLS, PIERS, COLUMNS, ETC. DOWELS SHALL BE STRAIGHT AND PLUMB.
15. ALL CONCRETE BLOCK UNITS SHALL BE OPEN END BOND BEAM UNITS.

STRUCTURAL STEEL (SUBMIT SHOP DRAWINGS BEFORE FABRICATING)

(GDSFILE.94055351, STEEL)

1. FABRICATION, ERECTION AND MATERIALS SHALL CONFORM WITH THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AND UBC, 1991 EDITION.
2. STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36.
3. PIPE COLUMNS SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B.
4. TUBE COLUMNS SHALL CONFORM TO ASTM A500, GRADE B.
5. WELDING SHALL BE DONE BY THE ELECTRIC ARC PROCESS IN ACCORDANCE WITH "AWS" STANDARDS, USING ONLY CERTIFIED WELDERS. ALL BUTT WELDS SHALL HAVE COMPLETE PENETRATION. ALL EXPOSED BUTT WELDS SHALL BE GROUND.
6. PLACE NON-SHRINK GROUT UNDER ALL BEARINGS ON CONCRETE OR MASONRY BEFORE ADDING VERTICAL LOAD.
7. ALL STRUCTURAL STEEL SHALL BE ERECTED PLUMB AND TRUE TO LINE. TEMPORARY BRACING SHALL BE INSTALLED AND SHALL BE LEFT IN PLACE UNTIL OTHER MEANS IS PROVIDED TO ADEQUATELY BRACE THE STRUCTURE.
8. HOLES FOR BOLTS SHALL BE OF THE SAME NOMINAL DIAMETER AS THE BOLT PLUS 1/16".
9. USE STANDARD AISC GAGE AND PITCH FOR BOLTS EXCEPT AS NOTED OTHERWISE.
10. PROVIDE 1/2" DIAMETER STITCH BOLTS AND RING FILLS, SPACED AT NOT MORE THAN 2'-0" ON CENTERS FOR ALL DOUBLE ANGLE MEMBERS.
11. WRAP STRUCTURAL STEEL EMBEDDED IN CONCRETE WITH 6X6-W1.4XW1.4 E.W.F. DO NOT PAINT EMBEDDED AREAS.
12. HIGH STRENGTH BOLTS SHALL BE 3/4" DIA. ASTM A-325 F U.N.O. SEE SPECIFICATIONS.

WELDING-REQUIREMENTS

(GDSFILE.94055351, WELD)

1. WELDING SHALL BE DONE BY THE ELECTRIC ARC OR THE ELECTRO-FLUX PROCESS IN ACCORDANCE WITH "A.S.M.E." STANDARDS, USING ONLY CERTIFIED WELDERS. ALL BUTT WELDS SHALL HAVE COMPLETE PENETRATION. ALL WELDS SHALL BE CLEANED OF SLAG BEFORE GALVANIZING.

REINFORCEMENT LAP SPLICES IN INCHES

(GDSFILE.94055351, REINF)

BAR SIZE		#4	#4	#5	#6	#7	#8	#9	#10	#11	
SPLICE	F'c (PSI)	GR 40	GRADE 60								
CLASS B	3000		18	28	35	42	49	59	74	94	116	TOP BARS
			14	22	27	32	38	45	57	73	89	BOTT BARS
CLASS B	3500		17	26	32	39	45	54	69	87	107	TOP BARS
			13	20	25	30	35	42	53	67	83	BOTT BARS

TOP BARS REFERS TO ANY HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.

REVISION	DESCRIPTION	BY	APP	DATE

ABBREVIATIONS

(GDSFILE.94055351, ABBR)

ADDNL.	ADDITIONAL
A.B.	AGGREGATE BASE
ARCH.	ARCHITECTURAL
BETW.	BETWEEN
BEV.	BEVELED
BM.	BEAM
BOTT.	BOTTOM
BRG.	BEARING
CHKD.	CHECKERED PLATE
CLR.	CLEAR
CL.	CENTER LINE
C.C.	CENTER TO CENTER
C.M.U.	CONCRETE MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONSTR JT.	CONSTRUCTION JOINT
CONT. (CONTIN.)	CONTINUOUS
C.J.	CONTROL JOINT (CONTRACTION JOINT)
DIA.	DIAMETER
DIM.	DIMENSION
DN.	DOWN
EA.	EACH
E.F.	EACH FACE
E.J.	EXPANSION JOINT
EL. (ELEV.)	ELEVATION
E.W.F.	ELECTRICALLY WELDED FABRIC
EQ.	EQUAL
E.N.	EDGE NAILING
E.S.	EDGE OF SLAB
E.W.	EACH WAY
F.B.	FACE OF BLOCK
F.C.	FACE OF CONCRETE
F.D.	FLOOR DRAIN
FIN. FLR.	FINISHED FLOOR
FIN. GRD.	FINISHED GRADE
FLG.	FLANGE
FTG.	FOOTING
GA.	GAGE
G.A.F.	GALVANIZE AFTER FABRICATION
GALV.	GALVANIZED
H.R.	HAND RAIL
H.A.	HEADED ANCHOR
H.	HIGH
H.S.B.	HIGH STRENGTH BOLT
HORIZ.	HORIZONTAL
K.P.	KICK PLATE
L.	LONG
L.S.	LAG SCREW
MANUF.	MANUFACTURER
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MECH.	MECHANICAL
MIN.	MINIMUM
N.T.S.	NOT TO SCALE
O.H.	OPPOSITE HAND
PL.	PLATE
REINF.	REINFORCING
DIA.	ROUND, DIAMETER
REQ'D.	REQUIRED
SIM.	SIMILAR
S.S.	STAINLESS STEEL
STIFF.	STIFFENER
STAG.	STAGGER
SQ.	SQUARE
SYM.	SYMMETRICAL
T & B	TOP AND BOTTOM
T.O.B.	TOP OF BLOCK
T.O.C.	TOP OF CONCRETE
T.S.	TOP OF SLAB
T.O.S.	TOP OF STEEL
T.W.	TOP OF WALL
TYP.	TYPICAL
U.N.O. (U.O.N.)	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W.S.	WATERSTOP
W.	WIDE
W.P.	WORKING POINT

William H. Richards, No. 1610, Exp. 6-30-97, Structural Engineer, State of California

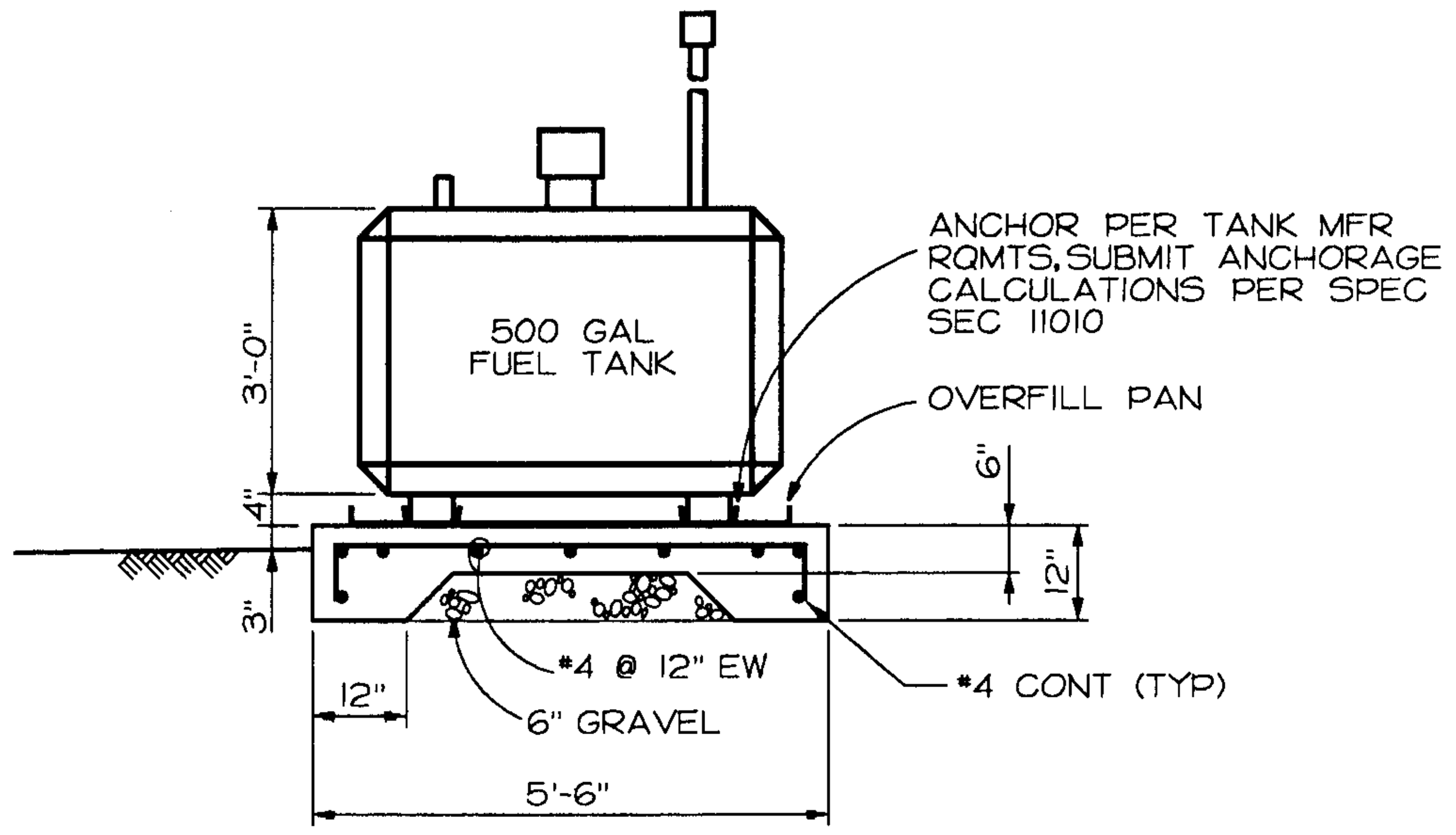
Cole/Yee/Schubert & Associates
Structural Engineers, Incorporated
Suite 200 2500 Venture Oaks Way
Sacramento, Ca. 95833 916/920-2020

RECORD DRAWING

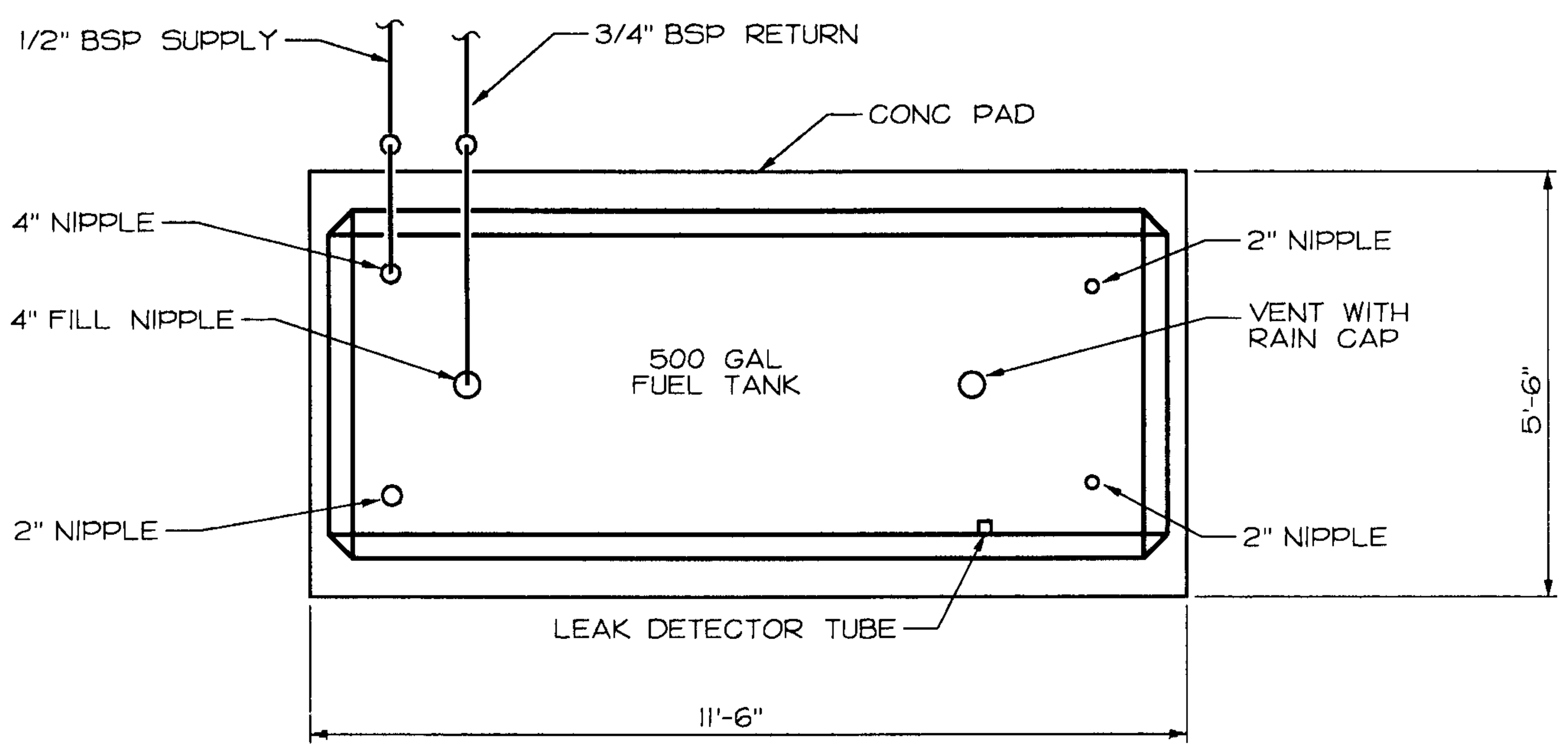
SU-2881

SCALE	DATE	DESIGNED	SUBMITTED	DEWANTE AND STOWELL	FLAG CITY	TYPICAL STRUCTURAL NOTES	DRAWING NUMBER	SHEET NUMBER
NONE	AUGUST 1994	STH		CONSULTING ENGINEERS	SAN JOAQUIN CO., CALIFORNIA		S1	22 OF 44
	FILE 93423	DRAWN LEL	RECOMMENDED	SACRAMENTO, CALIFORNIA	WASTEWATER TREATMENT FACILITIES			
		CHECKED WHR	APPROVED					

REVISION	DESCRIPTION	BY	APP	DATE



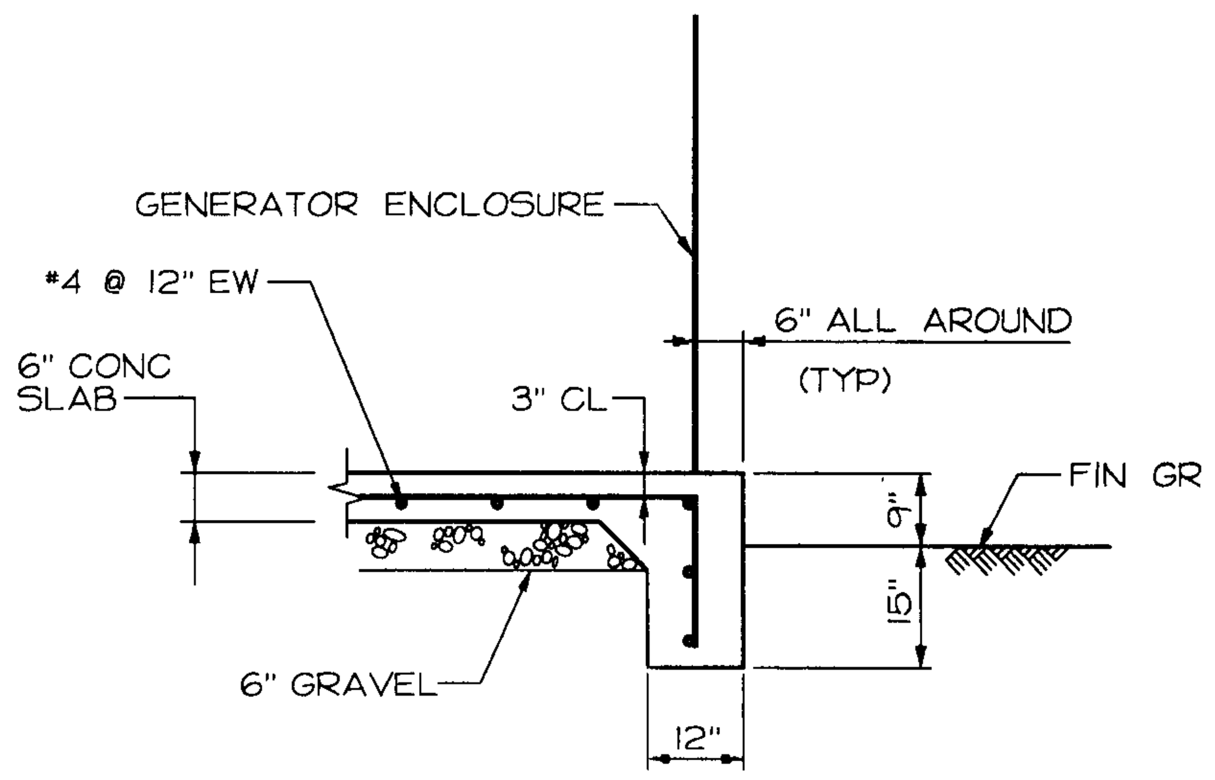
END ELEVATION



PLAN VIEW

FUEL STORAGE TANK

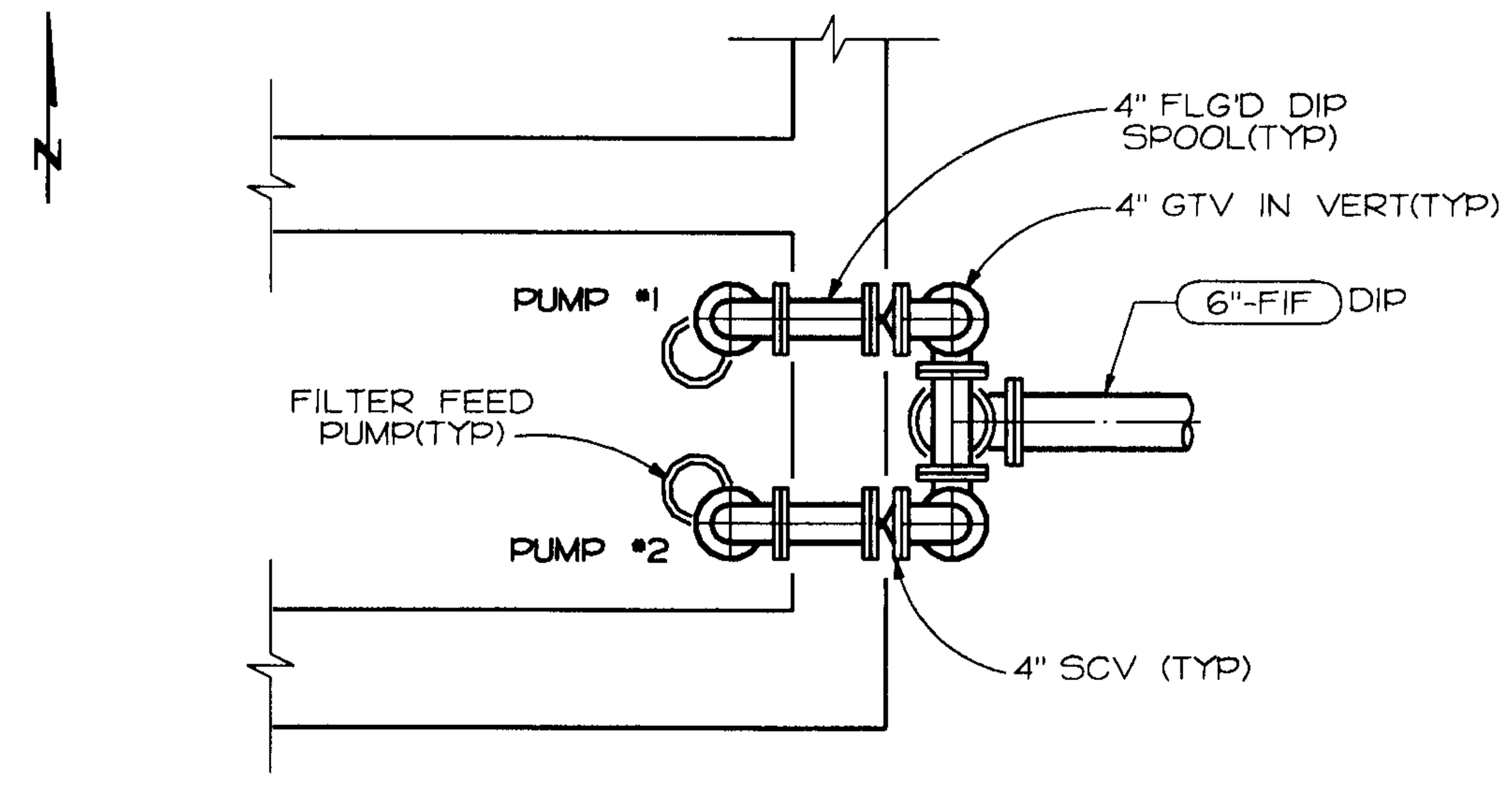
SCALE : 1/2" = 1'-0"



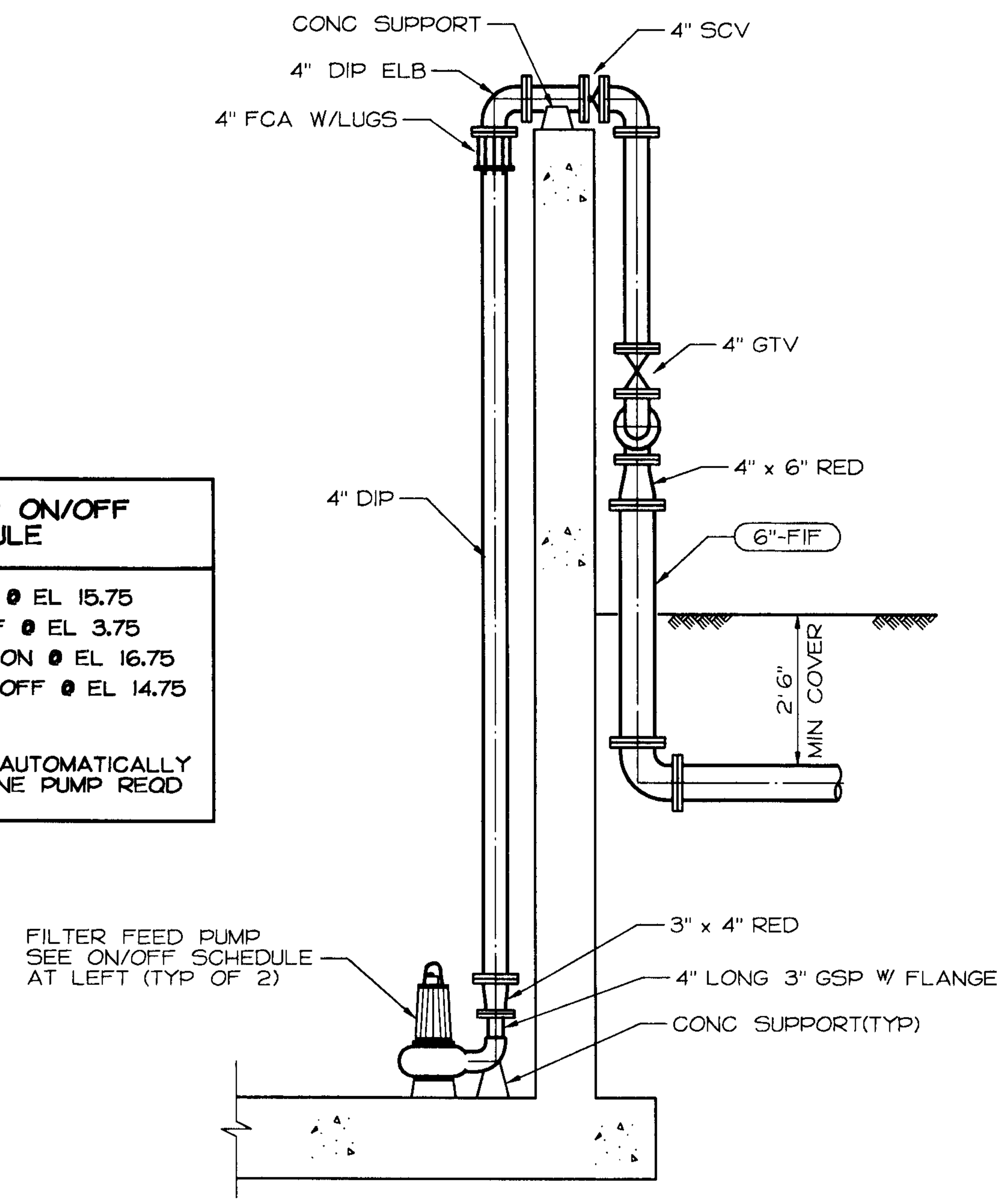
GENERATOR PAD

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

FILTER PUMP ON/OFF SCHEDULE
PRIMARY PUMP ON @ EL 15.75
PRIMARY PUMP OFF @ EL 3.75
SECONDARY PUMP ON @ EL 16.75
SECONDARY PUMP OFF @ EL 14.75
ALARM @ EL 16.5
ALTERNATE PUMPS AUTOMATICALLY NORMALLY ONLY ONE PUMP REQD



PARTIAL PLAN



SECTION

FILTER FEED PIPING

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

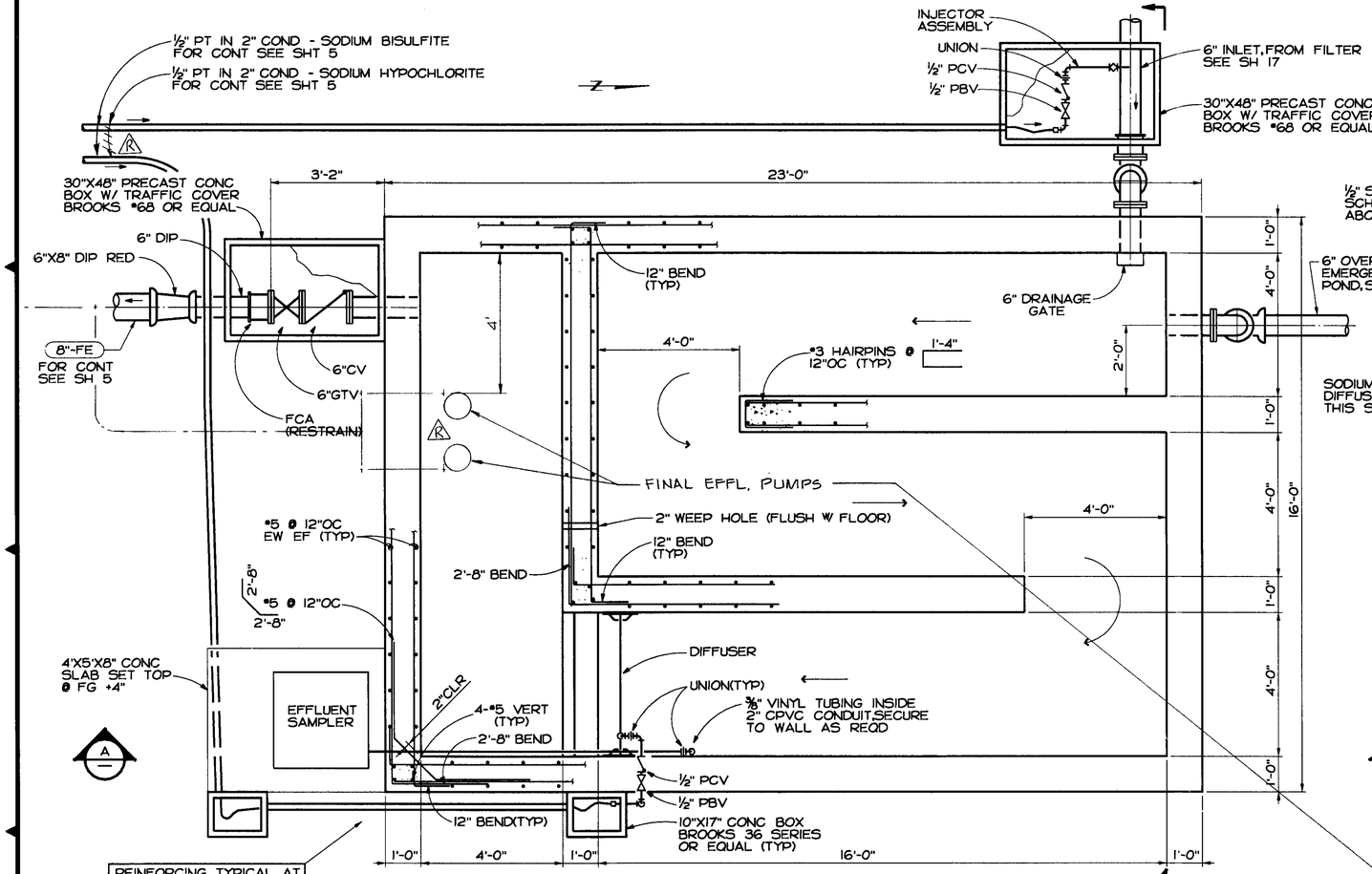
REGISTERED PROFESSIONAL ENGINEER EDWIN R. STOWELL No. 6513 EXP 9-30-96 CIVIL STATE OF CALIFORNIA

RECORD DRAWING

SU-2882

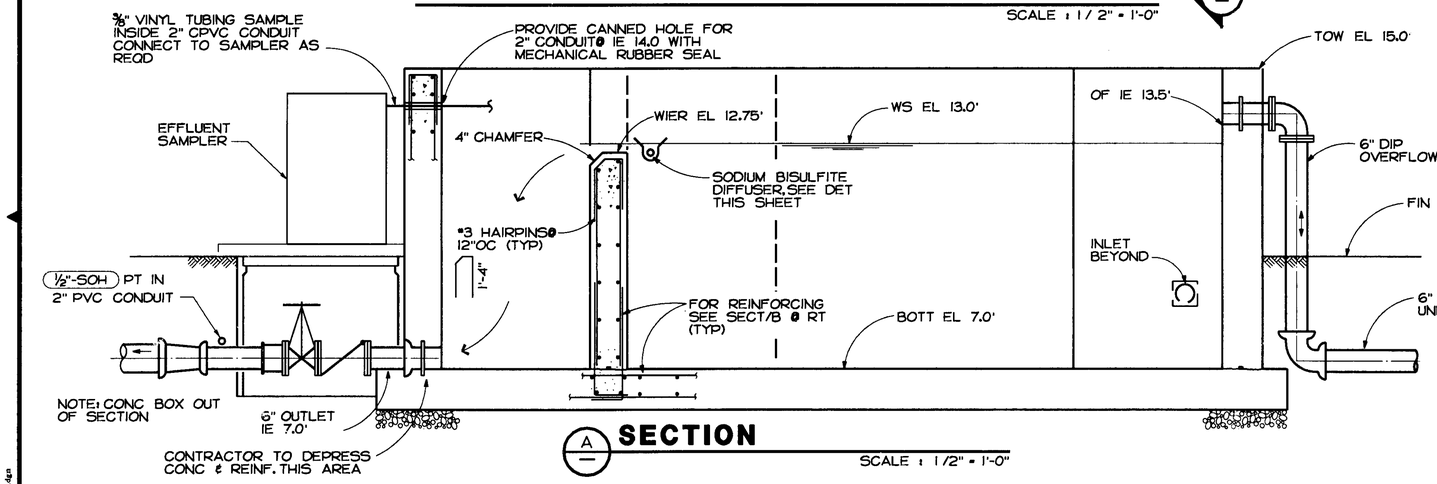
SCALE	DATE						
AS NOTED	AUGUST 1994 / FILE 93423	DESIGNED ERS / DRAWN MVW / CHECKED ERS	SUBMITTED / RECOMMENDED / APPROVED	DEWANTE AND STOWELL CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	FLAG CITY SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES	EMERGENCY STANDBY GENERATOR FUEL STORAGE TANK AND MISC DETAILS	DRAWING NUMBER / SHEET NUMBER 21 OF 44

REVISION	DESCRIPTION	BY	APP	DATE
A	RECORD DWG. CHANGES INCORP.	DCL	RMD	6-95



PLAN

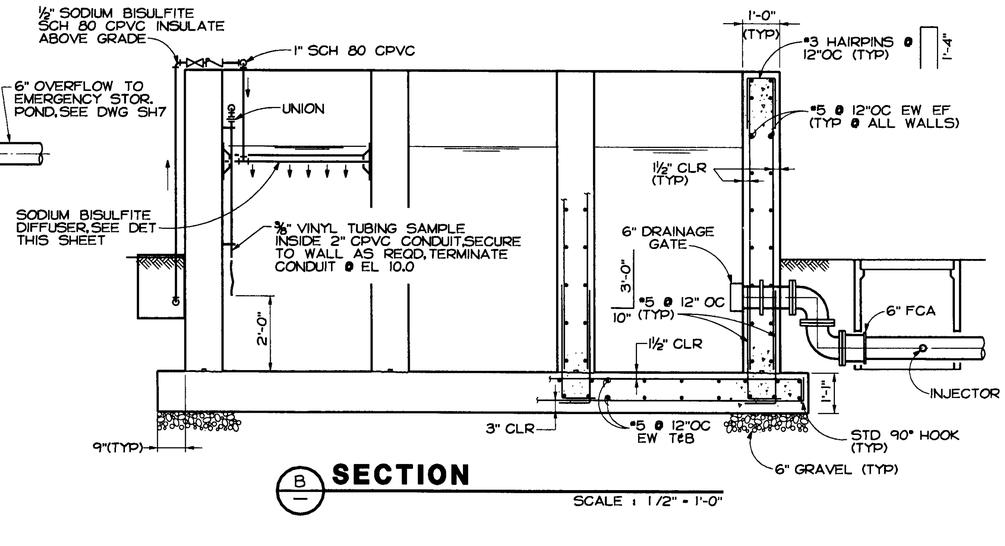
SCALE : 1/2" = 1'-0"



SECTION

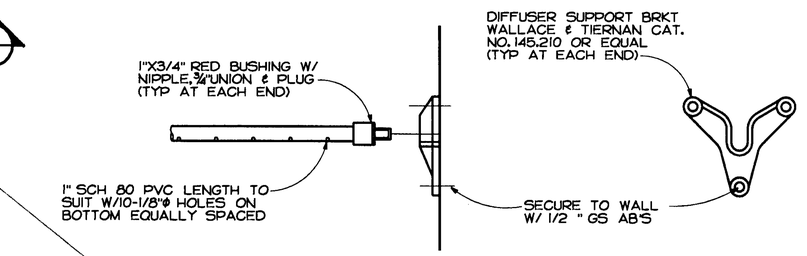
SCALE : 1/2" = 1'-0"

FOR ADDITIONAL REINFORCING @ WALL OPNG'S, SEE DET 12/24 (TYP)



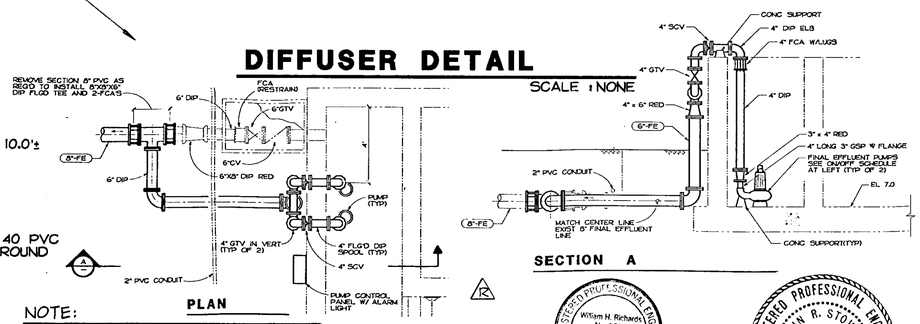
SECTION

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



DIFFUSER DETAIL

SCALE : NONE



NOTE:
SEE SHEETS 22-25 FOR STRUCTURAL NOTES AND DETAILS.

FINAL EFFLUENT PUMPS ON/OFF SCHEDULE
PRIMARY PUMP ON @ EL 5.0
PRIMARY PUMP OFF @ EL 5.5
SECONDARY PUMP ON @ EL 6.5
SECONDARY PUMP OFF @ EL 5.5
ALARM @ EL 12.5
ALTERNATE PUMPS AUTOMATICALLY NORMALLY ONLY ONE PUMP REQD

William H. Richards, No. 7610, Exp. 6-30-97, Structural Engineer

6-30-96, No. 6513, Edwin R. Stowell, CIVIL, STATE OF CALIFORNIA

RECORD DRAWING

SU-2883

DATE PLTD: 9 JUL 1994
FILE: C:\DWG\93423\chlorine.dgn
PLTD BY: RRR

SCALE	DATE	DESIGNED	DRAWN	CHECKED	SUBMITTED	RECOMMENDED	APPROVED
1/2" = 1'-0"	AUGUST 1994	ERS	RRR	ERS			
	FILE 93423						

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

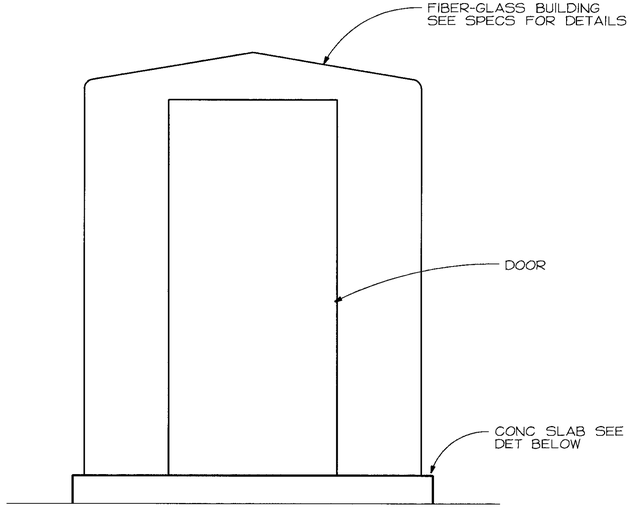
FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

CHLORINE CONTACT BASIN
PLAN AND ELEVATION

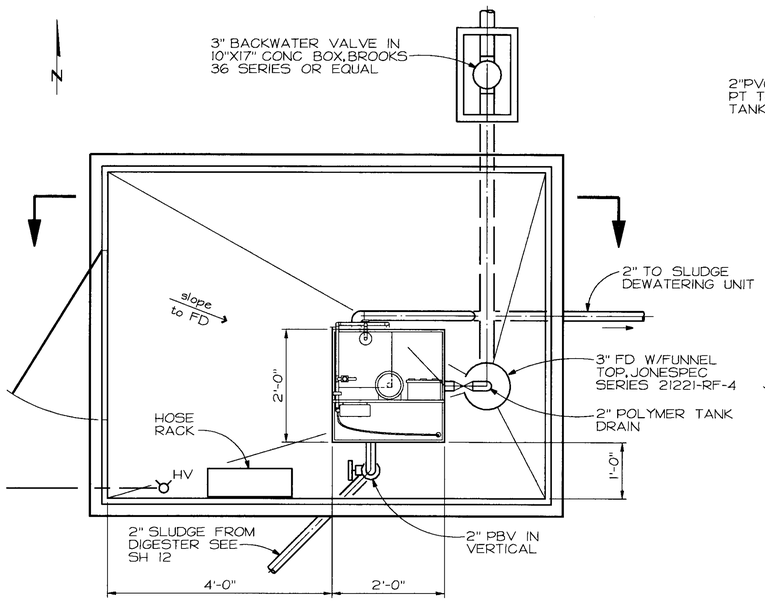
DRAWING NUMBER

SHEET NUMBER 20 OF 44

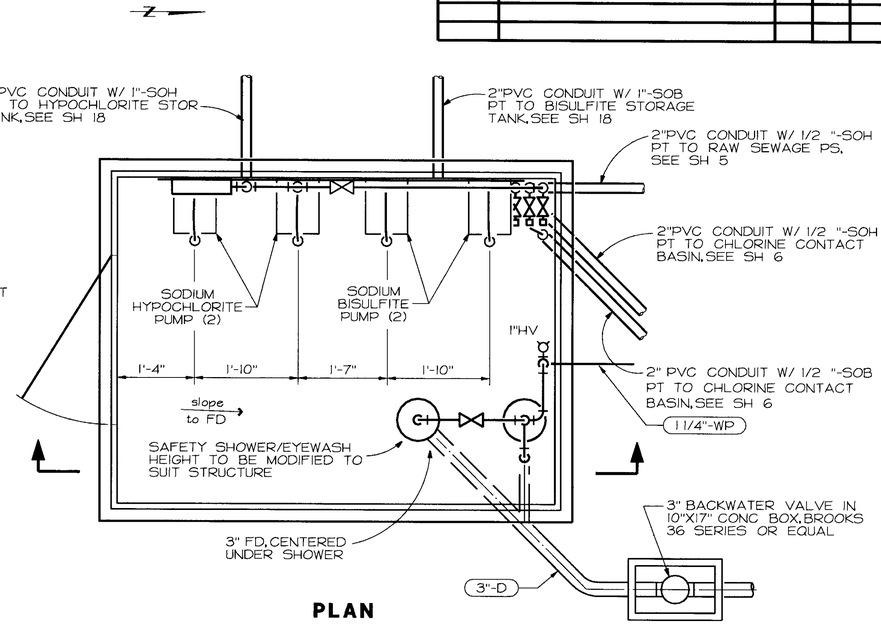
REVISION	DESCRIPTION	BY	APP	DATE



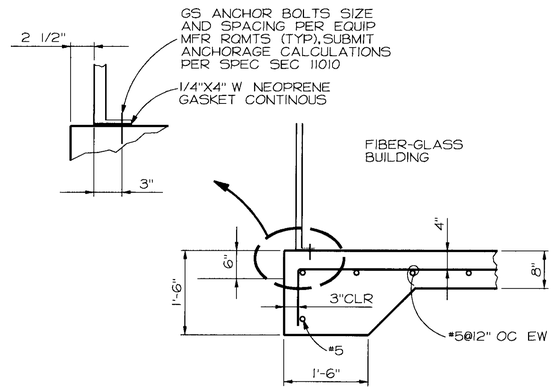
TYPICAL FRONT ELEVATION



PLAN

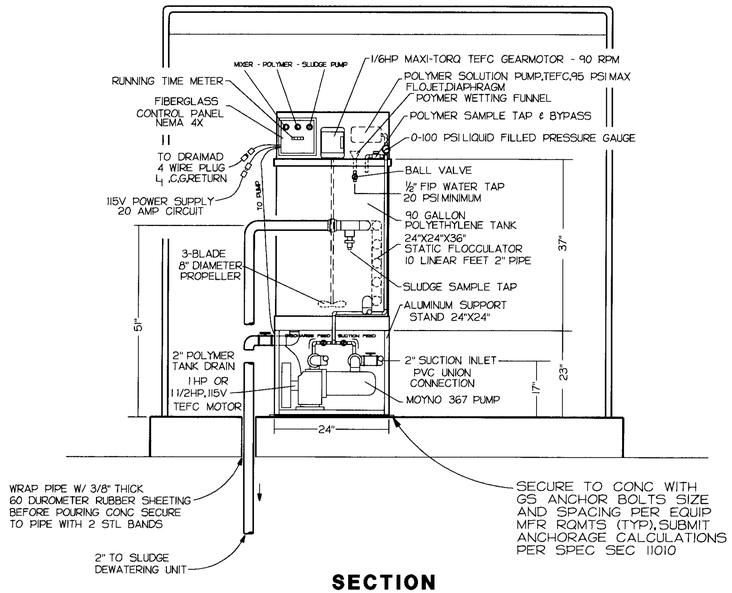


PLAN



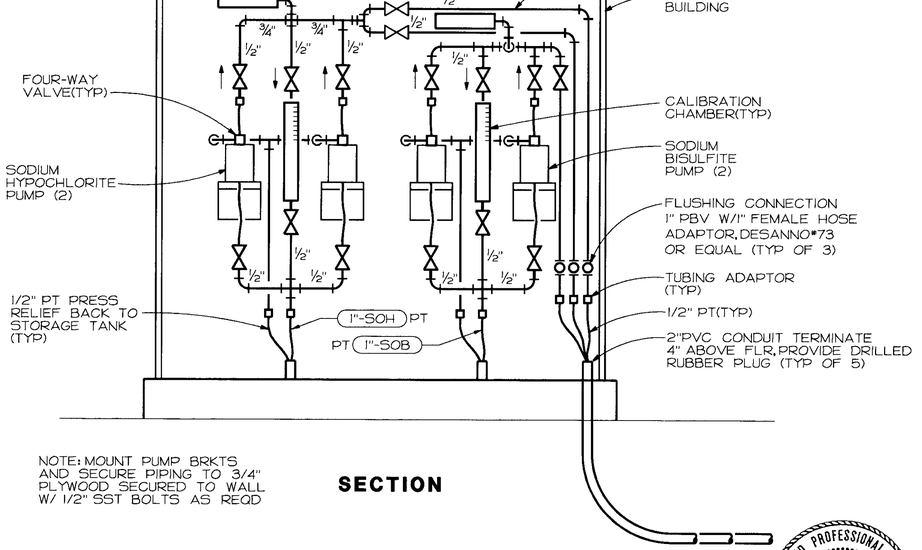
TYPICAL FOOTING DETAIL

TYPICAL FIBER-GLASS BUILDING



SECTION

POLYMER FEED



NOTE: MOUNT PUMP BRKTS AND SECURE PIPING TO 3/4" PLYWOOD SECURED TO WALL W/ 1/2" SST BOLTS AS REQD

SECTION

HYPOCHLORITE/SODIUM BISULFITE FEED

REGISTERED PROFESSIONAL ENGINEER
EDWIN R. STOWELL
No. 6513
EXP 9-30-96
CIVIL
STATE OF CALIFORNIA

SU-2884

DATE: JAN. 29, 1994
TIME: 10:44 AM
FILE: su\93423\chemfeed.dgn
PLOT:

SCALE	DATE	DESIGNED	SUBMITTED
3/4" = 1'-0"	AUGUST 1994	RRR	
	FILE 93423	DRAWN RRR	RECOMMENDED
		CHECKED ERS	APPROVED

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

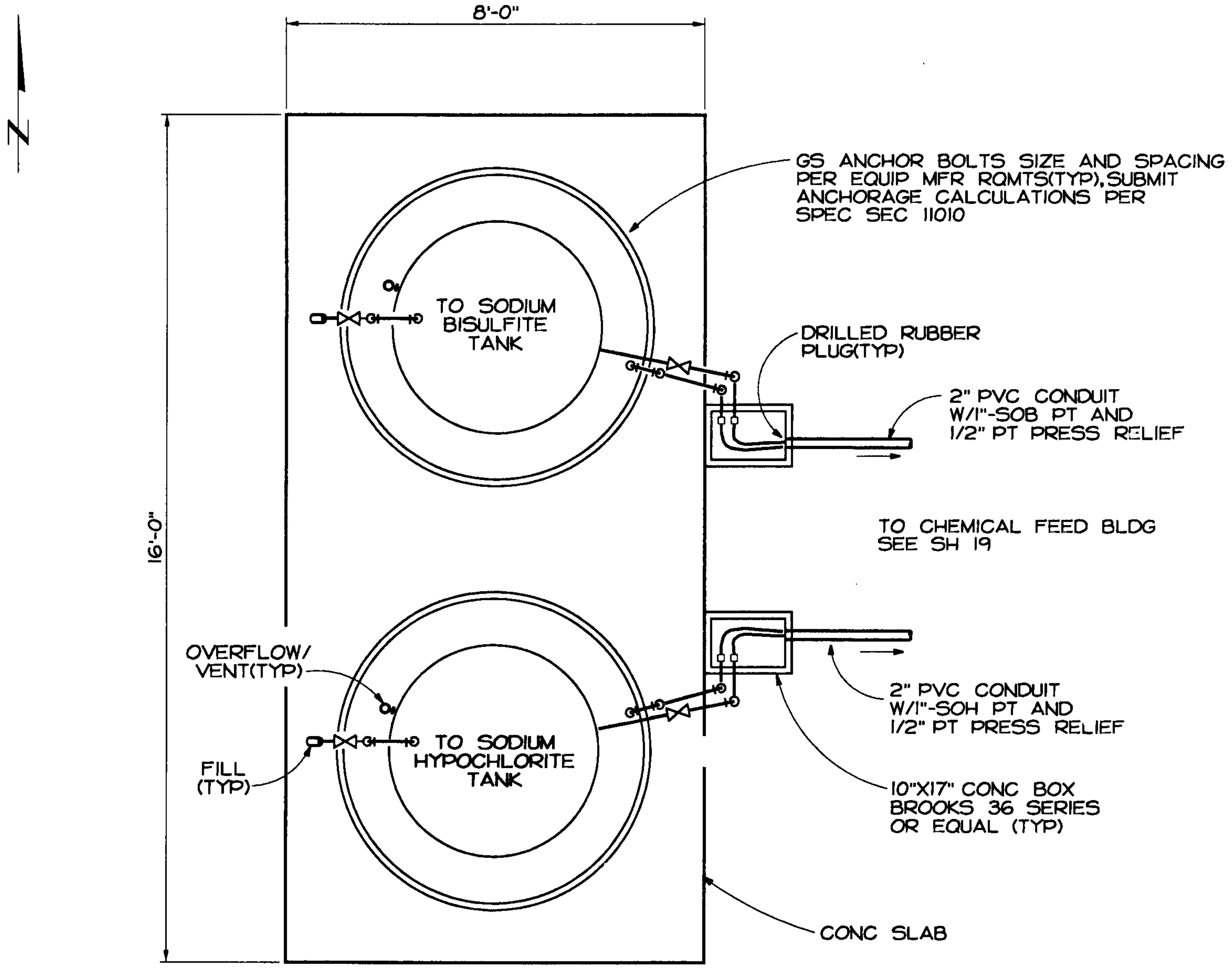
FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

CHEMICAL FEED STRUCTURES
PLANS, SECTIONS & DETAILS

DRAWING NUMBER

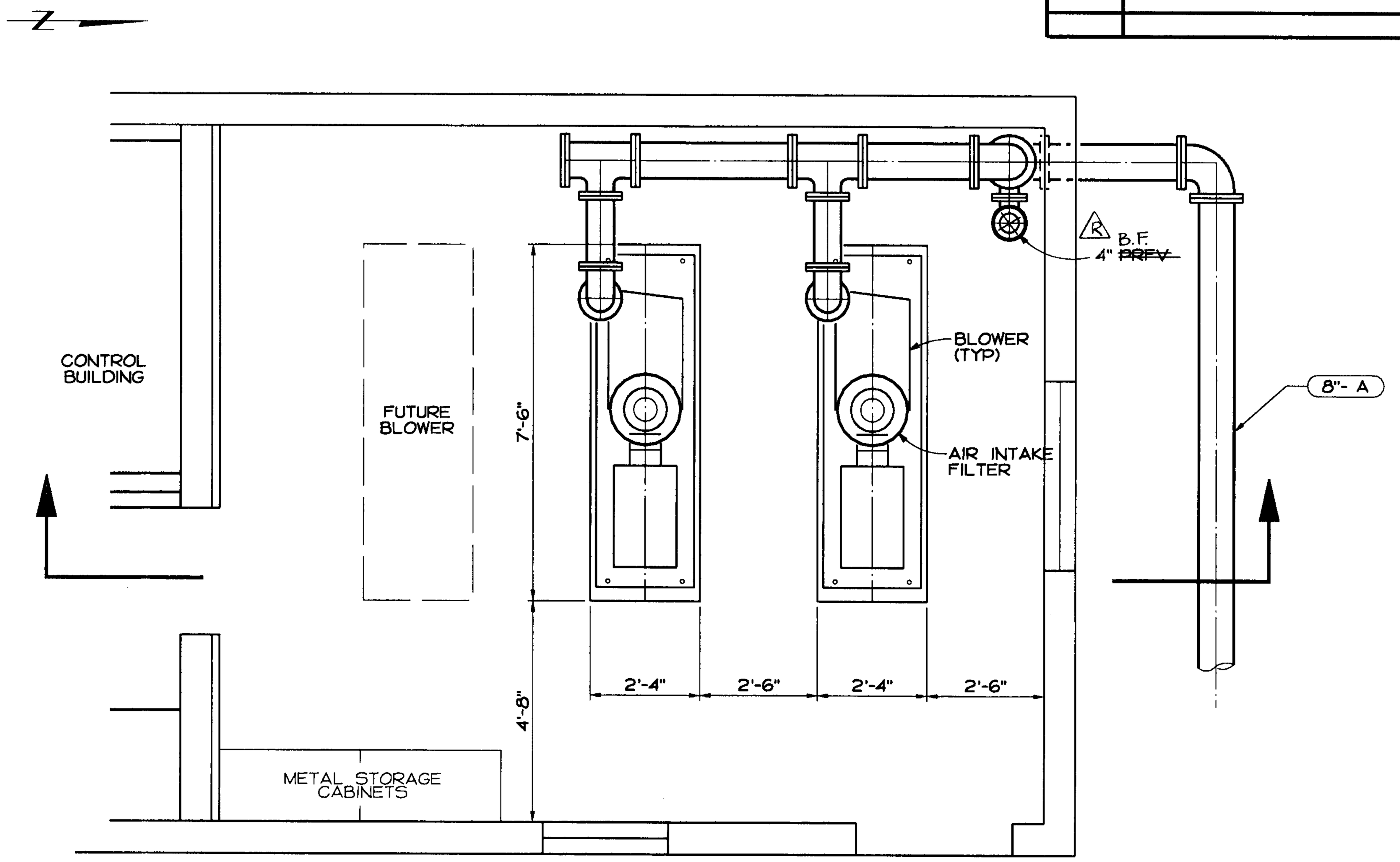
SHEET NUMBER 19 OF 44

REVISION	DESCRIPTION	BY	APP	DATE
R	RECORD DWG. CHANGES INCORP.	DCL	RMD	6-95



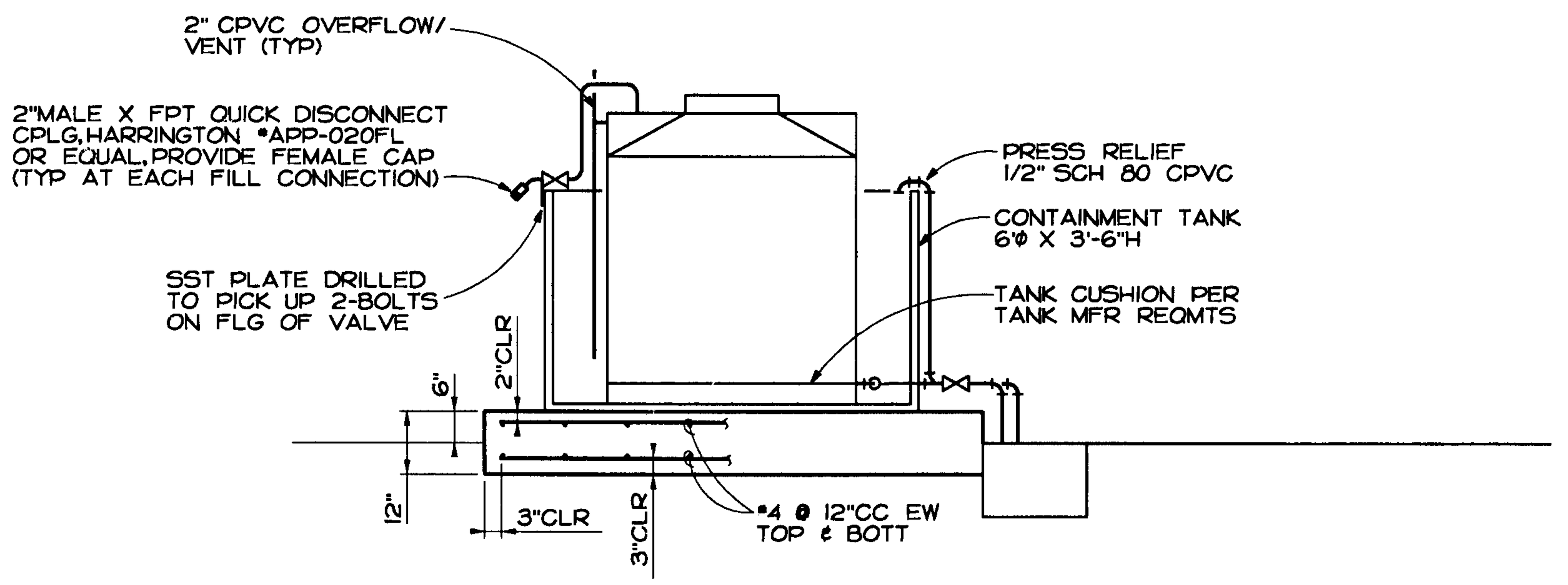
STORAGE TANK PLAN

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



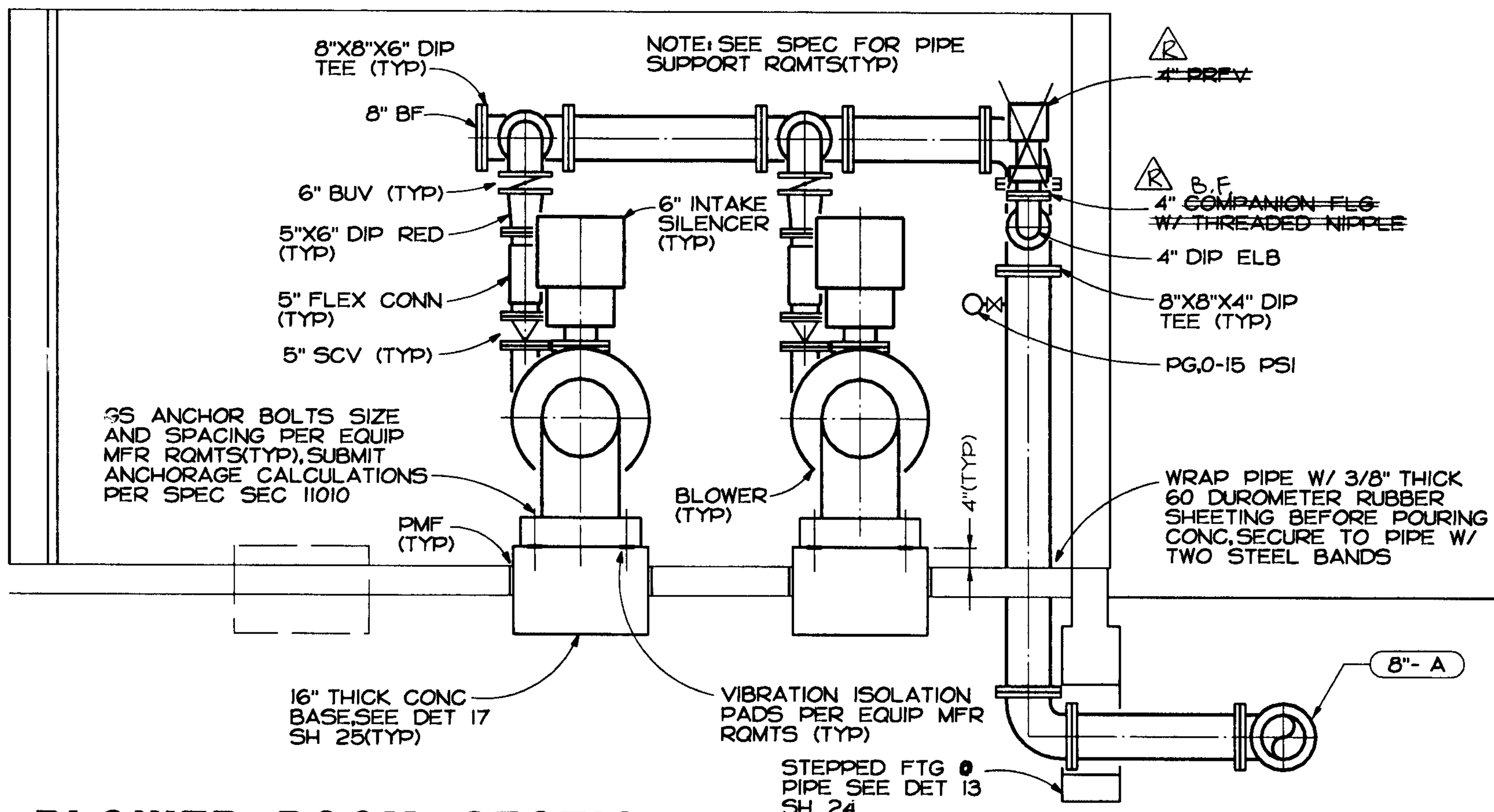
BLOWER ROOM PLAN

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



TYPICAL SECTION

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



BLOWER ROOM SECTION

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

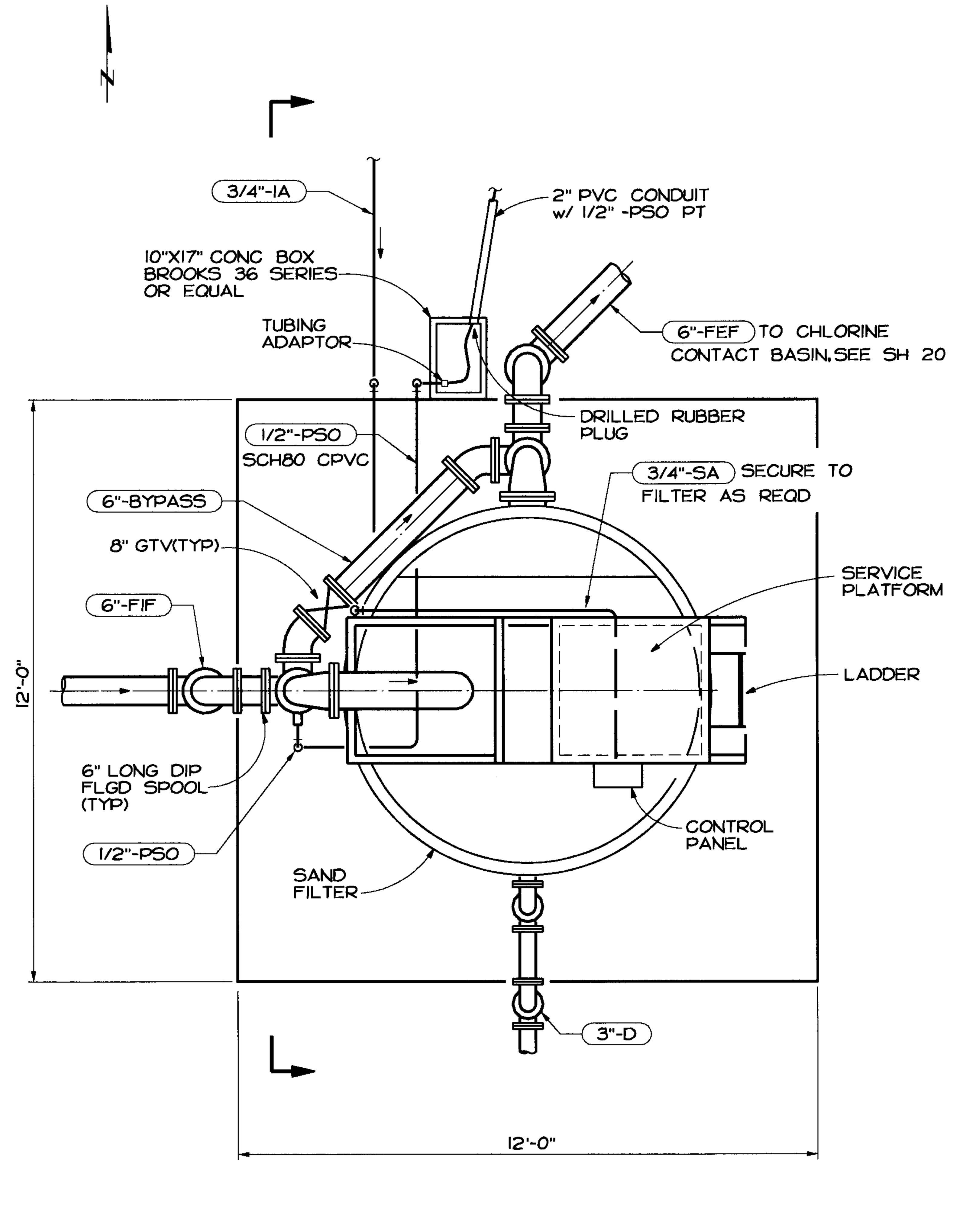
REGISTERED PROFESSIONAL ENGINEER EDWIN R. STOWELL No. 6513 EXP 9-30-96 CIVIL STATE OF CALIFORNIA

RECORD DRAWING

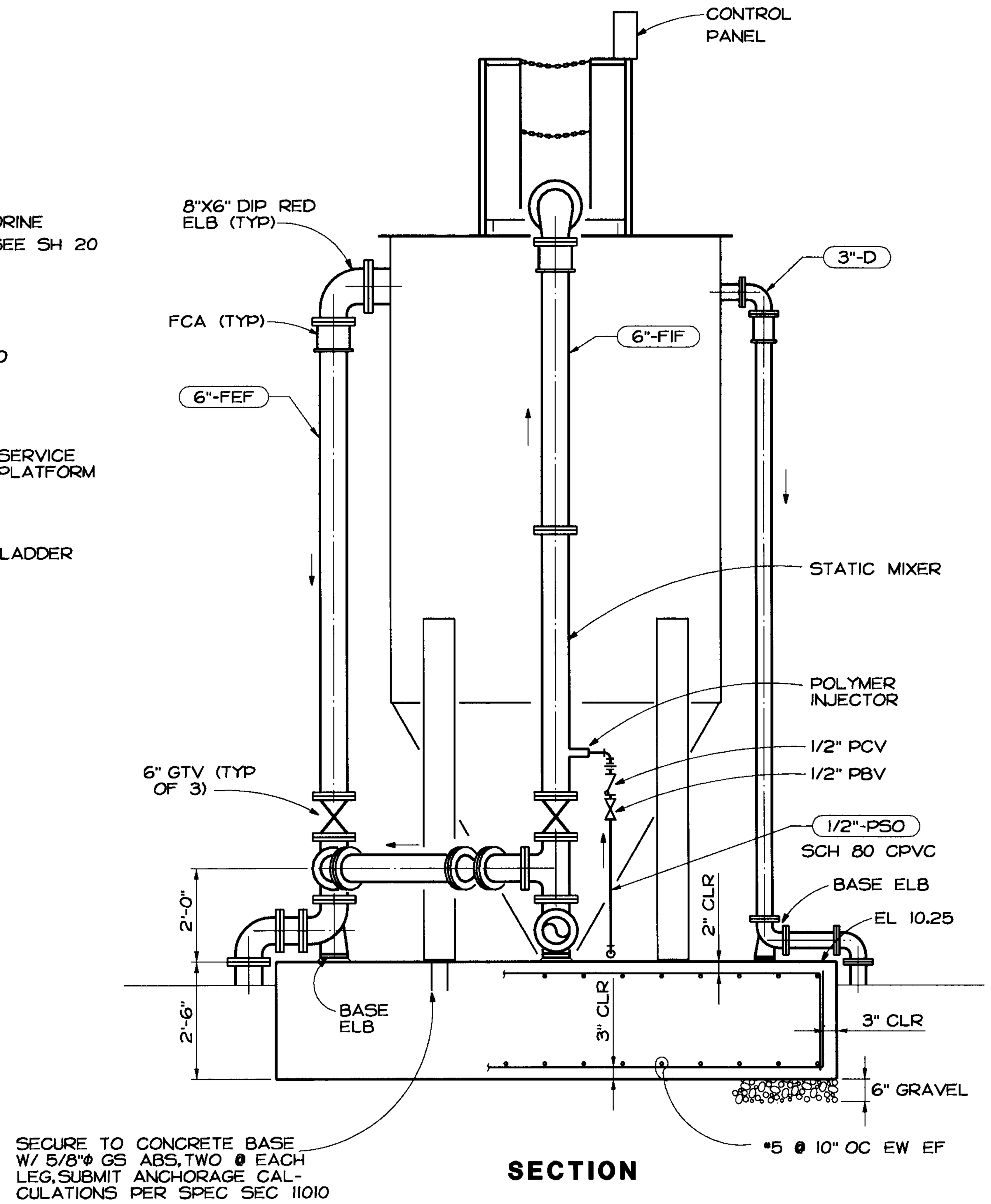
SU-2885

SCALE	DATE			DEWANTE AND STOWELL CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	FLAG CITY SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES	CHEMICAL STORAGE TANKS PLAN AND SECTION	DRAWING NUMBER	SHEET NUMBER
1/2" = 1'-0"	AUGUST 1994	DESIGNED ERS	SUBMITTED					18 OF 44
	FILE 93423	DRAWN RRR	RECOMMENDED					
		CHECKED ERS	APPROVED					

REVISION	DESCRIPTION	BY	APP	DATE



PLAN



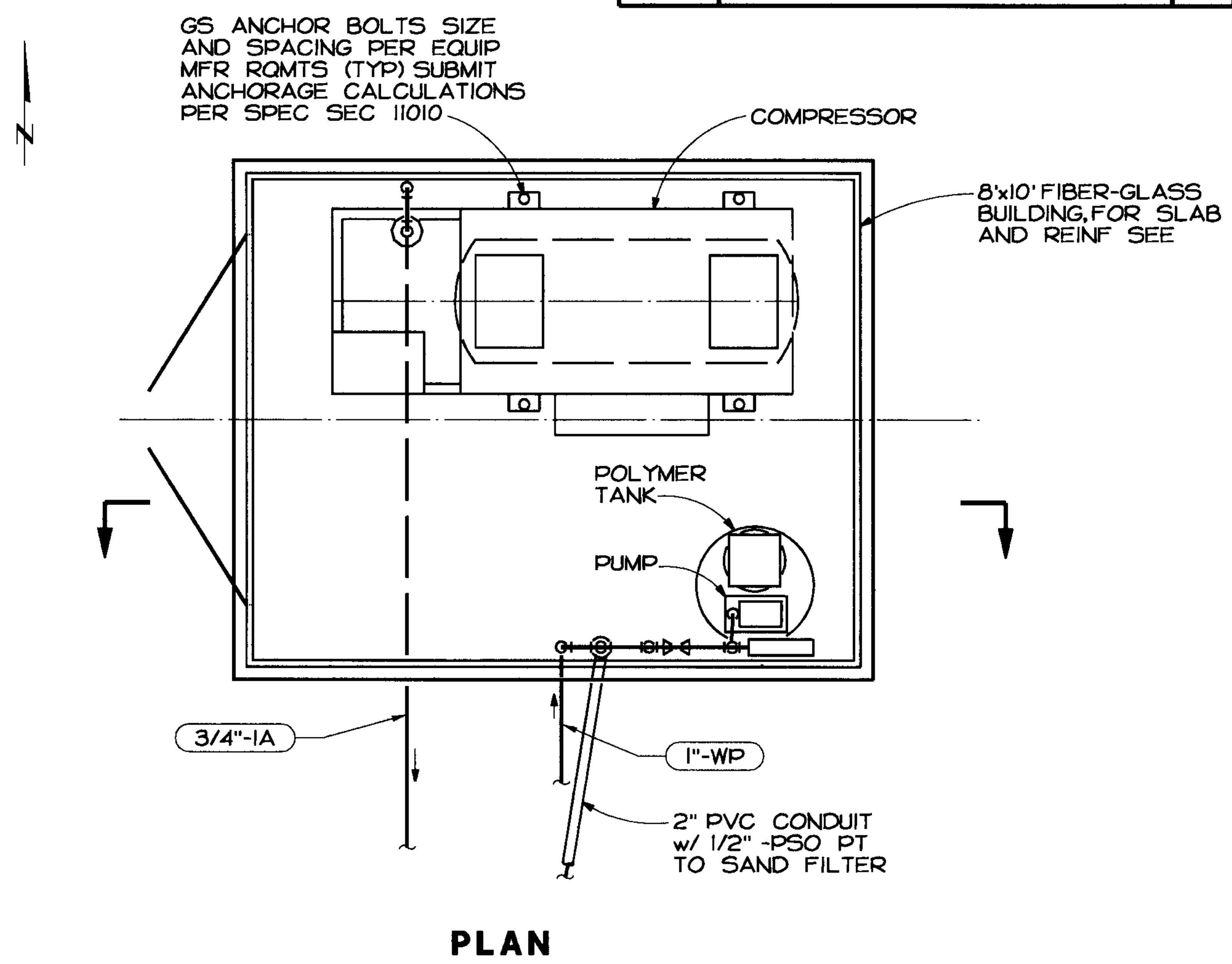
SECTION

NOTE:

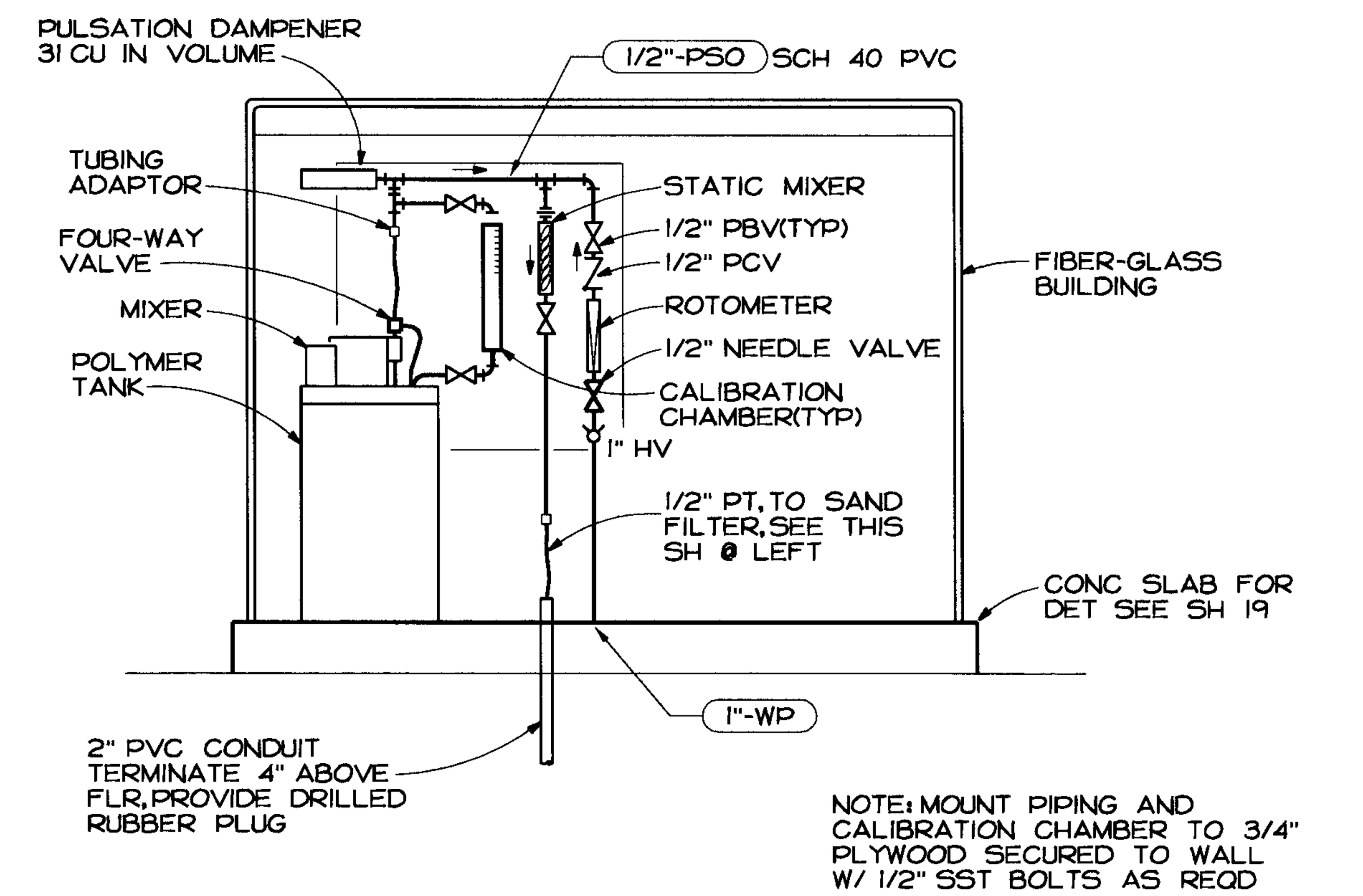
THE DYNASAND SHOP DRAWINGS AND SUBMITTALS FOR THIS PROJECT ARE HEREBY MADE PART OF THIS CONTRACT.

SAND FILTER

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



PLAN



NOTE: MOUNT PIPING AND CALIBRATION CHAMBER TO 3/4" PLYWOOD SECURED TO WALL W/ 1/2" SST BOLTS AS REQD

SECTION

FE POLYMER FEED/COMPRESSOR BLDG

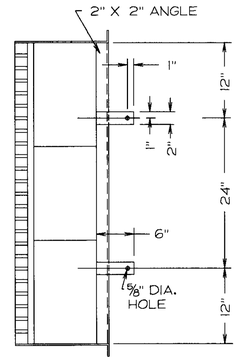
SCALE : 1/2 " = 1'-0"

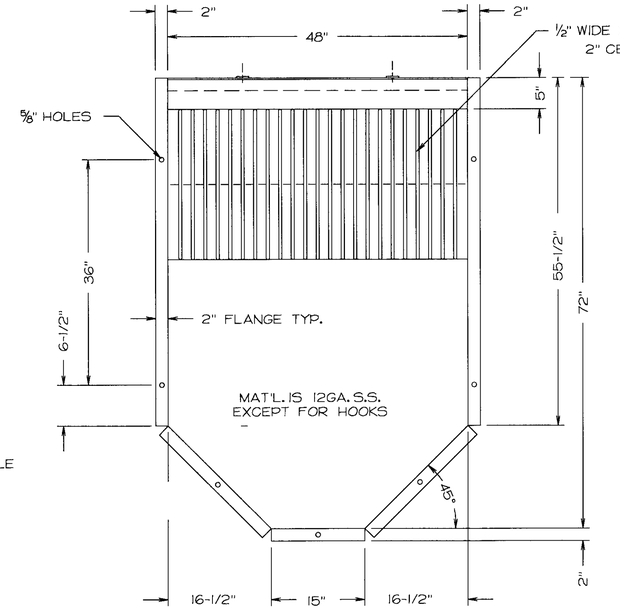
REGISTERED PROFESSIONAL ENGINEER
EDWIN R. STOWELL
Exp 9-30-96
No. 6513
CIVIL
STATE OF CALIFORNIA

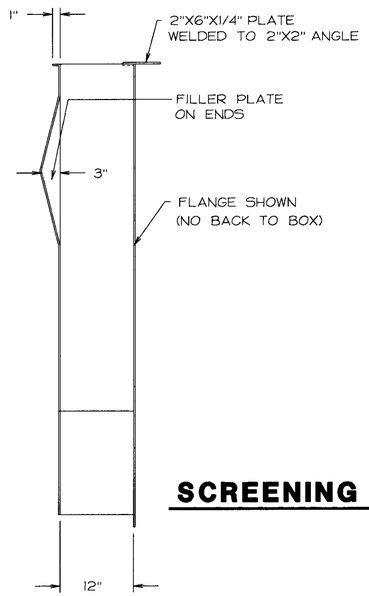
SU-2886

SCALE	DATE / FILE							
1/2" = 1'-0"	DATE AUGUST 1994 FILE 93423	DESIGNED ERS DRAWN RRR CHECKED ERS	SUBMITTED RECOMMENDED APPROVED	**DEWANTE AND STOWELL** CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	FLAG CITY SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES	SAND FILTER & POLYMER/COMPRESSOR BUILDING PLANS & SECTIONS	DRAWING NUMBER	SHEET NUMBER 17 OF 44

REVISION	DESCRIPTION	BY	APP	DATE

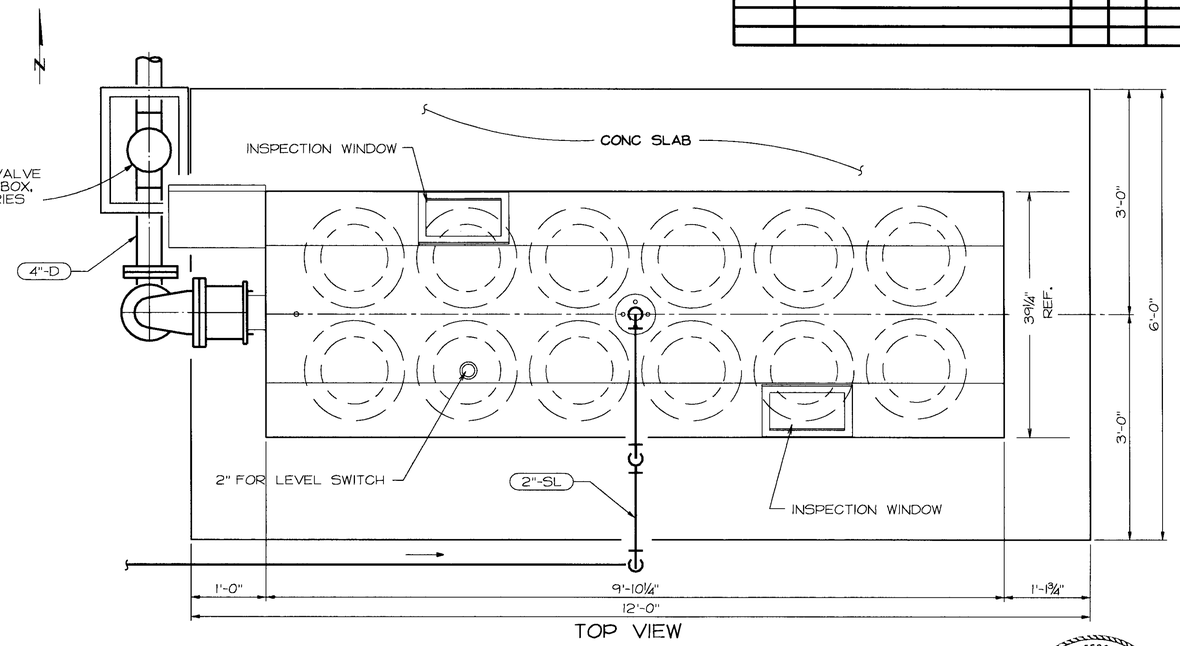




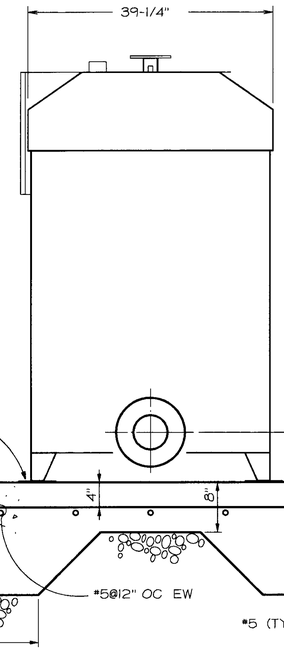


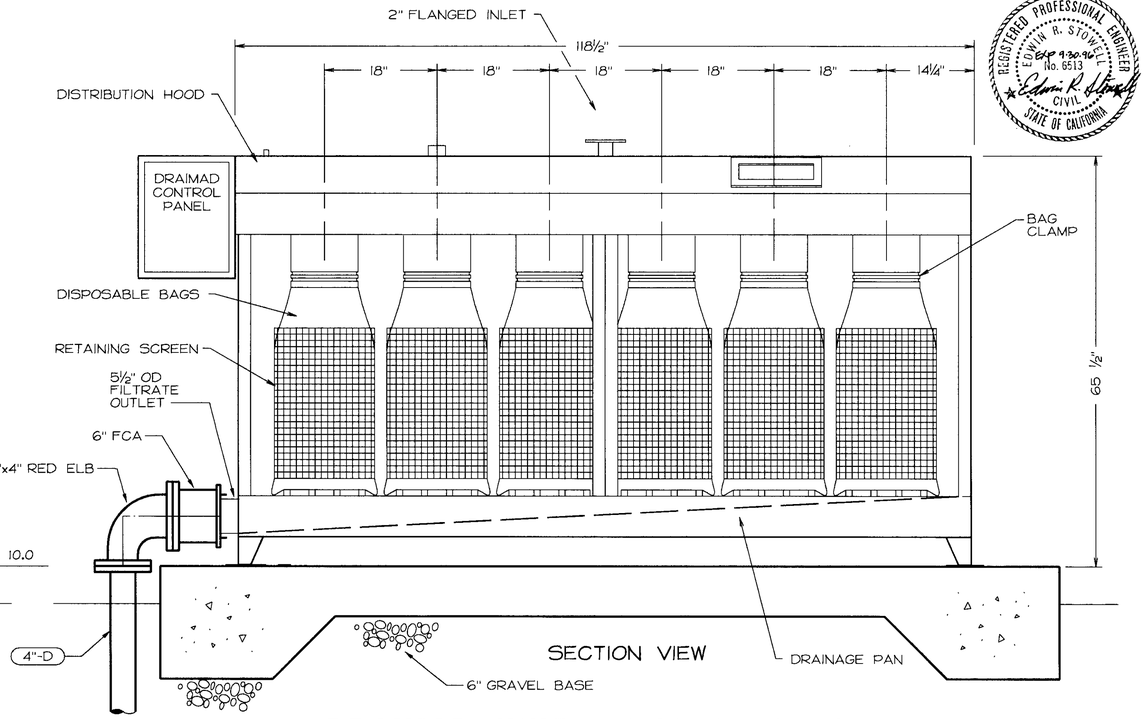
SCREENING & FLOCCULATION

SCALE : 1" = 1'-0"



TOP VIEW





SECTION VIEW

NOTE:

DRAIMAD UNIT FURNISHED AS A PART OF AERO-MOD PREPURCHASED PACKAGE.

DRAIMAD UNIT - MODEL 12 BCA

SCALE : 1" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
EDWIN R. STOWELL
No. 6513
CIVIL
STATE OF CALIFORNIA

SU-2887

DATE: AUG 29, 1994
FILE: 93423/drawings/draimad.dgn
USER: ers

SCALE	DATE	DESIGNED	SUBMITTED
AS SHOWN	AUGUST 1994	DRAWN MVW	RECOMMENDED
	FILE 93423	CHECKED ERS	APPROVED

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

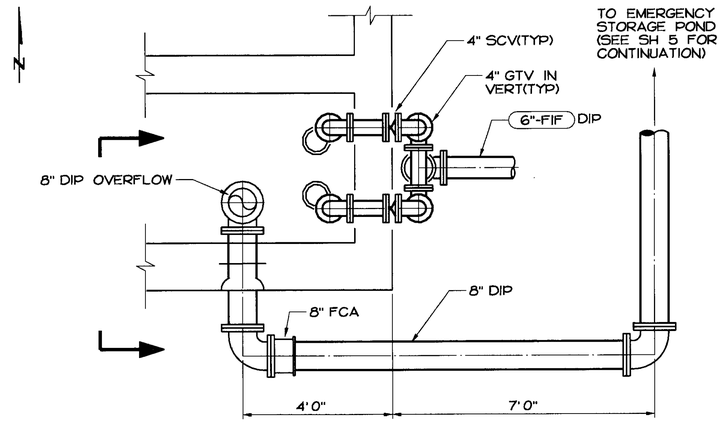
FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

SLUDGE DEWATERING AND SCREENING PLANS & SECTIONS

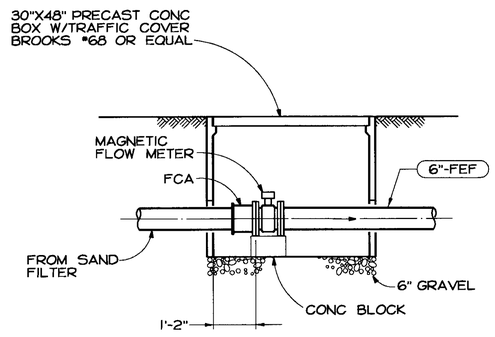
DRAWING NUMBER

SHEET NUMBER 16 OF 44

REVISION	DESCRIPTION	BY	APP	DATE

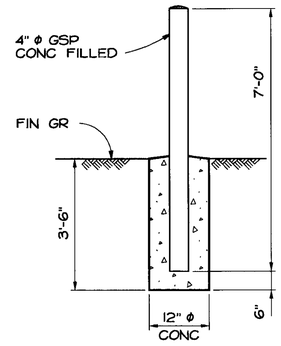


PARTIAL PLAN



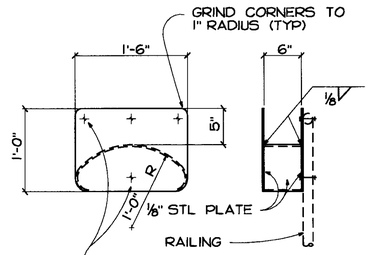
EFFLUENT FLOW METER

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



BARRIER POST

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



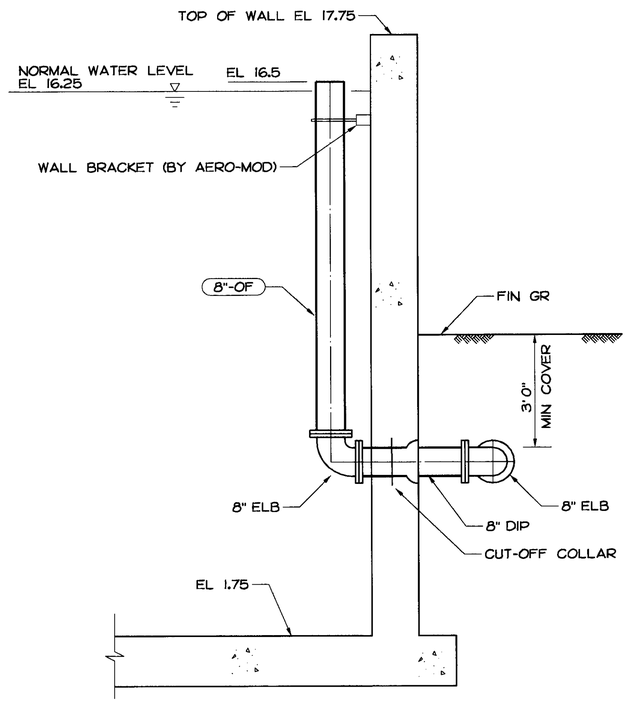
4 - 1/2 " HOLES FOR 3/8 " GS ANCHOR BOLTS REQ'D WHERE MOUNTED ON WALL OR RAILING

WALL OR RAILING MOUNT

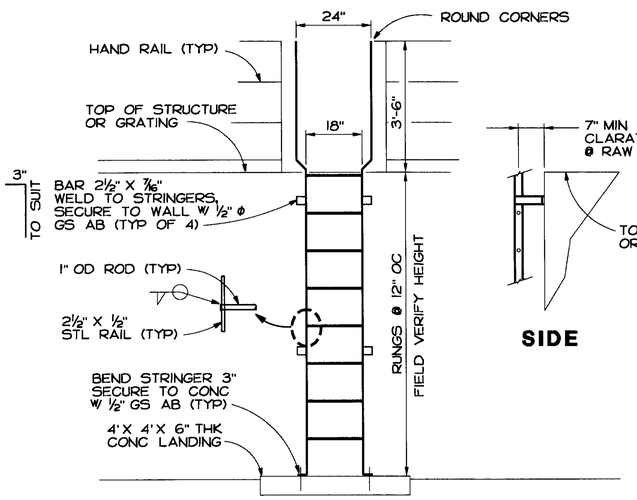
GALVANIZE AFTER FABRICATION

HOSE RACK

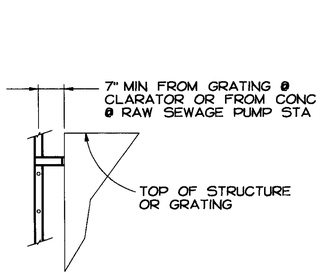
SCALE : 1" = 1'-0"



SECTION

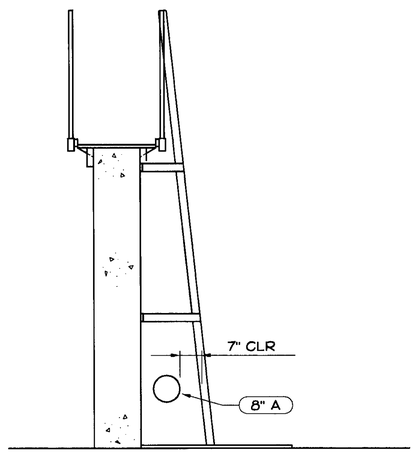


FRONT



SIDE

NOTE: ALL STEEL CONSTRUCTION (GAF)



THIS LADDER ONLY TO BE MOUNTED @ ANGLE TO CLEAR PIPE 7" MIN

SECONDARY EFFLUENT OVERFLOW

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

METAL LADDER

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

REGISTERED PROFESSIONAL ENGINEER — EDWIN R. STOWELL — No. 6513 — CIVIL — STATE OF CALIFORNIA — 8/19/96

SU-2888

DATE: Aug 20, 1994
FILE: d:\93423\details.dgn
APPR:

SCALE	DATE	DESIGNED	SUBMITTED
½" = 1'-0"	AUGUST 1994	DRAWN RRR	RECOMMENDED
	FILE 93423	CHECKED ERS	APPROVED

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

MISCELLANEOUS DETAILS III

DRAWING NUMBER

SHEET NUMBER 15 OF 44

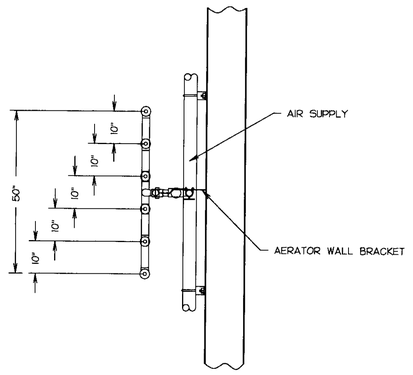
-\93423\details.dgn Jun 20, 1994 15:22:42

RECORD DRAWING

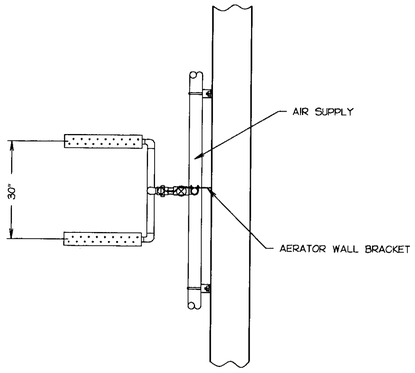
SU-2889

SCALE	DATE	DESIGNED ERS	SUBMITTED	DEWANTE AND STOWELL CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	FLAG CITY SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES	MISCELLANEOUS DETAILS II	DRAWING NUMBER	SHEET NUMBER
AS SHOWN	AUGUST 1994	DRAWN MVW	RECOMMENDED					14 OF 44
	FILE 93423	CHECKED ERS	APPROVED					

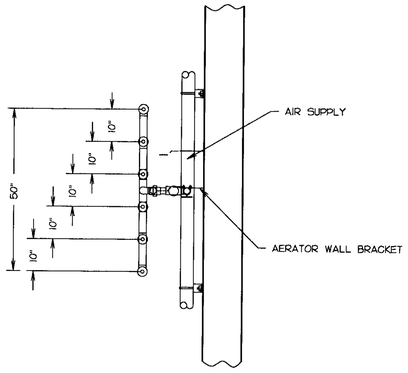
REVISION	DESCRIPTION	BY	APP	DATE



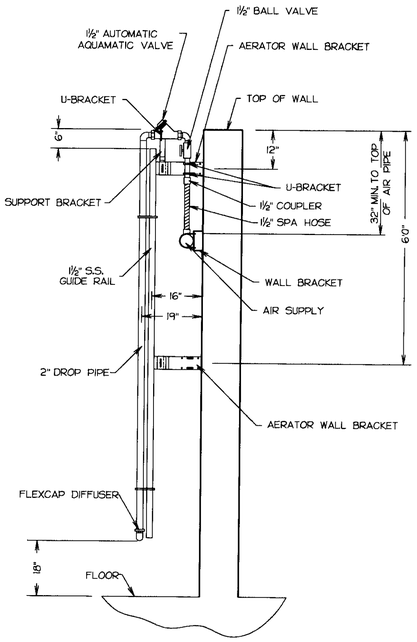
TOP VIEW



TOP VIEW

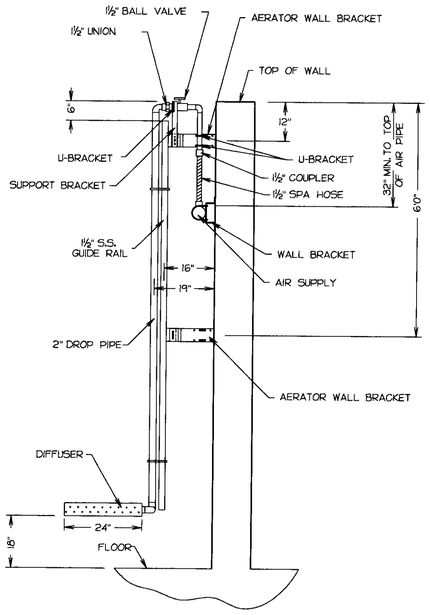


TOP VIEW



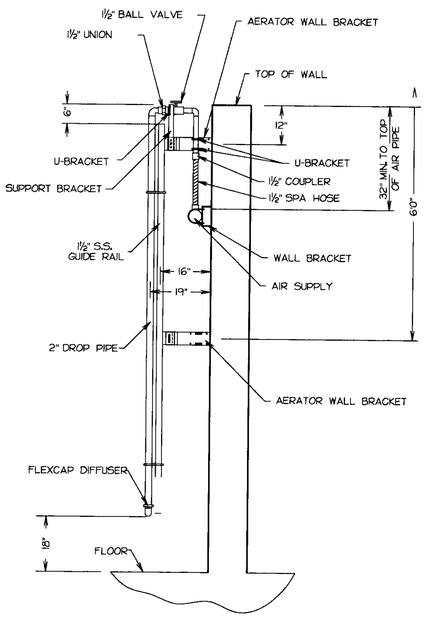
SIDE VIEW

WA-50-CA



SIDE VIEW

WA-50-PC-SS

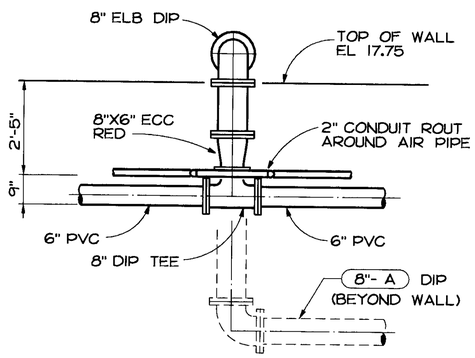


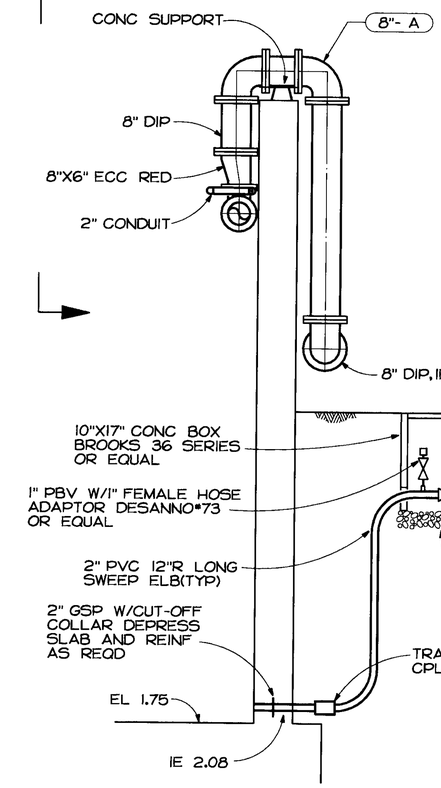
SIDE VIEW

WA-50-C

AERATOR DIFFUSERS

SCALE : " = 1'-0"





A/12 **SECTION**

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

REGISTERED PROFESSIONAL ENGINEER
EDWIN R. STOWELL
EXP 9-30-96
No. 6513
CIVIL
STATE OF CALIFORNIA

SCALE	DATE	DESIGNED	SUBMITTED
AS SHOWN	AUGUST 1994	DRAWN MVW	RECOMMENDED
	FILE 93423	CHECKED ERS	APPROVED

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

MISCELLANEOUS DETAILS I

DRAWING NUMBER

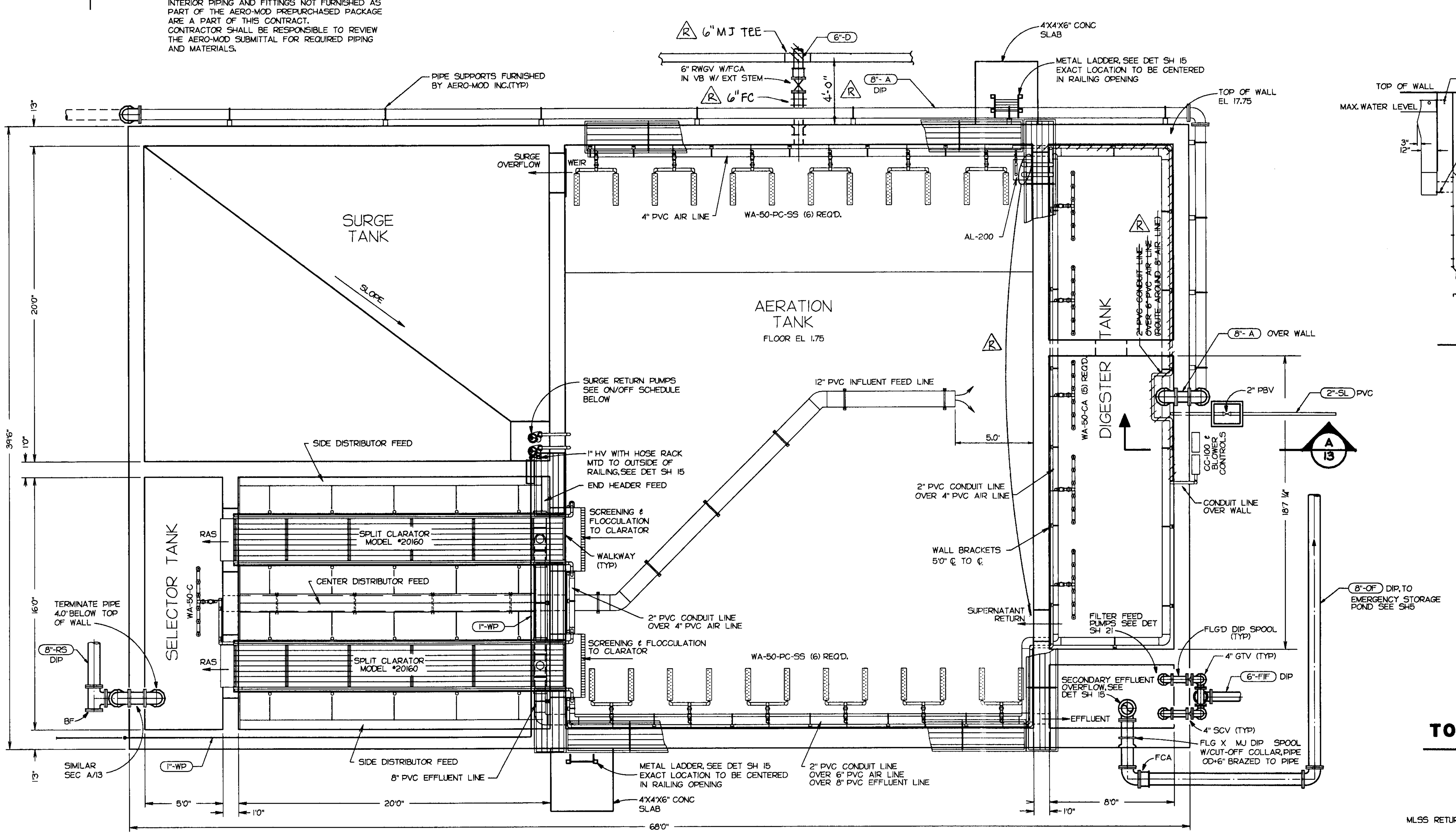
SHEET NUMBER 13 OF 44

P:\E\93423\dwg\details.dgn

REVISION	DESCRIPTION	BY	APP	DATE
R	RECORD DWG. CHANGES INCORP.	DCL	RMD	6-95

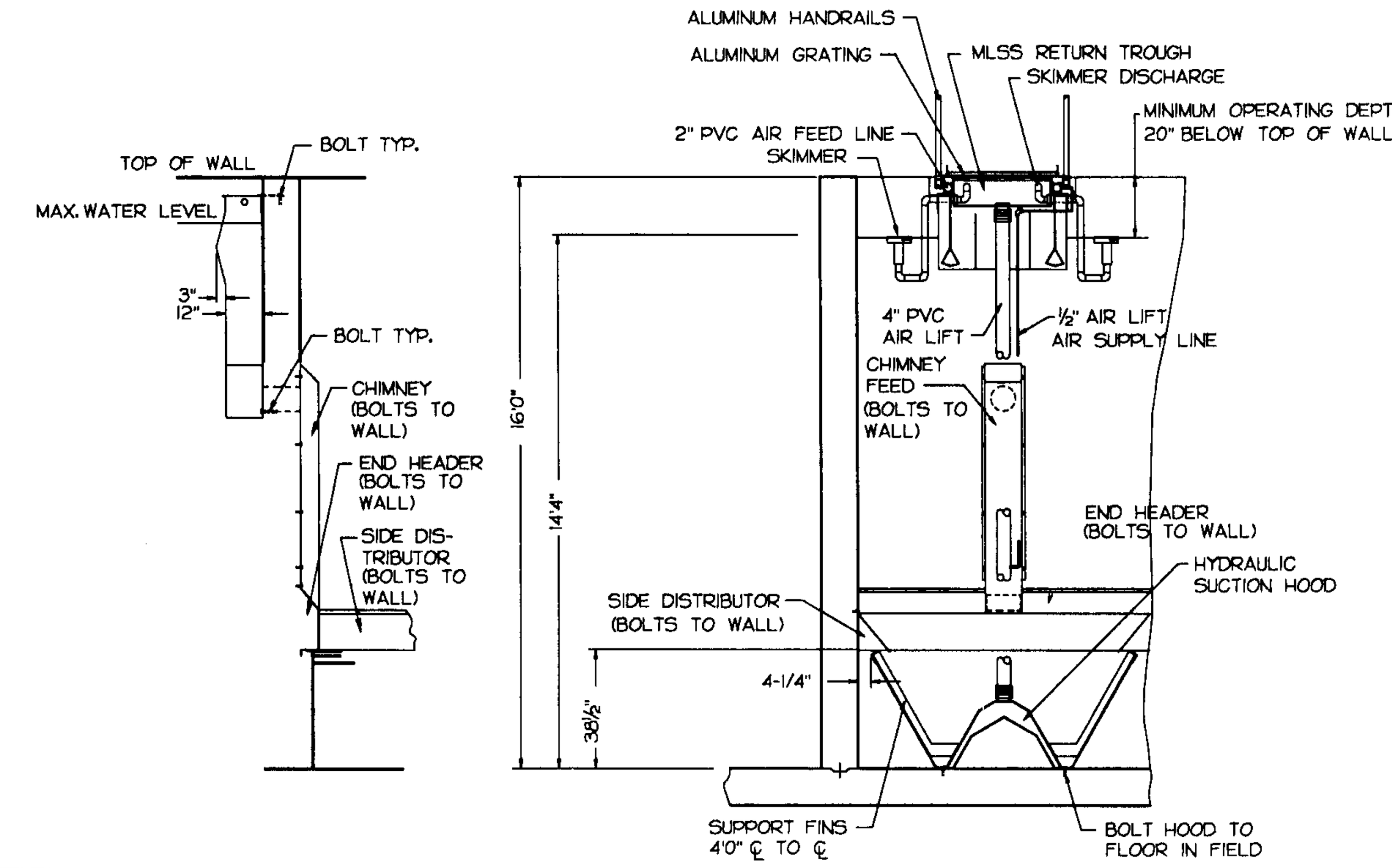
NOTES:

1. SHOP DRAWINGS AND SUBMITTALS OF AERO-MOD FOR THIS PROJECT ARE HEREBY MADE A PART OF THIS PROJECT.
2. INTERIOR TANK PIPING INCLUDING PVC INFLUENT FEED LINE, PVC AIR LINES, PVC CONDUIT LINES W/ CONTROL CONDUITS, PVC EFFLUENT LINE FROM CLARIFIER TO EFFLUENT PUMP SUMP AND ALL OTHER INTERIOR PIPING AND FITTINGS NOT FURNISHED AS PART OF THE AERO-MOD PREPURCHASED PACKAGE ARE A PART OF THIS CONTRACT. CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW THE AERO-MOD SUBMITTAL FOR REQUIRED PIPING AND MATERIALS.

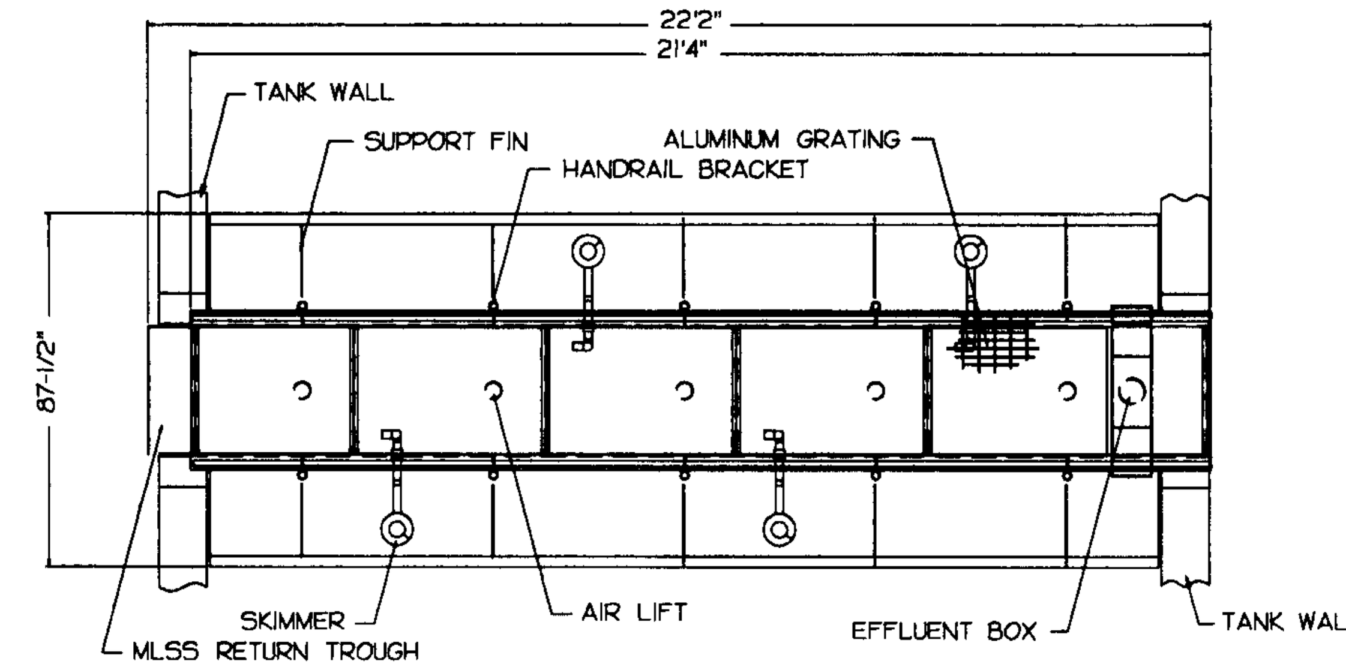


PLAN VIEW

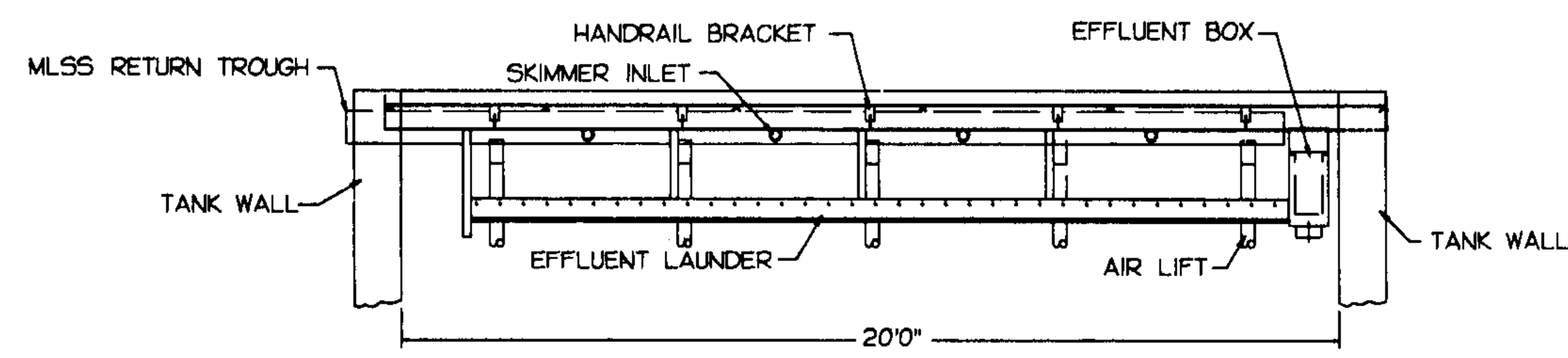
SURGE RETURN PUMP ON/OFF SCHEDULE
OFF= EL 1.75-2.0
ON= EL 2.5-3.5
ALARM= EL OF OVERFLOW WEIR



CLARATOR CROSS SECTION



TOP VIEW SPLIT CLARATOR MODEL 20160



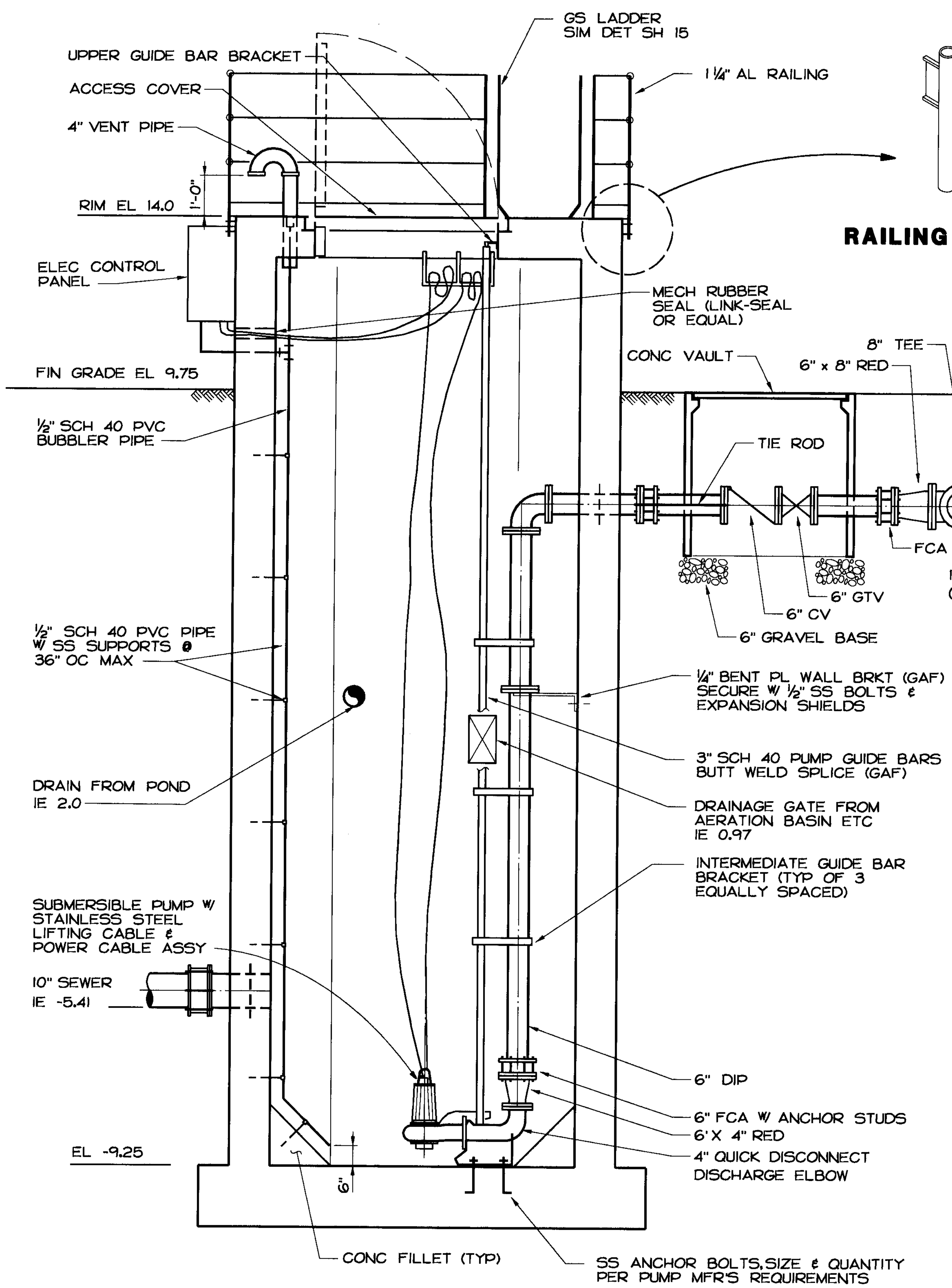
SIDE VIEW OF SPLIT CLARATOR (TOP HALF)

REGISTERED PROFESSIONAL ENGINEER
EDWIN R. STOWELL
EXP 9-30-96
No. 6513
CIVIL
STATE OF CALIFORNIA

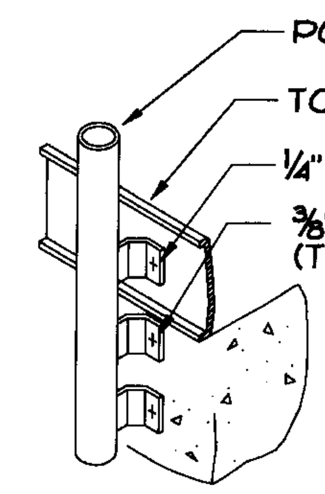
RECORD DRAWING

SU-2891

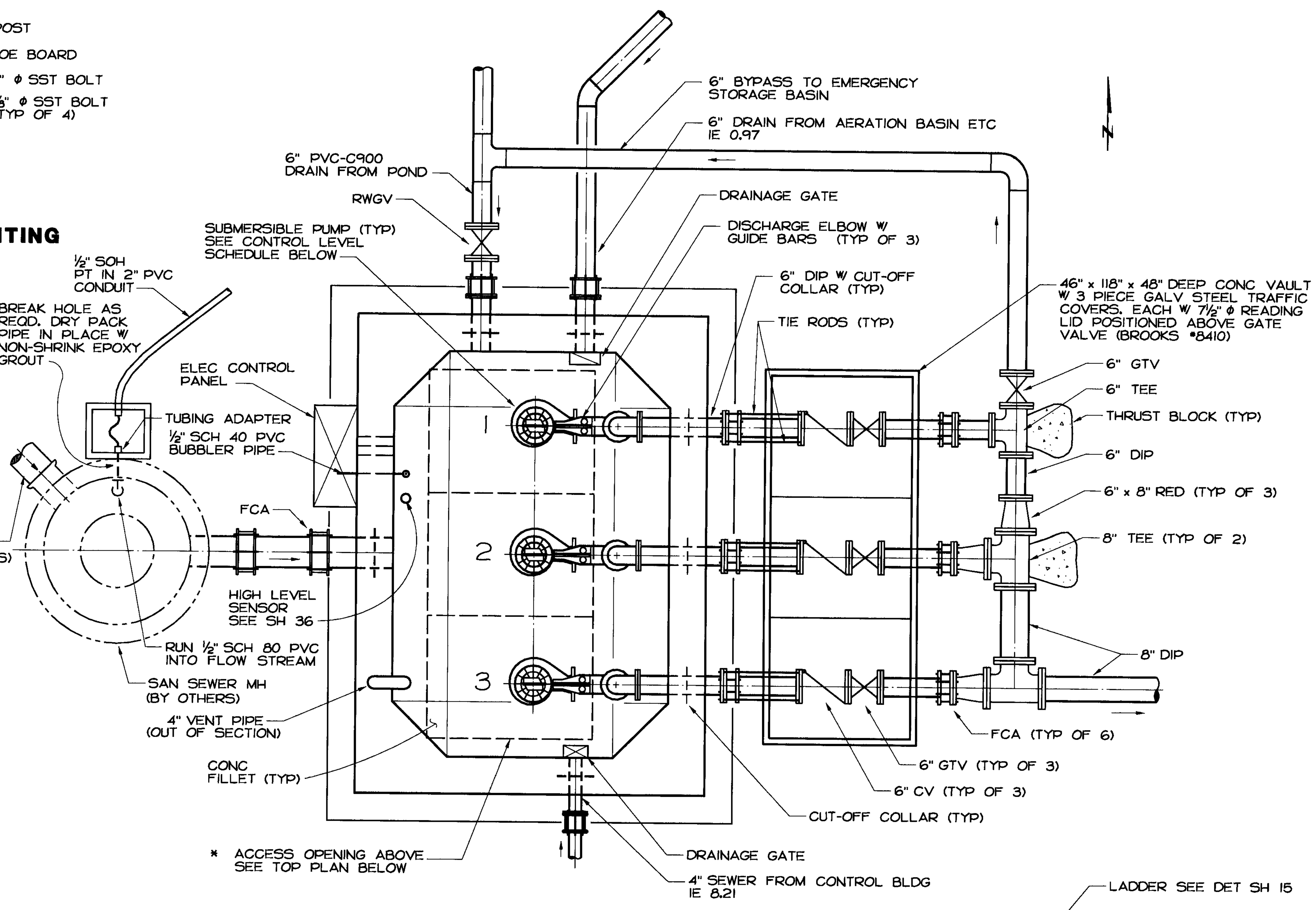
SCALE	DATE			DEWANTE AND STOWELL	FLAG CITY	AERATION BASIN, CLARIFIER, SURGE BASIN AND AEROBIC DIGESTER MECHANICAL PLAN & SECTIONS	DRAWING NUMBER	SHEET NUMBER
1/4" = 1'-0"	AUGUST 1994	DESIGNED ERS	SUBMITTED	CONSULTING ENGINEERS	SAN JOAQUIN CO., CALIFORNIA			12 OF 44
	FILE 93423	DRAWN MVW	RECOMMENDED	SACRAMENTO, CALIFORNIA	WASTEWATER TREATMENT FACILITIES			
		CHECKED ERS	APPROVED					



SECTION



RAILING MOUNTING



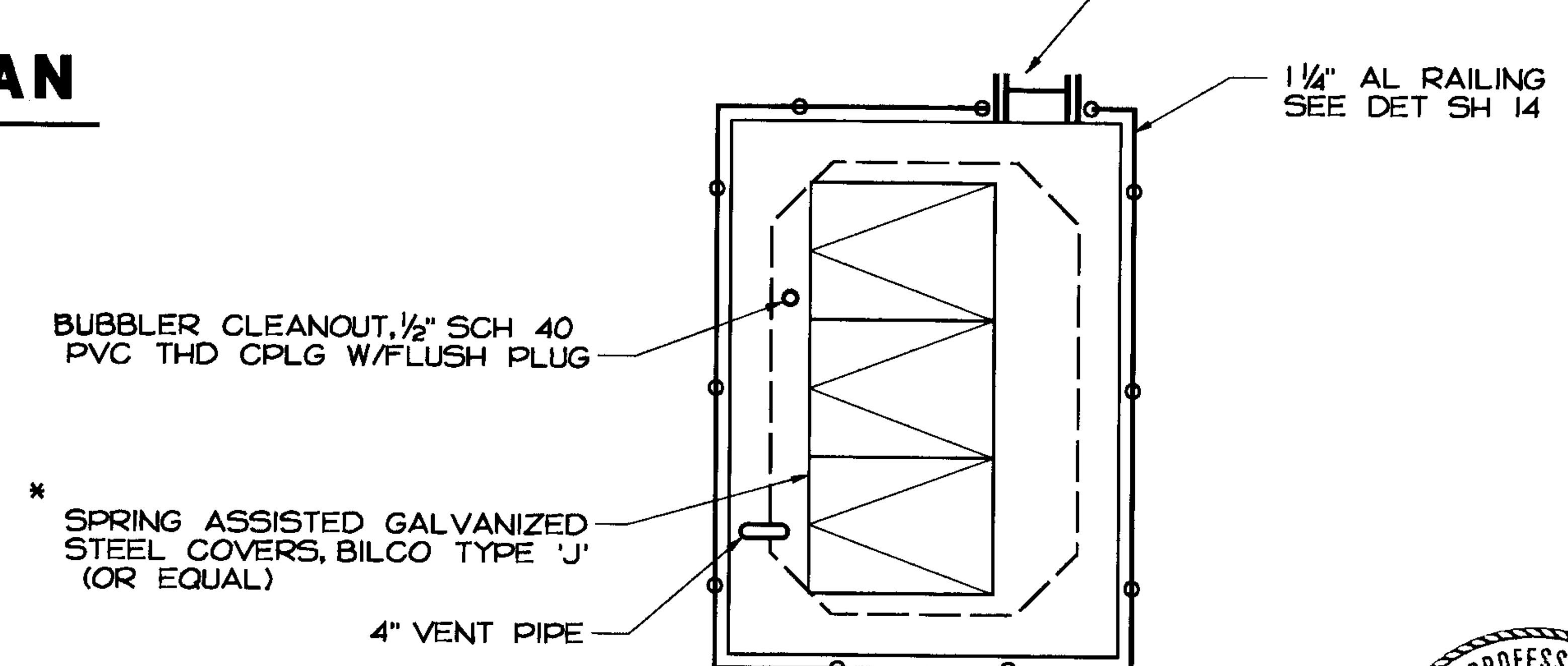
* LOCATION MAY VARY TO SUIT PUMP MFR REC

PLAN

RAW SEWAGE PUMP CONTROL LEVELS

	ON EL	OFF EL
PRIMARY PUMP	-6.75	-8.25
SECONDARY PUMP	-5.45	-7.45
TERTIARY PUMP	-4.95	-5.95
ALARM	-4.25	

ALTERNATE PUMPS AUTOMATICALLY.
NORMALLY ONLY TWO PUMPS REQUIRED.



TOP PLAN

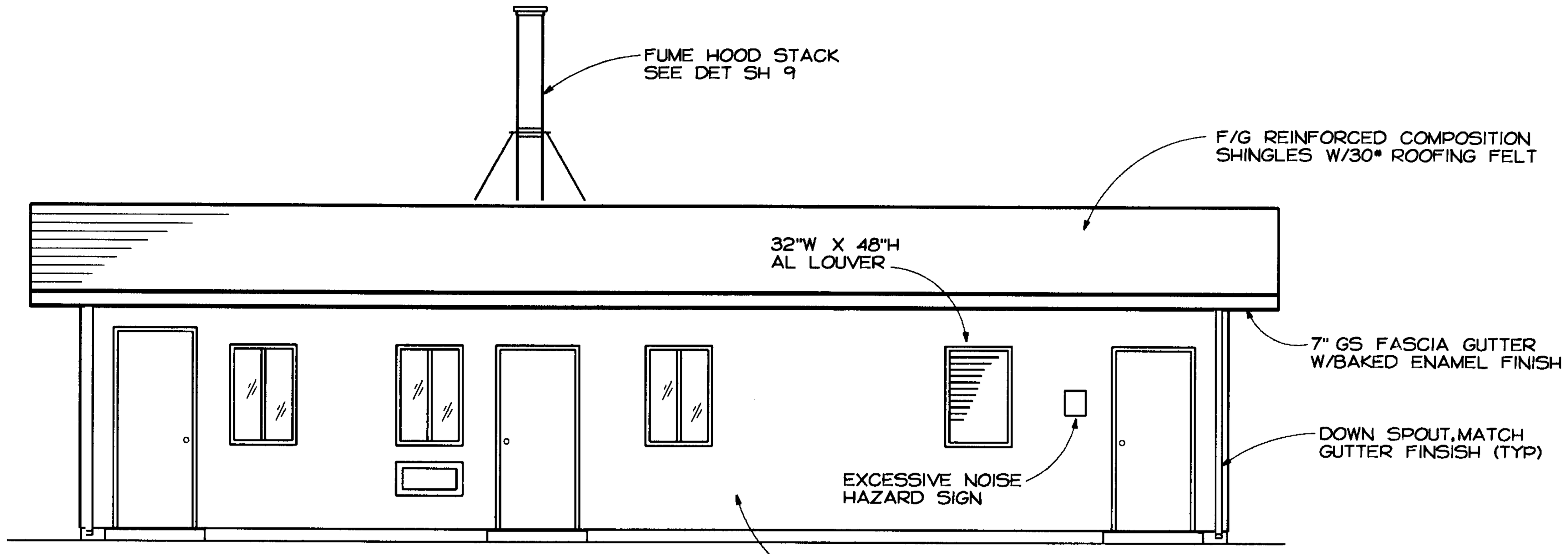
SCALE: 1/4" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
EDWIN R. STOWELL
EXP 9-30-96
No. 6513
CIVIL
STATE OF CALIFORNIA

REVISION	DESCRIPTION	BY	APP	DATE

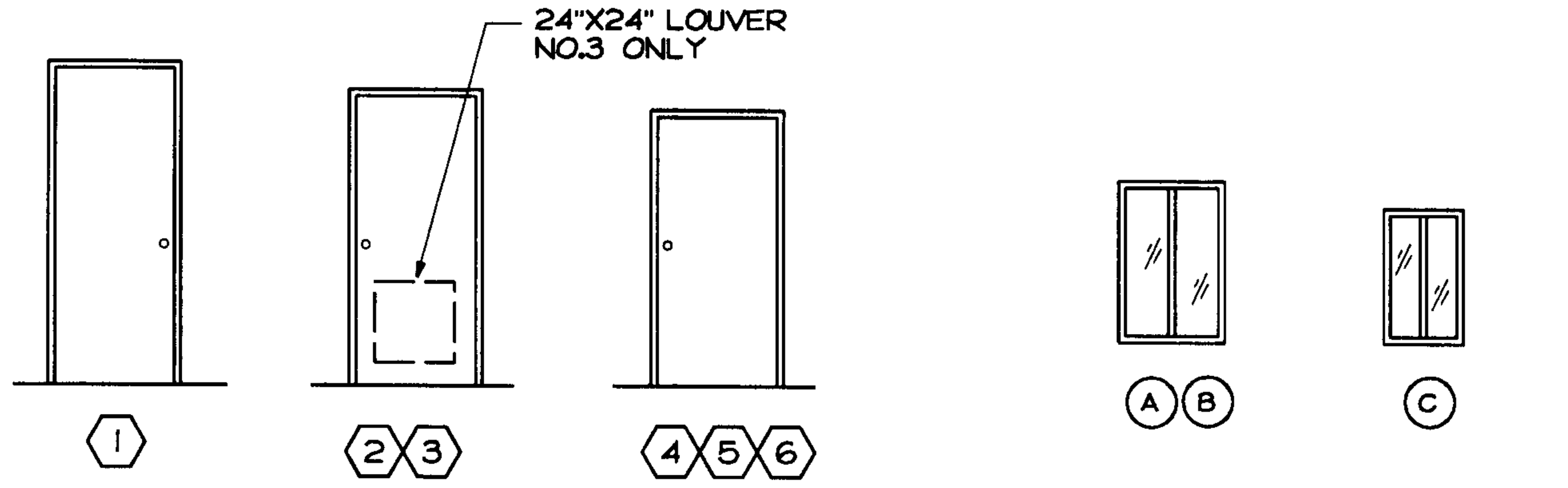
SCALE	DATE						
1/2" = 1'-0"	AUGUST 1994 / FILE 93423	DESIGNED ERS / DRAWN MVW / CHECKED ERS	SUBMITTED / RECOMMENDED / APPROVED	DEWANTE AND STOWELL CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	FLAG CITY SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES	RAW SEWAGE PUMP STATION MECHANICAL PLAN AND SECTION	DRAWING NUMBER / SHEET NUMBER 11 OF 44

REVISION	DESCRIPTION	BY	APP	DATE
1	RECORD DWG. CHANGES INCORP.	DCL	RMD	6-95



ELEVATION

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



1 — 3'-0" X 7'-10" X 1 3/4" HOLLOW METAL DOOR

2 3 — 3'-0" X 7'-2" X 1 3/4" HOLLOW METAL DOOR

4 — 2'-8" X 6'-8" X 1 3/4"SOLID CORE WOOD DOOR

5 — 2'-8" X 6'-8" X 1 3/4" HOLLOW METAL DOOR SPECIAL WEATHER STRIP REQ'D

6 — 3'-0" X 6'-8" X 1 3/4"SOLID CORE WOOD DOOR

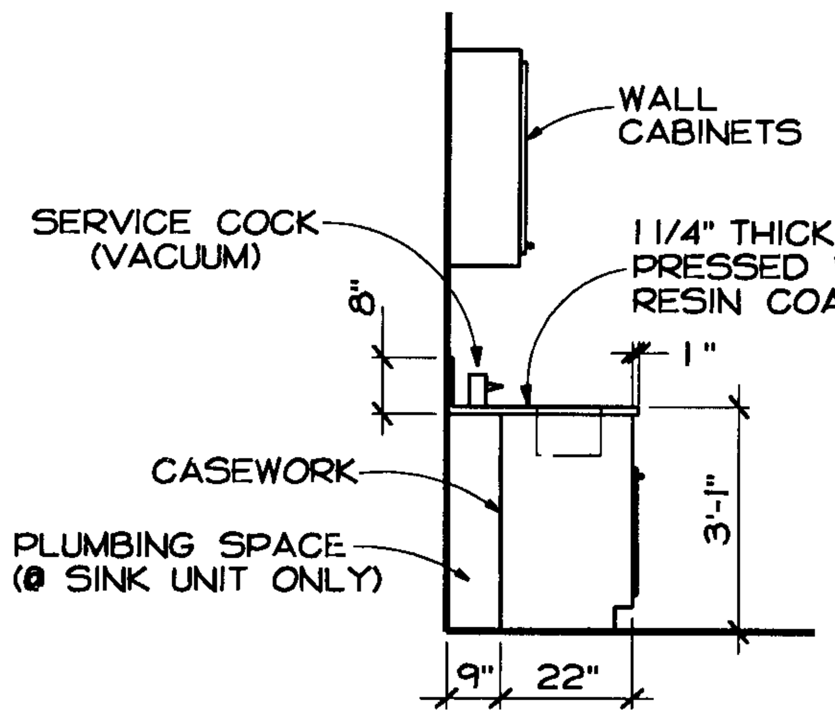
A — 2'-8"W X 3'-8"H HORIZ SLIDING ALUMINUM W/DUAL GLAZING

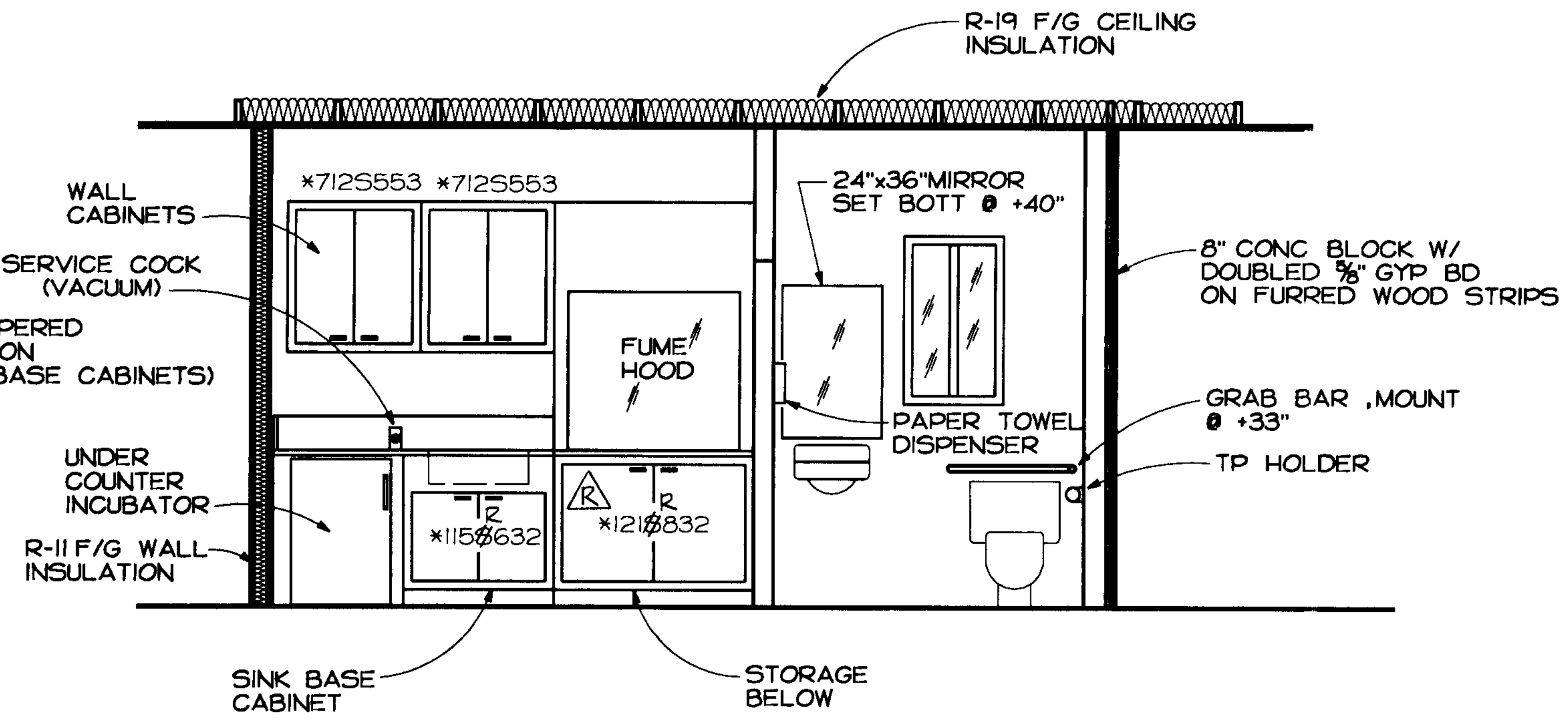
B — 4'-0"W X 3'-8"H HORIZ SLIDING ALUMINUM W/DUAL GLAZING

C — 2'-0"W X 3'-0"H HORIZ SLIDING ALUMINUM W/DUAL OBSCURE GLAZING

DOOR/ WINDOW SCHEDULE

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





*NOTE: NUMBERS REFER TO METAL CABINETS MANUFACTURED BY HAMILTON INDUSTRIES

LAB/BATH ELEVATIONS

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

ROOM FINISH SCHEDULE

NAME	FLOORS: CONCRETE	FLOORS: VINYL TILE	BASE: VINYL COVE	WALLS: GYP BOARD	WALLS: CONC. BLOCK	CLG.: GYP BOARD	CLG.: INSULATION	CLG.: CEILING HT.	REMARKS
CONTROL/ELEC	O		O	O	O	O	O	9'6"	
LABORATORY	O		O	O		O	O	9'6"	
TOILET	O		O	O	O	O	O	9'6"	
BLOWER ROOM	O			O	O	O	O	9'6"	
WORKSHOP	O		O	O	O	O	O	9'6"	

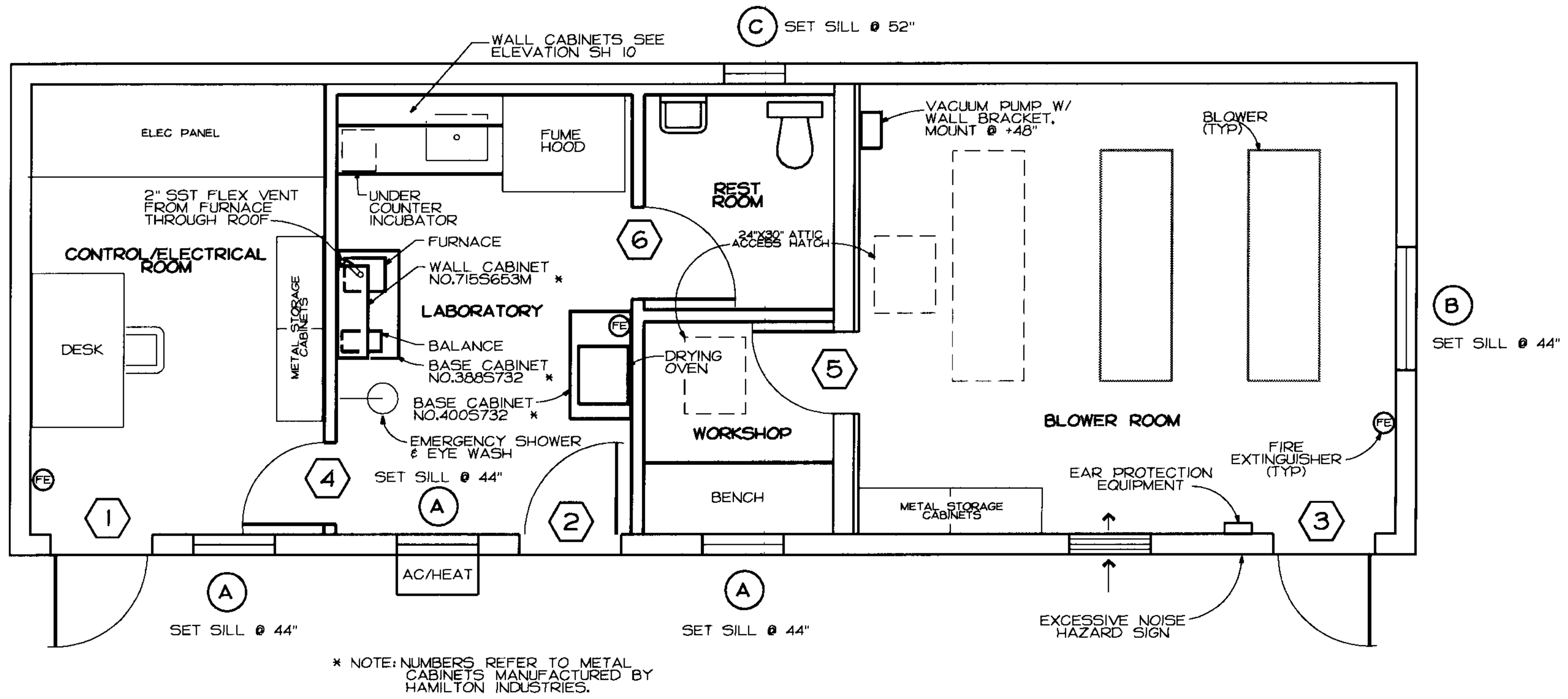
REGISTERED PROFESSIONAL ENGINEER
EDWIN R. STOWELL
Exp. 9-30-96
No. 6513
CIVIL
STATE OF CALIFORNIA

RECORD DRAWING

SCALE	DATE		SUBMITTED			
AS SHOWN	AUGUST 1994	DESIGNED RRR	RECOMMENDED	DEWANTE AND STOWELL CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	FLAG CITY SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES	CONTROL BUILDING ELEVATIONS AND SCHEDULES
	FILE 93423	DRAWN RRR	APPROVED			DRAWING NUMBER
		CHECKED ERS				SHEET NUMBER 10 OF 44

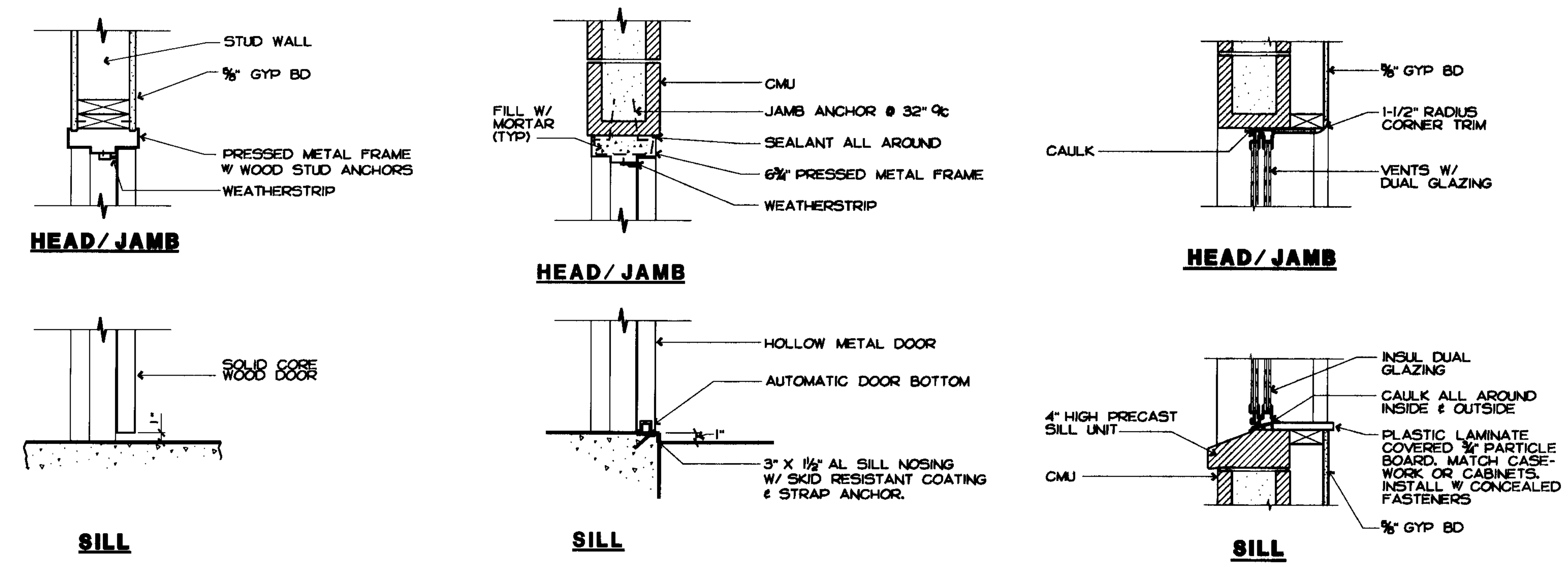
SU- 2893

REVISION	DESCRIPTION	BY	APP	DATE



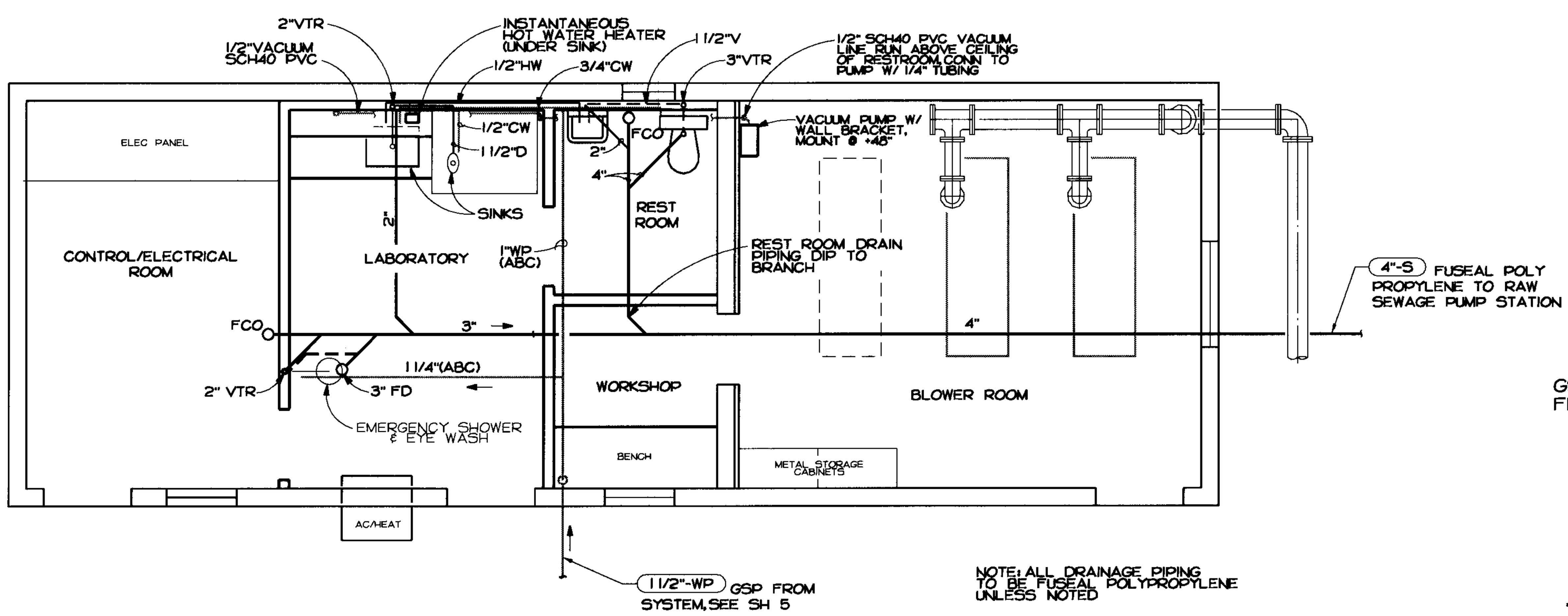
FLOOR PLAN

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



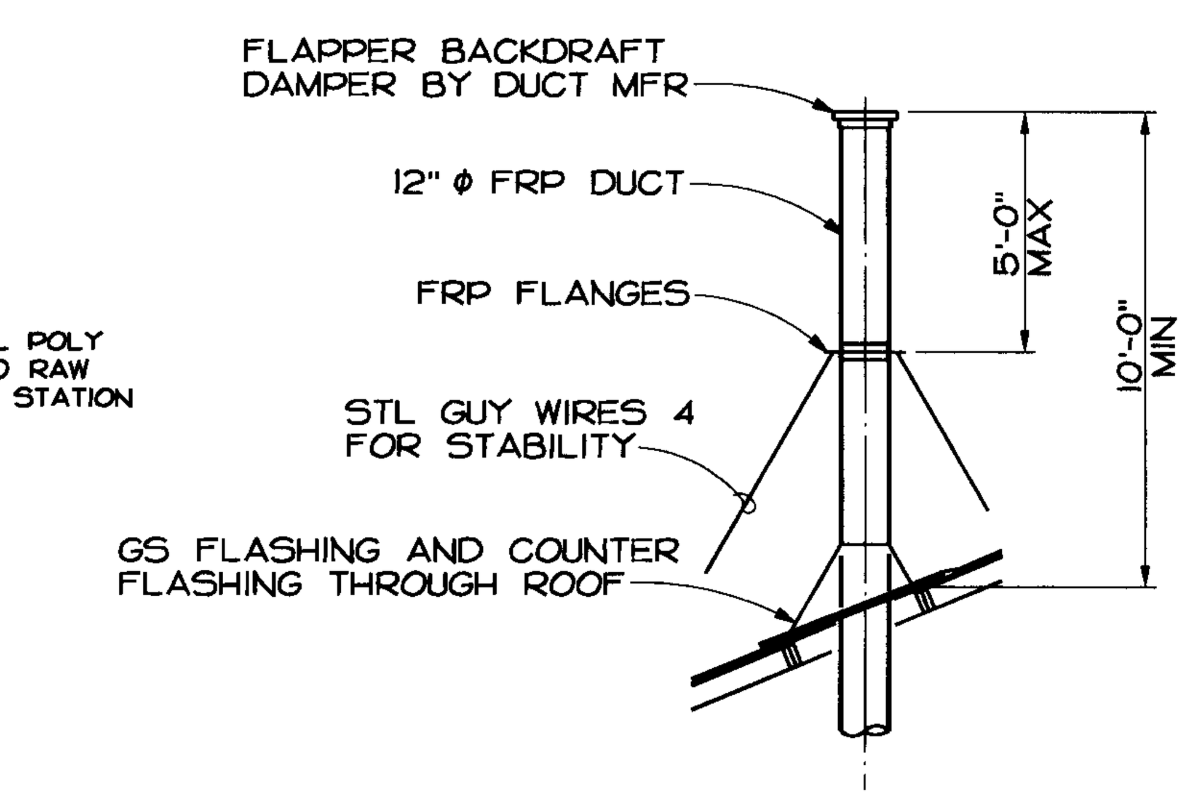
DOOR & WINDOW DETAILS

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



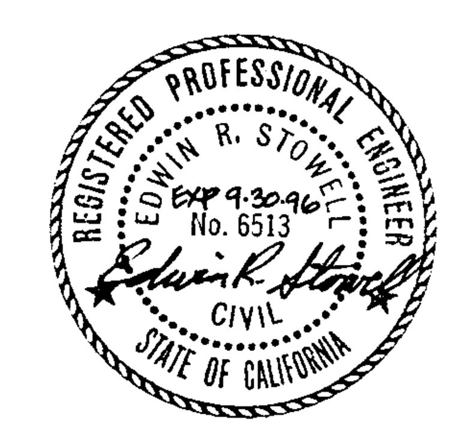
PLUMBING PLAN

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



FUME HOOD DUCT DETAIL

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



SU-2894

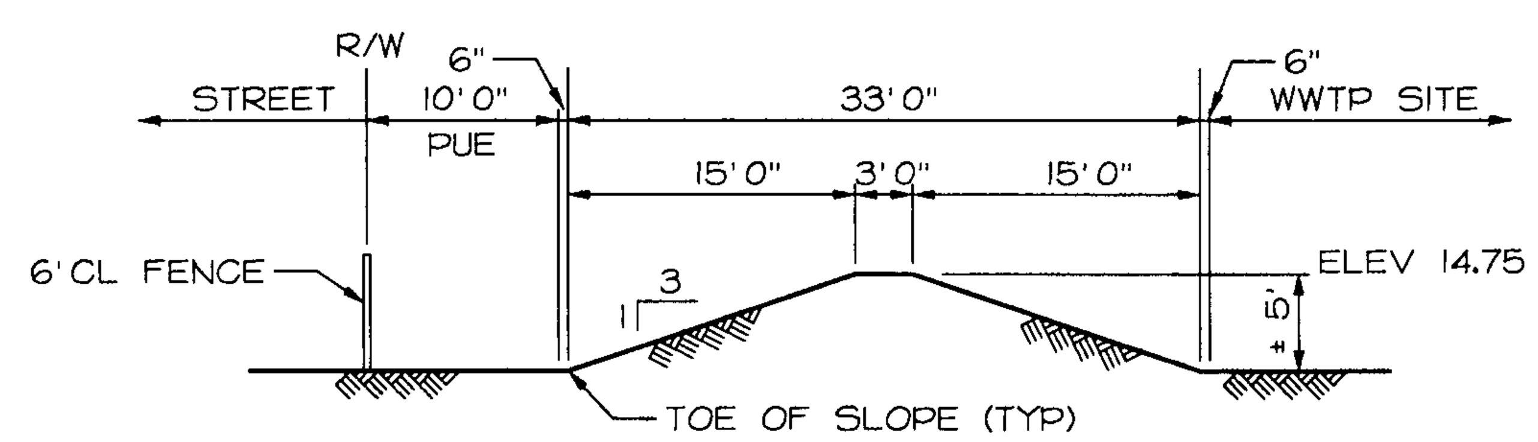
SCALE	DATE				
AS SHOWN	AUGUST 1994	DESIGNED RRR	SUBMITTED	DEWANTE AND STOWELL CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	FLAG CITY SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES
	FILE 93423	DRAWN RRR	RECOMMENDED		
		CHECKED ERS	APPROVED		

CONTROL BUILDING
FLOOR AND PLUMBING PLANS & DETAILS

DRAWING NUMBER

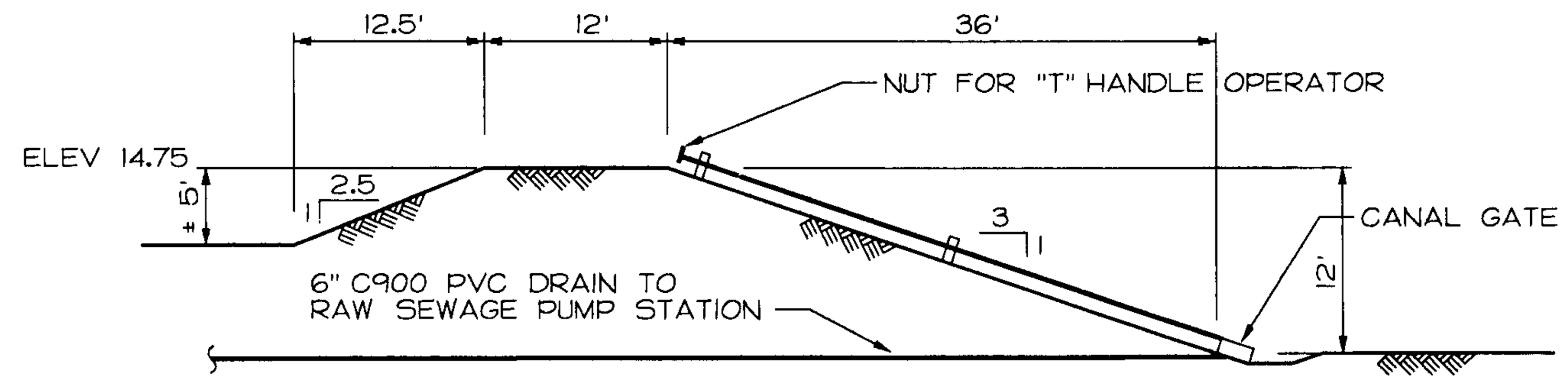
SHEET NUMBER 9 OF 44

REVISION	DESCRIPTION	BY	APP	DATE
R	RECORD DWG. CHANGES INCORP.	DCL	RMD	6-95



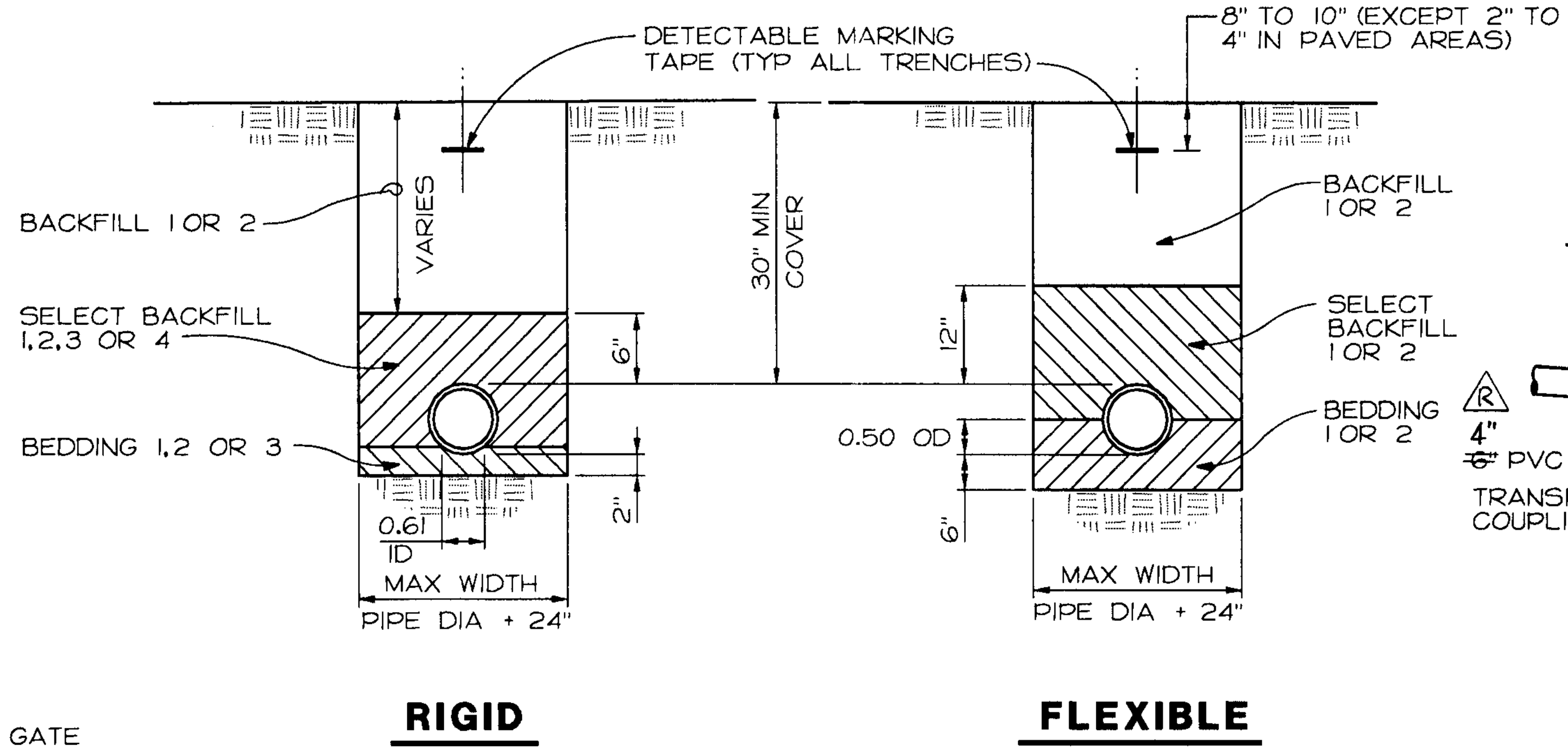
A/4 **BERM TO SHIELD WWTP**

SCALE: 1" = 10'



B/5 **POND DRAIN CANAL GATE**

SCALE: 1" = 10'

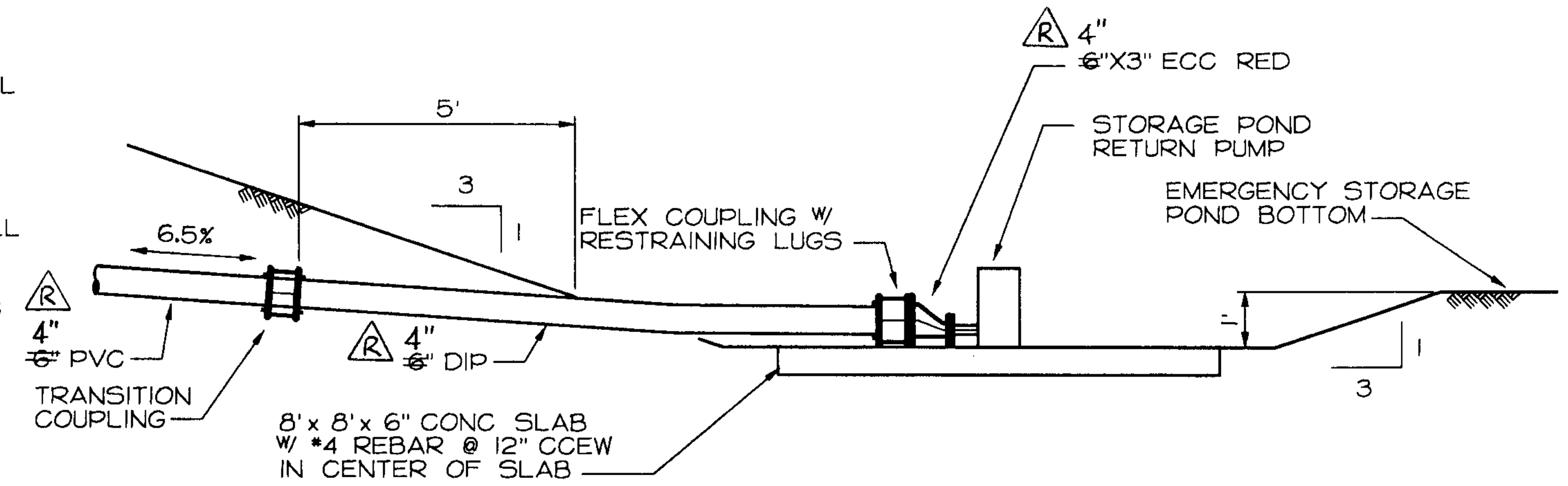


NOTE:

RIGID INCLUDES ALL STEEL, CAST IRON, CONCRETE & CLAY PIPE.
FLEXIBLE INCLUDES ALL PLASTIC PIPE

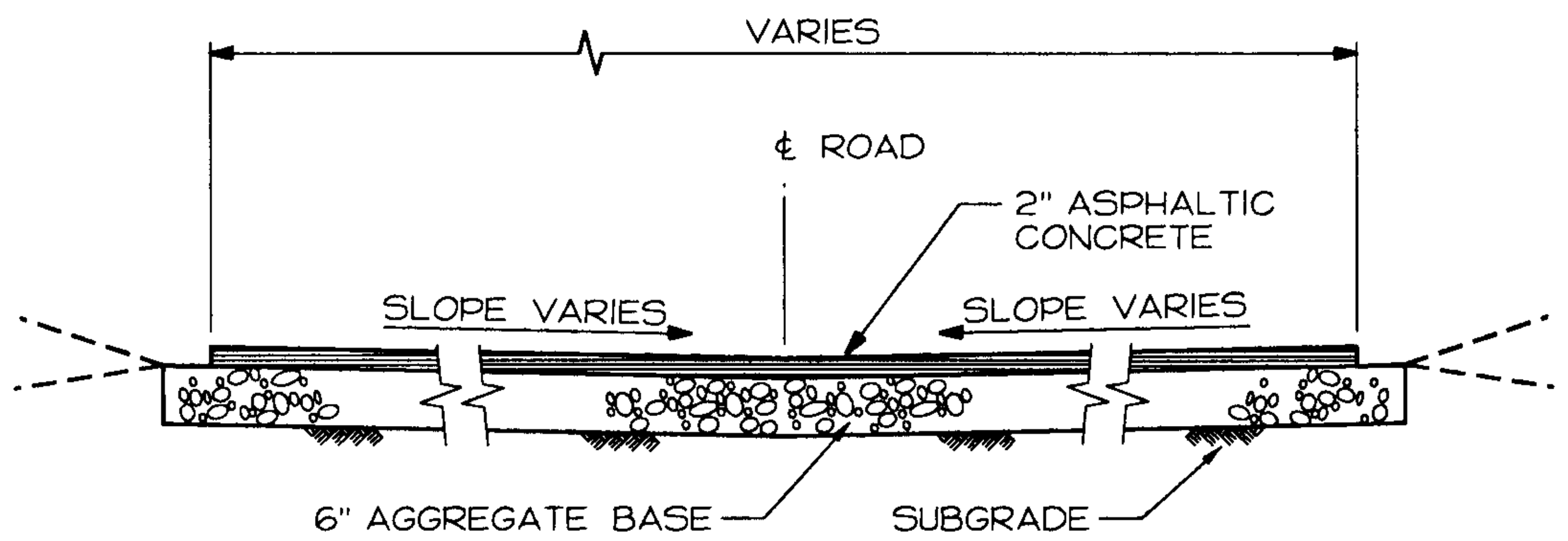
TYPICAL TRENCH

NTS



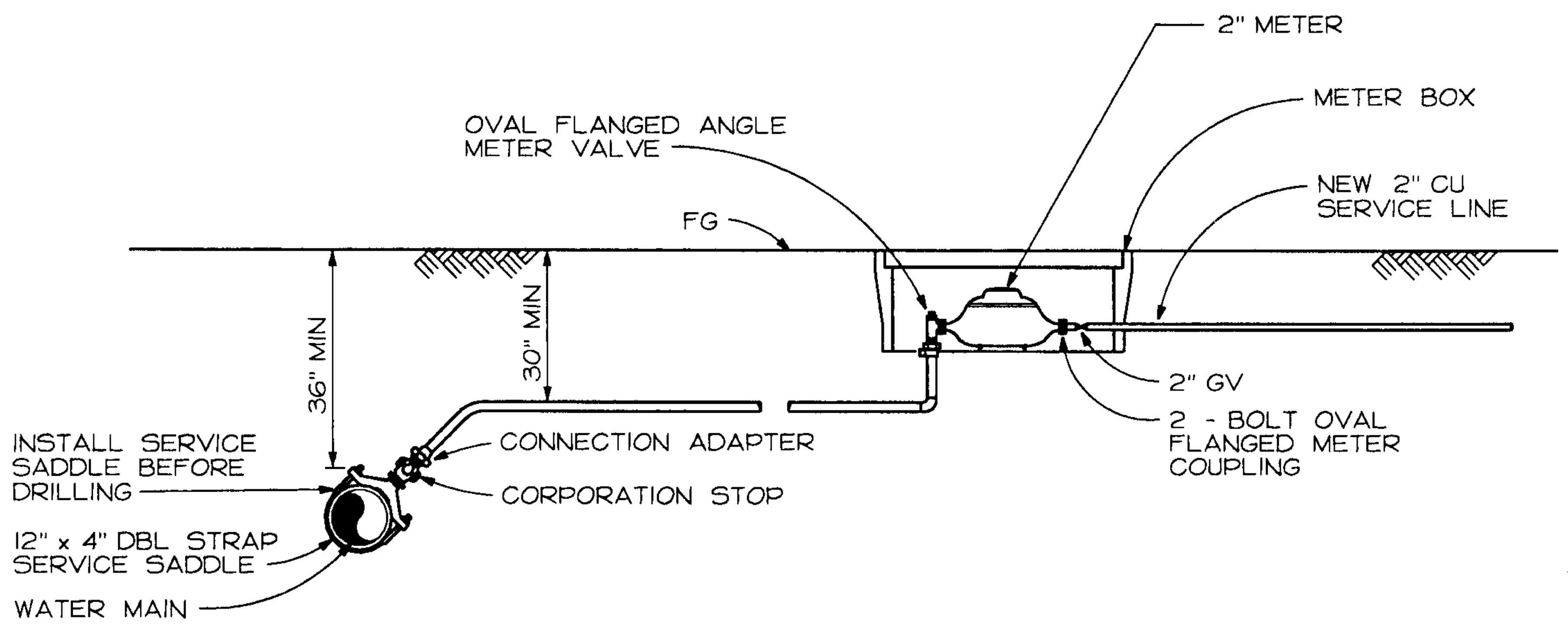
POND RETURN PUMP

NTS



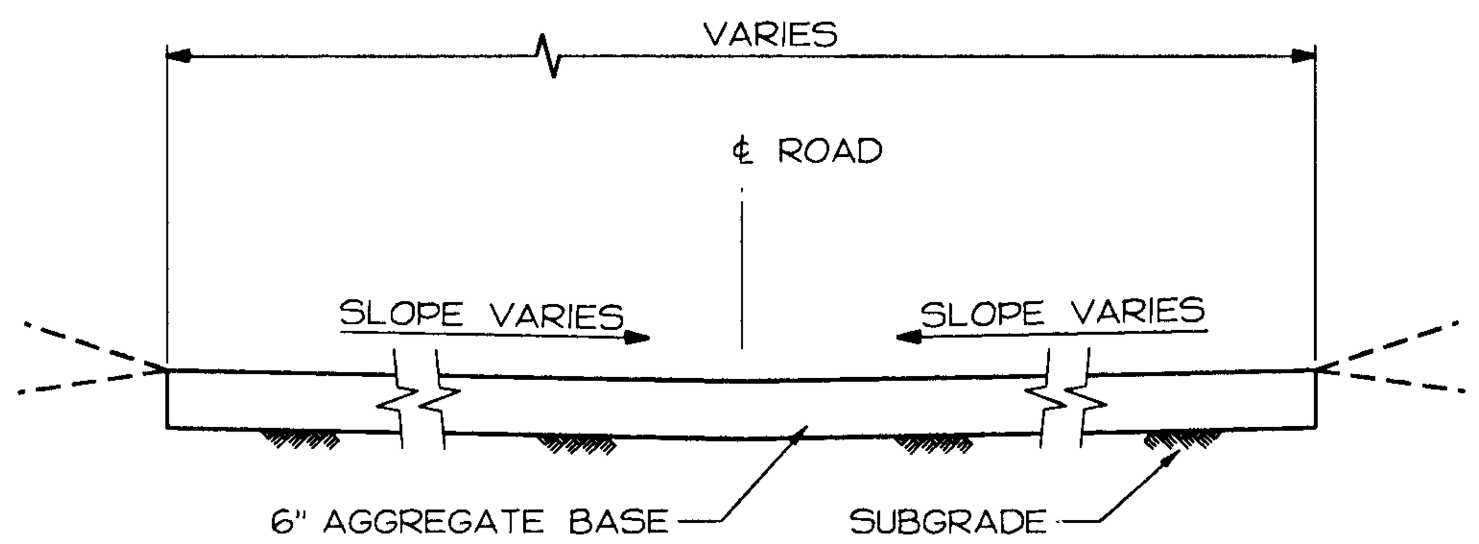
TYP ROAD PAVING SECTION

SCALE: NONE



WATER SERVICE TAP & METER CONNECTION

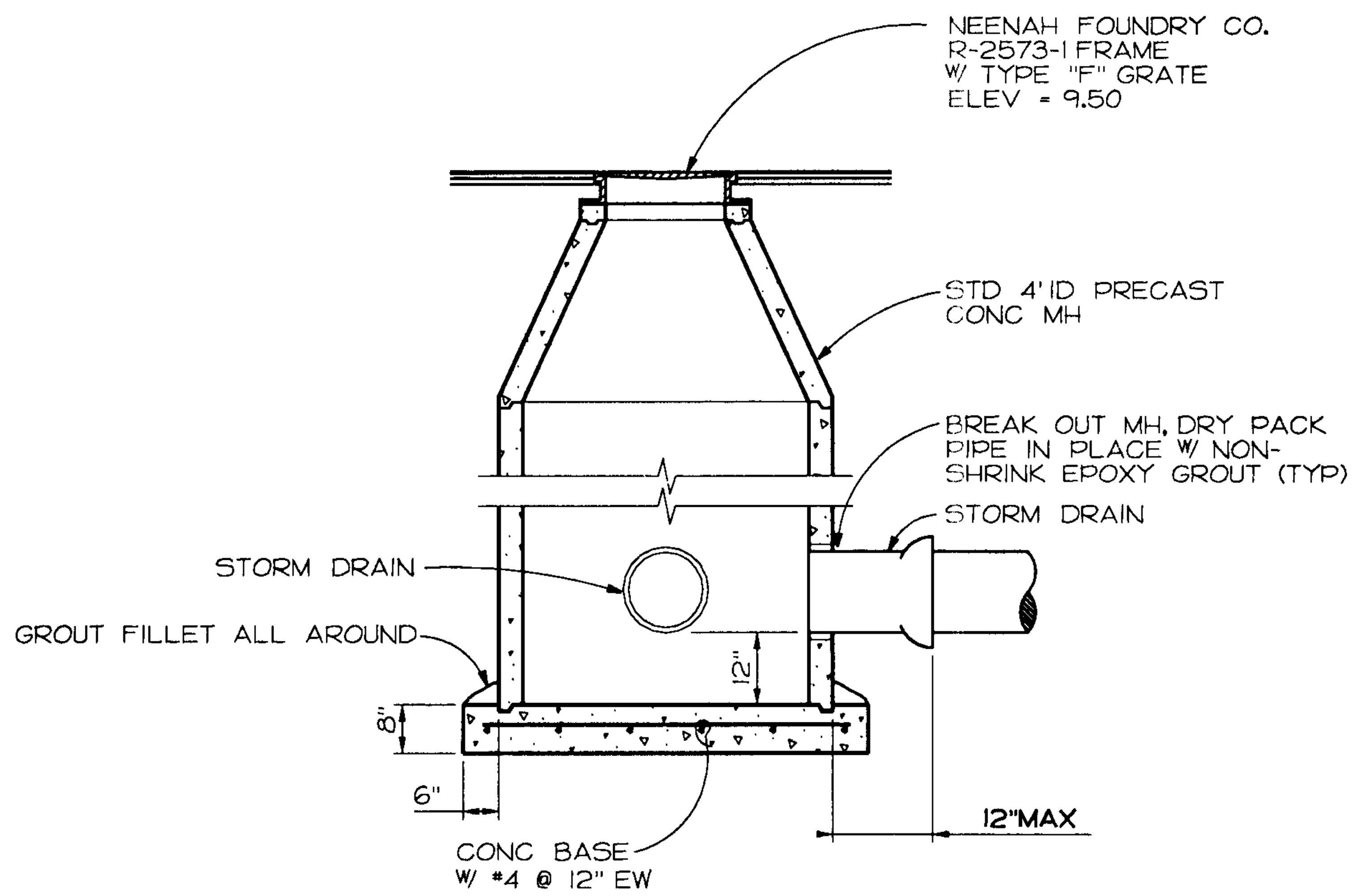
NTS



NOTE:
AGGREGATE BASE ROAD ON LEVEE
SHALL HAVE NO SLOPE

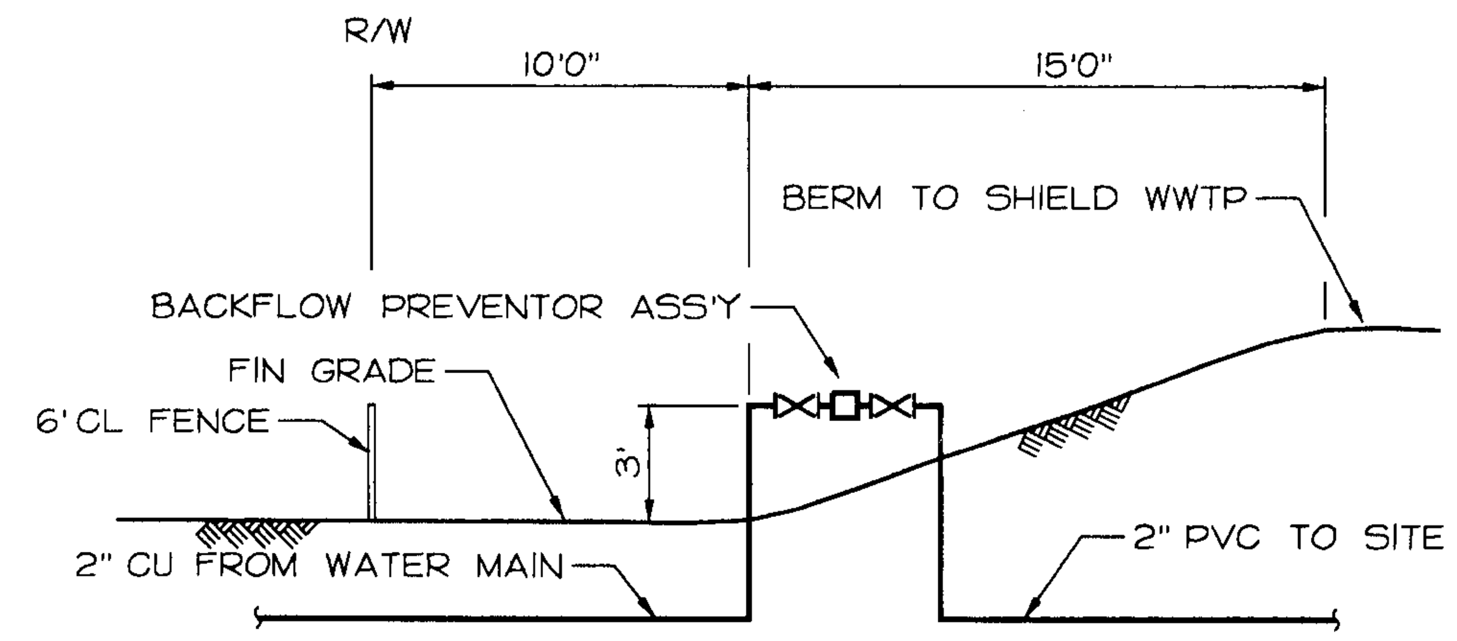
TYP AB ROADWAY SECTION

SCALE: NONE



TYPICAL DRAINAGE MANHOLE

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



REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY

RECORD DRAWING

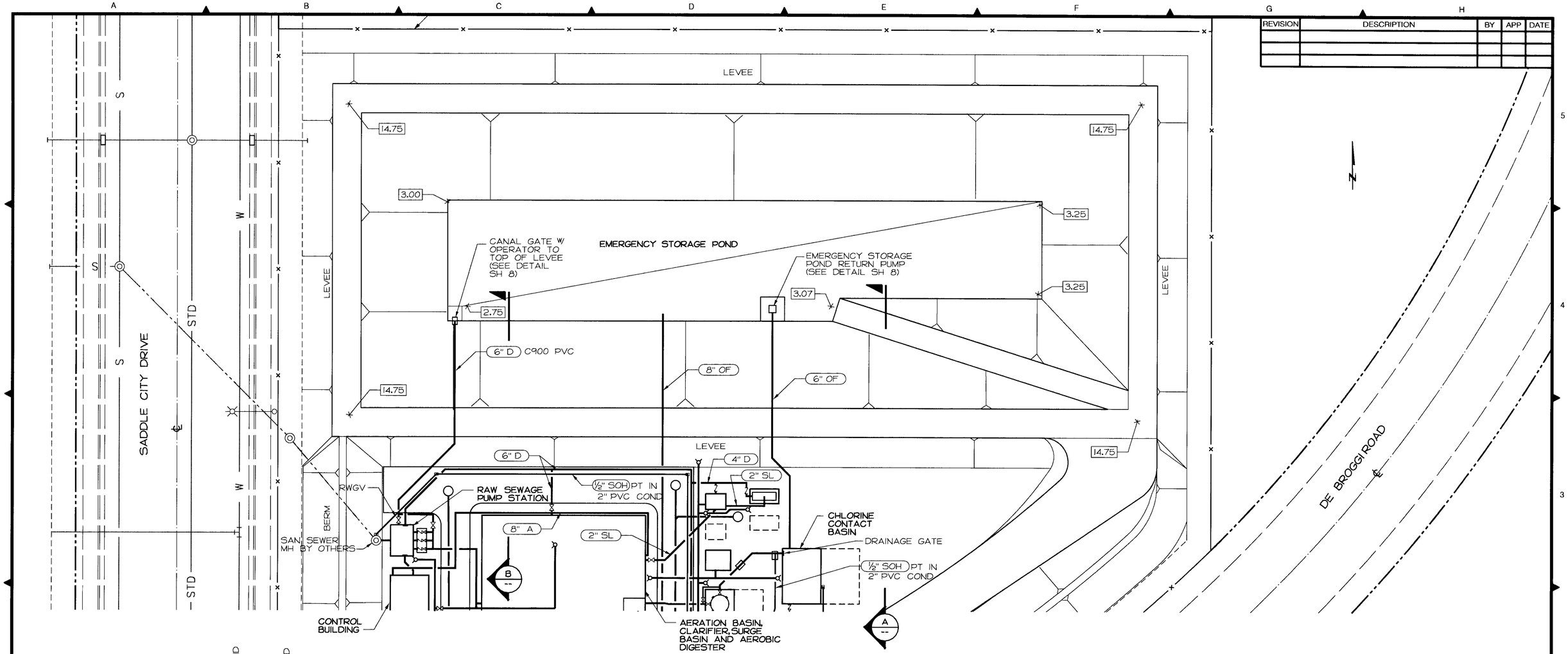
SU-2895

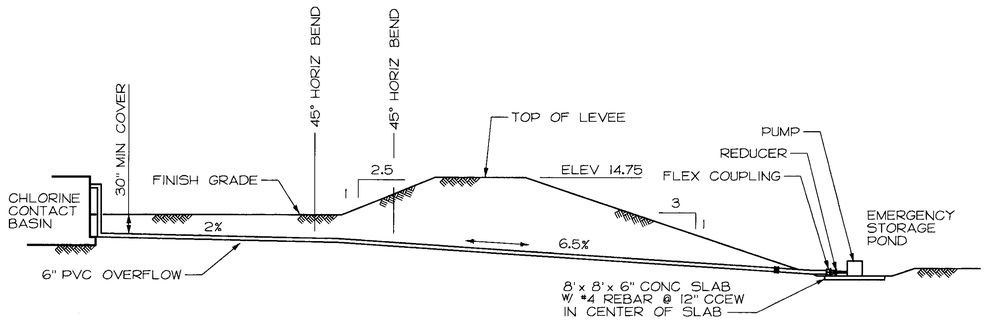
SCALE	DATE					
AS SHOWN	AUGUST 1994 / FILE 93423	DESIGNED ERS / DRAWN MVW / CHECKED ERS	SUBMITTED / RECOMMENDED / APPROVED	DEWANTE AND STOWELL CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	FLAG CITY SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES	PAVING, DRAINAGE & UTILITIES DETAILS

DRAWING NUMBER

SHEET NUMBER 8 OF 44

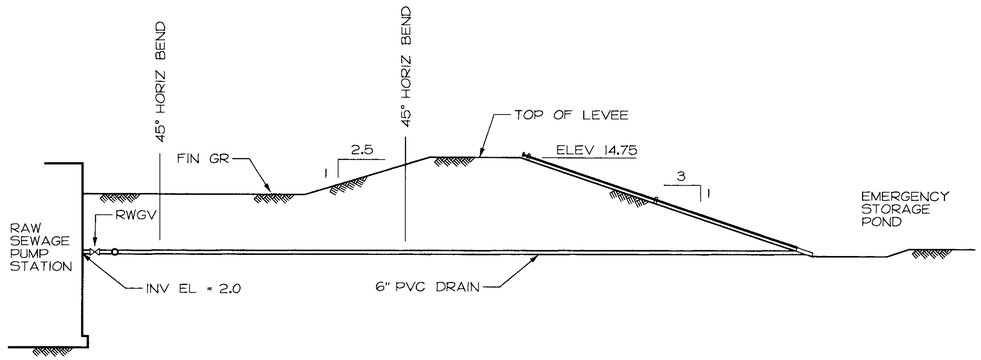
REVISION	DESCRIPTION	BY	APP	DATE





A -- **CHLORINE CONTACT BASIN OVERFLOW**

SCALE : 1" = 10'



B -- **STORAGE POND DRAIN**

SCALE : 1" = 10'

REGISTERED PROFESSIONAL ENGINEER
EDWIN R. STOWELL
Exp 9-30-96
No. 6513
CIVIL
STATE OF CALIFORNIA

SU-2896

DATE: JAN. 29, 1994
FILE: d:\93423\storpond.dgn

SCALE	DATE			
1" = 20'	AUGUST 1994	DESIGNED ERS	SUBMITTED	
	FILE 93423	DRAWN MVW	RECOMMENDED	
		CHECKED ERS	APPROVED	

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

EMERGENCY STORAGE POND PLAN & SECTIONS

DRAWING NUMBER

SHEET NUMBER 7 OF 44

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REVISION	DESCRIPTION	BY	APP	DATE
R	RECORD DWG. CHANGES INCORP.	DCL	RMD	6-95

6" D C900 PVC
6" OF SCH 40 PVC
4" POND RETURN
DRAINAGE MH GRATE EL 9.50 INV EL 4.55
1" HV (TYP)
1" WP
4" D
3" D
6" D
1/2" SOH PT IN 2" PVC COND
DRAINAGE MH GRATE EL 9.50 INV EL 4.55
RWGV
8" A
CHEMICAL FEED BLDGS
BWV
SLUDGE DEWATERING FACILITIES
2" SL
DRAINAGE MH GRATE EL 9.50 INV EL 4.52
8" STD
6" FEF
DRAINAGE GATE
RWGV
RAW SEWAGE PUMP STATION
DRAINAGE GATES
4'-0"
2" WP
2" SL
2" PBV
1" WP
FILTER BYPASS
6" FIF
8" RS
AERATION BASIN, CLARIFIER, SURGE BASIN AND AEROBIC DIGESTER
FLOW METER SEE DET SH 15
CONTINUOUS FLOW FILTER
1/2" SOH PT IN 2" PVC COND
CHLORINE CONTACT BASIN
4" D
8" BA
1" WP
8" BF
1 1/2" WP
CONTROL BUILDING
8" OF
2" WP
4" D
1 1/4" WP
8" STD
1 1/2" WP
CONC BOX - BROOKS SERIES 36 OR EQUAL (TYP)
EFFLUENT SAMPLER ON 4'X5'X8" CONC SLAB @ EL FG +4"
8"x6" RED.
3" D
1/2" SOB PT IN 2" PVC COND
BWV
CHLORINATION/ DECHLORINATION FEED PUMPS
CHLORINATION/ DECHLORINATION LIQUID STORAGE
1" WP
8" FE
CONNECT TO EXIST 12" WATER MAIN W/ 2" SERVICE SADDLE (SEE DET SH 8)
2" WATER METER (SEE DET SH 8)
2" WP
BACKFLOW PREVENTION ASSY (SEE DET SH 8)
GTV (TYP)
2" WP
DRAINAGE MH GRATE EL 9.50 INV EL 4.10
8" STD
NOTE:
STORM SEWER PIPES ARE SCH 40 PVC UNLESS OTHERWISE NOTED ON PLAN
STANDBY GENERATOR AND FUEL STORAGE
DRAINAGE MH GRATE EL 9.50 INV EL 3.83
10" STD
1/2" BSP FUEL SUPPLY & 3/4" BSP FUEL RETURN
BARRIER POST (TYP)
12" STD RCP
W
W
DE BROGGI ROAD
REGISTERED PROFESSIONAL ENGINEER
EDWIN R. STOWELL
No. 6513
CIVIL
STATE OF CALIFORNIA

RECORD DRAWING

SU-2897

SCALE	DATE				
1" = 10'	AUGUST 1994 / FILE 93423	DESIGNED ERS / DRAWN MVW / CHECKED ERS	SUBMITTED / RECOMMENDED / APPROVED		

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

ENLARGED PIPING PLAN

DRAWING NUMBER | SHEET NUMBER 6 OF 44

REVISION	DESCRIPTION	BY	APP	DATE

10" SAN SEWER

SEWER MANHOLE STA 83+10 (DILLON ENGINEERING SADDLE CITY DRIVE JOB NO. 8603 SHEET NO. 13)

10" SAN SEWER

6" SAN SEWER

SADDLE CITY DRIVE

EMERGENCY STORAGE POND

CANAL GATE W/ OPERATOR TO TOP OF LEVEE (SEE DETAIL SH 8)

EMERGENCY STORAGE POND RETURN PUMP (SEE DETAIL SH 8)

6" D C900 PVC

8" OF

6" OF

DRAINAGE MH GRATE EL 9.50 INV EL 4.55

DRAINAGE MH GRATE EL 9.50 INV EL 4.55

SEE SH 6 FOR ENLGD PLAN

CHEMICAL FEED BLDGS

SLUDGE DEWATERING FACILITIES

1" HV (TYP)

1" WP

4" D

2" SL

6" D

B/7

½" SOH PT IN 2" PVC COND

RWGV

8" A

2" WP

2" SL

2" PBV

1" WP

8" RS

AERATION BASIN, CLARIFIER, SURGE BASIN AND AEROBIC DIGESTER

6" FIF

8" OF

4" D

2" WP

8" STD

CHLORINATION/ DECHLORINATION LIQUID STORAGE

DRAINAGE MH GRATE EL 9.50 INV EL 4.52

8" STD

6" FEF

DRAINAGE GATE

FLOW METER

½" SOH PT IN 2" PVC COND

CHLORINE CONTACT BASIN

CV

GTV

CONTINUOUS FLOW FILTER

3" D

½" SOB PT IN 2" PVC COND

1" WP

DRAINAGE MH GRATE EL 9.50 INV EL 4.10

CHLORINATION/ DECHLORINATION FEED PUMPS

8" FE

SAN SEWER MH BY OTHERS

RAW SEWAGE PUMP STATION

CONTROL BUILDING

12" WATER MAIN

1" WP

1½" WP

2" WP

BACKFLOW PREVENTER (SEE DET SH 8)

WATER METER (SEE DET SH 8)

BARRIER POST (TYP)

8" STD

2" WP

DRAINAGE MH GRATE EL 9.50 INV EL 3.83

10" STD

STANDBY GENERATOR AND FUEL STORAGE

½" BSP FUEL SUPPLY & ¾" BSP FUEL RETURN

12" STD RCP

CONNECT TO EXIST 12" WATER MAIN W/ 12" x 4" TEE OR SERVICE SADDLE WITH VALVE

CONNECT TO EXIST 12" STORM SEWER INV EL 3.70 ±

DE BROGGI ROAD

CONNECT TO EXIST 8" SAN SEWER

NOTE:

STORM SEWER PIPES ARE SCH 40 PVC UNLESS OTHERWISE NOTED ON PLAN

REGISTERED PROFESSIONAL ENGINEER EDWIN R. STOWELL Exp 9-30-96 No. 6513 CIVIL STATE OF CALIFORNIA

SU - 2898

DATE: AUG 29, 1994
FILE: 93423/sitepipe.dgn
USER:

SCALE	DATE	DESIGNED	SUBMITTED
1" = 20'	AUGUST 1994	DRAWN MVW	RECOMMENDED
	FILE 93423	CHECKED ERS	APPROVED

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

MAJOR PROCESS PIPING

DRAWING NUMBER

SHEET NUMBER 5 OF 44

J:\93423\plot\plot00.dgn Aug 29, 1994 15:49:55

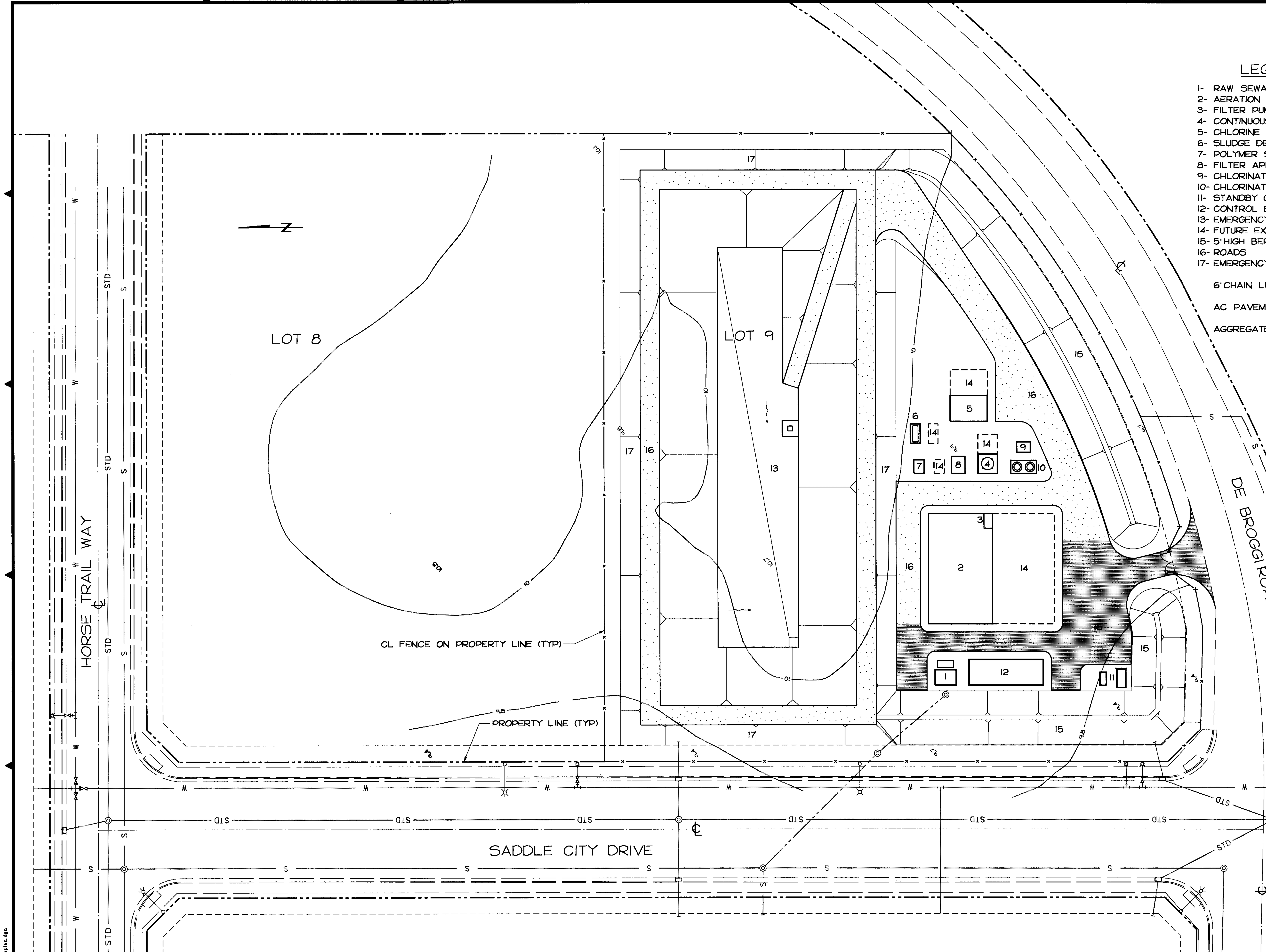
REVISION	DESCRIPTION	BY	APP	DATE
R	RECORD DWG. CHANGES INCORP.	DCL	RMD	6-95

RECORD DRAWING

SCALE	DATE						
1" = 20'	AUGUST 1994	DESIGNED ERS	SUBMITTED	DEWANTE AND STOWELL CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	FLAG CITY SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES	SITE GRADING	DRAWING NUMBER
	FILE 93423	DRAWN MVW	RECOMMENDED				SHEET NUMBER 4 OF 44
		CHECKED ERS	APPROVED				

SU-2899

REVISION	DESCRIPTION	BY	APP	DATE



LEGEND

1- RAW SEWAGE PUMP STATION
2- AERATION BASIN, CLARIFIER, SURGE BASIN AND AEROBIC DIGESTER
3- FILTER PUMP STATION
4- CONTINUOUS FLOW FILTER
5- CHLORINE CONTACT BASIN
6- SLUDGE DEWATERING FACILITIES
7- POLYMER STORAGE FOR SLUDGE DEWATERING
8- FILTER APPURTENANCES AND POLYMER STORAGE
9- CHLORINATION AND DECHLORINATION FEED PUMPS
10- CHLORINATION/DECHLORINATION LIQUID STORAGE
11- STANDBY GENERATOR AND FUEL STORAGE
12- CONTROL BUILDING
13- EMERGENCY STORAGE POND
14- FUTURE EXPANSION FACILITIES
15- 5' HIGH BERM
16- ROADS
17- EMERGENCY POND LEVEE

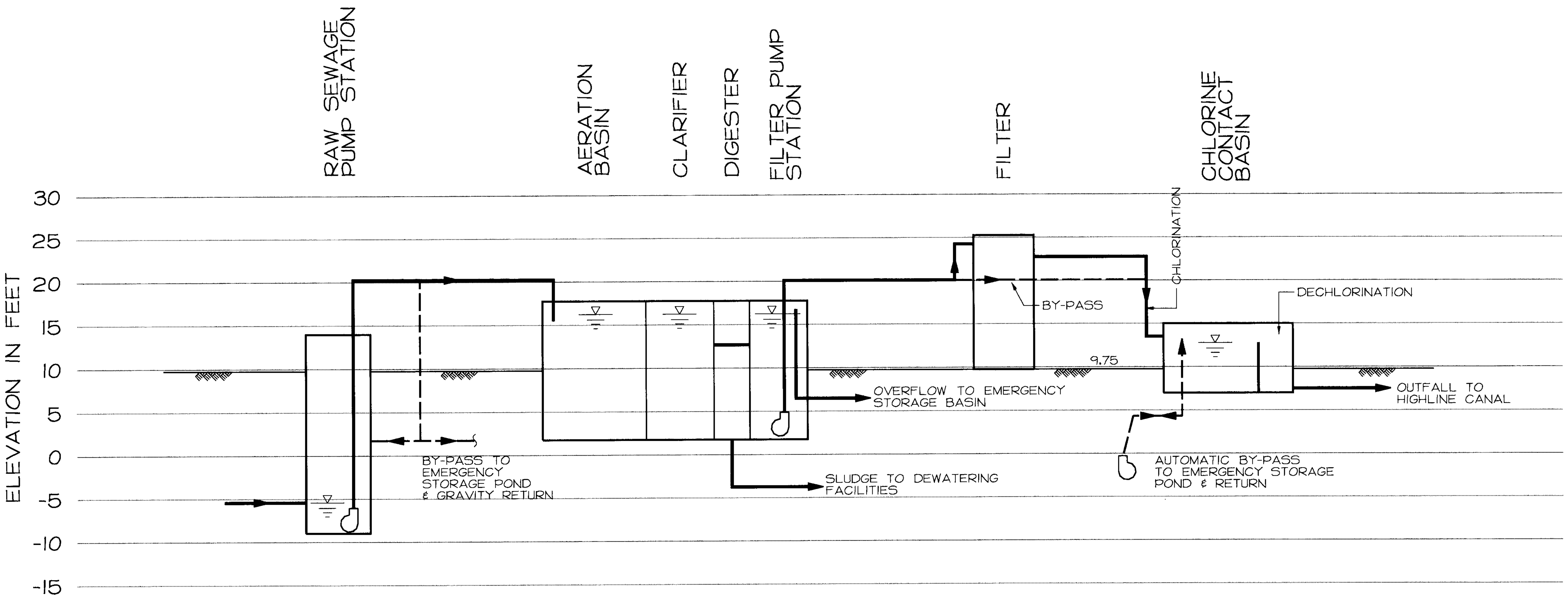
6' CHAIN LINK FENCE
AC PAVEMENT
AGGREGATE BASE

REGISTERED PROFESSIONAL ENGINEER EDWIN R. STOWELL No. 6513 CIVIL STATE OF CALIFORNIA

SU-2900

SCALE	DATE	DESIGNED ERS	SUBMITTED	DEWANTE AND STOWELL CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	FLAG CITY SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES	OVERALL SITE PLAN	DRAWING NUMBER	SHEET NUMBER
1" = 30'	AUGUST 1994	DRAWN MVW	RECOMMENDED					3 OF 44
	FILE 93423	CHECKED ERS	APPROVED					

REVISION	DESCRIPTION	BY	APP	DATE



SCHEMATIC FLOW DIAGRAM

DESIGN CRITERIA

DESIGN CONDITION	
FLOW, AWWF, MGD	.16
FLOW, PWWF, MGD	.64
BOD5, mg/l	250
BOD5, lbs/day	334
SS, TOTAL, mg/l	250
AMMONIA-N, mg/l	25
UNIT LOADING, DESIGN PARAMETERS	
AERATION TANK CAPACITY, MG	.120
AERATION RETENTION TIME, ADWF, hours	18
CLARIFIER OVERFLOW RATE, ADWF, GPD/sq.ft.	500
SLUDGE AGE, Days	19
DIGESTER, % OF AERATION TANK	22
DIGESTER-MAXIMUM MLSS, mg/l	15000
DIGESTER-SOLIDS AT WASTE, %	2.00%
OXYGEN TRANSFER RATE, %	5.00%
MIXED LIQUOR SUSPENDED SOLIDS, mg/l	2973
MIXED LIQUOR VOLATILE SUSPENDED SOLIDS, %	61.7
F/M RATIO, LBS. BOD5/LB MLVSS	0.20
F/M RATIO, LBS. BOD5/LB MLSS	0.13
ORGANIC LOADING, lbs BOD5/1000 of day	20.7
OXYGEN REQUIREMENTS, (Carbonaceous), mg/l hr.	16.46
OXYGEN REQUIREMENTS, (Nitrogenous), mg/l hr.	6.90
AIR REQUIRED, cfm (Carbonaceous)	261
AIR REQUIRED, cfm (Nitrogenous)	109
AIR REQUIRED, Total cfm	370
AIR REQUIRED IN AERATION TANK, cf/lb of BOD5/day	1599
MIXED LIQUOR WASTED PER DAY, lbs/day	160
MIXED LIQUOR WASTED PER DAY, gallons/day	6400
DIGESTER SLUDGE AGE, days	21
VOLATILE SOLIDS REDUCTION IN DIGESTER, %	31
SOLIDS WASTED FROM DIGESTER, lbs/day	130
VOLUME WASTED FROM DIGESTER, gallons/day	780
AIR REQUIRED FOR DIGESTION, cfm	164
TOTAL PLANT AIR REQUIRED, cfm	534
FILTER DATA	
SURFACE AREA, sq.ft.	38
FILTER RATE AT ADWF, gal/sq.ft./min.	2.9
REJECT WATER, % of flow	5
AIR REQUIREMENT, SCFM @ 15-25 psig	2-3
DEPTH OF SAND, inches	40
EXPECTED OVERALL PLANT RESULTS (EFFLUENT)	
BOD5, MG/L	<10
TOTAL SUSPENDED SOLIDS, MG/L	<10
NITRATES as (N)	<10
COLIFORM, MPN/100 ML	<2.2
AMMONIA (N) MG/L	<3

SCALE	DATE					
NO SCALE	AUGUST 1994	DESIGNED ERS	SUBMITTED	DEWANTE AND STOWELL CONSULTING ENGINEERS SACRAMENTO, CALIFORNIA	FLAG CITY SAN JOAQUIN CO., CALIFORNIA WASTEWATER TREATMENT FACILITIES	SCHEMATIC FLOW DIAGRAM & DESIGN CRITERIA
	FILE 93423	DRAWN MVW	RECOMMENDED			
		CHECKED ERS	APPROVED			

DRAWING NUMBER	SHEET NUMBER
	2 OF 44

REVISION	DESCRIPTION	BY	APP	DATE
R	RECORD DWG. CHANGES INCORP.	DCL	RMD	6-95

CONTRACT DRAWINGS FOR

FLAG CITY WASTEWATER TREATMENT FACILITIES

AUGUST 1994

Submitted: Edwin R. Stowell

R RECORD DRAWING NOTES

1. CONTRACTOR: AUBURN CONSTRUCTORS
   730 WEST STADIUM LANE
   SACRAMENTO, CA 95834-1130

   BID DATE: 9-27-94
   STARTING DATE: 10-5-94
   COMPLETION DATE: 6-14-95
   ORIGINAL CONTRACT: $ 1,080,000
   CHANGE ORDERS: $ 48,345.70
   FINAL CONTRACT: $ 1,128,345.70

2. R SYMBOL DESIGNATEDS "RECORD DRAWING" REVISIONS
3. THESE DRAWINGS INCORPORATE CHANGES TO THE ORIGINAL CONTRACT DRAWINGS THAT WERE NOTED DURING CONSTRUCTION BY THE CONTRACTOR AND CONSTRUCTION INSPECTORS. THE INFORMATION REPORTED IS CORRECT AS FAR AS IS KNOWN. BUT NO FIELD VERIFICATION HAS BEEN MADE AS TO THE COMPLETENESS OR ACCURACY OF THE INFORMATION.

SYMBOLS

- GATE VALVE, BALL VALVE, GLOBE VALVE
- CHECK VALVE OR BACKWATER VALVE
- BUTTERFLY VALVE
- UNION
- REDUCER
- PRESSURE GAUGE OR SWITCH
- HOSE VALVE
- FLANGED FITTING
- FLANGED COUPLING ADAPTER
- FLEXIBLE COUPLING
- LIGHT POLE
- NEW FENCE
- EXISTING MANHOLE
- NEW MANHOLE
- GUY WIRE WITH ANCHOR
- NEW FACILITIES
- FUTURE FACILITIES
- NEW PIPELINE
- W EXISTING PIPELINE
- POWER POLE
- RAILROAD
- EXISTING FACILITIES
- TREE
- UNDERGROUND UTILITIES

ABBREVIATIONS

A	AERATION AIR
AB	ANCHOR BOLT
ABC	ABOVE CEILING
AL	ALUMINUM
ASSY	ASSEMBLY
BF	BLIND FLANGE
BRKT	BRACKET
BSP	BLACK STEEL PIPE
BUV	BUTTERFLY VALVE
BWV	BACKWATER VALVE
C&G	CURB AND GUTTER
CL	CHAIN LINK OR CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
COND	CONDUIT
CONN	CONNECTION
CPLG	COUPLING
CU	COPPER
CV	CHECK VALVE
CW	COLD WATER
D	DRAIN
DIP	DUCTILE IRON PIPE
ECC	ECCENTRIC
EF	EACH FACE
ELB	ELBOW
EL	ELEVATION
EW	EACH WAY
FC	FLEXIBLE COUPLING
FCA	FLANGED COUPLING ADAPTOR
FCO	FLOOR CLEANOUT
FE	FINAL EFFLUENT
FEF	FILTERED EFFLUENT
FIF	FILTER INFLUENT
FG	FINISHED GRADE
F/G	FIBERGLASS
FHY	FIRE HYDRANT
FLEX	FLEXIBLE
FLG	FLANGE
FRP	FIBERGLASS REINFORCED PIPE
GAF	GALVANIZE AFTER FABRICATION
GS	GALVANIZED STEEL
GTV	GATE VALVE
GYP	GYPSUM
HT	HEIGHT
HV	HOSE VALVE
HW	HOT WATER
IE	INVERT ELEVATION
LR	LONG RADIUS
MFR	MANUFACTURER
MH	MANHOLE
MJ	MECHANICAL JOINT
OC	ON CENTER
OF	OVERFLOW
PCV	PLASTIC CHECK VALVE
PBV	PLASTIC BALL VALVE
PG	PRESSURE GUAGE
PL	PROPERTY LINE
PMF	PREMOLDED FILLER
PRFV	PRESSURE RELIEF VALVE
PSO	POLYMER SOLUTION
PT	PLASTIC TUBING
R/W	RIGHT OF WAY
RWD	REDWOOD
RWGV	RESILIENT WEDGE GATE VALVE
S	SEWER
SAN	SANITARY
SCH	SCHEDULE
SCV	SPLIT DISC CHECK VALVE
SH	SHEET
SL	SLUDGE
SOB	SODIUM BISULFITE
SOH	SODIUM HYPOCHLORITE
STD	STORM DRAIN
SST	STAINLESS STEEL
STL	STEEL
TP	TOILET PAPER
TYP	TYPICAL
VB	VALVE BOX
VTR	VENT THROUGH ROOF
W	WATER
WF	WIDE FLANGE
WP	POTABLE WATER

INDEX TO SHEETS

REGISTERED PROFESSIONAL ENGINEER EDWIN R. STOWELL No. 6513 CIVIL STATE OF CALIFORNIA EXP. 9-30-95

RECORD DRAWING

APPROVED BY THE SAN JOAQUIN COUNTY PUBLIC HEALTH SERVICES ENVIRONMENTAL SERVICE DIVISION
BY: Mike L. Hughes DATE: Aug. 29 1994

COUNTY OF SAN JOAQUIN
DEPARTMENT OF PUBLIC WORKS
APPROVED: Henry M. Hirata DATE: 9/2/94
HENRY M. HIRATA
DIRECTOR OF PUBLIC WORKS
R.C.E. NO. 21258
EXP. DATE: 09/30/97

SU-2902 SET B

SCALE	DATE			
NO SCALE	AUGUST 1994	DESIGNED ERS	SUBMITTED	
	FILE 93423	DRAWN MVW	RECOMMENDED	
		CHECKED ERS	APPROVED	

DEWANTE AND STOWELL
CONSULTING ENGINEERS
SACRAMENTO, CALIFORNIA

FLAG CITY
SAN JOAQUIN CO., CALIFORNIA
WASTEWATER TREATMENT FACILITIES

TITLE SHEET, ABBREVIATIONS AND INDEX TO DRAWINGS

DRAWING NUMBER

SHEET NUMBER 1 OF 44

DATE: 8/8/94 FILE: 93423\dcover.dgn