

# DESIGN DATA

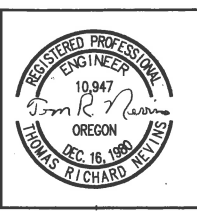
ITEM	VALUE		ITEM	VALUE		ITEM	VALUE		ITEM	VALUE	
	DESIGN	FUTURE		DESIGN	FUTURE		DESIGN	FUTURE		DESIGN	FUTURE
<b>PLANT FLOW</b>			<b>SECONDARY TREATMENT</b>			<b>RETURN SLUDGE PUMPS</b>			<b>SCREW PRESS FEED FLOW METERS</b>		
AVERAGE DRY WEATHER, MGD	0.5	0.75	AERATION BASINS			TYPE: NON-CLOG HORIZONTAL			TYPE: MAGNETIC		
PEAK MONTHLY AVERAGE, MGD	1.2	1.8	NUMBER	2	3	CENTRIFUGAL, VARIABLE-SPEED			NUMBER	2	2
PEAK DAILY AVERAGE, MGD	2.1	3.2	WIDTH, FEET	12.67	12.67	NUMBER	3	4	CAPACITY, GPM	15/35	15/35
PEAK WET WEATHER, MGD	3.2	4.8	WATER DEPTH, FEET	15.8	15.8	CAPACITY, EACH, GPM	50-270	50-270	SCREW PRESSES		
<b>PLANT LOAD</b>			<b>BASIN 1</b>			HORSEPOWER, EACH	5	5	EXISTING		
BOD AVERAGE, PPD	1,150	1,730	TYPE: 3-CELL ANOXIC SELECTOR WITH			SLUDGE WASTING CAPACITY, GPM	15-40	15-40	NUMBER	1	1
BOD MAXIMUM MONTH, PPD	1,550	2,320	1 AEROBIC CELL			<b>WAS FLOW METER</b>			CAPACITY, DRY SOLIDS, LB/HR	150	150
SS AVERAGE, PPD	1,350	2,020	LENGTH, FEET	105	105	TYPE: MAGNETIC			CAPACITY, GPM	15	15
SS MAXIMUM MONTH, PPD	2,350	3,520	VOLUME, 1000 GALLONS	157	157	CAPACITY, GPM	40	40	PERCENT CAPTURE, MIN	82.5	82.5
<b>FILLMORE AVENUE PUMPING STATION</b>			VOLUME ANOXIC CELLS, 1000 GALLONS			<b>ULTRAVIOLET DISINFECTION-OPEN CHANNEL VERTICAL TYPE</b>			<b>NEW</b>		
TYPE OF PUMPS: NON-CLOG VERTICAL			CELL 1	19	19	UV DISINFECTION CHANNELS			NUMBER	1	1
TURBINE, VARIABLE SPEED			CELL 2	19	19	NUMBER	2	2	CAPACITY, DRY SOLIDS, LB/HR	350	350
NUMBER OF PUMPS	2	2	CELL 3	42	42	LENGTH, INCHES	224	224	CAPACITY, GPM	35	35
CAPACITY, EACH, MGD	0.576-3.2	4.8	VOLUME, AEROBIC CELL, 1000 GALLONS	78	78	WIDTH, INCHES	16.25	16.25	PERCENT CAPTURE, MIN	82.5	82.5
HORSEPOWER, EACH	50		ANOXIC CELL MIXERS			DEPTH, INCHES	65.5	65.5	<b>POLYMER FEED SYSTEM</b>		
OVERFLOW TO FERRY CREEK, DIAMETER, INCHES	12	12	TYPE: SUBMERSIBLE PROPELLER			CAPACITY, EACH, MGD	1.6	2.4	POLYMER DOSE, LBS/TON DRY SOLIDS	6-15	6-15
WET WELL STORAGE BEFORE OVERFLOW AT 1.2 MGD, MINUTES	10	10	NUMBER	4	6	<b>LAMPS</b>			EXISTING		
<b>HEADWORKS</b>			HORSEPOWER, EACH	3.2	3.2	NUMBER PER MODULE	28	28	NEAT POLYMER FEED PUMP		
ROTATING DRUM SCREEN			<b>BASIN 2</b>			TOTAL NUMBER OF MODULES/CHANNEL	3	4	TYPE: MECHANICAL DIAPHRAGM, VARIABLE SPEED		
NUMBER	1	1	TYPE: 2-CELL AEROBIC			FLOW CAPACITY, PER MODULE, MGD	0.54	0.60	NUMBER	1	1
DIAMETER, INCHES	36	60	LENGTH, FEET	94.5	94.5	POWER CONSUMPTION, PER MODULE, KW	2.38	2.38	CAPACITY, GPH	5-104	5-104
LENGTH OF DRUM, INCHES	72	80	VOLUME, 1000 GALLONS	141	141	UV DOSE AT PWWF, 70% OUTPUT, 65% TRANSMISSION, MICROWATT-SEC/SQ CM	36,970	34,850	HORSEPOWER	0.5	0.5
SPACING BETWEEN WEDGEWIRES, INCHES	0.1	0.1	<b>BASIN 3</b>			EXPOSURE AT PWWF, SECONDS	12.5	11.1	POLYMER MIXING TANK, VOLUME, GALLONS	500	500
CAPACITY, MGD, AT SS CONCENTRATION OF 250 mg/l	3.2	4.8	TYPE: 2-CELL AEROBIC			<b>AEROBIC DIGESTION</b>			POLYMER SOLUTION MIXER, HORSEPOWER	0.5	0.5
<b>HAND RAKED BAR SCREEN</b>			LENGTH, FEET	-	105	DIGESTER BASIN (3-CELL SERIES TYPE)			<b>NEW</b>		
NUMBER	1	1	VOLUME, 1000 GALLONS	-	157	VOLUME, EACH CELL, GALLONS	2-125,000	2-125,000	NEAT POLYMER DRUM MIXER, HORSEPOWER	0.5	0.5
SPACING BETWEEN BARS, INCHES	1.0	1.0	<b>SECONDARY PROCESS PERFORMANCE,</b>			1-118,000	1-118,000	POLYMER SOLUTION FEED PUMP			
CAPACITY, MGD	4.8	4.8	MAXIMUM MONTH LOAD			FUTURE DIGESTER BASIN, VOLUME, GALLONS			TYPE: PROGRESSIVE CAVITY, VARIABLE SPEED		
<b>SCREENINGS COMPACTOR</b>			MLSS IN AERATION BASIN, mg/l	2,000	2,000	MAXIMUM MONTH SLUDGE LOADING, GPD AT 0.8% SOLIDS	18,600	27,900	NUMBER	1	1
TYPE: PLUNGER OR AUGER			RAS SUSPENDED SOLIDS, mg/l	8,000	8,000	HYDRAULIC DETENTION TIME, DAYS	20	20	CAPACITY, GPM	1-10	1-10
NUMBER	1	1	F/M, LB BOD/LB MLVSS/DAY	0.37	0.37	SOLIDS RETENTION TIME, DAYS	55	55	HORSEPOWER	3	3
WET SCREENINGS CAPACITY, CU FT/HR	12	12	SLUDGE AGE, DAYS	5	5	PEAK MONTH AIR REQUIREMENT, SCFM	850	1,300	<b>SLUDGE STORAGE</b>		
<b>GRIT REMOVAL</b>			HYDRAULIC DETENTION TIME AT PEAK MONTH AVERAGE FLOW, HOURS	6	6	DIGESTED SLUDGE FLOWMETER			EXISTING		
AERATED GRIT TANK			<b>BLOWERS, AERATION AND DIGESTION</b>			TYPE: MAGNETIC			AIR DRYING BEDS		
NUMBER OF BASINS	1	1	TYPE: POSITIVE DISPLACEMENT			CAPACITY, GPM	350	350	NUMBER	2	2
LENGTH, FEET	17.33	17.33	NUMBER, STANDBY	2		<b>LIQUID SLUDGE LOADING SYSTEM</b>			TOTAL AREA, SQ FT	4,213	4,213
WIDTH, FEET	13	13	NUMBER AND CAPACITY, EACH, SCFM/HORSEPOWER			EXISTING			<b>PLANT WATER PUMPS</b>		
AVERAGE DEPTH, FEET	8	8	AERATION (NEW, VARIABLE SPEED)	1-1,500/75	2-1,500/75	FEED PUMP			TYPE: VERTICAL TURBINE		
VOLUME, GALLONS	13,400	13,400	DIGESTION (EXISTING 2-SPEED)	1-850/50 HI SPD	1-1,300/75 (NEW)	TYPE: CENTRIFUGAL			NUMBER	2	2
DETENTION TIME AT PWWF, MINUTES	6	4	STANDBY (EXISTING)	510/30 LO SPD		CAPACITY, GPM	350	350	CAPACITY, EACH, GPM	60	60
AIRFLOW, SCFM	70	70		2-800/40	1-800/40	HORSEPOWER	3	3	HORSEPOWER	5	5
<b>GRIT PUMPING</b>			AIR REQUIRED FOR AERATION, SCFM			<b>AIR LIFT SLUDGE PUMPS</b>			HYDRO-PNEUMATIC TANK, VOLUME, GALLONS	158	158
TYPE: RECESSED IMPELLER			AVERAGE	380	600	TYPE: AIR LIFT			<b>SERVICE AIR COMPRESSOR</b>		
NUMBER OF PUMPS	1	1	MAXIMUM DAY	1,250	1,900	NUMBER	3	3	TYPE: AIR COOLED RECIPROCATING		
CAPACITY, GPM AT 30 FEET TDH	100	100	<b>SECONDARY CLARIFIERS</b>			DIAMETER, INCHES	4	4	CAPACITY, ACFM AT 100 PSIG	15	15
HORSEPOWER	7.5	7.5	TYPE: INBOARD WEIR, FLOCCULATOR			CAPACITY AT 3 FEET LIFT AND 82% SUBMERGENCE, EACH, GPM	175	175	HORSEPOWER	5	5
<b>GRIT SEPARATION</b>			NUMBER	2	3	AIR REQUIREMENT, EACH, SCFM	30	30	<b>EFFLUENT FLOW METER</b>		
CYCLONE SEPARATOR			DIAMETER, FEET	45	45	<b>SLUDGE THICKENING</b>			TYPE: IN-LINE SONIC		
NUMBER	1	1	SIDE WATER DEPTH, FEET	16	16	SCREW PRESS FEED PUMP			RANGE, MGD	0.072-4.8	0.072-4.8
CAPACITY, GPM AT 8 PSI	270	270	OVERFLOW RATE AT PWWF, GPD/SQ FT	1,000	1,000	EXISTING			<b>AVERAGE MONTHLY PLANT EFFLUENT REQUIREMENTS*</b>		
<b>GRIT WASHER</b>			OVERFLOW RATE AT PEAK DAILY FLOW, GPD/SQ FT	660	660	TYPE: PROGRESSIVE CAVITY, VARIABLE SPEED			BOD AND SS, PPD JUNE-OCTOBER	75	75
TYPE: SCREW CLASSIFIER			OVERFLOW RATE AT 75% PWWF WITH ONE CLARIFIER OUT OF SERVICE, GPD/SQ FT	1,500	1,100	NUMBER	1	1	BOD AND SS, PPD NOVEMBER-MAY	113	113
NUMBER	1	1	NUMBER OF SLUDGE LEVEL SIGHT PORTS PER CLARIFIER	3	3	CAPACITY, GPM	8-57	8-57	* MASS LOAD GOVERNS CONCENTRATION AT ALL DESIGN FLOWS		
SCREW DIAMETER, INCHES	12	12				HORSEPOWER	5	5	ANTICIPATED EFFLUENT QUALITY		
CAPACITY, POUNDS PER HOUR	1,500	1,500				AVERAGE SLUDGE FEED RATE, GPD, AT 2.5% SOLIDS	5,350	8,025	BOD AND SS, mg/l JUNE-OCTOBER	10-20	10-20
									BOD AND SS, mg/l NOVEMBER-MAY	10-30	10-30

**BC Brown and Caldwell**  
Consultants  
Eugene, Oregon

SUBMITTED: *Tom R. Lavin* DATE: 1-20-92  
APPROVED: *W.M. Lavin* DATE: 1-26-92  
APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"=SCALE ACCORDINGLY)

FILE: 6151  
DRAWN: GTM  
DESIGNED: WMH,JDB  
CHECKED: BKP  
CHECKED: \_\_\_\_\_



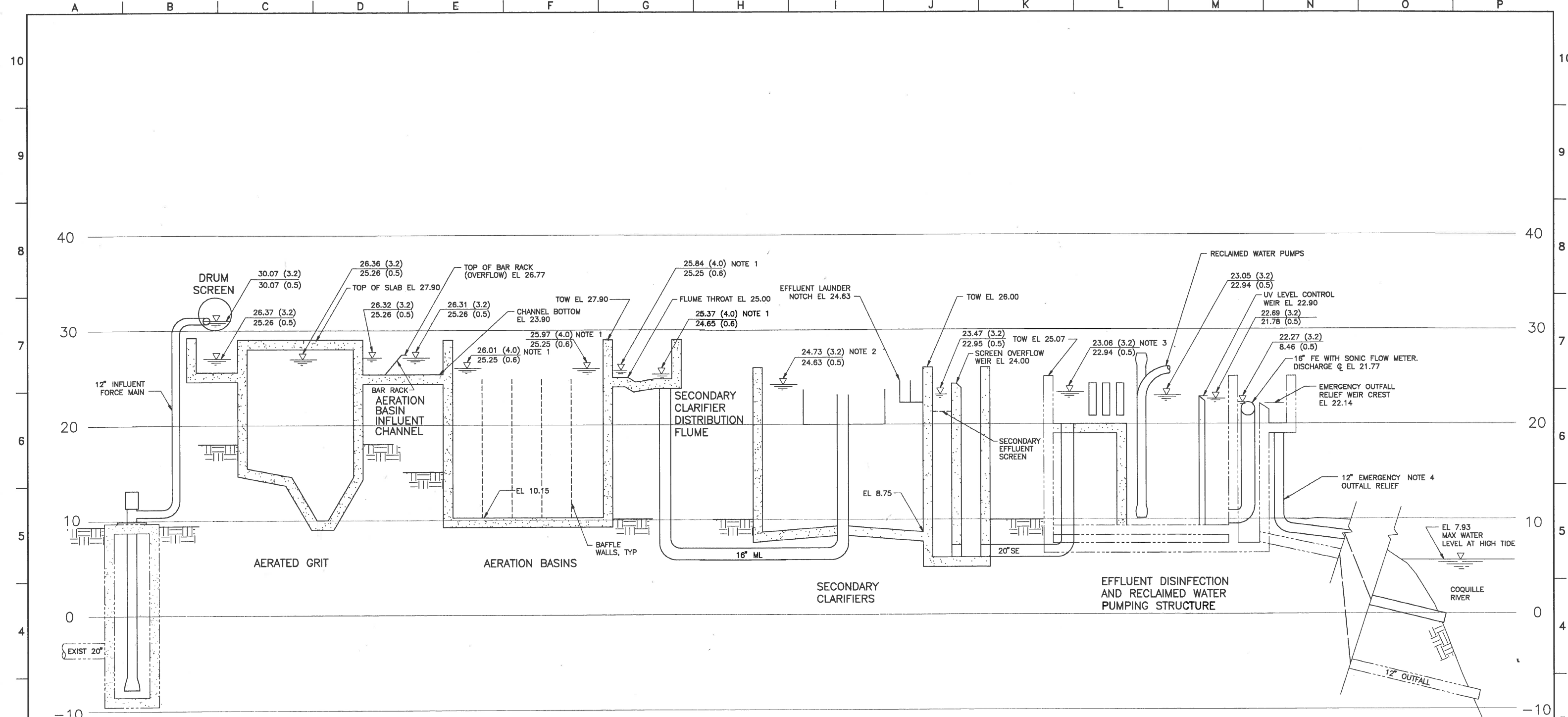
REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.

CITY OF BANDON, OREGON

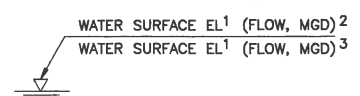
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DESIGN DATA

SCALE	NONE
DRAWING NUMBER	G5
SHEET NUMBER	5



**LEGEND**



- LEGEND NOTES:**
- ELEVATIONS IN FEET ABOVE MEAN SEA LEVEL.
  - FLOW ABOVE LINE RESULTS FROM PLANT PEAK FLOW OF 3.2 MGD.
  - FLOW BELOW LINE RESULTS FROM PLANT AVG. FLOW OF 0.5 MGD.

**NOTES:**

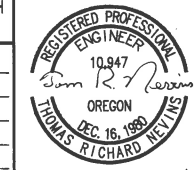
- INCLUDES RAS FLOW.
- FLOW IS SPLIT BETWEEN 2 CLARIFIERS.
- FLOW IS SPLIT BETWEEN 2 PARALLEL CHANNELS.
- FLWS EXCEEDING 2.6 MGD FLOW THROUGH RELIEF DURING HIGH TIDE PERIODS. MINIMUM TIDE LEVEL AT WHICH RELIEF FLOWS COULD OCCUR IS 0.5' MSL.

**BC Brown and Caldwell**  
 Eugene, Oregon

SUBMITTED: *Sam R. Davison* DATE: 1-20-92  
 PROJECT MANAGER  
 APPROVED: *W. Meier* DATE: 1-20-92  
 APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"=SCALE ACCORDINGLY)

FILE 6151  
 DRAWN MDS  
 DESIGNED JDB  
 CHECKED BKP  
 CHECKED \_\_\_\_\_



REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.

CITY OF BANDON, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

HYDRAULIC PROFILE

SCALE  
 NO SCALE

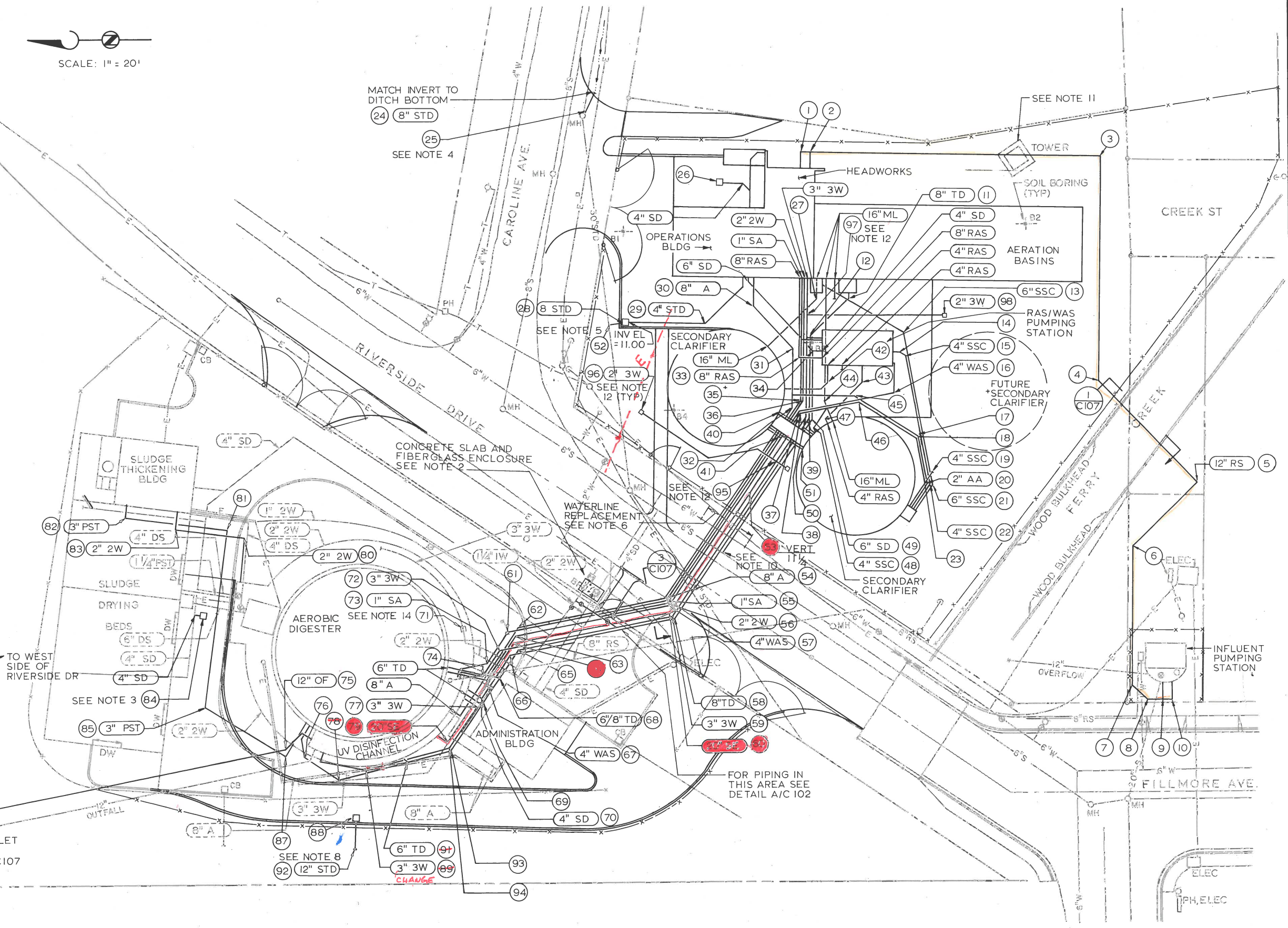
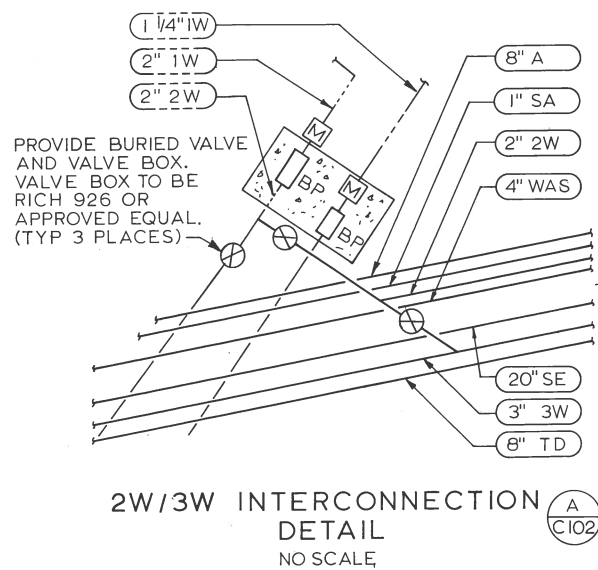
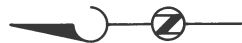
DRAWING NUMBER  
**G6**

SHEET NUMBER  
 6

**NOTES**

1. ALL DEMOLITION SHALL BE SEQUENCED AND TIMED IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE. REFER TO SECTION 01310.
2. CONSTRUCT 6' X 8' 6" X 4" THICK CONCRETE BASE SLAB FOR BACKFLOW PREVENTERS AND METER. INSTALL 5' X 7' 6" HINGED FIBERGLASS ENCLOSURE. ENCLOSURE BY PLASTI-FAB MODEL H OR APPROVED EQUAL.
3. CONNECT CATCH BASIN TO EXISTING 4" SD.
4. TAP EXISTING STORM DRAIN MANHOLE, SIMILAR TO DETAIL B/C106. CONCRETE CHANNELIZATION IS NOT REQUIRED.
5. INSTALL 10" TAPPING SADDLE ON EXISTING 30" CMP. REFER TO DETAIL A/C107. INSERT 8" STORM DRAIN PIPE MINIMUM 6" INTO SADDLE. SEAL JOINT AROUND SADDLE/8" STD WITH NEOPRENE GASKET AND GROUT FOR WATERTIGHT FIT.
6. REMOVE 20 LF OF EXISTING 6" W.L. REPLACE WITH 6" IW.
7. PIPING COORDINATES AT CATCH BASINS ARE REFERENCED TO THE INSIDE EDGE OF CATCH BASIN AT PIPE EXIT.
8. DAYLIGHT END OF 12" STORM DRAIN AND INSTALL 12" TEE IN HORIZONTAL POSITION AT END OF PIPE. REMOVE AND REPLACE RIP RAP AS REQUIRED.
9. REFER TO SHEET C101 FOR ADDITIONAL DEMOLITION REQUIREMENTS.
10. CONNECT NEW 6" SD TO EXISTING 8" S.
11. EXISTING CORPS OF ENGINEERS DREDGE TOWER TO BE RELOCATED BY OTHERS.
12. 2" 3W IRRIGATION PIPING. PROVIDE CONNECTIONS AT LOCATIONS 95 AND 97: CROSS AND 2 VALVES AT 95, TEE AND 1 VALVE AT 97. TERMINATE IRRIGATION PIPING PER DETAIL C/C107.
13. SEE DRAWING C103 FOR BURIED PIPING LOCATION SCHEDULE.
14. INSTALL VALVE IN EXISTING 3" 3W SIMILAR TO DETAIL C/C107.

SCALE: 1" = 20'



**BROWN AND CALDWELL**  
CONSULTING ENGINEERS  
EUGENE, OREGON

SUBMITTED: *Tom R. Levine* DATE: 1-20-92  
APPROVED: *Tom R. Levine* DATE: 1-20-92  
APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)  
FILE: 6151  
DRAWN: JEM (GLD)  
DESIGNED: MWE/RAH (GLD)  
CHECKED: BKP  
CHECKED: \_\_\_\_\_



REVISIONS				
ZONE	REV.	DESCRIPTION	BY	DATE

CITY OF BANDON  
WASTEWATER TREATMENT  
PLANT IMPROVEMENTS

OUTSIDE PIPING AND DEMOLITION PLAN

DRAWING NUMBER  
**C102**  
SHEET NUMBER  
8

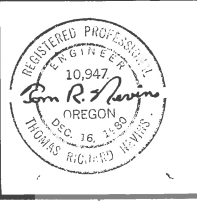
LOCATION NUMBER	PIPE SIZE INCHES	PIPING SYSTEM	COORDINATES		INVERT ELEVATION FEET
			NORTHING	EASTING	
1	12	RS	554,080.3	957,332.5	11.00
2	12	RS	554,076.8	957,332.3	10.90
3	12	RS	553,962.0	957,324.0	7.00
4	12	RS	553,968.4	957,235.2	4.90
5	12	RS	553,931.7	957,192.9	4.85
6	12	RS	553,961.0	957,167.0	4.80
7	12	RS	553,965.0	957,116.0	4.70
8	12	RS	553,960.0	957,110.0	4.70
9	12	RS	553,953.9	957,109.5	4.70
10	12	RS	553,950.5	957,109.2	4.70
11	8	TD	554,068.0	957,274.0	4.27
12	8	TD	554,082.8	957,261.2	4.34
13	6	SSC	554,045.1	957,260.2	9.58
14	4	SSC	554,047.5	957,251.2	9.00
15	4	SSC	554,044.5	957,248.0	9.00
16	4	WAS	554,051.5	957,237.5	10.30
17	2	AA	554,041.3	957,216.3	9.00
18	4	SSC	554,042.3	957,215.5	9.00
19	4	SSC	554,036.5	957,206.8	10.62
20	2	AA	554,039.3	957,202.1	9.25
21	6	SSC	554,037.3	957,202.0	9.09
22	4	SSC	554,038.3	957,202.3	9.00
23	4	SSC	554,040.3	957,201.9	10.00
24	8	STD	554,164.0	957,361.0	16.00
25	8	STD	554,167.1	957,354.8	13.50
26	4	SD	554,116.5	957,323.5	11.20
27	16	ML	554,080.5	957,275.7	9.30
28	8	STD	554,158.8	957,267.0	11.00
29	4	STD	554,125.9	957,266.7	11.55
30	8	A	554,106.0	957,273.7	10.30
31	8	A	554,089.0	957,254.5	10.30
32	8	A	554,090.5	957,236.0	10.30
33	8	RAS	554,088.0	957,250.7	10.30
34	6	SD	554,081.7	957,254.0	7.50
35	1	SA	554,088.0	957,237.5	9.30
36	2	2W	554,087.5	957,236.5	9.30
37	4	WAS	554,089.5	957,232.5	10.30
38	4	SSC	554,089.0	957,231.5	10.80
39	8	TD	554,085.2	957,228.5	4.47
40	6	TD	554,097.3	957,229.7	8.50
41	4	SSC	554,098.8	957,221.2	11.10
42	4	RAS	554,075.0	957,240.5	9.50
43	4	RAS	554,064.2	957,241.3	9.50
44	16	ML	554,079.7	957,236.7	6.19
45	2	AA	554,067.7	957,236.5	10.00
46	4	SSC	554,067.0	957,234.5	10.31
47	4	RAS	554,079.2	957,228.5	5.00
48	4	SSC	554,085.0	957,222.7	10.79
49	6	SD	554,083.7	957,228.5	5.70
50	3	3W	554,087.8	957,227.0	7.00
51	4	TD	554,090.0	957,216.2	6.00
52	8	STD	554,162.0	957,266.7	9.70
53	20	SE	554,109.7	957,201.4	3.80
54	8	A	554,147.5	957,160.7	4.90
55	1	SA	554,147.1	957,159.7	5.40
56	2	2W	554,146.6	957,158.7	5.40
57	4	WAS	554,145.9	957,157.8	5.20
58	8	TD	554,143.1	957,152.6	5.05
59	3	3W	554,143.6	957,146.5	5.20
60	20	SE	554,144.6	957,144.5	3.80
61	1	SA	554,209.8	957,151.1	8.50
62	8	A	554,206.3	957,152.5	6.50
63	4	WAS	554,207.7	957,149.4	6.70
64	20	SE	554,207.8	957,146.9	3.80
65	8	TD	554,206.9	957,143.9	5.47
66	4	SD	554,209.6	957,142.0	8.65
67	4	WAS	554,220.6	957,132.6	7.30
68	6/8	TD	554,215.2	957,133.1	5.56
69	6	TD	554,226.4	957,118.4	5.68
70	4	SD	554,227.0	957,119.1	8.94
71	3	3W	554,227.0	957,154.5	7.60
72	3	3W	554,214.2	957,143.9	8.50
73	1	SA	554,222.1	957,135.3	8.50
74	3	3W	554,221.9	957,133.9	8.50
75	12	OF	554,303.0	957,108.3	7.30
76	6	TD	554,294.7	957,102.0	6.19
77	3	3W	554,228.6	957,117.1	7.50
78	6	TD	554,285.4	957,095.4	6.11
79	20	SE	554,237.6	957,107.8	3.80
80	2	2W	554,314.2	957,194.0	8.00
81	3	PST	554,320.8	957,197.5	7.60
82	3	PST	554,360.0	957,204.8	7.60
83	2	2W	554,340.1	957,199.0	8.00
84	4	SD	554,333.3	957,164.6	8.30
85	3	PST	554,333.3	957,132.1	7.60
86					
87	3	PST	554,303.0	957,106.4	6.70
88	12	STD	554,276.0	957,079.0	7.00
89	3	3W	554,272.2	957,098.2	7.50
90	2	2W	554,459.0	957,078.0	-2.00
91	12	TD	554,256.5	957,099.5	5.92
92	6	TD	554,277.0	957,069.0	6.80
93	6	TD	554,239.0	957,101.8	5.81
94	3	3W	554,239.6	957,102.8	7.50
95	3	3W	554,100.0	957,211.1	7.00
96	2	3W	554,151.0	957,232.5	
97	3	3W	554,084.8	957,268.9	10.00
98	2	3W	554,030.0	957,265.3	

**BC BROWN AND CALDWELL**  
CONSULTING ENGINEERS  
EUGENE, OREGON

SUBMITTED: *Don R. Lewis* DATE: 1-20-92  
APPROVED: *W. Meyer* DATE: 1-20-92  
APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2"=SCALE ACCORDINGLY)

FILE 6151  
DRAWN JEM (GLD)  
DESIGNED MWE/RAH(GLD)  
CHECKED WMH  
CHECKED \_\_\_\_\_



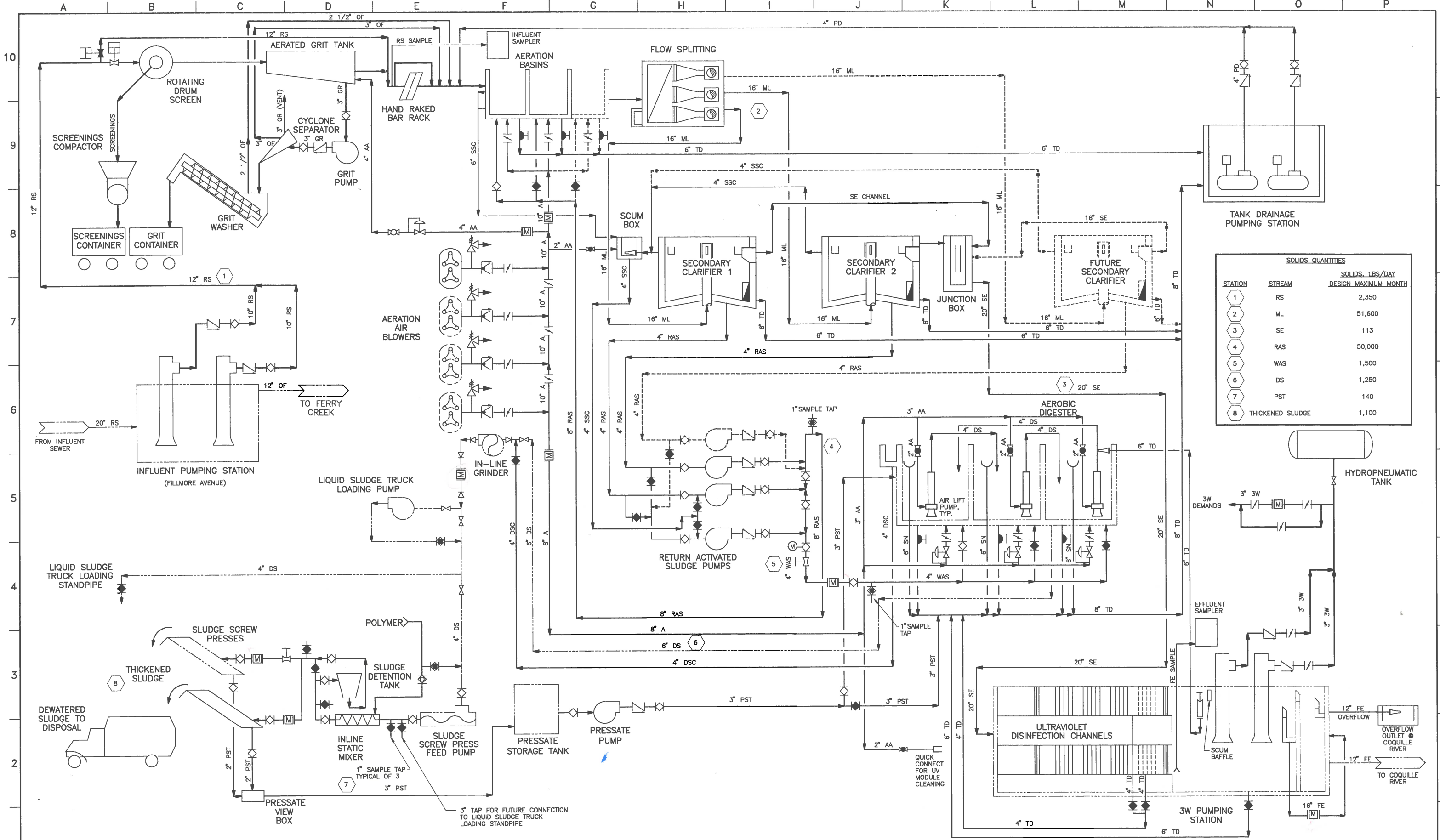
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ZONE	REV.	DESCRIPTION	BY	DATE	APP.

CITY OF BANDON

WASTEWATER TREATMENT  
PLANT IMPROVEMENTS

BURIED PIPING LOCATION SCHEDULE

DRAWING NUMBER  
**C103**  
SHEET NUMBER  
9



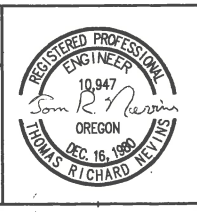
SOLIDS QUANTITIES		
STATION	STREAM	SOLIDS, LBS/DAY DESIGN MAXIMUM MONTH
1	RS	2,350
2	ML	51,600
3	SE	113
4	RAS	50,000
5	WAS	1,500
6	DS	1,250
7	PST	140
8	THICKENED SLUDGE	1,100

**BC Brown and Caldwell**  
Consultants  
Eugene, Oregon

SUBMITTED: *Tom R. Harris* DATE: 1-20-92  
APPROVED: *W. Meyer* DATE: 1-26-92  
APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2" SCALE ACCORDINGLY)

FILE 6151  
DRAWN GTM  
DESIGNED WMH  
CHECKED BKP  
CHECKED \_\_\_\_\_



REVISIONS				
ZONE	REV.	DESCRIPTION	BY	DATE

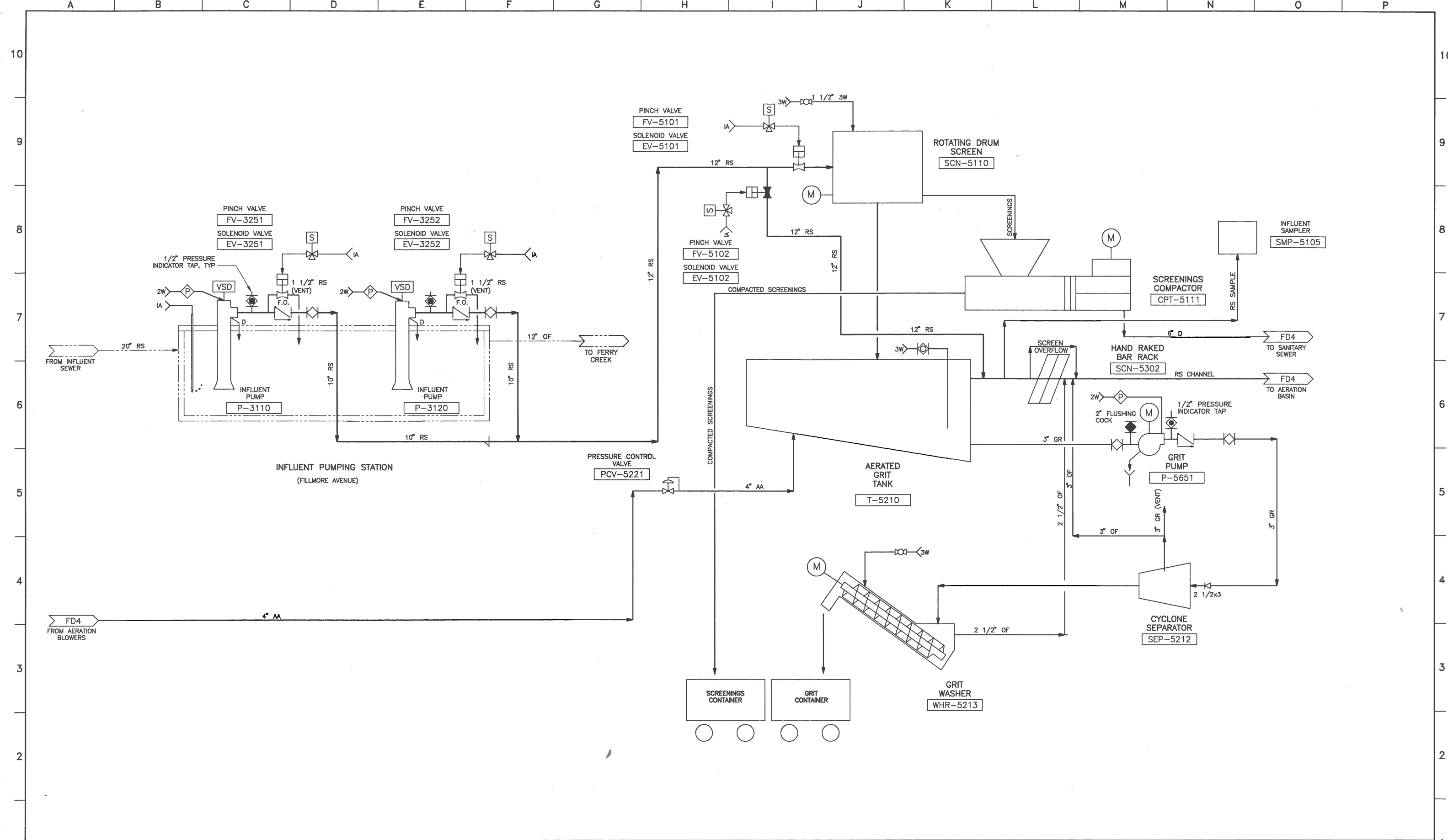
CITY OF BANDON, OREGON

WASTEWATER TREATMENT  
PLANT IMPROVEMENTS

SCALE  
NO SCALE

DRAWING NUMBER  
FD2

SHEET NUMBER  
16

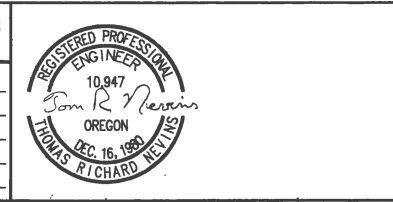


**BC Brown and Caldwell**  
 Consultants  
 Eugene, Oregon

SUBMITTED: *Tom R. Nevins* DATE: 1-20-92  
 PROJECT MANAGER  
 APPROVED: *W.M.H.* DATE: 1-20-92  
 CHECKED: BKP  
 APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

LINE IS 2 INCHES  
 AT FULL SIZE  
 (IF NOT 2" - SCALE ACCORDINGLY)

FILE 6151  
 DRAWN REJ/MDS  
 DESIGNED WMH  
 CHECKED BKP  
 CHECKED \_\_\_\_\_



REVISIONS				
ZONE	REV.	DESCRIPTION	BY	DATE

CITY OF BANDON, OREGON

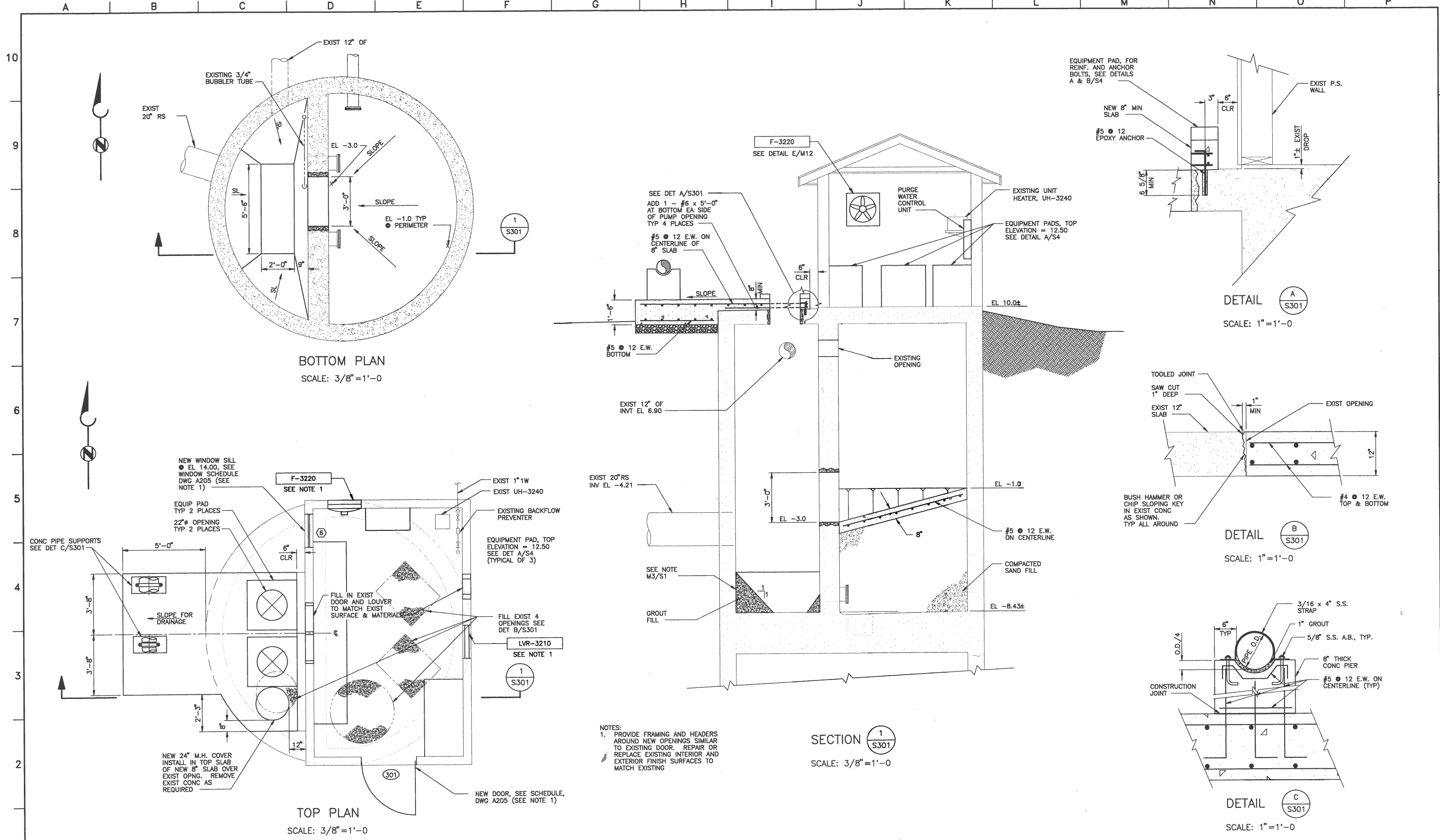
WASTEWATER TREATMENT  
 PLANT IMPROVEMENTS

SCALE  
 NO SCALE

DRAWING NUMBER  
**FD3**

SHEET NUMBER  
 17

FLOW DIAGRAM  
 INFLUENT PUMPING STATION  
 AND HEADWORKS

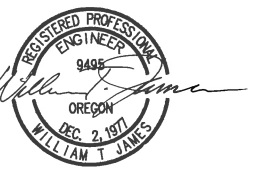


**BC** Brown and Caldwell  
Consultants  
Eugene, Oregon

SUBMITTED: *Tom R. Ferris* DATE: 1-20-92  
APPROVED: *W. J. James* DATE: 1-20-92  
PROJECT MANAGER  
BROWN AND CALDWELL

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" SCALE ACCORDINGLY)

FILE: 6151  
DRAWN: MDS/REJ  
DESIGNED: WTJ  
CHECKED: BKP



REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.

CITY OF BANDON, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

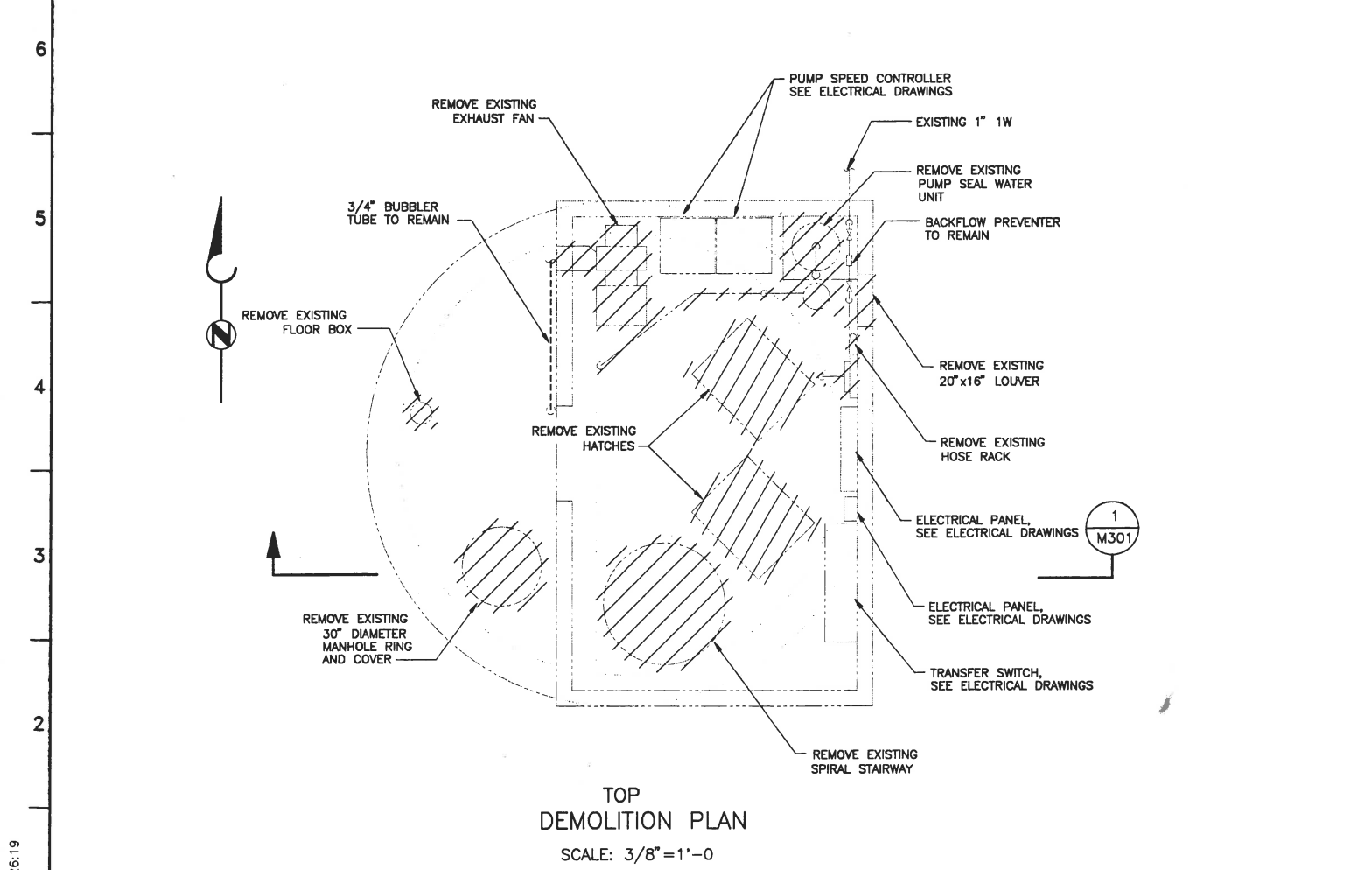
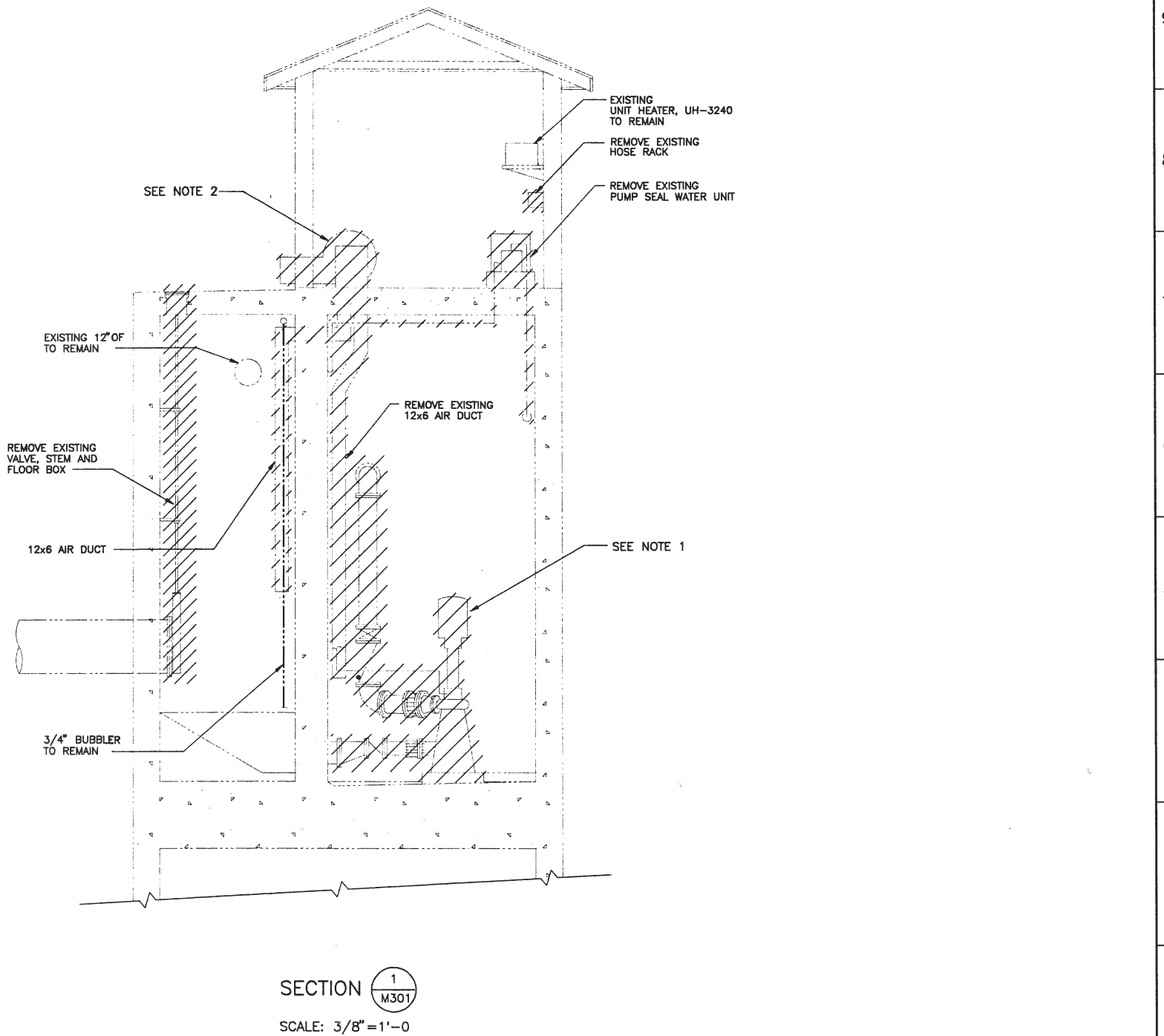
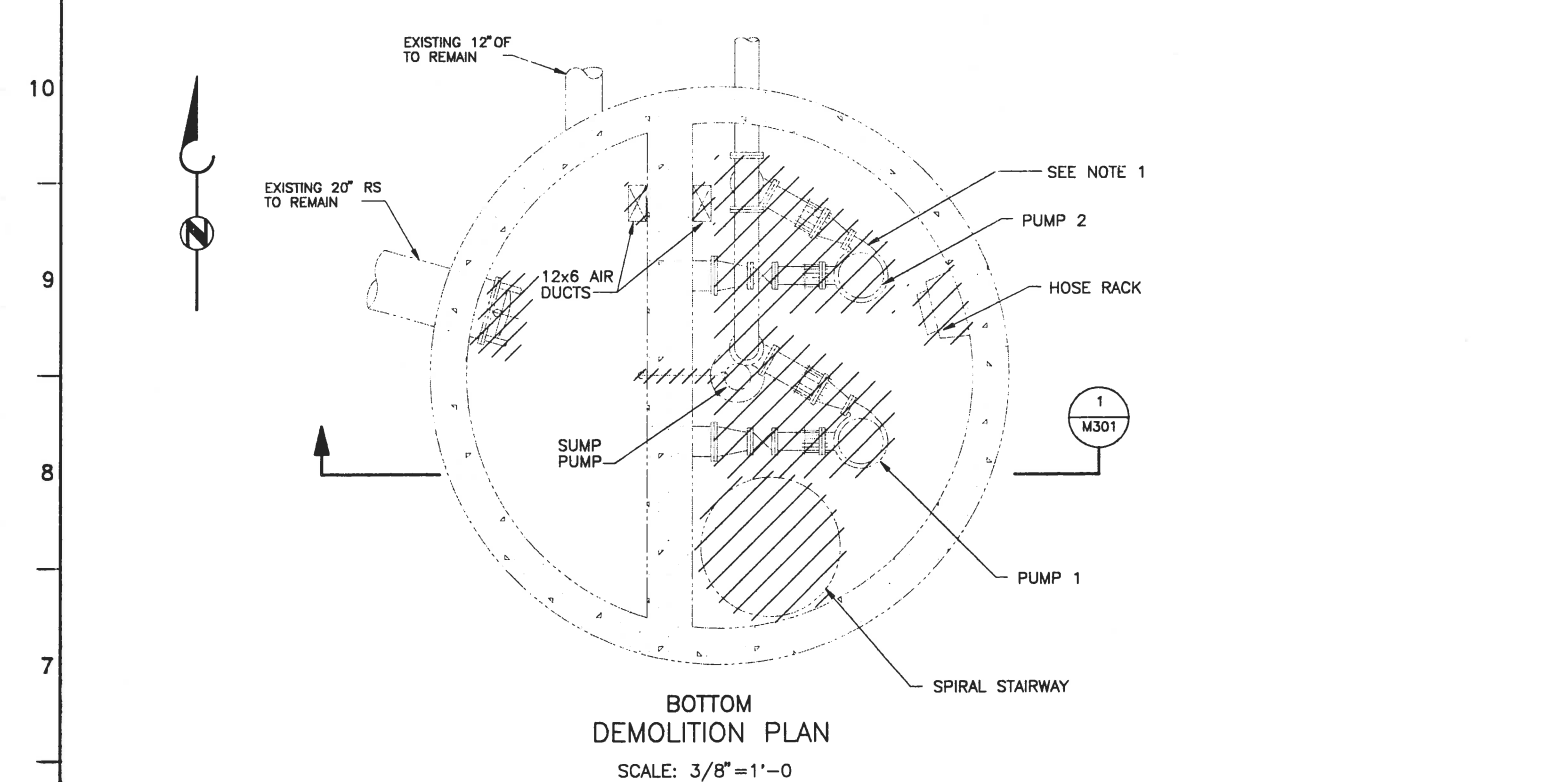
INFLUENT PUMPING STATION  
PLANS, SECTION AND  
DETAILS

SCALE: 3/8" = 1'

DRAWING NUMBER: **S301**

SHEET NUMBER: 38

NOTES:  
 1. REMOVE EXISTING PUMPS, PIPES AND APPURTENANCES.  
 2. REMOVE EXISTING EXHAUST FAN AND ASSOCIATED DUCTWORK.



6151M301 01/08/92 07:26:19

**BC Brown and Caldwell**  
 Eugene, Oregon

SUBMITTED: *Tom R. Harris* DATE: 1-20-92  
 APPROVED: *W. Meyer* DATE: 1-20-92  
 APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)

FILE	6151
DRAWN	GTM
DESIGNED	WMH
CHECKED	BKP
CHECKED	



REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.

CITY OF BANDON, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

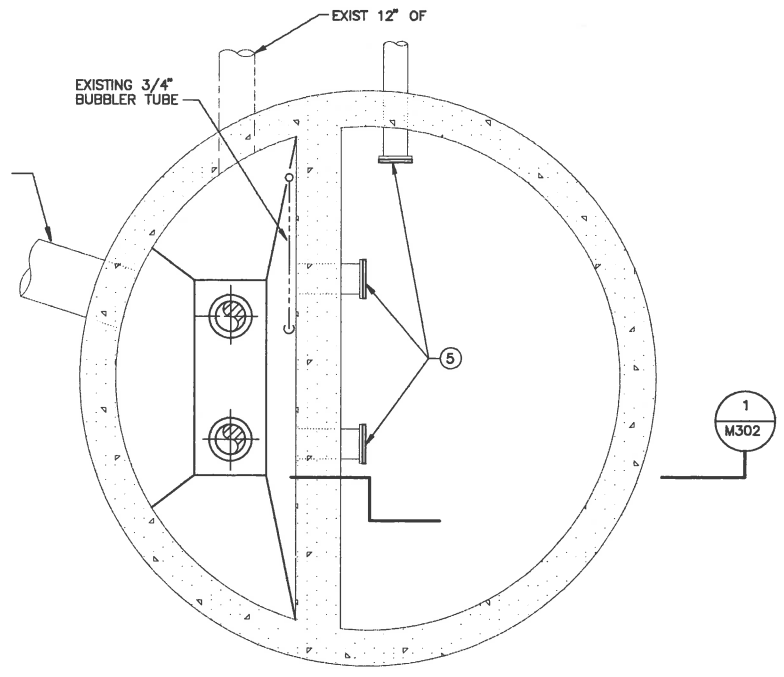
INFLUENT PUMPING STATION

DEMOLITION PLANS AND SECTION

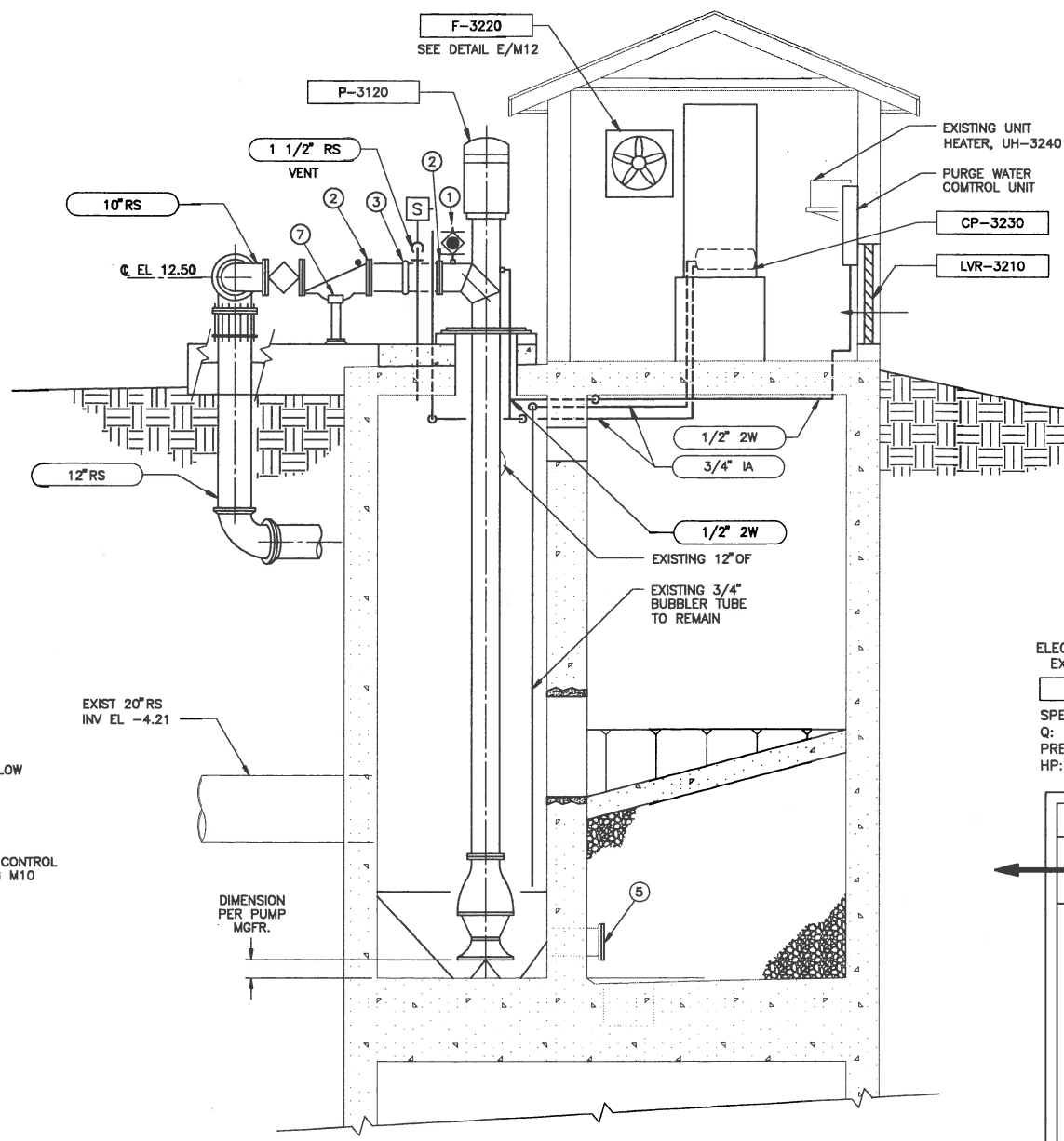
SCALE	
DRAWING NUMBER	M301
SHEET NUMBER	78



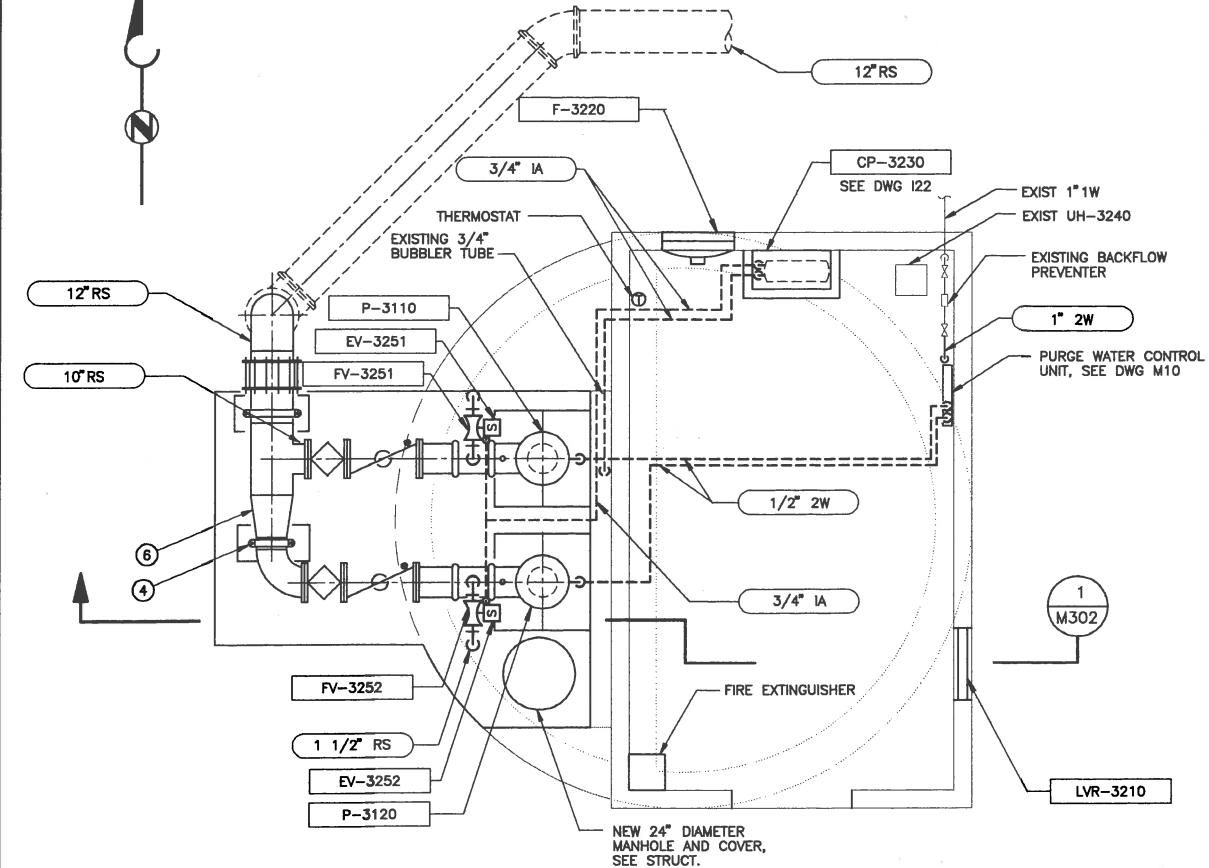
- KEY NOTES:**
- ① 1/2-INCH PRESSURE INDICATOR CONNECTION.
  - ② GROOVE-TYPE FLANGE CONNECTION. VICTAULIC STYLE 341 VIC FLANGE OR EQUAL.
  - ③ GROOVE-TYPE COUPLING. VICTAULIC STYLE 77 OR EQUAL.
  - ④ CONCRETE PIPE SADDLE WITH HOLD-DOWN STRAP. SEE DETAIL C/S301.
  - ⑤ BLIND FLANGE EXISTING 8" PIPES.
  - ⑥ 10" X 12" ECCENTRIC REDUCER.
  - ⑦ BEND 1/4" X 4" WIDE STEEL PLATE SADDLE TO MATCH BOTTOM SHAPE OF VALVE. WELD BENT PLATE SADDLE TO TYPE N STRUCTURAL ATTACHMENT. HOT DIP GALVANIZE AFTER FABRICATION.



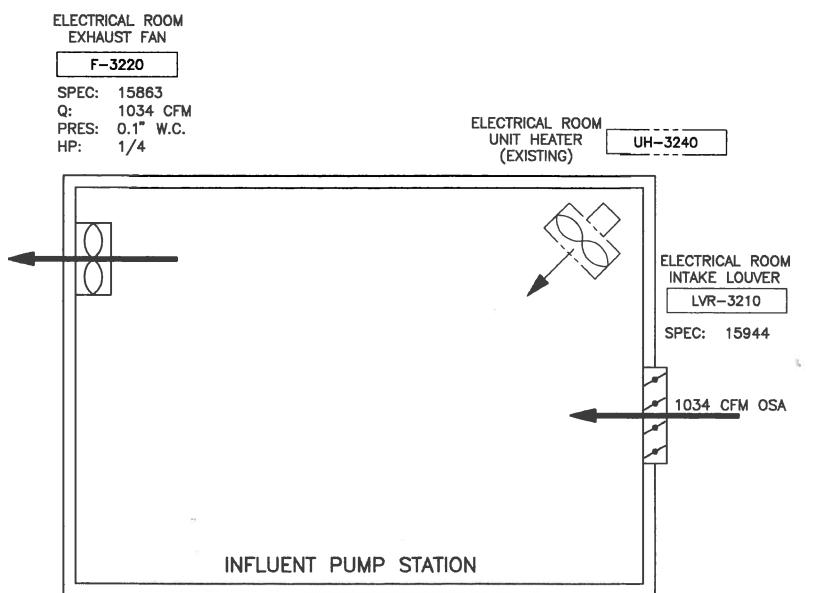
**BOTTOM PLAN**  
SCALE: 3/8"=1'-0"



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



**TOP PLAN**  
SCALE: 3/8"=1'-0"



**AIR FLOW SCHEMATIC**

**BC Brown and Caldwell**  
Consultants  
Eugene, Oregon

SUBMITTED: *Tom R. Perkins* DATE: 1-20-92  
APPROVED: *W. Meyer* DATE: 1-20-92  
APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"=SCALE ACCORDINGLY)

FILE 6151  
DRAWN MDS  
DESIGNED WMH  
CHECKED BKP  
CHECKED \_\_\_\_\_



REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.

CITY OF BANDON, OREGON

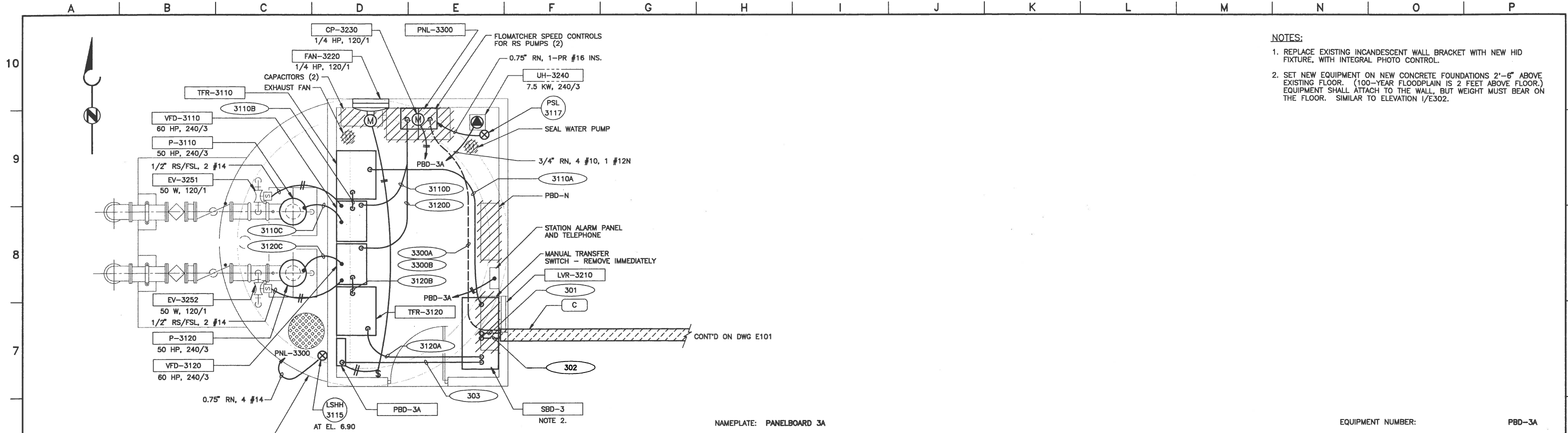
WASTEWATER TREATMENT PLANT IMPROVEMENTS

INFLUENT PUMPING STATION  
PLANS, SECTION AND  
AIR FLOW SCHEMATIC

SCALE  
3/8"=1'

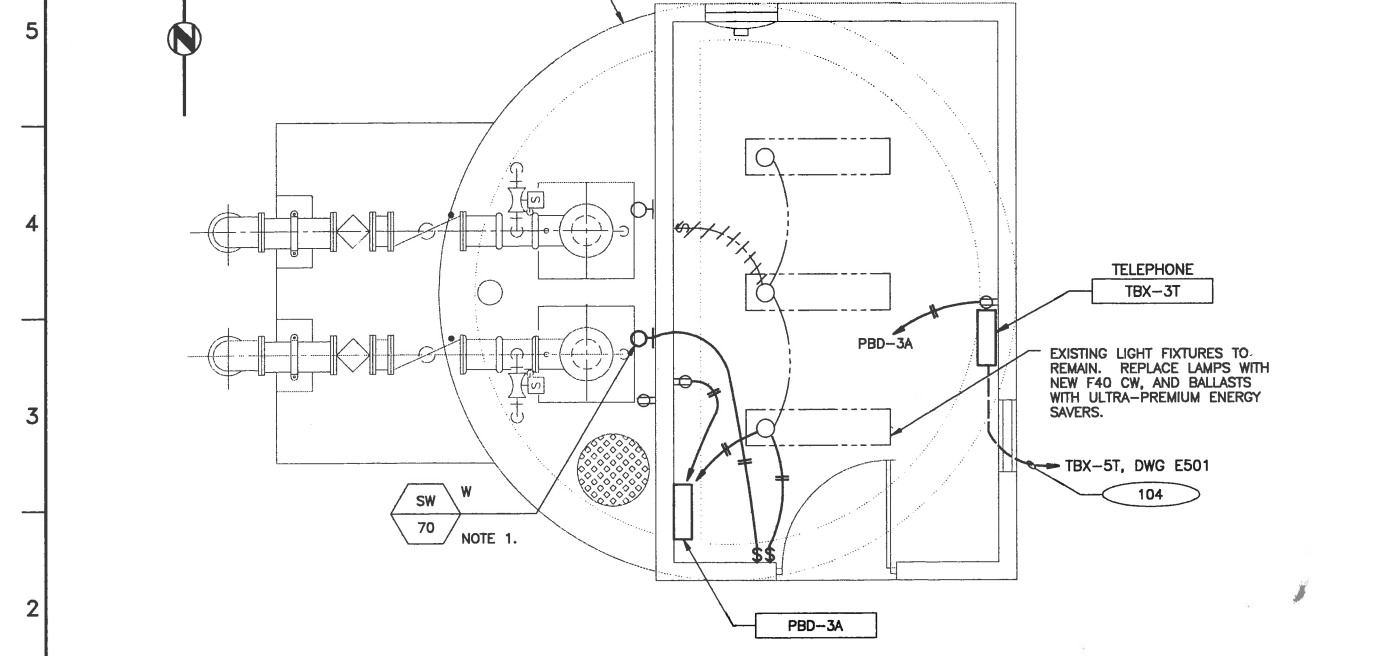
DRAWING NUMBER  
**M302**

SHEET NUMBER  
79



UPPER POWER PLAN  
SCALE: 3/8" = 1'-0"

CLASS I, DIV. 2  
GROUP D  
ENVELOPE WITHIN 10'  
HORIZONTALLY AND  
18" VERTICALLY OF ANY  
WET WELL OPENINGS



UPPER LIGHTING PLAN  
SCALE: 3/8" = 1'-0"

- NOTES:
- REPLACE EXISTING INCANDESCENT WALL BRACKET WITH NEW HID FIXTURE, WITH INTEGRAL PHOTO CONTROL.
  - SET NEW EQUIPMENT ON NEW CONCRETE FOUNDATIONS 2'-6" ABOVE EXISTING FLOOR. (100-YEAR FLOODPLAIN IS 2 FEET ABOVE FLOOR.) EQUIPMENT SHALL ATTACH TO THE WALL, BUT WEIGHT MUST BEAR ON THE FLOOR. SIMILAR TO ELEVATION I/E302.

NAMEPLATE: PANELBOARD 3A

HIGH VOLTAGE: 240  
LOW VOLTAGE: 120  
PHASE: 1  
WIRE: 3  
HERTZ: 60

NEUTRAL BUS: YES  
GROUND BUS: YES  
MAIN BREAKER SIZE: 50 AMPS  
MINIMUM BUS SIZE: 100 AMPS  
AVAILABLE FAULT CURRENT: AMPS, RMS SYMMETRICAL

EQUIPMENT NUMBER: PBD-3A

LOCATION: Influent Pumping Station  
FED FROM: SBD-3  
FEED: Bottom  
ENCLOSURE: NEMA 12, Industrial Indoor  
SPECIFICATION: Section 16470

UNIT NO.	EQUIPMENT NUMBER	NAMEPLATE ENGRAVING EQUIPMENT NAME OR LOAD DESCRIPTION	LOAD SIZE	LOAD UNIT	CONNECTED LOAD				DEMAND FACTOR	DESIGN LOAD			DISCONNECT		STARTER		CONTROL STRATEGY	REMARKS	
					VOLT	PH	HP	AMPS		KVA	HP	AMPS	KVA	TYPE	AMPS	POLES			NEMA SIZE
1	F-3220	Electrical Room Exhaust Fan	0.25	HP	120	1	0.3	5.8	0.7	1.25	0.3	7.3	0.9	CB	20	1	0	HS	17010-13
2	CP-3220	Instrument Air Compressor	1/16	HP	120	1	0.1	1.4	0.2	1.00	0.1	1.4	0.2	CB	20	1	0	FVNR	DIV. 17
3	EV-3251	Pinch Valve, P-3110	50	W	120	1		0.4	0.1	1.00		0.4	0.1	CB	20	1			
4	EV-3252	Pinch Valve, P-3120	50	W	120	1		0.4	0.1	1.00		0.4	0.1	CB	20	1			
5		Lights	400	W	120	1		3.3	0.4	1.25		4.2	0.5	CB	20	1			
6		Receptacles	540	W	120	1		4.5	0.5	1.00		4.5	0.5	CB	20	1			
7		Telephone	100	W	120	1		0.8	0.1	1.00		0.8	0.1	CB	20	1			
8		Alarms, telemetry	50	W	120	1		0.4	0.1	1.00		0.4	0.1	CB	20	1			
9		Spare												CB	20	1			
10		Spare												CB	20	1			
11		Spare																	
12		Spare																	
13		Space																	
14		Space																	
15		Space																	
16		Space																	
17		Space																	
18		Space																	
19		Space																	
20		Space																	
Minimum service size:							0.3	8.5	2.0		0.3	9.7	2.3						
Plus growth factor:			25	%								2.4	0.6						
Design service size:												12.1	2.9						

PBD-3A SCHEDULE 1  
E301  
NTS

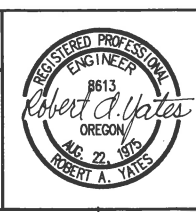
- REFERENCES:
- DRAWING E22, NEW PLANT ONE LINE DIAGRAM.

**BC Brown and Caldwell**  
Consultants  
Eugene, Oregon

SUBMITTED: *Tom R. Hawkins* DATE: 1-20-92  
APPROVED: *[Signature]* DATE: 1-20-92  
APPROVED: *[Signature]* DATE:

LINE IS 2 INCHES  
AT FULL SIZE  
(IF NOT 2"-SCALE ACCORDINGLY)

FILE 6151  
DRAWN GTM  
DESIGNED RAY  
CHECKED KLG  
CHECKED



REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.

CITY OF BANDON, OREGON

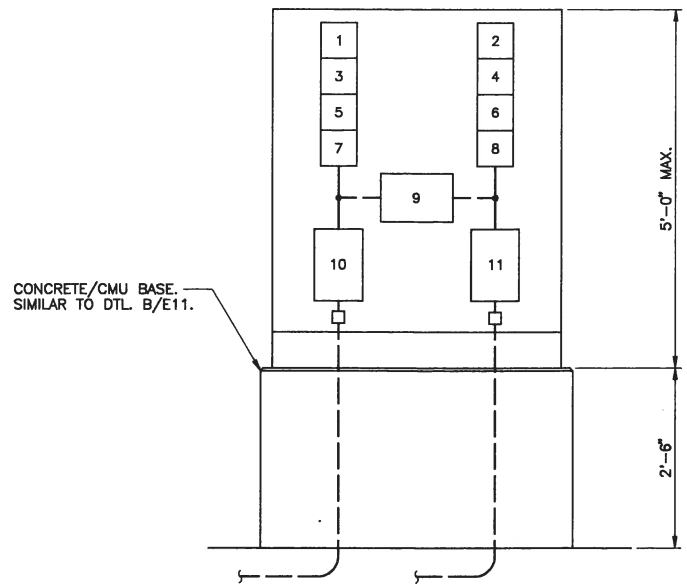
WASTEWATER TREATMENT  
PLANT IMPROVEMENTS

INFLUENT PUMPING STATION  
POWER AND LIGHTING PLANS

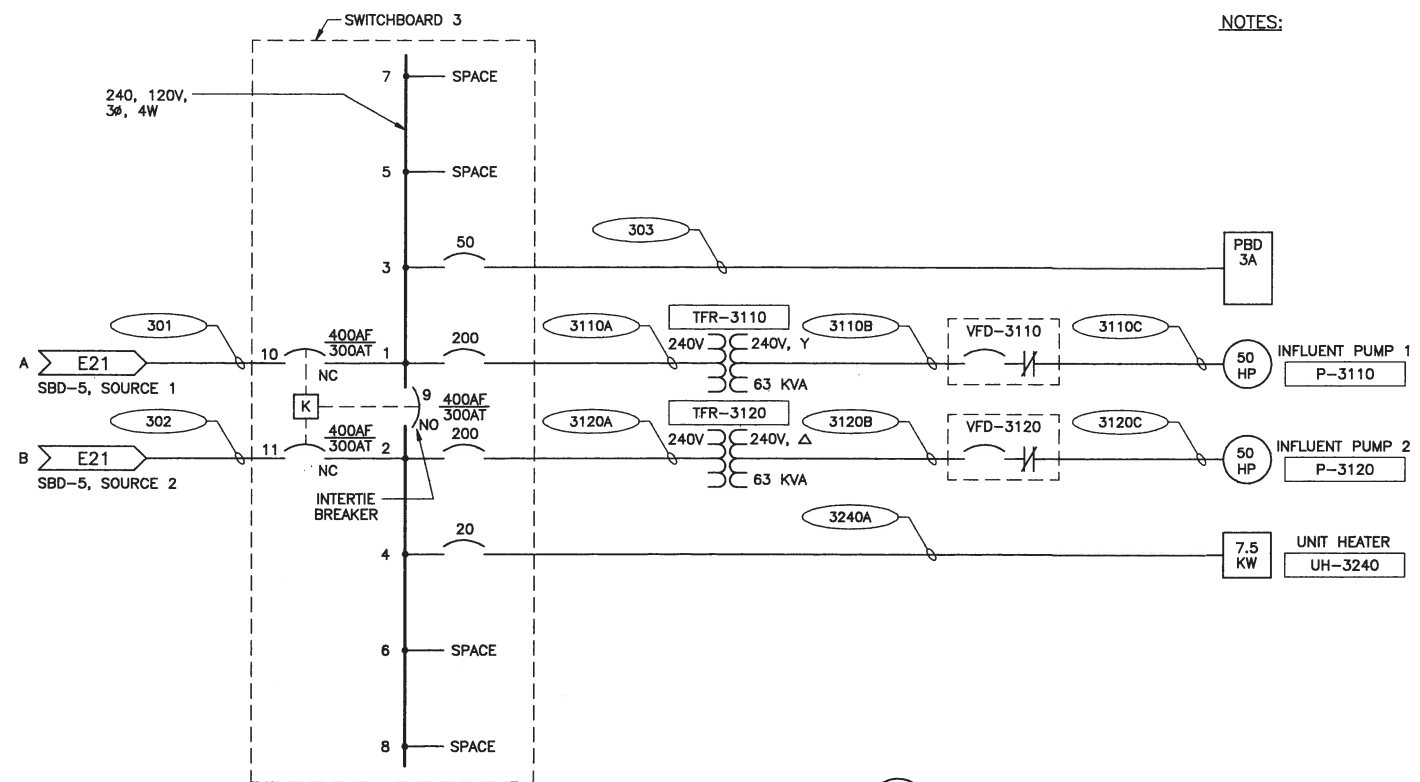
SCALE

DRAWING NUMBER  
**E301**

SHEET NUMBER  
118



**SBD-3 ELEVATION** (1) E302  
SCALE: 3/4" = 1'-0"



**ONE LINE DIAGRAM** (1) E301  
NTS

NOTES:

NAMEPLATE: SWITCHBOARD 3

HIGH VOLTAGE: 240  
LOW VOLTAGE: 120  
PHASE: 3  
WIRE: 4  
HERTZ: 60

NEUTRAL BUS: YES  
GROUND BUS: YES  
MAIN BREAKER SIZE: 300 AMPS  
MINIMUM BUS SIZE: 400 AMPS  
AVAILABLE FAULT CURRENT: AMPS, RMS SYMETRICAL

EQUIPMENT NUMBER: SBD-3  
LOCATION: Influent Pumping Station  
FED FROM: SBD-5A and SBD-5B  
FEED: Bottom  
ENCLOSURE: NEMA 12, Industrial Indoor  
SPECIFICATION: Section 16311

UNIT NO.	NAMEPLATE ENGRAVING		CONNECTED LOAD							DESIGN LOAD			DISCONNECT		STARTER		CONTROL STRATEGY	REMARKS	
	EQUIPMENT NUMBER	EQUIPMENT NAME OR LOAD DESCRIPTION	LOAD SIZE	LOAD UNIT	VOLT	PH	HP	AMPS	KVA	DEMAND FACTOR	HP	AMPS	KVA	TYPE	AMPS	POLES			NEMA SIZE
1	VFD-3110	Influent Pump 1 Variable Frequency Drive	50	HP	240	3	50.0	139.8	58.1	1.00	50.0	139.8	58.1	CB	200	3	VFD	17010-1	
2	VFD-3120	Influent Pump 2 Variable Frequency Drive	50	HP	240	3	50.0	139.8	58.1	0.00	0.0	0.0	0.0	CB	200	3	VFD	17010-1	
3	PBD-3A	Panelboard 3A	See sched.		240	1	0.3	8.5	2.0	1.00	0.3	9.7	2.3	CB	50	2			
4	UH-3240	Existing Unit Heater	7.5	KW	240	3		18.0	7.5	1.00	0.0	18.0	7.5	CB	20	3	CONT		RECONNECT
5		Space																	
6		Space																	
7		Space																	
8		Space																	
9		Intertie Breaker												CB	300	3			
10		Main Breaker, Source 1												CB	300	3			
11		Main Breaker, Source 2												CB	300	3			
Subtotals:								100.3	306.1	125.8			50.3	167.5	67.9				
	VFD-3110	Plus 25% of largest motor:	50	HP				34.9	14.5				34.9	14.5					
		Minimum service size:						341.1	140.3				202.4	82.5					
		Plus growth factor:	25	%				41.9	17.0										
Design service size:													244.3	99.4					

**SBD-3 SCHEDULE** (2) E302  
NTS

RACEWAY				FEEDER SCHEDULE						
NUMBER	QTY.	SIZE	TYPE	NUMBER	NO. SETS	CABLE QTY.	COND. SIZE	GND. SIZE	INS. TYPE	PURPOSE
303	1	1.5"	RN	PBD-3A	1	3-1C	8	8	EPR	POWER
3110A	1	2"	RN	3110A	1	3-1C	3/0	6	EPR	POWER
3110B	1	2"	RN	3110B	1	3-1C	3/0	6	EPR	POWER
3110C	1	2"	RN	3110C	1	3-1C	3/0	6	EPR	POWER
3110D	1	.75"	RN	SC-3110	1	1-PR	16	SHLD	INS	SPEED
				YS-3110	1	2-1C	14	-	EPR	RUN
				NL-3110	1	2-1C	14	-	EPR	STATUS
				UA-3110	1	1-PR	16	SHLD	INS	TROUBLE
				X-3110A	1	1-PR	16	SHLD	INS	SPARE
				X-3110B	1	2-1C	14	-	EPR	SPARE
3120A	1	2"	RN	3120A	1	3-1C	2/0	6	EPR	POWER
3120B	1	2"	RN	3120B	1	3-1C	2/0	6	EPR	POWER
3120C	1	2"	RN	3120C	1	3-1C	2/0	6	EPR	POWER
3120D	1	.75"	RN	SC-3120	1	1-PR	16	SHLD	INS	SPEED
				YS-3120	1	2-1C	14	-	EPR	RUN
				NL-3120	1	2-1C	14	-	EPR	STATUS
				UA-3120	1	1-PR	16	SHLD	INS	TROUBLE
				X-3120A	1	1-PR	16	SHLD	INS	SPARE
				X-3120B	1	2-1C	14	-	EPR	SPARE
3300A	1	2"	RN	LAH-3115	1	1-PR	16	SHLD	INS	LEVEL ALARM
				LAHH-3115	1	1-PR	16	SHLD	INS	LEVEL ALARM
				PAL-3117	1	1-PR	16	SHLD	INS	PRESSURE ALARM
				PAL-3130	1	1-PR	16	SHLD	INS	PRESSURE ALARM
					2	1-PR	16	SHLD	INS	SPARES
3300B	1	2"	RN							SPARE

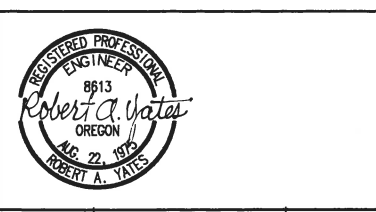
REFERENCES:  
1. DRAWING E22, NEW PLANT ONE LINE DIAGRAM.

**BC Brown and Caldwell**  
Consultants  
Eugene, Oregon

SUBMITTED: *Tom R. Lewis* DATE: 1-20-92  
APPROVED: *[Signature]* DATE: 1-20-92  
APPROVED: *[Signature]* DATE:

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"=SCALE ACCORDINGLY)

FILE: 6151  
DRAWN: GS  
DESIGNED: RAY  
CHECKED: KLG  
CHECKED:



REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.

CITY OF BANDON, OREGON

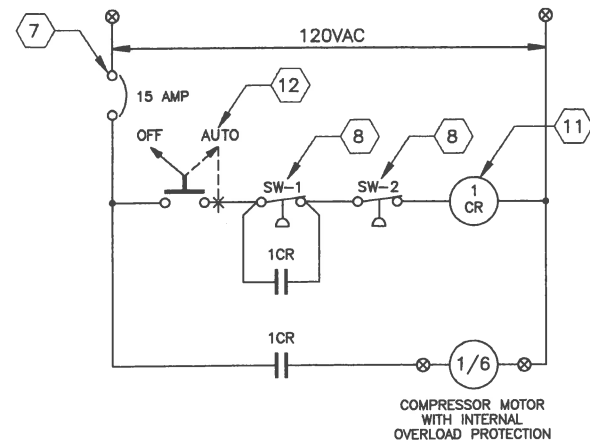
WASTEWATER TREATMENT PLANT IMPROVEMENTS

INFLUENT PUMPING STATION  
SWITCHBOARD 3

SCALE AS SHOWN  
DRAWING NUMBER E302  
SHEET NUMBER 119

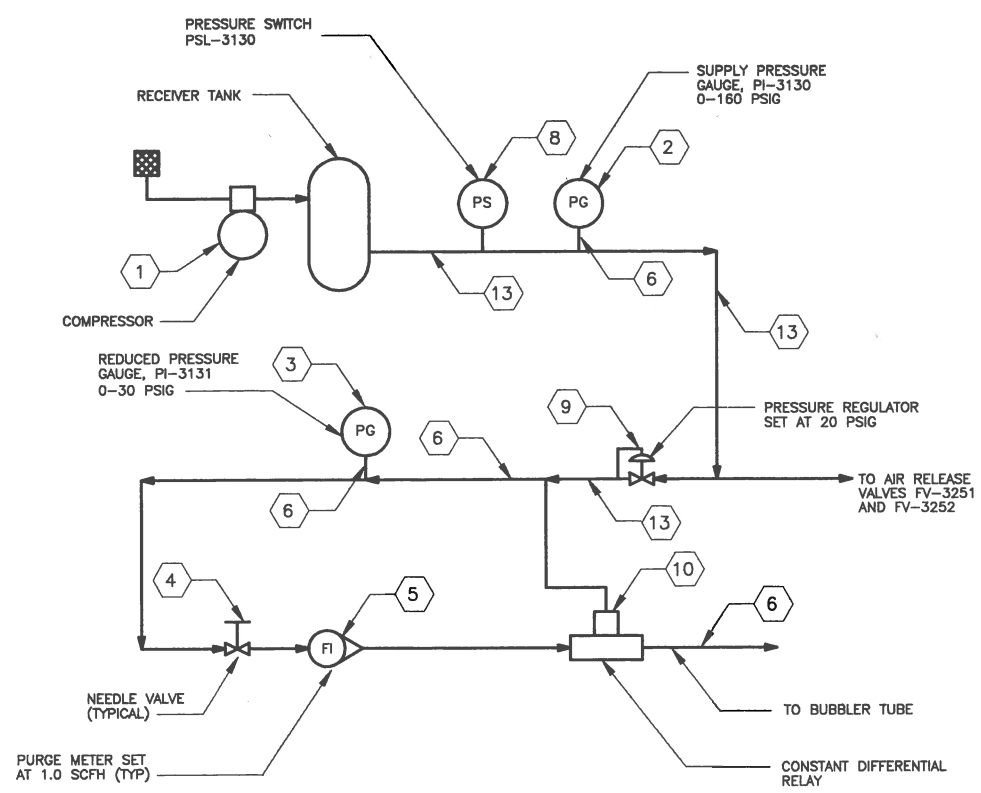
NAMEPLATE SCHEDULE				
NUMBER	FIRST LINE	SECOND LINE	THIRD LINE	TAG
NP-1	CONTROL	PANEL	PNL-3300	
NP-2	SUPPLY	POWER		PI-3130
NP-3	REDUCED	PRESSURE		PI-3131
NP-4	BUBBLE	TUBE	AIR FLOW	
NP-5	WET	WELL	LEVEL	LIC-3115
NP-6	AIR	COMPRESSOR	SELECT	
NP-7	LEAD	PUMP		
NP-8	INFLUENT	PUMP 1		
NP-9	INFLUENT	PUMP 2		
NP-10				

- NOTES:
- PUMP SEQUENCER PANEL SHALL BE CONSTRUCTED IN ACCORDANCE WITH PARAGRAPH 17000-2.02 C.1.
  - REFER TO THE CONTROL PANEL ITEM LIST ON DRAWING I21.
  - NAMEPLATES SHALL BE AS SPECIFIED IN PARAGRAPH 17000-2.02 D AND SHALL BE 2-15/16 INCHES LONG BY 1 INCH WIDE UNLESS OTHERWISE NOTED. REFER TO THE NAMEPLATE SCHEDULE ON THIS DRAWING FOR ENGRAVING.
  - REFER TO PARAGRAPH 17000-3.04 INSTRUMENT SCHEDULE AND THE MATERIAL LIST ON THIS DRAWING FOR INFORMATION ON SPECIFIC INSTRUMENTS AND DEVICES.
  - INPUT CIRCUIT BREAKER OPERATOR.
  - NP-1 SHALL BE 4 INCHES LONG BY 1-1/2 INCHES WIDE WITH 1/4 INCH LETTERING.
  - REFER TO THE LEGEND PLATE SCHEDULE ON DRAWING I21.
  - MOUNT AND SECURE BUBBLER COMPRESSOR TO THE FLOOR INSIDE OF THE PANEL.
  - MATERIAL LIST ITEM.
  - MATERIALS OF EQUAL QUALITY MAY BE SUBSTITUTED FOR THE ITEMS SHOWN ON THE MATERIALS LIST BELOW, IF THE PROPOSED SUBSTITUTION COMPLIES WITH THE REQUIREMENTS OF THE APPLICABLE SECTION OF THE SPECIFICATIONS AND IS APPROVED BY THE ENGINEER.

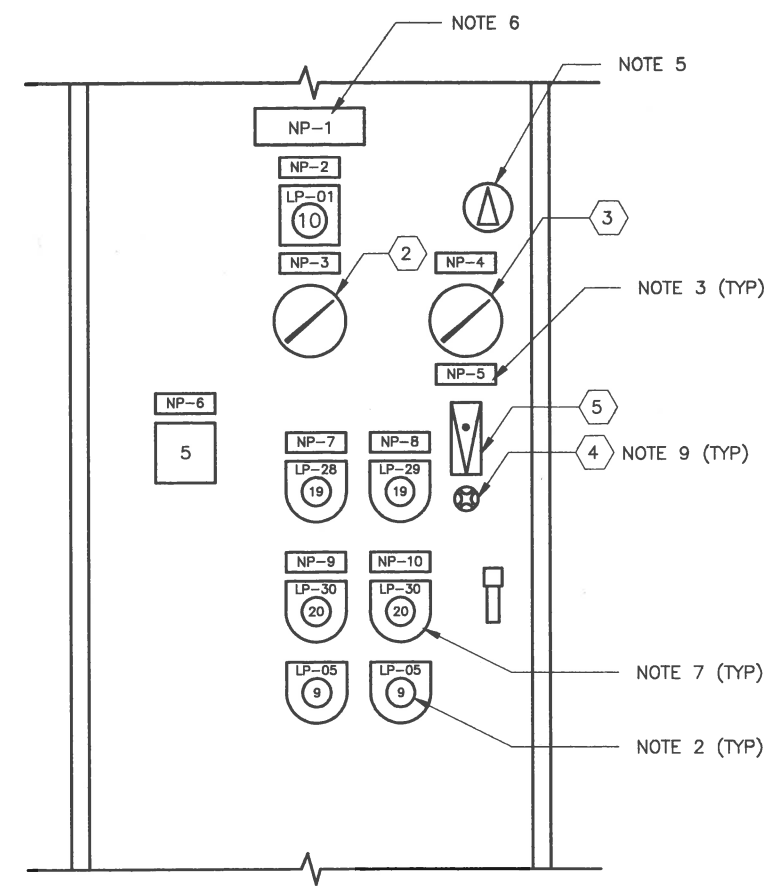


SW-1 CLOSES AT 50 PSIG DECREASING.  
 SW-2 OPENS AT 100 PSIG INCREASING.  
 SW-3 OPENS AT 40 PSIG DECREASING.

**BUBBLER AIR COMPRESSOR CONTROL DIAGRAM**  
 DETAIL A I22  
 NOT TO SCALE



**AIR FLOW SCHEMATIC**  
 DETAIL B I22  
 NOT TO SCALE



**INFLUENT PUMPING STATION PUMP CONTROL PANEL PNL-3300**  
 DETAIL C I22  
 NOT TO SCALE

- MATERIALS LIST
- COMPRESSOR AND TWO GALLON RECEIVER TANK, ITT MODEL LGH-210-H02.
  - FLUSH MOUNTED 4-1/2 INCH PRESSURE GAUGE, 0-160 PSIG, IN ACCORDANCE WITH PARAGRAPH 17000-3.03 PG. NO SNUBBER REQUIRED.
  - FLUSH MOUNTED 4-1/2 INCH PRESSURE GAUGE, 0-30 PSIG, IN ACCORDANCE WITH PARAGRAPH 17000-3.03 PG. NO SNUBBER REQUIRED.
  - 1/4 INCH BRASS NEEDLE VALVE, WHITEY #B-1VM4-S4.
  - PURGE METER, SCALE: 0.2-2.0 SCFH WITH FRONT OF PANEL MOUNTING KIT AND 1/4 INCH FEMALE NPT CONNECTIONS, BROOKS SHO-RATE 50.
  - 1/4 INCH O.D. PVC TUBING, IN ACCORDANCE WITH PARAGRAPH 17000-2.05 D.2.
  - CIRCUIT BREAKER, 15 AMP, 120 VOLT, SINGLE POLE, IN ACCORDANCE WITH DIVISION 16.
  - PRESSURE SWITCH, THREE SPDT SWITCHES, RANGE: 0-200 PSIG, IN ACCORDANCE WITH PARAGRAPH 17000-3.03 PS.
  - PRESSURE REGULATOR, RANGE: 5-35 PSIG, IN ACCORDANCE WITH PARAGRAPH 17000-2.05 B.
  - CONSTANT DIFFERENTIAL RELAY WITH MOUNTING BRACKET, MOORE PRODUCTS #63BU.
  - CONTROL RELAY WITH SOCKET, POTTER & BRUMFIELD #KRP11G.
  - LIQUIDTIGHT ON/OFF SWITCH, SQUARE D #KR-7.
  - 1/4 INCH O.D. PVC COATED COPPER TUBING, IN ACCORDANCE WITH PARAGRAPH 17000-2.05 D.1.

**BC Brown and Caldwell**  
 Consultants  
 Eugene, Oregon

DATE: 1-20-92  
 DATE: 1-20-92

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" SCALE ACCORDINGLY)

FILE	6151
DRAWN	GIM
DESIGNED	RES
CHECKED	KLB

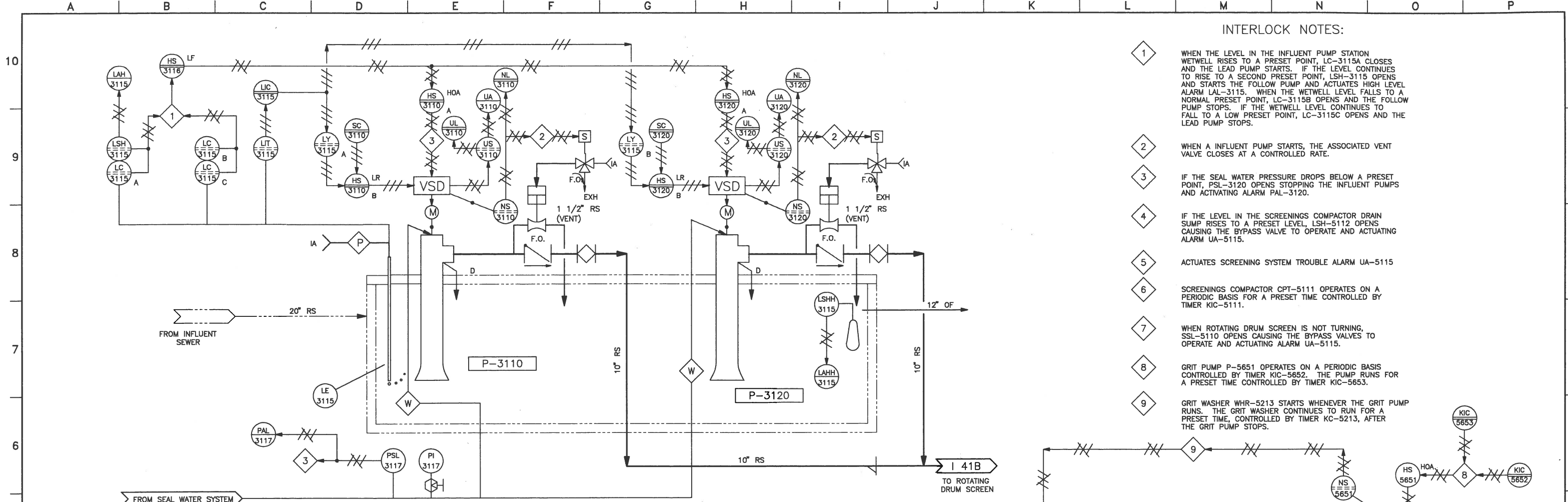


REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.

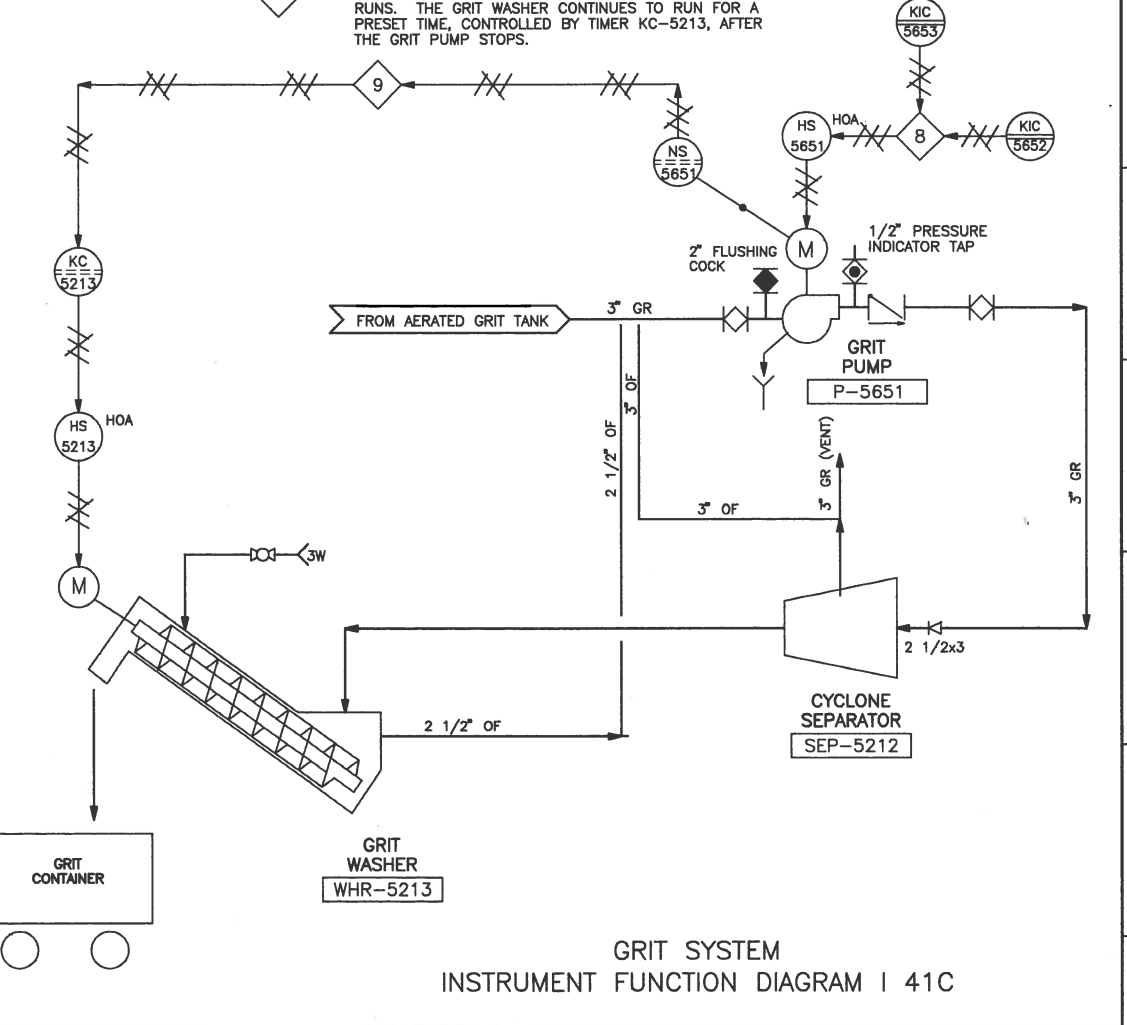
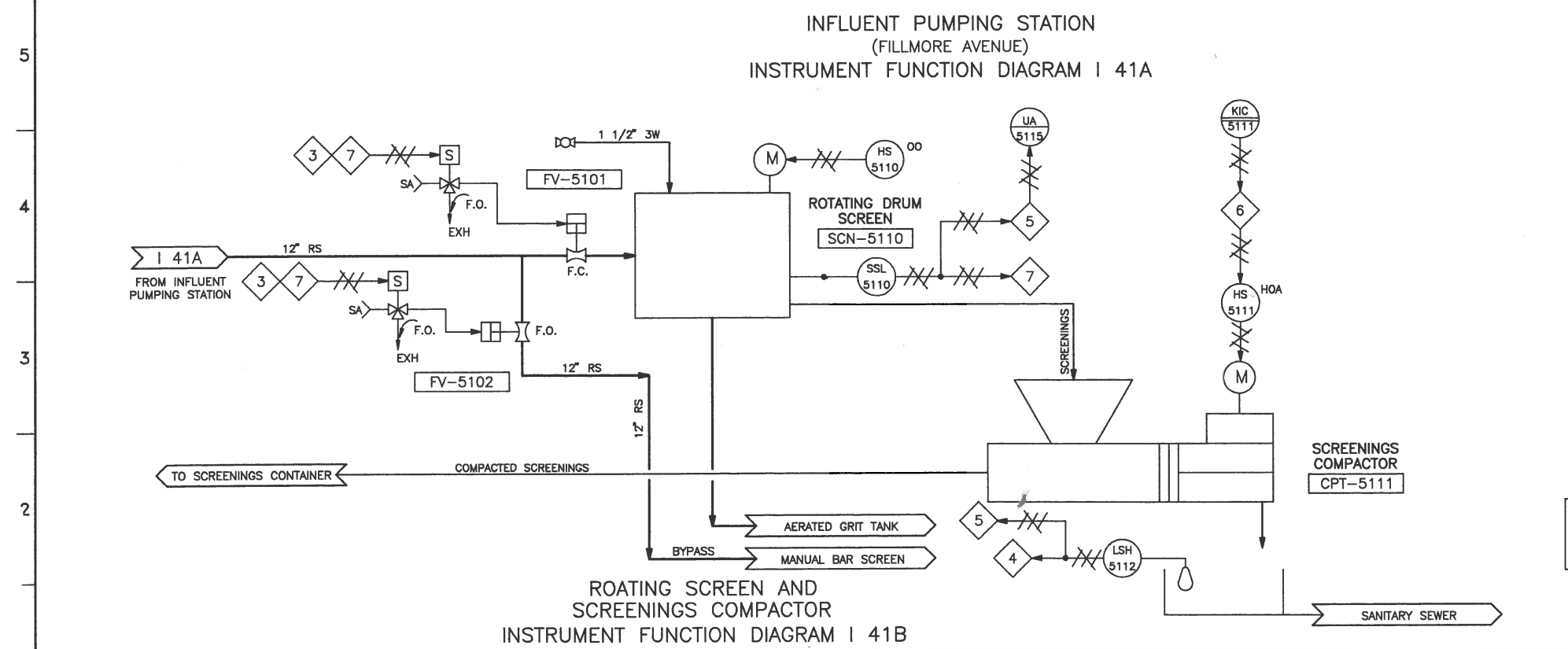
CITY OF BANDON, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

SCALE	AS SHOWN
DRAWING NUMBER	I 22
SHEET NUMBER	136



- INTERLOCK NOTES:
- 1 WHEN THE LEVEL IN THE INFLUENT PUMP STATION WETWELL RISES TO A PRESET POINT, LC-3115A CLOSURES AND THE LEAD PUMP STARTS. IF THE LEVEL CONTINUES TO RISE TO A SECOND PRESET POINT, LSH-3115 OPENS AND STARTS THE FOLLOW PUMP AND ACTUATES HIGH LEVEL ALARM LAL-3115. WHEN THE WETWELL LEVEL FALLS TO A NORMAL PRESET POINT, LC-3115B OPENS AND THE FOLLOW PUMP STOPS. IF THE WETWELL LEVEL CONTINUES TO FALL TO A LOW PRESET POINT, LC-3115C OPENS AND THE LEAD PUMP STOPS.
  - 2 WHEN A INFLUENT PUMP STARTS, THE ASSOCIATED VENT VALVE CLOSURES AT A CONTROLLED RATE.
  - 3 IF THE SEAL WATER PRESSURE DROPS BELOW A PRESET POINT, PSL-3120 OPENS STOPPING THE INFLUENT PUMPS AND ACTUATING ALARM PAL-3120.
  - 4 IF THE LEVEL IN THE SCREENINGS COMPACTOR DRAIN SUMP RISES TO A PRESET LEVEL, LSH-5112 OPENS CAUSING THE BYPASS VALVE TO OPERATE AND ACTUATING ALARM UA-5115.
  - 5 ACTUATES SCREENING SYSTEM TROUBLE ALARM UA-5115
  - 6 SCREENINGS COMPACTOR CPT-5111 OPERATES ON A PERIODIC BASIS FOR A PRESET TIME CONTROLLED BY TIMER KIC-5111.
  - 7 WHEN ROTATING DRUM SCREEN IS NOT TURNING, SSL-5110 OPENS CAUSING THE BYPASS VALVES TO OPERATE AND ACTUATING ALARM UA-5115.
  - 8 GRIT PUMP P-5651 OPERATES ON A PERIODIC BASIS CONTROLLED BY TIMER KIC-5652. THE PUMP RUNS FOR A PRESET TIME CONTROLLED BY TIMER KIC-5653.
  - 9 GRIT WASHER WHR-5213 STARTS WHENEVER THE GRIT PUMP RUNS. THE GRIT WASHER CONTINUES TO RUN FOR A PRESET TIME, CONTROLLED BY TIMER KC-5213, AFTER THE GRIT PUMP STOPS.



**BC Brown and Caldwell**  
 Consultants  
 Eugene, Oregon

SUBMITTED: *Tom R. Lewis* PROJECT MANAGER DATE: 1-20-92  
 APPROVED: *[Signature]* DATE: 1-20-92  
 APPROVED: *[Signature]* DATE:

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 DRAWN REJ  
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REVISIONS				
ZONE	REV.	DESCRIPTION	BY	DATE

CITY OF BANDON, OREGON

WASTEWATER TREATMENT  
 PLANT IMPROVEMENTS

INSTRUMENT  
 FUNCTION DIAGRAMS - 1

SCALE

DRAWING NUMBER  
**I 41**

SHEET NUMBER  
 138