

CITY OF SUNNYVALE, CALIFORNIA

**CONTRACT DOCUMENTS
FOR CONSTRUCTION OF**

PRIMARY FACILITIES

CONTRACT NO. C-2

**WATER POLLUTION CONTROL PLANT
CAPACITY EXPANSION & PROCESS IMPROVEMENTS**

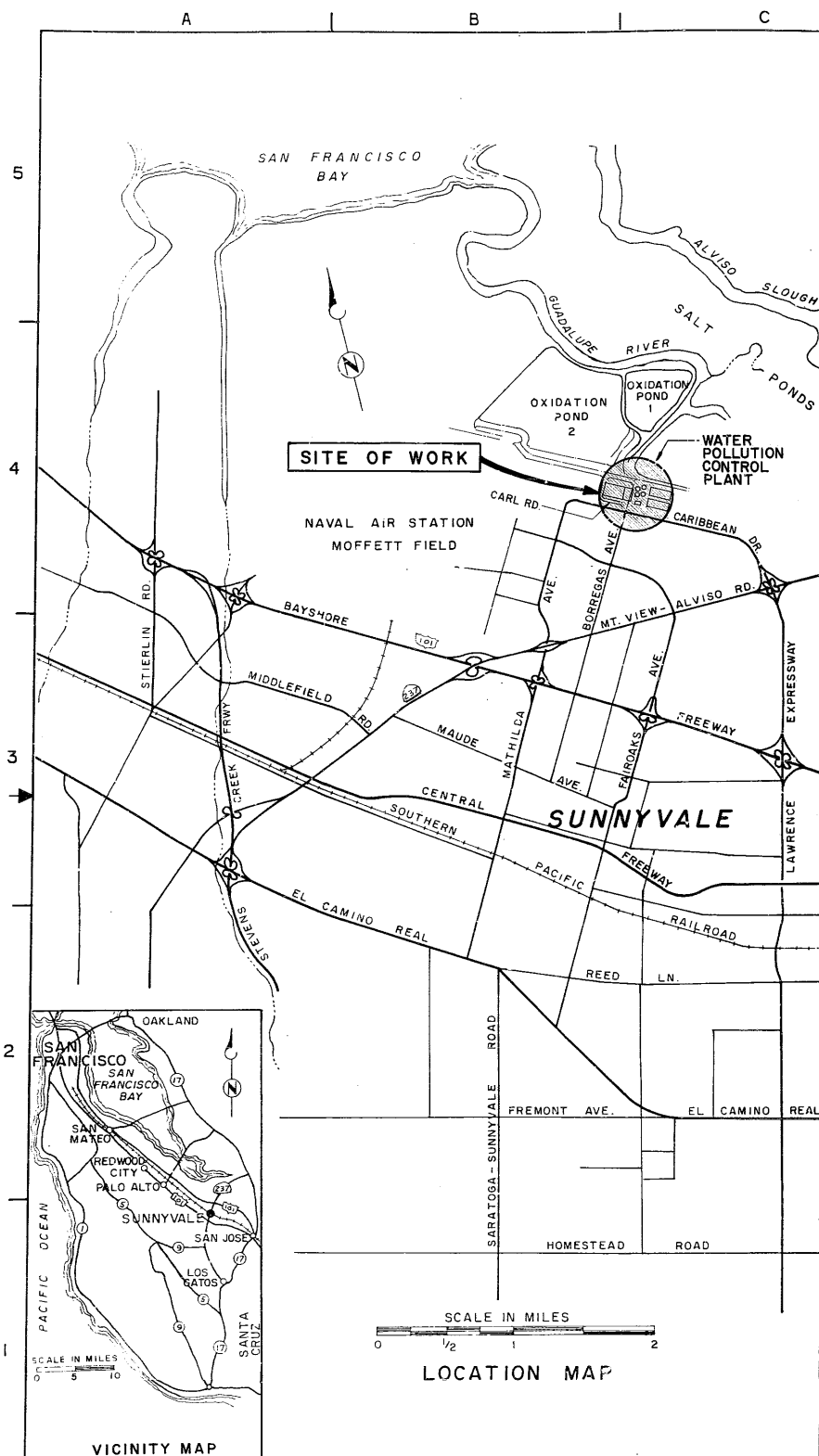
VOLUME 2 OF 2—PLANS

DESIGN ENGINEERS



BROWN AND CALDWELL, CONSULTING ENGINEERS

**CONFORMS TO RECORD
DOCUMENTS**
DATE: 4/85



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SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE
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CONFORMS TO RECORD DOCUMENTS

DATE: 4/85

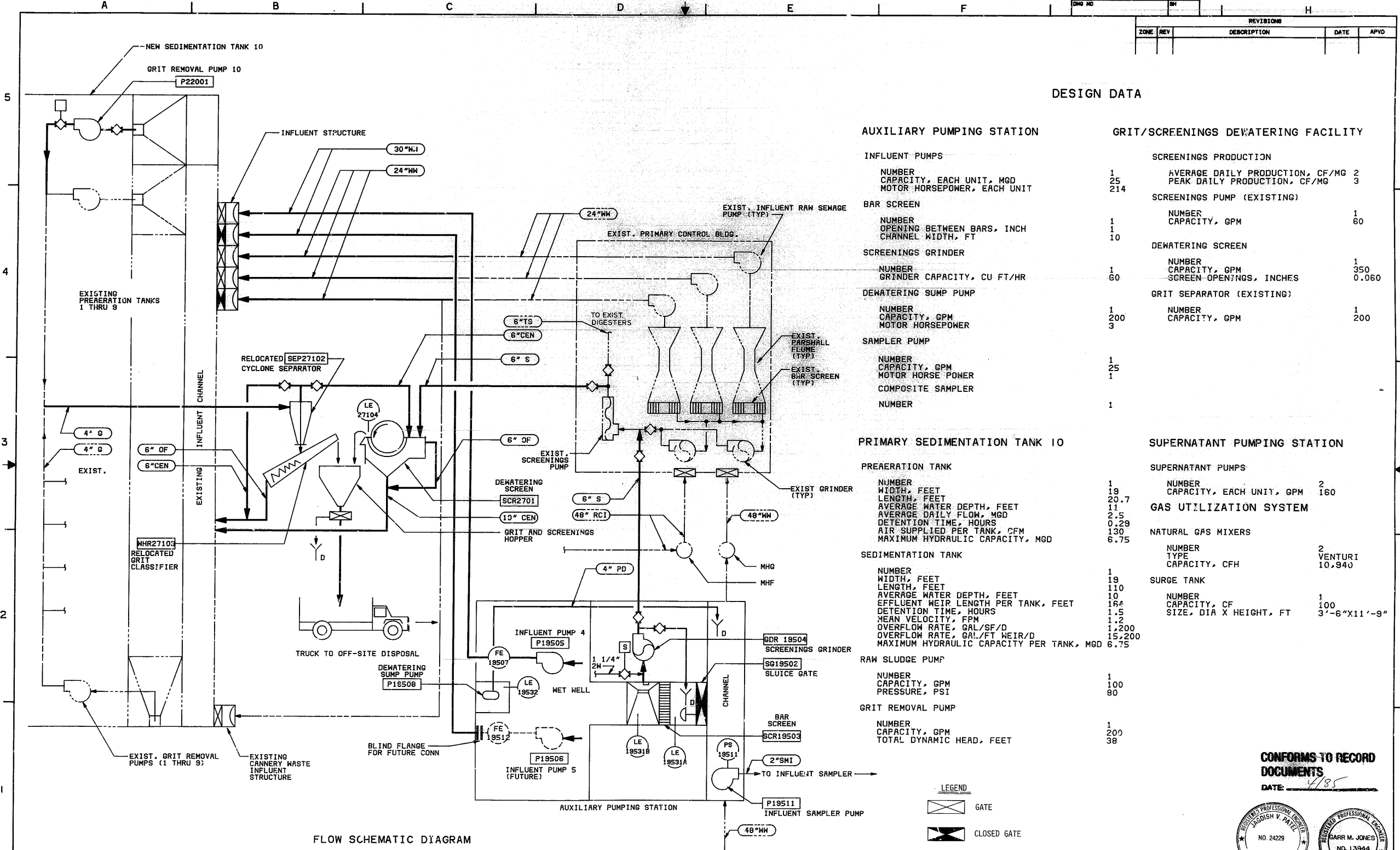


BN	DET	DN	GM	CM	CP	DM	FEN	CR	IR	LG	OP	PG	PL	PP	PPG	NR	SC	SF	SH	STD	TE	TN	PRM	AM	CF	CB	FN	FR	PT	BO	SM	EQ	ECN	FPP	MEQ	MM	MP	P	PP	PS	PW	HVE	HVM	HVS	EC	EL	EN	EP	IC	IM
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CODE:
INITIATED BY
DRAWN BY
CHECKED BY

CODE
INITIALS
DATE
HOURS

CONTROL NUMBER
FILE NO.



DESIGN DATA

AUXILIARY PUMPING STATION		GRIT/SCREENINGS DEWATERING FACILITY	
INFLUENT PUMPS		SCREENINGS PRODUCTION	
NUMBER	1	AVERAGE DAILY PRODUCTION, CF/MG	2
CAPACITY, EACH UNIT, MGD	25	PEAK DAILY PRODUCTION, CF/MG	3
MOTOR HORSEPOWER, EACH UNIT	214	SCREENINGS PUMP (EXISTING)	
BAR SCREEN		DEWATERING SCREEN	
NUMBER	1	NUMBER	1
OPENING BETWEEN BARS, INCH	1	CAPACITY, GPM	60
CHANNEL WIDTH, FT	10	GRIT SEPARATOR (EXISTING)	
SCREENINGS GRINDER		SUPERNATANT PUMPING STATION	
NUMBER	1	SUPERNATANT PUMPS	
GRINDER CAPACITY, CU FT/HR	60	NUMBER	2
DEWATERING SUMP PUMP		CAPACITY, EACH UNIT, GPM	160
NUMBER	1	GAS UTILIZATION SYSTEM	
CAPACITY, GPM	200	NATURAL GAS MIXERS	
MOTOR HORSEPOWER	3	NUMBER	2
SAMPLER PUMP		TYPE	VENTURI
NUMBER	1	CAPACITY, CFH	10,940
CAPACITY, GPM	25	SEDIMENTATION TANK	
MOTOR HORSEPOWER	1	NUMBER	1
COMPOSITE SAMPLER	1	WIDTH, FEET	19
NUMBER	1	LENGTH, FEET	20.7
PRIMARY SEDIMENTATION TANK 10		AVERAGE WATER DEPTH, FEET	11
PREAERATION TANK		AVERAGE DAILY FLOW, MGD	2.5
NUMBER	1	DETENTION TIME, HOURS	0.29
WIDTH, FEET	19	AIR SUPPLIED PER TANK, CFM	130
LENGTH, FEET	20.7	MAXIMUM HYDRAULIC CAPACITY, MGD	6.75
AVERAGE WATER DEPTH, FEET	11	RAW SLUDGE PUMP	
AVERAGE DAILY FLOW, MGD	2.5	NUMBER	1
DETENTION TIME, HOURS	0.29	CAPACITY, GPM	100
AIR SUPPLIED PER TANK, CFM	130	PRESSURE, PSI	80
MAXIMUM HYDRAULIC CAPACITY, MGD	6.75	GRIT REMOVAL PUMP	
SEDIMENTATION TANK		NUMBER	1
NUMBER	1	CAPACITY, GPM	200
WIDTH, FEET	19	TOTAL DYNAMIC HEAD, FEET	38
LENGTH, FEET	110	LEGEND	
AVERAGE WATER DEPTH, FEET	10		GATE
EFFLUENT WEIR LENGTH PER TANK, FEET	164		CLOSED GATE
DETENTION TIME, HOURS	1.5	CONFORMS TO RECORD DOCUMENTS	
MEAN VELOCITY, FPM	1.2	DATE: 4/85	
OVERFLOW RATE, GAL/SF/D	1,200	REGISTERED PROFESSIONAL ENGINEER	
OVERFLOW RATE, GAL/FT WEIR/D	15,200	NO. 24229	
MAXIMUM HYDRAULIC CAPACITY PER TANK, MGD	6.75	REGISTERED PROFESSIONAL ENGINEER	

BROWN AND CALDWELL
CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA

DESIGNED JCL/MS
CHECKED MS
CHECKED JCL

SUBMITTED [Signature]
APPROVED [Signature]
APPROVED [Signature]

DATE 6-1-82
DATE 6-1-82
DATE

FILE 942
DATE JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

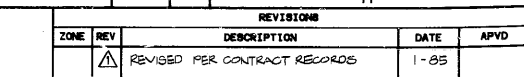
WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

GENERAL
FLOW SCHEMATIC DIAGRAM
AND DESIGN DATA

DRAWING NUMBER G2
SHEET 2

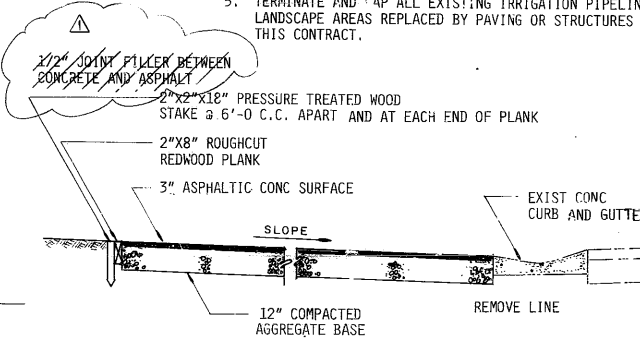
A		B		C		D		E		F		G		H																																																	
SYMBOLS																																																															
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PRECAST CONCRETE MORTAR GROUT OR PLASTER CONCRETE BLOCK ALUMINUM RIGID INSULATION TO BE BUILT FOR FUTURE REMOVAL A.C. PAVEMENT PROPERTY LINE HANDRAIL OUTLINE OF EXISTING INSTALLATION CURB & GUTTER OUTLINE OF EXISTING INSTALLATION HIDDEN ROOM NUMBER HOISTING HOOK UTILITY STATION FIRE HYDRANT WATER METER BOX SOIL BORING AND DESIGNATION UTILITY POLE (TELEPHONE OR ELECTRICAL) PERMANENT BENCH MARK OR SURVEY MONUMENT EXISTING GRADE CONTOURS FINISH GRADE CONTOURS FINISH GRADE SPOT ELEV. FINISH T/C ELEV. GUTTER ELEV. SWALE OR DITCH ROTAMETER CENTERLINE PROPERTY LINE CATCH BASIN GRINDER MECHANICAL OTHER THAN THOSE SHOWN BELOW, SYMBOLS EMPLOYED ON MECHANICAL DRAWINGS ARE AS SET FORTH IN ANSI Z32.2.3, ANSI Z32.2.4 AND ANSI Y32.11. BUTTERFLY VALVE NEEDLE VALVE CHECK VALVE PLUG VALVE SOLENOID OPERATED VALVE BALL VALVE DIAPHRAGM VALVE PINCH VALVE GATE VALVE OR KNIFE VALVE GLOBE VALVE FLUSHING COCK BACK PRESSURE CONTROL VALVE MANUAL AIR VENT AUTOMATIC AIR VENT RELIEF VENT FPC REDUCER OR INCREASER FLEXIBLE COUPLING ELASTIC TYPE PC-T(F) PC-T PROGRESSING CAVITY PUMP CENTRIFUGAL PUMP ROTARY LOBE PUMP SYMBOLS FOR UNITS OF WEIGHT, LENGTH, TIME, ENERGY AND QUANTITY ARE AS SET FORTH IN ANSI Y10.19, UNLESS NOTED OTHERWISE, ALL UNITS ARE BASED UPON THE ENGLISH SYSTEM OF MEASUREMENT. NOTES: 1. SEE DWG E1 & E2 FOR SYMBOLS USED ON ELECTRICAL DRAWINGS. 2. SEE DWG I1 FOR SYMBOLS USED ON INSTRUMENTATION DRAWINGS. 3. SYMBOLS EMPLOYED ON STRUCTURAL DRAWINGS CONFORM TO THE STANDARDS OF THE AMERICAN CONCRETE INSTITUTE, THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND THE AMERICAN WELDING SOCIETY. <tr><td colspan="16">ABBREVIATIONS</td></tr> <tr><td colspan="16">GENERAL PURPOSE ABBREVIATIONS, OTHER THAN THOSE NOTED BELOW, CONFORM TO ANSI Z32.13 AND ANSI Z10.1.</td></tr> <tr><td colspan="16"> AB ANCHOR BOLT AC ASPHALTIC CONCRETE ACP ASBESTOS CEMENT PIPE ARCH ARCHITECTURAL BF BLIND FLANGE BLDG BUILDING BOD BIOCHEMICAL OXYGEN DEMAND CFM CUBIC FEET PER MINUTE CLR CLEAR, CLEARANCE CMP CORRUGATED METAL PIPE CPLG COUPLING CONN CONNECTION DAF DISSOLVED AIR FLOTATION THICKENER DET DETAIL DIA DIAMETER DIG DIGESTER DIP DUCTILE IRON PIPE DWF DRYWEATHER FLOW DWG DRAWING ENG ENGINE EXHAUST EFF EFFLUENT EL ELEVATION EXIST EXISTING FB FLAT BAR FCA FLANGE COUPLING ADAPTER FCO FLOOR CLEAN OUT FF FAR FACE FIN FINISHED FM FORCE MAIN FNH FLEXIBLE METAL HOSE FUT FUTURE FPC FLEXIBLE PIPE COUPLING FRP FIBERGLASS REINFORCED POLYESTER GR GRADE HR HANDRAIL HT HEIGHT HV HOSE VALVE IF INSIDE FACE INF INFLUENT INV INVERT JST JOIST LP LOW PRESSURE LW LOW WATER LWR LOWER MCC MOTOR CONTROL CENTER MGD MILLION GALLONS/DAY MH MANHOLE MIN MINIMUM, MINUTE NIC NOT IN CONTRACT OBVD OPPOSED BLADE VOLUME DAMPER OSA OUTSIDE SUPPLY AIR P/C PLAIN CONCRETE PCC PLANT CONTROL CENTER PCP PLAIN CONCRETE PIPE PC-T FLEXIBLE PIPE COUPLING (TENSION TYPE) PC-T(F) PIPE COUPLING (FLANGED) PG PRESSURE GAUGE PK PEAK RCP REINFORCED CONCRETE PIPE RE RETURNED EFFLUENT RE-STL REINFORCING STEEL R/C REINFORCED CONCRETE RPMP REINFORCED PLASTIC MORTAR PIPE RTP REINFORCED THERMOSET PLASTIC SED SEDIMENTATION SHT SHEET SS STAINLESS STEEL T & B TOP AND BOTTOM T/C TOP OF CURB UG UNDERGROUND UP UTILITY POLE US UTILITY STATION VAR VARIES VCP VITRIFIED CLAY PIPE VTR VENT THROUGH ROOF WC WATER COLUMN OR WATER CLOSET WCO WALL CLEANOUT WPJ WEAKENED PLANE JOINT WS WATER SURFACE WSTP WATER STOP WWF WELDED WIRE FABRIC WTF WET WEATHER FLOW YCO YARD CLEAN OUT MAJOR ITEMS OF MECHANICAL, ELECTRICAL AND INSTRUMENTATION EQUIPMENT ARE IDENTIFIED BY A CODED NUMBERING SYSTEM, CONSISTING OF ONE TO THREE LETTERS WHICH ARE UNIQUE TO THAT PARTICULAR ITEM, FOLLOWED BY A FIVE DIGIT NUMBER. EQUIPMENT NUMBERS ARE DEPICTED IN THE FOLLOWING MANNER: NOTE (5) - AREA OR PROCESS CODE NOTE (2) - SPECIFIC STRUCTURE WITHIN MAJOR PROCESS AREA NOTE (3) - LOCATION OR ROOM WITHIN SPECIFIC STRUCTURE NOTE (4) - EQUIPMENT IDENTIFICATION NUMBER NOTE (5) - EQUIPMENT DESCRIPTION PREFIX NOTE (6) - EQUIPMENT DESCRIPTION SUFFIX EQUIPMENT NUMBERS FOR EQUIPMENT TO BE FURNISHED AND INSTALLED UNDER THIS CONTRACT MAY BE FOUND ON THE BEGINNING MECHANICAL, HVAC AND ELECTRICAL DRAWINGS FOR EACH PROCESS AREA. EQUIPMENT PREFIXES AE ANALYZER ELEMENT AHU AIR HANDLING UNIT AT ANALYZER TRANSMITTER ATI ANALYZER TRANSMITTER & INDICATOR B BLOWER BNR BURNER BP BACKFLOW PREVENTER BRV BACKPRESSURE REGULATING VALVE C CRANE CAL CALORIMETER CC COOLING COIL CFR CHEMICAL FEEDER CHR CHILLER CLR CONTROLLER COF COOLING AIR FAN COL COLLECTOR CON CONVEYOR CP COMPRESSOR CTF CENTRIFUGE CTR COOLING TOWER CV CONTROL VALVE CYL CYLINDER DE DENSITY ELEMENT DP DEMATERING PRESS DFC DIGESTER-FLOATING COVER DT DENSITY TRANSMITTER DU DRIVE UNIT EE ENGINE EXHAUST E ENGINE ER ENGINE BLOWER MODULE EG ENGINE GENERATOR MODULE EFL EFFLUENT LAUNDERS ENG ENGINE EP ENGINE PUMP MODULE EVP EVAPORATOR F FAN FDC FLEXIBLE DUCT CONNECTION FE FLOW ELEMENT FLG FLAP GATE FLT FILTER FI FLOW INDICATOR FS FLOW SWITCH FZ FREEZESTAT AREA CODE AUXILIARY PUMPING STATION 19500 MAINTENANCE WING 19700 PRIMARY SEDIMENTATION TANK 10 23000 GRIT AND SCREENINGS 27100 DEWATERING FACILITIES 28100 INFLUENT DISTRIBUTION CHANNEL 30 </td></tr>																ABBREVIATIONS																GENERAL PURPOSE ABBREVIATIONS, OTHER THAN THOSE NOTED BELOW, CONFORM TO ANSI Z32.13 AND ANSI Z10.1.																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ABBREVIATIONS																																																															
GENERAL PURPOSE ABBREVIATIONS, OTHER THAN THOSE NOTED BELOW, CONFORM TO ANSI Z32.13 AND ANSI Z10.1.																																																															
AB ANCHOR BOLT AC ASPHALTIC CONCRETE ACP ASBESTOS CEMENT PIPE ARCH ARCHITECTURAL BF BLIND FLANGE BLDG BUILDING BOD BIOCHEMICAL OXYGEN DEMAND CFM CUBIC FEET PER MINUTE CLR CLEAR, CLEARANCE CMP CORRUGATED METAL PIPE CPLG COUPLING CONN CONNECTION DAF DISSOLVED AIR FLOTATION THICKENER DET DETAIL DIA DIAMETER DIG DIGESTER DIP DUCTILE IRON PIPE DWF DRYWEATHER FLOW DWG DRAWING ENG ENGINE EXHAUST EFF EFFLUENT EL ELEVATION EXIST EXISTING FB FLAT BAR FCA FLANGE COUPLING ADAPTER FCO FLOOR CLEAN OUT FF FAR FACE FIN FINISHED FM FORCE MAIN FNH FLEXIBLE METAL HOSE FUT FUTURE FPC FLEXIBLE PIPE COUPLING FRP FIBERGLASS REINFORCED POLYESTER GR GRADE HR HANDRAIL HT HEIGHT HV HOSE VALVE IF INSIDE FACE INF INFLUENT INV INVERT JST JOIST LP LOW PRESSURE LW LOW WATER LWR LOWER MCC MOTOR CONTROL CENTER MGD MILLION GALLONS/DAY MH MANHOLE MIN MINIMUM, MINUTE NIC NOT IN CONTRACT OBVD OPPOSED BLADE VOLUME DAMPER OSA OUTSIDE SUPPLY AIR P/C PLAIN CONCRETE PCC PLANT CONTROL CENTER PCP PLAIN CONCRETE PIPE PC-T FLEXIBLE PIPE COUPLING (TENSION TYPE) PC-T(F) PIPE COUPLING (FLANGED) PG PRESSURE GAUGE PK PEAK RCP REINFORCED CONCRETE PIPE RE RETURNED EFFLUENT RE-STL REINFORCING STEEL R/C REINFORCED CONCRETE RPMP REINFORCED PLASTIC MORTAR PIPE RTP REINFORCED THERMOSET PLASTIC SED SEDIMENTATION SHT SHEET SS STAINLESS STEEL T & B TOP AND BOTTOM T/C TOP OF CURB UG UNDERGROUND UP UTILITY POLE US UTILITY STATION VAR VARIES VCP VITRIFIED CLAY PIPE VTR VENT THROUGH ROOF WC WATER COLUMN OR WATER CLOSET WCO WALL CLEANOUT WPJ WEAKENED PLANE JOINT WS WATER SURFACE WSTP WATER STOP WWF WELDED WIRE FABRIC WTF WET WEATHER FLOW YCO YARD CLEAN OUT MAJOR ITEMS OF MECHANICAL, ELECTRICAL AND INSTRUMENTATION EQUIPMENT ARE IDENTIFIED BY A CODED NUMBERING SYSTEM, CONSISTING OF ONE TO THREE LETTERS WHICH ARE UNIQUE TO THAT PARTICULAR ITEM, FOLLOWED BY A FIVE DIGIT NUMBER. EQUIPMENT NUMBERS ARE DEPICTED IN THE FOLLOWING MANNER: NOTE (5) - AREA OR PROCESS CODE NOTE (2) - SPECIFIC STRUCTURE WITHIN MAJOR PROCESS AREA NOTE (3) - LOCATION OR ROOM WITHIN SPECIFIC STRUCTURE NOTE (4) - EQUIPMENT IDENTIFICATION NUMBER NOTE (5) - EQUIPMENT DESCRIPTION PREFIX NOTE (6) - EQUIPMENT DESCRIPTION SUFFIX EQUIPMENT NUMBERS FOR EQUIPMENT TO BE FURNISHED AND INSTALLED UNDER THIS CONTRACT MAY BE FOUND ON THE BEGINNING MECHANICAL, HVAC AND ELECTRICAL DRAWINGS FOR EACH PROCESS AREA. EQUIPMENT PREFIXES AE ANALYZER ELEMENT AHU AIR HANDLING UNIT AT ANALYZER TRANSMITTER ATI ANALYZER TRANSMITTER & INDICATOR B BLOWER BNR BURNER BP BACKFLOW PREVENTER BRV BACKPRESSURE REGULATING VALVE C CRANE CAL CALORIMETER CC COOLING COIL CFR CHEMICAL FEEDER CHR CHILLER CLR CONTROLLER COF COOLING AIR FAN COL COLLECTOR CON CONVEYOR CP COMPRESSOR CTF CENTRIFUGE CTR COOLING TOWER CV CONTROL VALVE CYL CYLINDER DE DENSITY ELEMENT DP DEMATERING PRESS DFC DIGESTER-FLOATING COVER DT DENSITY TRANSMITTER DU DRIVE UNIT EE ENGINE EXHAUST E ENGINE ER ENGINE BLOWER MODULE EG ENGINE GENERATOR MODULE EFL EFFLUENT LAUNDERS ENG ENGINE EP ENGINE PUMP MODULE EVP EVAPORATOR F FAN FDC FLEXIBLE DUCT CONNECTION FE FLOW ELEMENT FLG FLAP GATE FLT FILTER FI FLOW INDICATOR FS FLOW SWITCH FZ FREEZESTAT AREA CODE AUXILIARY PUMPING STATION 19500 MAINTENANCE WING 19700 PRIMARY SEDIMENTATION TANK 10 23000 GRIT AND SCREENINGS 27100 DEWATERING FACILITIES 28100 INFLUENT DISTRIBUTION CHANNEL 30																																																															

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100	100	100

[illegible]

NOTES:

1. A PILOT PLANT LAGOON WAS ERECTED IN FALL, 1981 IN THE AREA OF SEDIMENTATION TANK 10. GRADES MAY BE LOWER THAN SHOWN ON THIS DWG. CONTRACTOR SHALL VERIFY EXISTING GRADES.
2. PAVING OUTSIDE ALL STRUCTURES AND CONCRETE PADS SHALL SLOPE AWAY FROM THE STRUCTURE OR PAD.
3. AFTER REPLACING DAMAGED PAVEMENT FROM MAINTENANCE WING TO INFLUENT STRUCTURE, CONTRACTOR SHALL COAT THE ENTIRE ROADWAY WITH TWO COATS OF SEAL COAT. SEE SPECIFICATION 02500.
4. EARTHWORK REQUIREMENTS ARE CONTAINED IN SPECIFICATIONS.
5. TERMINATE AND CAP ALL EXISTING IRRIGATION PIPELINE IN LANDSCAPE AREAS REPLACED BY PAVING OR STRUCTURES IN THIS CONTRACT.



SECTION 
NO SCALE

LEGEND:

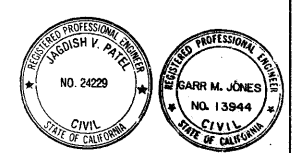
 NEW ASPHALT PAVEMENT

 EXISTING PAVEMENT

RESTORATION OF IMPROVEMENTS

ROADS AND STREETS IN WHICH THE SURFACE IS REMOVED, BROKEN, OR DAMAGED, OR IN WHICH THE CROWN HAS CAVED OR SETTLED DURING THE WORK UNDER THIS CONTRACT, SHALL BE REPAVED AND BROUGHT TO THE ORIGINAL GRADE. EACH SECTION. ROADWAYS USED BY THE CONTRACTOR SHALL BE CLEANED AND REPAIRED. BEFORE REPAVING IS DONE, EDGES OF PAVEMENTS SHALL BE TRIMMED BACK FAR ENOUGH TO PROVIDE CLEAN, SLOPE, VERTICAL FACES, AND SHALL BE FREE OF LOOSE MATERIAL. REPAIR WORK SHALL CONFORM TO THE PAVING SPECIFICATIONS.

CONFORMS TO RECORD
DOCUMENTS
DATE: 4/85



 BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA	DESIGNED <u>MA, JC</u> CHECKED <u>JS</u> CHECKED <u>Jac</u>	SUBMITTED <u>1/14/82</u> DATE <u>1/14/82</u> APPROVED _____ DATE _____ For Brown and Caldwell APPROVED _____ DATE _____ For City of Sunnyvale	FILE <u>942</u> DATE <u>JUNE 1982</u>	CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	GENERAL PAVING AND GRADING	DRAWING NUMBER G 4 SHEET <u>4</u>
	A	B	C	D	E	F	G

EL 117.00
EL 107.55
EL 111.08
EL 105.40
EL 100.17 ±
EL 117.00
EL 108.50
EL 117.00

EXIST PIPE CHASE
OTHER PIPING NOT SHOWN
CUT AND REROUTE
EXIST PIPE AS
SHOWN
EXIST PAVEMENT EL. 111.6 ±
EXIST AIR AND STEAM LINES
EXIST ELECTRICAL CONDUITS
EXIST GRADE
CONC ENCASUREMENT
SEE NOTE 1
DRY PACK W/
CEMENT GROUT
INV EL 115.00
FLOW
66" RCP
(EXIST)

4" 3W
4" 2W
6" S
24" WW
30" WW
6" TS
8" PA
2'-0 (TYP.)
30" WW
CONCRETE ENCASUREMENT
CURB SEE
DETAIL THIS DWG.
CURB INLET DETAIL
NTS
SECTION 1
SCALE: 3/8" = 1'-0
SECTION 2
SCALE: 1/4" = 1'-0
SECTION 3
SCALE: 3/8" = 1'-0
DETAIL A
SCALE: 3/8" = 1'-0
DETAIL B
NO SCALE
DETAIL C
NO SCALE

PLUG WITH PLYWOOD
EXISTING 24" CONCRETE
CYLINDER PIPE
24" CONCRETE
CYLINDER PIPE (EXISTING)
EL. VERIFY IN FIELD
24" ELBOW
(STEEL)
NEW 24" STEEL PIPE
CYLINDER EXPOSED & TAPERED
TO MEET STL. PIPE I.D.
GROUT
BUTT WELD
BOTH SIDES
DRESSER STYLE
162 TRANSITION
COUPLING
GROUT PATCH INSIDE
& OUTSIDE
NOTES:
1. PROVIDE 1/2" EXPANSION FELT BETWEEN 30" WW PIPE AND
CONCRETE ENCASUREMENT, CONCRETE ENCASUREMENT TO EXTEND
TWO FEET NORTH AND SOUTH OF PIPE CHASE.

6" RMP
6" FLAP VALVE
RODNEY HUNT FV-AC
OR EQUAL
6" ROCK RIP-RAP
EXTEND TO 1'-0 EACH
SIDE OF DRAIN
4" SN
FOR CONT
SEE DWG 65
9" (TYP)
3'-6
1'-6
6"
#5 @ 12
3 #5 CIRCULAR TIES
CONCRETE COLLAR

CONFORMS TO RECORD
DOCUMENTS
DATE: 4/85

DESIGNED M.G./JCI
CHECKED JAC
SUBMITTED JAC
APPROVED JAC
DATE 6-1-82
FILE 942
DATE JUNE 1982
CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES
WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS
GENERAL
SECTIONS AND DETAILS
DRAWING
NUMBER G6
SHEET 6

DATE: 4/83



THRUST BLOCK BEARING AREA SQ. FT.

PIPE DIA. INCHES	TEST PRESS. PSIG	22 1/2"	45"	90"	TEE
4 OR LESS	150	1.1	2.1	3.8	2.7
6	150	2.4	4.7	8.6	6.1
8	150	4.2	8.3	15.3	10.8
12	0-30	1.9	3.7	6.9	4.9
24	0-30	11.8	23.2	42.9	30.3

NOTES:

- THRUST BLOCK SIZES BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF 700 PSF AND MINIMUM SOIL COVER OF 3'-0"
- THRUST BLOCKS SHALL BE POURED SOLIDLY AGAINST FIRM, UNDISTURBED SOIL WITH PASSIVE PRESSURE EQUAL TO OR GREATER THAN THAT SHOWN IN NOTE 1. IF LOOSE OR PREVIOUSLY BACKFILLED SOILS ARE ENCOUNTERED, CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OR RESIDENT ENGINEER WHO MAY ADJUST THE DIMENSIONS SHOWN IN THE SCHEDULE.
- CONCRETE COMPRESSIVE STRENGTH SHALL MEET SPECIFICATIONS FOR 3000 PSI AT 28 DAYS CURING WHEN TESTED IN ACCORDANCE WITH ASTM C39.
- THRUST BLOCK WITH AREA LESS THAN 25 SQ. FT. NEED NOT BE REINFORCED.
- THRUST BLOCK WITH AREA 25 TO 60 SQ. FT. SHALL BE REINFORCED WITH #5@ 12 EMMF.
- THE ABOVE BEARING AREAS ARE BASED ON SOIL CONDITIONS SHOWN. THEY ARE PROVIDED FOR CONTRACTORS GUIDE AND SHALL BE USED AS MINIMUM BEARING AREA.

PIPE BEDDING DETAILS

TYPICAL TRENCH LIMITATIONS:

D, IN.	H MIN. IN.	Bd MAX. IN.
0-6	6	Bc+24
8-24	8	Bc+24
27-60	12	Bc+36
OVER 60	18	Bc+42

CONFORMS TO RECORD DOCUMENTS

DATE: 4/85

PROFESSIONAL ENGINEER
JANUARY V. PACE
NO. 24229
CIVIL
STATE OF CALIFORNIA

PROFESSIONAL ENGINEER
BARR M. JONES
NO. 13944
CIVIL
STATE OF CALIFORNIA

BROWN AND CALDWELL CONSULTING ENGINEERS
WALNUT CREEK CALIFORNIA

DESIGNED JVC
CHECKED JVP
CHECKED MBS

SUBMITTED [Signature]
APPROVED [Signature]
APPROVED [Signature]

DATE 6-1-83
DATE 6-1-83
DATE 6-1-83

FILE 942
DATE JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

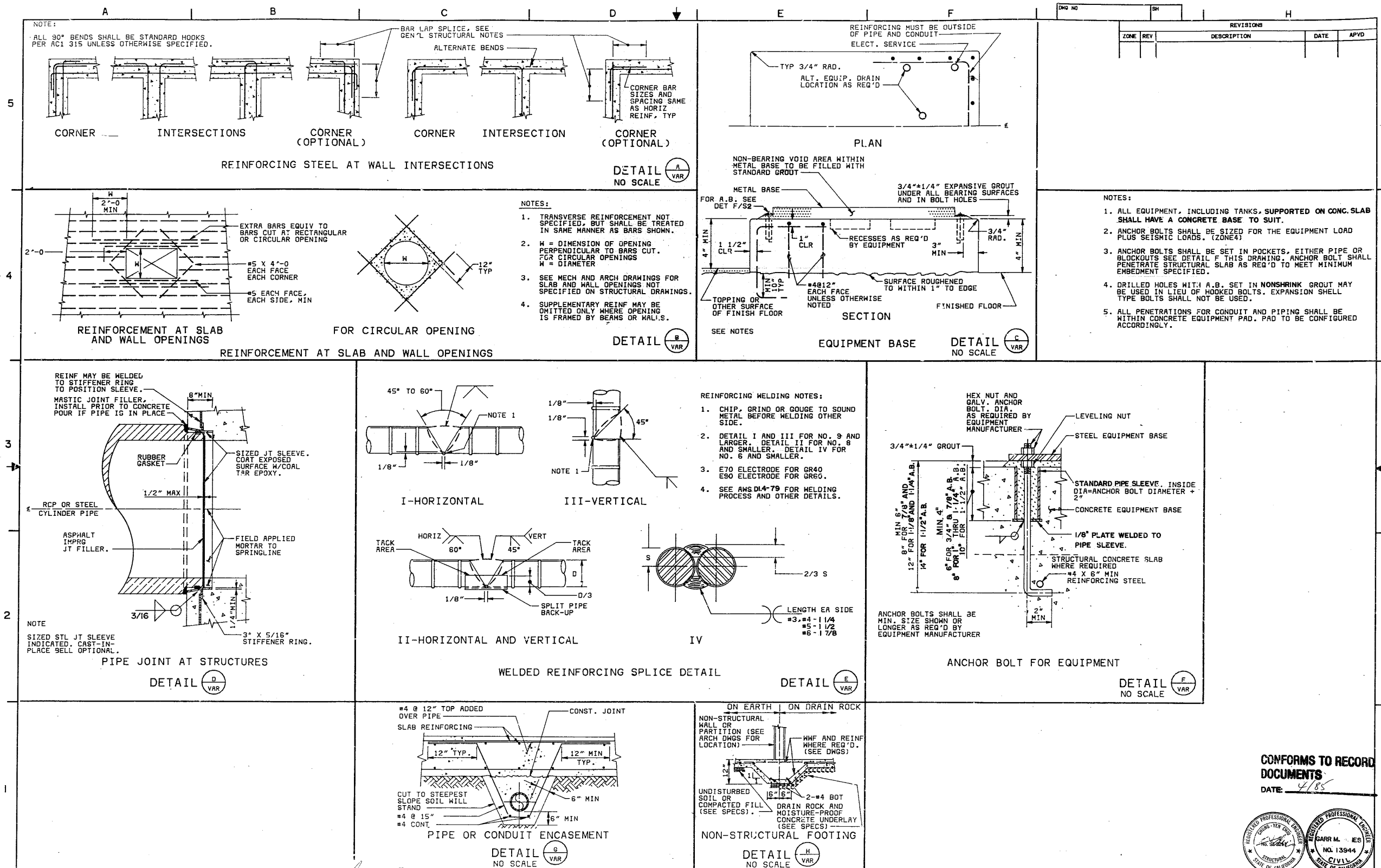
GENERAL
THRUST BLOCKS AND
PIPE BEDDING DETAILS

DRAWING NUMBER G 7
SHEET 7

[illegible]

CONTROL NUMBER

FILE NO.



CONFORMS TO RECORD
DOCUMENTS
DATE: 4/85



8CD6PB

BROWN AND CALDWELL
CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA.

DESIGNED W. Mann
CHECKED W. Mann
CHECKED [Signature]

SUBMITTED *[Signature]* *[Signature]*
APPROVED *[Signature]*
APPROVED *[Signature]* For Brown and Caldwell

DATE 8/1/82 FILE 942
DATE 6/1/82 DATE JUNE 1982
DATE _____

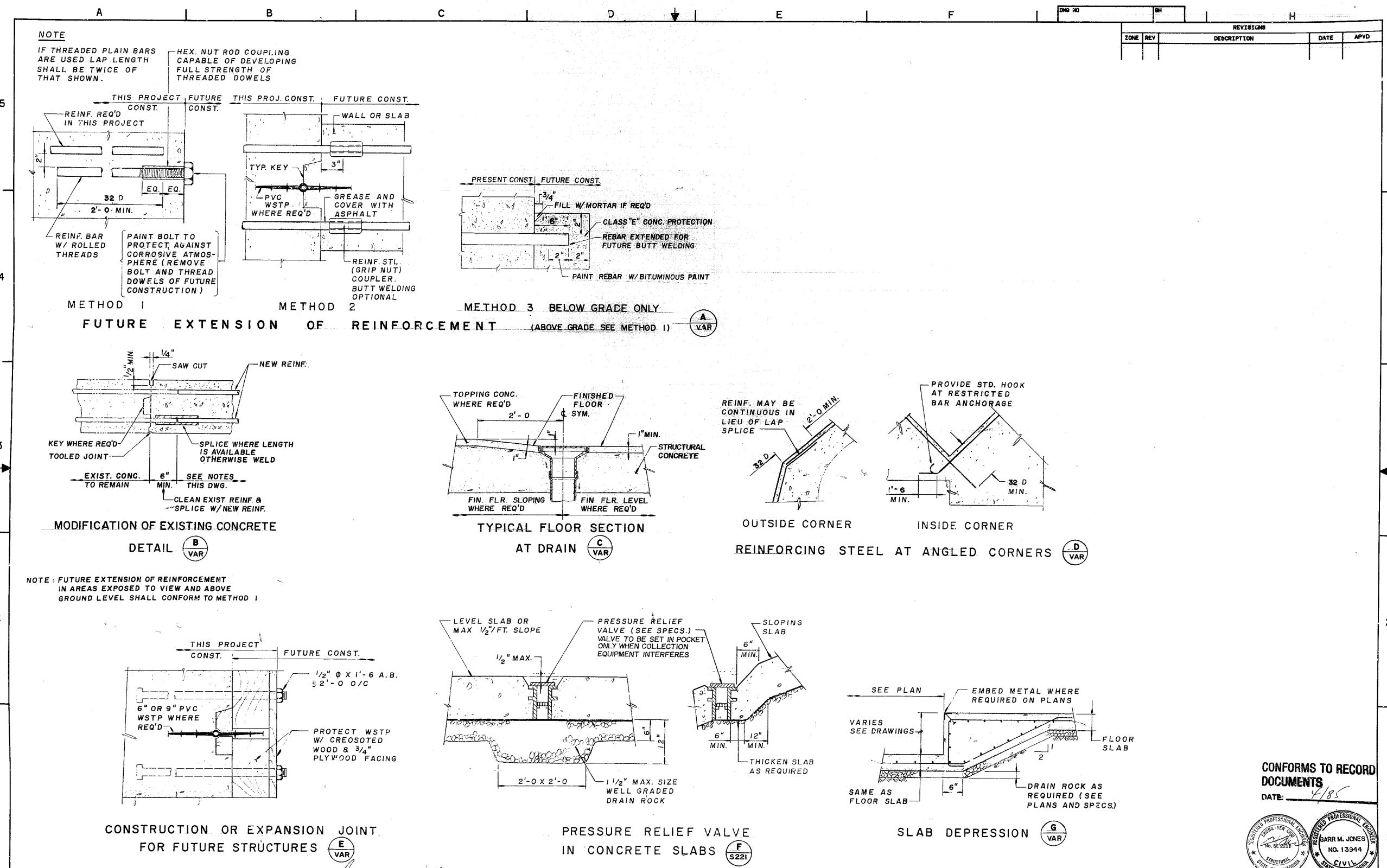
CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

TYPICAL CONCRETE DETAILS I

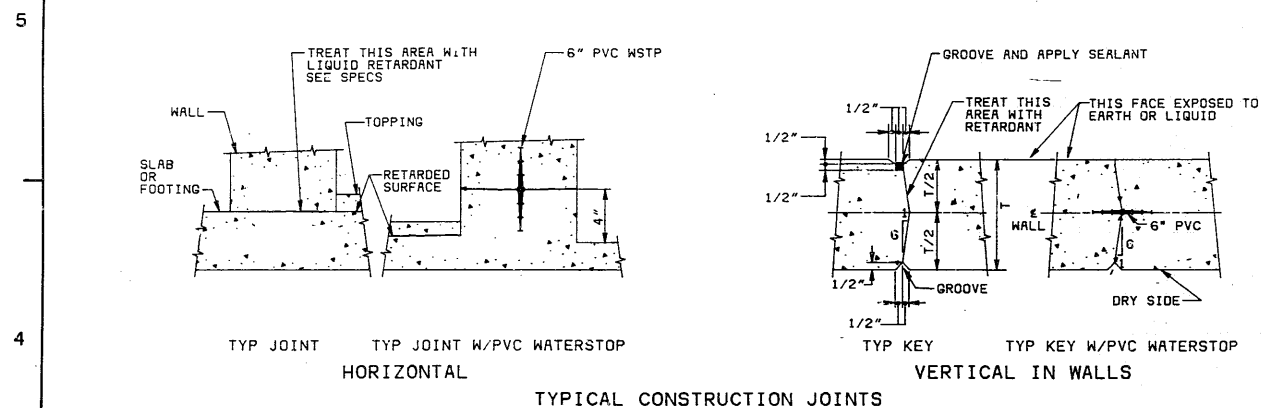
DRAWING NUMBER	S2
SHEET 9	D

BN	DET	DM	GM	CM	CF	DM	FEN	GR	IRR	LQ	OP	PG	PL	PP	PPG	RF	RIE	SIF	WIN	STD	TE	TH	PRM	AM	CF	CG	FN	FR	PT	BO	SM	EQ	EQM	FPP	MEQ	MGA	MP	P	PPP	PS	PW	HVE	HVM	HVS	EC	EL	EM	EF	IC	IM
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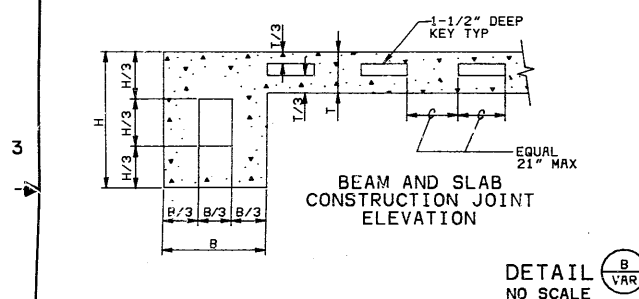


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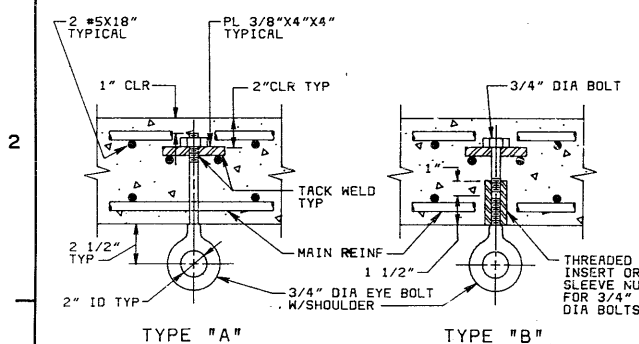
CONTROL NUMBER	FILE NO.
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DETAIL
NO SCALE



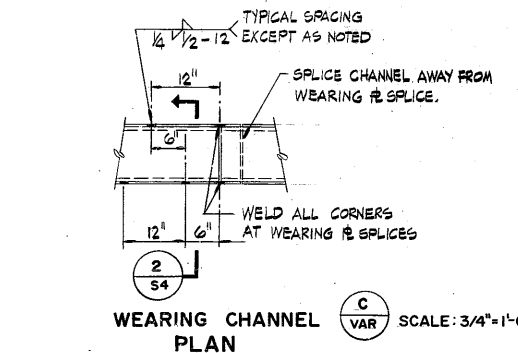
DETAIL NO SCALE 



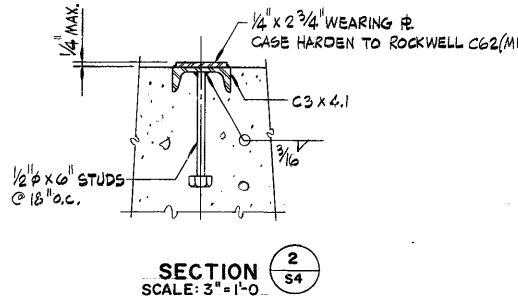
NOTES:

1. LIFTING DEVICES SHALL BE GALVANIZED AFTER FABRICATION.
2. LOAD CAPACITY: MAX 500 POUNDS.
3. TO BE PROVIDED FOR ALL EQUIPMENT OVER 200 POUNDS.

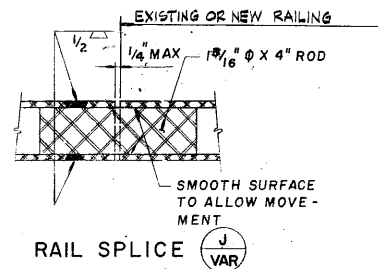
LIFTING DEVICES



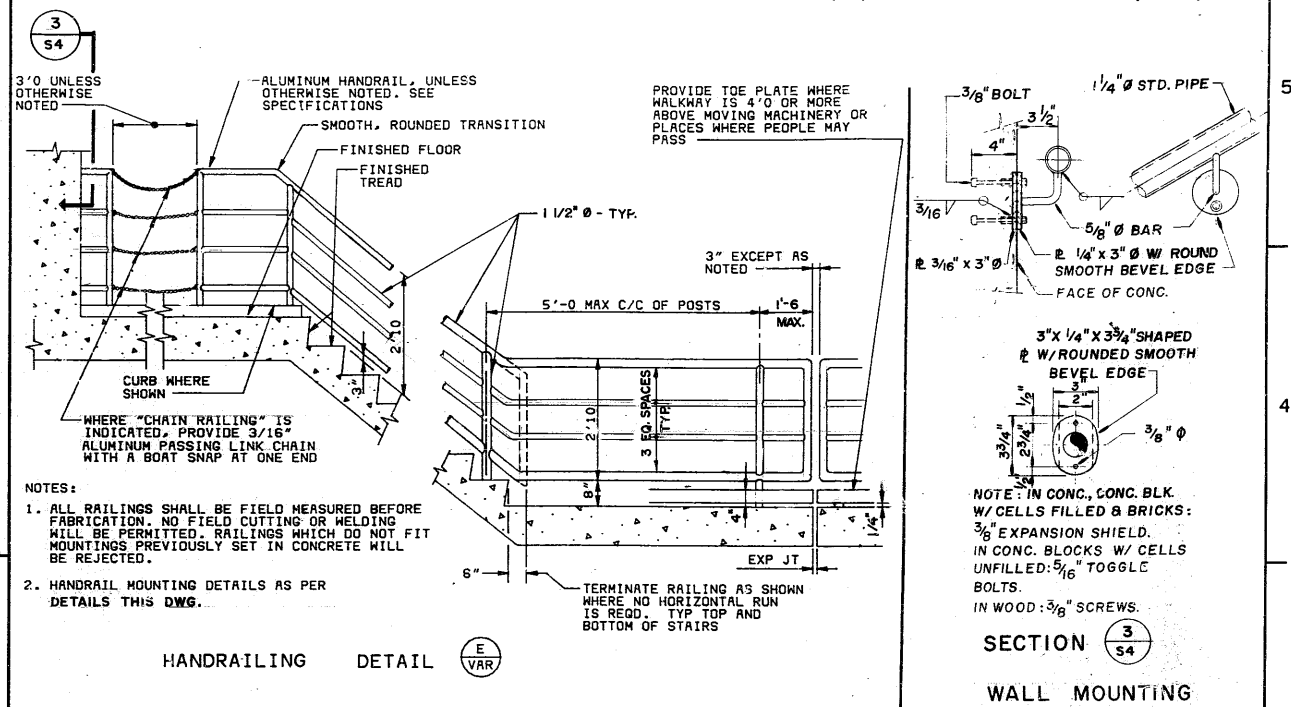
WEARING CHANNEL  SCALE: 3/4"=1'-0"



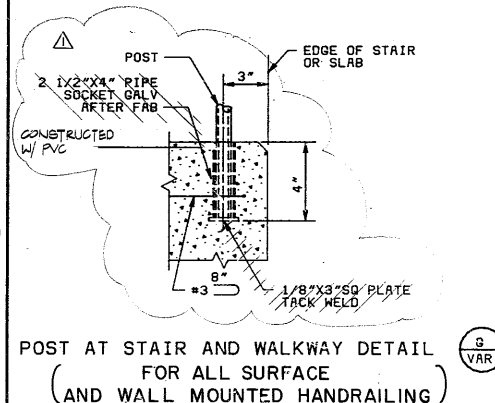
SECTION
SCALE: 3" = 1'-0"



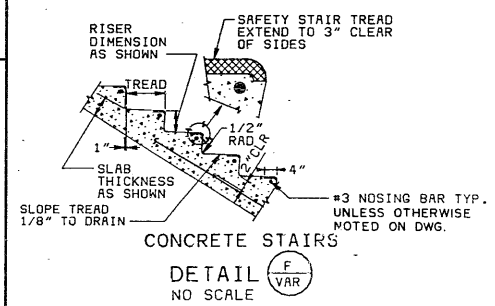
RAIL SPLICE (J VAF)



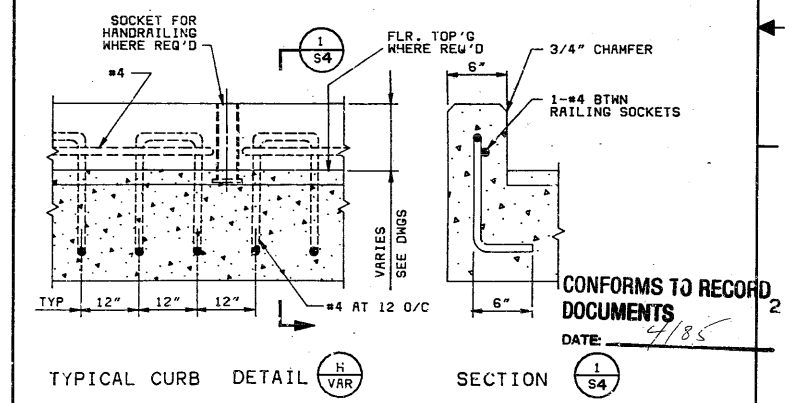
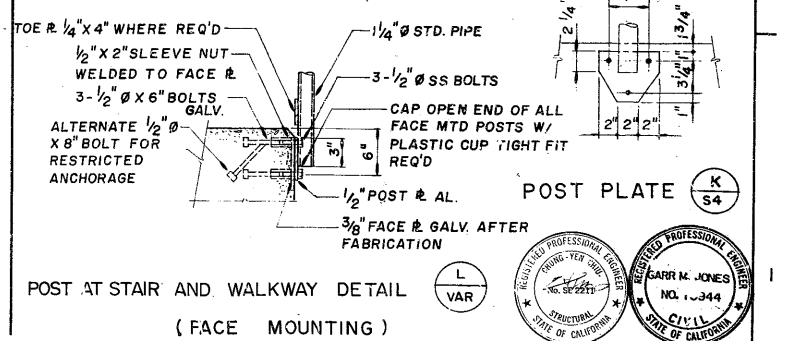
HANDRAILING DETAIL $\left(\frac{E}{VAR} \right)$



POST AT STAIR AND WALKWAY DETAIL
(FOR ALL SURFACE
(AND WALL MOUNTED HANDRAILING)



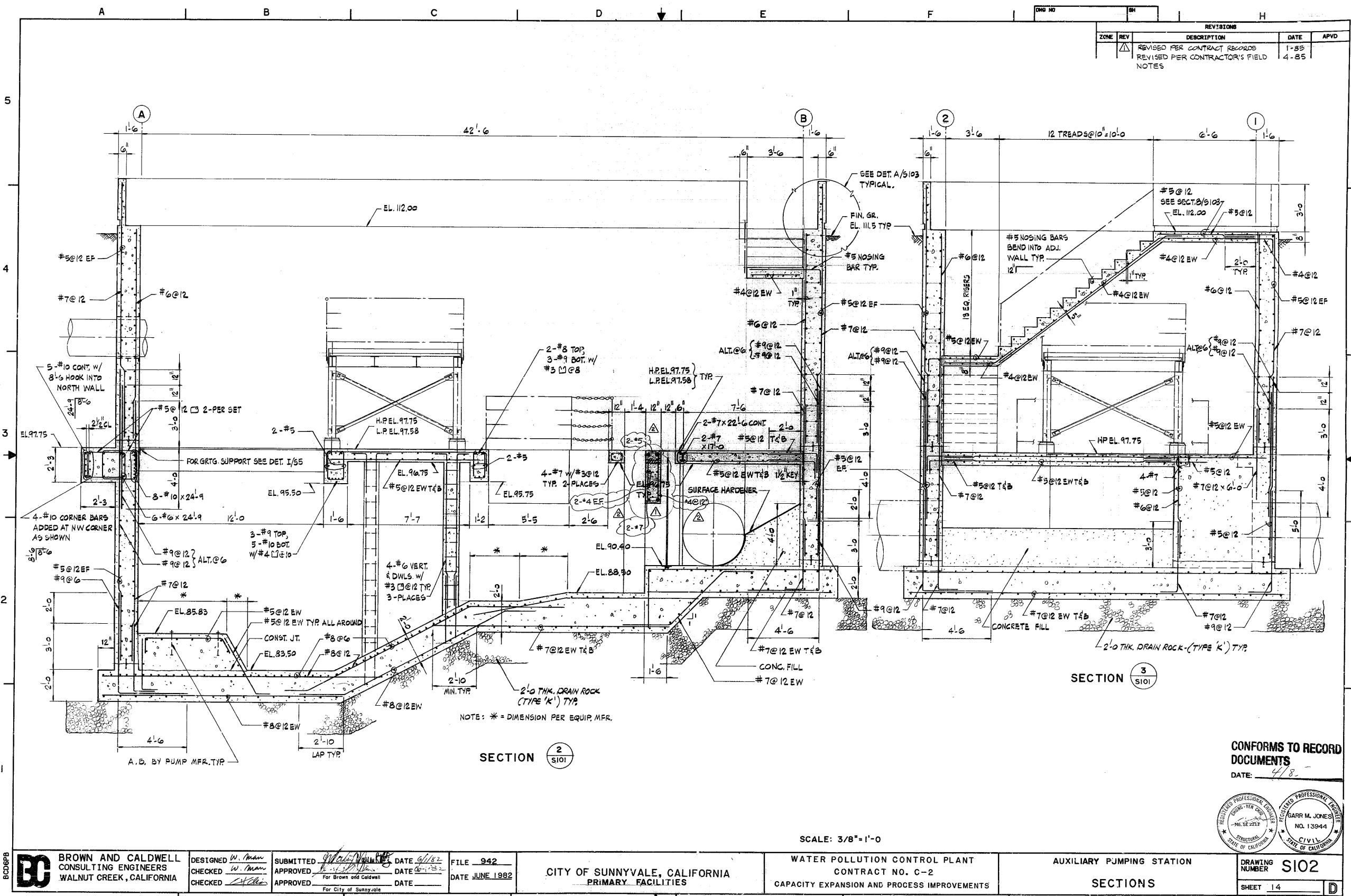
CONCRETE STAIRS
DETAIL
NO SCALE

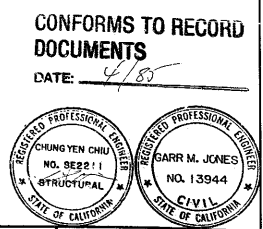
TYPICAL CURB DETAIL 

POST AT STAIR AND WALKWAY DETAIL
(FACE MOUNTING)

GN	DET	DN	GM	CM	CP	DM	FEM	GR	IRR	LG	OP	PG	PL	PP	PFS	RR	SIE	SIF	SIN	STD	TE	TN	PRM	AM	CF	CG	FN	FR	PT	BO	SM	EQ	EON	FPP	MEQ	MM	MP	P	PP	PS	PW	HVE	HVM	HVS	EC	EL	EM	EP	IC	IM
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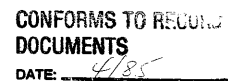
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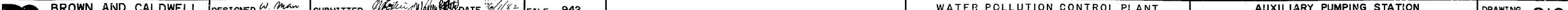


[illegible]

[illegible]

FILE NO.	
CONTROL NUMBER	



 BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA	DESIGNED <u>W. Man</u> CHECKED <u>W. Man</u> CHECKED <u>Steb</u>	SUBMITTED <u>John M. Man</u> DATE <u>5/1/82</u> APPROVED <u>W. Man</u> DATE <u>5/1/82</u> APPROVED For Brown and Caldwell DATE _____ APPROVED For City of Sunnyvale _____	FILE <u>942</u> DATE <u>JUNE 1982</u>	CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	AUXILIARY PUMPING STATION SECTIONS AND DETAILS	DRAWING NUMBER <u>S104</u> SHEET <u>16</u>	
	A	B	C	D	E	F	G	H
								

Architectural drawing showing the Foundation Plan and Sections for the Maintenance Wing of the Water Pollution Control Plant, Contract No. C-2, Capacity Expansion and Process Improvements.

The drawing includes a main Foundation Plan (Scale: 1/4" = 1'-0", LL = 250 PSF) and several cross-sections (Section 1, 2, 3, 4, 5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H, 5I, 5J, 5K, 5L, 5M, 5N, 5O, 5P, 5Q, 5R, 5S, 5T, 5U, 5V, 5W, 5X, 5Y, 5Z).

Key components and details shown:

- EXIST. CONTROL BLDG
- EXIST. WALL
- HAUNCH SLAB
- BEAM
- JOINT FILLER
- JOINT CAULK & SEALANT TYP
- OPTIONAL CONST JT.
- REIN. SEE SECT. 3/S121
- 3-#9 CONT.
- 4-#12 EF
- 2-#5 EF
- 3-#6 CONT.
- 5A S121
- 5B S121
- 5C S121
- 5D S121
- 5E S121
- 5F S121
- 5G S121
- 5H S121
- 5I S121
- 5J S121
- 5K S121
- 5L S121
- 5M S121
- 5N S121
- 5O S121
- 5P S121
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- 5S S121
- 5T S121
- 5U S121
- 5V S121
- 5W S121
- 5X S121
- 5Y S121
- 5Z S121

CONFORMS TO RECORD DOCUMENTS

DATE: 4/85

DESIGNED: S. S121
CHECKED: W. S121
SUBMITTED: [Signature]
APPROVED: [Signature]
DATE: 10/82
FILE: 942
DATE: JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

MAINTENANCE WING
FOUNDATION PLAN AND SECTIONS

DRAWING NUMBER: S121
SHEET: 17

Architectural drawing showing three elevations of a building: South Elevation, East Elevation, and North Elevation. The drawing includes grid lines (A through H) and various annotations for materials and dimensions.

South Elevation: Shows a building section with a central door and a rain hood. Annotations include: "4x8x16 CONC BLOCK COURSES TO ALIGN W/ EXIST TYP", "RAIN HOOD", "12'-0\" x 12'-0\" DOUBLE SLIDING DOOR SEE SPECS. (TYP OF 2)", and "4 x 4 x 1/4 x 4'-0 GALV. BUMPER ANGLES ANCHORS @ 12\" O/C MAX.".

East Elevation: Shows a building section with a window. Annotation: "PLUG EXIST WINDOW SEE 10/5124".

North Elevation: Shows a building section with a door. Annotation: "SEE SOUTH ELEVATION THIS DWG".

MASONRY NOTES:

1. ALL MASONRY UNITS SHALL CONFORM TO ASTM C90 AND SHALL HAVE A MIN COMPRESSIVE STRENGTH OF $f_m = 1500 \text{ psi}$. FOR MORTAR SEE SPECIFICATIONS.
2. ALL EXTERIOR MASONRY BLOCK SHALL BE 8x4x16 UNLESS OTHERWISE NOTED.
3. ALL CELLS WITH VERTICAL REINFORCEMENT SHALL BE GROUTED.

CONFORMS TO RECORD DOCUMENTS
DATE: 4/85

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

DESIGNER: BROWN AND CALDWELL CONSULTING ENGINEERS, WALNUT CREEK, CALIFORNIA

DESIGNED: W. M. M. (Signature)
CHECKED: W. M. M. (Signature)
APPROVED: W. M. M. (Signature)

SUBMITTED: W. M. M. (Signature) DATE 6/1/82
APPROVED: W. M. M. (Signature) DATE 6/1/82
FOR: For Brown and Caldwell
FOR: For City of Sunnyvale

FILE: 942
DATE: JUNE 1982

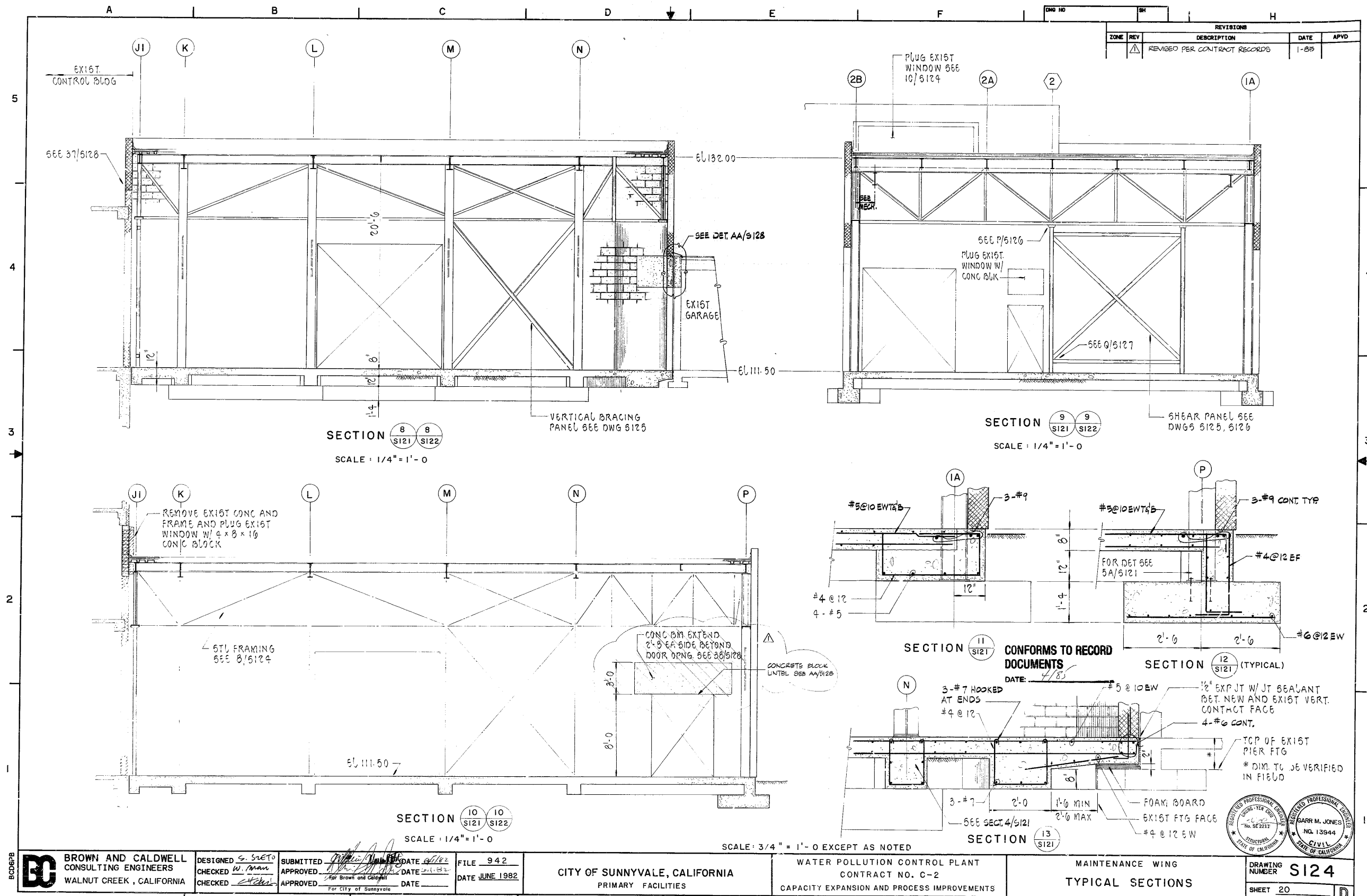
CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

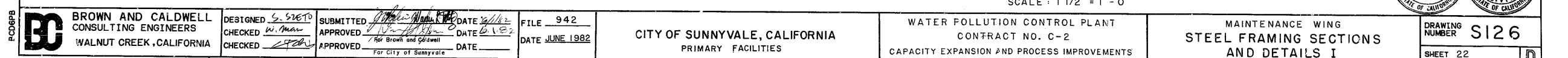
WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

MAINTENANCE WING ELEVATIONS

DRAWING NUMBER: S123
SHEET: 19

REGISTERED PROFESSIONAL ENGINEER
GARR M. JONES
No. 13944
CIVIL
STATE OF CALIFORNIA

[illegible]

[illegible]

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APVD

DETAIL R (S125)

DETAIL S (S125)

SECTION 23 (S127)

DETAIL T (S125)

DETAIL U (S125)
(TYPICAL CROSS BRACING)

SECTION 24 (S127)

SECTION 25 (S127)

DETAIL V (S125)

SECTION 26 (S125)
(TYPICAL SHEAR CONNECTION)

DETAIL W (S125)

SECTION 27 (S127)

DETAIL X (S125)

DETAIL Y (S125)

DETAIL JJ (S126)
ISOMETRIC
NO SCALE

CONFORMS TO RECORD DOCUMENTS
DATE: 4/85

REGULATED PROFESSIONAL ENGINEER
CHUNG YEN CHIU
NO. 92211
STRUCTURAL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BARR M. JONES
NO. 13944
CIVIL
STATE OF CALIFORNIA

BROWN AND CALDWELL CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA

DESIGNED: S. S125
CHECKED: W. M. JONES
APPROVED: [Signature]

DATE: 4/85

FILE 942
DATE JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

MAINTENANCE WING
STEEL FRAMING SECTIONS AND DETAILS II

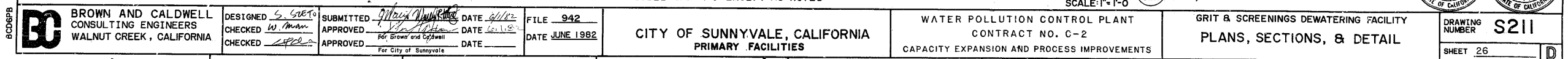
DRAWING NUMBER
SHEET 23
S127

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

11

DRAWING NUMBER S 201

SHEET 25

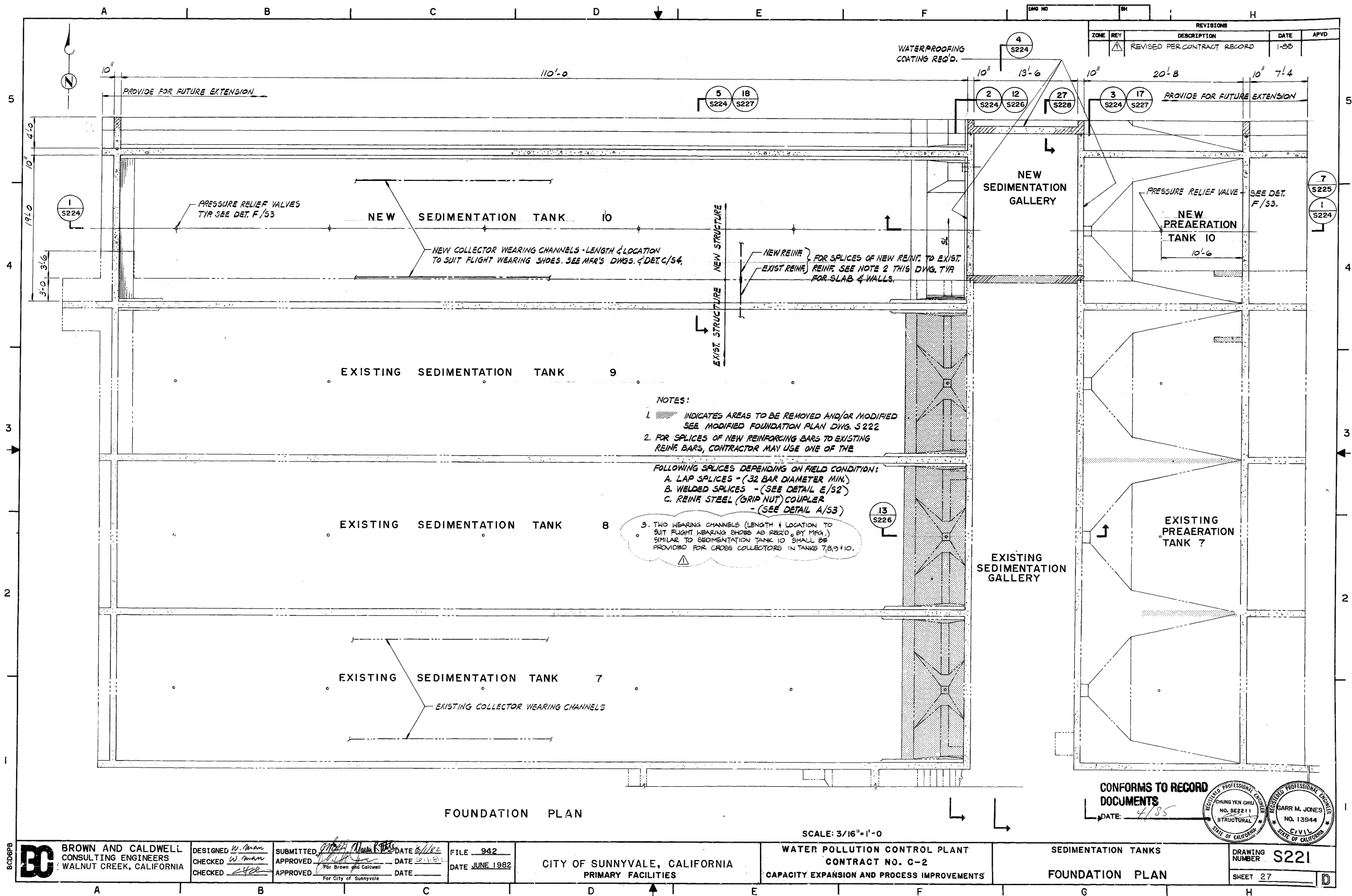
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BN	DET	DN	GM	CM	CP	DM	FEM	GR	IRR	LQ	OP	PG	PL	PP	PPG	RR	SIF	SIF	SIN	STD	TE	TH	PRM	AM	CF	CQ	FN	FR	PT	BO	SM	EQ	EQM	FPP	MEQ	MM	LP	P	PRP	PS	PW	HVE	HVM	HVS	EC	EL	EM	EP	IC	IM
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CODE:
INITIATED BY
DRAWN BY
CHECKED BY

CODE
INITIALS
DATE
HOURS

CONTROL NUMBER
FILE NO.



BCD69B
BROWN AND CALDWELL CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA

DESIGNED *W. Man*
CHECKED *W. Man*
CHECKED *W. Man*

SUBMITTED *W. Man*
APPROVED *W. Man*
APPROVED *W. Man*

DATE *6/1/82*
DATE *6/1/82*
DATE *6/1/82*

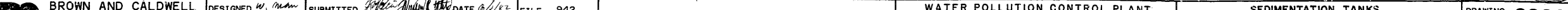
FILE *942*
DATE *JUNE 1982*

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

SEDIMENTATION TANKS
FOUNDATION PLAN

DRAWING NUMBER **S221**
SHEET **27**

 BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA	DESIGNED <u>W. Man</u> CHECKED <u>W. Man</u> CHECKED <u>efc</u>	SUBMITTED <u>John A. Miller</u> DATE <u>6/1/82</u> APPROVED <u>[Signature]</u> DATE <u>6-1-82</u> APPROVED <u>For Brown and Caldwell</u> DATE _____ APPROVED <u>For City of Sunnyvale</u> DATE _____	FILE <u>942</u> DATE <u>JUNE 1982</u>	CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	SEDIMENTATION TANKS PARTIAL PLANS	DRAWING NUMBER S222 SHEET <u>28</u>	
	A	B	C	D	E	F	G	H
								

SECTION 1 S221 S223

SECTION 2 S221 S222 S223

SECTION 3 S221 S222 S223

SECTION 4 S221 S222 S223

SECTION 5 S221 S223

SCALE: 3/16" = 1'-0"

CONFORMS TO RECORD DOCUMENTS

DATE: 6/85

REGISTERED PROFESSIONAL ENGINEER
CHUNG YEN CHIU
NO. 82211
STRUCTURAL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BARR M. JONES
NO. 13944
CIVIL
STATE OF CALIFORNIA

BROWN AND CALDWELL
CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA

DESIGNED: W. Man
CHECKED: W. Man
SUBMITTED: [Signature]
APPROVED: [Signature]
DATE: 6/82

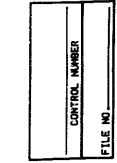
FILE: 942
DATE: JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

SEDIMENTATION TANKS
SECTIONS

DRAWING NUMBER: S224
SHEET: 30

[illegible]

DRAWING NUMBER		S225
SHEET 31		D

DRAWING
NUMBER S226

SHEET 32

DRAWING NUMBER S227

SHEET 33

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APVD
	1	REVISED PER CONTRACT RECORDS	1-85	

SECTION 24
24 S228
TOP PLAN (AT EL. 117.50)
SCALE: 1/2" = 1'-0"

SECTION 25
25 S228
SECTION
SCALE: 1/2" = 1'-0"

SECTION 26
26 S228
SECTION
SCALE: 1/2" = 1'-0"

SECTION 27
27 S228
SECTION
SCALE: 1/2" = 1'-0"

SECTION 28
28 S228
SECTION
SCALE: 1/2" = 1'-0"

SECTION 29
29 S228
SECTION
SCALE: 1/2" = 1'-0"

DETAIL E
E S223
PLAN (AT EL. 115.00)
SCALE: 1/2" = 1'-0"

DETAIL F
F S222
PARTIAL PLAN DETAIL
SCALE: 3/4" = 1'-0"

DETAIL G
G S223
PLAN DETAIL
SCALE: 3/4" = 1'-0"

DETAIL H
H S223
DETAIL
SCALE: 1/2" = 1'-0"

CONFORMS TO RECORD DOCUMENTS
DATE: 4/85

PROFESSIONAL ENGINEER
CHUN YEN CHAU
NO. 88211
STRUCTURAL
STATE OF CALIFORNIA

PROFESSIONAL ENGINEER
GARR M. JONES
NO. 13944
CIVIL
STATE OF CALIFORNIA

BROWN AND CALDWELL
CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA

DESIGNED W. Man
CHECKED W. Man
APPROVED For Brown and Caldwell
For City of Sunnyvale

SUBMITTED [Signature]
APPROVED For Brown and Caldwell
For City of Sunnyvale

DATE 6-1-82
DATE 6-1-82

FILE 942
DATE JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

SEDIMENTATION TANKS
PLAN, SECTIONS, & DETAILS

DRAWING NUMBER S228
SHEET 34

[illegible]

DATE: 4/85



DRAWING NUMBER S301

SHEET 36

BCD6P8



BROWN AND CALDWELL
CONSULTING ENGINEERS
WALNUT CREEK CALIFORNIA

DESIGNED W. Mann
CHECKED [Signature]
CHECKED [Signature]

SUBMITTED [Signature] DATE 6-1-82
APPROVED [Signature] DATE 6.1.82
APPROVED For Brown and Caldwell DATE

FILE 942
DATE JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

GAS UTILIZATION SYSTEM

PIPING SUPPORT- PLAN & SECTIONS

DRAWING NUMBER S301

SHEET 36

REVISIONS

ZONE	KEY	DESCRIPTION	DATE	APVD
	1	REVISED PER CONTRACT RECORDS	1-85	
	2	REVISED PER CONTRACTOR'S FIELD NOTES & ADDENDUM NO. 1	4-85	

NOTES FOR REPAIR WORK:

- CONTRACTOR SHALL INSPECT ALL THE EXISTING STRUCTURES REQUIRING REPAIR WORK AND DETERMINE THE EXACT EXTENT OF THE WORK.
- ALL CRACKS IN EXISTING BRICK VENEER OF DIGESTERS 1, 2, & 3 SHALL BE CUT TO 1/4" WIDE X 1/4" DEEP AND SHALL BE SEALED WITH MASTIC SEALANT.
 - SPALLED CONCRETE AND EXPOSED REINFORCING STEEL AT THE TOP OF CONCRETE WALLS OF DIGESTERS 1 & 2 SHALL BE COVERED WITH DRYPACK GROUT. REMOVE LOOSE & SPALLED CONCRETE & FILL W/ DRY PACK GROUT (SEE SPEC.) TO THE EXIST. FINISH ELEVATION.
- SPALLED CONCRETE - REMOVE LOOSE & SPALLED CONCRETE AND FILL WITH DRYPACK GROUT (SEE SPECS) TO THE EXISTING FINISH SLAB ELEVATION.
 - CRACKS - CRACKS IN CONCRETE SLABS AND WALL BETWEEN SEDIMENTATION TANKS 1, 2, 3, 5 & 6 AND SEDIMENTATION GALLERY WALL ABOVE EL. 114.50 SHALL BE CLEANED BY VACUUMING OR BLOWING OUT WITH OIL-FREE COMPRESSED AIR. CRACKS SHALL BE REPAIRED BY PUMPING OR INJECTING EPOXY GROUT (SEE SPECS) UNDER PRESSURE. PUMPING OR INJECTING EPOXY GROUT UNDER PRESSURE SHALL STRICTLY BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND PERFORMED BY EXPERIENCED WORKERS.
- WHEN THE TANKS ARE DEWATERED, ENGINEER MAY DETERMINE THAT FURTHER REPAIR WORK IS REQUIRED BELOW EL. 114.50. AT THAT TIME ENGINEER MAY INSTRUCT THE CONTRACTOR TO DO MORE REPAIR WORK. BASIS OF PAYMENT FOR EXTRA WORK SHALL BE AS SPECIFIED.

REPAIR WORK SHOWN AND SPECIFIED SHALL BE BASED ON THE FOLLOWING QUALITIES:

- DIGESTER CRACK REPAIRS, NOTE 2 (A) 800 LINEAR FEET
- DIGESTER SPALLED CONCRETE REPAIRS, NOTE 2 (B) 50 SQUARE FEET
- PRIMARY TANK SPALLED CONCRETE REPAIRS, NOTE 3 (A)
 - TOP SLAB 500 SQUARE FEET
 - TANK WALL ABOVE EL. 114.5 300 SQUARE FEET
- PRIMARY TANK CRACK REPAIRS
 - IN SLAB 300 LINEAR FEET
 - IN WALL ABOVE EL. 114.5 150 LINEAR FEET
- REPAIR SHOWN ON SECTION 3 150 LINEAR FEET

CONFORMS TO RECORD DOCUMENTS
DATE: 4/85

ENGINEER
CHUNG-YEN CHIU
NO. 38211
STRUCTURAL
STATE OF CALIFORNIA

ENGINEER
BARR M. JONES
NO. 13944
CIVIL
STATE OF CALIFORNIA

BROWN AND CALDWELL CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA

DESIGNED W. Man
CHECKED W. Man
CHECKED [Signature]

SUBMITTED [Signature]
APPROVED [Signature]
APPROVED [Signature]

DATE 6/1/82
DATE 6/1/82
DATE 6/1/82

FILE 942
DATE JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

MISCELLANEOUS STRUCTURES
PLANS AND SECTIONS

DRAWING NUMBER S551
SHEET 38

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

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BCD6P5

TYPE 1 PIPE HANGER
1/2" THROUGH 8" PIPE

TYPE 2 PIPE HANGER
1/2" THROUGH 8" PIPE

TYPE 3 PIPE HANGER
2-1/2" THROUGH 12" PIPE

TYPE 4 PIPE HANGER
3/8" THROUGH 8" PIPE

TYPE 5 PIPE HANGER
10" THROUGH 12" PIPE

TYPE 6 PIPE HANGER
3/8" THROUGH 8" PIPE

TYPE 7 PIPE HANGER
1/2" THROUGH 12" PIPE

TYPE 8 PIPE HANGER
3/8" THROUGH 12" PIPE

TYPE 9 PIPE HANGER
2-1/2" THROUGH 12" PIPE

TYPE 10 PIPE HANGER
2-1/2" THROUGH 12" PIPE

TYPE 11 PIPE HANGER
4" THROUGH 12" PIPE

TYPE 12 PIPE HANGER
4" THROUGH 12" PIPE

TYPICAL PIPE SUPPORT

TABLE A

TABLE B

GENERAL NOTES:

CONFORMS TO RECORD DOCUMENTS

DATE: 4/85

DESIGNED: [Signature]
CHECKED: [Signature]
SUBMITTED: [Signature]
APPROVED: [Signature]
DATE: 4/82

FILE: 942
DATE: JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

MECHANICAL DETAILS
STANDARD PIPING DETAILS 1

DRAWING NUMBER: M.1
SHEET: 39

BC1456 GWS 18AUG81

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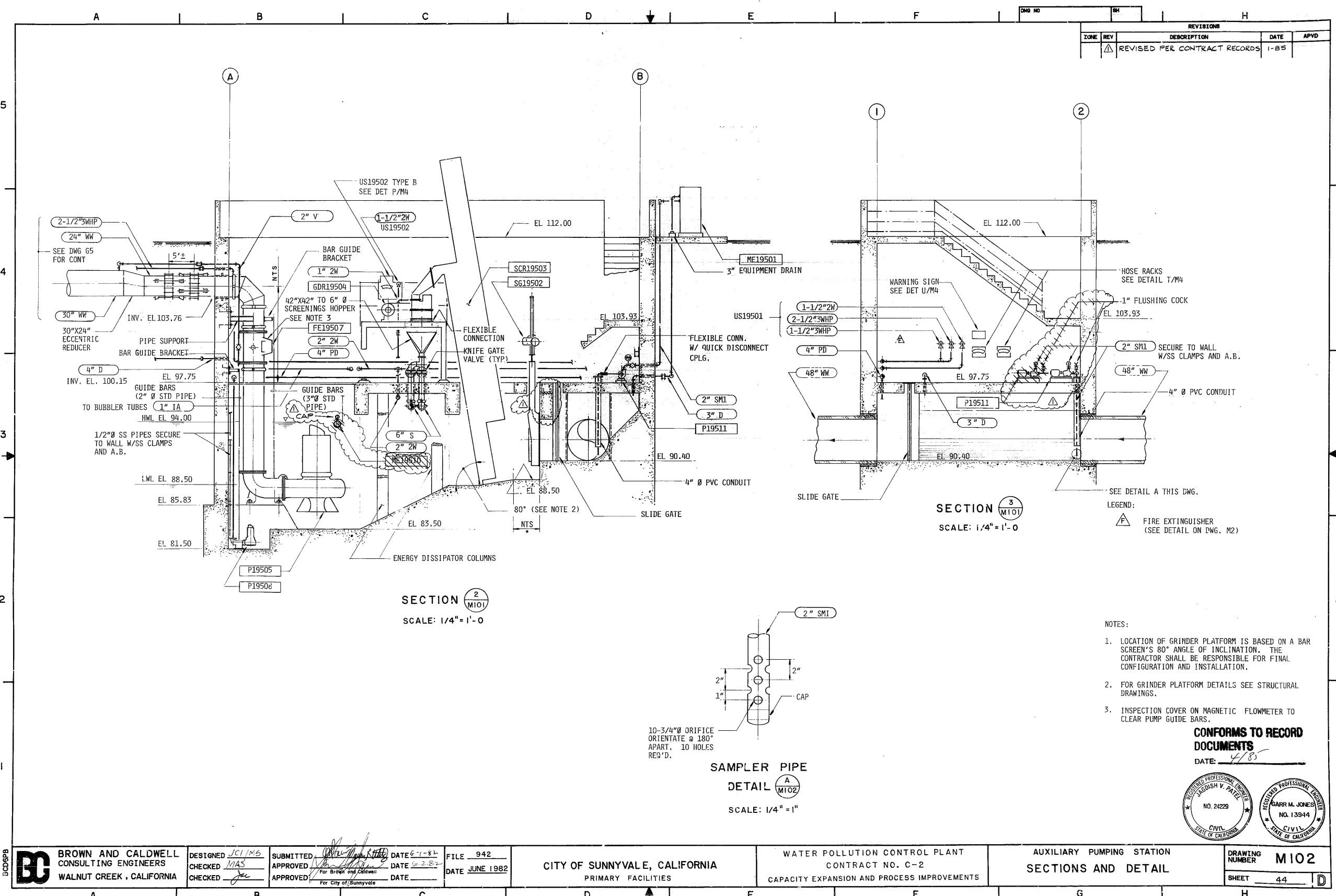
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UCD5PB



BROWN AND CALDWELL
CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA

DESIGNED: JCL/MG
CHECKED: MAS
APPROVED: [Signature]
DATE: 6-1-82

FOR BROWN AND CALDWELL
APPROVED: [Signature]
DATE: 6-2-82

FILE: 942
DATE: JUNE 1982

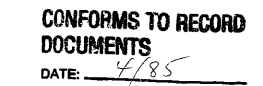
CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

AUXILIARY PUMPING STATION
SECTIONS AND DETAIL

DRAWING NUMBER: M102
SHEET: 44



[illegible]

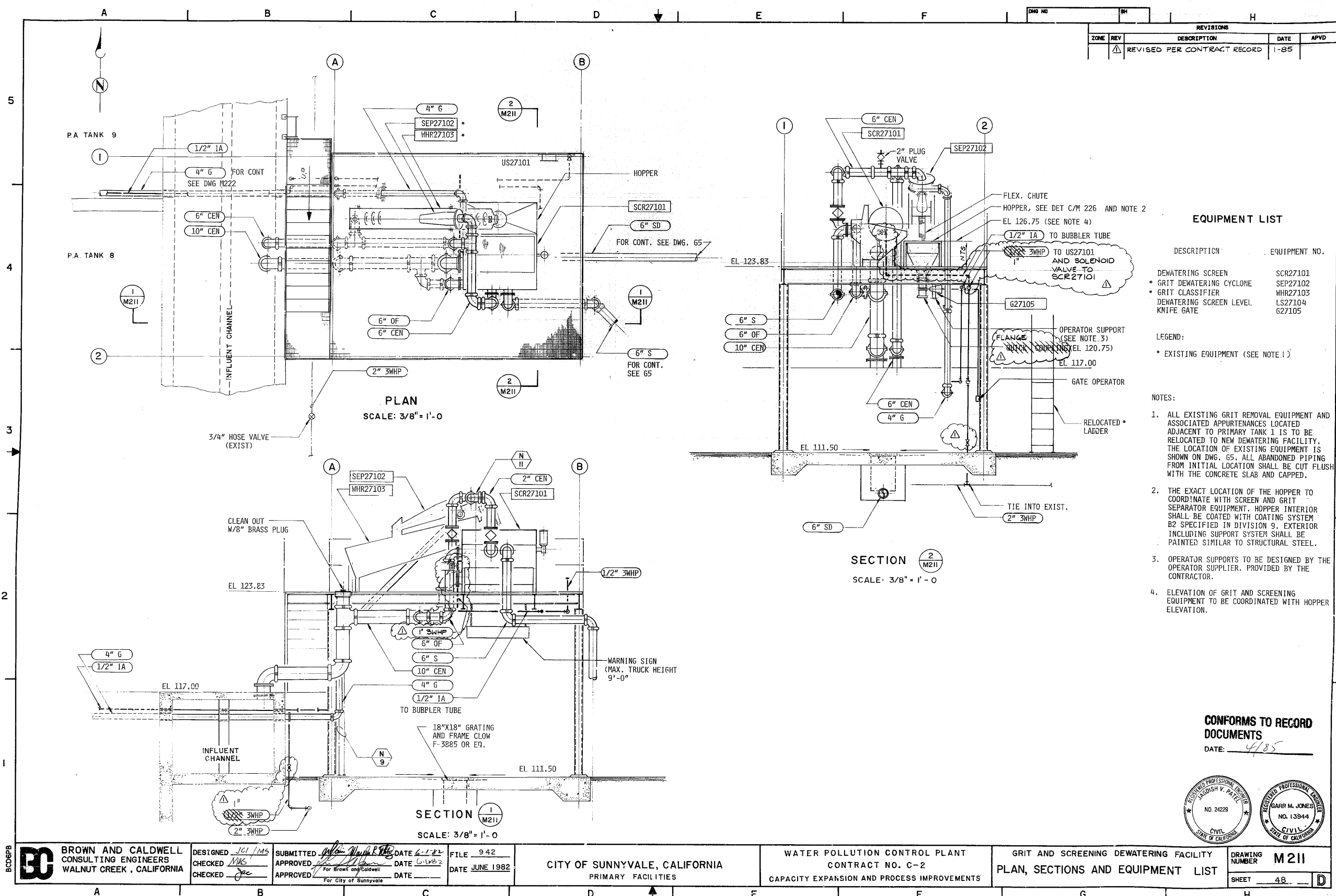
NOTE: REFER TO DWG HV 121 FOR
HVAC NUMBERING.



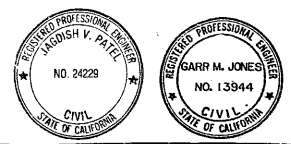
 BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA	DESIGNED <u>JCL/mjs</u> CHECKED <u>MJS</u> CHECKED <u>JCL</u>	SUBMITTED <u>March 11, 1982</u> APPROVED <u>[Signature]</u> For Brown and Caldwell	DATE <u>3-1-82</u> DATE <u>3-1-82</u> DATE _____ For City of Sunnyvale	FILE <u>942</u> DATE <u>JUNE 1982</u>	CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	MAINTENANCE WING SECTIONS	DRAWING NUMBER M122 SHEET <u>46</u>

[illegible]

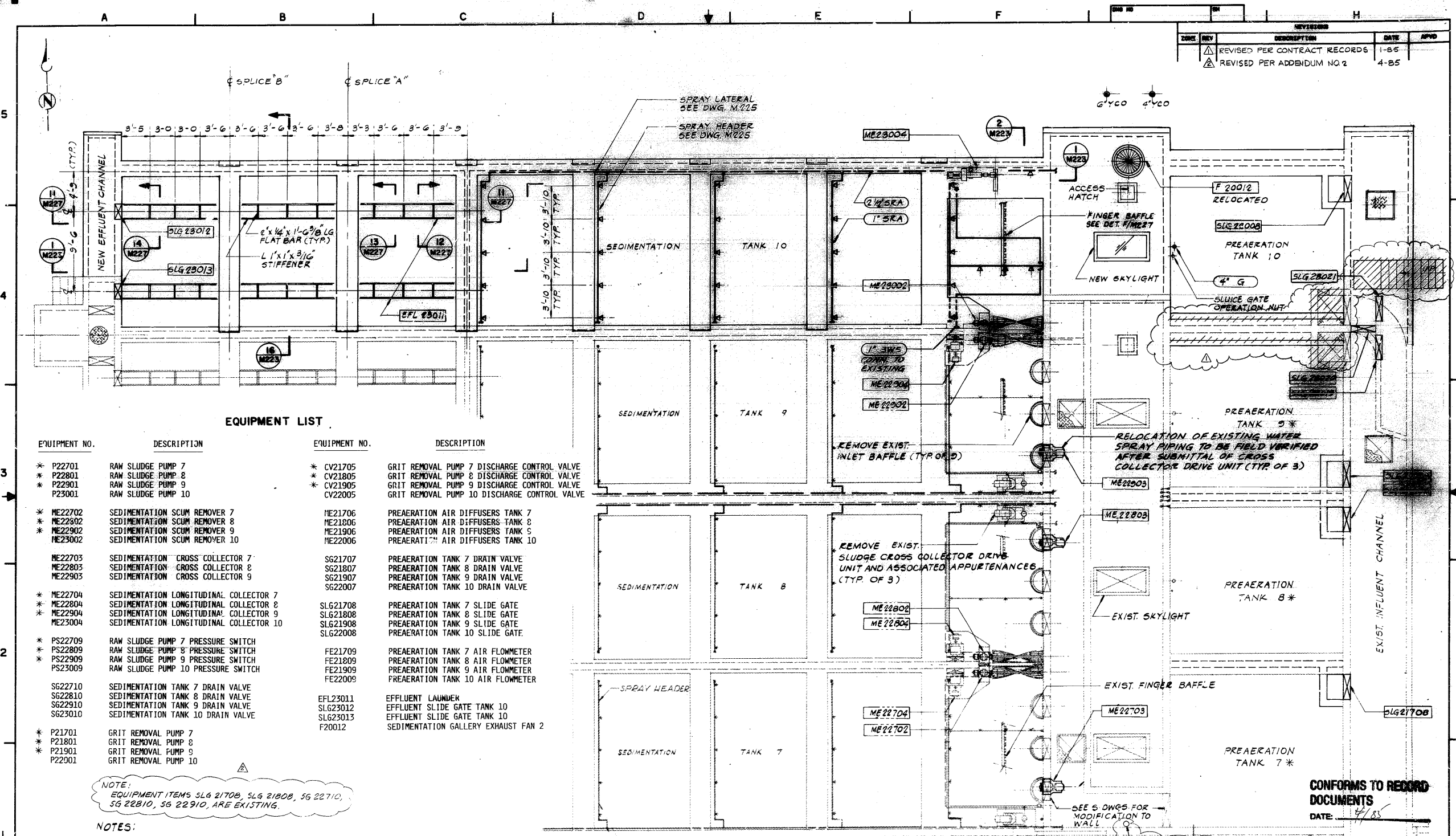
 BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA	DESIGNED <u>JCL/MS</u> CHECKED <u>MRS</u> CHECKED <u>Jac</u>	SUBMITTED <u>Jeffrey Davis, P.E.</u> APPROVED <u>[Signature]</u> APPROVED <u>For Brown and Caldwell</u> APPROVED <u>For City of Sunnyvale</u>	DATE <u>6-1-82</u> DATE <u>6-1-82</u> DATE _____ DATE _____	FILE <u>942</u> DATE <u>JUNE 1982</u>	CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	INFLUENT STRUCTURES PLAN AND SECTION	DRAWING NUMBER M201 SHEET <u>47</u>

[illegible]

CONFORMS TO RECORD
DOCUMENTS
DATE: 4/85



CO	CP	CS	CR	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GZ	HA	HB	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP	HQ	HR	HS	HT	HU	HV	HW	HX	HY	HZ	IA	IB	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN	IO	IP	IQ	IR	IS	IT	IU	IV	IW	IX	IY	IZ	JA	JB	JC	JD	JE	JF	JG	JH	JI	JJ	JK	JL	JM	JN	JO	JP	JQ	JR	JS	JT	JU	JV	JW	JX	JY	JZ	KA	KB	KC	KD	KE	KF	KG	KH	KI	KJ	KK	KL	KM	KN	KO	KP	KQ	KR	KS	KT	KU	KV	KW	KX	KY	KZ	LA	LB	LC	LD	LE	LF	LG	LH	LI	LJ	LK	LL	LM	LN	LO	LP	LQ	LR	LS	LT	LU	LV	LW	LX	LY	LZ	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK	ML	MM	MN	MO	MP	MQ	MR	MS	MT	MU	MV	MW	MX	MY	MZ	NA	NB	NC	ND	NE	NF	NG	NH	NI	NJ	NK	NL	NM	NN	NO	NP	NQ	NR	NS	NT	NU	NV	NW	NX	NY	NZ	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OQ	OR	OS	OT	OU	OV	OW	OX	OY	OZ	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PQ	PR	PS	PT	PU	PV	PW	PX	PY	PZ	QA	QB	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT	QU	QV	QW	QX	QY	QZ	RA	RB	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL	RM	RN	RO	RP	RQ	RR	RS	RT	RU	RV	RW	RX	RY	RZ	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL	SM	SN	SO	SP	SQ	SR	SS	ST	SU	SV	SW	SX	SY	SZ	TA	TB	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM	TN	TO	TP	TQ	TR	TS	TT	TU	TV	TW	TX	TY	TZ	UA	UB	UC	UD	UE	UF	UG	UH	UI	UJ	UK	UL	UM	UN	UO	UP	UQ	UR	US	UT	UU	UV	UW	UX	UY	UZ	VA	VB	VC	VD	VE	VF	VG	VH	VI	VJ	VK	VL	VM	VN	VO	VP	VQ	VR	VS	VT	VU	VV	VW	VX	VY	VZ	WA	WB	WC	WD	WE	WF	WG	WH	WI	WJ	WK	WL	WM	WN	WO	WP	WQ	WR	WS	WT	WU	WV	WW	WX	WY	WZ	XA	XB	XC	XD	XE	XF	YG	YH	YI	YJ	YK	YL	YM	YN	YO	YP	YQ	YR	YS	YT	YU	YV	YW	YX	YY	YZ	ZA	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZI	ZJ	ZK	ZL	ZM	ZN	ZO	ZP	ZQ	ZR	ZS	ZT	ZU	ZV	ZW	ZX	ZY	ZZ
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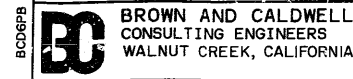




E:

I - INITIATED BY
D - DRAWN BY
C - CHECKED BY

FILE NO.
CONTROL NUMBER



DESIGNED JCI/MS
CHECKED MS
CHECKED jc

SUBMITTED Alain M. M...
APPROVED [Signature]
APPROVED For Brown and Caldwell
For City of Sunnyvale

FILE 942
DATE JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

SEDIMENTATION AND PREAERATION TANKS SECTIONS AND DETAILS

DRAWING NUMBER	M 223
SHEET	51

**CONFORMS TO RECORD
DOCUMENTS**

DATE _____



 BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA	DESIGNED <u>JCI/MS</u>	SUBMITTED <u>John M. Smith</u>	DATE <u>6-1-82</u>	FILE <u>942</u>	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	EQUIPMENT GALLERY SECTIONS	DRAWING NUMBER M224	
	CHECKED <u>MRS</u>	APPROVED _____	DATE <u>6-1-82</u>	DATE <u>JUNE 1982</u>			CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	SHEET <u>52</u>
	CHECKED <u>JCI</u>	APPROVED _____ For Brown and Caldwell	DATE _____	DATE _____				D

BN	DET	DN	GM	CM	CP	DM	FEN	GR	IRR	LG	OP	PG	PL	PP	PPG	PR	SIE	SIF	SIN	STD	TE	TN	PRM	AM	CF	CG	FN	FR	FT	BO	SM	EQ	EQN	FPP	MEQ	MM	MP	P	PPR	PS	PW	HVE	HVM	HVS	EC	EL	EM	EP	IC	IM
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CODE:

INITIALS

DATE

HOURS

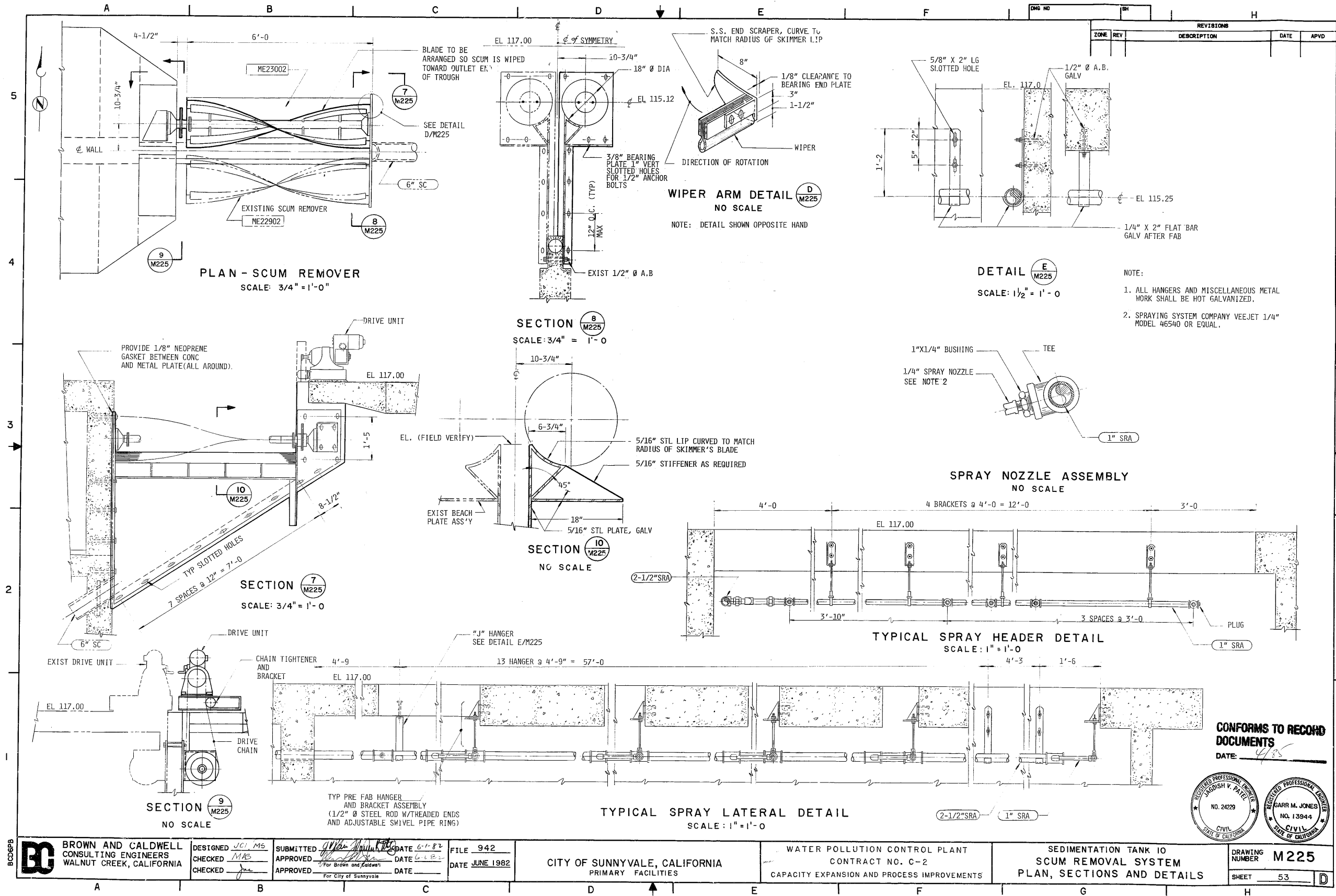
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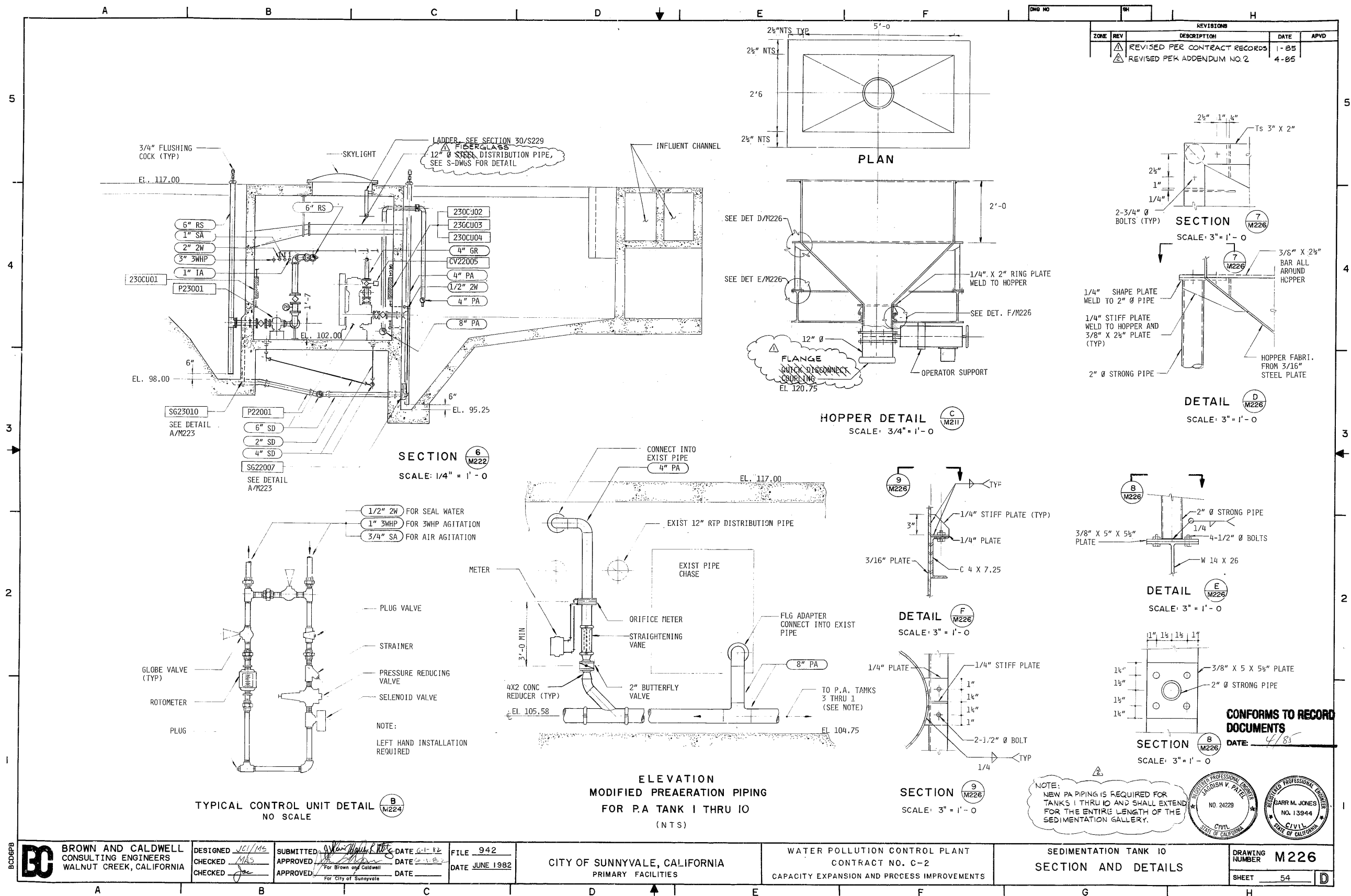
2 - DRAWN BY

3 - CHECKED BY

CONTROL NUMBER

FILE NO.





TYPICAL FINGER BAFFLE DETAIL
SCALE: 1/2" = 1'-0"

SECTION 11
SCALE: 3/4" = 1'-0"

SECTION 12
NO SCALE

SECTION 13
NO SCALE

SECTION 14
NO SCALE

SECTION 15
NO SCALE

NOTES:

- ALL HARDWARE ACCESSORIES USED IN THE MOUNTING OF THE TROUGHS SHALL BE GALVANIZED AFTER FABRICATION.
- TROUGHS TO BE FABRICATED OF 3/16" STEEL PLATE IN 3 SECTIONS AS SHOWN, PAINT AT SITE AFTER FABRICATION.
- 2 TROUGHS REQUIRED IN SED TANK 10.
- NOTCHES TO BE ACCURATELY PUNCHED IN TROUGH AND STAGGERED ON OPPOSITE SIDES AS DIMENSIONED.

CONFORMS TO RECORD DOCUMENTS
DATE: 4/85

REGISTERED PROFESSIONAL ENGINEER
AGNISH V. PATEL
NO. 24229
CIVIL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
BARR M. JONES
NO. 13944
CIVIL
STATE OF CALIFORNIA

BROWN AND CALDWELL
CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA

DESIGNED JCM/ML
CHECKED MAS
APPROVED JCM/ML
SUBMITTED JCM/ML
APPROVED For Brown and Caldwell
DATE 6-1-82
DATE 6-1-82
DATE JUNE 1982

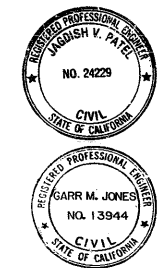
FILE 942
DATE JUNE 1982

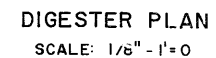
CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

SEDIMENTATION TANK 10
EFFLUENT TROUGH AND BAFFLE
SECTIONS AND DETAIL

DRAWING NUMBER M227
SHEET 55

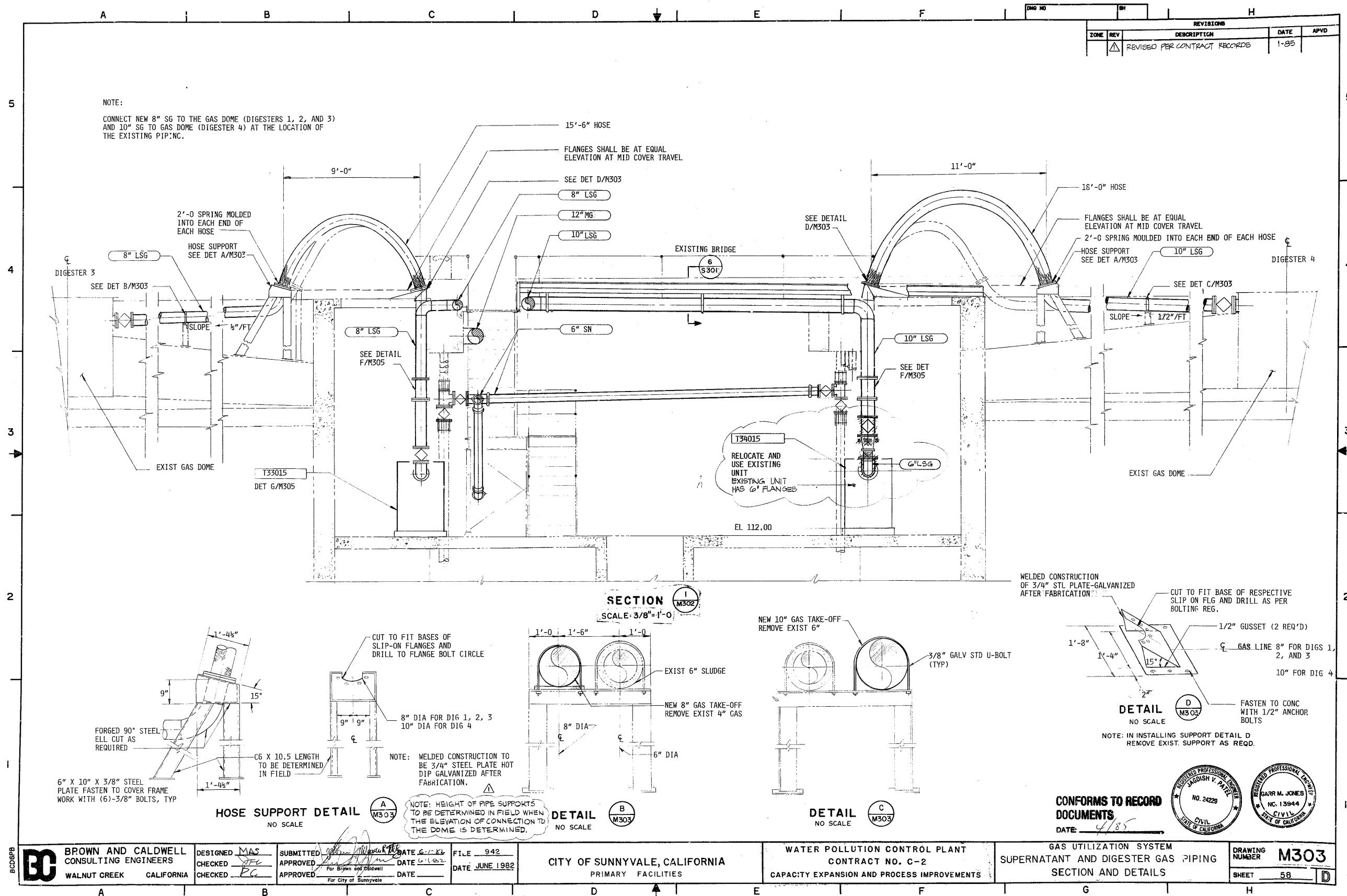


[illegible]A circular professional engineer seal for Garr M. Jones, No. 13944, State of California. The seal features the text "REGISTERED PROFESSIONAL ENGINEER" around the top inner edge, "GARR M. JONES" in the center, "NO. 13944" below the name, "CIVIL" below the number, and "STATE OF CALIFORNIA" around the bottom inner edge. There are small stars on either side of the bottom text.

SHEET 57

[illegible]

CONTROL NUMBER
FILE NO.



CONFORMS TO RECORD DOCUMENTS

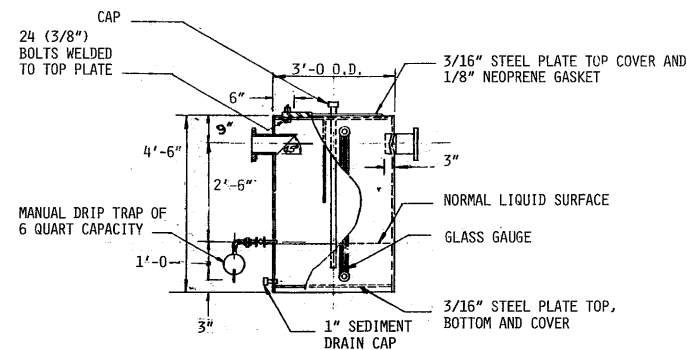
DATE: 4/85



GAS UTILIZATION SYSTEM SUPERNATANT AND DIGESTER GAS PIPING SECTION AND DETAILS

DRAWING NUMBER	M303
SHEET	58

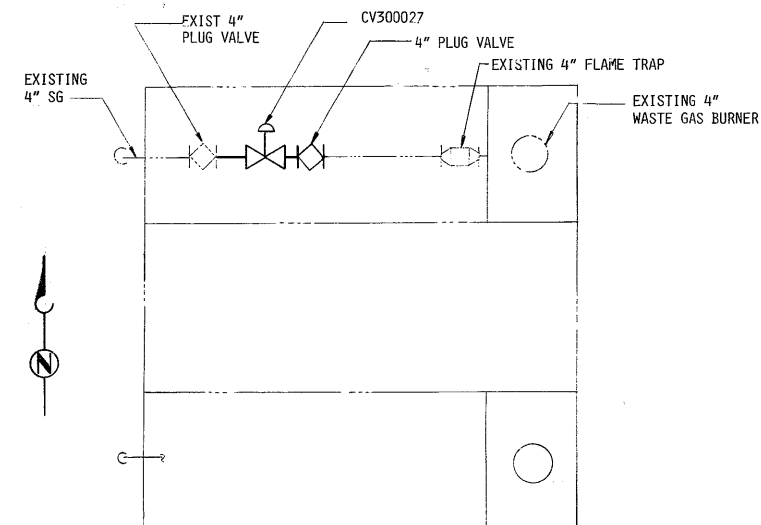
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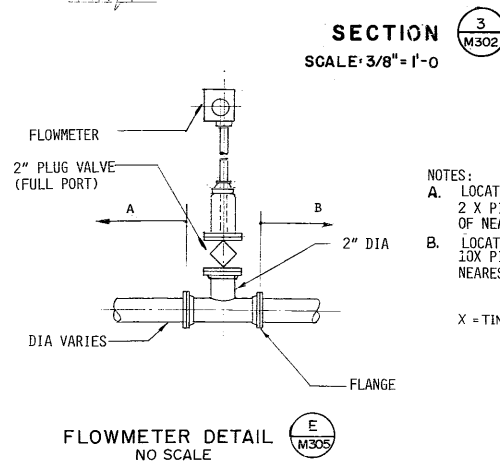
DETAIL
SCALE: 1/2" = 1'-0"

NOTE: THE CONDENSATE AND SEDIMENT TRAP SHALL COMPLY WITH THE FOLLOWING:

1. 3/4" WELDED STEEL PLATE CHAMBER BAFFLE (2- GA. STEEL 2'-6" DEEP 1/4" INSPECTION PIPE WITH CAP (APPROXIMATELY 4'-3" INSIDE THE CHAMBER).
2. GLASS GAUGE TO BE PROVIDED WITH PROTECTIVE GUARD, DRAIN AND SHUTOFF VALVES AT DRAIN AND AT TWO CONNECTIONS.



PLAN
WASTE GAS BURNERS
NO SCALE

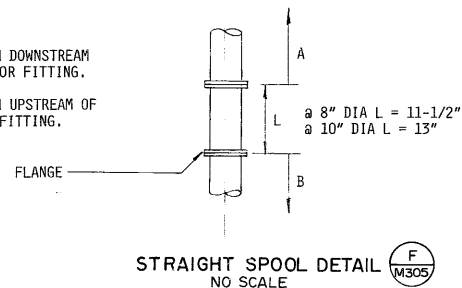


NOTES:

A. LOCATE FLOWMETER
2 X PIPE DIA FROM DOWNSTREAM
OF NEAREST VALVE OR FITTING.

B. LOCATE FLOWMETER
10X PIPE DIA FROM UPSTREAM OF
NEAREST VALVE OR FITTING.

X = TIMES



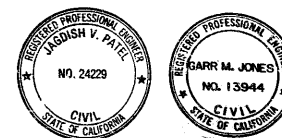
NOTES:

A. LOCATE SPOOL
10 X PIPE DIA FROM DOWNSTREAM OF
NEAREST VALVE OR FITTING.

B. LOCATE SPOOL
5 X PIPE DIA FROM UPSTREAM OF
NEAREST VALVE OR FITTING.

X = TIMES

CONFORMS TO RECORD
DOCUMENTS
DATE: 4/85



BCD6PB



DESIGNED MAS
CHECKED JFC
CHECKED PC

SUBMITTED [Signature]
APPROVED [Signature]
APPROVED [Signature] For Brown and Caldwell
For City of Sunnyvale

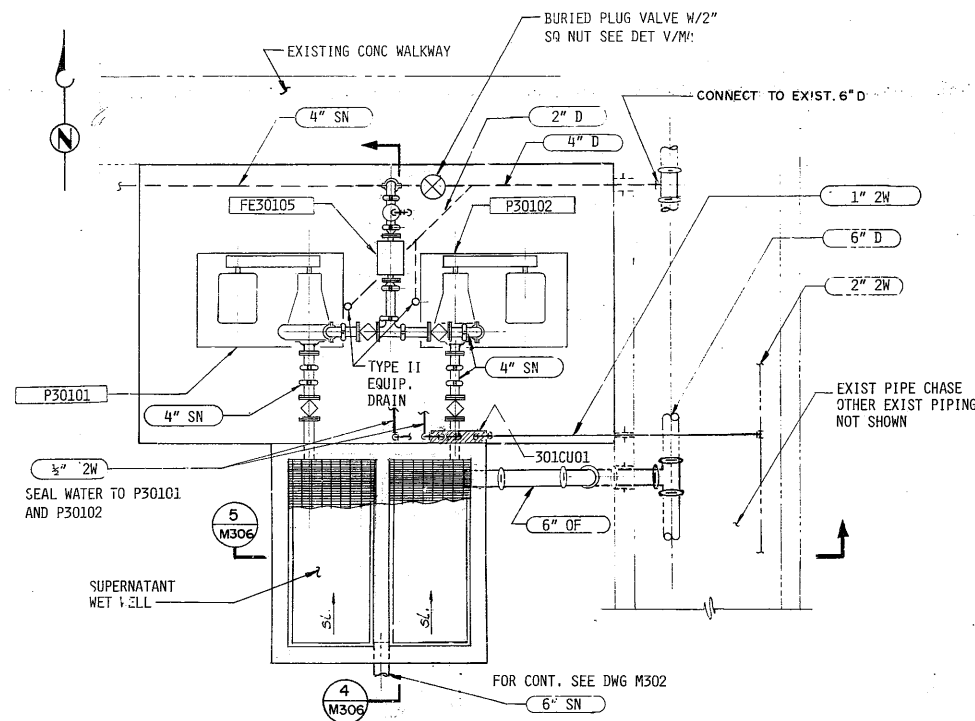
DATE <u>6-1-82</u>	FILE <u>942</u>
DATE <u>6-1-82</u>	DATE <u>JUNE 1982</u>

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

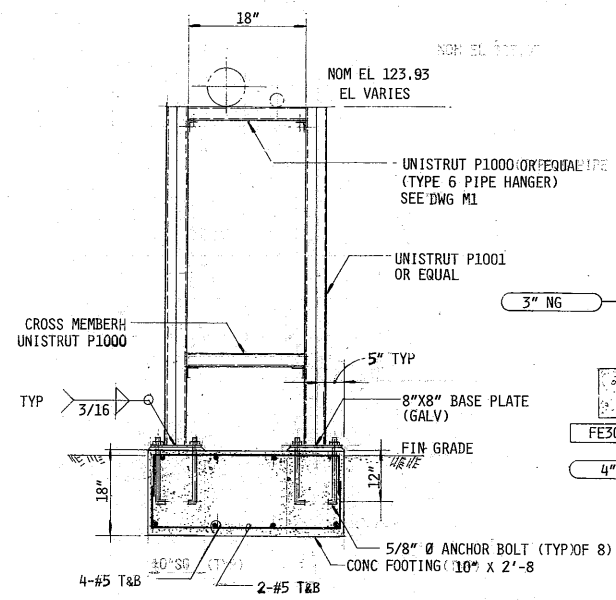
GAS UTILIZATION SYSTEM
SUPERNATANT AND DIGESTER GAS PIPING
PLAN, SECTION AND DETAILS

DRAWING NUMBER	M305
SHEET	60

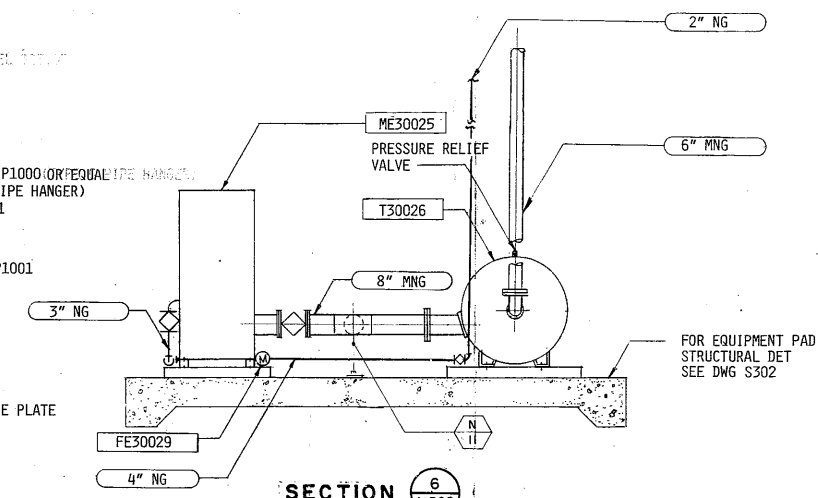
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APVD
	1	REVISED PER ADDENDUM NO. 1	4-85	



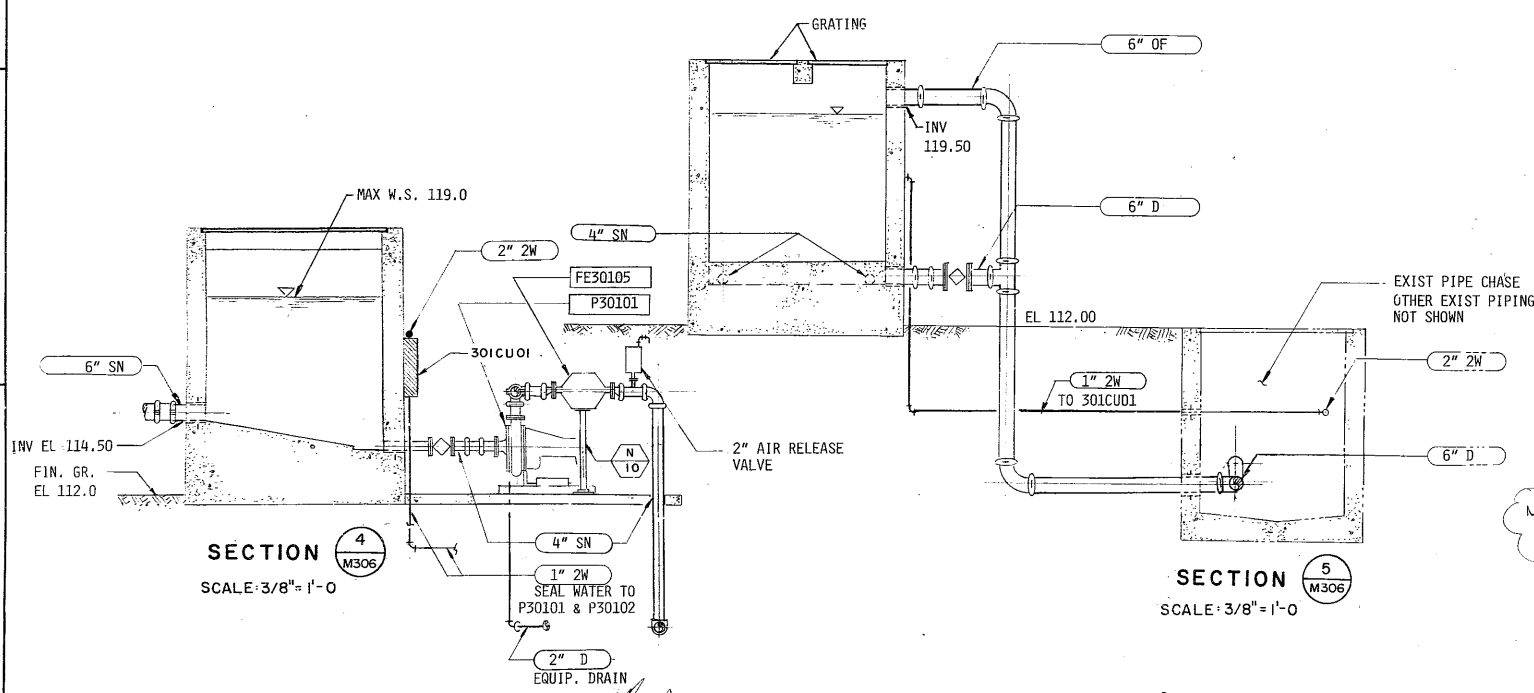
**SUPERNATANT PUMPING STATION
PART PLAN**
SCALE: 3/8" = 1'-0"



SECTION 13 M306
NO SCALE



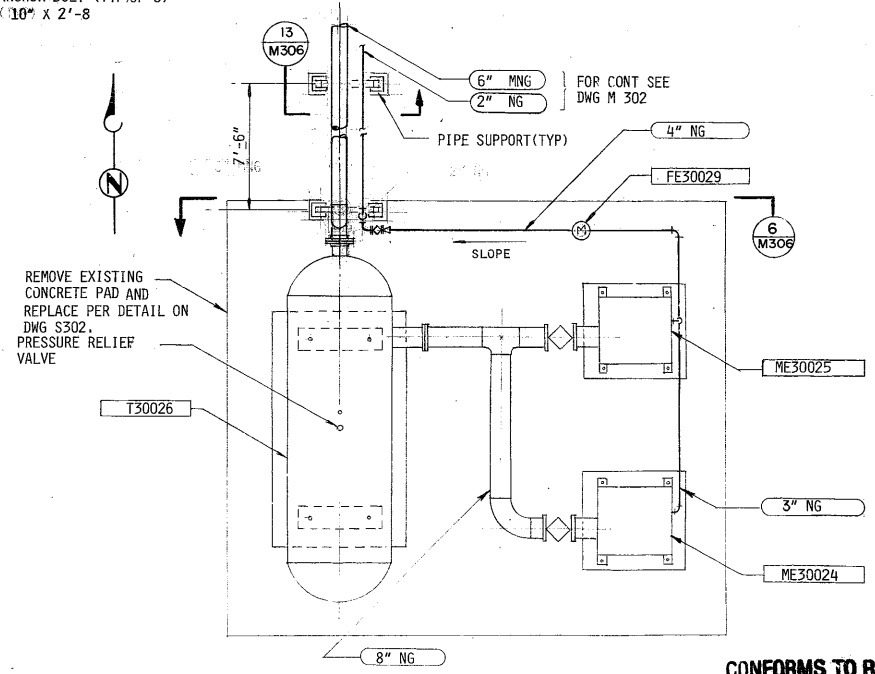
SECTION 6 M306
SCALE: 3/8" = 1'-0"



SECTION 4 M306
SCALE: 3/8" = 1'-0"

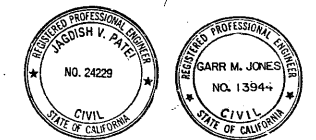
SECTION 5 M306
SCALE: 3/8" = 1'-0"

NOTE: ON 2" NG LINE BETWEEN ISOLATING VALVE AND FE 30029, INSTALL PRESSURE REDUCING VALVE. CAPACITY 26,500 SCFH PRESSURE REDUCING FROM 100 PSI TO 35 PSI.



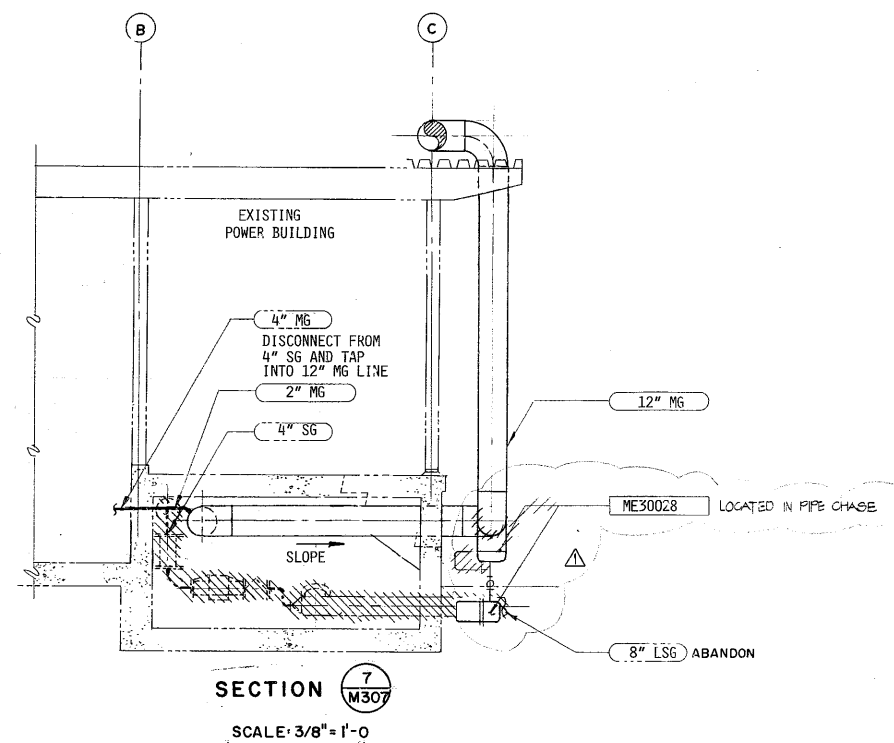
**BLENDED GAS
PART PLAN**
SCALE: 3/8" = 1'-0"

CONFORMS TO RECORD DOCUMENTS
DATE: 4/85



[illegible]

FILE NO.	
CONTROL NUMBER	



SECTION 

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

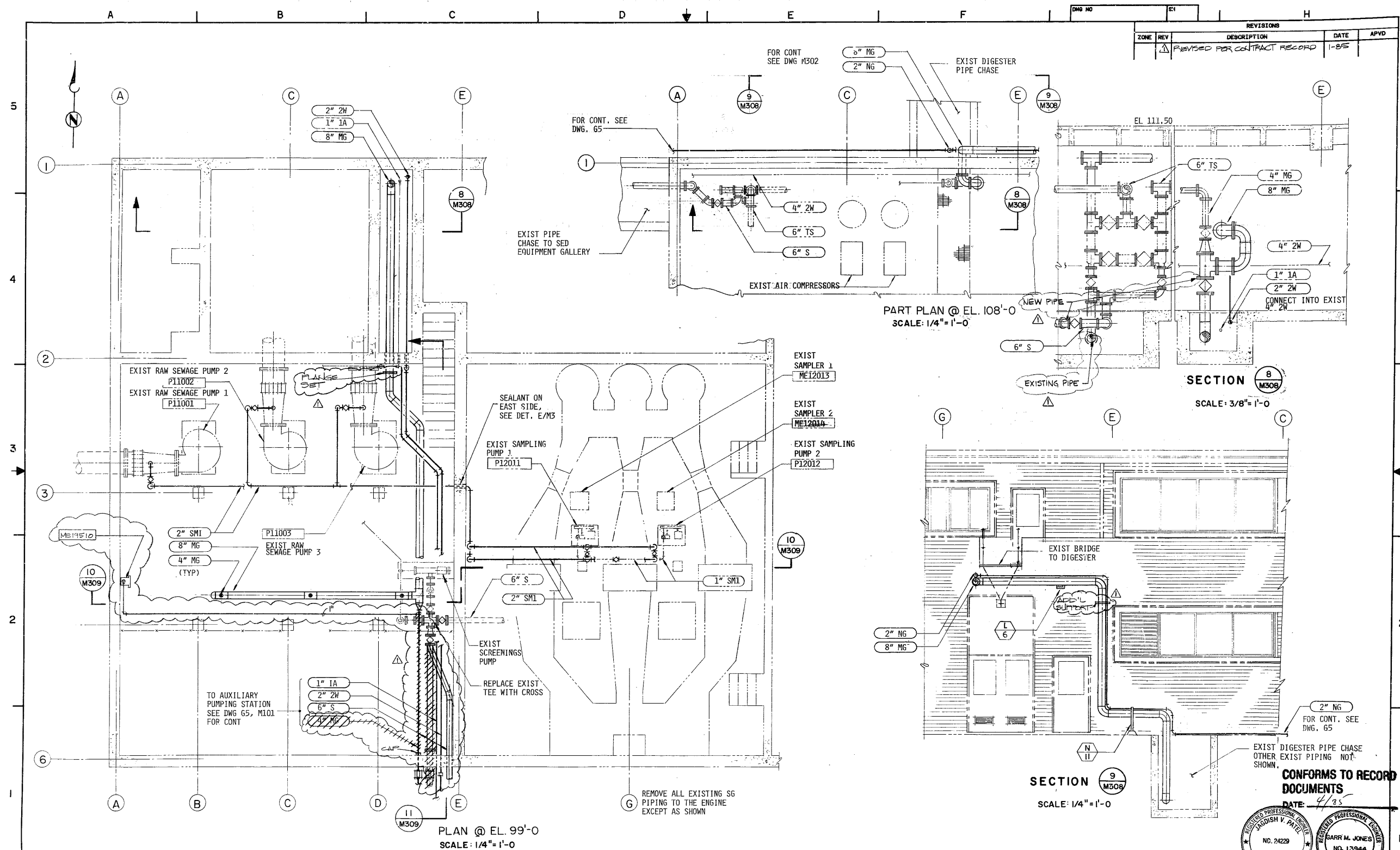
REGISTERED PROFESSIONAL ENGINEER
GARR M. JONES
NO. 13944
CIVIL
STATE OF CALIFORNIA

BCD6PB



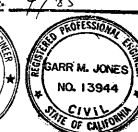
M307

SHEET 62

[illegible]

CONFORMS TO RECORD DOCUMENTS

DATE: 4/85



8060



DATE 6-1-82 FILE 942
DATE 6-1-82 DATE JUNE 1982

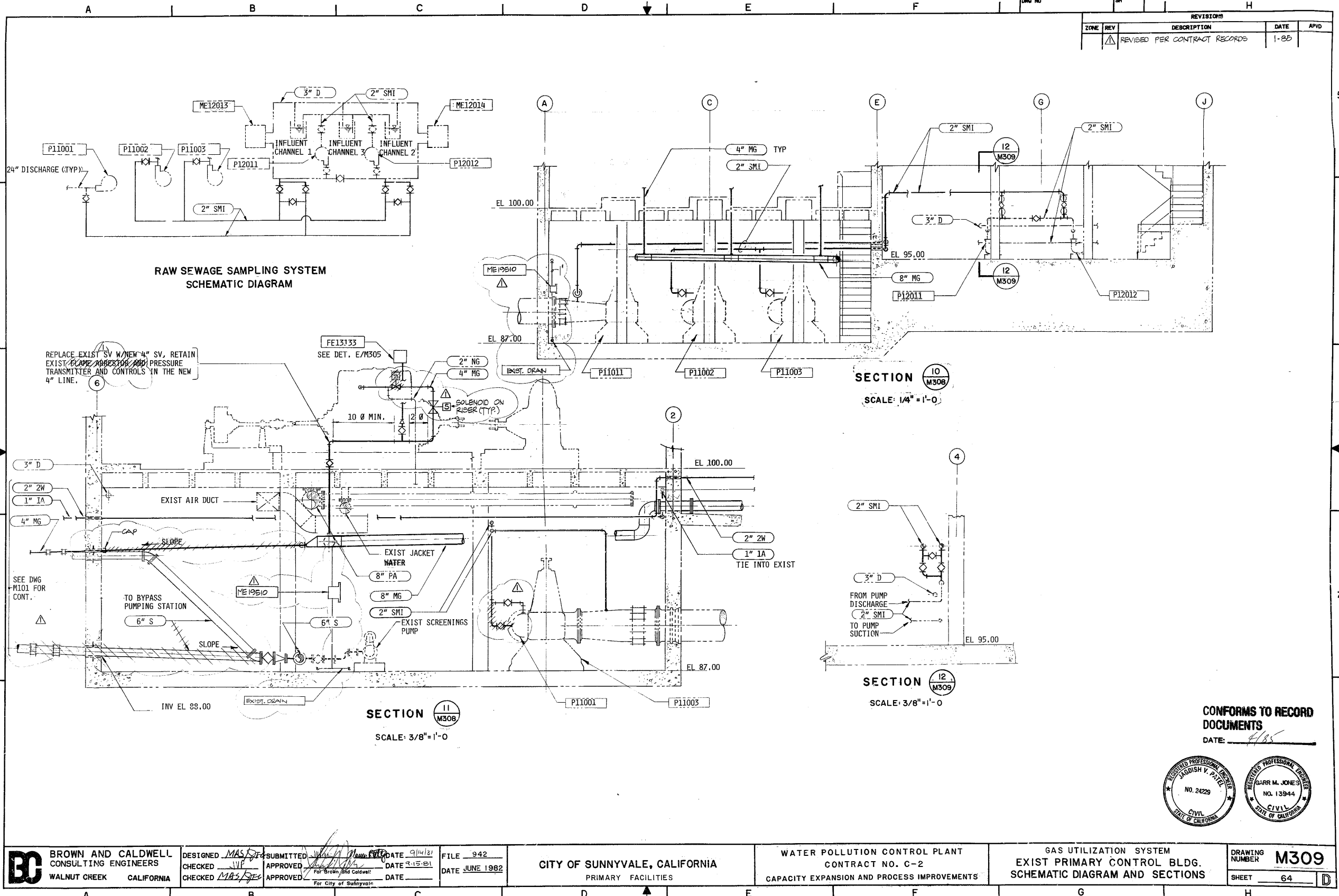
WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

GAS UTILIZATION SYSTEM
EXIST PRIMARY CONTROL BLDG.
PLAN, PART PLAN AND SECTION

DRAWING NUMBER	M308
SHEET	63

CODE: 1 - INITIATED BY
2 - DRAWN BY
3 - CHECKED BY

CODE	INITIALS	DATE	HOURS
1			
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ZONE	REV	DESCRIPTION	DATE	APVD
		REVISOR PER CONTRACT RECORDS	1-85	

CONFORMS TO RECORD DOCUMENTS
DATE: 4/85



BC BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK CALIFORNIA	DESIGNED <i>MAS</i>	SUBMITTED <i>MAS</i>	DATE 9/14/81	FILE 942	CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	GAS UTILIZATION SYSTEM EXIST PRIMARY CONTROL BLDG. SCHEMATIC DIAGRAM AND SECTIONS	DRAWING NUMBER M309
	CHECKED <i>MAS</i>	APPROVED <i>MAS</i>	DATE 9-15-81	DATE JUNE 1982				
	For City of Sunnyvale							

[illegible]

DESIGNED JCI
CHECKED MAS
CHECKED PC

SUBMITTED *[Signature]*
APPROVED *[Signature]*
APPROVED *[Signature]* For Brown and Caldwell
For City of Sunnyvale

DATE 6-1-82 FILE 942
DATE 6-1-82 DATE JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

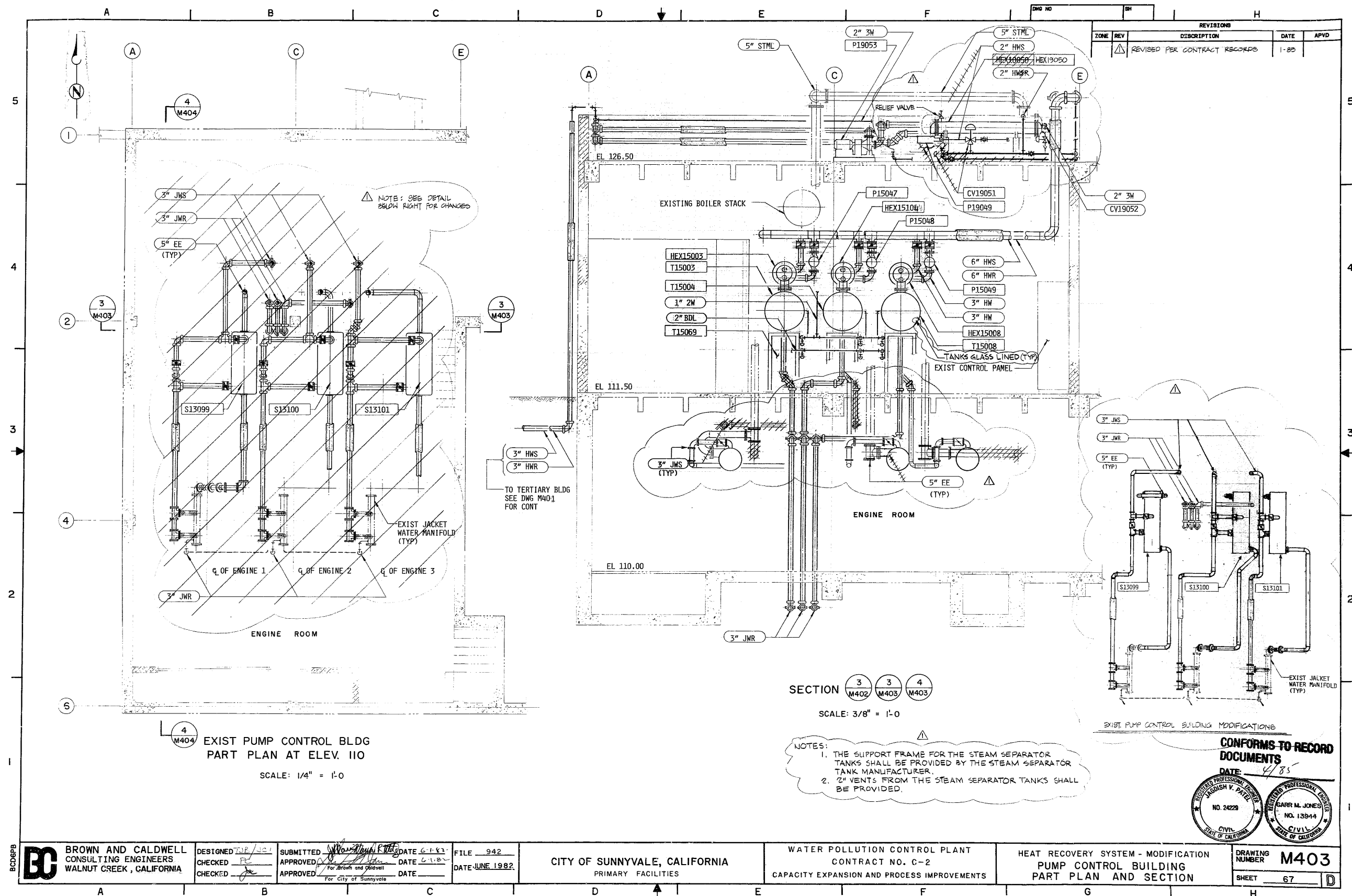
HEAT RECOVERY SYSTEM - MODIFICATION
OUTSIDE PIPING

DRAWING NUMBER	M40
SHEET	65

I - INITIATED BY
D - DRAWN BY
C - CHECKED BY

[illegible]

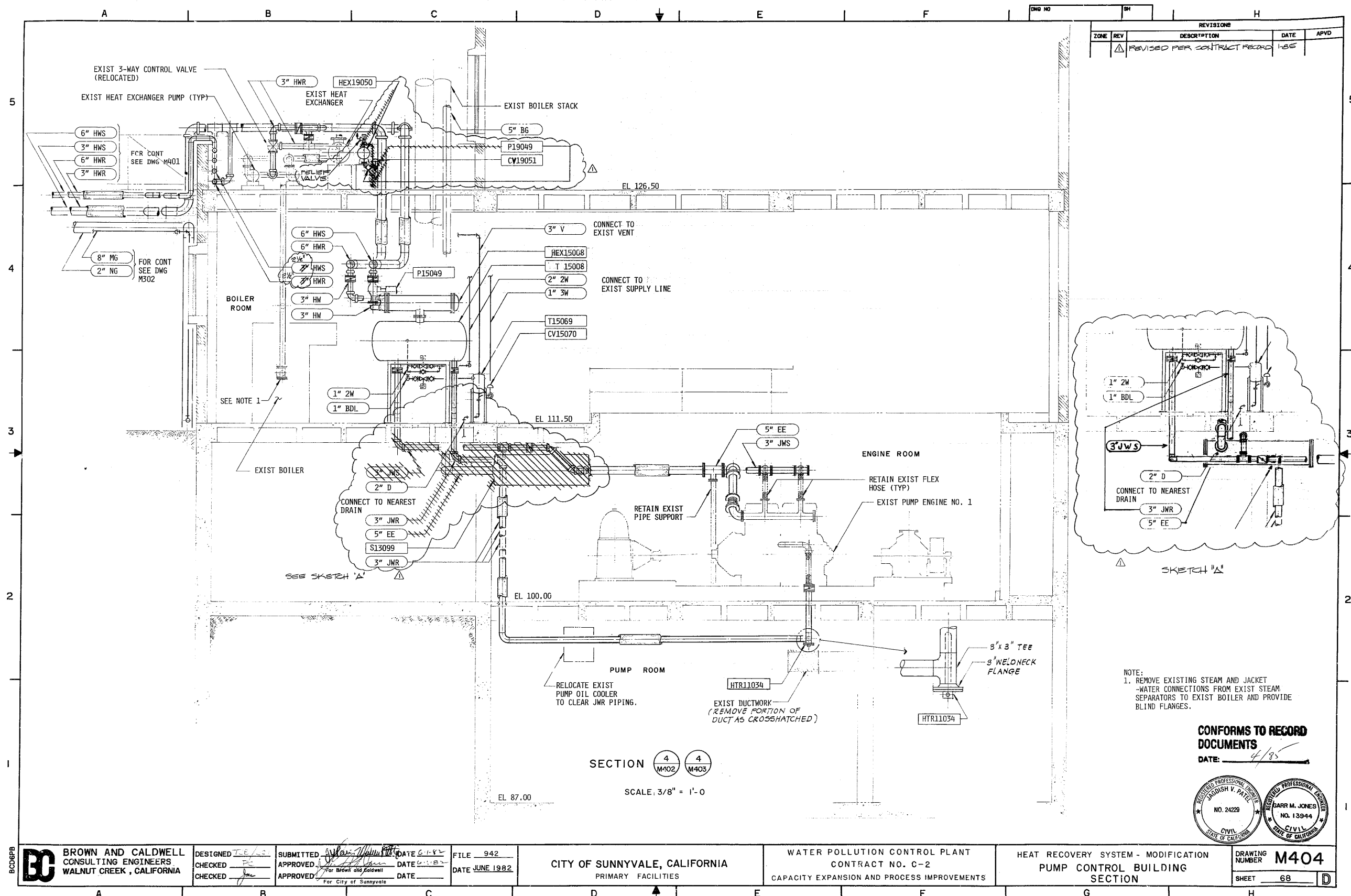
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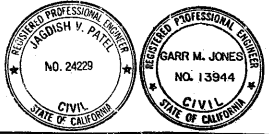
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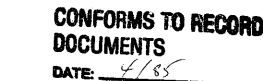
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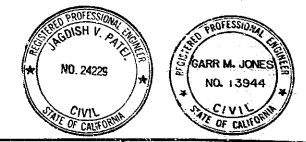
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BCSP	 BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA	DESIGNED <u>JLB/JC</u>	SUBMITTED <u>[Signature]</u> DATE <u>6-1-82</u>	FILE <u>942</u>	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	HEAT RECOVERY SYSTEM - MODIFICATION MISCELLANEOUS BUILDINGS PART PLANS, SECTIONS AND DETAIL	DRAWING NUMBER M407	
		CHECKED <u>PC</u>	APPROVED <u>[Signature]</u> DATE <u>6-1-82</u>	DATE <u>JUNE 1982</u>				CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES
		CHECKED <u>TJB</u>	APPROVED <u>For Brown and Caldwell</u> DATE _____	DATE _____				
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FILE NO



 BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA	DESIGNED <u>TJB</u>	SUBMITTED <u>March</u>	DATE <u>6-1-82</u>	FILE <u>942</u>	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	PROCESS SCHEMATIC HEAT RESERVOIR SYSTEM	DRAWING NUMBER M408	
	CHECKED <u>PC</u>	APPROVED <u>Mark A. C. Jones</u>	DATE <u>6-1-82</u>	DATE <u>JUNE 1982</u>			CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	SHEET <u>72</u>
	CHECKED <u>JJB</u>	APPROVED _____	DATE _____	DATE _____				

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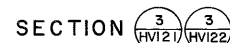
 BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA	DESIGNED <u>JCI/GP</u>	SUBMITTED <u>1/11/82</u> DATE <u>6-1-82</u>	FILE <u>942</u>	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	MAINTENANCE WING ROOF PLAN AND CONTROL DIAGRAM	DRAWING NUMBER HV122	
	CHECKED <u>MS</u>	APPROVED <u>[Signature]</u> DATE <u>6-1-82</u>	DATE <u>JUNE 1982</u>			CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	SHEET <u>1</u> D
	CHECKED _____	APPROVED _____ DATE _____					

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



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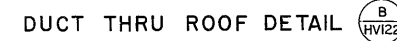


SCALE: 1/4" = 1' - 0"



VERTICAL DUCT SUPPORT AT WALL
NTS.

EXHAUST FAN OR GRAVITY INTAKE VENT MOUNTING



NTS

 BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA	DESIGNED <u>ICJ/GP</u>	SUBMITTED <u>DATE 6-1-82</u>	FILE <u>942</u>	CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	MAINTENANCE WING SECTIONS AND DETAILS	DRAWING NUMBER HV123
	CHECKED <u>MS</u>	APPROVED <u>DATE 6-1-82</u>	DATE <u>JUNE 1982</u>				SHEET <u>75</u>
	CHECKED <u>ja</u>	APPROVED <u>DATE</u>					

BN	DET	DN	GM	CM	CP	DM	FEN	GR	HR	LG	OP	PG	PL	PP	PPQ	RR	SE	SIF	SIN	STD	TE	TN	WM	AM	CF	CG	FN	FR	PT	DO	SM	EQ	EON	FPP	MEQ	MM	MP	P	PP	PS	PW	HVE	HVM	HVS	EC	EL	EM	EP	IC	IM
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1 - INITIATED BY 2 - DRAWN BY 3 - CHECKED BY				NO. OF FIXTURES FIXTURE TYPE FIXTURE IDENTIFICATION NUMBER OF LAMPS/LAMP WATTAGE		BELL		SPEAKER		JUNCTION BOX OR CONDUIT FITTING		ELECTRICAL DEVICE OR OUTLET AS NOTED ON DRAWINGS		THERMOSTAT MTG HT +5'0		MOTOR (NUMBER INDICATES HORSEPOWER)		FIELD MOUNTED INSTRUMENT OR TERMINAL IN CONTROL CIRCUIT		PUSHBUTTON STATION. SUBSCRIPT INDICATES FUNCTION "S/S"=START-STOP, "S/LOS"=START/LOCK-OUT STOP, "J"=JOG, "T/LOS"=TEST/LOCK-OUT STOP		TEMPERATURE SWITCH - NORMALLY CLOSED		TEMPERATURE SWITCH - NORMALLY OPEN		LIMIT SWITCH - NORMALLY OPEN		LIMIT SWITCH - NORMALLY CLOSED		PRESSURE SWITCH - NORMALLY OPEN		PRESSURE SWITCH - NORMALLY CLOSED		FLOW SWITCH - NORMALLY OPEN		FLOW SWITCH - NORMALLY CLOSED		LEVEL SWITCH - NORMALLY OPEN		LEVEL SWITCH - NORMALLY CLOSED		RPM SWITCH - NORMALLY OPEN		RPM SWITCH - NORMALLY CLOSED		TORQUE SWITCH - NORMALLY CLOSED		TORQUE SWITCH - NORMALLY OPEN		FUSED DISCONNECT SWITCH		NORMALLY OPEN CONTACT TIMED TO CLOSE ON ENERGIZATION (ON-DELAY)		NORMALLY CLOSED CONTACT TIMED TO OPEN ON ENERGIZATION (ON-DELAY)		INSTANTANEOUSLY CLOSED, TIMED TO OPEN AFTER DEENERGIZATION (OFF-DELAY)		INSTANTANEOUSLY OPEN, TIMED TO CLOSE AFTER DEENERGIZATION (OFF-DELAY)		HAND-OFF-AUTO SWITCH		ON-OFF SWITCH		NORMALLY CLOSED PUSHBUTTON - MOMENTARY TYPE		NORMALLY OPEN PUSHBUTTON - MOMENTARY TYPE		MAINTAINED CONTACT - PUSHBUTTON		NORMALLY OPEN INTERLOCK (1CR DENOTES THAT CONTACT IS ASSOCIATED WITH CONTROL RELAY #1)		NORMALLY CLOSED INTERLOCK (1CR DENOTES THAT CONTACT IS ASSOCIATED WITH CONTROL RELAY #1)		MOTOR STARTER CONTACTOR, NUMBER IDENTIFIES CONTACTOR		ALARM RELAY, NUMBER IDENTIFIES RELAY		CONTROL RELAY, NUMBER IDENTIFIES RELAY		TIME DELAY RELAY, NUMBER IDENTIFIES RELAY (3-30 SEC DENOTES TIME RANGE OF RELAY)		3-30 SEC		RELAY DEVICE-NUMBER REFERS TO AMERICAN STANDARD DEVICE FUNCTION NUMBER		MOTOR OPERATOR		SOLENOID VALVE		THERMAL OVERLOAD RELAY		MOTOR SPACE HEATER		ELAPSED TIME METER		KILOWATT HOUR METER OR VAR-VAR-METER KH-KILOWATTMETER		AMMETER		AMMETER SWITCH		VOLTMETER		VOLTMETER SWITCH		FUSE (CLF INDICATES CURRENT LIMITING FUSE)		INDICATING LIGHT: R=RED, G=GREEN, A=AMBER W=WHITE		TRANSFORMER CONNECTION (DELTA-WYE W/GROUNDED NEUTRAL)		INCOMING LINE		CONNECTOR, PLUG DRAW OUT TYPE		DRAW OUT TYPE POWER CIRCUIT BREAKER		STRESS CONE		POTHEAD		TEST DEVICE		CAPACITOR		BATTERY		KIRK-KEY INTERLOCK		TRANSFORMER		CURRENT TRANSFORMER (3 INDICATES NUMBER OF CT'S) 600/5 INDICATES XFMR RATIO		POTENTIAL (VOLTAGE) TRANSFORMER (3 INDICATES NUMBER OF PT'S)		THERMAL MAGNETIC BREAKER, 100 INDICATES FRAME SIZE, 30 INDICATES TRIP AMPS		FULL VOLTAGE, NON-REVERSING MAGNETIC MOTOR STARTER. SEE SPECIFICATIONS FOR TYPE OF BRANCH CIRCUIT PROTECTION		FULL VOLTAGE REVERSING MAGNETIC MOTOR STARTER. SEE SPECIFICATIONS FOR TYPE OF BRANCH CIRCUIT PROTECTION		REDUCED VOLTAGE AUTO TRANSFORMER CLOSED TRANSITION MAGNETIC MOTOR STARTER, 65% INDICATES TAP SETTING, SEE SPECIFICATIONS FOR TYPE OF BRANCH CIRCUIT PROTECTION		COMBINATION MAGNETIC, MOTOR STARTER		MAGNETIC MOTOR STARTER		CONDUCTOR-CONNECTED		CONDUCTOR-NOT CONNECTED		FUSE WITH BLOWN FUSE INDICATOR		LIGHTNING ARRESTOR & GROUND		RESISTOR		CONFORMS TO RECORD DOCUMENTS		DATE: 4/85		REGISTERED PROFESSIONAL ENGINEER GARRICK JONES NO. 13944 CIVIL STATE OF CALIFORNIA		REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA		DRAWING NUMBER E1		SHEET 76		D	
5				FLUORESCENT LIGHTING FIXTURE (TYPE AND MOUNTING AS NOTED)		FLUORESCENT LIGHTING FIXTURE (WALL BRACKET MOUNTED)		INCANDESCENT LIGHTING FIXTURE (TYPE AND MOUNTING AS NOTED)		INCANDESCENT LIGHTING FIXTURE (WALL BRACKET MOUNTED)		HID LIGHTING FIXTURE (TYPE AND MOUNTING AS NOTED)		HID LIGHTING FIXTURE (POLE OR STANCHION MOUNTED)		FLOODLIGHT (AIMED AS INDICATED)		EXIT LIGHT - ARROW INDICATES DIRECTION - DARK ENDED QUADRANT INDICATES FACE ILLUMINATED		EMERGENCY LIGHTING UNIT (BATTERY POWERED)		DUPLEX CONVENIENCE RECEPTACLE, 2 POLE, 3 WIRE 120 VOLTS AC MTG HT +45", UON, (F-INDICATES FLOOR MOUNTED, H-HAZARDOUS AREA EXPLOSION PROOF, WP-OUTDOOR, WEATHER PROOF)		SINGLE CONVENIENCE RECEPTACLE		DUPLEX FLOOR RECEPTACLE		RECEPTACLE (RATINGS AS SHOWN ON DRAWINGS)		WELDING RECEPTACLE, 60A, 600 VOLTS AC 4 WIRE (H-INDICATES HAZARDOUS AREA-EXPLOSION PROOF)		ALARM HORN		LIGHTING PANEL		POWER PANEL		FLUSH MOUNTED PANEL		SURFACE MOUNTED PANEL		LINE SWITCH DISCONNECT- (30A-3 POLE UNLESS OTHERWISE NOTED) NF INDICATES NON-FUSED		CONDUIT RUN, CONCEALED IN WALL OR CEILING		CONDUIT RUN, EXPOSED		CONDUIT RUN, IN SLAB OR BELOW GRADE		CONDUIT RUN, FULL STROKE DESIGNATES PHASE WIRE, HALF STROKE INDICATES NEUTRAL WIRE, CONDUIT FILL PER CODE OR MIN. SIZE CONDUIT AS PERMITTED ON PLANS OR SPECIFICATIONS		CONDUIT RUN, NUMBER ABOVE CROSSED LINES INDICATES WIRE SIZE OTHER THAN #12		CONDUIT HOMERUN TO PANEL "A" CIRCUITS 1 & 3 (COMMON NEUTRAL)		CONDUIT SEAL-HORIZ OR VERT TYPE AS REQ'D.-COMPOUND FILLED		CONDUIT BENDS AWAY FROM OBSERVER		CONDUIT BENDS TOWARD OBSERVER		CONDUIT RUN - CHANGE IN ELEVATION		TELEPHONE CONDUIT, SIZE AS NOTED		PA - INTERCOM CONDUIT, SIZE AS NOTED		GROUND WIRE, SIZE AS NOTED		CONDUIT NO. SEE CONDUIT/CABLE SCHEDULE		GROUND CONNECTION - BOLTED TYPE		GROUND CONNECTION - EXOTHERMIC TYPE		GROUND ROD 3/4" X 10'0 COPPERCLAD (UNLESS OTHERWISE NOTED)		GROUND WELL		TOGGLE SWITCH 1 POLE, 20A, 120V, SUBSCRIPT INDICATES CIRCUIT CONTROLLED		TOGGLE SWITCH 2 POLE, 20A, 120V		TOGGLE SWITCH 3 WAY, 20A, 120V		TOGGLE SWITCH KEY OPERATED		TOGGLE SWITCH WITH PILOT LIGHT		3 POSITION MOMENTARY CONTACT TOGGLE SWITCH - CENTER "OFF" OR MANUAL MOTOR STARTER		SOUND POWERED TELEPHONE OUTLET		TELEPHONE OUTLET																																																																													
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2				FLUORESCENT LIGHTING FIXTURE (TYPE AND MOUNTING AS NOTED)		FLUORESCENT LIGHTING FIXTURE (WALL BRACKET MOUNTED)		INCANDESCENT LIGHTING FIXTURE (TYPE AND MOUNTING AS NOTED)		INCANDESCENT LIGHTING FIXTURE (WALL BRACKET MOUNTED)		HID LIGHTING FIXTURE (TYPE AND MOUNTING AS NOTED)		HID LIGHTING FIXTURE (POLE OR STANCHION MOUNTED)		FLOODLIGHT (AIMED AS INDICATED)		EXIT LIGHT - ARROW INDICATES DIRECTION - DARK ENDED QUADRANT INDICATES FACE ILLUMINATED		EMERGENCY LIGHTING UNIT (BATTERY POWERED)		DUPLEX CONVENIENCE RECEPTACLE, 2 POLE, 3 WIRE 120 VOLTS AC MTG HT +45", UON, (F-INDICATES FLOOR MOUNTED, H-HAZARDOUS AREA EXPLOSION PROOF, WP-OUTDOOR, WEATHER PROOF)		SINGLE CONVENIENCE RECEPTACLE		DUPLEX FLOOR RECEPTACLE		RECEPTACLE (RATINGS AS SHOWN ON DRAWINGS)		WELDING RECEPTACLE, 60A, 600 VOLTS AC 4 WIRE (H-INDICATES HAZARDOUS AREA-EXPLOSION PROOF)		ALARM HORN		LIGHTING PANEL		POWER PANEL		FLUSH MOUNTED PANEL		SURFACE MOUNTED PANEL		LINE SWITCH DISCONNECT- (30A-3 POLE UNLESS OTHERWISE NOTED) NF INDICATES NON-FUSED		CONDUIT RUN, CONCEALED IN WALL OR CEILING		CONDUIT RUN, EXPOSED		CONDUIT RUN, IN SLAB OR BELOW GRADE		CONDUIT RUN, FULL STROKE DESIGNATES PHASE WIRE, HALF STROKE INDICATES NEUTRAL WIRE, CONDUIT FILL PER CODE OR MIN. SIZE CONDUIT AS PERMITTED ON PLANS OR SPECIFICATIONS		CONDUIT RUN, NUMBER ABOVE CROSSED LINES INDICATES WIRE SIZE OTHER THAN #12		CONDUIT HOMERUN TO PANEL "A" CIRCUITS 1 & 3 (COMMON NEUTRAL)		CONDUIT SEAL-HORIZ OR VERT TYPE AS REQ'D.-COMPOUND FILLED		CONDUIT BENDS AWAY FROM OBSERVER		CONDUIT BENDS TOWARD OBSERVER		CONDUIT RUN - CHANGE IN ELEVATION		TELEPHONE CONDUIT, SIZE AS NOTED		PA - INTERCOM CONDUIT, SIZE AS NOTED		GROUND WIRE, SIZE AS NOTED		CONDUIT NO. SEE CONDUIT/CABLE SCHEDULE		GROUND CONNECTION - BOLTED TYPE		GROUND CONNECTION - EXOTHERMIC TYPE		GROUND ROD 3/4" X 10'0 COPPERCLAD (UNLESS OTHERWISE NOTED)		GROUND WELL		TOGGLE SWITCH 1 POLE, 20A, 120V, SUBSCRIPT INDICATES CIRCUIT CONTROLLED		TOGGLE SWITCH 2 POLE, 20A, 120V		TOGGLE SWITCH 3 WAY, 20A, 120V		TOGGLE SWITCH KEY OPERATED		TOGGLE SWITCH WITH PILOT LIGHT		3 POSITION MOMENTARY CONTACT TOGGLE SWITCH - CENTER "OFF" OR MANUAL MOTOR STARTER		SOUND POWERED TELEPHONE OUTLET		TELEPHONE OUTLET																																																																													
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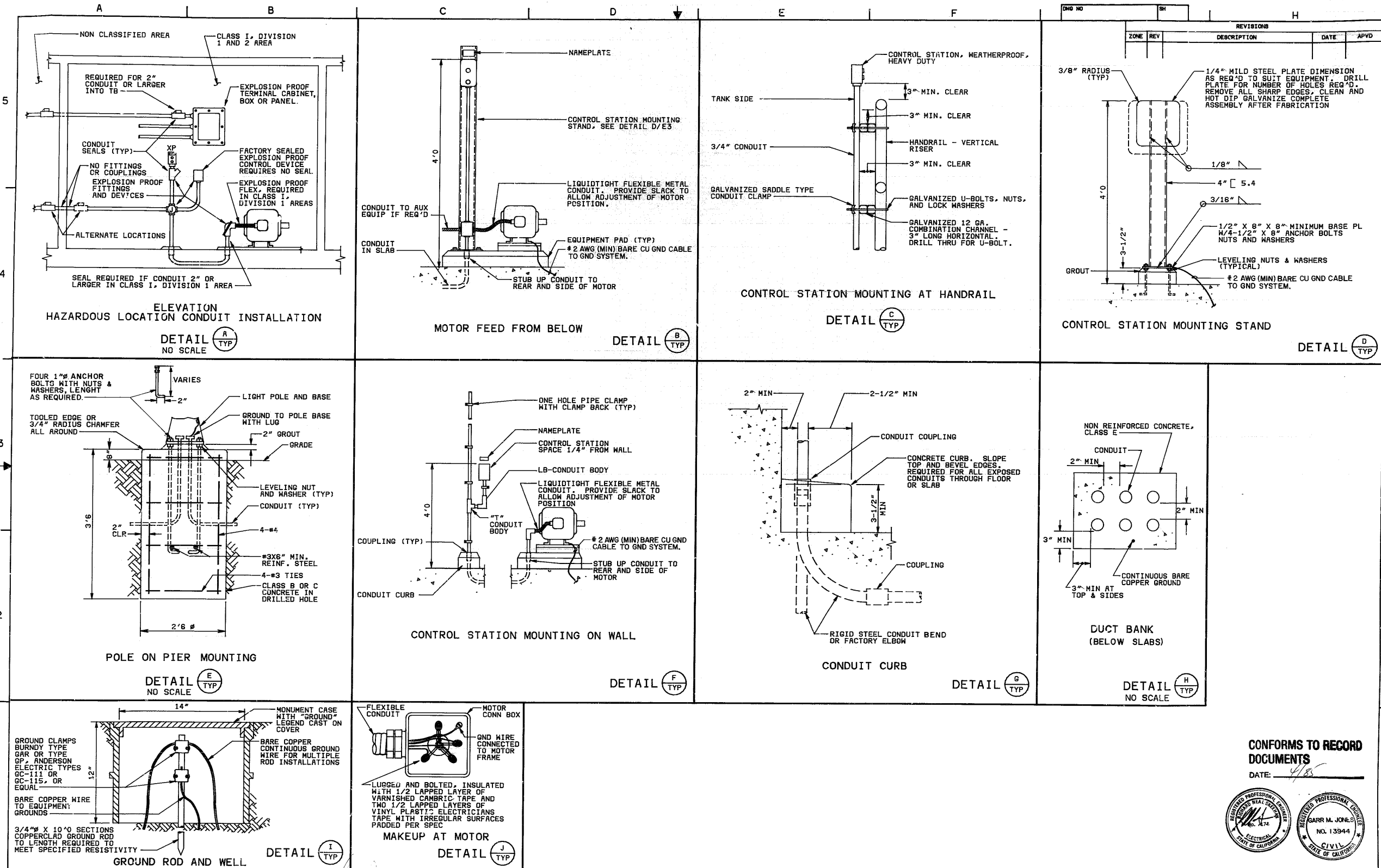
ABBREVIATIONS										REVISIONS				
THE FOLLOWING LIST IS IN ADDITION TO THOSE ABBREVIATIONS DEFINED ON OTHER DRAWINGS										ZONE	REV	DESCRIPTION	DATE	APVD
A	AMPERES, AMMETER	G	GREEN GROUND CONDUCTOR, GENERATOR	N	NEW	T1	TRANSFORMER NO. 1	DEVICE NUMBER	DESCRIPTION					
AC	ALTERNATING CURRENT	GALV	GALVANIZED	N/A	NOT APPLICABLE	TACH	TACHOMETER	5	STOPPING DEVICE					
AF	AMPERE FRAME	GEN	GENERATOR	NA	NON-AUTOMATIC	TB	TERMINAL BLOCK	15	FREQUENCY MATCHING					
AFF	ABOVE FINISHED FLOOR	GFI	GROUND FAULT INTERRUPTER	NC	NORMALLY CLOSED	TC	TIME CLOCK, TIME CONTROLLER	25	SYNCHRONIZING CHECK					
AIC	AMPERES INTERRUPTING CAPACITY	GFR	GROUND FAULT RELAY	NF	NON FUSED	TR	TIME DELAY RELAY	26	FIELD TEMPERATURE					
AL	ALUMINUM	GND	GROUND	NIC	NOT IN CONTRACT	TDAD	TIME DELAY AFTER DEENERGIZATION (OFF-DELAY)	27	UNDERVOLTAGE					
AR	ALARM RELAY			NO	NORMALLY OPEN		TIME DELAY AFTER ENERGIZATION (ON-DELAY)	37	UNDERCURRENT					
AS	AMMETER SELECTOR SWITCH	H/A	HAND/AUTO	NP	NAMEPLATE	TDAE	TIME DELAY AFTER ENERGIZATION (ON-DELAY)	38	BEARING TEMPERATURE					
AT	AMPERE TRIP	HOA	HAND/OFF/AUTO	NTS	NOT TO SCALE	TEL	TELEPHONE	40	FIELD FAILURE					
ATS	AUTOMATIC TRANSFER SWITCH	HH	HAND HOLE			TEMP	TEMPERATURE	41	FIELD CIRCUIT BREAKER					
AUTO.	AUTOMATIC	HP	HORSEPOWER	OC	ON CENTER OR OVER CURRENT	TS	TEMPERATURE SWITCH	46	REVERSE PHASE OR PHASE BALANCE					
AUX	AUXILIARY	HT	HEIGHT	OL'S	OVERLOADS	TYP	TYPICAL	47	PHASE SEQUENCE					
AWG	AMERICAN WIRE GAUGE	HTR	HEATER					48	THERMAL RELAY					
		HV	HIGH VOLTAGE (GENERALLY ABOVE 600V)			UG	UNDERGROUND	50	INSTANTANEOUS OVERCURRENT					
BC	BARE COPPER CONDUCTOR	HZ	HERTZ (CYCLES PER SECOND)	P	POLE, PHASE	UON	UNLESS OTHERWISE NOTED	51	TIME OVERCURRENT					
BKR	BREAKER			PA	PUBLIC ADDRESS			52	AC CIRCUIT BREAKER					
BTD	BEARING TEMPERATURE DETECTOR			PB	PULL BOX, PUSH BUTTON			59	OVERVOLTAGE					
		IL	INDICATING LAMP	PDS	PRESSURE DIFFERENTIAL SWITCH	V	VOLTMETER	64	GROUND PROTECTION					
C	CONDUIT	INCAND	INCANDESCENT	PNL	PANEL	VA	VOLT-AMPS	67	DIRECTIONAL OVERCURRENT					
CB	CIRCUIT BREAKER	INTLK	INTERLOCK	PP	POWER PANEL	VS	VOLTMETER SELECTOR SWITCH	70	RHEOSTAT					
CKT	CIRCUIT	INST	INSTANTANEOUS	PR	PAIR			72	DC CIRCUIT BREAKER					
CLG	CEILING	INSTR	INSTRUMENT	PRI	PRIMARY			81	FREQUENCY RELAY					
CND	CONDUIT			PROVIDE	FURNISH, INSTALL & CONNECT	W/	WITH	86	LOCK OUT RELAY					
CO	CONDUIT ONLY			PSH/L	PRESSURE SWITCH, HIGH/LOW	WM	WATTMETER	87	DIFFERENTIAL CURRENT					
COMPR	COMPRESSOR	JB	JUNCTION BOX	PT	POTENTIAL TRANSFORMER	W/O	WITHOUT	90	REGULATING DEVICE					
COMPT	COMPARTMENT			PVC	POLYVINYLCHLORIDE	WP	WEATHERPROOF							
CDR	CONDUCTOR			PW	PART WINDING	WTD	WINDING TEMPERATURE DETECTOR							
CONT	CONTROL	KVA	KILOVOLT-AMPERES	PMR	POWER									
CONTD	CONTINUED	KW	KILOWATTS											
CPT	CONTROL POWER TRANSFORMER	KWH	KILOWATT HOUR											
CR	CONTROL RELAY			RECP	RECEPTACLE	XFMR	TRANSFORMER							
CT	CURRENT TRANSFORMER			REQD	REQUIRED									
CU	COPPER	LC	LIGHTING CONTACTOR	RGS	RIGID GALVANIZED STEEL CONDUIT									
		LDS	LEVEL DIFFERENTIAL SWITCH	RMS	ROOT MEAN SQUARE	XS	MISCELLANEOUS SWITCHES (VIBRATION, ETC.)							
		LO	LUGS ONLY	RTD	RESISTANCE TEMPERATURE DETECTOR									
DB	DIRECT BURIAL	LOS	LOCK-OUT STOP	RVNR	REDUCED VOLTAGE NON-REVERSING									
DC	DIRECT CURRENT	LP	LIGHTING PANEL			ZS	POSITION (LIMIT) SWITCH							
DET	DETAIL	LS	LEVEL SWITCH											
DIAG	DIAGRAM	LTG	LIGHTING	SCH	SCHEDULE									
DISC	DISCONNECT	LV	LOW VOLTAGE (GENERALLY BELOW 600V)	SEC	SECONDARY, SECONDS									
DS	DISCONNECT SWITCH			SEL	SELECTOR									
				SH	SHIELDED									
E	EXISTING	M	MOTOR, MOTOR CONTACTOR	SPEC	SPECIFICATIONS									
EL	ELEVATION	MA	MILLIAMPERE	SPDT	SINGLE POLE DOUBLE THROW									

BN	DET	DN	GM	CM	CP	DM	FEM	GR	IRR	LG	OP	PG	PL	PP	PPG	RR	SIE	SIF	SIN	STJ	TE	TN	PPM	AM	CF	CG	FN	FR	PT	BO	SM	EQ	EON	FPP	MEQ	MM	MP	P	PP	PS	PW	HVE	HVM	HVS	EC	EL	EM	EP	IC	IM
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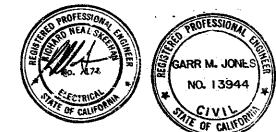
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CODE	INITIALS	DATE	HOURS
1	INITIATED BY		
2	DRAWN BY		
3	CHECKED BY		

CONTROL NUMBER	FILE NO.



CONFORMS TO RECORD DOCUMENTS
DATE: 4/85



BCDGPB	BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK CALIFORNIA	DESIGNED FL CHECKED [Signature] CHECKED [Signature]	SUBMITTED [Signature] APPROVED [Signature] APPROVED [Signature]	DATE 9/6/81 DATE 9/15/81 DATE	FILE 942 DATE JUNE 1982	CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	ELECTRICAL DETAILS - I	DRAWING NUMBER E3 SHEET 78
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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APVD

DETAIL A
DUCT BANK
(YARD RUNS)
DIMENSIONS ARE MINIMUM

DETAIL B
DUCT BANK AT STRUCTURES

DETAIL C
MOTOR FEED FROM BELOW

DETAIL D
TYPICAL FREESTANDING EQUIPMENT MOUNTING
NO SCALE

DETAIL E
SUB STATION PAD

CONFORMS TO RECORD DOCUMENTS
DATE: 4/25

REGISTERED PROFESSIONAL ENGINEER
GARR M. JONES
NO. 13944
ELECTRICAL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
GARR M. JONES
NO. 13944
CIVIL
STATE OF CALIFORNIA

BROWN AND CALDWELL CONSULTING ENGINEERS
WALNUT CREEK CALIFORNIA

DESIGNED FL
CHECKED [Signature]
CHECKED [Signature]

SUBMITTED [Signature] DATE 9/14/81
APPROVED [Signature] DATE 9/14/81
APPROVED For Brown and Caldwell DATE [Signature]
APPROVED For City of Sunnyvale DATE [Signature]

FILE 942
DATE JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

ELECTRICAL DETAIL - 2

DRAWING NUMBER E4
SHEET 79

CODE	INITIALS	DATE	HOURS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	12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CODE:

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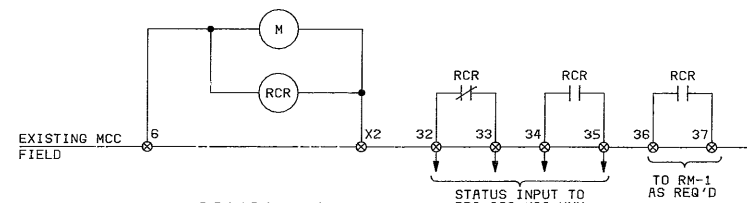
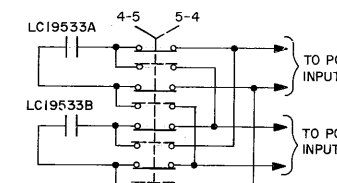
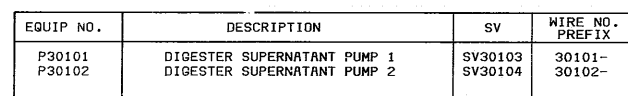
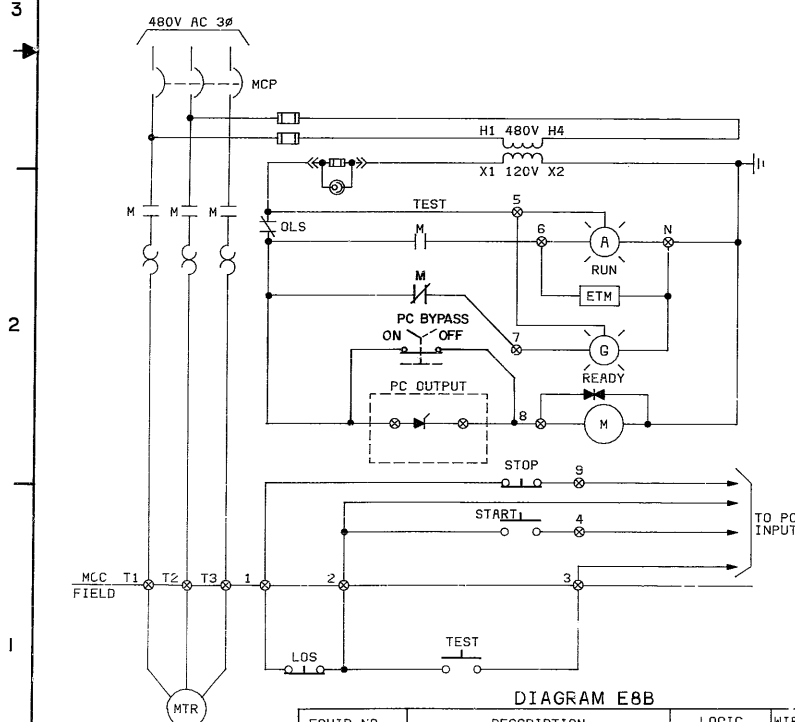
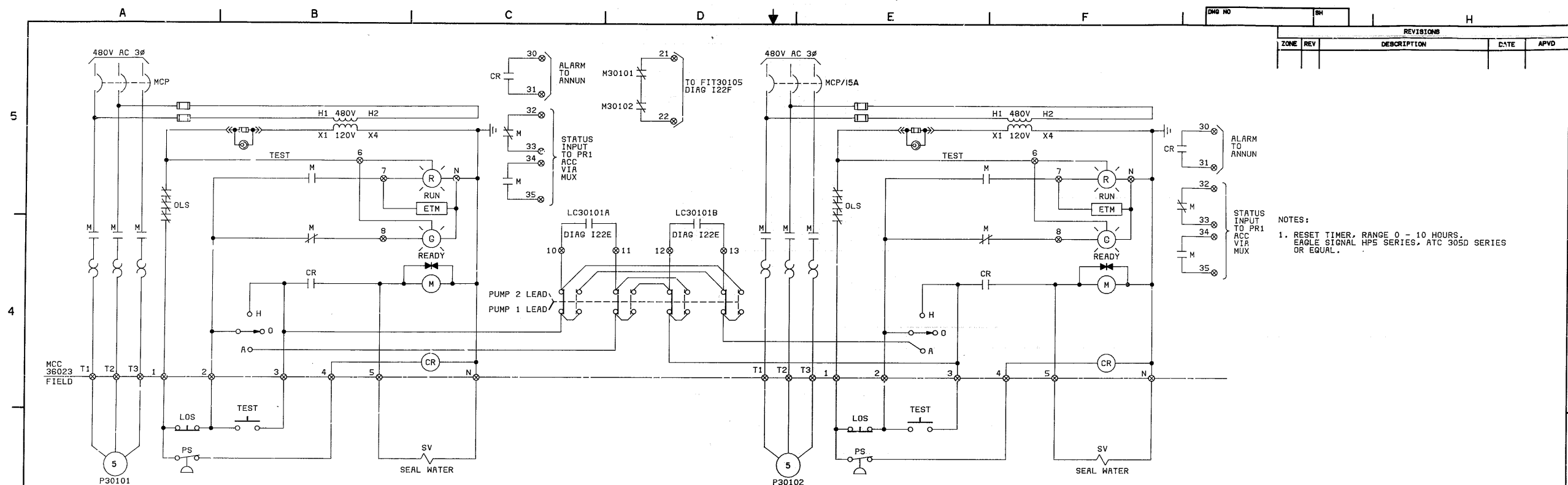
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CONTROL NUMBER	

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D - DRAWN BY
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FILE NO.	CONTROL NUMBER
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[illegible][illegible]

CONFORMS TO RECORD
DOCUMENTS
DATE: 4/85



BCD6P9	BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK , CALIFORNIA	DESIGNED <i>[Signature]</i>	SUBMITTED <i>[Signature]</i>	DATE <i>6-18-82</i>	FILE <i>942</i>	CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	CONTROL DIAGRAMS - 2	DRAWING NUMBER E8
		CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i> For Brown and Caldwell	DATE <i>6-18-82</i>	DATE JUNE 1982				DATE _____
A	B	C	D	E	F	G	H	I	J

CODE:

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CONTROL NUMBER	
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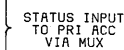


DIAGRAM E9A

ROTOR	CONTACT	VALVE POSITION			FUNCTION
		FULL OPEN	INTERMEDIATE	FULL CLOSE	
1	1	_____	_____	_____	BYPASS CIR
	2	_____	_____	_____	SPARE
	3	_____	_____	_____	CLOSED IND LIGHT
	4	_____	_____	_____	OPEN LIMIT
2	5	_____	_____	_____	BYPASS CIR
	6	_____	_____	_____	SPARE
	7	_____	_____	_____	OPEN IND LIGHT
	8	_____	_____	_____	CLOSE LIMIT
3	9	_____	_____	_____	SPARE
	10	_____	_____	_____	SPARE
	11	_____	_____	_____	CLOSED IND LIGHT
	12	_____	_____	_____	SPARE
4	13	_____	_____	_____	SPARE
	14	_____	_____	_____	SPARE
	15	_____	_____	_____	OPEN IND LIGHT
	16	_____	_____	_____	SPARE

17 } TORQUE
18 } SWITCHES

VALVE OPERATOR LIMIT SWITCH CONTACT DEVELOPMENT



NOTES:

1. REPEAT CYCLE TIMER, DIAL RANGE 30 HOURS.
EAGLE SIGNAL BULLETIN 321, OR EQUAL.
2. DEVICE 86 IS SWITCHGEAR TYPE LOCK-OUT RELAY.

DIAGRAM E9B

120V AC Ckt D7

L

N

NOTE 2

86

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LS

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INTLK A

INTLK B

INTLK C

INTLK D

DIAGRAM E9C

LS	DIAG	DESCRIPTION	INTLK A	INTLK B	INTLK C	INTLK D
LSL19533	I21H	WET WELL LEVEL	TO P19504	(FUTURE)	SPARE	SPARE

CONFORMS TO RECORD
DOCUMENTS
DATE: 4/85



BCD6PB



BROWN AND CALDWELL
CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA

DESIGNED ~~AK~~ ~~AK~~ ~~AK~~
CHECKED CGW
CHECKED [Signature]

SUBMITTED *[Signature]* DATE 6-1-82
APPROVED *[Signature]* DATE 6-1-82
APPROVED *[Signature]* For Brown and Caldwell DATE

FILE 942
DATE JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

CONTROL DIAGRAMS - 3

	DRAWING NUMBER
--	-------------------

SHEET 8

BC1946 RJH 12APLR

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APV:
	1	REVISED PER CONTRACTOR'S FIELD NOTES	4-85	

NOTES:

1. ALL EQUIPMENT I.E. RELAYS, SELECTOR SWITCHES AND CONTACTS SHOWN AS LOCATED IN THE SEDIMENTATION RELAY AND INSTRUMENT PANELS ARE EXISTING UNLESS OTHERWISE NOTED.

SCUM REMOVAL AIR SWITCH

AL 210A
RESET
TO SCUM REMOVER IO

DIAGRAM E10A

EQUIP NO.	DESCRIPTION	WIRE NO. PREFIX
ME23003	SED LONG/CROSS COLL 10	10LC

DIAGRAM E10B

EQUIP NO.	DESCRIPTION	WIRE NO. PREFIX
P23001	RAW SLUDGE PUMP 10	10SP

DIAGRAM E10C

EQUIP NO.	DESCRIPTION	WIRE NO. PREFIX
ME23002	SED SCUM REMOVER 10	10SSR

BROWN AND CALDWELL CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

CONTROL DIAGRAM - 4

DRAWING NUMBER E10
SHEET 85

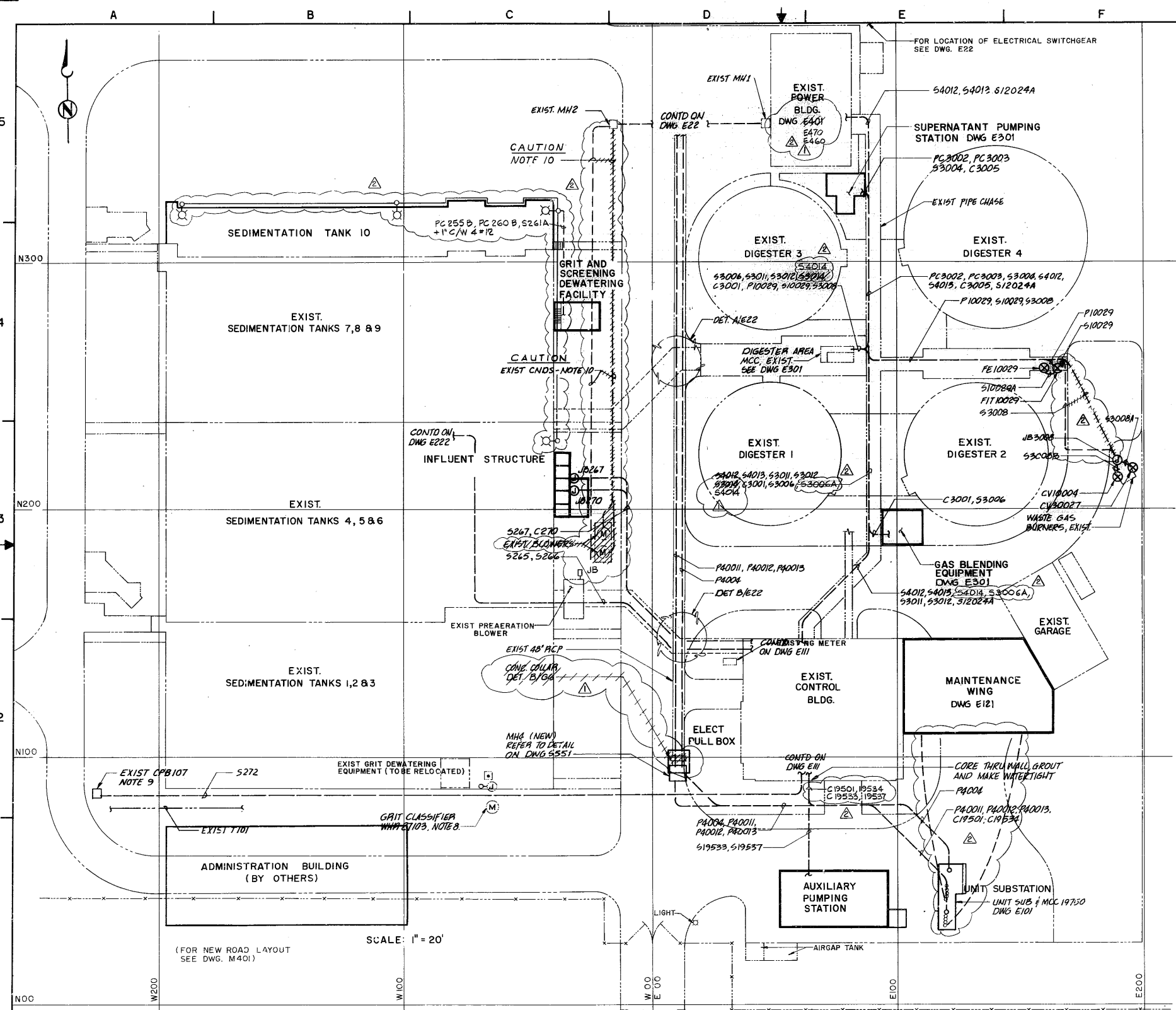
PROFESSIONAL ENGINEER
GARR M. JONES
NO. 13944
STATE OF CALIFORNIA

PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

No.	CM	CP	DM	FEW	GR	HR	LG	OP	PG	PL	PP	PPG	RR	SM	SIF	SIN	STD	TE	TN	PRW	AM	CF	CG	FN	FR	PT	BO	SM	EQ	EON	FPP	MEQ	MM	MP	P	PPW	PS	PW	HVE	HVM	HVS	EC	EL	EM	EP	IC	IM		
No.																																																	
% Scr.																																																	

CODE:
 I - INITIATED BY
 D - DRAWN BY
 C - CHECKED BY

CODE	INITIALS	DATE	HOURS
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D	DJP	5/5/85	1

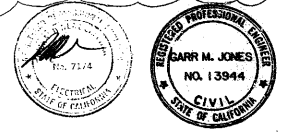


ZONE	REV	DESCRIPTION	DATE	APVD
	1	REVISED PER CONTRACT RECORDS	1-85	
	2	REVISED PER CONTRACTOR'S FIELD RECORDS	3-85	
	3	REVISED PER CONTRACT RECORDS	4-85	

- NOTES: (REF DWGS E21 AND E22)
- INSTALL CONDUITS THROUGH EXISTING 48" REINFORCED CONCRETE PIPE. REINFORCING STEEL BARS SHALL NOT BE DISTURBED. GROUT AND MAKE WATERTIGHT AFTER CONDUIT INSTALLATION.
 - REFER TO RACEWAY SCHEDULE FOR NUMBER AND SIZE OF CONDUITS IN DUCT BANK.
 - RELOCATE EXISTING POLE MOUNTED LIGHTING FIXTURE TO THE NORTHERN SIDE 5 FEET FROM THE STAIRWAY.
 - THE EXISTING 4.16KV SWITCHGEAR SHALL BE REPLACED WITH A NEW LINE-UP OF MV SWITCHGEAR ACROSS THE ROAD FROM IT AS SHOWN. REFERENCE SPECIFICATIONS.
 - THE EXISTING 5KV DIRECT BURIAL FEEDERS FOR THE EXISTING POND UNIT SUBS ARE ROUTED THROUGH THIS MH3. THE CONTRACTOR SHALL DISCONNECT THE FEEDERS P4011, P4012 AND P4013 FROM THEIR RESPECTIVE MV AIR CIRCUIT BREAKER AND ROUTE THESE EXISTING CABLES THROUGH A NEW MH5. (REFERENCE NOTE 6)
 - THE CONTRACTOR SHALL PROVIDE A NEW MH5 HAVING THE FOLLOWING DIMENSIONS: 5 FEET SQUARE BY 5 FEET DEEP WITH DRAIN SUMP WITH 2" DRAIN PIPE WITH BACKWATER VALVE. PIPE SHALL BE DRAINED TO CHANNEL APPROXIMATELY 40 FEET NORTH WEST OF MH5. PROVIDE FIVE 4" INCH DIAMETER SCHEDULE 40 PVC CONDUIT SLEEVES IN THE NORTH WALL OF MH5 FOR ROUTING THE EXISTING 5KV CABLES P4011-P4013 THROUGH IT TO THE NEW MV SWITCHGEAR LINE-UP. TWO OF THE 4" INCH PVC CONDUITS SHALL BE SPARES. CONDUITS SHALL BE PROVIDED BETWEEN MH5 AND THE MV SWITCHGEAR. RACEWAY AND CABLE SCHEDULES AND SPECIFICATIONS. NEW CABLES SHALL BE PROVIDED BETWEEN THE MV SWITCHGEAR AND MH5 AND SPLICES MADE IN MH5.
 - THE CONTRACTOR SHALL PROVIDE A 3'-6" WIDE BY 4 FEET LONG BY 4 FEET DEEP MANHOLE AND INTERCEPT THE EXISTING 4.16KV FEEDER TO THE TERTIARY AREA SUB. THE EXISTING 5KV 350 MCM CABLES SHALL BE PULLED BACK FROM THE EXISTING MV SWITCHGEAR CB AND SPLICED IN MH6 WITH THE NEW CABLES FROM CONDUIT P4003.
 - THE EXISTING GRIT CLASSIFIER WHR27103 LOCATED AT THE SOUTH END OF THE SED TANK 1 WILL BE RELOCATED TO THE EAST END OF SED TANK 8. REFERENCE DRAWING E221. THE CONTRACTOR SHALL CUT AND CAP THE EXISTING CONDUIT FLUSH WITH THE SLAB AND REMOVE ALL THE WIRES IN THE CONDUIT. TOTAL OF 7 WIRES. ALL WIRES, BOXES, FITTINGS AND CONTROL STATION SHALL BE RETURNED TO THE CITY FOR DISPOSAL.
 - CONDUIT S272 SHALL BE ROUTED TO THE EXISTING CPB107 AS SHOWN. CORE DRILL THRU WALL OF CPB AND GROUT.
 - THE CONTRACTOR SHALL TAKE ALL PRECAUTION IN EXCAVATING AROUND THIS AREA, AS THERE PRESENTLY EXISTS TWO (2) INCH AND ONE (1) INCH PVC CONDUITS THAT ARE BURIED IN THE GROUND OVER A SAND BED ONLY. THESE CONDUITS CONTAIN 480VAC 3PHASE CIRCUITS AND ARE INSTALLED BETWEEN THE EXISTING PREAERATION BLOWERS AND MH2.

ADD TO NOTE 5:
 THE EXISTING 5KV DIRECT BURIAL (DB) CABLES ARE 3-CONDUCTOR, CROSS-LINK POLYETHYLENE INSULATED, 7/0 ALUMINUM, E.C. GRADE, H-19 TEMPER, WITH STRAND, SOFT ANNEALED COPPER GROUND CONDUCTOR. THE POWER CONDUCTORS AND GROUND CONDUCTORS ARE CABLED TOGETHER WITH JUTE FILLERS AND BOUND WITH A MYLAR BINDING TAPE AND A BLACK INNER PVC BELT WITH 10MIL CORRUGATED STAINLESS STEEL ARMOR HELICALLY WRAPPED OVERALL AND WITH AN OUTER BLACK PVC JACKET.

CONFORMS TO RECORD DOCUMENTS
 DATE: 4/85



CODE:

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D - DRAWN BY
C - CHECKED BY

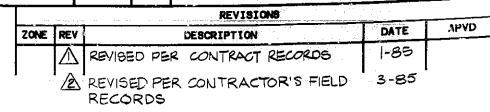
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A 4x4 grid with diagonal lines in the last column.

A 4x4 grid with the main diagonal shaded from bottom-left to top-right.

CONTROL NUMBER	NO.
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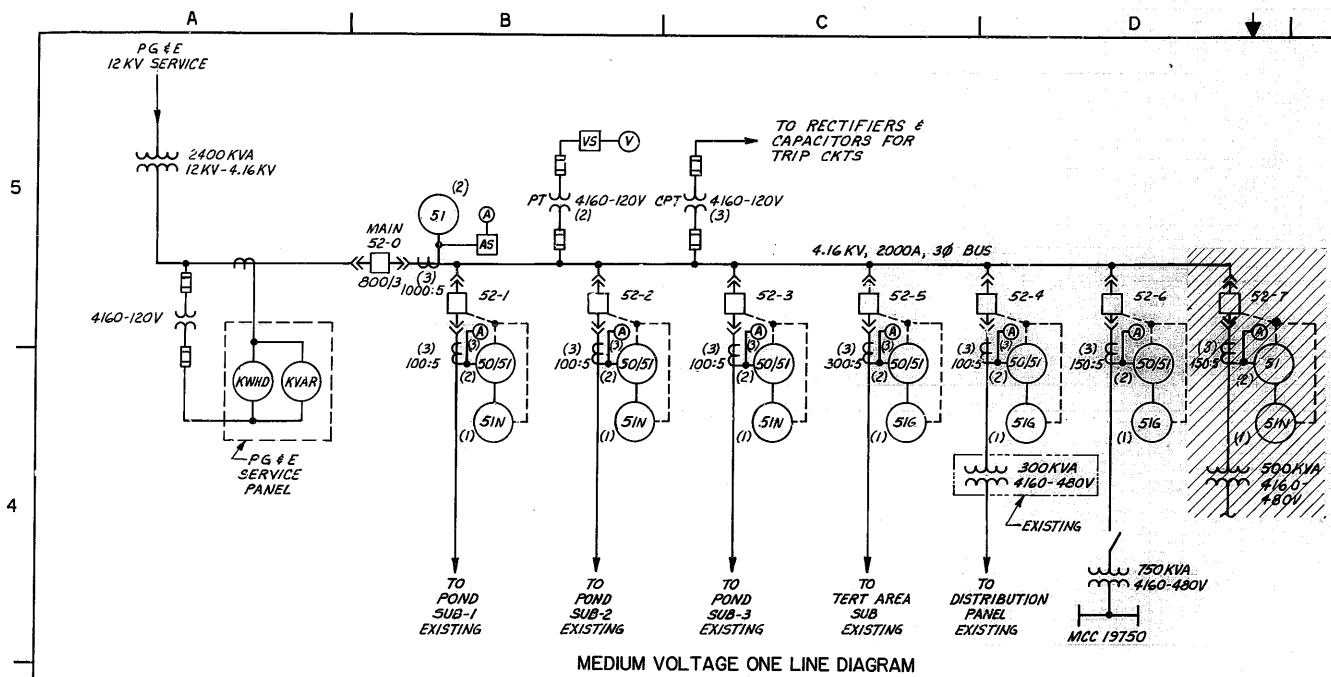
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- NOTES:
1. REFERENCE DWG E21 FOR ALL NOTES.
 12. THE EXISTING 6-2" CONDUITS P204A, P204B, P205A, P205B, P206A, P 206B AND 1-1" CONDUIT P204C ARE STUB OUT IN EXISTING SLAB. THE CONTRACTOR SHALL EXTEND 6-2" CONDUITS TO THE NEW 500 KVA XFMR AND 1-1" CONDUIT TO MV SWGR, PROVIDE ALL NECESSARY FITTINGS.
 13. THE CONTRACTOR SHALL PROVIDE 4#4/0 & 1#2 GND THHN, 600V CABLE IN P204A, P204B, & P205A FROM 500 KVA XFMR TO 800A MAIN SWBD BKR. EXISTING CONDUITS, P205B, P206A & P206B ARE SPARE CONDUITS. THE CONTRACTOR SHALL PROVIDE 8#12 THHN, 600V WIRES IN P204C FROM SWBD TO MV SWGR.
 14. EQUIPMENT CROSSHATCHED ON THIS DRAWING ARE PART OF THE DEDUCTIBLE ITEMS UNDER THE COGENERATION CONTRACT.
 15. PROVIDE 2-3" CONDUIT. ONE (1) 3" CONDUIT SHALL CONTAIN 3-1/C #1 AWG, 5KV SHIELDED EPR CABLE AND THE OTHER 3" WILL BE SPARE, EMPTY CONDUIT.
 16. 350MCM IN 1 1/4"C, CADWELD TO EXISTING GRD CABLE IN MH3.
 17. THE CONTRACTOR SHALL EXTEND THE EXISTING PAD FOR THE PG&E SUB-STATION TO THE EAST WALL OF THE EXISTING CHLORINATION BUILDING. SLAB SHALL BE 6" THICK W/MO. 4 REBARS AT 12" C.C. BOTHWAYS. PROVIDE ADDITIONAL FENCING AND A NEW GATE.
 18. THE EXISTING TERTIARY FACILITIES 4,160 VOLT FEEDER FROM MH3 IS ROUTED ON THE EAST SIDE OF THE EXISTING SWITCHGEAR AND TO THE SOUTH SIDE OF THE EXISTING UTILITY SUBSTATION.

CONFORMS TO RECORD
DOCUMENTS
DATE: 4/85



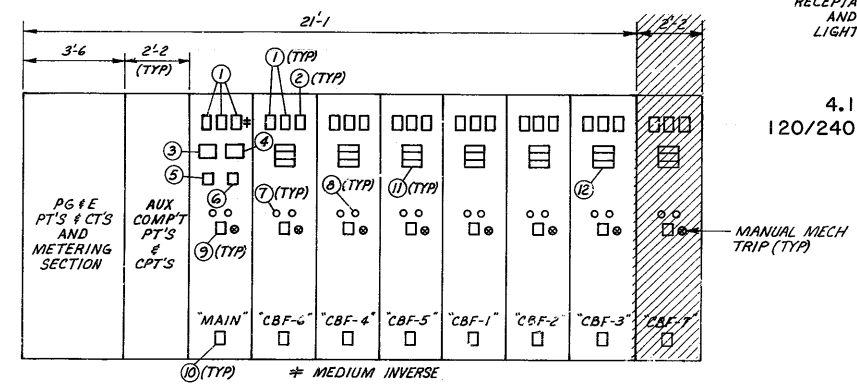
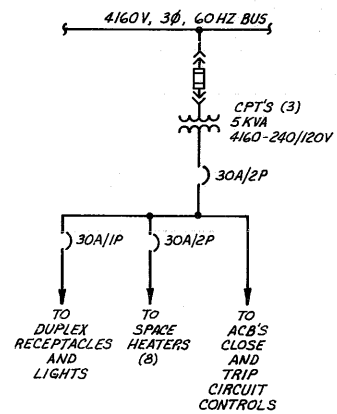
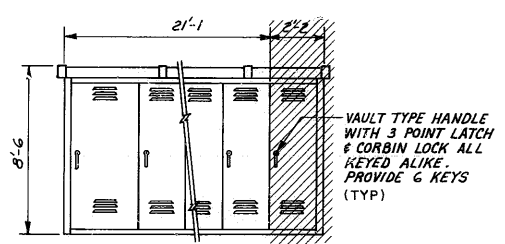
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4.16 KV SWITCHGEAR EQUIPMENT IDENTIFICATION	
ITEM	DESCRIPTION
1	50/51 INSTANTANEOUS OVERCURRENT AND AC TIME
2	OVERCURRENT RELAY WESTINGHOUSE TYPE C08
3	51G 5V INVERSE TIME OVERCURRENT RELAY WESTINGHOUSE TYPE C0
4	AMMETER 0-6000A WESTINGHOUSE TYPE KA241
5	VOLTMETER 0-5090V WESTINGHOUSE TYPE KA241
6	AMMETER SWITCH WESTINGHOUSE TYPE W2
7	VOLTMETER SWITCH WESTINGHOUSE TYPE W2
8	INDICATING LIGHT WITH RED LENS
9	INDICATING LIGHT WITH GREEN LENS
10	CIRCUIT BREAKER CONTROL SWITCH-WESTINGHOUSE TYPE W2
11	DUPLEX RECEPTACLE
12	AMMETER 0-200A EDGEWISE TYPE WESTINGHOUSE TYPE HC-252
	AMMETER 0-300A EDGEWISE TYPE WESTINGHOUSE TYPE HC-252

NOTES:

1. EQUIPMENT SHOWN CROSSHATCHED ON THIS DRAWING ARE PART OF THE DEDUCTIBLE ITEMS UNDER CO-GENERATION CONTRACT. REFERENCE DRAWINGS E22, E451 AND E452.

4.16 KV SWGR NAMEPLATE ENGRAVING	
MAIN	- MAIN CKT BRKR
CBF1	- POND AREA FEEDER 1(P4011)
CBF2	- POND AREA FEEDER 2(P4012)
CBF3	- POND AREA FEEDER 3(P4013)
CBF4	- PLANT TRANSFORMER CF
CBF5	- TERTIARY AREA SUB-B
CBF6	- AUXILIARY PUMPING STATION SUB (MCC19750)
CBF7	- POWER DISTRIBUTING TRANSFORMER



CONFORMS TO RECORD DOCUMENTS
DATE: 4/85

[illegible]

 BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA	DESIGNED <u>[Signature]</u> CHECKED <u>[Signature]</u> CHECKED <u>[Signature]</u>	SUBMITTED <u>[Signature]</u> DATE <u>5-1-82</u> APPROVED <u>[Signature]</u> DATE <u>6-1-82</u> APPROVED <u>[Signature]</u> For Brown and Caldwell DATE _____ For City of Sunnyvale	FILE 942 DATE <u>JUNE 1982</u>	CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	GENERAL SWITCHGEAR DETAILS AND ONE LINE DIAGRAMS	DRAWING NUMBER E25 SHEET <u>90</u>	
	A	B	C	D	E	F	G	H

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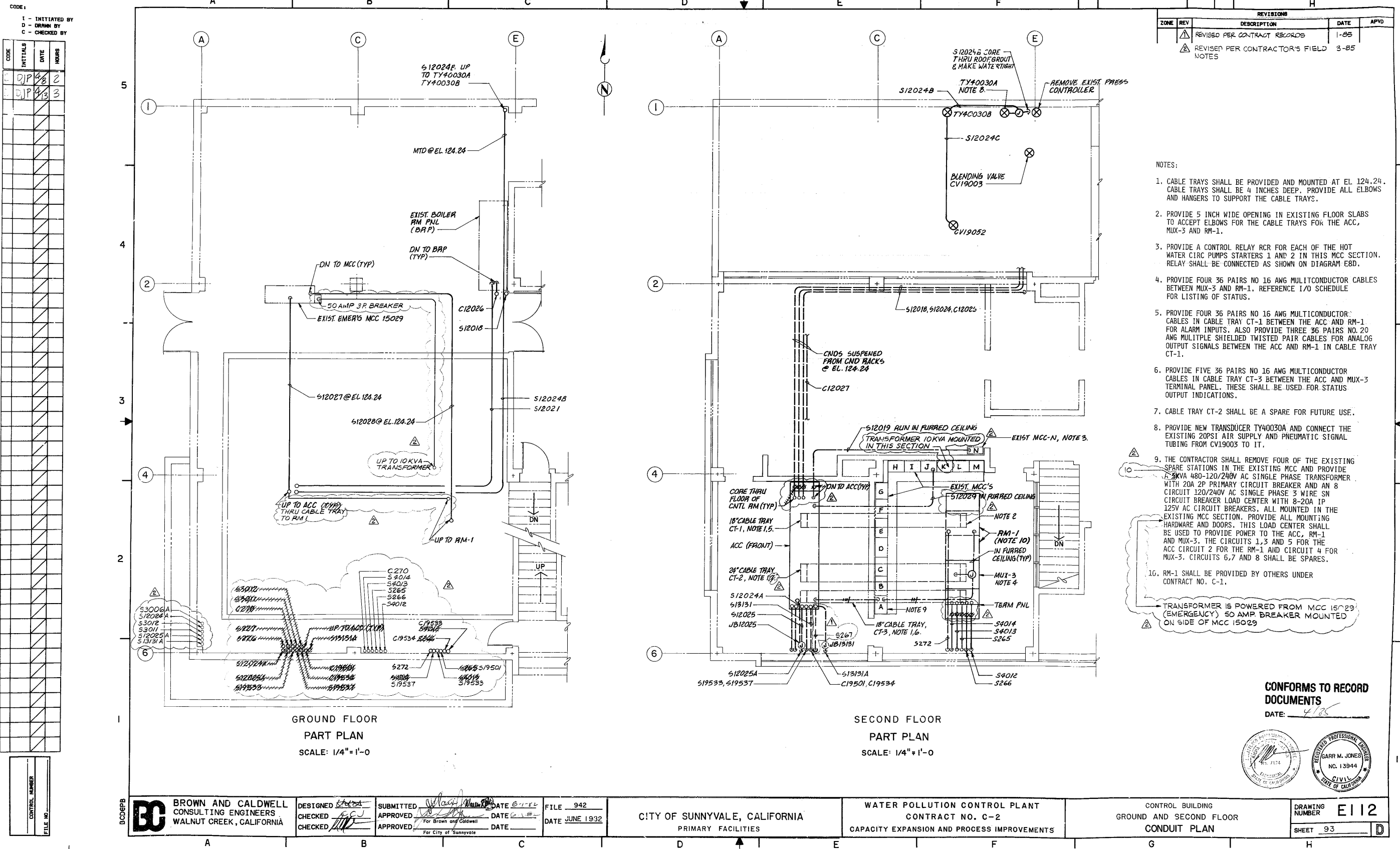
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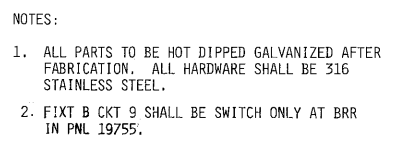
NAMEPLATE	
1.	JACKET WATER TEMPERATURE
2.	MANIFOLD VACUUM
3.	ENGINE SPEED
4.	LUBE OIL TEMPERATURE
5.	LUBE OIL PRESSURE
6.	ENGINE SPEED CONTROL
7.	ENGINE 1
8.	ENGINE EXHAUST TEMP

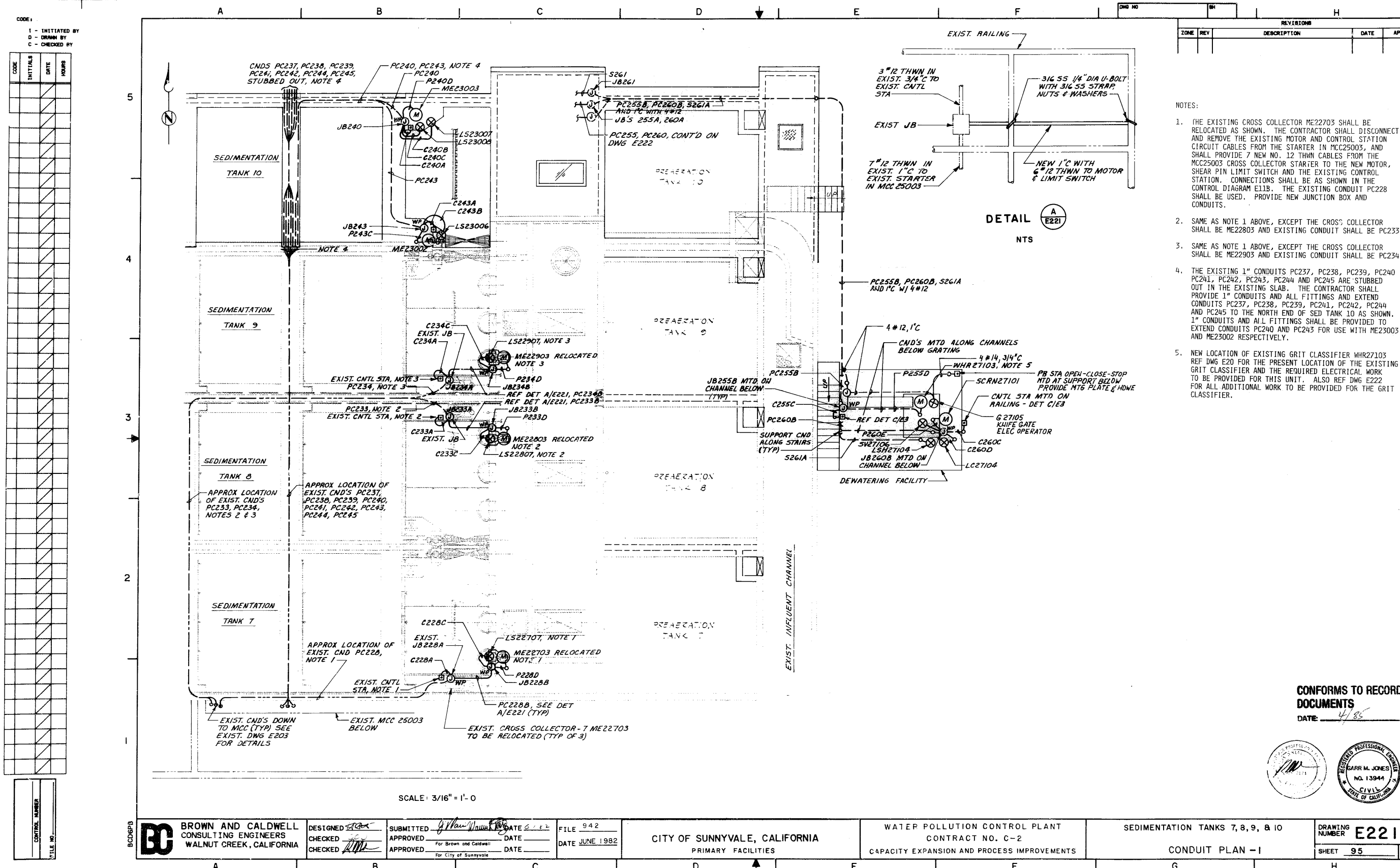


BC	BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA		DESIGNED <u>WBC</u>	SUBMITTED <u>WBC</u>	DATE <u>6-1-82</u>	FILE <u>942</u>	CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	CONTROL BUILDING ENGINE AND SCREEN ROOMS CONDUIT PLAN	DRAWING NUMBER <u>E111</u>
	CHECKED <u>WBC</u>	APPROVED <u>WBC</u>	DATE <u>6-1-82</u>	DATE <u>JUNE 1982</u>	SHEET <u>92</u>	D				
	CHECKED <u>WBC</u>	APPROVED <u>WBC</u>	DATE _____	DATE _____						

BN	DET	DN	GM	CM	CP	DM	FEN	GR	HR	LG	OP	PG	PL	PP	PPG	RR	SIE	SIP	SIN	STD	TE	TN	PRM	AM	CF	CG	FK	FR	PT	BO	SM	EQ	EQM	FPP	MEQ	MM	MP	P	PFT	PS	PW	HVE	HVM	HVS	EC	EL	EM	EP	IC	IM
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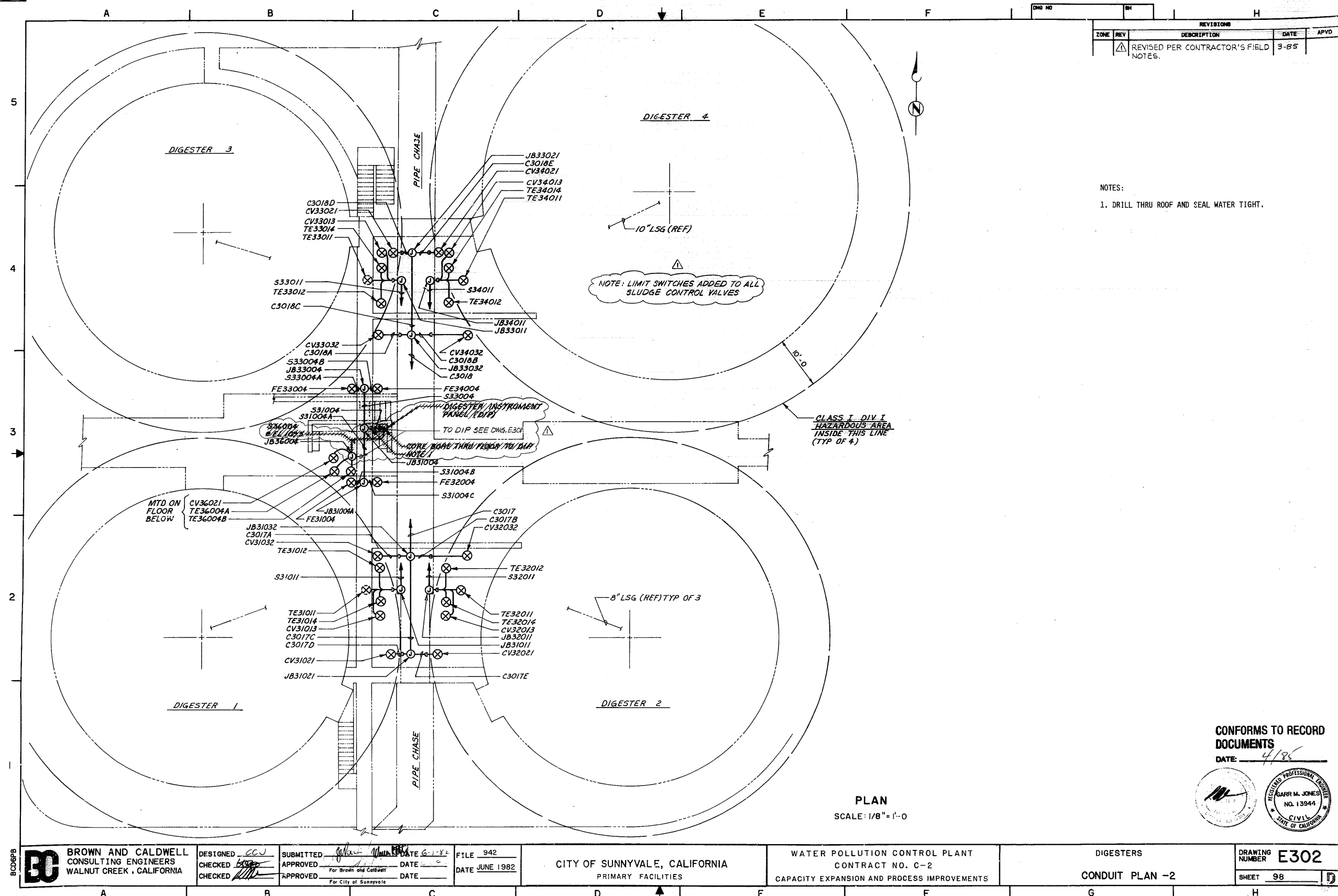


CODE:

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D - DRAWN BY
C - CHECKED BY

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FILE NO.
CONTROL NUMBER



CODE:

I - INITIATED BY
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C - CHECKED BY

FILE NO.	
CONTROL NUMBER	



EQUIP NO.	DESCRIPTION		
P62009	S02 EVAP HOT WATER CIRC PUMP 1		
P62010	S02 EVAP HOT WATER CIRC PUMP 2		



EQUIP NO.	DESCRIPTION		
P19049	WASTE HEAT HOT WATER CIRC PUMP		

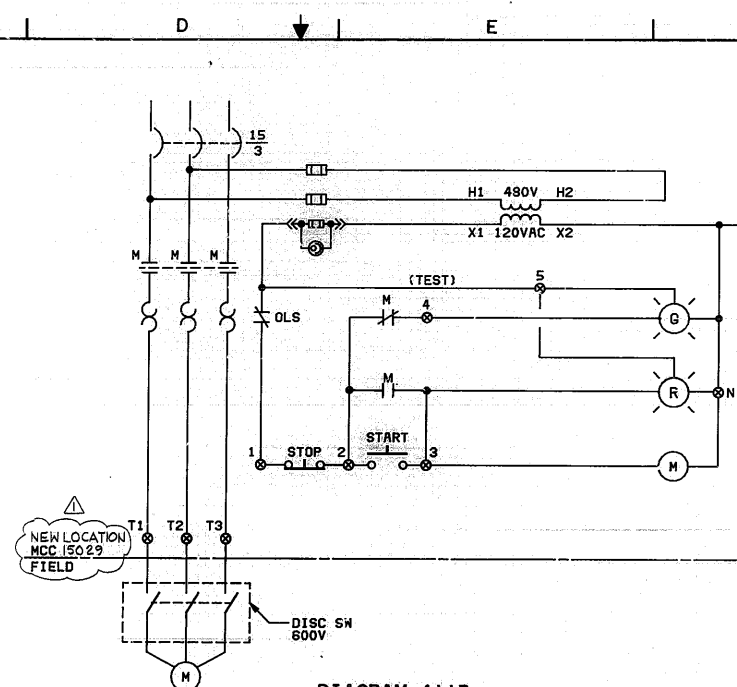


DIAGRAM 411B

EQUIP NO.	DESCRIPTION		
P19053	TERTIARY C B HOT WATER CIRC PUMP		
P19054	CNTL BLDG HOT WATER CIRC PUMP		

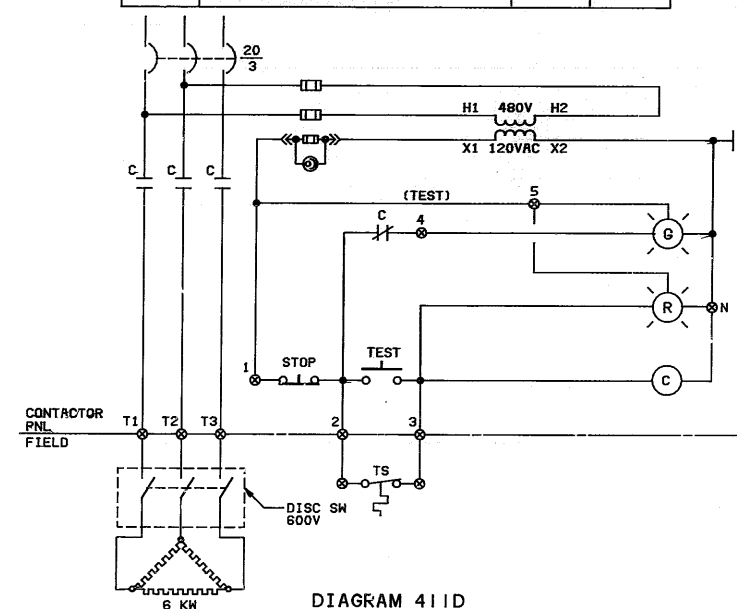


DIAGRAM 411D

EQUIP NO.	DESCRIPTION	TS
HTR11034	ENGINE JACKET WATER HEATER 1	TS11034
HTR11035	ENGINE JACKET WATER HEATER 2	TS11035
HTR11036	ENGINE JACKET WATER HEATER 3	TS11036

NOTES:

1. REPLACE EXIST CONTROL TRANSFORMER IN EXIST COMB. CONTACTOR WITH NEW CONTROL TRANSFORMER RATED 500VA.
2.  EXISTING EQUIPMENT.

CONFORMS TO RECORD
DOCUMENTS
DATE: 4/85



BCD6PB **BC** BROWN AND CALDWELL
CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA

DESIGNED <u>CCJ</u>	SUBMITTED <u>[Signature]</u>
CHECKED <u>[Signature]</u>	APPROVED <u>[Signature]</u>
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For Brown and Caldwell

For City of Sunnyvale

FILE 942
DATE JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

HEAT RECOVERY SYSTEM
CONTROL DIAGRAM 1

DRAWING NUMBER	E411
SHEET	99

BC2181 DJP 26 MAY

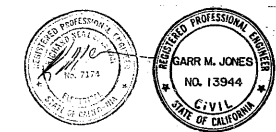
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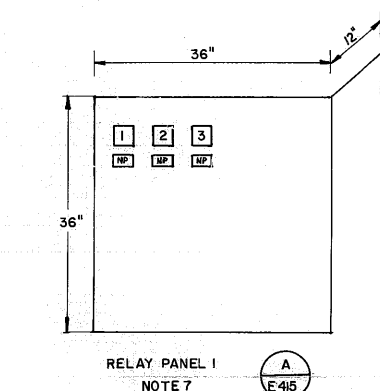
NOTES:

1. CORE DRILL FLOORS, OR WALLS, GROUT AND CAULK SURFACES TO BE WATERTIGHT AND REFINISHED TO MATCH EXISTING SURFACES.
2. THE CONTRACTOR SHALL PROVIDE NEW RUNNING CONTROL RELAY (TYP 3) IN NEMA 4 ENCLOSURE AND SHALL BE MOUNTED AT THE SIDE OF THE EXISTING ENGINE CONTROL PANEL. THE NEW CNTRL RELAY SHALL BE CONNECTED IN PARALLEL WITH THE EXIST ENGINE RUNNING LIGHT AND INTERLOCK N.O. CONTACT TO PUMPS, REFER TO DIAG 412A AND 412B.

GROUND FLOOR
PART PLAN
SCALE: 1/4"=1'-0"



 BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA	DESIGNED <u>CCJ</u> CHECKED <u>WJC</u> CHECKED <u>WJC</u>	SUBMITTED <u>10/1/82</u> APPROVED <u>[Signature]</u> APPROVED For Brown and Caldwell APPROVED For City of Sunnyvale	DATE <u>6-1-82</u> DATE <u>6-1-82</u> DATE	FILE <u>942</u> DATE <u>JUNE 1982</u>	CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	HEAT RECOVERY SYSTEM CONTROL BUILDING CONDUIT PLAN	DRAWING NUMBER E 415 SHEET <u>101</u> D
	A B C D E F G H							
	1 2 3 4 5 6 7 8							

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ITEM NO	NAMEPLATE SCHEDULE
1	KC15053
2	KC 15054
3	KC 15055

1. CKT C19049 SHALL BE TERMINATED IN EXIST SPARE UP, 20A CB AT EXIST PNL B.
2. CORE DRILL WALLS, GROUT & CAULK SURFACES TO BE WATERTIGHT AND REFINISH TO MATCH EXISTING SURFACES.
3. THE CONTRACTOR SHALL PROVIDE TWO (2) NEW COMB CB & SIZE 1 STARTER IN EXISTING MCC SPACES. FOR P19053 AND P19054 REFERENCE DWG E411 DIAG 411B.
4. THE CONTRACTOR SHALL PROVIDE THREE (3) NEW COMB CB SIZE 1 CONTACTOR IN EXIST MCC SPACES FOR HTRS 11034, 11035 AND 11036. REFERENCE DWG E411 DIAG E411D
5. THE CONTRACTOR SHALL PROVIDE THREE (3) NEW COMB CB AND SIZE 1 STARTER IN EXIST MCC SPACES FOR P15047, P15048 AND P15049. REFERENCE DWG E412 DIAG 412A
6. NEW DOORS, MOUNTING HARDWARES AND ACCESSORIES SHALL BE PROVIDED FOR ALL NEW COMBINATION STARTERS AND CONTACTORS MOUNTED IN EXISTING MCC SPACES. REFERENCE NOTES 3, 4 AND 5.
7. RELAY PANEL 1 (RP1) SHALL BE 36"W x 36"H x 12"D IN NEW 4 ENCLOSURE COMPLETE WITH RELAYS, TERMINAL BLOCKS AND RESET TIMERS. REFER TO DWG E412, DIAG 412C, 412D AND 412E.
8. PUMP MOTORS ARE RATED AS FOLLOWS:
P19053-1 HP, 460V, 30
P19054-1 1/2HP, 460V, 30
P15047-1 HP, 460V, 30
P15048-1 HP, 460V, 30
P15049-1 HP, 460V, 30

SECOND FLOOR
PART PLAN
SCALE: 1/4" = 1'-0"

CONFORMS TO RECORD
DOCUMENTS
DATE: 4/85



BCD6PB

BROWN AND CALDWELL
CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA

DESIGNED CC
CHECKED ~~WJG~~
CHECKED RME

SUBMITTED Gilbert W. Wynn DATE 6-1-82
APPROVED For Brown and Caldwell DATE 6-1-82
APPROVED For City of Sunnyvale DATE _____

FILE 942
DATE JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

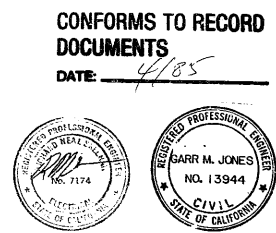
WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

HEAT RECOVERY SYSTEM CONTROL BUILDING CONDUIT PLAN

DRAWING NUMBER	E 416
SHEET	102

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CONTROL NUMBER	

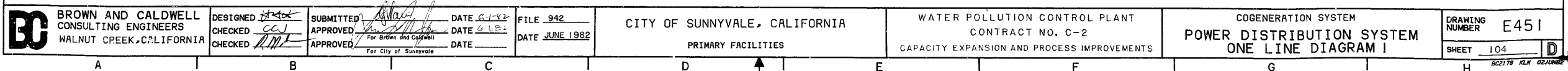


 BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA	DESIGNED <u>CCV</u>	SUBMITTED <u>[Signature]</u> DATE <u>6-1-82</u>	FILE 942	CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	HEAT RECOVERY SYSTEM DECHLORINATION BUILDING CONDUIT PLAN	DRAWING NUMBER E 417
	CHECKED <u>[Signature]</u>	APPROVED <u>[Signature]</u> DATE <u>6-1-82</u>	DATE JUNE 1982				SHEET 103
	CHECKED <u>[Signature]</u>	APPROVED <u>[Signature]</u> For Brown and Caldwell For City of Sunnyvale	DATE				

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FILE NO.
CONTROL NUMBER



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Architectural drawing showing the layout and details of the PNL DCDP, Switchboard Modification and Details. The drawing includes a main layout view, a 24V DC Distribution Panel-DCDP, and a Swing Panel detail.

MAIN LAYOUT VIEW:

- Dimensions: 4'-0" (width), 6'-6" (height).
- Components: PROTECT RELAYING PNL, EXIST DISTR PNL, EXIST GEN SWITCHBOARD, EXIST PUMP STARTERS AND FEEDERS, NEW SWGR.
- Notes:
 - NOTE 1: KVAR, SEE G3, SEE G3, V, A, VS, AS, 5IV, 5IG, 32, VOLTAGE REGUL., NP.
 - NOTE 2: 52 G3, 52 G2, 52 G1.
 - NOTE 3: 52 MS.
 - NOTE 4: 52 G.
 - NOTE 5: MCC 19750 EMERG FDR MAIN.
- Concrete Pad: CONCRETE PAD.
- Legend: [NP] = NAME PLATE ENGRAVED "VOLTAGE REGULATOR".

24V DC DISTRIBUTION PANEL-DCDP:

- Dimensions: 10" (width), 20" (height).
- Components: 24VDC (+), 24VDC (-), 20, 20, 20, 20, 20, 20, 20, 20, 20, 20.
- Notes:
 - PROTECTIVE RELAYS, 24V CNTL PWR BUS.
 - UTILITY CB 52-0, 24V CNTL PWR BUS.
 - GEN MAIN CB 52-G, 24V CNTL PWR BUS.
 - MAIN SWGR CB 52-MS, 24V CNTL PWR BUS.
 - SPARE.

EXISTING GENERATOR SWITCHBOARD MODIFICATION:

- Dimensions: 48" (width), 90" (height).
- Components: AUTO SYNC PNL (EXIST), PROTECTIVE RELAYING PNL (NEW), SWING PNL (NEW).
- Concrete Pad: CONC PAD.

DETAIL A E456:

- Dimensions: 18" (width), 12" (height).
- Components: SWING PANEL.
- Notes:
 - NOTE 7: 1 SYNCHROSCOPE, 2 FREQUENCY METER, 58 - 62 HZ, 3 VOLTMETER, 0 - 600 V, 4 AMMETER, 0 - 800 A, 5 SELECTOR SWITCH, AUTO-MANUAL.

CONFORMS TO RECORD DOCUMENTS:

DATE: 4/85

DESIGNED: CCJ
CHECKED: [Signature]
APPROVED: [Signature]
DATE: 6-1-82
FILE: 942
DATE: JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

COGENERATION SYSTEM
PNL DCDP, SWITCHBOARD MODIFICATION
AND DETAILS

DRAWING NUMBER: E 456
SHEET: 108

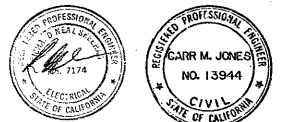
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FILE NO.	
CONTROL NUMBER	

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

- NOTES:
1. C40029 CKT SHALL BE CONNECTED TO THE EXISTING SPARE BREAKER, 1P, 20A IN EXISTING LIGHTING PANEL.
 2. CORE DRILL WALL, GROUT & CAULK SURFACE TO BE WATERTIGHT AND REFINISHED TO MATCH EXISTING SURFACE.

CONFORMS TO RECORD
DOCUMENTS
DATE: 4/85



 BROWN AND CALDWELL CONSULTING ENGINEERS WALNUT CREEK, CALIFORNIA	DESIGNED <u>CCW</u> CHECKED <u>[Signature]</u> CHECKED <u>[Signature]</u>	SUBMITTED <u>[Signature]</u> APPROVED <u>[Signature]</u> APPROVED <u>For Brown and Caldwell</u> APPROVED <u>For City of Sunnyvale</u>	DATE <u>5-1-82</u> DATE <u>6-1-82</u> DATE _____ DATE _____	FILE <u>942</u> DATE <u>JUNE 1982</u>	CITY OF SUNNYVALE, CALIFORNIA PRIMARY FACILITIES	WATER POLLUTION CONTROL PLANT CONTRACT NO. C-2 CAPACITY EXPANSION AND PROCESS IMPROVEMENTS	COGENERATION SYSTEM POWER BUILDING CONDUIT PLAN	DRAWING NUMBER E460 SHEET <u>109</u>
	A	B	C	D	E	F	G	H

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A 3x3 grid where the cells on the main diagonal (top-left to bottom-right) are shaded. There are 3 shaded cells.

A 3x3 grid where the bottom-right cells (row 3, column 3), (row 2, column 3), and (row 2, column 2) contain diagonal lines from the bottom-left to the top-right.

A 2x2 grid where the bottom-right cells of both the top and bottom rows contain a diagonal line from the bottom-left to the top-right corner.

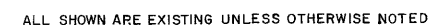
A 3x3 grid with the main diagonal cells shaded.

NUMBER

CONTROL	NO
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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APVD
	△	REVISED PER CONTRACTOR'S	3-85	

SECTION 

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CONFORMS TO RECORD
DOCUMENTS
DATE: 4/85



BCD6PB **BC** BROWN AND CALDWELL
CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA

DESIGNED <u>CCW</u>	SUBMITTED <u>[Signature]</u>	DATE <u>5-1-82</u>
CHECKED <u>[Signature]</u>	APPROVED <u>[Signature]</u>	DATE <u>6-1-82</u>
CHECKED <u>[Signature]</u>	APPROVED <u>[Signature]</u> for Brown and Caldwell	DATE _____

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

POWER BUILDING
CONDUIT PLAN

DRAWING NUMBER	E47C
SHEET 110	

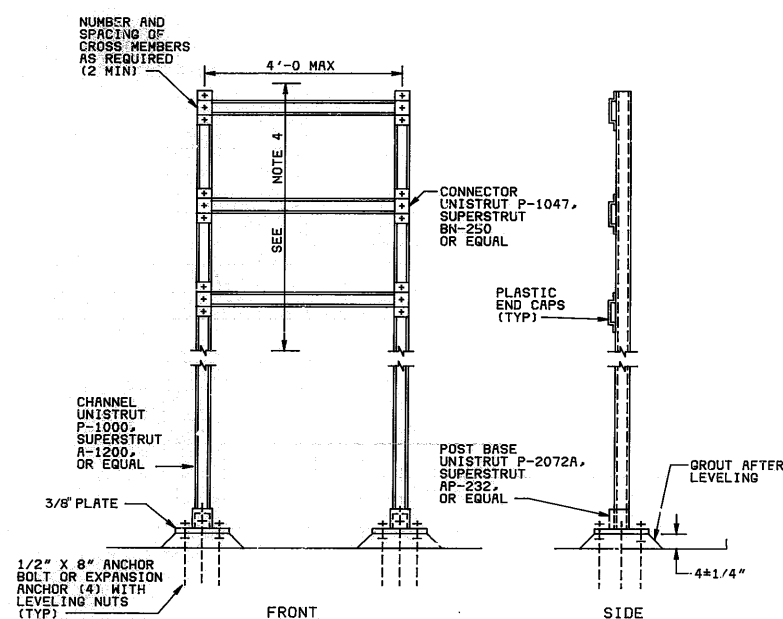
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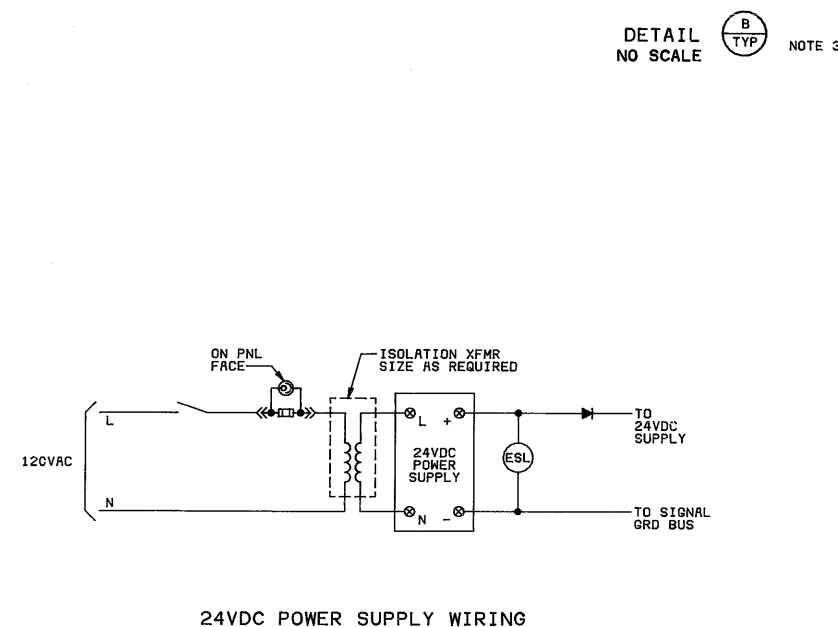
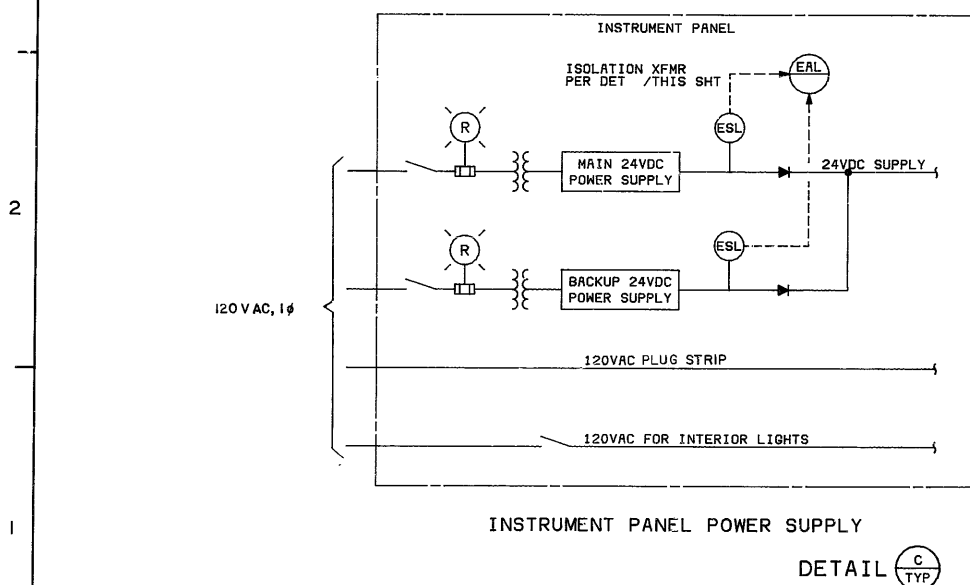
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CONTROL NUMBER _____



INSTRUMENT RACK FABRICATION

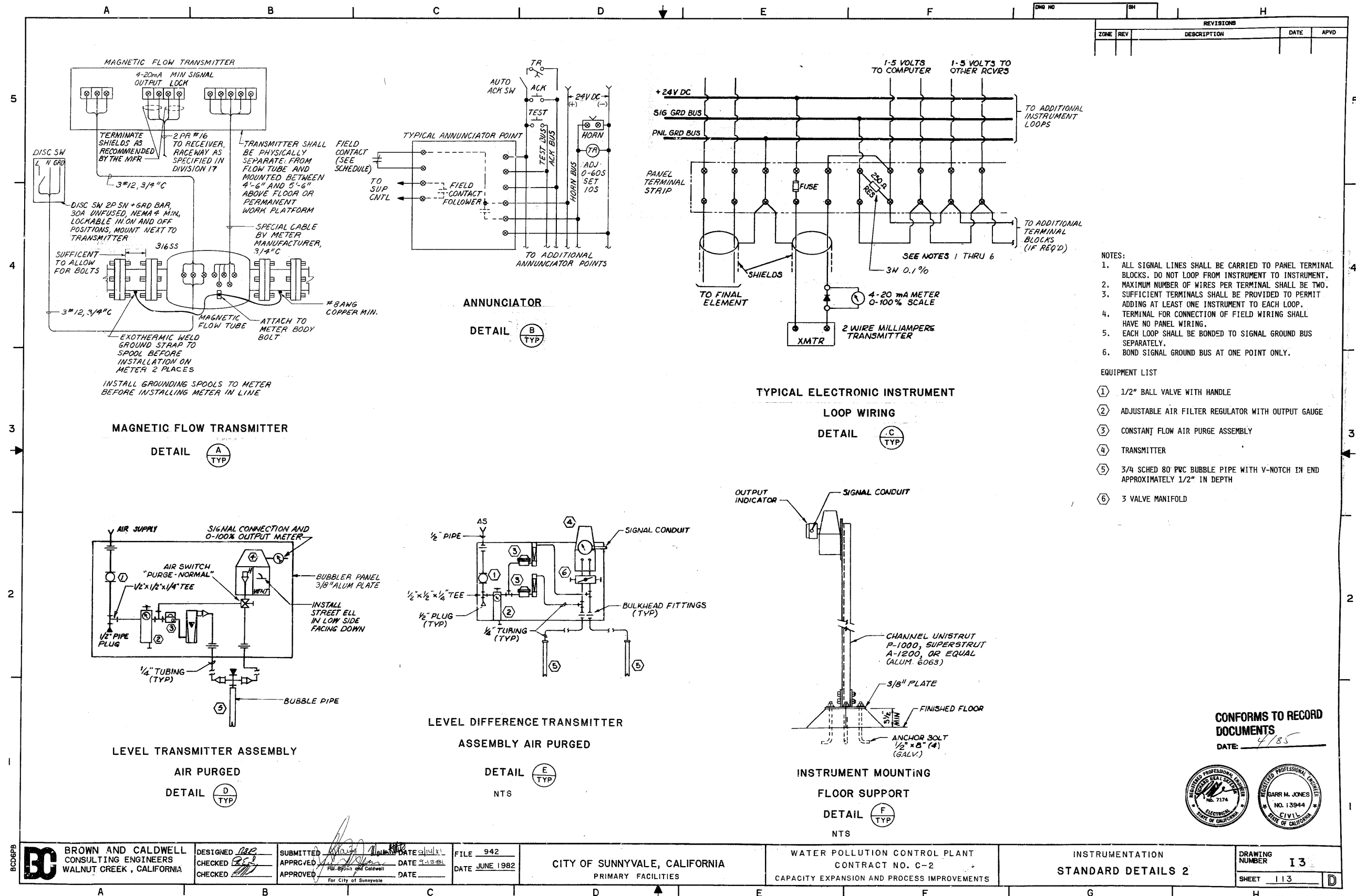
- NOTES:
1. DETAIL A/12 SHALL NOT BE USED FOR SLUDGE, GRITTY LIQUID OR STEAM APPLICATIONS.
 2. ALL ANCHOR BOLTS SHALL BE HOT-DIPPED GALVANIZED.
 3. INSTRUMENT RACK CHANNELS AND FITTINGS SHALL ALL BE 6063 ALUMINUM.
 4. CONTRACTOR SHALL MOUNT INSTRUMENTS SO THAT INDICATION OR ADJUSTMENTS ARE FOUR TO FIVE FEET ABOVE AN OPERATING FLOOR OR PLATFORM. INSTRUMENTS SHALL BE IN ACCESSIBLE AREAS, BUT SHALL NOT OBSTRUCT AISLES OR WALKWAYS. INSTRUMENTS SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE EQUIPMENT (PUMPS, HEATERS, ETC.) WITH WHICH THEY ARE ASSOCIATED. INSTRUMENTS SHALL NOT BE MOUNTED WHERE SHOCK OR VIBRATION WILL IMPAIR THEIR OPERATION.
 5. FOR DIFFERENTIAL PRESSURE MEASUREMENTS EACH LEG SHALL BE PER DETAIL A/12 EXCEPT A 3 VALVE MANIFOLD (6) SHALL BE USED AT THE INSTRUMENT INSTEAD OF 2 SINGLE BALL VALVES.
 6. CONTRACTOR SHALL USE A 1/2" NIPPLE AND ROOT VALVE FOR ORIFICE FLANGES.



DETAIL

CONFORMS TO RECORD
DOCUMENTS
DATE: 4/85

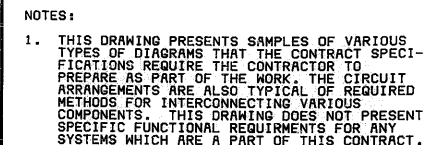


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CONFORMS TO RECORD
DOCUMENTS
DATE: 4/85



BCD6PB **BC** BROWN AND CALDWELL
CONSULTING ENGINEERS
WALNUT CREEK, CALIFORNIA

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SUBMITTED [Signature] DATE 9/14/81
APPROVED [Signature] DATE 9-15-81
For-Brown and Caldwell
APPROVED _____ DATE _____
For City of Sunnyvale

FILE 942
DATE JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

INSTRUMENTATION
INSTRUMENT DIAGRAMS DETAILS - 2

DRAWING NUMBER	I 5
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CONTROL PANEL SCHEDULE

REVISIONS			
ZONE	REV	DESCRIPTION	DATE

ITEM	ALARM SCHEDULE	ACTUATING DEVICE	DWG NO.	ITEM	ALARM SCHEDULE	ACTUATING DEVICE	DWG NO.	ITEM	TAG NO.	NAME PLATE	INSTRUMENT	DWG NO.
1	DEWATERING SUMP PUMP TROUBLE	P19508		102	GRIT REMOVAL PUMP 1 TROUBLE	AL243		200		BAR SCREEN DIFFERENTIAL LEVEL		
2	INFLUENT PUMP 4 TROUBLE	P13505		103	GRIT REMOVAL PUMP 2 TROUBLE	AL244		201	LD119531	APS BAR SCREEN	DIFFERENTIAL LEVEL INDICATOR	I21A
3	INFLUENT PUMP 5 TROUBLE (FUT)			104	GRIT REMOVAL PUMP 3 TROUBLE	AL245		202	LD112018	BAR SCREEN 1	DIFFERENTIAL LEVEL INDICATOR	I21A
4	SCREENINGS GRINDER PRESSURE HIGH	GDR19504		105	GRIT REMOVAL PUMP 4 TROUBLE	AL246		203	LD112019	BAR SCREEN 2	DIFFERENTIAL LEVEL INDICATOR	I21A
5	AUXILIARY MET WELL LEVEL HIGH	LSH19523	121H	106	GRIT REMOVAL PUMP 5 TROUBLE	AL247		204	LD112020	BAR SCREEN 3	DIFFERENTIAL LEVEL INDICATOR	I21A
6	AUXILIARY MET WELL LEVEL LOW	LSH19533	121H	107	GRIT REMOVAL PUMP 6 TROUBLE	AL248		205		SCREEN CHANNEL FLOW		
7	INF SAMPLE PUMP CASING TEMP HIGH	TSH19511	121C	108	GRIT REMOVAL PUMP 7 TROUBLE	AL249		206	FI12021	CHANNEL 1	FLOW INDICATOR	I12B
8	STEAM SEP 1 LEVEL LOW-LOW	LSLL15053	122G	109	GRIT REMOVAL PUMP 8 TROUBLE	AL250		207	FI12022	CHANNEL 2	FLOW INDICATOR	I21B
9	BAR SCREEN 4 LEVEL DIFF HIGH	LDSH19531	121A	110	GRIT REMOVAL PUMP 9 TROUBLE	AL251		208	FI12023	CHANNEL 3	FLOW INDICATOR	I21B
10	BAR SCREEN 1 LEVEL DIFF HIGH	LDSH12018	121A	111	GRIT REMOVAL PUMP 10 TROUBLE	AL252		209		SPARE		
11	BAR SCREEN 2 LEVEL DIFF HIGH	LDSH12019	121A	112	SPARE			210	FI13131	PUMP ENGINE GAS FLOW	FLOW INDICATOR	I21E
12	BAR SCREEN 3 LEVEL DIFF HIGH	LDSH12020	121A	113	SPARE			211	FI13132	PUMP ENGINE 1	FLOW INDICATOR	I21E
13	DRAIN SUMP LEVEL HIGH	LIC11005		114	SPARE			212	FI13133	PUMP ENGINE 2	FLOW INDICATOR	I21E
14	SCREENING PUMP DISCHARGE PRESS HIGH	PS11026		115	SED GALLERY EXHAUST FAN 1 RUNNING	AL202		213	FI13133	PUMP ENGINE 3	FLOW INDICATOR	I21E
15	INSTRUMENT AIR COMPRESSOR PRESS LOW	PS13003		116	SED GALLERY EXHAUST FAN 2 RUNNING	AL203		214A		HOT WATER RETURN TEMP		
16	STEAM SEP 2 LEVEL LOW-LOW	LSLL15054	122G	117	DRAIN SUMP 2 LEVEL HIGH	AL201		214	TIC40030A		TEMP CONTROLLER	I24A
17	RAW SEWAGE PUMP 1 TROUBLE	ENGINE CNTL PNL		118	RAW SLUDGE SYSTEM-CONTROL OVRERRUN	AL255/AL256		215	TIC40030B		TEMP CONTROLLER	I24A
18	RAW SEWAGE PUMP 2 TROUBLE	ENGINE CNTL PNL		119	SPARE			216		RAW SEWAGE SUMP LEVEL		
19	RAW SEWAGE PUMP 3 TROUBLE	ENGINE CNTL PNL		120	NO. 3 WATER STR DIFF PRESSURE HIGH	AL228		217	LIC12024	SUMP 1	LEVEL CONTROLLER	I24D
20	RAW SEWAGE SUMP 1 LEVEL HIGH	LSH12024	124D	121	NO. 3 HP WATER BOOSTER PUMP PRESSURE LOW	AL230		218	LIC12025	SUMP 2	LEVEL CONTROLLER	
21	RAW SEWAGE SUMP 2 LEVEL HIGH	LSH12025	124D	122	DEWATERING ROTATING SCREEN LEVEL HIGH	LSH27104	124B	219	LIC12026	SUMP 3	LEVEL CONTROLLER	
22	RAW SEWAGE SUMP 3 LEVEL HIGH	LSH12026	124D	123	SPARE			220		PUMP ENGINE SPEED		
23	SERVICE AIR COMPRESSOR PRESS LOW	AL111		124	SPARE			221	SI13071	PUMP ENGINE 1	SPEED INDICATOR	I24D
24	STEAM SEP 3 LEVEL LOW-LOW	LSLL15055		125	SPARE			222	SI13072	PUMP ENGINE 2	SPEED INDICATOR	I24D
25	RAW SEWAGE PUMP ENGINE 1 TROUBLE	ENGINE CNT PNL		126	SPARE			223	SI13073	PUMP ENGINE 3	SPEED INDICATOR	I24D
26	RAW SEWAGE PUMP ENGINE 2 TROUBLE	ENGINE CNT PNL		127	SPARE			225		SPARE		
27	RAW SEWAGE PUMP ENGINE 3 TROUBLE	ENGINE CNT PNL		150	SUPERNATANT PUMP 1 TROUBLE	P30101		226	FI19507	INFLUENT PUMP 4 FLOW		
28	TRAN SL PUMP 1 DISCHARGE PRESS HIGH	PS13077		151	SUPERNATANT PUMP 2 TROUBLE	P30102		227			FLOW INDICATOR	I21F
29	TRAN SL PUMP 2 DISCHARGE PRESS HIGH	PS13078		152	DIGESTER 1 COVER LEVEL HI/LO	LSH31005/LSL31005	123B	228	LI19533	AUX PUMPING ST WET WELL LEVEL		
30	DEWATERING SUMP LEVEL LOW	LSL19532	124E	153	DIGESTER 2 COVER LEVEL HI/LO	LSH31005/LSL32005	123B	229			LEVEL INDICATOR	I21H
31	SPARE			154	DIGESTER 3 COVER LEVEL HI/LO	LSH33005/LSL33005	123B	230				
32	SPARE			155	DIGESTER 4 COVER LEVEL HI/LO	LSH34005/LSL34005	123B	231	DIC20013	RAW SLUDGE DENSITY		
33	SPARE			156	SPARE			232	DIC20014	RAW SLUDGE 1	CONTROLLER	I22A
34	SPARE			157	SPARE			233		RAW SLUDGE 2	CONTROLLER	I22A
35	SPARE			158	SPARE			234	FI20015	RAW SLUDGE 1	FLOW INDICATOR	I22B
36	SPARE			159	DC POWER SUPPLY TROUBLE			235	FI20016	RAW SLUDGE 2	FLOW INDICATOR	I22B
37	SPARE			160	SUPERNATANT WET WELL LEVEL HI/LO	LSH30101/LSL30101	122E	236		DIGESTER COVER LEVEL		
38	SPARE			161	RAW SLUDGE HOT WATER TEMP HIGH	TSH36004	124C	237	LI31005	DIGESTER 1	LEVEL INDICATOR	I23B
39	SPARE			162	GAS CIRCULATION PUMP 1 TROUBLE	AL08		238	LI32005	DIGESTER 2	LEVEL INDICATOR	I23B
40	SPARE			163	GAS CIRCULATION PUMP 2 TROUBLE	AL09		239	LI33005	DIGESTER 3	LEVEL INDICATOR	I23B
41	LAMP TEST			164	GAS CIRCULATION PUMP 3 TROUBLE	AL10		240	LI34005	DIGESTER 4	LEVEL INDICATOR	I23B
50	RAW SLUDGE PUMP 1 DISCHARGE PRESS HIGH	AL231		165	GAS CIRCULATION PUMP 4 TROUBLE	AL12		241		SPARE		
51	RAW SLUDGE PUMP 2 DISCHARGE PRESS HIGH	AL232		166	SPARE			242		DIGESTER SLUDGE GAS FLOW		
52	RAW SLUDGE PUMP 3 DISCHARGE PRESS HIGH	AL233		167	GENERATOR ENGINE 1 TROUBLE	GEN ENG PNL		243	FI31004	DIGESTER 1	FLOW INDICATOR	I23A
53	RAW SLUDGE PUMP 4 DISCHARGE PRESS HIGH	AL234		168	GENERATOR ENGINE 2 TROUBLE	GEN ENG PNL		244	FI32004	DIGESTER 2	FLOW INDICATOR	I23A
54	RAW SLUDGE PUMP 5 DISCHARGE PRESS HIGH	AL235		169	GENERATOR ENGINE 3 TROUBLE	GEN ENG PNL		245	FI33004	DIGESTER 3	FLOW INDICATOR	I23A
55	RAW SLUDGE PUMP 6 DISCHARGE PRESS HIGH	AL236		170	UTILIZED GAS PRESSURE HI/LO	PSH30018/PSL30018	122C	246	FI34004	DIGESTER 4	FLOW INDICATOR	I23A
56	RAW SLUDGE PUMP 7 DISCHARGE PRESS HIGH	AL237		171	SPARE			247		SPARE		
57	RAW SLUDGE PUMP 8 DISCHARGE PRESS HIGH	AL238		172	DIGESTER 1 CIRC SLUDGE INLET TEMP HI/LO	TSH31011/TSL31011	123C	248		DIGESTER CIRC SLUDGE INLET TEMP		
58	RAW SLUDGE PUMP 9 DISCHARGE PRESS HIGH	AL239		173	DIGESTER 2 CIRC SLUDGE INLET TEMP HI/LO	TSH32011/TSL32011	123C	249	TI31011	DIGESTER 1	TEMPERATURE INDICATOR	I23C
59	RAW SLUDGE PUMP 10 DISCHARGE PRESS HIGH	AL240		174	DIGESTER 3 CIRC SLUDGE INLET TEMP HI/LO	TSH33011/TSL33011	123C	250	TI32011	DIGESTER 2	TEMPERATURE INDICATOR	I23C
60	SPARE			175	DIGESTER 4 CIRC SLUDGE INLET TEMP HI/LO	TSH34011/TSL34011	123C	251	TI33011	DIGESTER 3	TEMPERATURE INDICATOR	I23C
61	SPARE			176	SPARE			252	TI34011	DIGESTER 4	TEMPERATURE INDICATOR	I23C
62	SPARE			177	SPARE			253		SPARE		
63	SED CROSS COLLECTOR 1 TROUBLE	AL216		178	SPARE			254		DIGESTER SLUDGE OUTLET TEMP		
64	SED CROSS COLLECTOR 2 TROUBLE	AL217		179	SPARE			255	TIC31012	DIGESTER 1	TEMPERATURE CONTROLLER	I23D
65	SED CROSS COLLECTOR 3 TROUBLE	AL218		180	DIGESTER DRAIN PUMP TEMP HIGH			256	TIC32012	DIGESTER 2	TEMPERATURE CONTROLLER	I23D
66	SED CROSS COLLECTOR 4 TROUBLE	AL219		181	DRAINAGE SUMP 3 LEVEL HIGH	AL317		257	TIC33012	DIGESTER 3	TEMPERATURE CONTROLLER	I23D
67	SED CROSS COLLECTOR 5 TROUBLE	AL220		182	DIGESTER 1 SLUDGE HOT WATER TEMP HIGH	TSH31014	123E	258	TIC34012	DIGESTER 4	TEMPERATURE CONTROLLER	I23D
68	SED CROSS COLLECTOR 6 TROUBLE	AL221		183	DIGESTER 2 SLUDGE HOT WATER TEMP HIGH	TSH32014	123E	259		SPARE		
69	SED CROSS COLLECTOR 7 TROUBLE	AL222A		184	DIGESTER 3 SLUDGE HOT WATER TEMP HIGH	TSH33014	123E	260		DIGESTER SLUDGE HOT WATER TEMP		
70	SED CROSS COLLECTOR 8 TROUBLE	AL223A		185	DIGESTER 4 SLUDGE HOT WATER TEMP HIGH	TSH34014	123E	261	TIC31014	DIGESTER 1	TEMPERATURE CONTROLLER	I23E
71	SED CROSS COLLECTOR 9 TROUBLE	AL224A		186	SPARE			262	TIC32014	DIGESTER 2	TEMPERATURE CONTROLLER	I23E
72	SED CROSS COLLECTOR 10 TROUBLE	AL225A		187	SPARE			263	TIC33014	DIGESTER 3	TEMPERATURE CONTROLLER	I23E
73	SPARE			188	SPARE			264	TIC34014	DIGESTER 4	TEMPERATURE CONTROLLER	I23E
74	SPARE			189	SPARE			265		SPARE		
75	SPARE			190	LAMP TEST			266		DIGESTER SLUDGE HOT WATER TEMP		
76	SED LONG COLLECTOR 1 TROUBLE	AL216		191	ALARM ACKNOWLEDGE			267	HK31014	DIGESTER 1	AUXILIARY STATION	
77	SED LONG COLLECTOR 2 TROUBLE	AL217		192	AUDIBLE			268	HK32014	DIGESTER 2	AUXILIARY STATION	
78	SED LONG COLLECTOR 3 TROUBLE	AL218						269	HK33014	DIGESTER 3	AUXILIARY STATION	
79	SED LONG COLLECTOR 4 TROUBLE	AL219						270	HK34014	DIGESTER 4	AUXILIARY STATION	
80	SED LONG COLLECTOR 5 TROUBLE	AL220						271		SPARE		
81	SED LONG COLLECTOR 6 TROUBLE	AL221						276	FI30105	SUPERNATANT PUMP FLOW		
82	SED LONG COLLECTOR 7 TROUBLE	AL222B						277			FLOW INDICATOR	
83	SED LONG COLLECTOR 8 TROUBLE	AL223B						278		GENERATOR ENGINE GAS FLOW		
84	SED LONG COLLECTOR 9 TROUBLE	AL224B						279	FI42066	GENERATOR ENGINE 1	FLOW INDICATOR	
85	SED LONG COLLECTOR 10 TROUBLE	AL225B						280	FI42067	GENERATOR ENGINE 2	FLOW INDICATOR	
86	SPARE							281	FI42068	GENERATOR ENGINE 3	FLOW INDICATOR	
87	SPARE							282	TIC36004A	RAW SLUDGE TEMP		
88	SPARE							283			TEMPERATURE CONTROLLER	I24C
89	SKIMMER SHEAR PIN 1 TROUBLE	AL204						284	TIC36004B	RAW SLUDGE HOT WATER TEMP		
90	SKIMMER SHEAR PIN 2 TROUBLE	AL205						285			TEMPERATURE CONTROLLER	I24C
91	SKIMMER SHEAR PIN 3 TROUBLE	AL206						286	FI30023	NATURAL GAS FLOW		
92	SKIMMER SHEAR PIN 4 TROUBLE	AL207						287			FLOW INDICATOR	I22D
93	SKIMMER SHEAR PIN 5 TROUBLE	AL208						288	FI10029	WASTE GAS FLOW		
94	SKIMMER SHEAR PIN 6 TROUBLE	AL209						289			FLOW INDICATOR	I22C
95	SKIMMER SHEAR PIN 7 TROUBLE	AL210						290	PIC30018	UTILIZED GAS PRESSURE		
96	SKIMMER SHEAR PIN 8 TROUBLE	AL211						291			PRESSURE CONTROLLER	I22C
97	SKIMMER SHEAR PIN 9 TROUBLE	AL212						292		SPARE		
98	SKIMMER SHEAR PIN 10 TROUBLE	AL213						293		SPARE		
99	SPARE							294		SPARE		
100	SPARE							295		SPARE		
101	SPARE							296				
								297	HS12021	MULTIPOINT RECORDER		
								298	HS12022	TOGGLE SWITCH		
								299	HS12023	TOGGLE SWITCH		

CONFORMS TO RECORD DOCUMENTS

DATE: 4/8/85

BROWN AND CALDWELL
CONSULTING ENGINEERS

DESIGNED 4/4
CHECKED 11/8
SUBMITTED [Signature] DATE 6-1-85
APPROVED [Signature] DATE 6-1-85
FILE 942
DATE JUNE 1982

CITY OF SUNNYVALE, CALIFORNIA
PRIMARY FACILITIES

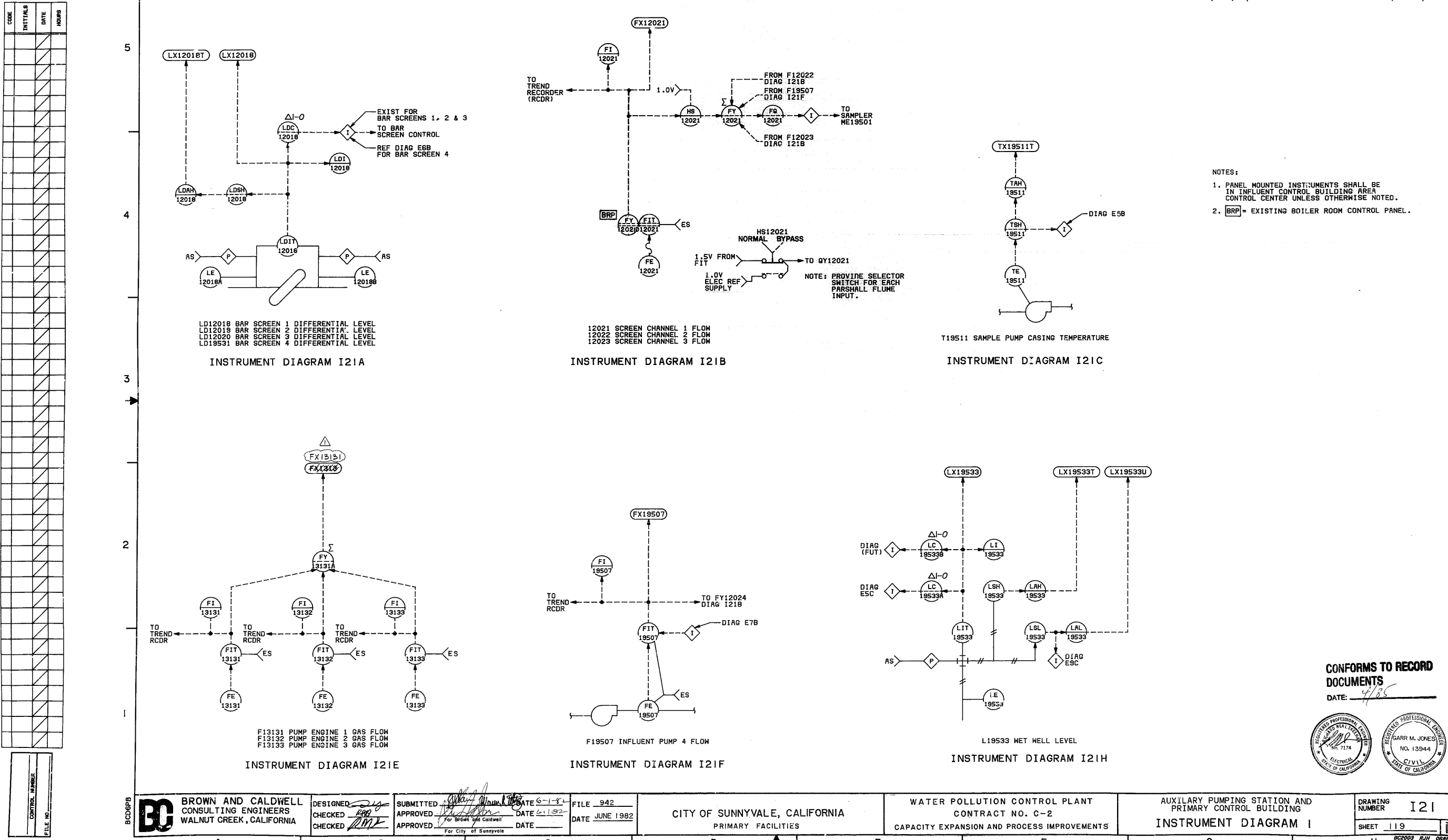
WATER POLLUTION CONTROL PLANT
CONTRACT NO. C-2
CAPACITY EXPANSION AND PROCESS IMPROVEMENTS

EXISTING PRIMARY CONTROL BUILDING
CONTROL PANEL SCHEDULE-1

DRAWING NUMBER 111
SHEET 117



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APVD
	△	REVISED PER ADDENDUM NO.1	4-85	



CONFORMS TO RECORD DOCUMENTS

DATE: 4/85

CODE:

I - INITIATED
D - DRAWN BY
C - CHECKED BY

CONTROL NUMBER	FILE NO.
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