COOS BAY
SEWAGE TREATMENT PLANT NO. 2

1973

CITY OF COOS BAY

MAYOR . . . . . ROBERT HALE

CITY COUNCIL

JAMES WHITTY — WALLACE FERGUSON
HARVEY DUERKSON — ROBERT WILLIAMS
JUSTIN GUERNSEY — BETTY BOCK

CITY MANAGER — RICHARD KAHANEK

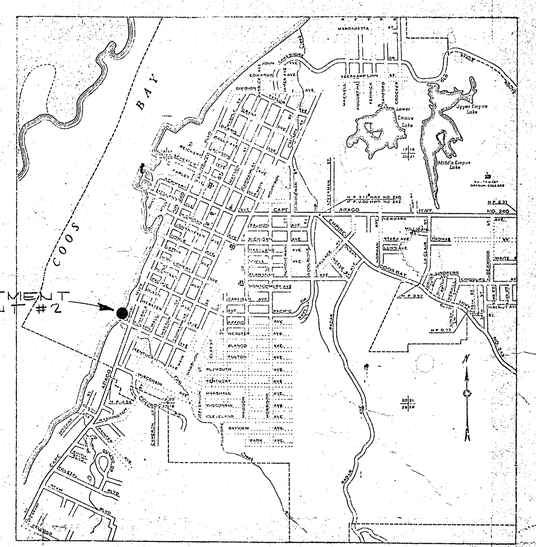
HG INC ENGINEERS • PLANNERS
5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

PROJECT NUMBER
1172 A 69

EPA - C-410345

INDEX TO DRAWINGS

NO.	DESCRIPTION
1	EXISTING SITE & DEMOLITION PLAN
2	NEW SITE PLAN
3	LANDSCAPING AND PAVING PLAN
4	CONTROL BUILDING REMODELING: PLAN & ELEV.
5	CONTROL BUILDING REMODELING: DETAILS
6	DIGESTER CONTROL BUILDING: FLOOR & ROOF PLAN
7	DIGESTER CONTROL BLDG: FOUNDATION & ROOF
8	DIGESTER CONTROL BUILDING: SECTIONS
9	DIGESTER CONTROL BLDG.: STRUCTURAL DTLS
10	DIGESTER CONTROL BLDG.: EXTERIOR ELEVS
11	DIGESTER CONTROL BUILDING: DETAILS
12	GRIT COLLECTOR PLAN & ELEVATIONS
13	GRIT COLLECTOR PLAN & SECTION
14	GRIT COLLECTOR SECTIONS & DETAILS
15	LIFT STATION PLAN AND ELEVATIONS
16	LIFT STATION SECTIONS
17	WET WELL-DRY WELL REMODEL
18	PRIMARY CLARIFIER REMODEL
19	AERATION BASIN PLAN & SECTION
20	AERATION BASIN PILING & PIPING PLAN
21	AERATION BASIN DETAILS
22	SLUDGE THICKENER & DETAILS
23	SECONDARY CLARIFIER PLAN
24	SECONDARY CLARIFIER SECTIONS & DETAILS
25	DETAILS
26	EXISTING DIGESTER REMODELING
27	NEW SECONDARY DIGESTER & DETAILS
28	SITE PIPING PLAN
29	CONTROL BLDG. PIPING AND PLUMBING PLAN
30	DIGESTER CONTROL BLDG PIPING PLAN
31	DIGESTER ROOF PIPING PLAN
32	LIFT STATION PIPING PLAN
33	LIFT STATION MECHANICAL SEC & DETAILS
34	ELECTRICAL SITE PLAN
35	CONTROL BUILDING ELECTRICAL
36	ELECTRICAL RISER DIAGRAM
37	LIFT STATION ELECTRICAL
38	OUTFALL PLAN & PROFILE



VICINITY MAP

SCALE: 1" = 1600'

REGISTERED PROFESSIONAL ENGINEER
OREGON
RICHARD D. HOWD

HG INC ENGINEERS • PLANNERS
5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

PROPERTY LINE N66°26'W 435.60'

15' ROAD EASEMENT

MANHOLE AND CONTROL STRUCTURE

12.17 - TEMPORARY BENCH MARK - TOP OF M.H. COVER

RISER DIA. 72"

FULTON STREET

EXIST. 24" CMP

EXISTING DIGESTER (TO BE REMODELED)

EXIST. BLDG. (TO BE REMOVED)

EXISTING CONTROL BLDG (TO BE REMODELED)

EXISTING CHLORINE CONTACT CHAMBERS (TO BE REMODELED)

EXISTING CLARIFIER (TO BE REMODELED)

EXISTING SLUDGE LAGOON (TO BE CLEARED & CLEANED FOR NEW CONSTRUCTION)

GRAVEL

CONCRETE TO BE REMVD.

GUARD RAIL

FENCE TO BE REMOVED

NEW MESH

EXIST. CATCH BASIN

EXIST. MANHOLE

EXIST. 24" Ø CONC. OUTFALL TO BE EXTENDED.

BROKEN 24Ø CMP OUTFALL TO BE REPLACED

260.0' N66°26'W

15' OUTFALL EASEMENT

PROPERTY LINE N22°34'E 235.00'

PROPERTY LINE N66°26'W 435.60'

COOS BAY

FLOOD ESE

1 SITE PLAN
1 SCALE: 1" = 20'

AS BUILTS F.E. DEC. 75

REGISTERED PROFESSIONAL ENGINEER 1989 OREGON JULY 12, 1982 RICHARD D. NORDO

H.G. INC

ENGINEERS + PLANNERS

SUITE 430 HIGHLAND BUILDING COOS BAY, OREGON 97420 269-1166

COOS BAY #2 WATER TREATMENT FACILITIES

EXISTING SITE AND DEMOLITION PLAN

1172.8.69

1

FULTON STREET

MILL STREET

BAY

FLOOD

PROPERTY LINE — N 66° 26' W — 435.60'

15' ROAD EASEMENT

PROPERTY LINE — N 66° 26' W — 435.60'

INSTALL NEW WIRE MESH ON EXIST. GATE

INSTALL NEW WIRE MESH ON EXIST. GATE

NEW AC PAVING INSTALL 3" OVER EXIST. EARTH

NEW AC PAVING INSTALL 3" OVER EXIST. EARTH

EXIST. TOE

EXIST. TOP

NEW TOE

NEW TOP

EXIST. FENCE TO REMAIN

EXIST. FENCE TO BE REMOVED & NEW MESH

EXIST. LIGHT TO REMAIN

EXIST. CURB & GUTTER — NEW CURB & GUTTER TO MATCH EXIST.

NEW CATCH BASIN

EXISTING MANHOLE TO BE ADJUST TO GRADE & PLACE NEW WATER TIGHT COVER AS SPECIFIED

EXISTING PRIMARY DIGESTER TO BE REMODELED

1/26

NEW DIGESTER CONTROL BLDG.

2/6

NEW SECONDARY DIGESTER

6/27

EXISTING CONTROL BLDG TO BE REMODELED

1/4

EXIST. TRENCH DRAIN

EXIST. WALK

NEW DOOR

NEW AC PAVING

EXIST. CURB & GUTTER

EXIST. CONC. WALK TO BE REPLACED

NEW LANDSCAPING

EXIST. MH

RELOCATED EXIST. MH & NEW MESH

NEW SECONDARY CLARIFIER

2/23

W.S. 7.00

EXISTING PRIMARY CLARIFIER TO BE REMODELED

W.S. 10.96

1/8

NEW AERATION BASIN

1/19

W.S. 14.00

NEW SLUDGE THICKENER

2/25

1/22

NEW TOE

RELOCATED FENCE - UTILIZE EXIST. POSTS & INSTALL NEW MESH

RESHAPE EXISTING BANK AS SHOWN & PLACE RIP RAP TO BE SPECIFIED TO COVER AREAS INDICATED

1/1

NOTE: ALL AREAS RECEIVING AC PAVING TO HAVE GROUND STERILIZED PRIOR TO PAVING

NOTE: ALL BANKS SHALL BE UNIFORMLY SLOPED FROM GRADES INDICATED

NEW 18" Ø MIN. DIA. RIP RAP EXTEND FROM FENCE TO

FENCE (RELOCATED) UTILIZE EXIST. POST ADD ADDITIONAL REQUIRED & NEW CONST.

2 MAX. 1

EXIST. DI RAP

RESHAPE BANK AS INDICATED

1/2 TYPICAL SLOPE PROTECTION
N.T.S.

2/2 NEW SITE PLAN
1" = 20'

AS BUILTS R.E. DEC. 75

REGISTERED PROFESSIONAL ENGINEER
5489
OREGON
JULY 11, 1969
RICHARD D. NOREEN

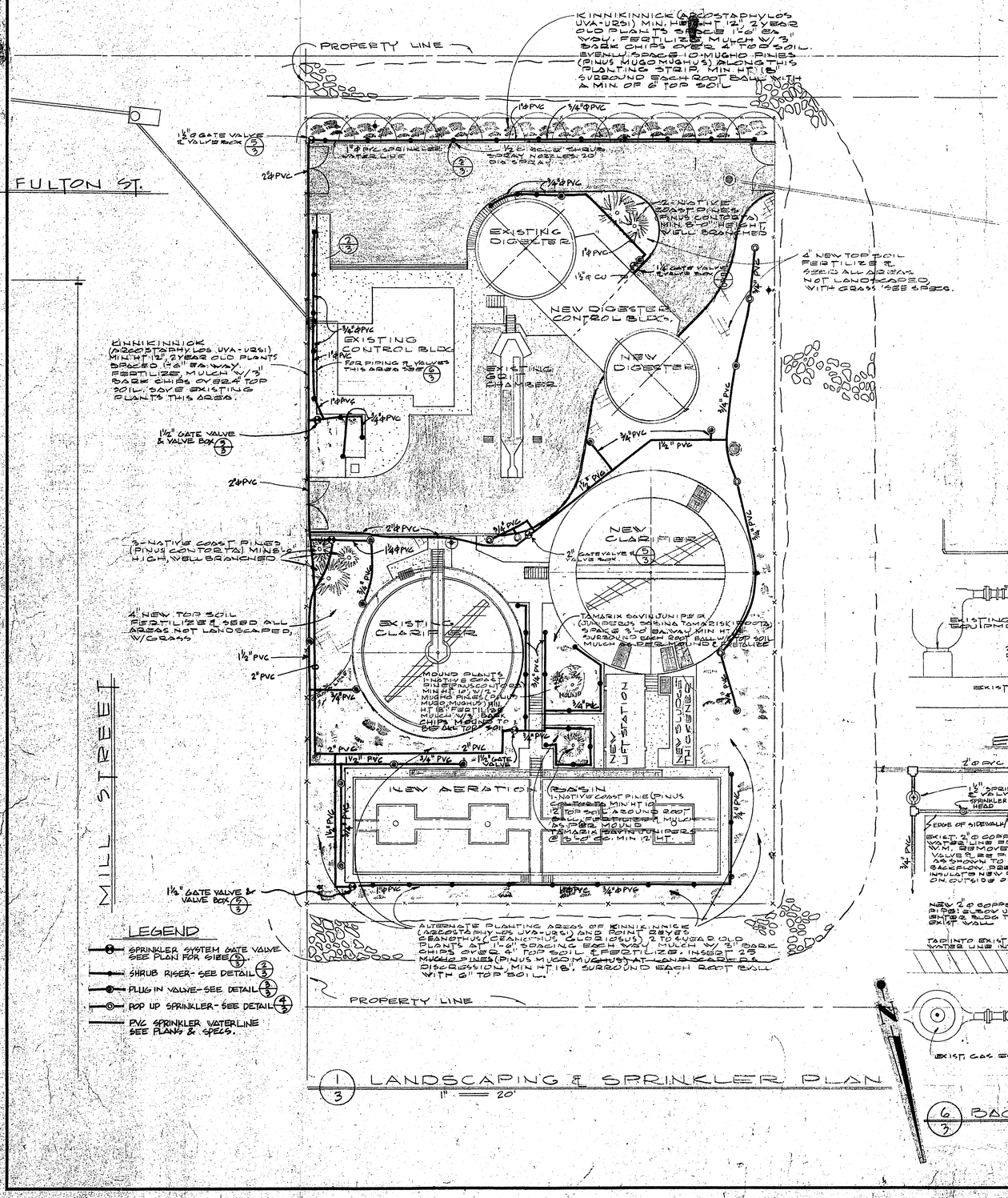
HG ENGINEERS INC

COOS BAY
SEWAGE TREATMENT FACILITIES

NEW SITE PLAN

1172-A-69

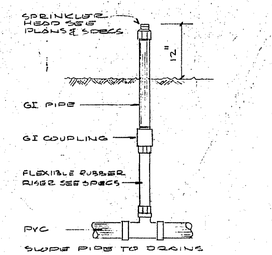
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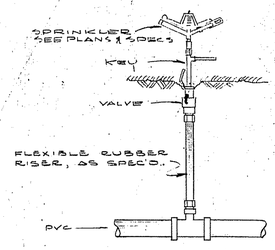
LEGEND

- SPRINKLER SYSTEM GATE VALVE SEE PLAN FOR SIZE 5/3
- SHRUB RISER - SEE DETAIL 2/3
- PLUG IN VALVE - SEE DETAIL 3/3
- POP UP SPRINKLER - SEE DETAIL 4/3
- PVC SPRINKLER WATERLINE SEE PLANS & SPECS.

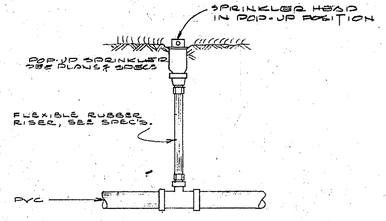
(1/3) LANDSCAPING & SPRINKLER PLAN
1" = 20'



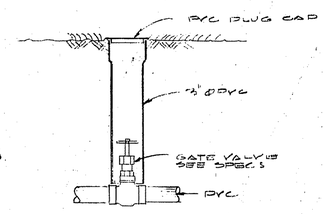
(2/3) TYPICAL SHRUB RISER
N.T.S.



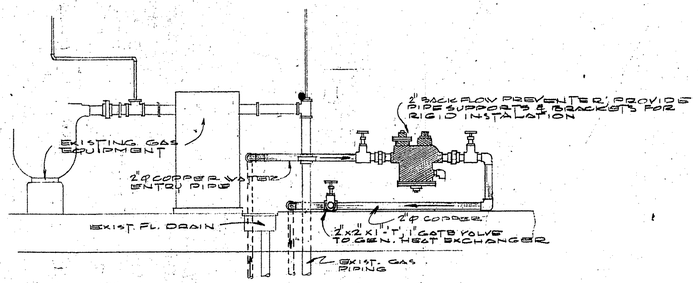
(3/3) TYPICAL PLUG IN VALVE
N.T.S.



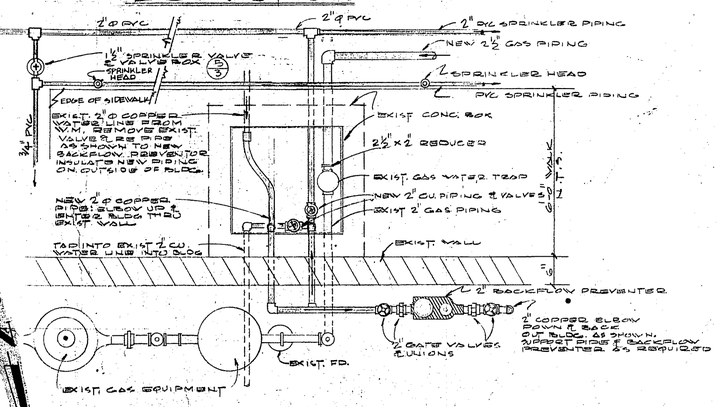
(4/3) TYPICAL POP UP SPRINKLER
N.T.S.



(5/3) TYPICAL VALVE BOX
N.T.S.



ELEVATION



PLAN

(6/3) BACKFLOW PREVENTER PIPING
¾" = 1'-0"

SPRINKLER SYSTEM REVISED TO AS BUILT - JULY '76 - DCL
AS BUILTS P.E. DEC. 75

REGISTERED PROFESSIONAL ENGINEER 6489 OREGON RICHARD D. NORRED

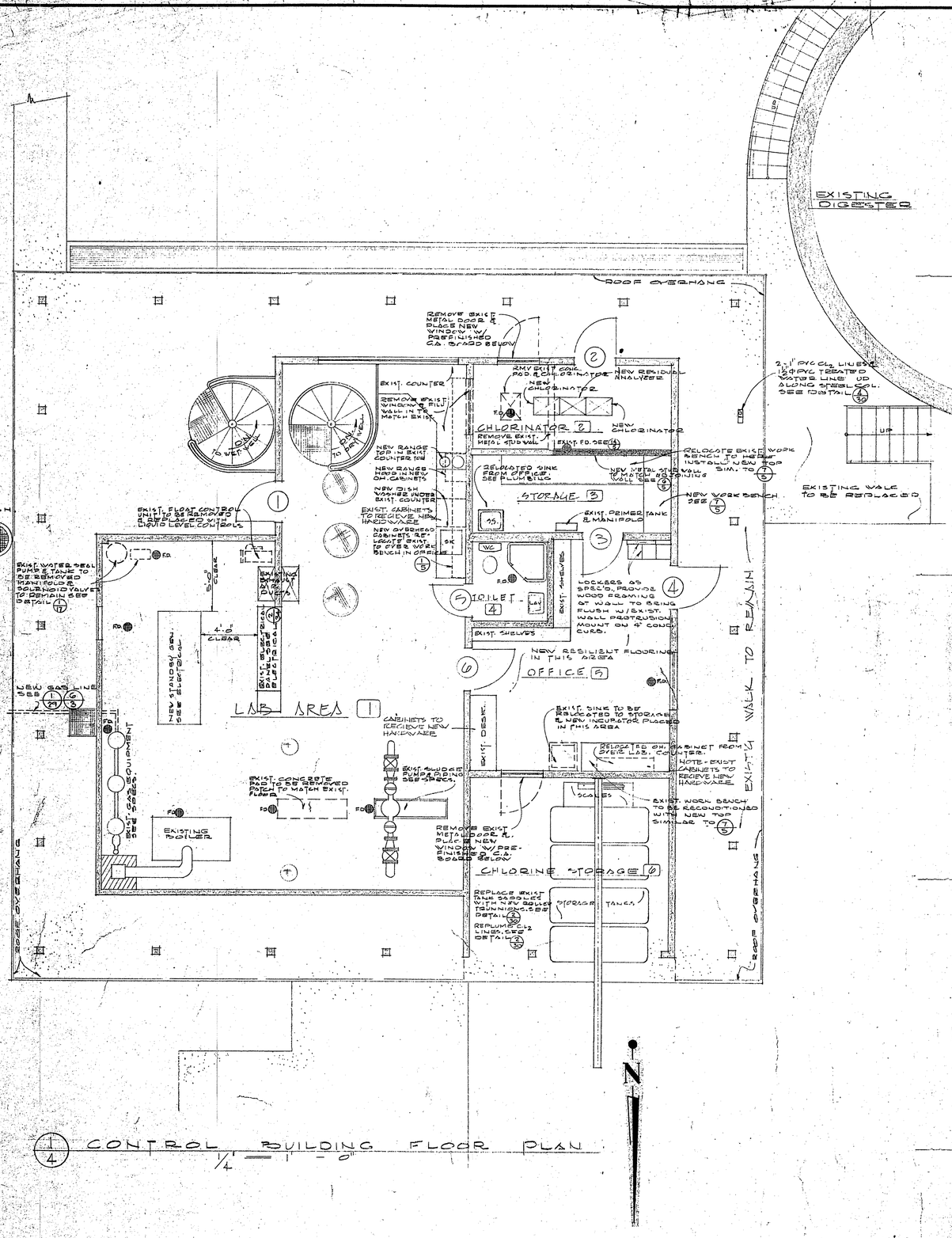
S.H. AND HIGHLAND
COOS BAY, OREG.
269-1166

HG INC ENGINEERS • PLANNERS

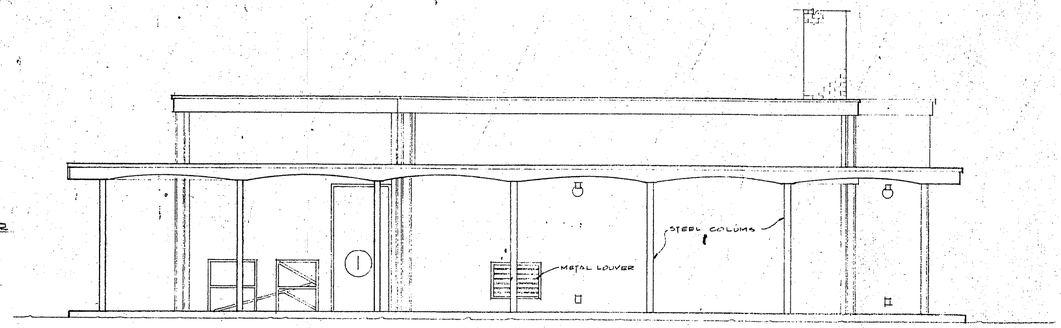
LANDSCAPING & SPRINKLER PLAN
COOS BAY PLANT #2
SEWAGE TREATMENT FACILITIES

1172-A-69

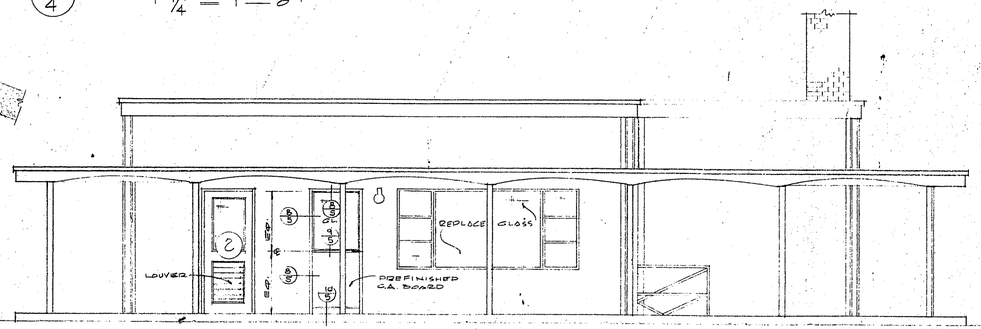
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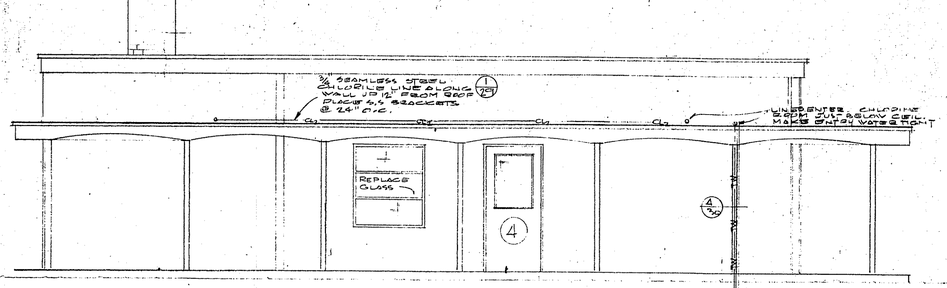
1/4 CONTROL BUILDING FLOOR PLAN
1/4" = 1'-0"



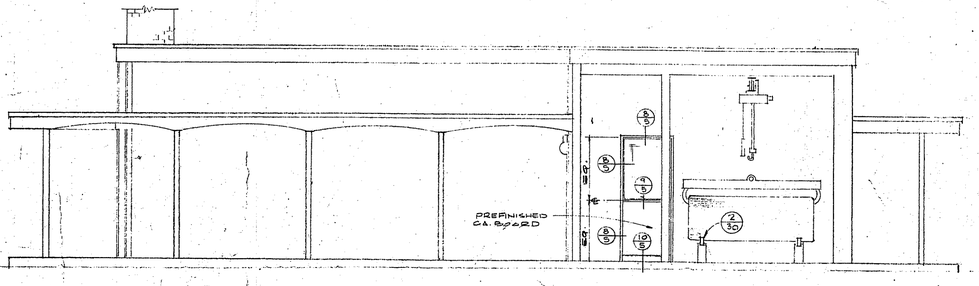
2/4 EAST ELEVATION
1/4" = 1'-0"



3/4 SOUTH ELEVATION
1/4" = 1'-0"



4/4 WEST ELEVATION
1/4" = 1'-0"



5/4 NORTH ELEVATION
1/4" = 1'-0"

NOTE: SEE PAINTING SCHEDULE IN SPECIFICATIONS FOR ITEMS & COLOR. ON A IN EXIST CONTROL BLDG.

AS BUILTS P.F. DEC. 75

REGISTERED PROFESSIONAL ENGINEER 5889 OREGON JULY 11, 1980 RICHARD D. NORED

SHN AND HIGHLAND CORVALLIS, OREGON 2691166

ENGINEERS • PLANNERS

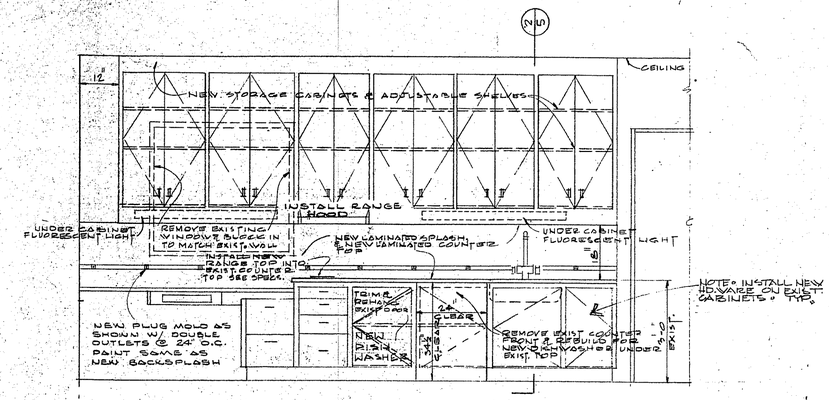
HG INC

COOS BAY PLANT #2
SEWAGE TREATMENT FACILITIES

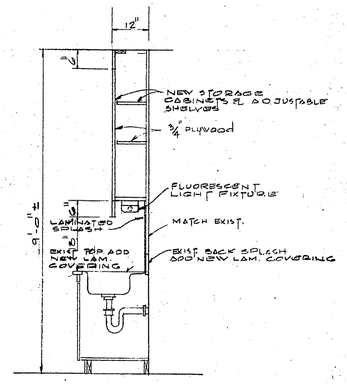
CONTROL BUILDING REMODEL
PLAN & ELEVATIONS

1172-A-62

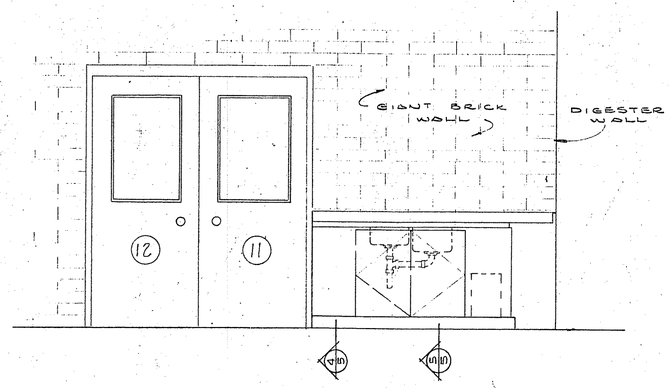
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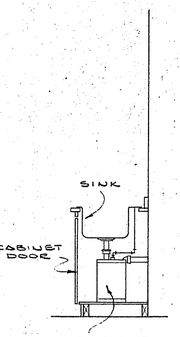
1/5 LAB. AREA 1 WEST ELEVATION — 1/2" = 1'-0"



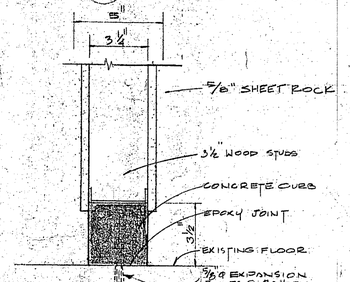
2/5 SECTION 1/2" = 1'-0"



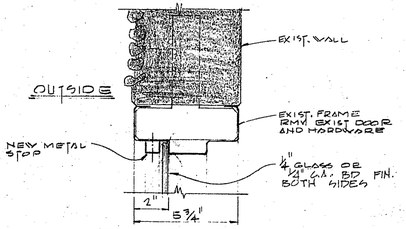
3/5 NEW CONTROL BLDG. LKG. EAST
SCALE: 3/8" = 1'-0"



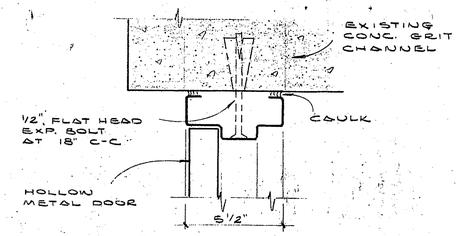
5/5 SECT.
3/8" = 1'-0"



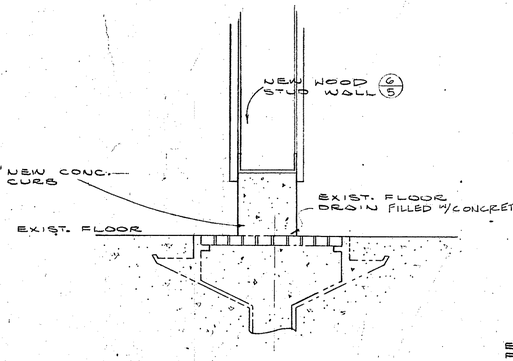
6/5 STUD WALL DET.
3" = 1'-0"



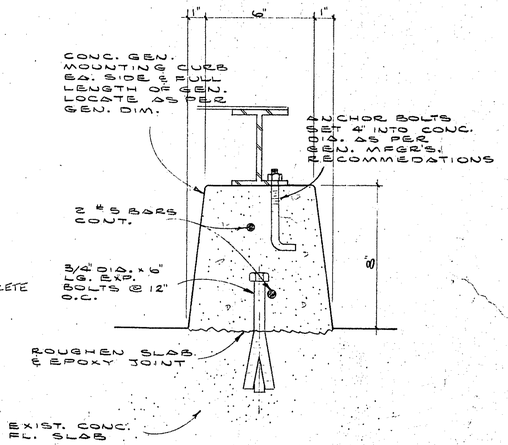
8/5 HEAD/JAMB SIM.
3" = 1'-0"



11/5 HEAD
3" = 1'-0"

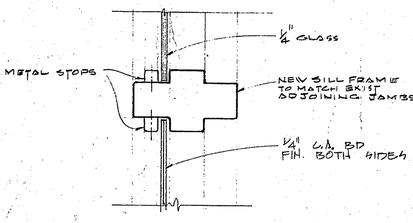


14/5 WALL @ EXIST. FL. DRAIN
3" = 1'-0"

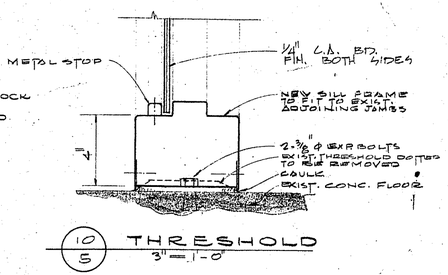


16/5 GENERATOR SUPPORT
N.T.S.

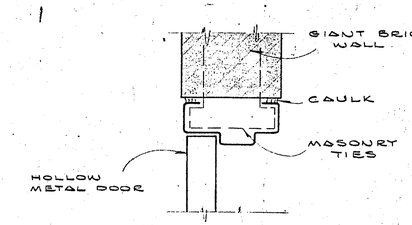
7/5 WORK BENCH
1" = 3/4" = 1'-0"



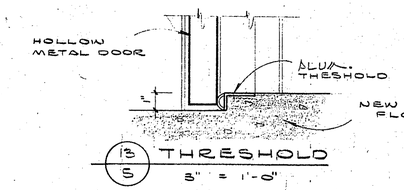
9/5 SILL
3" = 1'-0"



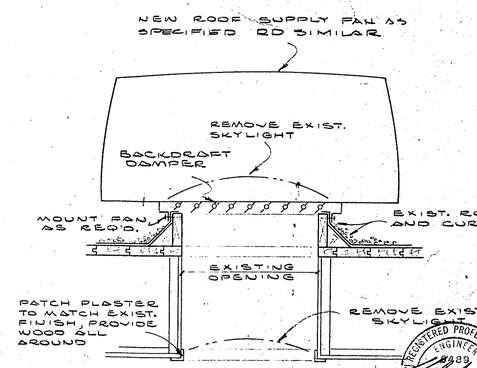
10/5 THRESHOLD
3" = 1'-0"



12/5 JAMB
3" = 1'-0"



13/5 THRESHOLD
3" = 1'-0"



17/5 CHLORINE SUPPLY
1" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER 16989 OREGON JULY 11, 1972 RICHARD M. REED

AS BUILTS R.E. DEC. 75

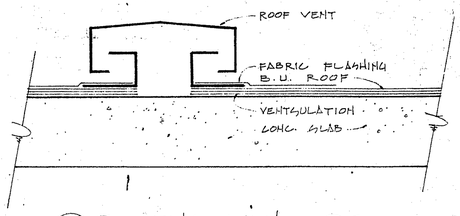
HG INC ENGINEERS • PLANNERS
5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

COOS BAY PLANT #2
CONTROL BUILDING
REMODELING DETAILS
SEWAGE TREATMENT FACILITIES

172-A-69

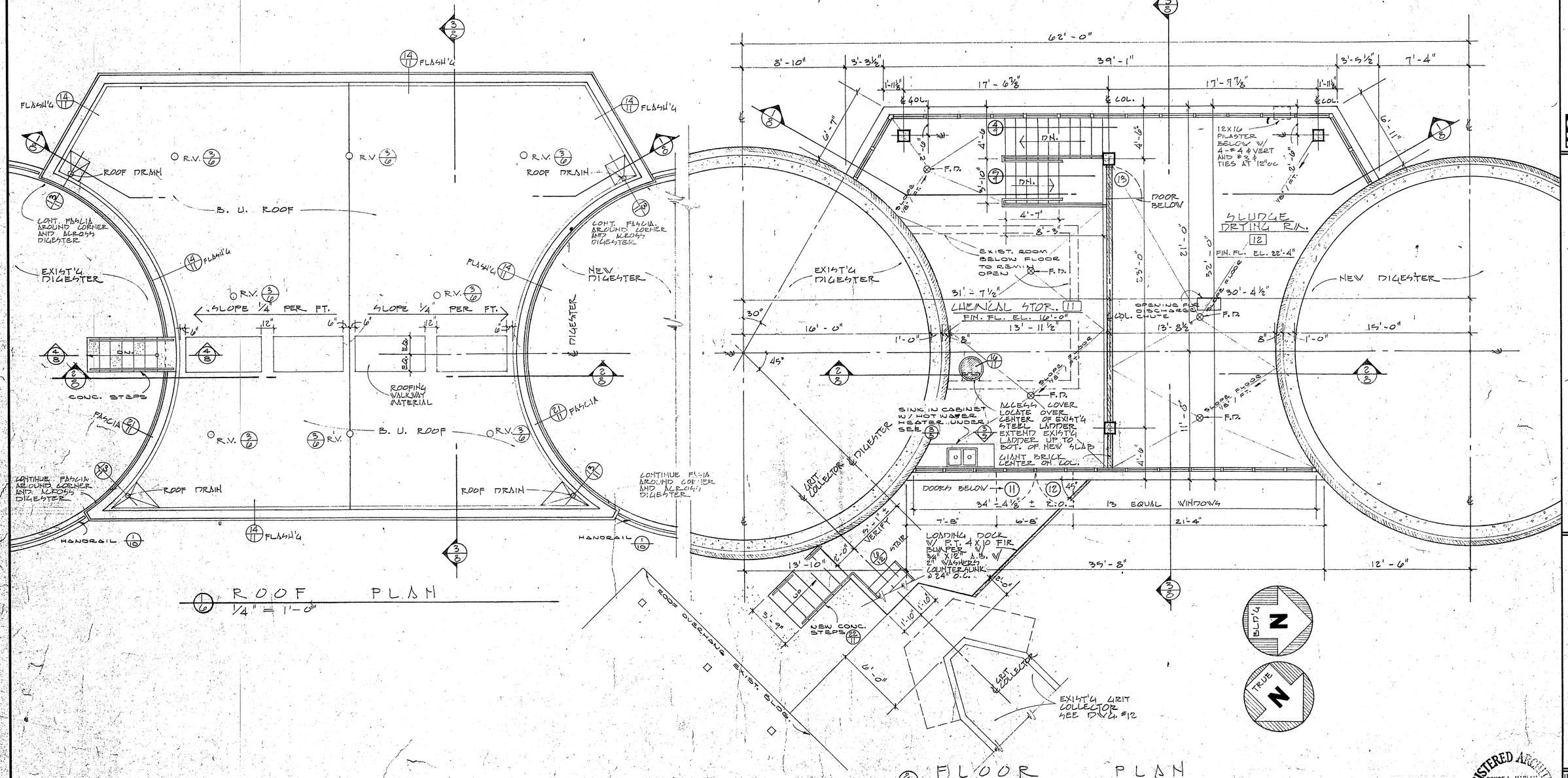
5

KOE & KANNEMAN



3/6 ROOFING VENT DTL.
3" = 1'-0"

INDICATES CONCRETE
INDICATES GIANT BRICK



1/6 ROOF PLAN
1/4" = 1'-0"

1/6 FLOOR PLAN
1/4" = 1'-0"

AS BUILTS R.E. DEC. 75

REGISTERED ARCHITECT
BRUCE L. HARLAN
COOS BAY, OREGON
STATE OF OREGON

HG INC
ENGINEERS • PLANNERS
5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

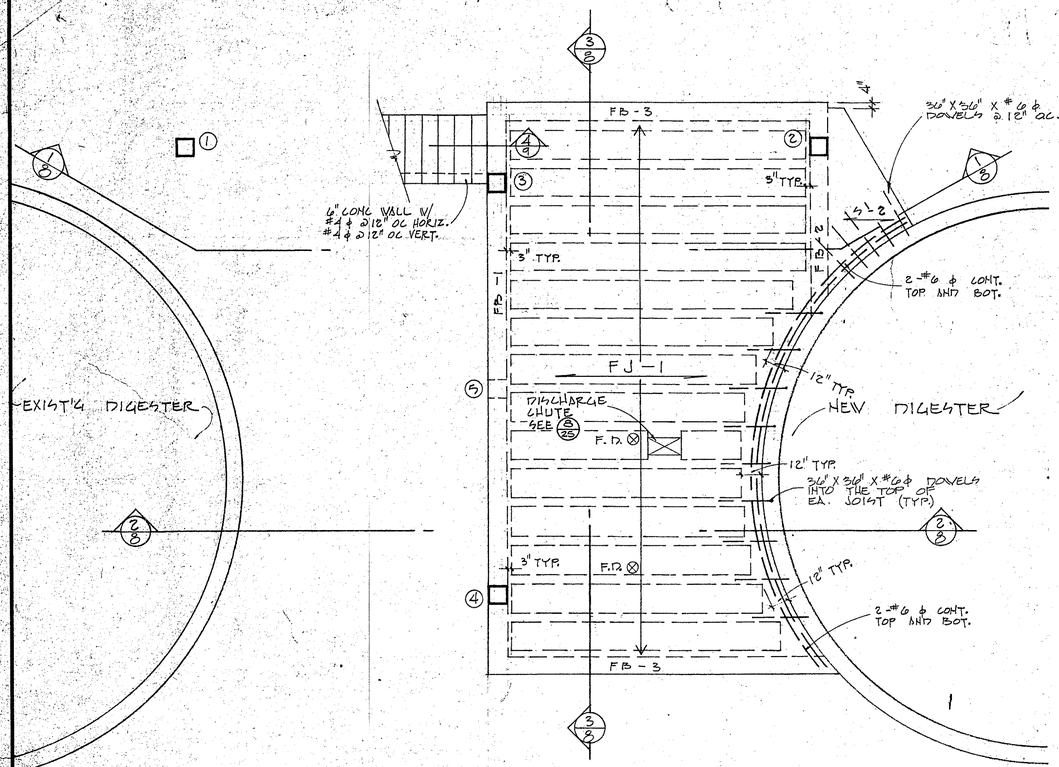
COOS BAY PLANT #2
SEWAGE TREATMENT FACILITIES

DIGESTER CONTROL BLDG
FLOOR & ROOF PLAN

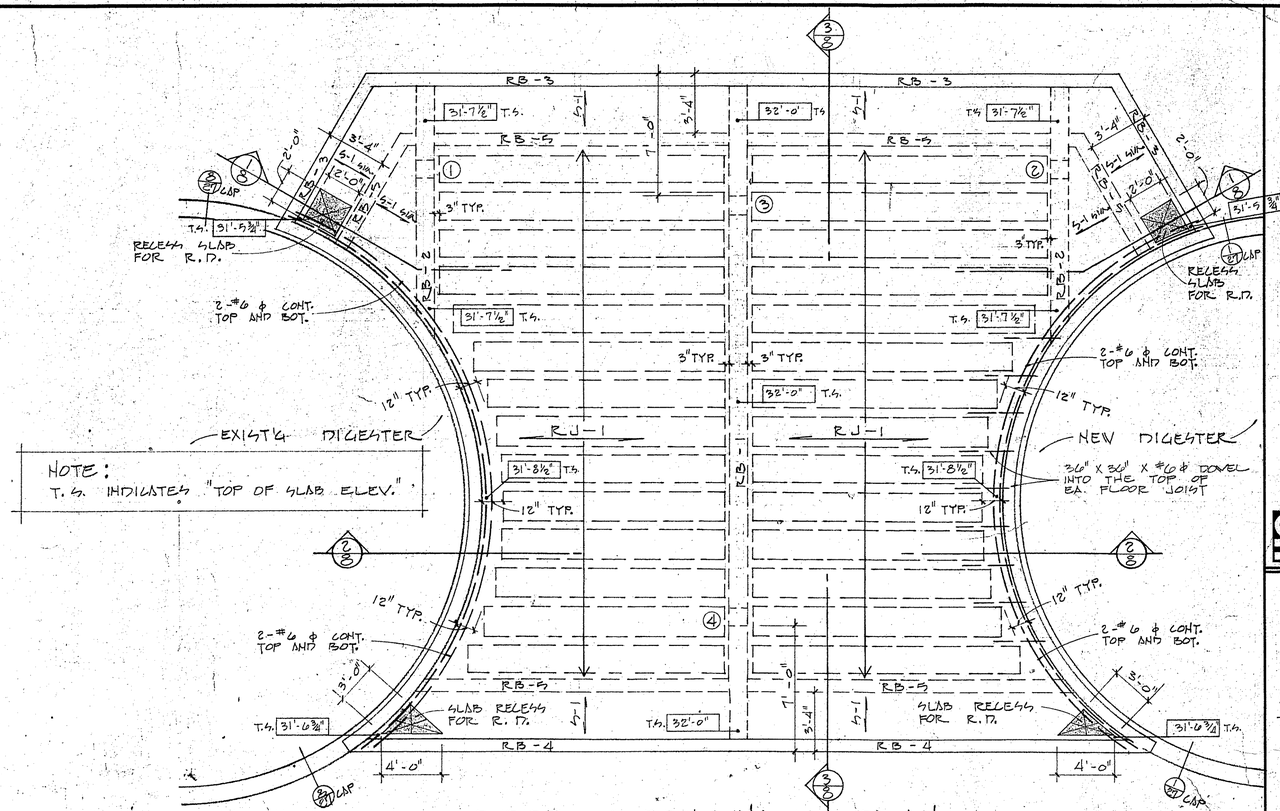
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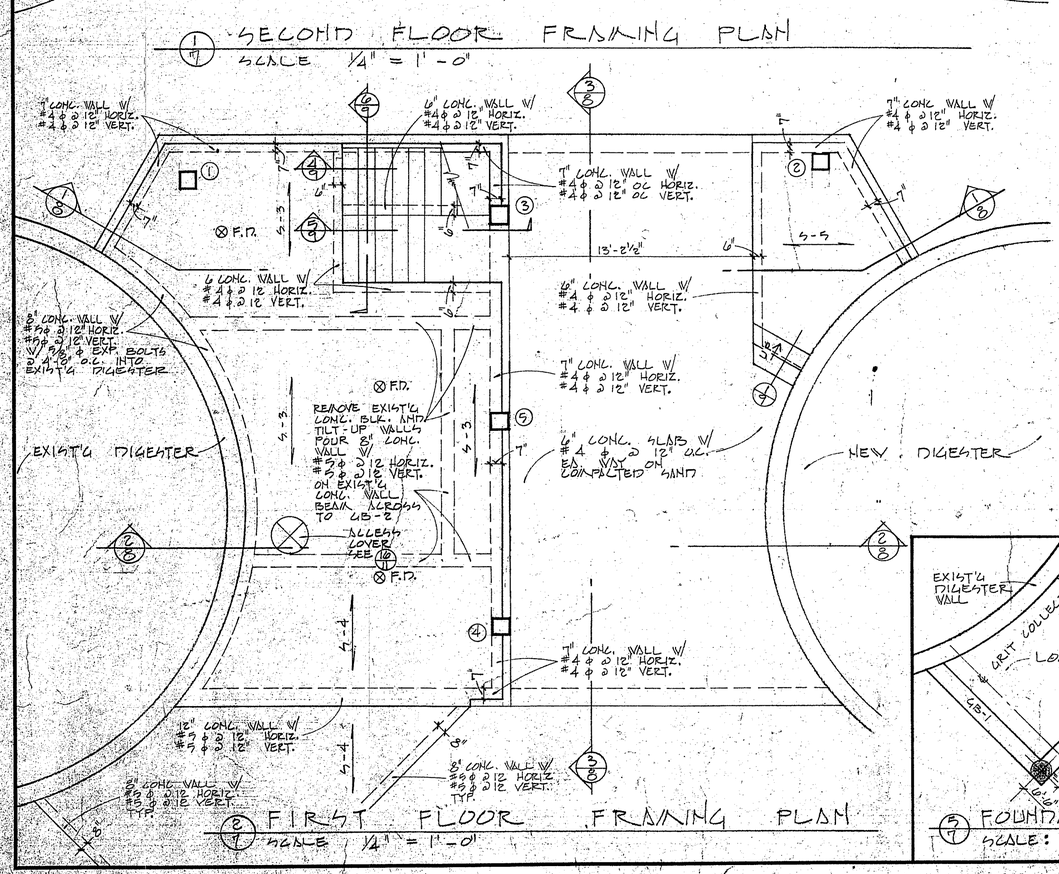
K&E



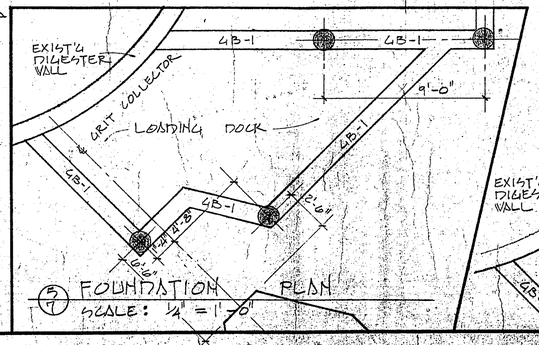
1/7 SECOND FLOOR FRAMING PLAN
SCALE 1/4" = 1'-0"



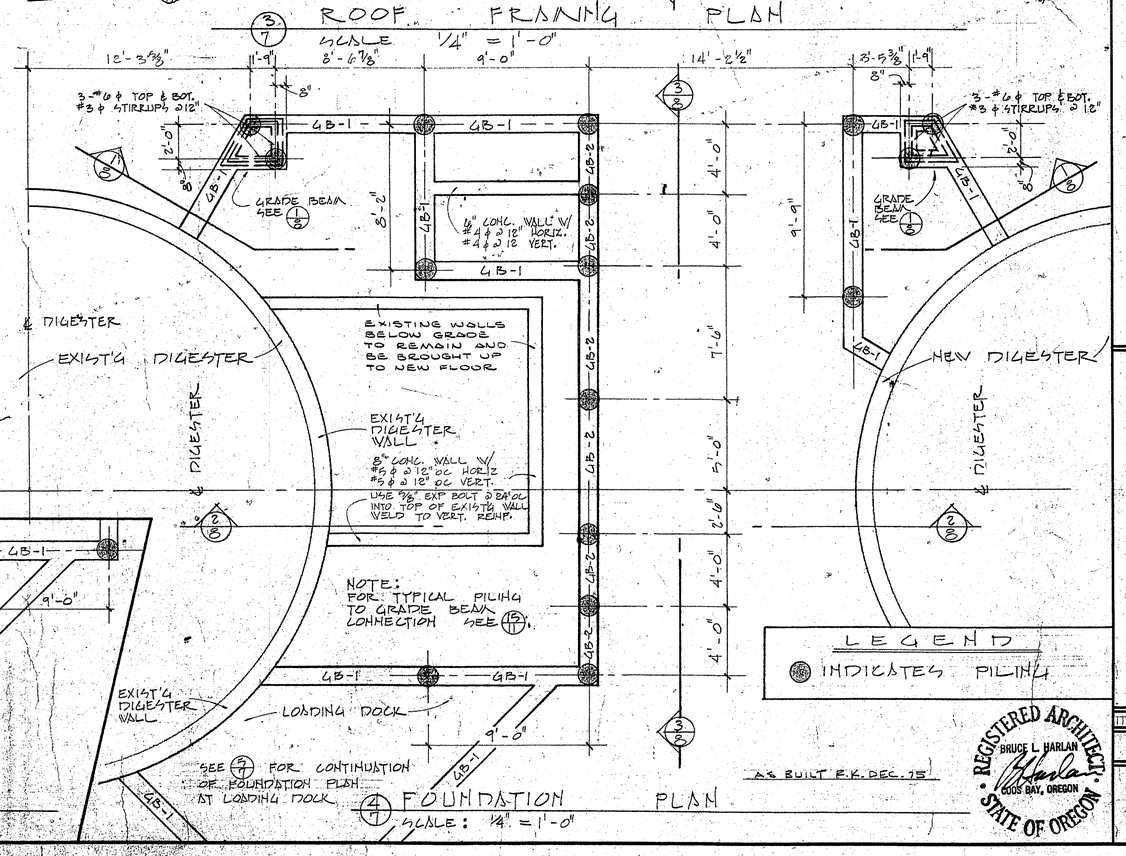
3/7 ROOF FRAMING PLAN
SCALE 1/4" = 1'-0"



2/7 FIRST FLOOR FRAMING PLAN
SCALE 1/4" = 1'-0"



5/7 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



4/7 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

5TH AND HIGHLAND
COOS BAY, OREGON
269-166
HGE INC
ENGINEERS • PLANNERS

PLANT #2
WASTEWATER FACILITIES

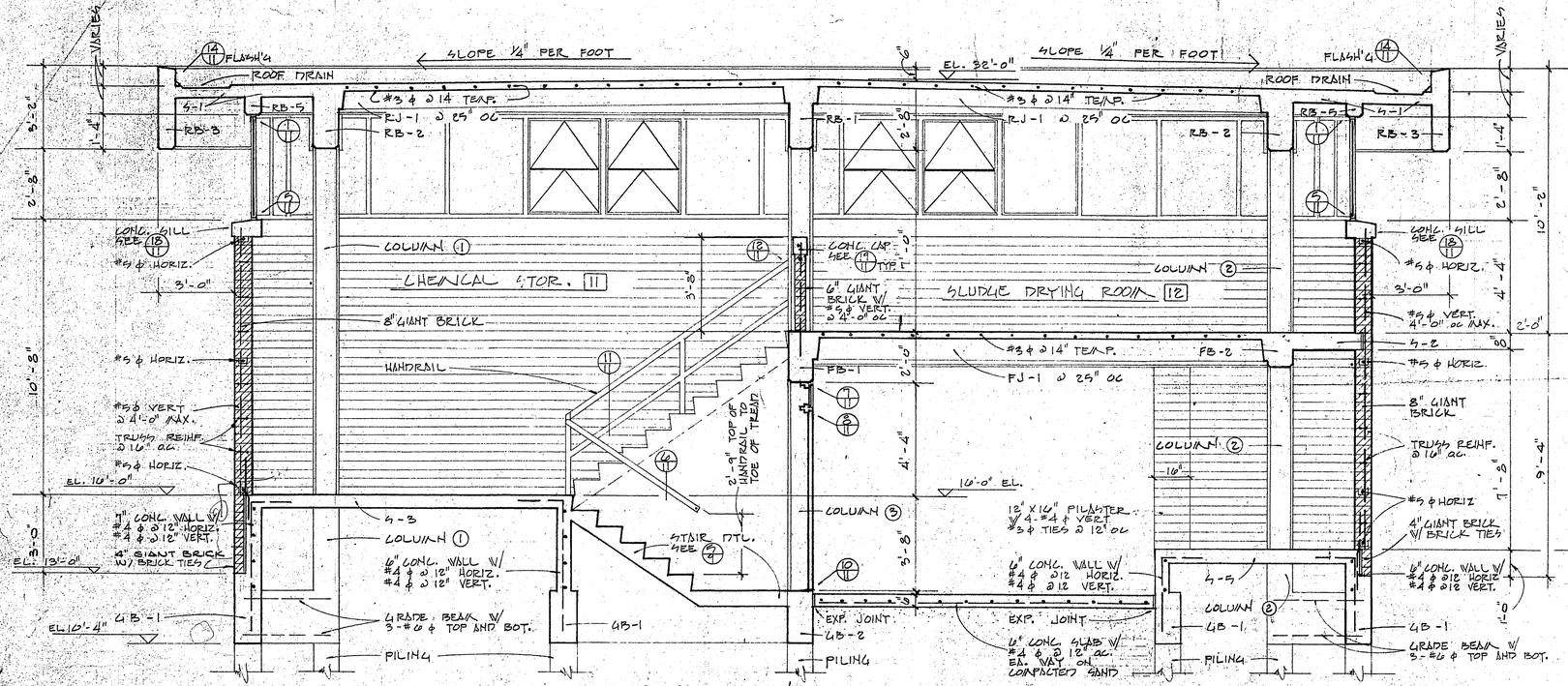
COOS BAY
DIGESTER CONTROL BLDG.
FOUNDATION & ROOF FRAMING
SEWAGE TREATMENT

1172-A-69

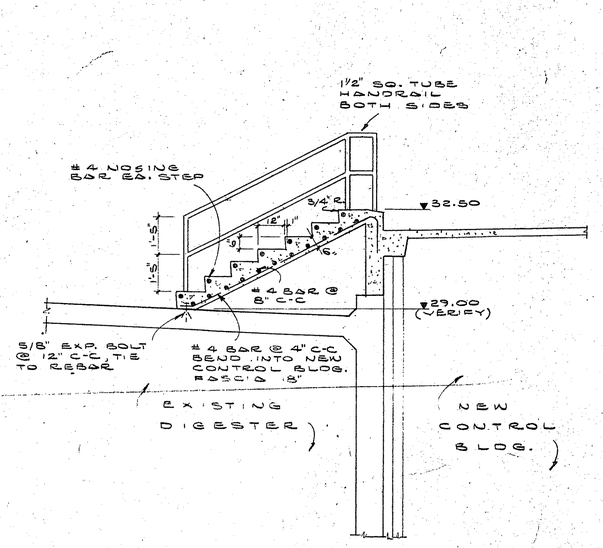
REGISTERED ARCHITECT
BRUCE L. HARLAN
COOS BAY, OREGON
STATE OF OREGON

7

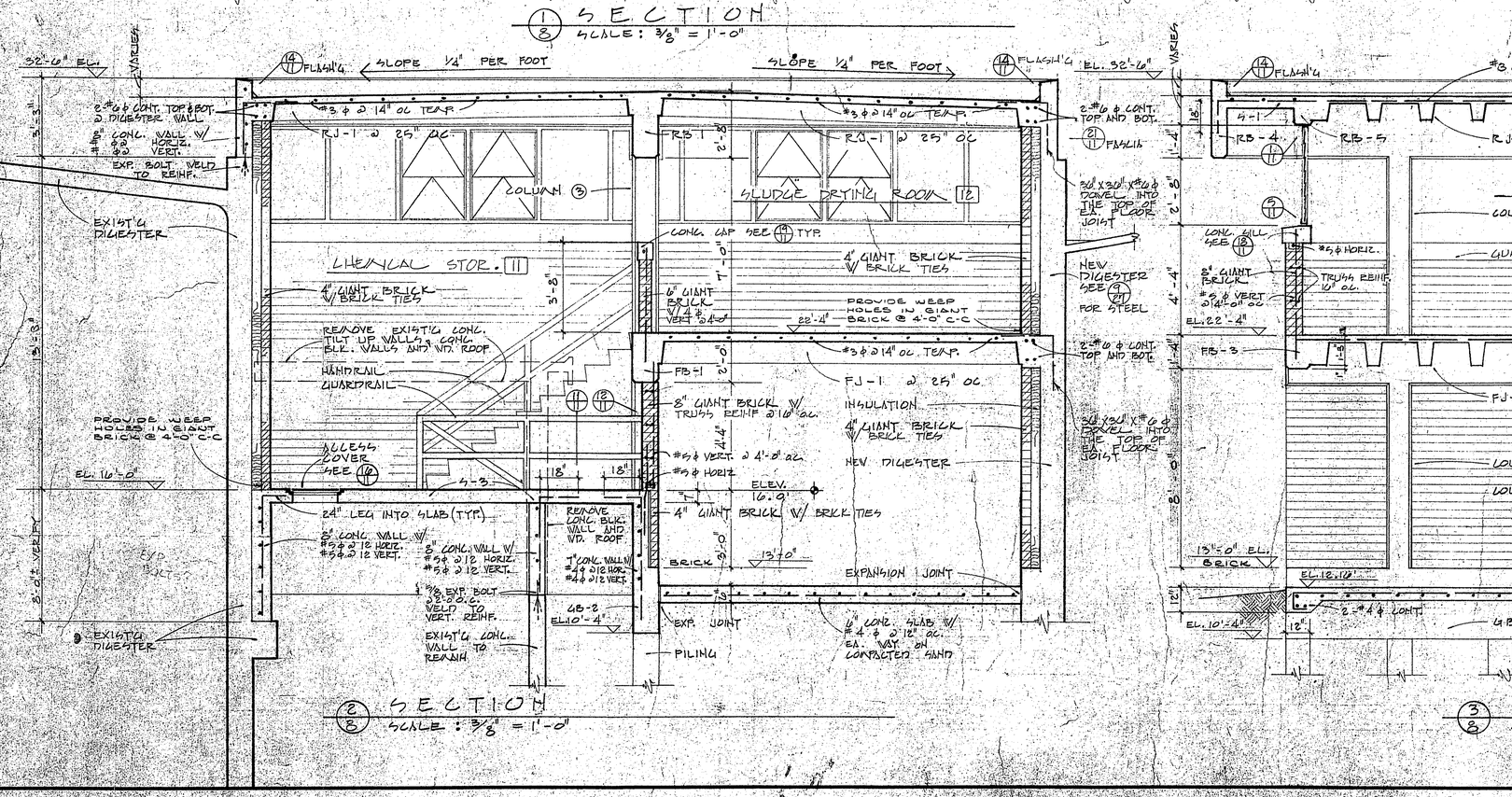
K&E Inc.



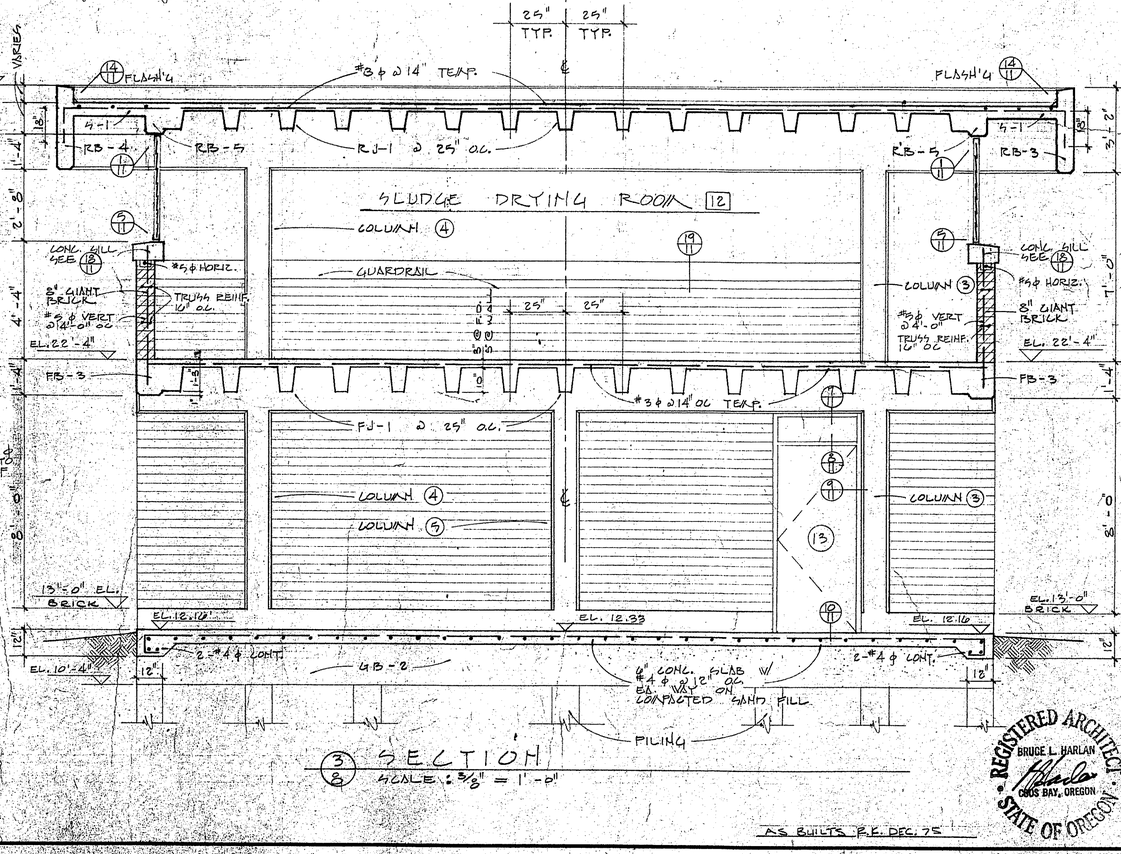
1 SECTION
8 SCALE: 3/8" = 1'-0"



4 DIGESTER ROOF STAIRWAY
8 3/8" = 1'-0"



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



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

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STATE OF OREGON

HG INC
ENGINEERS • PLANNERS
DAN HIGHLAND
COOS BAY, OREGON
269-1166

DIGESTER CONTROL BUILDING SECTIONS
COOS BAY PLANT #2 SEWAGE TREATMENT FACILITIES

1972-5-69

8

KOE

BEAM SCHEDULE

MARK	SECTION	FACE OF SUPPORT	REMARKS
RB-1	32" 3" CLR. 2" CLR. 12"	2" CLR. 4-#6 4-#6 4-#6 2" CLR. 2" CLR. 2" CLR.	STIRRUPS — #4 ϕ 1'-0" @ 9 REMAINDER @ 12" E.E. AND AT CANTILEVERS.
RB-2	VARIES 27" MIN. 3" CLR. 12"	2" CLR. 3-#6 3-#6 3-#6 8" 2" CLR.	STIRRUPS — #4 ϕ 1'-0" @ 4" REMAINDER @ 9" E.E. AND AT CANTILEVER
RB-3	32" 2" CLR. 8"	2-#6 8" 5'-6" 2-#6 8" 8"	STIRRUPS — #3 ϕ 1'-6" @ REMAINDER CONT. @ 12" E.E. HOOK AT DISCONTINOUS ENDS ONLY
RB-4	38" 2" CLR. 8"	2-#6 8" 5'-6" 2-#6 8" 8"	STIRRUPS — #3 ϕ 1'-6" @ REMAINDER @ 12" E.E.
RB-5	VARIES 2" CLR. 8"	1-#4 6" 6"	NO STIRRUPS

MARK	SECTION	FACE OF SUPPORT	REMARKS
FB-1	24" 3" CLR. 2" CLR. 12"	2" CLR. 4-#6 3-#6 2" CLR. 2" CLR.	STIRRUPS — #3 ϕ 1'-4" @ 3'-9" REMAINDER CONT. @ 12" E.E. AND AT CANTILEVERS
FB-2	16" 3" CLR. 2" CLR. 12"	8" 3-#6 3-#6 8" 2" CLR.	STIRRUPS — #3 ϕ 1'-3" @ 4'-6" REMAINDER CONT. @ 12" E.E. AND AT CANTILEVER
FB-3	16" 3" CLR. 2" CLR. 12"	8" 2-#6 4-#6 8" 8"	STIRRUPS — #3 ϕ 1'-6" @ REMAINDER @ 12" E.E.
GB-1	24" 3" CLR. 12"	36" 8" 3-#6 3-#6 8" 8"	STIRRUPS #3 ϕ 1'-6" @ REMAINDER @ 12" E.E. HOOK AT DISCONTINIOUS ENDS ONLY
GB-2	24" 3" CLR. 12"	36" 8" 3-#6 3-#6 3-#6 8" 8"	STIRRUPS #3 ϕ 1'-4" @ REMAINDER @ 10" E.E. HOOK AT DISCONTINIOUS ENDS ONLY

JOIST SCHEDULE

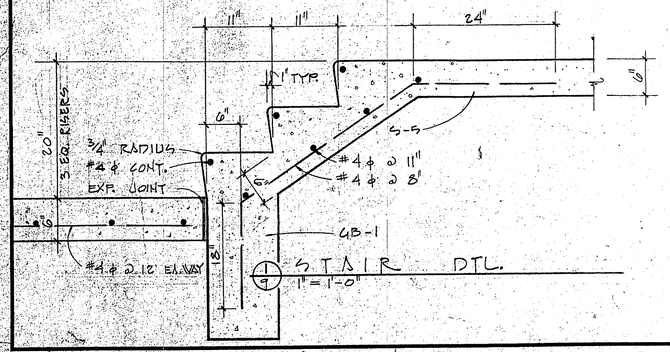
MARK	SECTION	FACE OF SUPPORT	REMARKS
RJ-1	3" 3" CLR. 8" 3" CLR. 5"	8" 2'-6" 3'-6" 5'-6" 1-#5 1-#5 8" 8"	NO STIRRUPS HOOK TRUSS BAR AT DISCONTINOUS ENDS ONLY
FJ-1	5" 10" 3" CLR. 5"	8" 2'-9" 2'-9" 8" 1-#6 1-#6 8" 8"	NO STIRRUPS

SLAB SCHEDULE

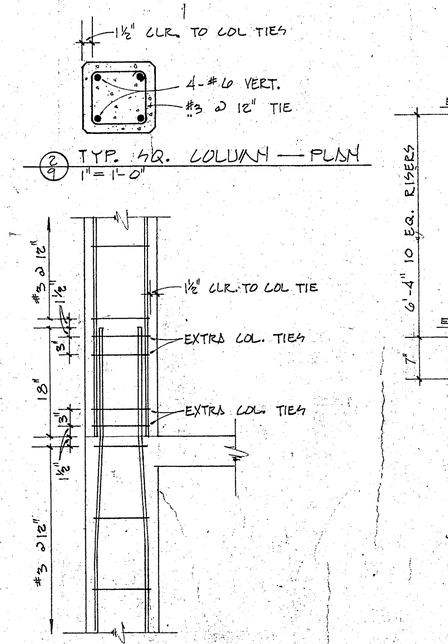
MARK	SIZE	DIRECTION	BAR SIZE	BAR SPACING	LOCATION	REMARKS
S-1	6" MIN.	E — W	#3	14"	TOP	
		N — S	#3	14"	TOP	
		E — W	#4	12"	BOT.	HOOK DISCONTINIOUS ENDS ONLY
S-2	8"	N — S	#4	12	TOP	
		N — S	#4	12	BOT.	
		E — W	#4	12	TEMP.	
S-3	7'	E — W	#5	8"	TOP	36" X 36" DOWELS @ DISCONT. ENDS ONLY
		E — W	#5	8"	BOT	HOOK DISCONTINIOUS ENDS ONLY
		E — W	#5	8"	TRUSS	HOOK DISCONTINIOUS ENDS ONLY
		N — S	#4	12"	TEMP.	
S-4	7"	E — W	#5	8"	TOP	HOOK DISCONTINIOUS ENDS ONLY
		E — W	#5	8"	BOT.	HOOK DISCONTINIOUS ENDS ONLY
		N — S	#4	12"	TEMP.	
S-5	6"	N — S	#4	12"	BOT.	
		E — W	#4	12"	TEMP.	

COLUMN SCHEDULE

MARK / ELEV.	1	2	3	4	5
ELEV. 31.5					
SIZE VERT. TIES	12 X 12 4-#6 #3 @ 12	12 X 12 4-#6 #3 @ 12	12 X 12 4-#6 #3 @ 12	12 X 12 4-#6 #3 @ 12	
ELEV. 22.33					
SIZE VERT. TIES		12 X 12 4-#6 #3 @ 12	12 X 12 4-#6 #3 @ 12	12 X 12 4-#6 #3 @ 12	12 X 12 4-#6 #3 @ 12
ELEV. 16.0					
SIZE VERT. TIES	12 X 12 4-#6 #3 @ 12		12 X 12 4-#6 #3 @ 12	12 X 12 4-#6 #3 @ 12	12 X 12 4-#6 #3 @ 12
ELEV. 12.33					

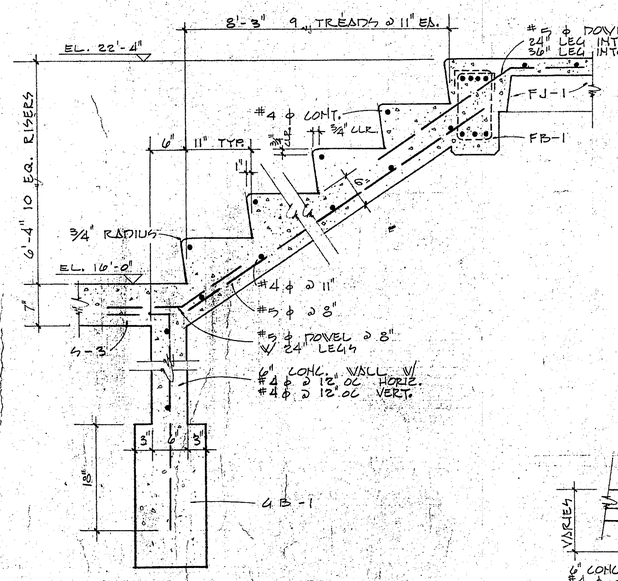


1 STAIR DTL.
1" = 1'-0"



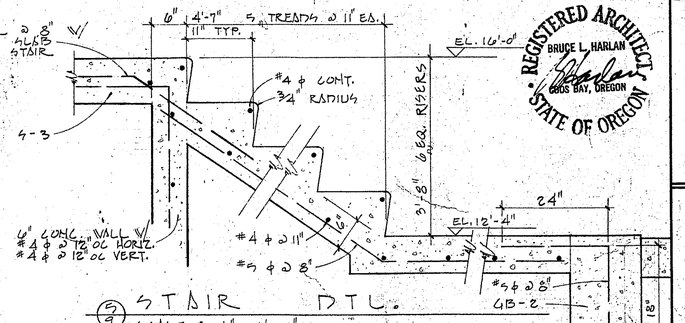
3 TYP. SQ. COLUMN — PLAN
1" = 1'-0"

3 TYP. SQ. COLUMN — ELEV.
1" = 1'-0"

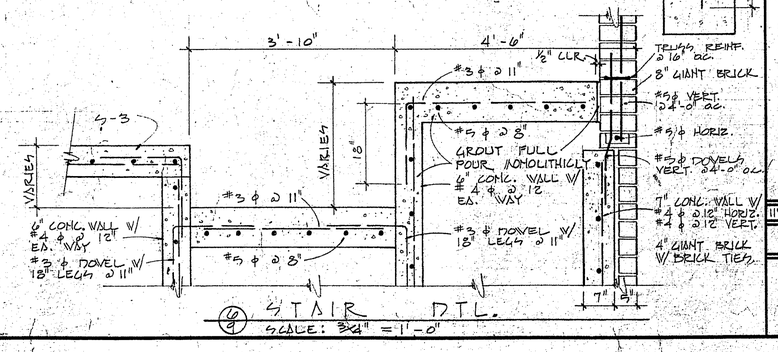


4 STAIR DTL.
SCALE: 1" = 1'-0"

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5 STAIR DTL.
SCALE: 1" = 1'-0"



6 STAIR DTL.
SCALE: 3/4" = 1'-0"

HGE INC
5TH AND HIGHLAND
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COOS BAY, OREGON
269-1162

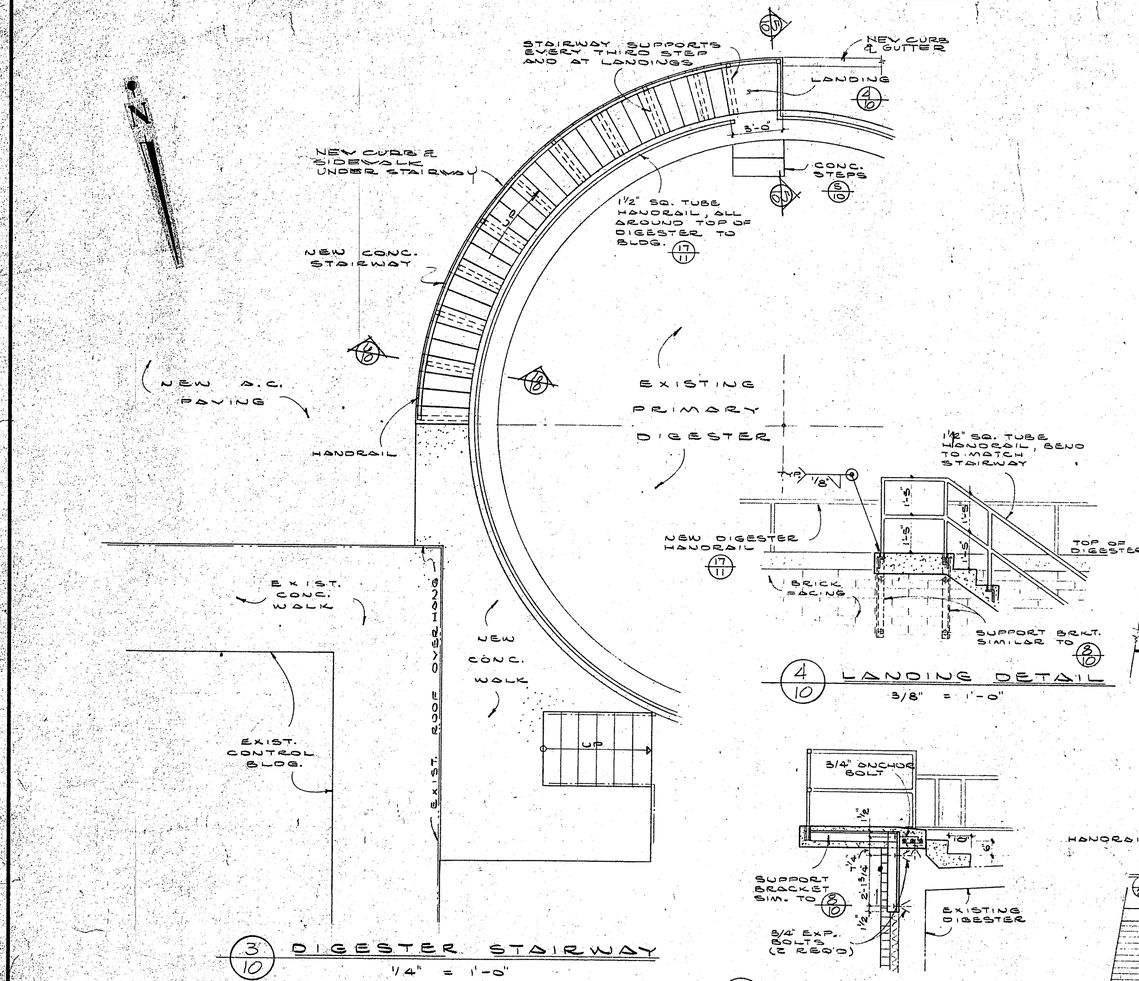
PLANT #2 FACILITIES

DIGESTER CONTROL BLDG. STRUCTURAL DETAILS

COOS BAY SEWAGE TREATMENT

1172-A-69

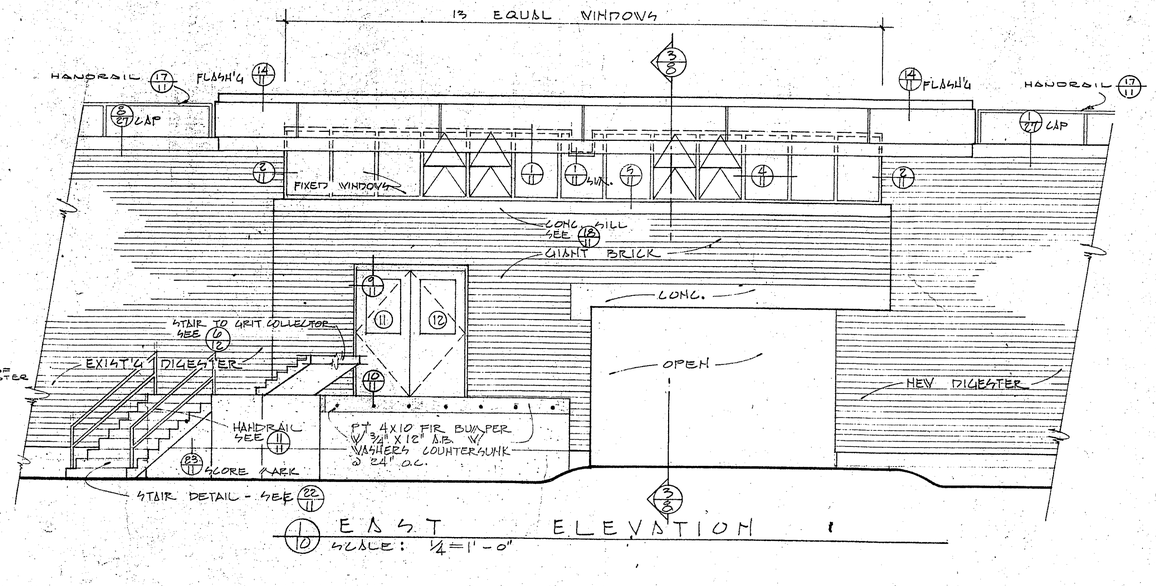
REGISTERED ARCHITECT
BRUCE L. HARLAN
COOS BAY, OREGON
STATE OF OREGON



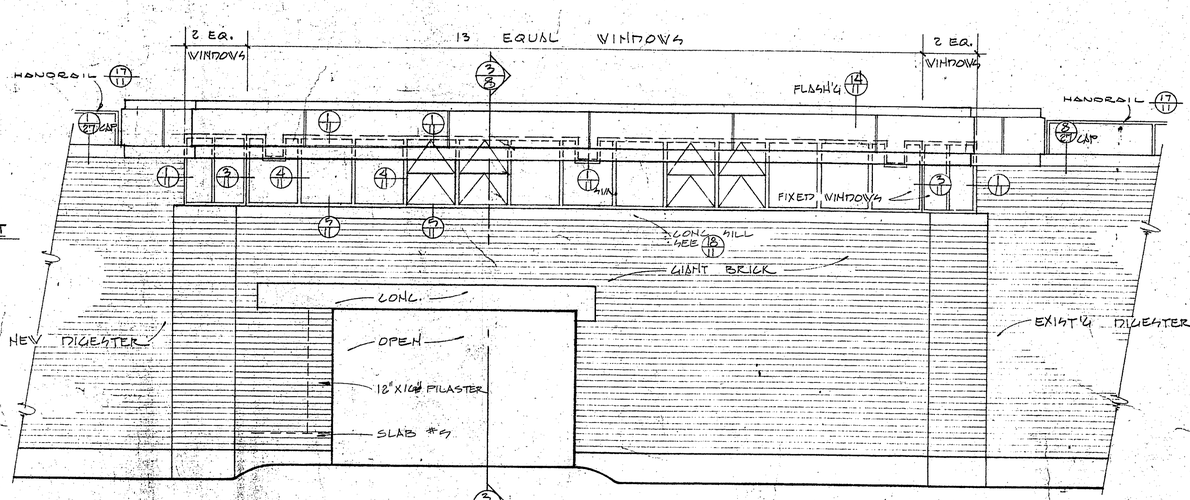
(3/10) DIGESTER STAIRWAY
1/4" = 1'-0"

(4/10) LANDING DETAIL
3/8" = 1'-0"

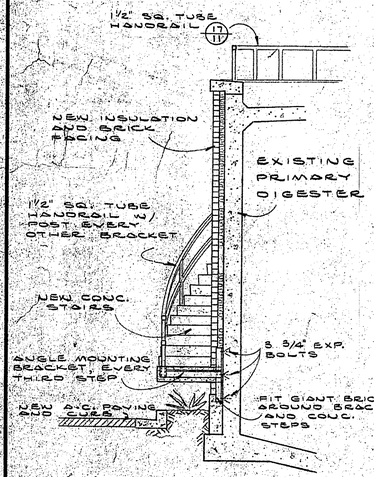
(5/10) LANDING SUPPORT
3/8" = 1'-0"



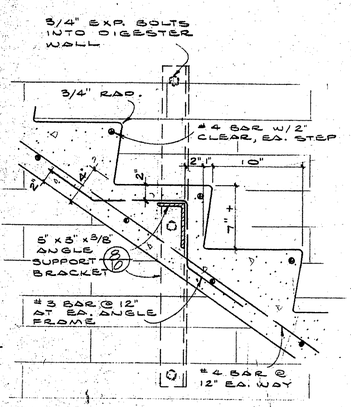
(1/10) EAST ELEVATION
SCALE: 1/4"=1'-0"



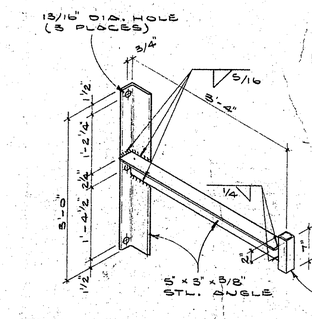
(2/10) WEST ELEVATION
SCALE: 1/4"=1'-0"



(10/10) STAIR SECTION
1/4" = 1'-0"



(7/10) STEP DETAIL
1½" = 1'-0"



(8/10) SUPPORT BRKT.
3/4" = 1'-0"
(BRACKET WILL BE ALTERED SLIGHTLY TO SUIT LOCATION)

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REGISTERED ARCHITECT
BRUCE L. HARLAN
COOS BAY, OREGON
STATE OF OREGON

STRAND-HIGHLAND
P.O. BOX 1147
COOS BAY, OREGON
269-3166

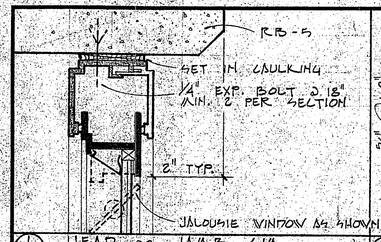
HGE INC
ENGINEERS • PLANNERS

COOS BAY PLANT #2 FACILITIES

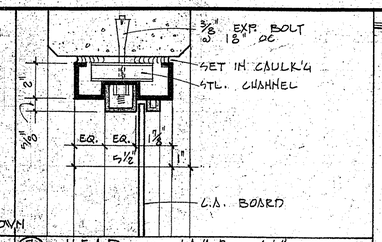
DIGESTER CONTROL BLDG
EXTERIOR ELEVATIONS
SEWAGE TREATMENT FACILITIES

172-A-69

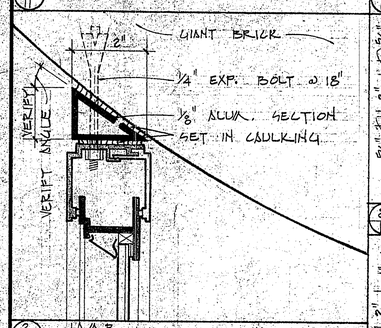
10



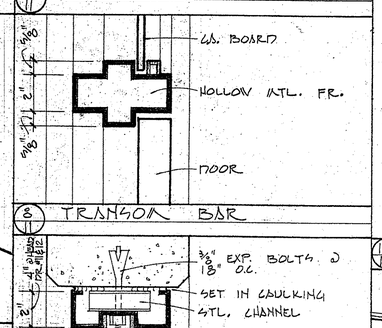
1 HEAD ∘∘ JAMB SILL.



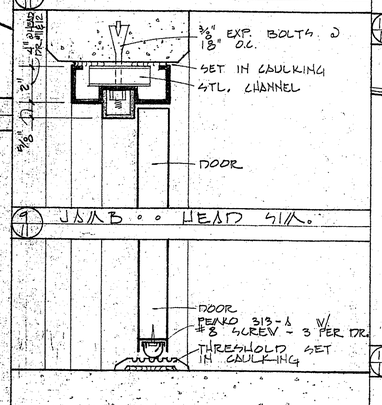
7 HEAD ∘∘ JAMB SILL.



2 JAMB

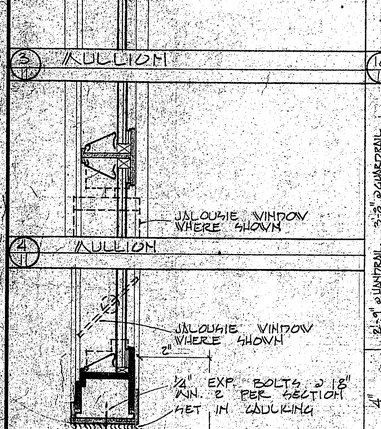


8 TRANSOM BAR



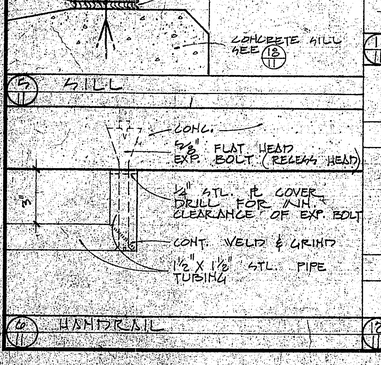
9 JAMB ∘∘ HEAD SILL

3 MULLION

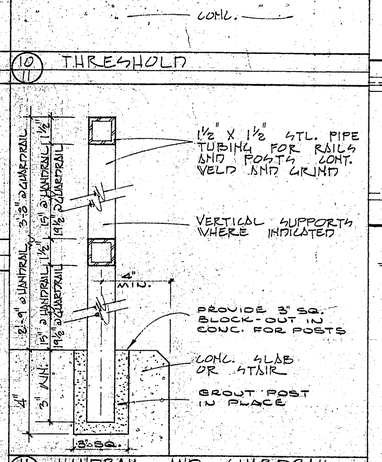


4 MULLION

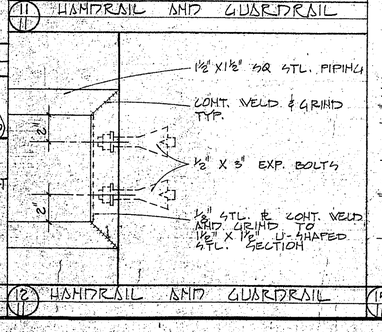
5 SILL



6 HANDRAIL

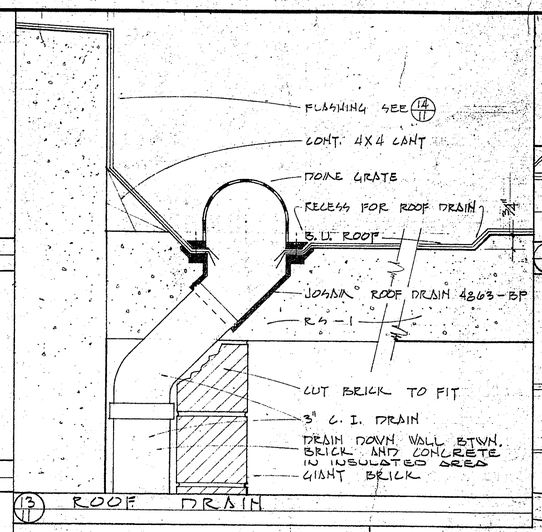


11 HANDRAIL AND GUARDRAIL



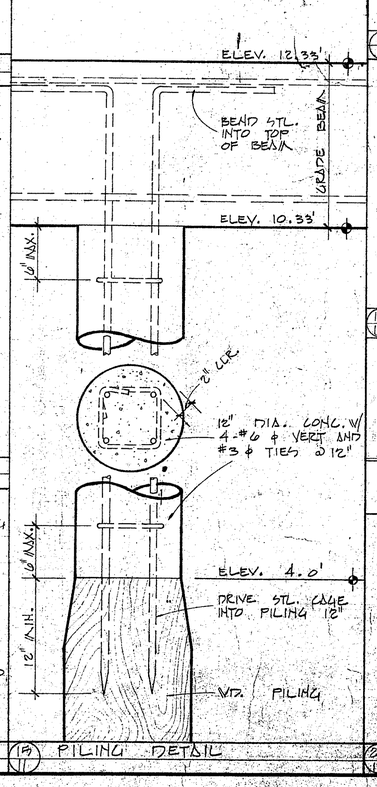
12 HANDRAIL AND GUARDRAIL

10 THRESHOLD

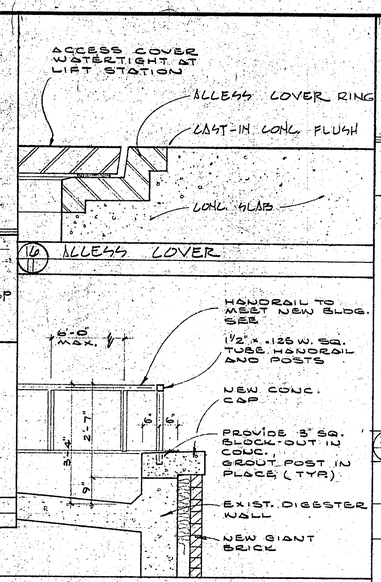


13 ROOF DRAIN

14 FLASHING



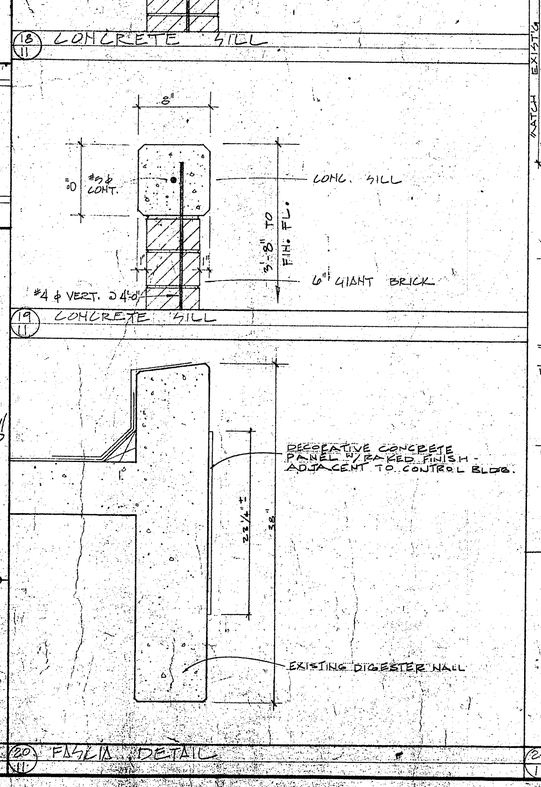
19 PILING DETAIL



16 ALLESS COVER

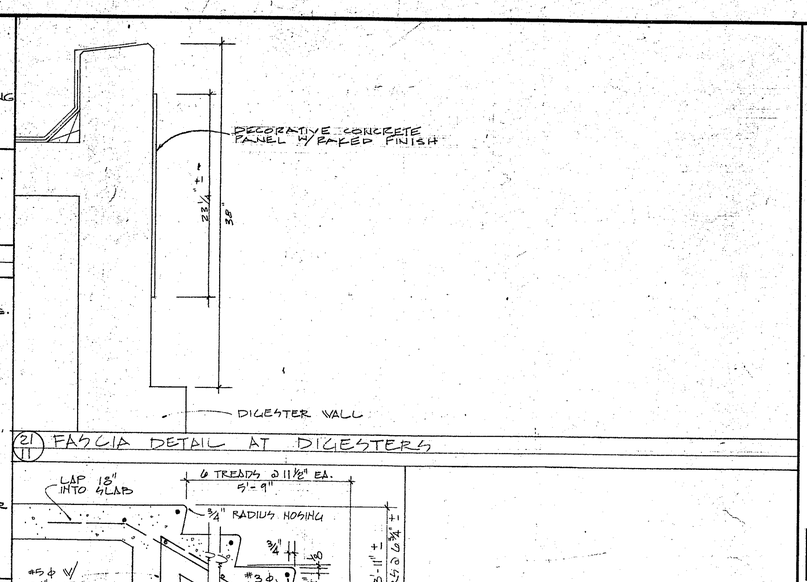
17 HANDRAIL @ EXISTING DIGESTER

18 CONCRETE SILL



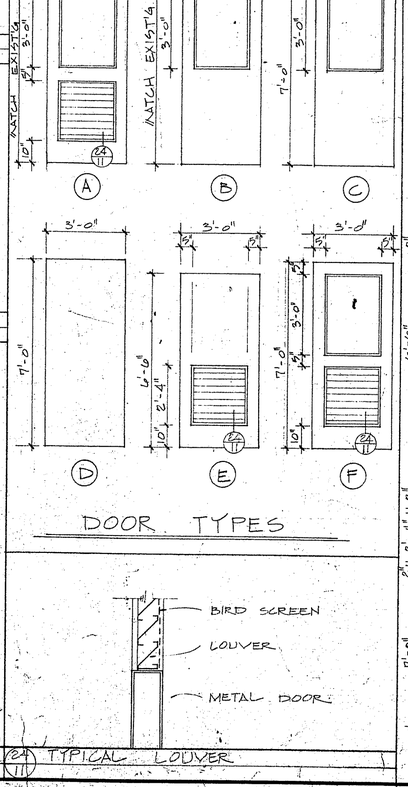
19 CONCRETE SILL

20 FASCIA DETAIL



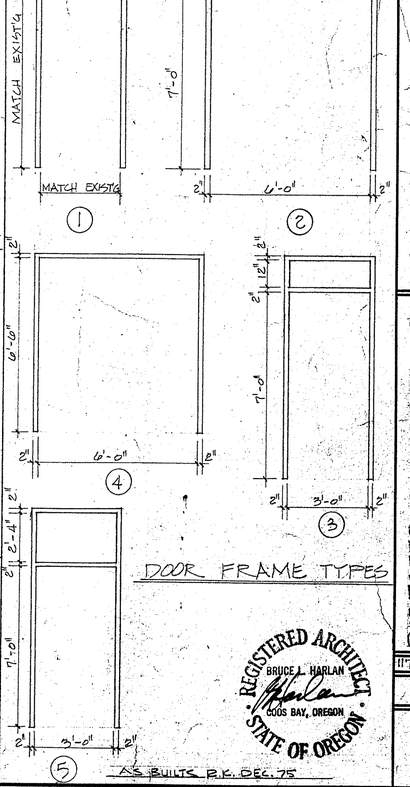
21 FASCIA DETAIL AT DIGESTERS

22 STAIR DETAIL



DOOR TYPES

24 TYPICAL LOUVER



DOOR FRAME TYPES

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COOS BAY, OREGON
STATE OF OREGON

AS BUILTS R.K. DEC. 75

HGE INC
ENGINEERS • PLANNERS
5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

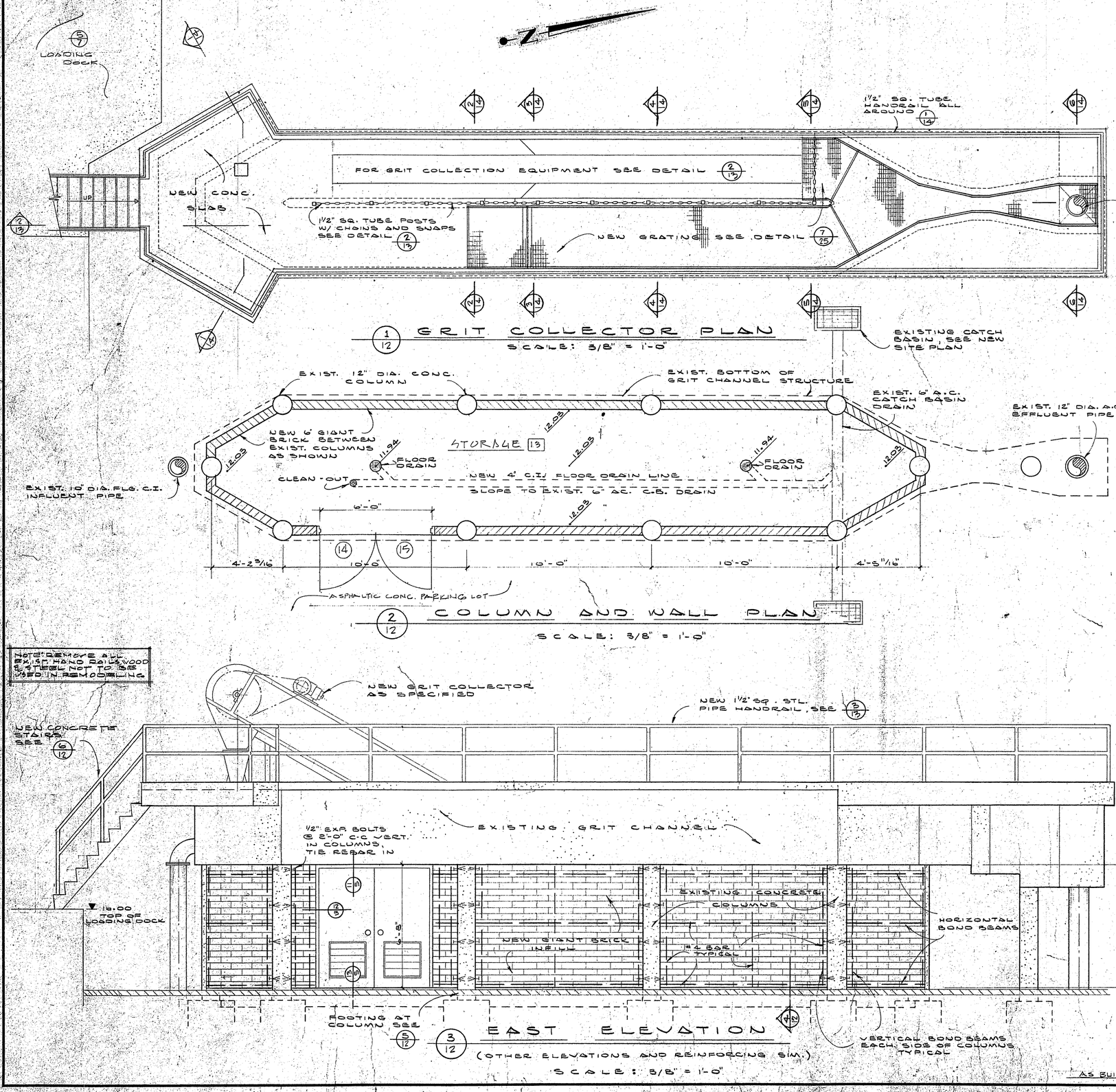
COOS BAY #2 PLANT FACILITIES
SEWAGE TREATMENT

DIGESTER CONTROL BUILDING DETAILS

1172-A-69

11

K&E



1/12 GRIT COLLECTOR PLAN

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

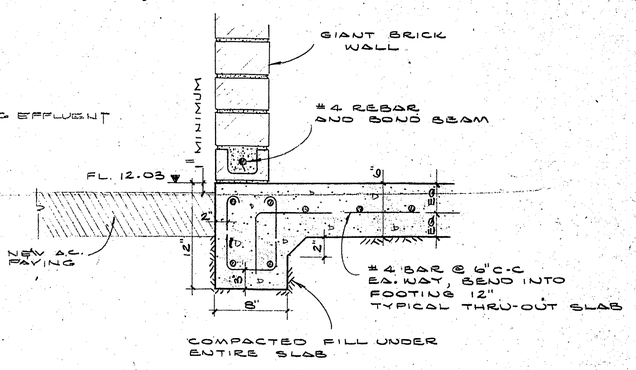
2/12 COLUMN AND WALL PLAN

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

3/12 EAST ELEVATION

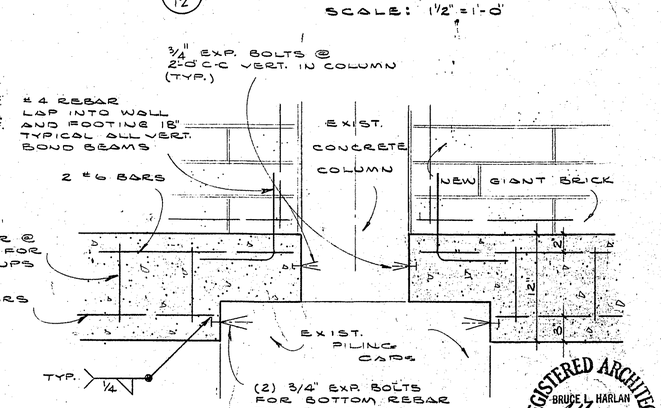
(OTHER ELEVATIONS AND REINFORCING SIM.)

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



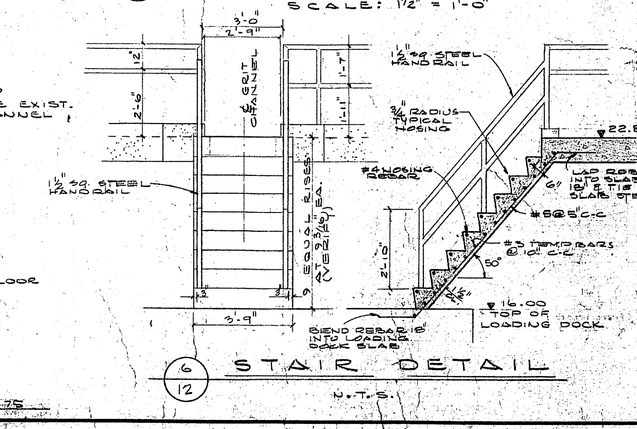
4/12 FOOTING DETAIL

SCALE: 1½" = 1'-0"



5/12 FOOTING AT COLUMN

SCALE: 1½" = 1'-0"



6/12 STAIR DETAIL

N.T.S.

AS BUILT R.K. DEC. 75

REGISTERED ARCHITECT
BRUCE L. HARLAN
COOS BAY, OREGON
STATE OF OREGON

HGE INC
ENGINEERS • PLANNERS
5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

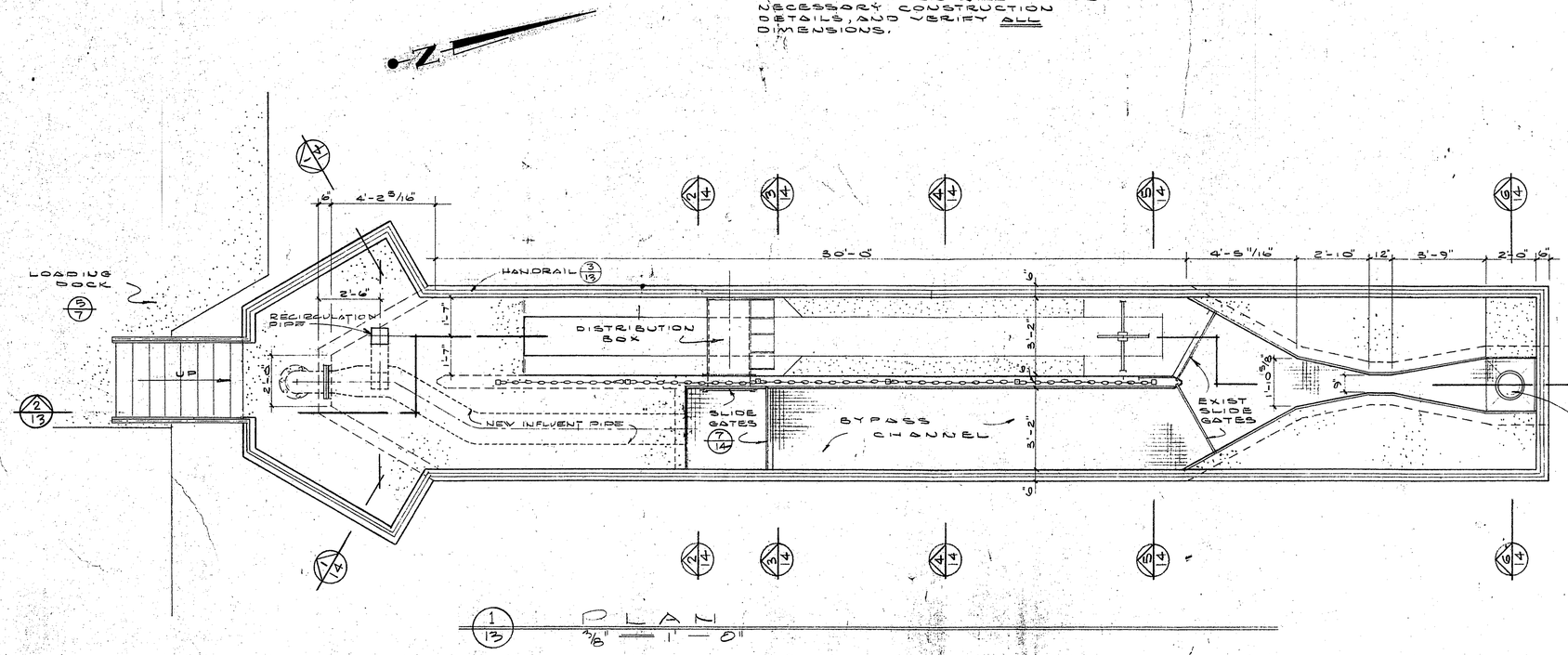
COOS BAY #2 PLANT
SEWAGE TREATMENT FACILITY

GRIT COLLECTOR PLAN & ELEVATION 2

1172-A-69

12

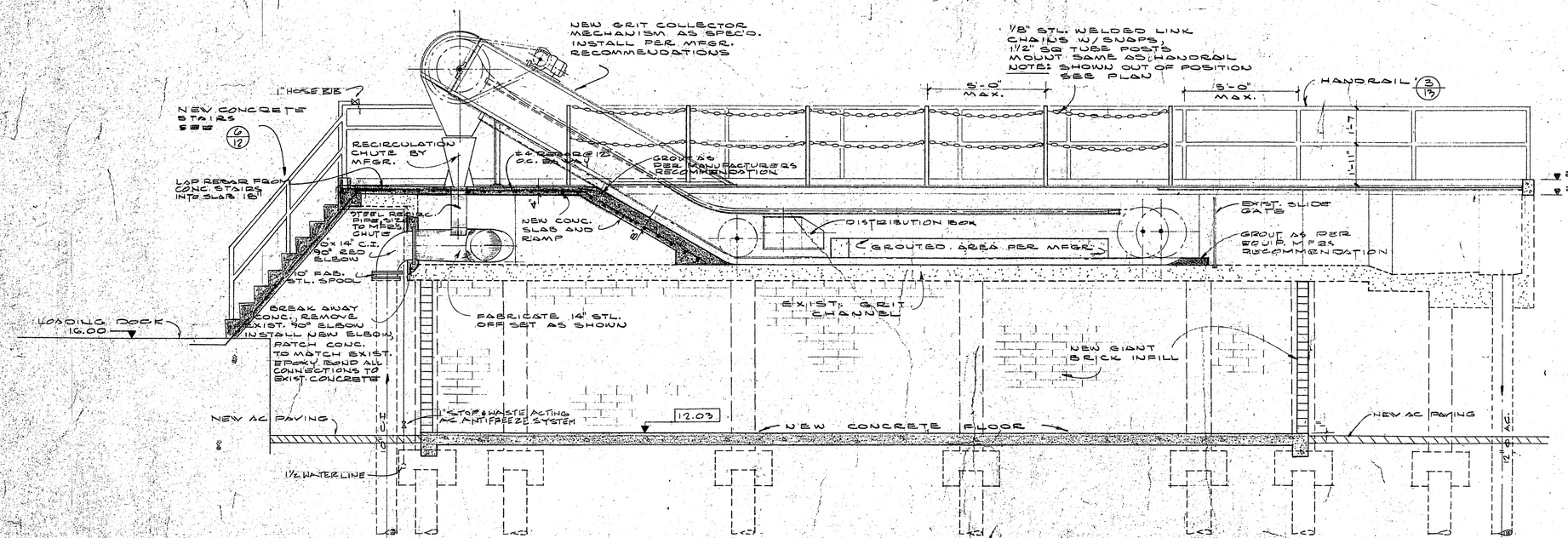
NOTE: DIMENSIONS ARE GENERALLY FOR THE EXISTING STRUCTURE. EQUIPMENT MFGR. WILL PROVIDE NECESSARY CONSTRUCTION DETAILS, AND VERIFY ALL DIMENSIONS.



1 1/2" SQ TUBE HANDRAIL POST
NEW CONC.
EXIST. CONC.

(3/13) HANDRAIL MOUNT
SCALE: 1 1/2" = 1'-0"

(1/13) PLAN
3/8" = 1'-0"



(2/13) SECTION
3/8" = 1'-0"

AS BUILTS P.K. DEC. 75

REGISTERED PROFESSIONAL ENGINEER 6489 OREGON JULY 11, 1985 RICHARD D. NORED

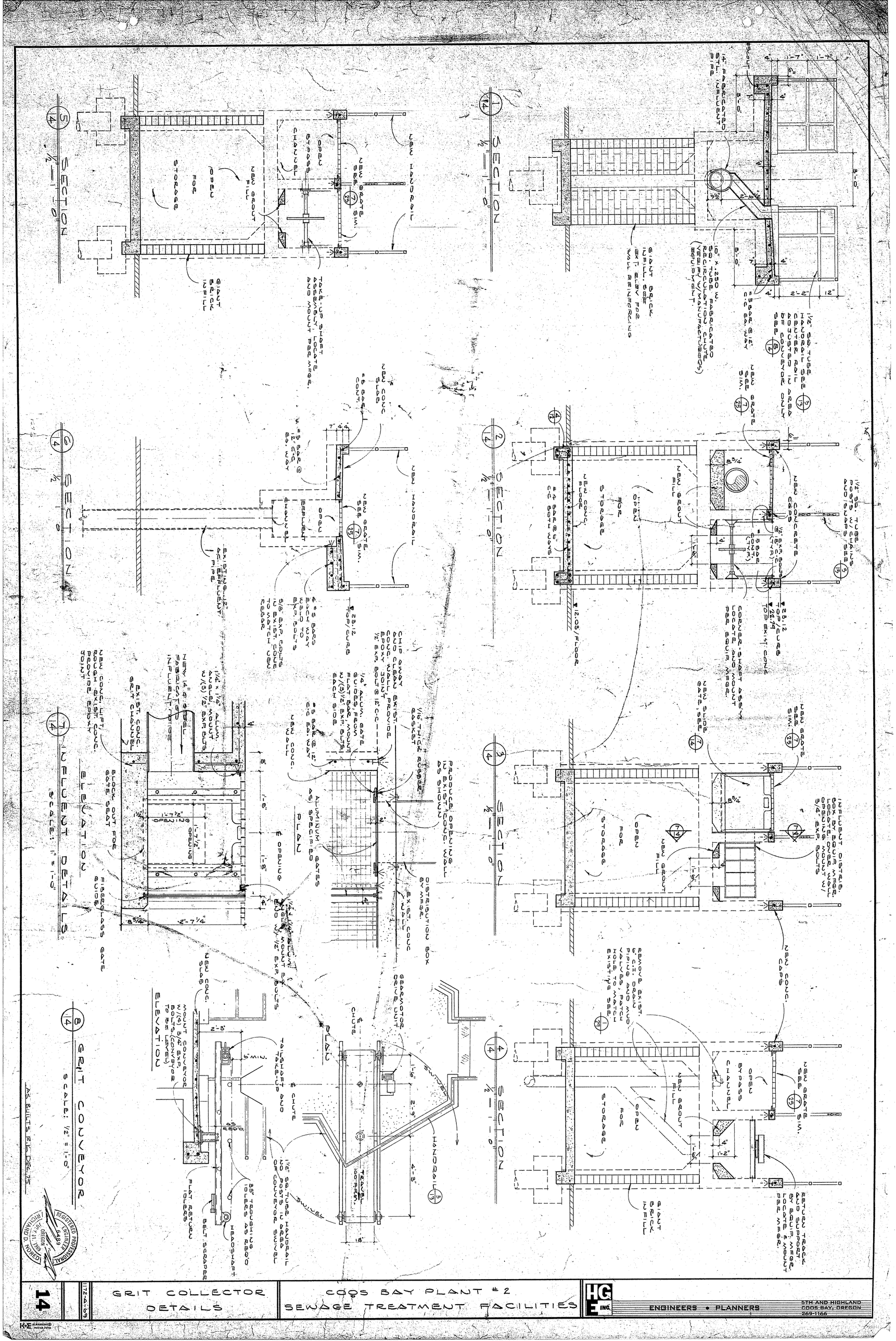
HG ENGINEERS • PLANNERS
5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

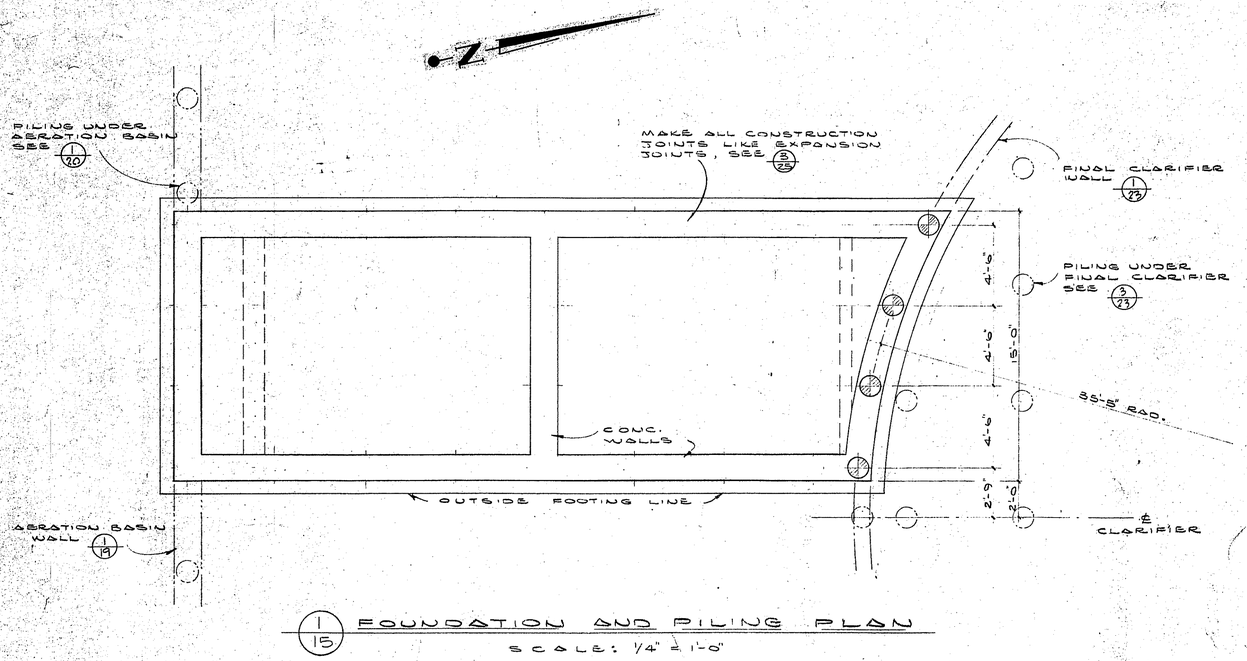
COOS BAY PLANT #2
SEWAGE TREATMENT

GRIT COLLECTOR PLAN & SECTION

1172-A-GA1

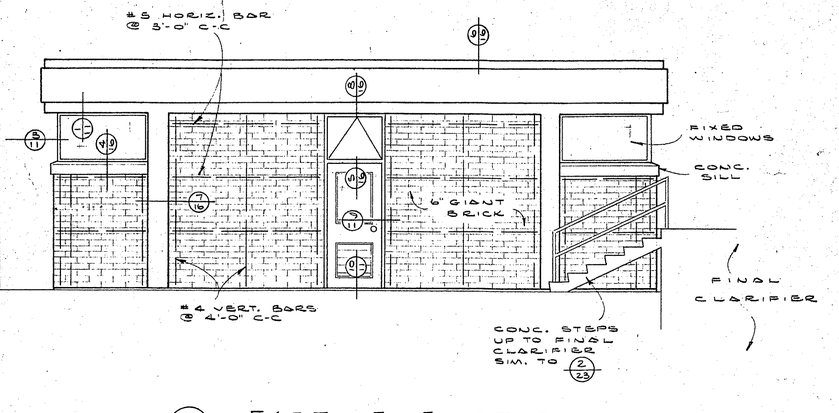
13


5 14 SECTION 1/2"=1'-0"
6 14 SECTION 1/2"=1'-0"
1 14 SECTION 1/2"=1'-0"
2 14 SECTION 1/2"=1'-0"
3 14 SECTION 1/2"=1'-0"
4 14 SECTION 1/2"=1'-0"
7 14 INFLUENT DETAILS
8 14 GRIT CONVEYOR
NEW GRATE SEE SIM.
NEW CONC. FILL
OPEN FOR STORAGE
OPEN BYPASS CHANNEL
NEW CONC. SLAB
NEW CONC. CAP
NEW CONC. WALL
EXIST. CONC. WALL
EXIST. 12" CAST IRON PIPE
NEW CONC. GRIT CHANNEL
NEW CONC. LIFT/FLOOR
NEW CONC. ROUGH EXIST. JOINT
NEW 1/4" ø STEEL INFLUENT PIPE
1/4" x 1/4" ALUM. ANGLE W/ (5) 1/2" EXP. BOLTS
BLOCK OUT FOR GATE SEAT
FIBERGLASS GATE GUIDE
ELEVATION
PLAN
ALUMINUM GATES AS SPECIFIED
PROVIDE OPENING IN EXIST. CONC. WALL AS SHOWN
DISTRIBUTION BOX BY MFGR.
EXIST. CONC. WALL
GEARMOTOR DRIVE UNIT
CHUTE
TAKE-UP & TAILSHAFT ASSY.
TAILSHAFT
HEADSHAFT
BELT SCRAPER
BELT RETURN IDLERS
TROUGHING IDLERS AS REQD
1/2" GALVANIZED SWIVEL
TRAVEL DIRECTION OF CONVEYOR
TAKE-UP SHAFT ASSEMBLY. LOCATE AND MOUNT PER MFGR.
NEW GRATE SEE SIM.
NEW CONC. SLAB
NEW CONC. FILL
NEW CONC. CAP
NEW CONC. WALL
EXIST. CONC. WALL
#5 BAR @ 12" C.C. EACH WAY
#5 BAR @ 12" C.C. BOTH WAYS
#4 BARS C.C. BOTH WAYS
#5 BAR CONT.
NEW CONC. SLAB
NEW CONC. CAP
NEW CONC. WALL
EXIST. CONC. WALL
EXIST. 12" CAST IRON PIPE
#5 BAR EACH WAY BEND TO MATCH CAP REBAR
5/8" EXP. BOLTS TO MATCH CAP REBAR
#5 BAR @ 12" C.C. EACH WAY
#5 BAR @ 12" C.C. BOTH WAYS
#5 BAR CONT.
NEW CONC. SLAB
NEW CONC. CAP
NEW CONC. WALL
EXIST. CONC. WALL
EXIST. 12" CAST IRON PIPE
#5 BAR EACH WAY BEND TO MATCH CAP REBAR
5/8" EXP. BOLTS TO MATCH CAP REBAR
CHIP AWAY AND CLEAN EXIST. CONC. WALL. PROVIDE EPOXY JOINT 1/2" EXP. BOLTS @ 12" C.C.
1/8" ALUM. GATE GUIDES FROM FLAT BAR. MOUNT W/(5) 1/2" EXP. BOLTS EACH SIDE
1/16" THICK RUBBER GASKET
ALUMINUM GATES AS SPECIFIED
#5 BAR @ 12" C.C. EACH WAY
NEW CONC. SLAB
NEW CONC. WALL
NEW CONC. CAP
NEW CONC. SLAB
NEW CONC. WALL
EXIST. CONC. WALL
NEW GRATE SEE SIM.
NEW CONC. FILL
OPEN FOR STORAGE
OPEN BYPASS CHANNEL
NEW CONC. CAP
NEW CONC. WALL
EXIST. CONC. WALL
NEW GRATE SEE SIM.
NEW CONC. FILL
OPEN FOR STORAGE
NEW CONC. CAP



1/15 FOUNDATION AND PILING PLAN

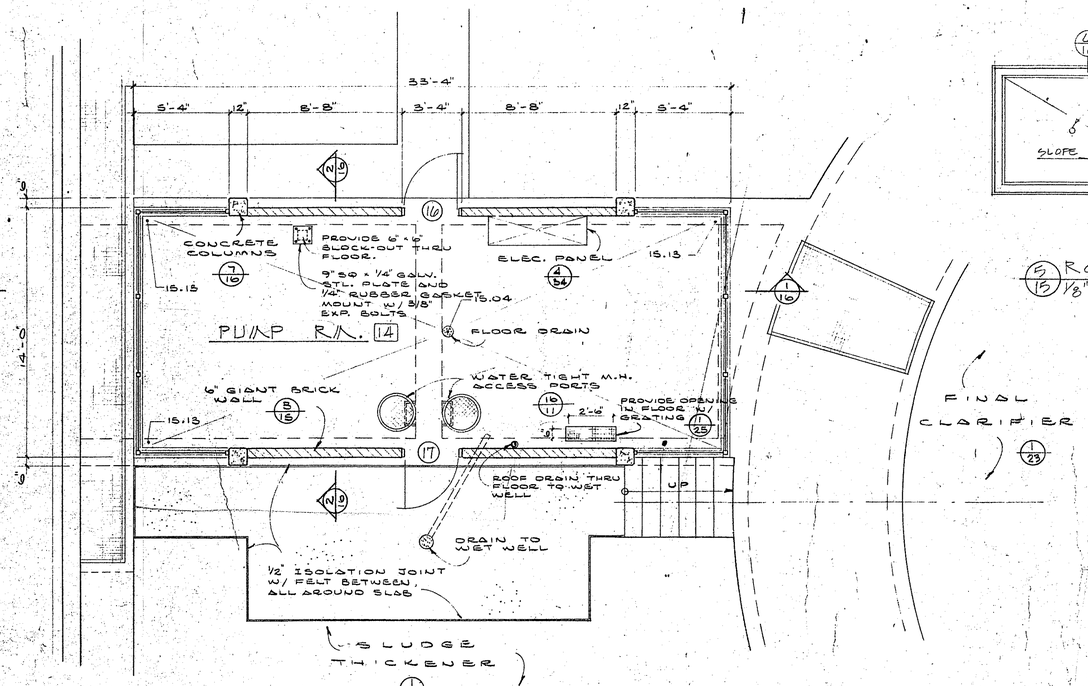
SCALE: 1/4" = 1'-0"



3/15 EAST ELEVATION

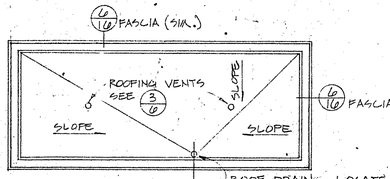
"WEST ELEV. SIMILAR"

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



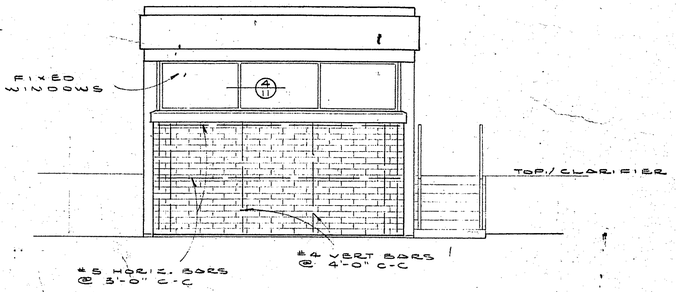
2/15 PLAN

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



5/15 ROOF PLAN

1/8" = 1'-0"



4/15 NORTH ELEVATION

"SOUTH ELEV. SIMILAR"

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

REGISTERED ARCHITECT BRUCE L. HARLAN COOS BAY, OREGON STATE OF OREGON

AS BUILTS P.E. DEC. '75

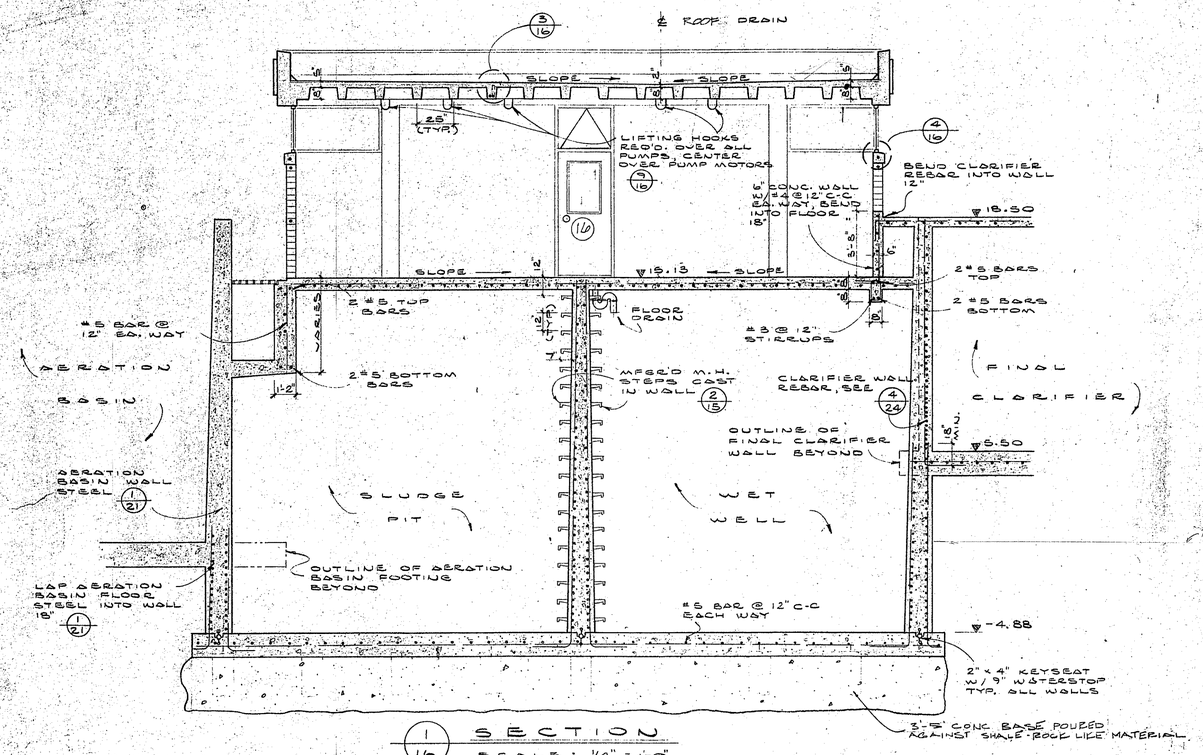
HGE INC ENGINEERS • PLANNERS 5TH AND HIGHLAND COOS BAY, OREGON 269-1166

CITY OF COOS BAY SEWERAGE TREATMENT PLANT PHASE 2

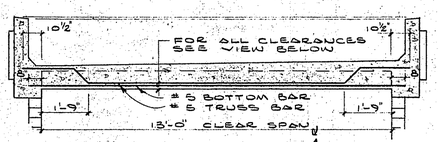
LIFT STATION & FORCE MAIN PHASE 2

1172-A-68

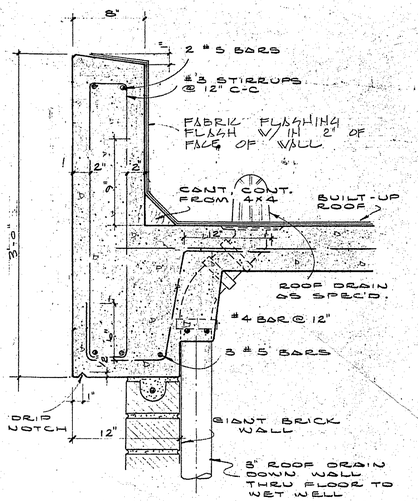
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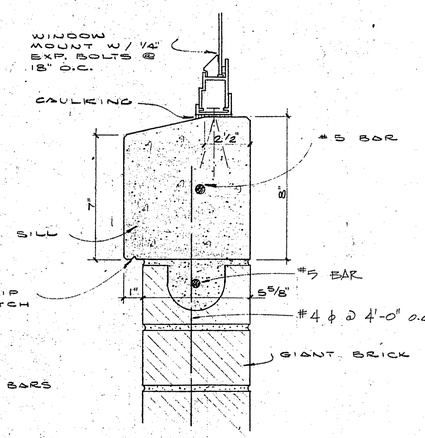
1/16 SECTION
SCALE: 1/4" = 1'-0"



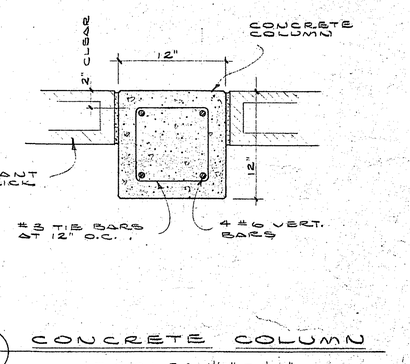
3/16 TYPICAL PAN JOIST
SCALE: 1 1/2" = 1'-0"



6/16 FASCIA
SCALE: 1 1/2" = 1'-0"

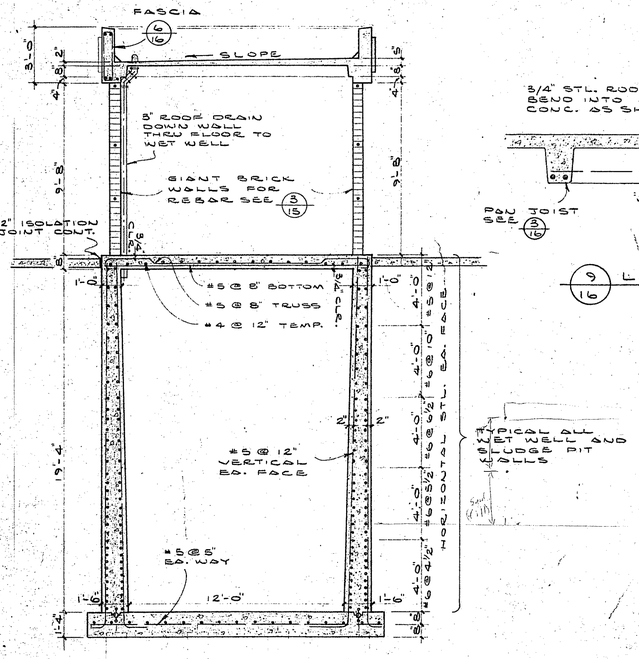


4/16 CONCRETE SILL
SCALE: 3" = 1'-0"

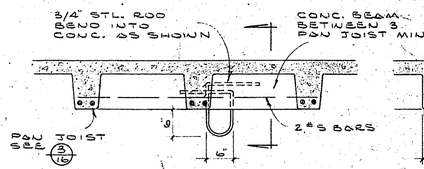


7/16 CONCRETE COLUMN
SCALE: 1 1/2" = 1'-0"

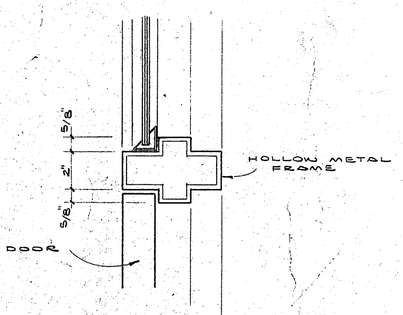
NOTE: PROVIDE WATERSTOP AT ALL CONSTRUCTION JOINTS SEE 9/25



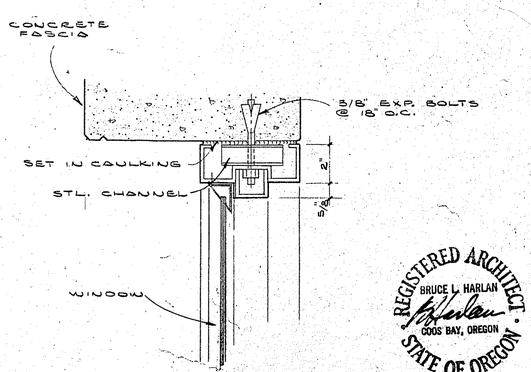
2/16 SECTION
SCALE: 1/4" = 1'-0"



9/16 LIFTING HOOKS
SCALE: 3/4" = 1'-0"



5/16 TRANSOM BAR
SCALE: 3" = 1'-0"



8/16 WINDOW HEAD
SCALE: 3" = 1'-0"

REGISTERED ARCHITECT
BRUCE L. HARLAN
COOS BAY, OREGON
STATE OF OREGON

AS BUILTS E.E. DEC. 75

5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

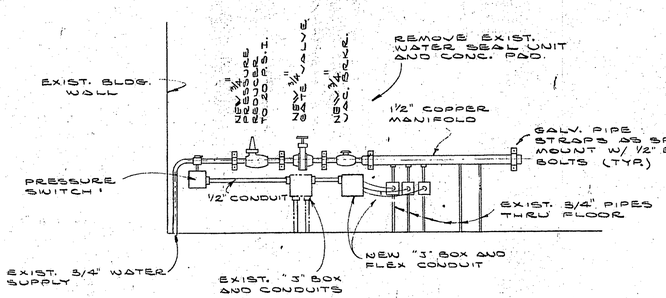
HGE INC
ENGINEERS • PLANNERS

SEWAGE TREATMENT FACILITIES
COOS BAY, OREGON
PLANT #2

1972-1974
SECTION 2

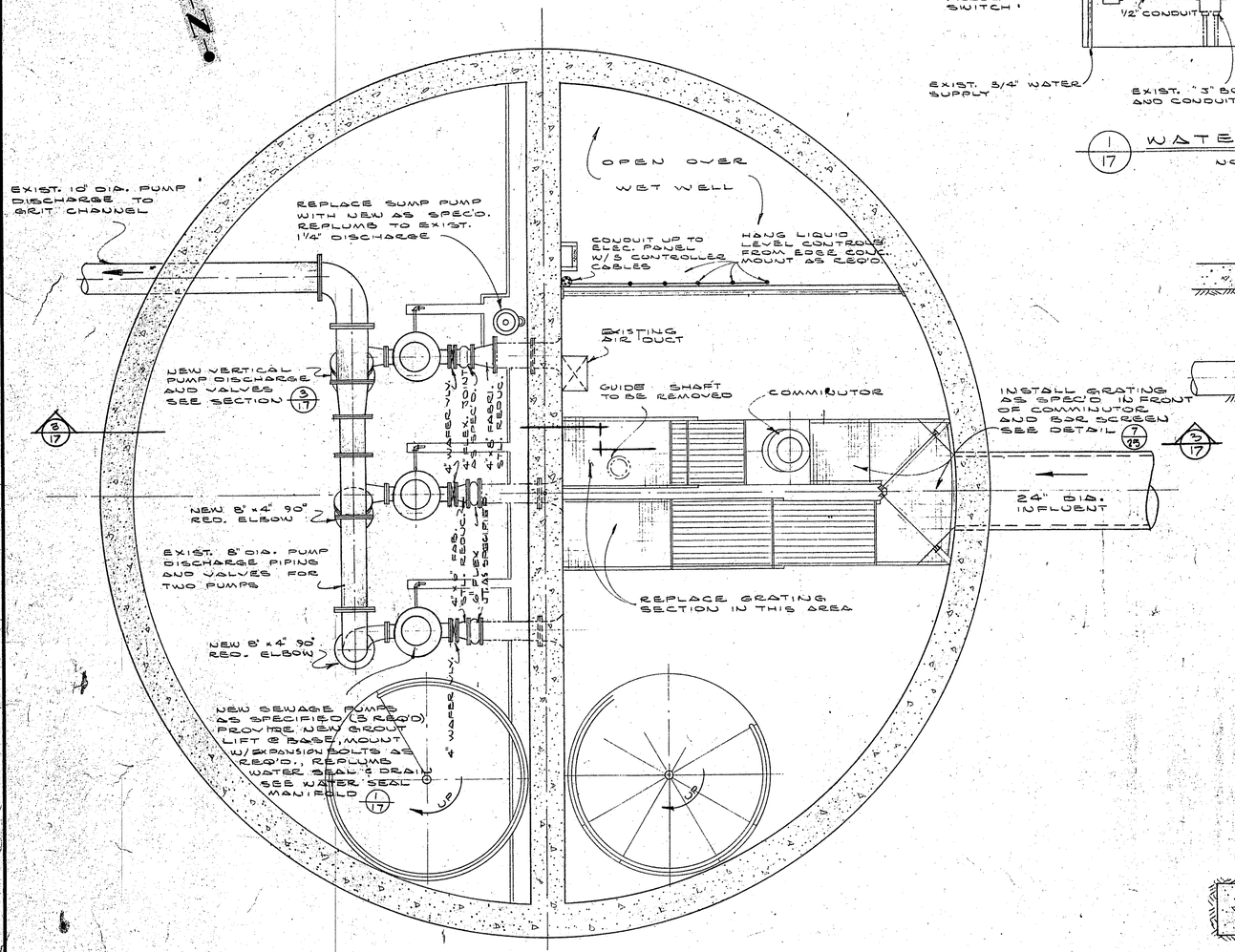
SHEET
16

1172-A-69



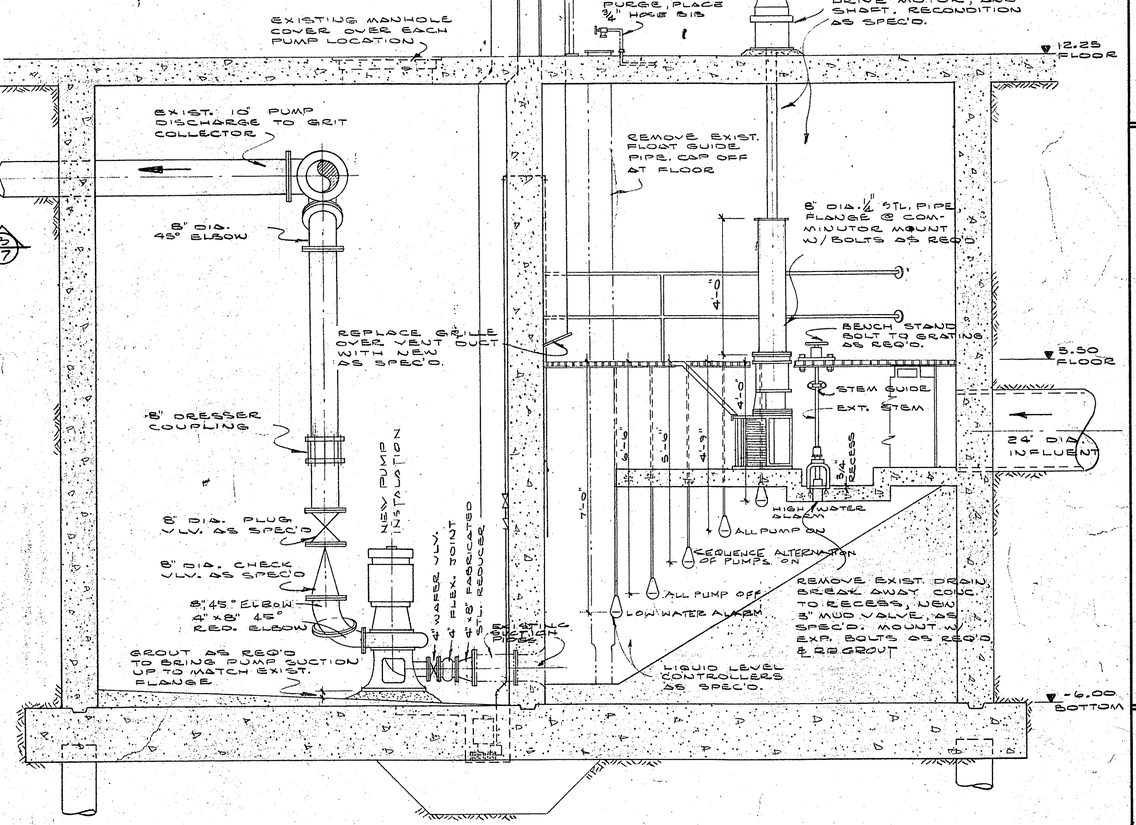
1/17 WATER SEAL UNIT

NO SCALE



2/17 PLAN

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



3/17 SECTION

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

AS BUILTS P.E. DEC 75

REGISTERED PROFESSIONAL ENGINEER 6689 OREGON JULY 11, 1969 RICHARD D. NOREDI

HG2E INC

ENGINEERS • PLANNERS

COOS BAY, OREGON
269-1166

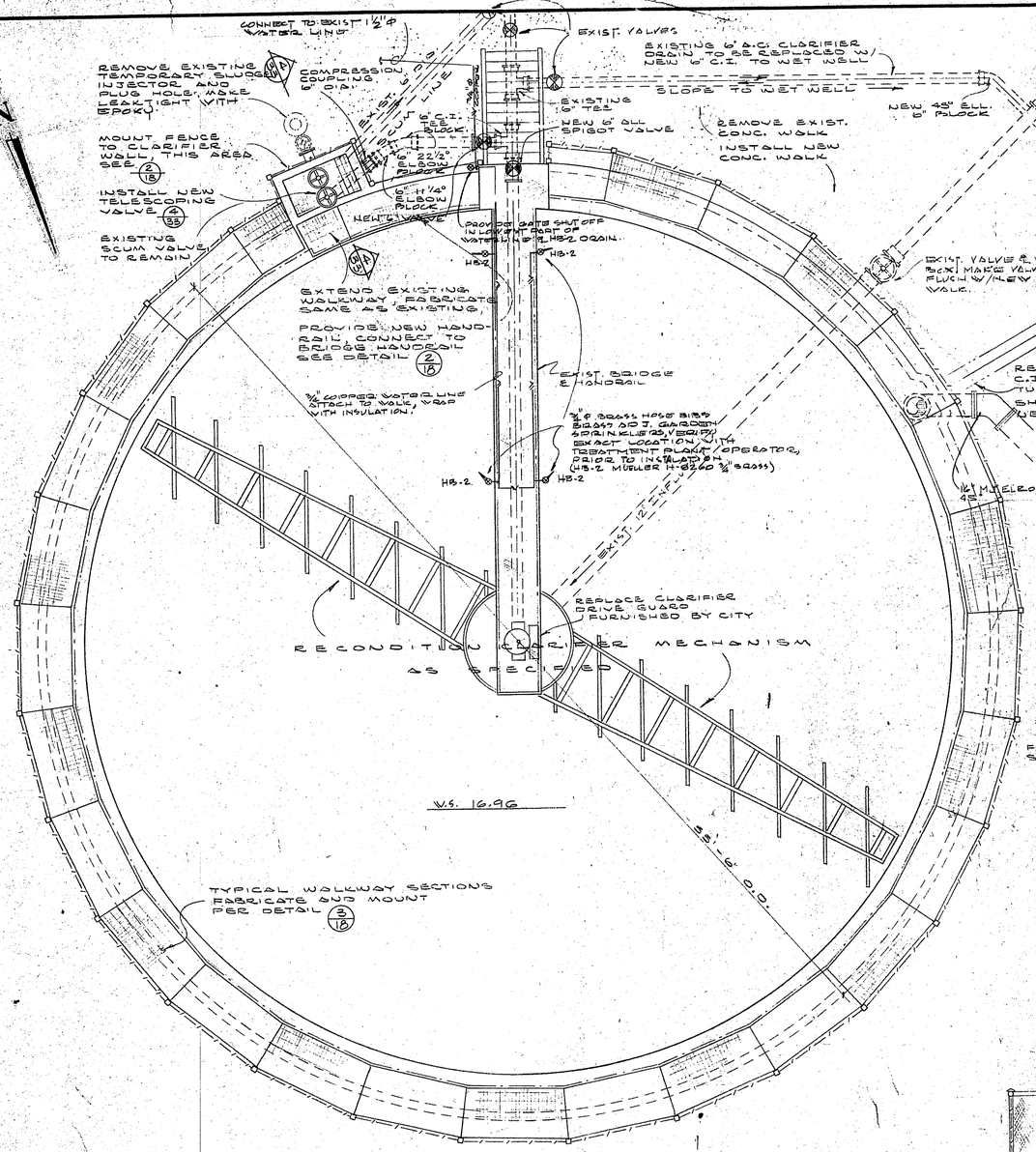
COOS BAY PLANT #2

SEWAGE TREATMENT FACILITIES

WET WELL & DRY WELL REMODEL

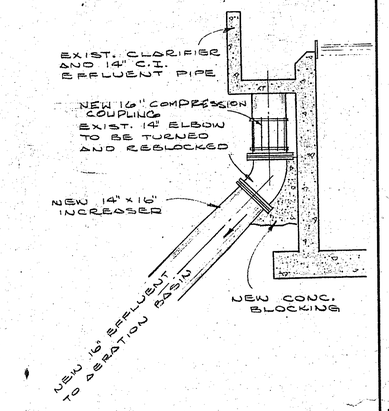
1172-A-69

17



1/18 CLARIFIER PLAN
SCALE: 1/4" = 1'-0"

2/18 EXISTING WALKWAY
SCALE: 1/2" = 1'-0"



5/18 EFFLUENT PIPE
SCALE: 3/8"=1'-0" (ROTATED SLIGHTLY)

3/18 WALKWAY DETAILS
SCALE: 1/2" = 1'-0"

4/18 CLARIFIER SECTION
SCALE: 1/4" = 1'-0"

AS BUILTS P.F. DEC. 75

REGISTERED PROFESSIONAL ENGINEER 6489 OREGON JULY 11, 1969 RICHARD D. MORGEN

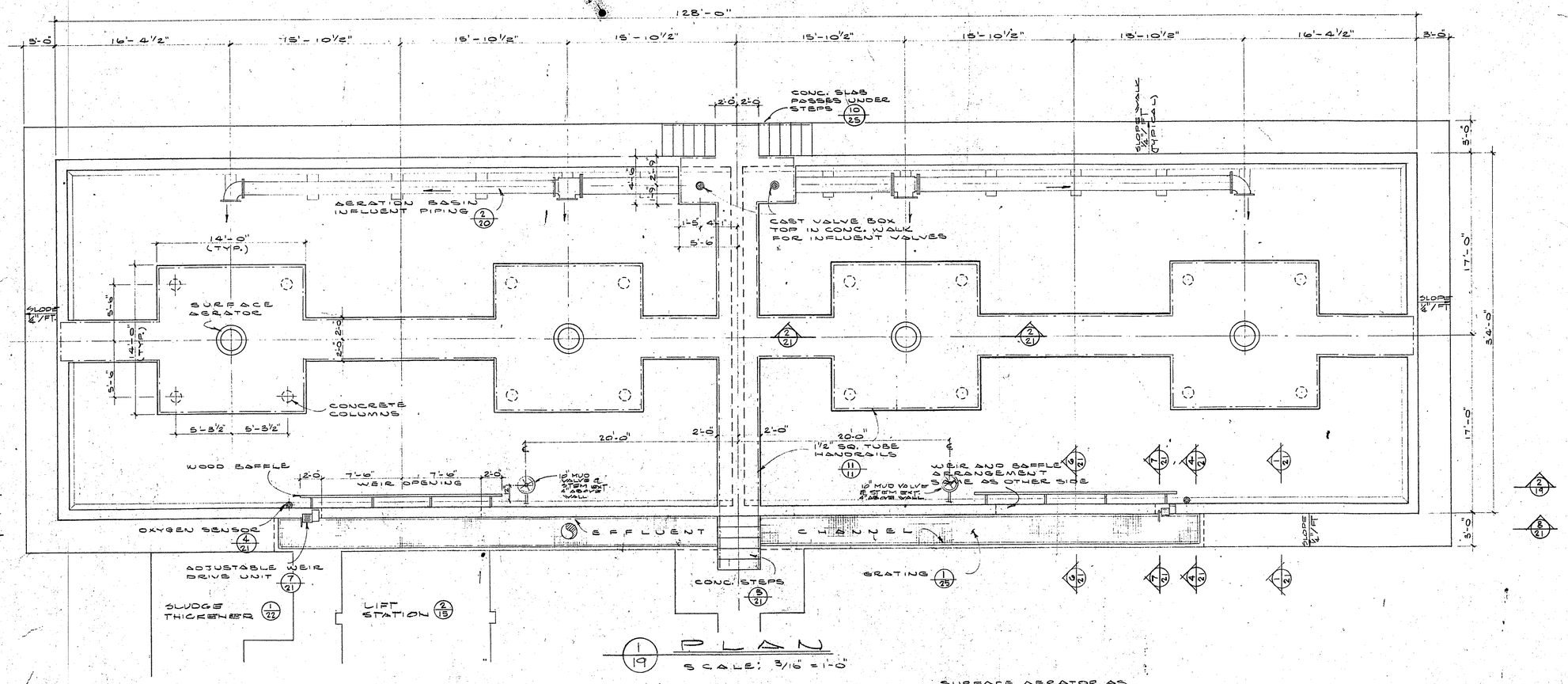
HGE INC
ENGINEERS • PLANNERS
5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

COOS BAY PLANT #2
SEWAGE TREATMENT FACILITIES

PRIMARY CLARIFIER
REMODEL

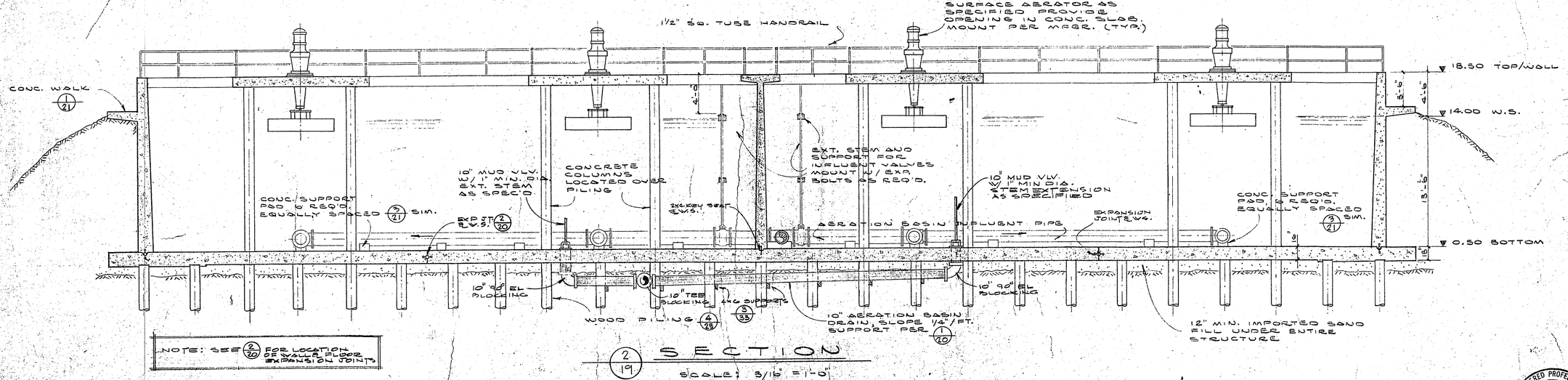
1172-A-69

18



1 / 19 PLAN

SCALE: 3/16 = 1'-0"



NOTE: SEE (2/20) FOR LOCATION OF WALL FLOOR EXPANSION JOINTS

2 / 19 SECTION

SCALE: 3/16 = 1'-0"

AS BUILTS P.E. DEC. 75

REGISTERED PROFESSIONAL ENGINEER 6489 OREGON JULY 11, 1958 RICHARD D. NOPPEL

HG ENGINEERS INC

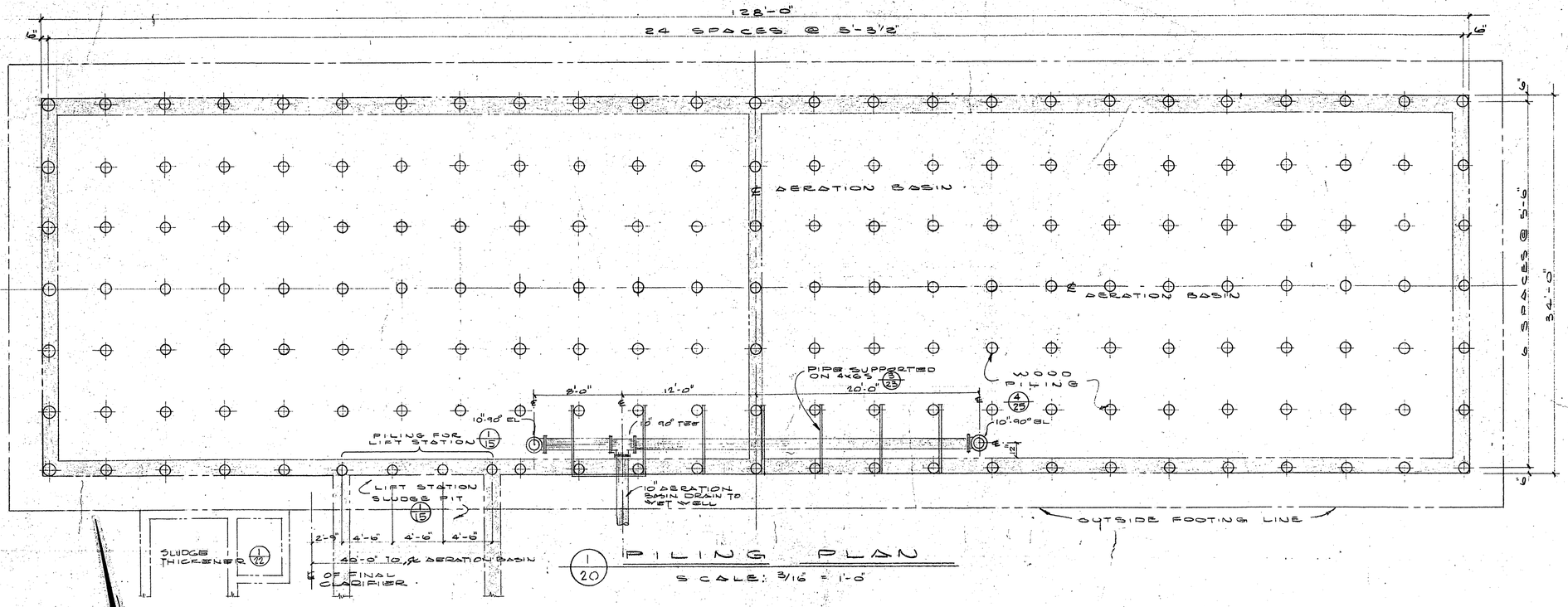
ENGINEERS • PLANNERS

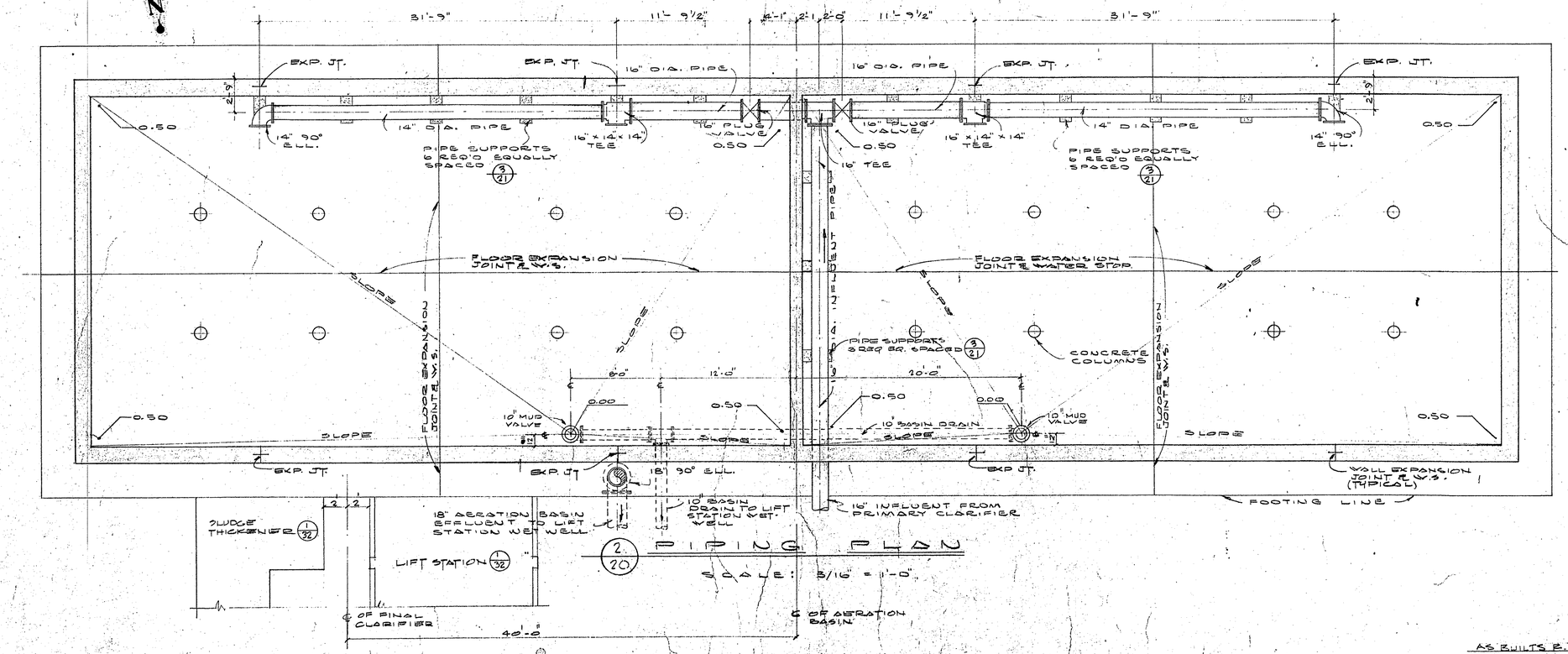
5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

COOS BAY PLANT #2
SEWAGE TREATMENT FACILITIES
AERATION BASIN 2 SECTION 2
PLAN & SECTION

1172-A-69

19





HG ENGINEERS INC • PLANNERS
5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

COOS BAY PLANT #2
SEWAGE TREATMENT FACILITIES

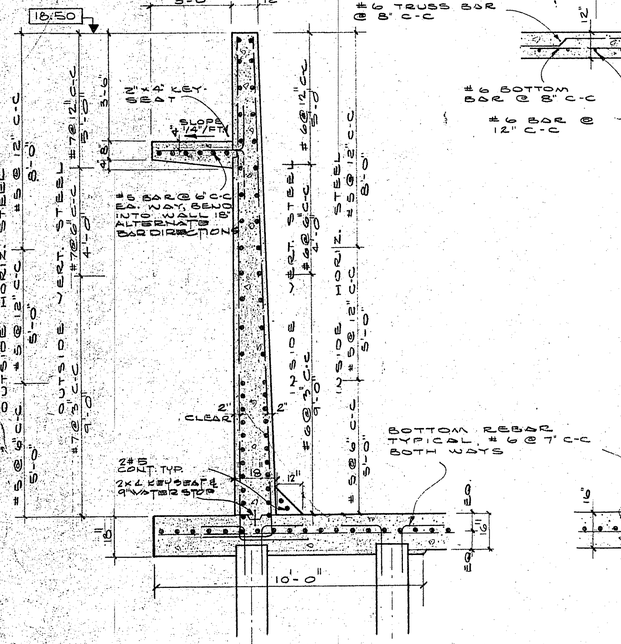
AERATION BASIN
PILING & PIPING PLAN

1172-A-69

20

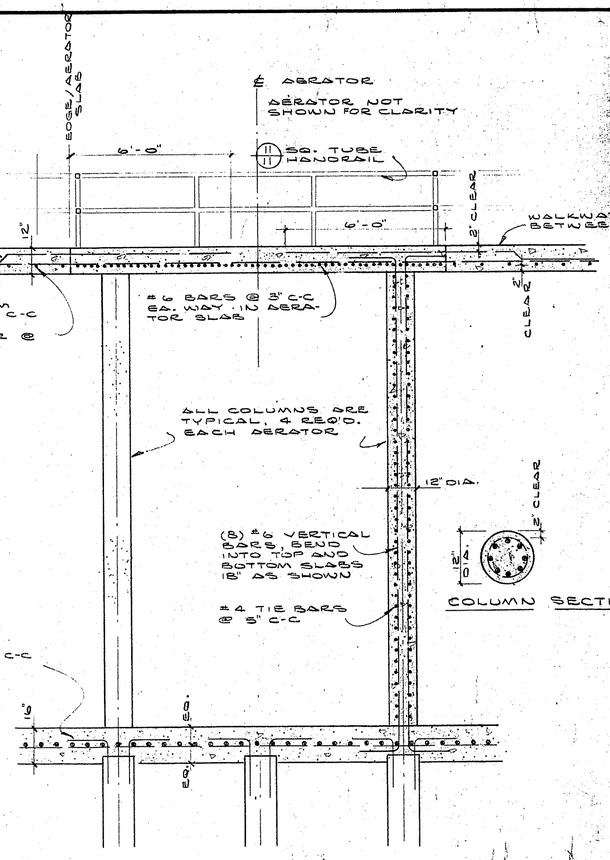
REGISTERED PROFESSIONAL ENGINEER 5689 OREGON JULY 11, 1969 RICHARD D. NORED

AS BUILTS P.E. DEC. 75



1/21 OUTSIDE WALL

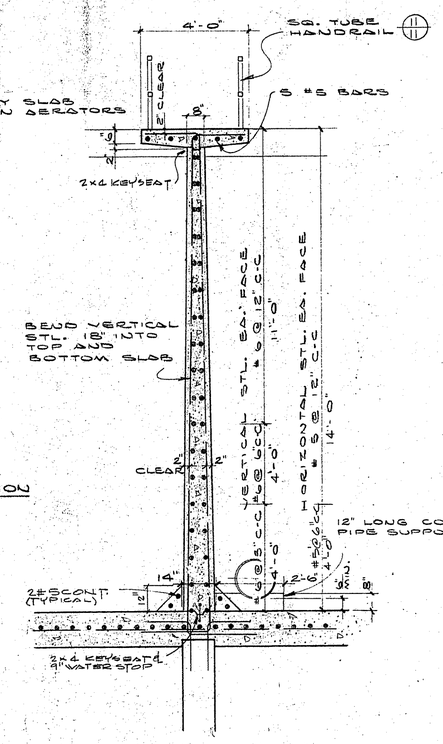
SCALE: 3/8" = 1'-0"



COLUMN SECTION

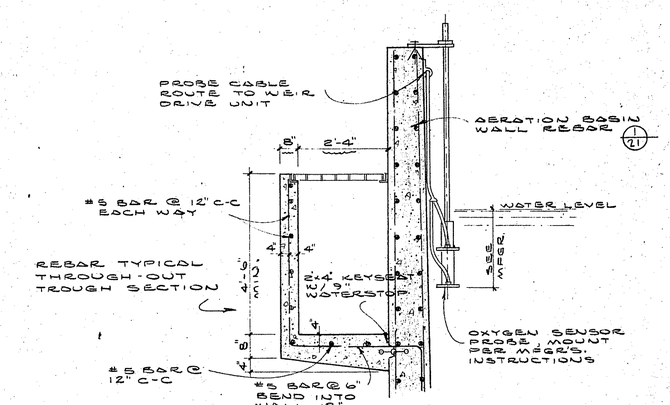
2/21 AERATOR SLAB

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



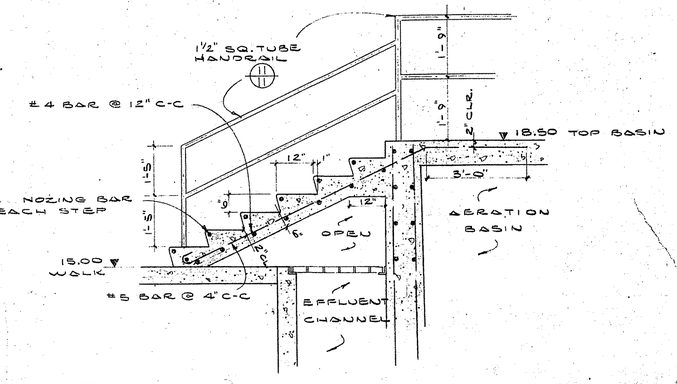
3/21 DIVIDER WALL

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



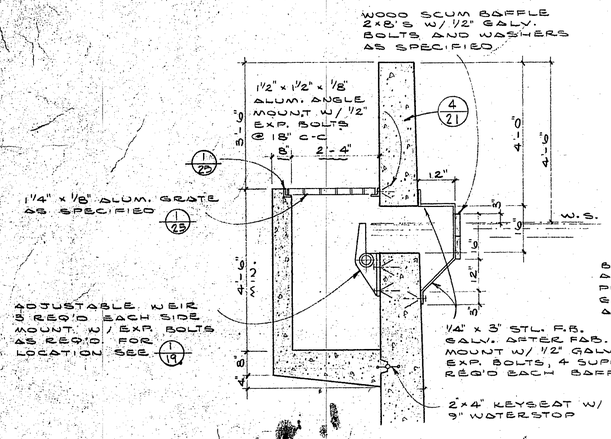
4/21 OXYGEN SENSOR AND TROUGH STRUCTURAL

1/2" = 1'-0"



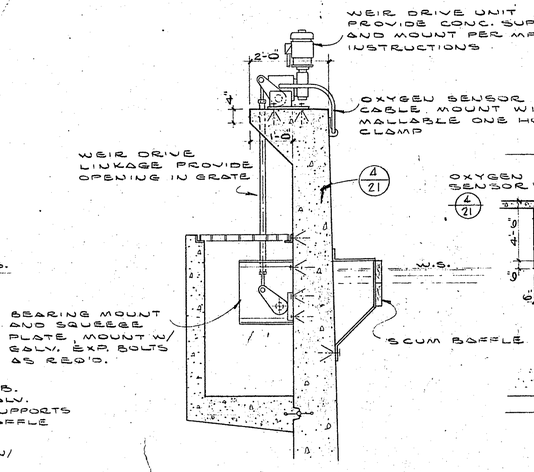
5/21 AERATION BASIN STEPS

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



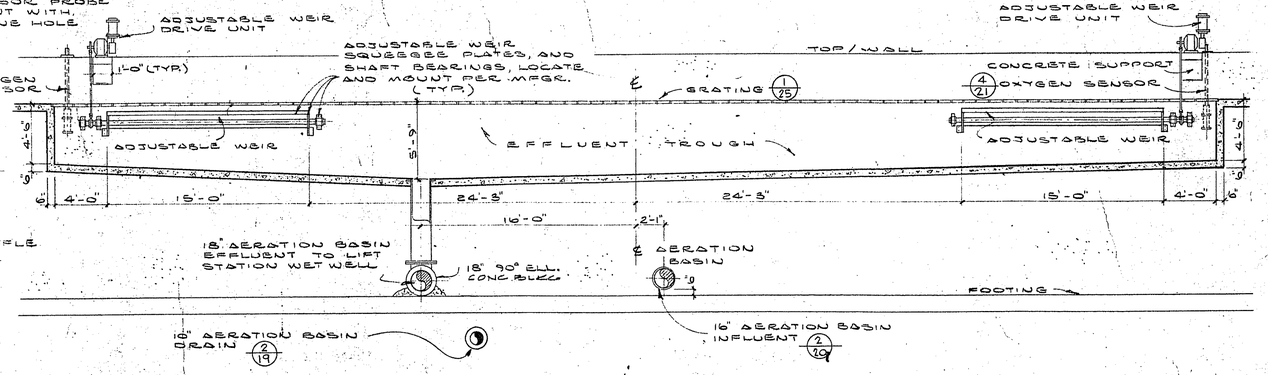
6/21 ADJUSTABLE WEIR

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



7/21 SQUEEGEE & DRIVE UNIT

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



8/21 EFFLUENT TROUGH

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

AS BUILTS R.K.M. DEC. 75

REGISTERED PROFESSIONAL ENGINEER 9109 OREGON JULY 11, 1975 RICHARD D. NOPSO

HG INC ENGINEERS • PLANNERS

5TH AND HIGHLAND COOS BAY, OREGON 269-1166

COOS BAY WATER PLANT # 2 SEWAGE TREATMENT FACILITIES

AERATION BASIN 2 DETAILS

1172-A65

21

KBE

FINAL CLARIFIER

N

SCUM BOX (1/22)

WASTE SLUDGE BOX (1/22)

CONCRETE STEPS 6" RISERS, 12" TREADS CONSTUCT SAME AS EXCEPT ELEVS. (2/22)

℄ CLARIFIER

6" THICKENED SLUDGE TO CONTROL BLDG.

4'-0"

4'-6"

2'-5"

7'-10"

10" EFFLUENT LINE TO WET WELL

MFG'D ALUM. STEPS AS SPEC'D. CONC. W/WALLS @ 1'-0" C-C W/7" PROJECTING

PILING

ALUM. GRATING AS SPEC'D. IN TWO PIECES OVER 7'-0" x 4'-0" OPENING SEE (1/22)

15.00

PROVIDE OPENING IN GRATE FOR DRIVE CHAIN AND GUARD

6" VLV. IN VLV. BOX (2/22)

SKIMMER CONV. BY MFGR. INSTALL AS REQ'D

85'-11"

TO ℄ CLARIFIER

9'-11 1/4"

33'-6"

1 1/2" SQ. TUBE HANDRAIL (11/11)

LIFT STA. NO 2

15.00

P.H. FLOOR 15.18

4" DRAIN CAST IN SLAB RD TO WET WELL

SLUDGE THICKENER

W.S. 15.00

CONCRETE WALK 6" THICK REINF. W/ #5 @ 12" C-C EA. WAY

4" VLV. IN VLV. BOX (2/22)

4'-0"

15.00

ACCESS HATCH COVER AS SPEC'D. OVER 50" x 50" OPENING

4'-9"

MANHOLE STEPS AS SPEC'D. CAST IN CONC. @ 12" O.C. PROJECTING

5'-2"

SKIMMER CONV. DRIVE, BY MFGR. MOUNT AS REQ'D.

2'-0"

4" PLUG VALVE W/ EXT. STEM & VALVE BOX CAST IN WALL

3'-0"

2'-0"

8"

40'-0" TO ℄ AERATION BASIN

AERATION BASIN

PILING

2" CAST IRON PIPE SLEEVES

4" CAST IRON PIPE TUBE CONTROL

EFFLUENT FLUME BY EQUIPMENT

2" CAST IRON SLEEVE

4" DRAIN CHUTE

PRESSURE COUPS

2"X4" REDUCER

NEW CONC. WALLS AND FLOOR SHEAR

3'-0"

(1/22) THICKENER PLAN

3/8" = 1'-0"

THICKENED SLUDGE SCREW DRIVE UNIT MOUNT AS REQ'D.

TOP OF WALL 18.50

1 1/2" X .125 WALL SCH. TUBE HANDRAIL SEE (11/11)

17.00 WATER SURFACE

#5 BAR @ 6" C-C EA WAY

PLACE ALL VERT. STL. IN EL. WALL

NEW FINAL CLARIFIER

#5 BAR @ 6" C-C BOTH WAYS

#5 BAR @ 6" C-C BOTH WAYS

BOTTOM 8.25

RADIUS DETERMINED BY EQUIPMENT MFG'R.

5.50

THICKENED SLUDGE SKIMMER CONVEYOR BY MFGR. MOUNT AS REQUIRED

33'-6"

29'-0"

22'-0"

10" 2'-3" 10" 6" 6'-4" 10"

WATER SURFACE 15.00

SCUM BEACH AND SCREW CONVEYOR TROUGH SEE (6/22)

EFFLUENT WEIR BY MFG'R MOUNT AS REQ.

BOTTOM SLUDGE CONV. BY EQUIP. MFG'R, INSTALL AS REQUIRED

#5 BAR @ 6" C-C EA. WAY

4.00 TOP/WOOD PILING

12" IMPORTED COMPACTED SAND FILL UNDER ENTIRE STRUCTURE

5.75 BOTTOM / SUMP

DEFLECTOR BY EQUIP. MFG'R MOUNT W/ BMP. BOLTS

18.50 TOP OF WALL

SEATING SEE DETAIL (5/22)

15.25

5'-0"

15.00 WALK

14.00 W.S.

FABRICATED STEPS 1" DIA. STL. GALV.

6" C.I. PRESSURIZED FLOW FROM LIFT STATION

BACK PRESSURE VALVE BY EQUIP. MFG'R.

4"x8" FLA. BEAD 90° EL.

#5 REBARS 12" C-C EA. WAY (WALLS & FLOOR)

1/2" EXP. BOLTS @ 12" C-C TIE TO REBARS TYP. (WALLS & FLOOR)

8" C.I. WASTE SLUDGE FROM CLARIFIER

8" WATER AND AIR FROM LIFT STATION

NEW AERATION BASIN

+0.42

8" WASTE SLUDGE FROM CLARIFIER

(2/22) SECTION

3/8" = 1'-0"

SKIMMER CONVEYOR BY MFGR. MOUNT AS REQ'D.

#5 BARS @ 12" C-C EA. WAY

TOP/ WALL 15.25

#5 BAR @ 6" U.O.E.O. VERT. BOTH SIDES OF WALL

3"x4" KEYSEAT W/ WATERSTOP CONT. UNLESS OTHERWISE NOTED

1'-0" N.T.S.

BOTTOM SLUDGE CONVEYOR BY MFGR MOUNT AS REQ'D.

#5 BAR @ 6"-0" EA. WAY

NOTE: PROVIDE WATERSTOP AT ALL CONSTRUCTION JOINTS, SEE (3/25)

(3/22) SECTION

3/8" = 1'-0"

SCREW CONVEYOR DRIVE UNIT, MOUNT PER MFGR.

8"x5/16" ALUM. GRATING, INSTALL IN TWO PIECES MOUNT AS SHOWN IN DETAIL EXCEPT SIZE (25/25)

10" EFFLUENT LINE TO WET WELL

OPENING TO BE MADE FOR SCREW

#5 BAR @ 6" C-C EA. WAY PLACE IN VERT. STL. ON WALL

8'-4" 7'-0" 5'-0" 8"

1/8" WELDED LINK CHAIN W/ SNAPS ACROSS 5'-0 OPENING

#4 BARS @ 12" C-C EA. WAY

#5 BAR @ 6" C-C EACH WAY

(4/22) SECTION

3/8" = 1'-0"

50" x 50" ACCESS HATCH COVER AS SPECIFIED MOUNT TO CONC. W/ 5/8" EXP. BOLTS, CAULK TO MAKE LEAKTIGHT

6'-4"

8" 1'-0" 5'-0" 1'-0" 8"

#5 BAR @ 12" C-C EA. WAY IN TOP SLAB

DRIVE SHAFT EXTENDS THRU WALL WITH SPROCKETS AND CHAIN ON DRY PIT SIDE

SKIMMER CONV. DRIVE BY MFGR. MOUNT AS REQ'D.

BOTTOM CONVEYOR DRIVE UNIT BY MFGR. MOUNT AS REQ'D.

#5 BAR @ 6"-0" EA. WAY

#5 BAR @ 6" C-C BOTH WAYS

SLUDGE SUMP BEYOND

6" THICKNER DRAIN (1/55)

NOTE: ALL REBAR TO HAVE 2" MIN. CLEARANCE WITH CONC. SURFACE, AND 24 BAR DIAS. MIN. LAP AT ALL SPLICES, UNLESS OTHERWISE NOTED

(5/22) SECTION

3/8" = 1'-0"

PROVIDE TWO 1/8" WELDED LINK CHAINS W/ SNAPS AT 4'-0" OPENING IN HANDRAIL

6'-4"

9" 1'-0" 1'-4" 3'-3"

BLADE WIPER BY EQUIP. MFG'R., MOUNT AS REQUIRED

SCUM BEACH BY EQUIP. MFG'R, MOUNT AS REQ. GROUT AS PER EQUIP. MFG'S RECOMMENDATION

2" 2" 1'-6 5/8" 1'-8"

THICKENED SLUDGE SCREW CONVEYOR BY MFG'R, MOUNT AS REQUIRED

5 1/2" 3'-1 1/2" 2"

GROUT PER EQUIP. MFG'R. RECOMMENDATION

#5 BAR @ 12" C-C BOTH WAYS IBEND INTO SIDE WALLS 18" WHERE POSSIBLE

9" 6" 6"

BAFFLE BY EQUIP MFG'R., MOUNT AS REQUIRED

(6/22) SCUM BEACH DETAIL

3/4" = 1'-0"

AS BUILT R.E. DEC. '75

REGISTERED PROFESSIONAL ENGINEER 6489 OREGON JULY 11, 1969 RICHARD D. NOREDI

5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

HG E INC ENGINEERS • PLANNERS

COOS BAY PLANT #2
SEWAGE TREATMENT FACILITIES

SLUDGE THICKENER DETAILS

1172-A-69

22

CONCRETE STAIRWAY

CHAIN-LINK FENCE W/ REDWOOD SLATS SIM. TO

EXCEPT GROUT POSTS IN PLACE

ALUM. SLIDE GATE FOR BY PASS OPERATION W/ 36" LIFT-OUT SECT. OPERATE USING 8" DIA. TOP

INLET TROUGH AND GATE BY EQUIP. MFGR.

BRIDGE W/ GUARDRAIL TO MATCH DETAIL BY EQUIP. MFGR. SIM.

ALUM. SKIRT BY EQUIP. MFGR.

6" THICK CONC. BOBBLES, & REQ'D TOTAL

1½" SQ. TUBE GUARDRAIL SEE

EXPANSION JOINTS ON WALLS AND TOP EQUALLY SPACED DISTANT BETWEEN FLOOR EXPANSION JOINTS AND AT ALL CONSTRUCTION JOINTS

WET WELL

PILING FOR LIFT STATION

15 PILING EQUALLY SPACED AROUND CLARIFIER

#6 HOOP BARS @ 8" C-C (TYP.)

3" CLEAR TYP. (TYP.)

RADIAL BARS SPACED @ C-C @ THE OUTSIDE

#6 BAR 30'-0" LG

#6 BAR 20'-0" LG

#6 BAR 26'-0" LG

#6 BAR 29'-0" LG.

#6 BAR 31'-0" LG.

PILING SEE DETAIL

EXPANSION JOINTS AT 6 PLACES EQUALLY SPACED, SEE DETAIL

℄ CLARIFIER

℄ CLARIFIER

NOTE: PILING CUT-OFF ELEVATIONS WILL BE DETERMINED BY THE CONTRACTOR

FLOW METER AS SPEC'D. SEE DETAIL

CONC. STEPS SIM. UP

8" WASTE SLUDGE LINE

10' DIA. SCUM PIPE BY MFGR.

EFFLUENT WEIR.

CHLORINE DIFFUSER IN EFFLUENT PIPE

1" CHLORINE VALVE

EFFLUENT PIPE BY MFGR.

8" CONTACT CHAMBER DRAIN

CLARIFIER EQUIP. AS SPEC'D, BY EQUIP. MFGR.

TELESCOPING VALVE AS SPEC'D.

SLIDE GATE FOR SCUM DECANTING

WASTE SLUDGE THICKENER

1" STORAGE "L" VALVE BOX

2½" PVC TREATED WATER SUCTION LINE TO TREATED WATER PUMP

V.S. 15.00

V.S. 17.00

SUPPORT 4" PVC TO STRUCTURE W/ ST. STRAPS

PROVIDE 6" WIDE LIFT-OUT SECTIONS OF GRATE OVER GATES

SLIDE GATES

REMOVABLE WEIR W/ ALUMINUM SLIDE GUIDES & INTERCHANGABLE W/ SLIDE GATES

ALL SLIDE GATE OPENINGS SAME SIZE

NEW 24" EFFLUENT LINE TO OUTFALL MH. SEE

1" STANDBY CHLORINE VALVE

2½" PVC TO LINE

½" GATE VALVES & VALVE BOXES

GRATING (TYP. 5 PLACES)

4'-0" (TYP.)

5'-0" (TYP.)

50.0" OUTSIDE

54.0" INSIDE

PER MFGR.

3'-0"

PER MFGR.

5'-0"

6" CLEAR SLOPE

1½" FRESH WATER SUPPLY FROM HOSE BIB SEE

1" STOP & WASTE "L" VALVE BOX

1" CHLORINE SOLUTION LINES FROM CHLORINE BLDG.

1½" SQ. TUBE HANDRAIL, MOUNT SAME AS DETAIL

18.50 TOP OF CLARIFIER

5/8" RAD. EA. STEP

#4 ZIGZIG BAR EACH STEP 3/ 1" CLEAR

#5 BAR @ 4" C-C BEND TO CLARIFIER WALL 18"

#5 BAR @ 8" C-C

12.80 TOP WALK

GRATE

TYPICAL ALUMINUM SLIDE GATE

17.00 WATER LEVEL

DISCHARGE FROM LIFT PUMPS

INLET TROUGH AND GATE BY MFGR. MOUNT PER INSTRUCTION

#5 BAR @ 12" C-C EA. WAY BEND INTO CLARIFIER WALLS 18" WHERE POSSIBLE (TYPICAL @ SIDES)

2'-6" OPENING

AS REQ'D FOR GATE GUIDE (TYPICAL)

1'-9"

1'-6"

1'-9"

1'-6"

1/4" ALUM. PLATE

3'-5" OPENING

ALL WEIR SURFACES MUST HAVE 0.010 MAX. DEVIATION

1 / 23 NEW FINAL CLARIFIER PLAN
1/4" = 1'-0"

2 / 23 CLARIFIER STEPS
SCALE: 5/8" = 1'-0"

3 / 23 CLARIFIER PILING & STEEL PLAN
1/8" = 1'-0"

4 / 23 INFLUENT BOX
SCALE: 3/8" = 1'-0"

5 / 23 EFFLUENT WEIR
SCALE: 3/4" = 1'-0"

AS BUILTS E.E. DEC. 75

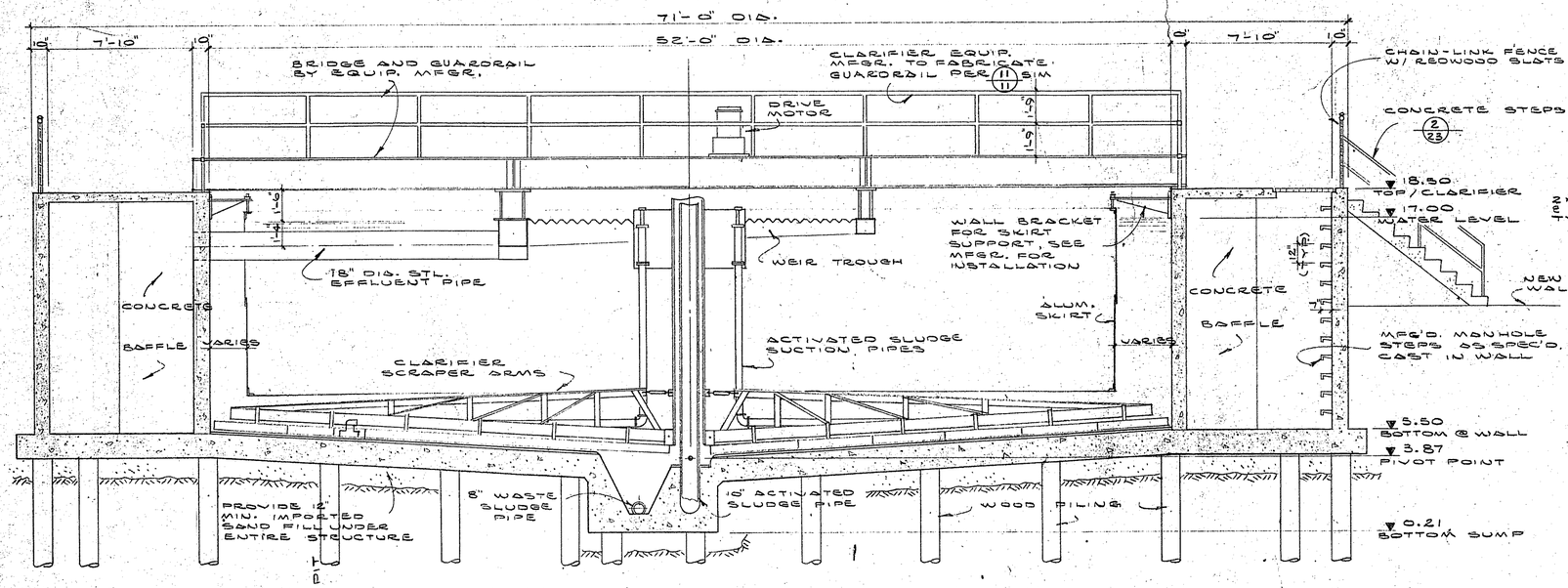
REGISTERED PROFESSIONAL ENGINEER 6489 OREGON JULY 11, 1969 RICHARD D. NORTH

HG INC ENGINEERS • PLANNERS
5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

SECONDARY CLARIFIER
PLANT #2
COOS BAY
SEWAGE TREATMENT FACILITIES

1172-3:69

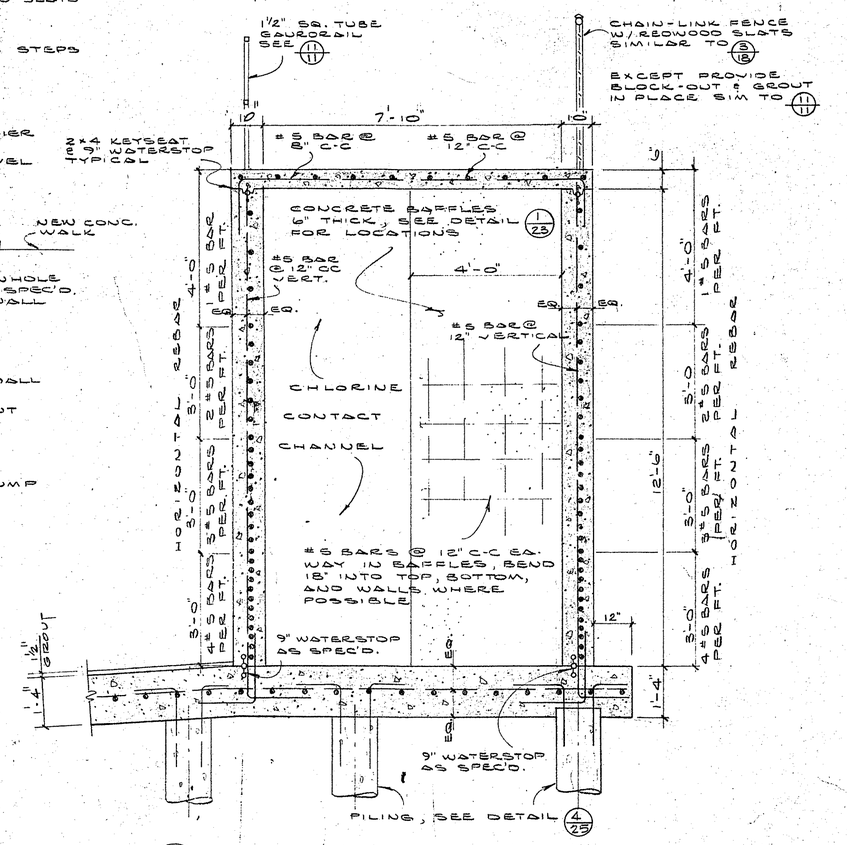
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1/24 CLARIFIER SECTION

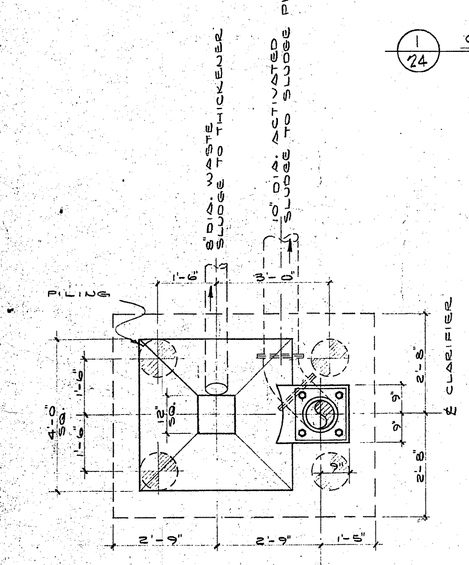
1/4" = 1'-0"

NOTE: REBAR OMITTED FOR CLARITY

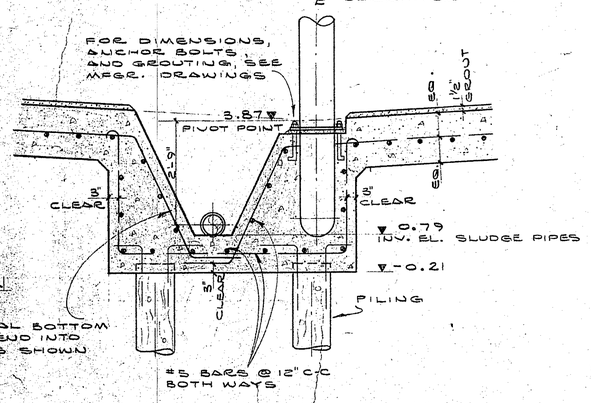


4/24 TYPICAL WALL SECTION

½" = 1'-0"



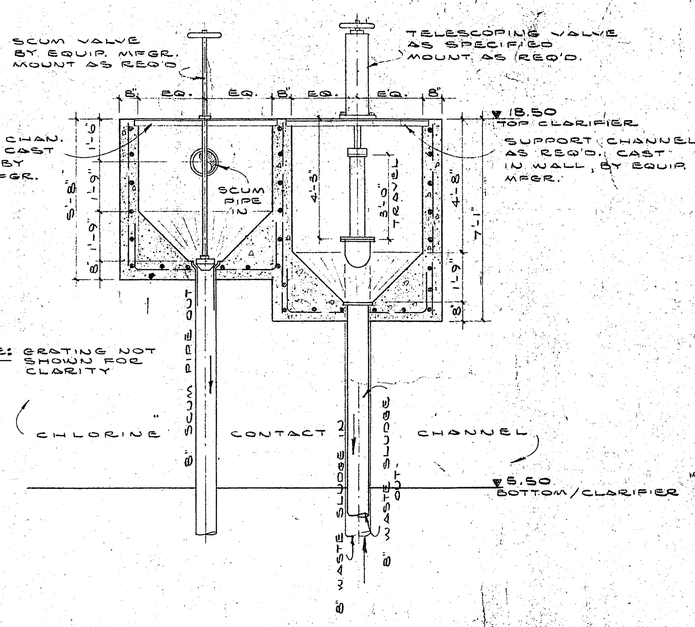
PLAN



ELEVATION

1/24 SLUDGE SUMP DETAILS

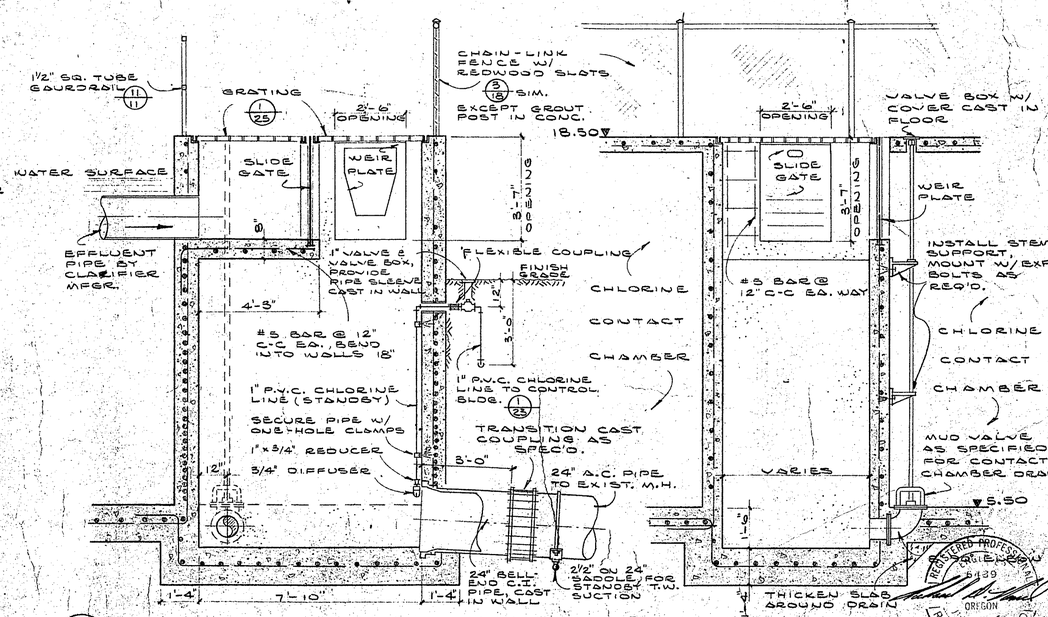
½" = 1'-0"



NOTE: GRATING NOT SHOWN FOR CLARITY

3/24 SLUDGE & SCUM BOX

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



5/24 EFFLUENT BOX SECTION

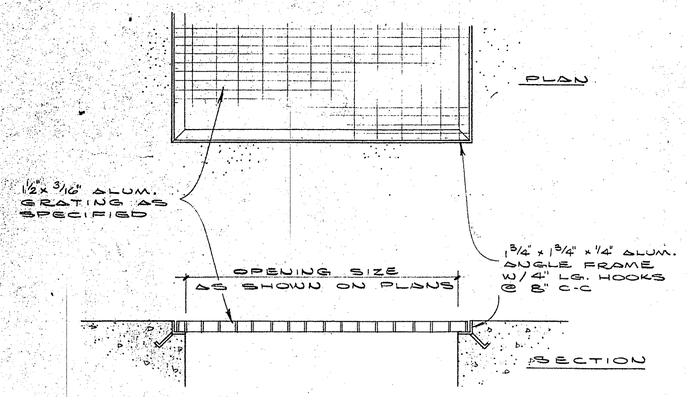
SCALE: 3/8" = 1'-0"

6/24 EFFLUENT BOX SECTION

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

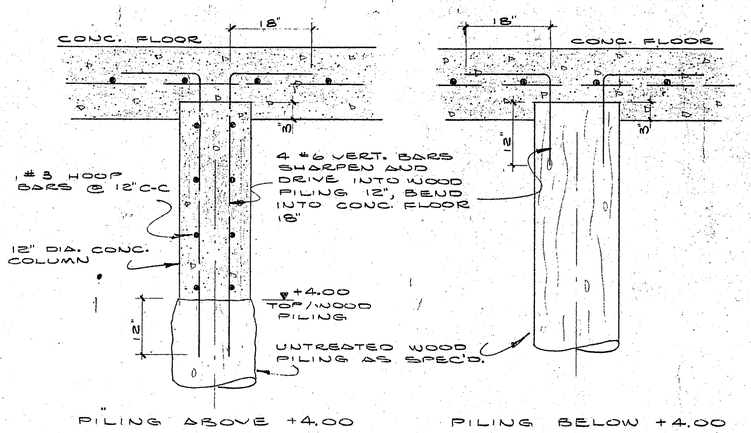
AS BUILTS P.E. DEC. '75

REGISTERED PROFESSIONAL ENGINEER 5139 OREGON



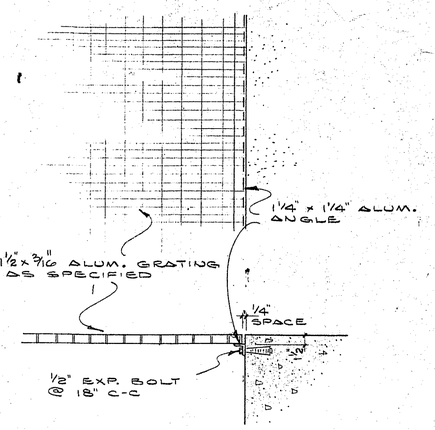
1/25 TYPICAL GRATE DETAIL

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



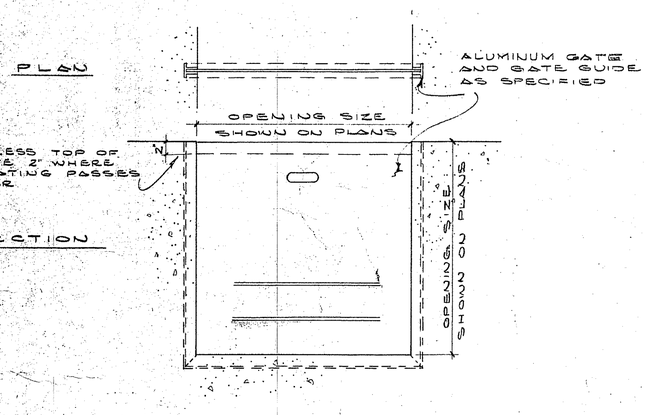
4/25 TYPICAL PILING DETAIL

SCALE: 1" = 1'-0"



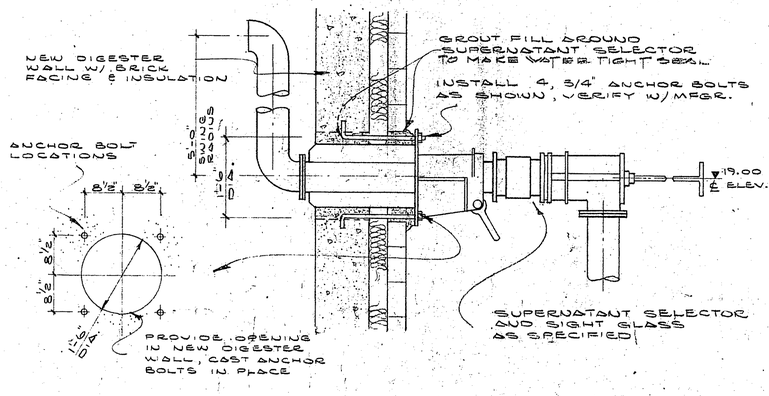
7/25 GRATING ON EXIST. CONCRETE

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



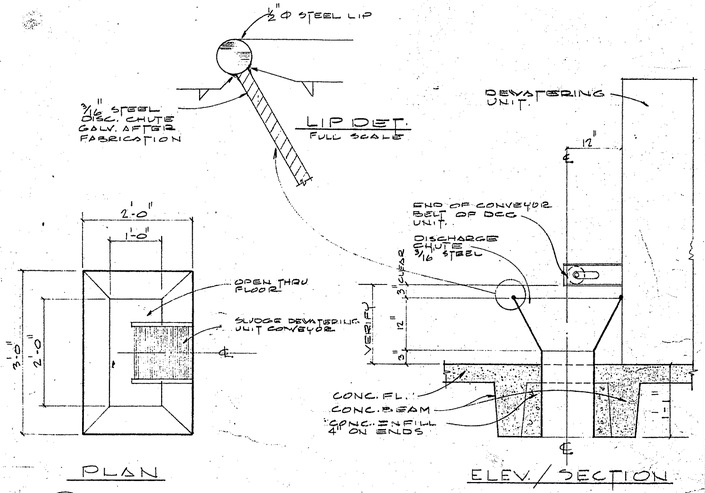
2/25 TYPICAL SLIDE GATE

SCALE: 1" = 1'-0"



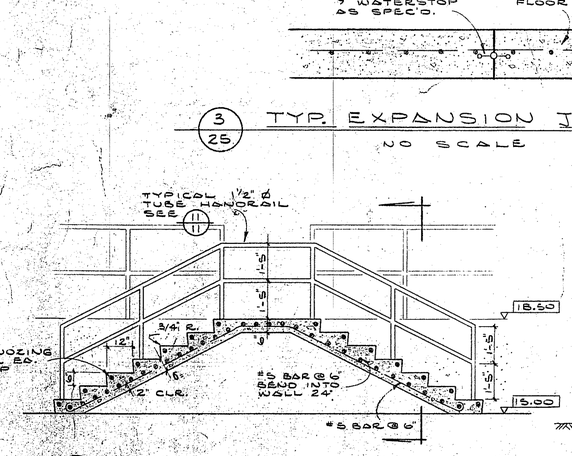
5/25 SUPERNATANT SELECTOR

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



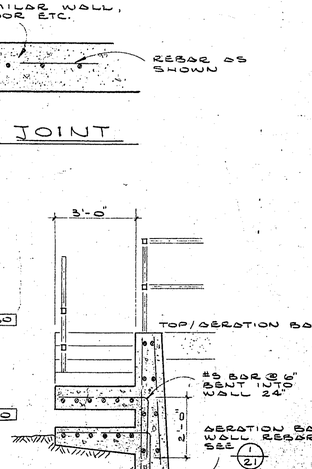
8/25 DISCHARGE CHUTE DET.

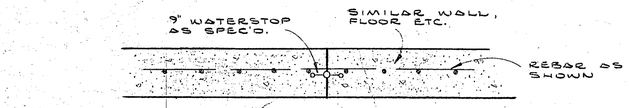
3/4" = 1'-0"



10/25 AERATION BASIN STEPS

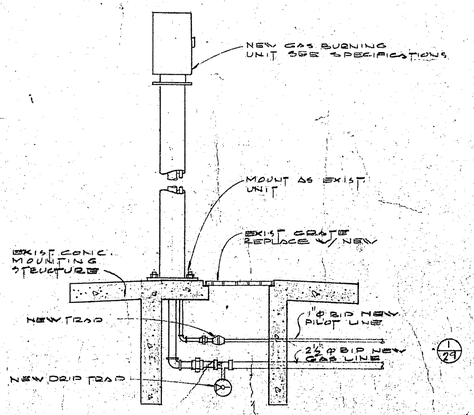
3/8" = 1'-0"





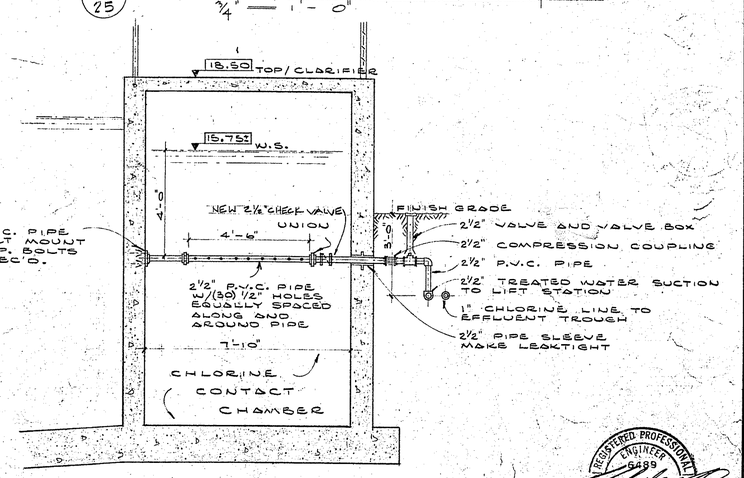
3/25 TYP. EXPANSION JOINT

NO SCALE



6/25 WASTE GAS BURNER

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



11/25 TREATED WATER INTAKE

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

AS BUILTS R.K. DEC. 75

REGISTERED PROFESSIONAL ENGINEER 5489 OREGON JULY 11, 1968 RICHARD D. NOREEN

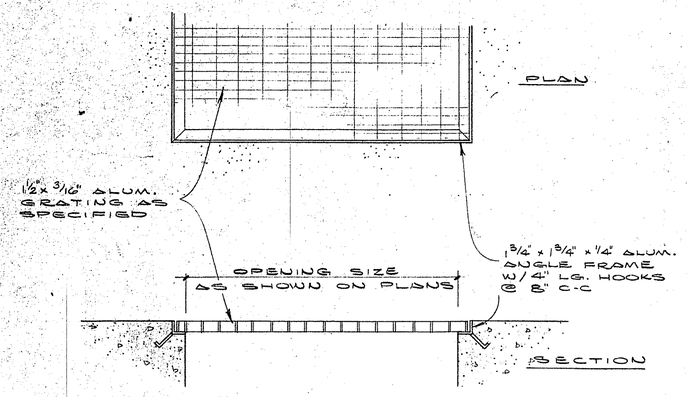
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HGE INC

COOS BAY PLANT #2
SEWAGE TREATMENT FACILITIES

DETAILS

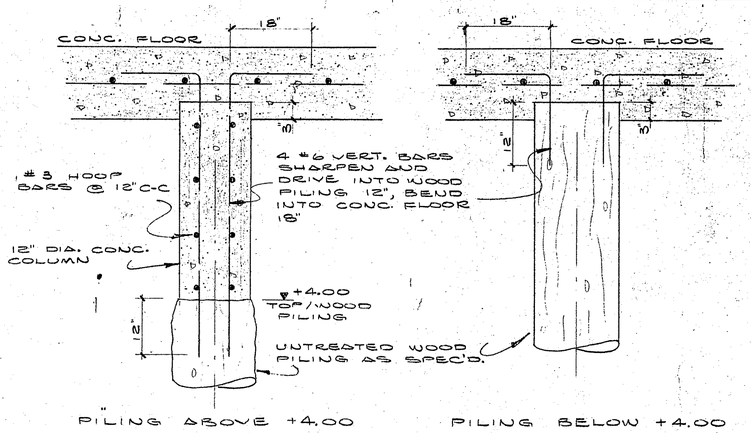
1172-A-69

25



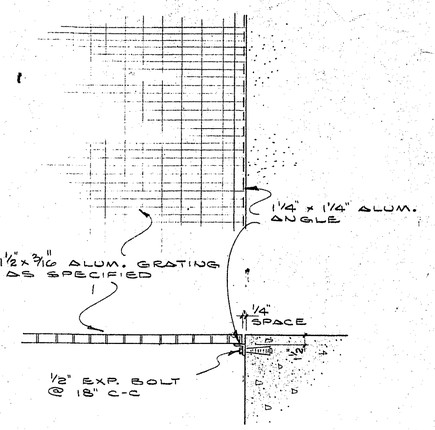
1/25 TYPICAL GRATE DETAIL

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



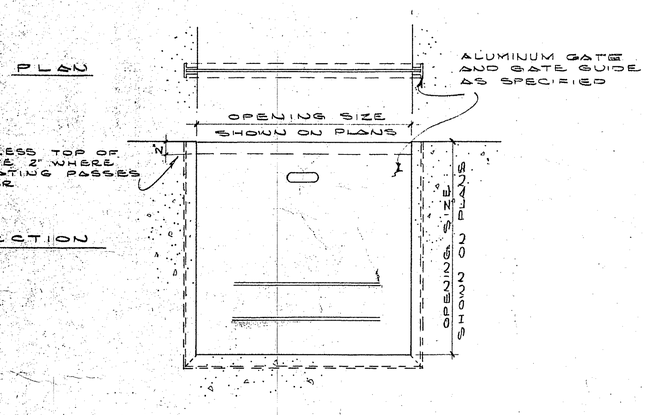
4/25 TYPICAL PILING DETAIL

SCALE: 1" = 1'-0"



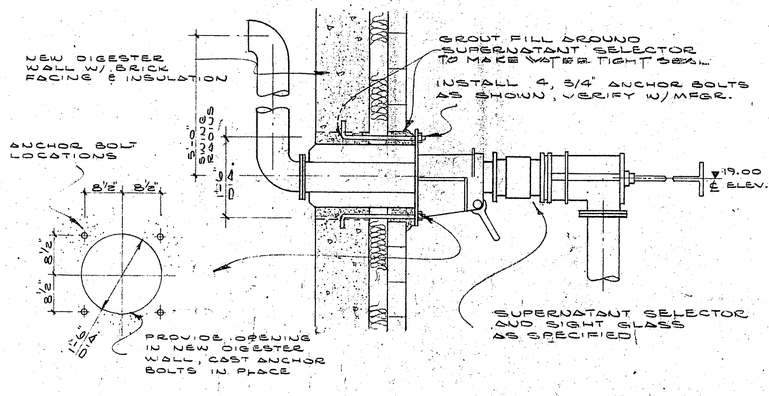
7/25 GRATING ON EXIST. CONCRETE

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



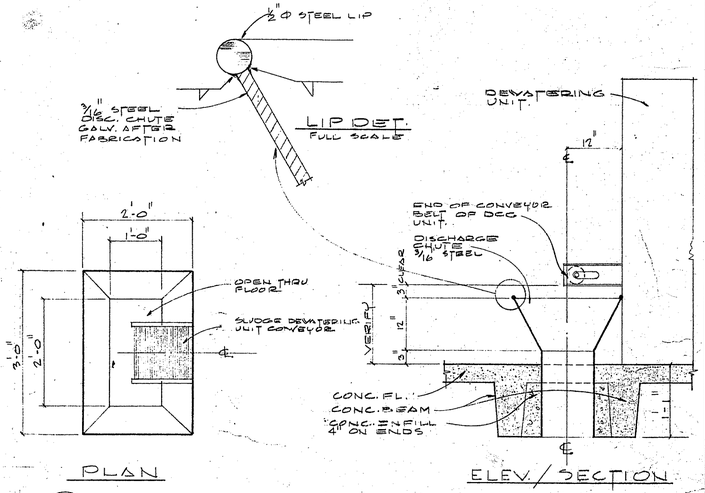
2/25 TYPICAL SLIDE GATE

SCALE: 1" = 1'-0"



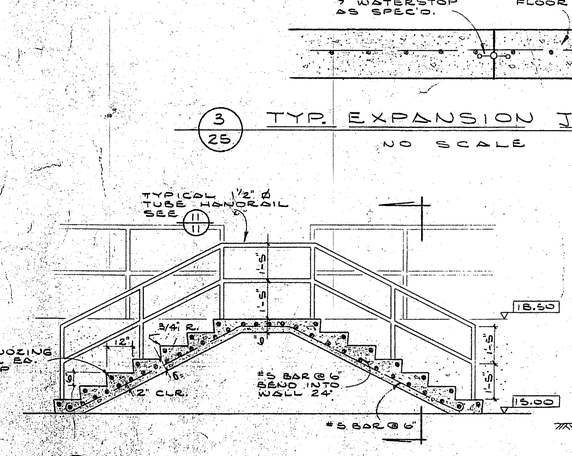
5/25 SUPERNATANT SELECTOR

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



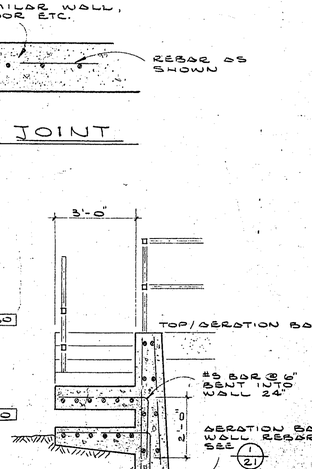
8/25 DISCHARGE CHUTE DET.

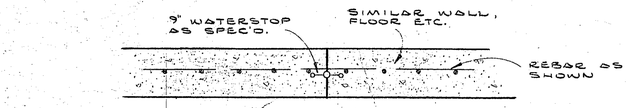
3/4" = 1'-0"



10/25 AERATION BASIN STEPS

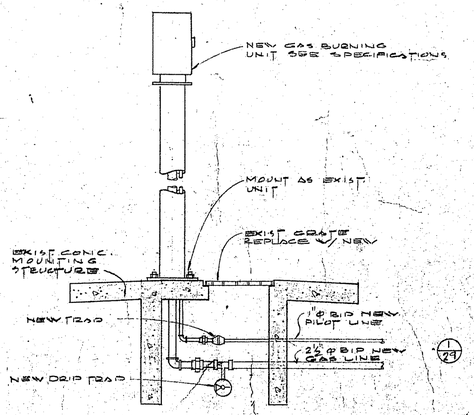
3/8" = 1'-0"





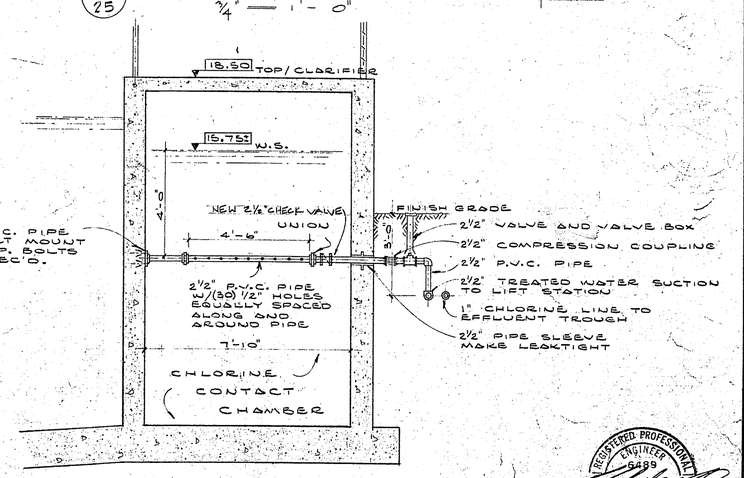
3/25 TYP. EXPANSION JOINT

NO SCALE



6/25 WASTE GAS BURNER

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



11/25 TREATED WATER INTAKE

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

AS BUILTS R.K. DEC. 75

REGISTERED PROFESSIONAL ENGINEER 5489 OREGON JULY 11, 1968 RICHARD D. NOREEN

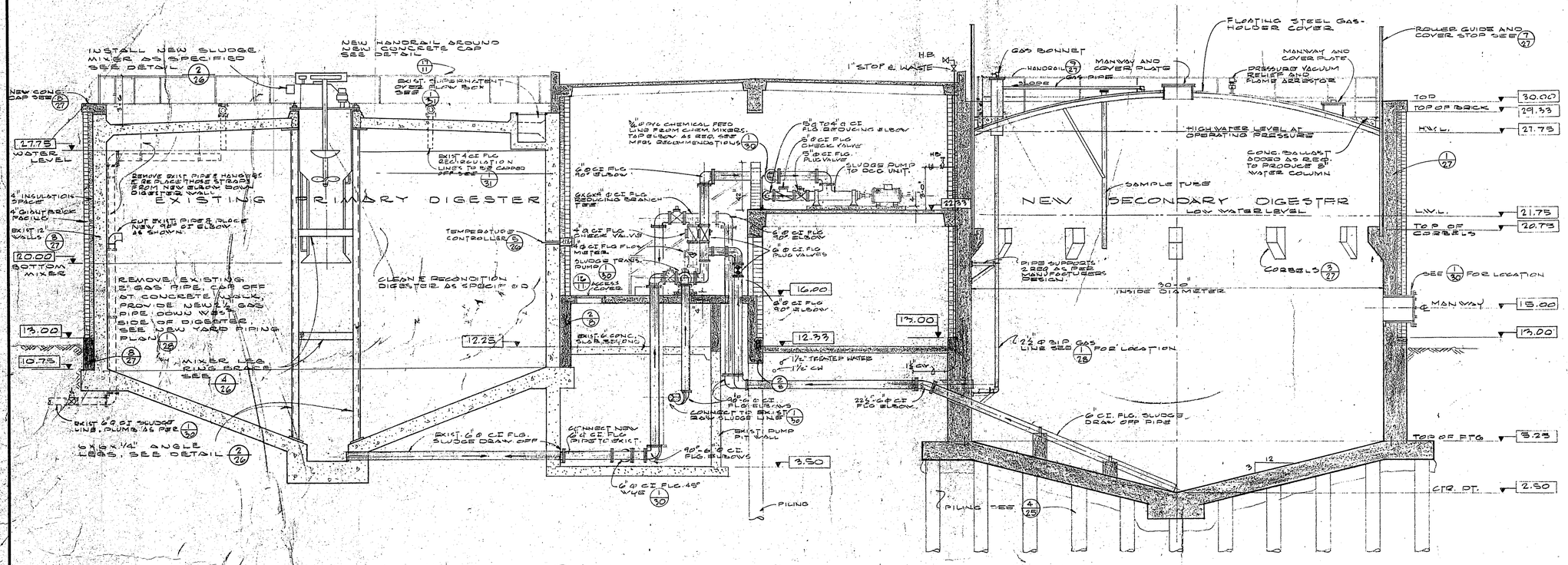
ENGINEERS • PLANNERS
5TH AND HIGHLAND
COOS BAY, OREGON
269-1166
HGE INC

COOS BAY PLANT #2
SEWAGE TREATMENT FACILITIES

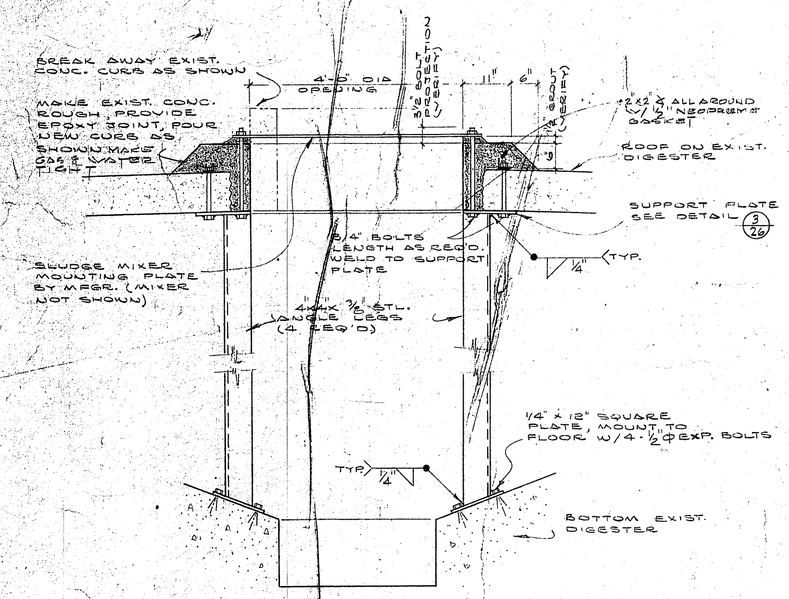
DETAILS

1172-A-69

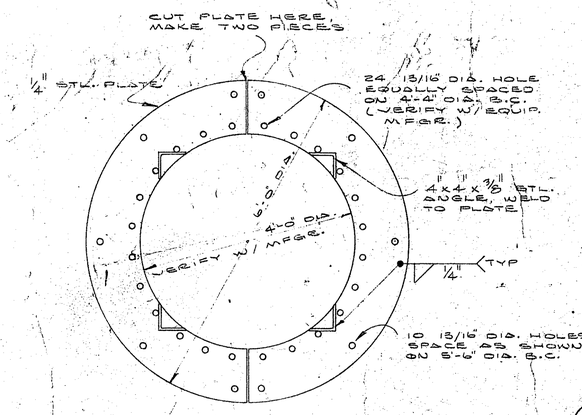
25



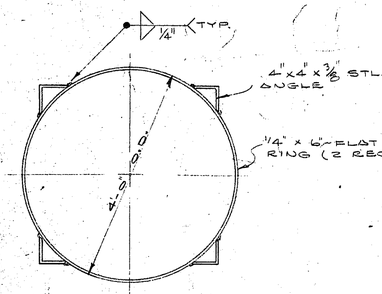
1/26 FOLDED SECTION
1/4" = 1'-0"



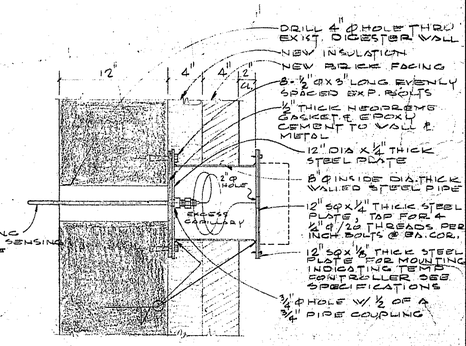
2/26 MIXER SUPPORT DETAIL
SCALE: 3/4" = 1'-0"



3/26 MIXER SUPPORT PLATE
(1 REQ'D)
SCALE: 3/4" = 1'-0"



4/26 MIXER LEG RING BRACE
(2 REQ'D)
SCALE: 3/4" = 1'-0"



NOTE:
GALVANIZE AFTER FABRICATION

5/26 TEMPERATURE CONTROLLER
1 1/2" = 1'-0"

AS BUILTS P.K. DEC. '75

REGISTERED PROFESSIONAL ENGINEER 5439 OREGON JULY 11, 1958 RICHARD Q. NOYED

STRAND HIGHLAND DOUGLAS COUNTY, OREGON 2007-1165

HG ENGINEERS • PLANNERS INC

EXISTING DIGESTER REMODELING & NEW SECONDARY DIGESTER

COOS BAY PLANT #2 SEWAGE TREATMENT FACILITIES

1172-A-65

26

511 KING HIGHLAND
SAN FRANCISCO
285-1166

HG INC ENGINEERS • PLANNERS

PLANT #2
COOS BAY
SEWAGE TREATMENT FACILITIES

DIGESTER STRUCTURAL DETAILS

1172-A-69

27

30.00 TOP OF DIGESTER
29.33 TOP OF BRICK
1'-9" 1'-0"
3#5 BARS CONTINUOUS
BEND VERTICAL BARS INTO CONC. CAP AS SHOWN
4" SPACE FILLED W/ INSULATION AS SPECIFIED
CONT. JOINT
#5 HOOP BARS @ 24" C-C
2" CLEAR ALL REBAR TO HAVE 2" CLEARANCE TYPICAL
#5 VERTICAL BARS @ 12" C-C
4" GIANT BRICK SEE SPECIFICATIONS
#5 BARS @ 12" C-C EA. WAY
DOVE TAIL ANCHORS EVERY THIRD COURSE AND 24" O.C. ALL AROUND SEE 4/27
45° CHAMFER TYPICAL
EVERY 10'-0" BOTTOM COURSE LEAVE ONE MORTAR JOINT OPEN BETWEEN BRICK AS A MOISTURE WEEP HOLE
49 COURSES OF GIANT BRICK = 16'-4"
7'-0"
#6 HOOP BARS @ 4" C-C
7'-1"
#5 BARS @ 12" CC BENT AS SHOWN 24" INTO WALL AND FOOTING
2'-0"
9" CONTINUOUS WATER STOP
5.25 TOP OF FTG.
6" CLEAR 6/27
PROVIDE 12" OF COMPACTED IMPORTED SAND FILL
1 27 TYPICAL WALL SECTION
1/2" = 1'-0"

DOVE TAIL ANCHOR SLOT CAST IN WALL @ 24" C-C ALL AROUND
DIGESTER WALL
4" INSULATION
4" GIANT BRICK AS SPECIFIED
DOVE-TAIL ANCHOR 6" LONG EVERY THIRD COURSE
2 27 BRICK TIE ANCHORS (NEW DIGESTER)
N.T.S.

18" 18"
CORBEL 8 REQUIRED
2#5 BARS HORIZ. BEND INTO WALL AS SHOWN
12"
PLAN

20.75
12" 12" 2" CLEAR TYPICAL
18"
2#5 BARS VERT. BEND INTO WALL 18" AS SHOWN
ELEVATION

3 27 CORBEL DETAILS (8 REQ'D)
N.T.S.

#6 HOOP BARS 8" C-C TYPICAL.
2-4 SQ. FTG. SEE 5/27
#6 RADIAL BARS 17'-10" LONG
#6 RADIAL BARS 15'-3" LONG
#6 RADIAL BARS 12'-8" LONG
#6 RADIAL BARS 20'-6" LONG (4 REQ'D)
3" CLEAR TYPICAL
18" LAP 4 LONGEST BARS SEE 4/27 5/27
#6 RADIAL BARS SEE PLAN 6/27
4 27 REBAR DETAIL
1/2" = 1'-0"

#6 HOOP BARS @ 8" C-C TYP.
#6 RADIAL BARS SEE 4/27 6/27
4 #6 BARS BEND INTO FLOOR AS SHOWN
4'-0" SQ.
PILING
B 27 REBAR DETAIL
1/2" = 1'-0"

HANDRAIL ON FLOATING COVER, SUPPLIED AND MOUNTED BY MFR. HANDRAIL TO ENCIRCLE ENTIRE COVER FABRICATE SIMILAR TO DETAIL 7/11 8/8

NEW CONC CAP W/ #5 BARS CONT. & EXP. BOLTS AT 4'-0" OC

TOP OF EXIST WALL 29.25
TOP 30.00
TOP OF BRICK 29.33
PATIES @ 3'-0" OC.
CAULKED JOINT
4" SPACE FILLED W/ INSULATION SEE SPECS.
4" GIANT BRICK SEE SPECS.
EXIST DIGESTER WALL
EVERY 10'-0" BOTTOM COURSE LEAVE ONE MORTAR JOINT OPEN BETWEEN BRICK AS A MOISTURE WEEP HOLE
13.00
NEW CONC FTG. CONTINUOUS AROUND
10.75 (VERIFY) (IN FIELD)
8 27 NEW BRICK FACING (EXIST. DIGESTER)
1/2" = 1'-0"

7 1/2"
CORRUGATED BELL ANCHOR W/ DRIVE PIN TO EXIST. ONLY 18" OC EA. WAY
BRICK TIES
BRICK TIES AT 18" OC EACH WAY ALL AROUND DIGESTER WALL
5/8" ø 18" LONG EXP. BOLTS @ 5'-0" C-C TIE TO EXIST. STEEL
4 #4 BARS CONT. AROUND
#4 VERT BARS @ 12" C-C

6 27 NEW DIGESTER FOUNDATION & PILING PLAN
1/4" = 1'-0"

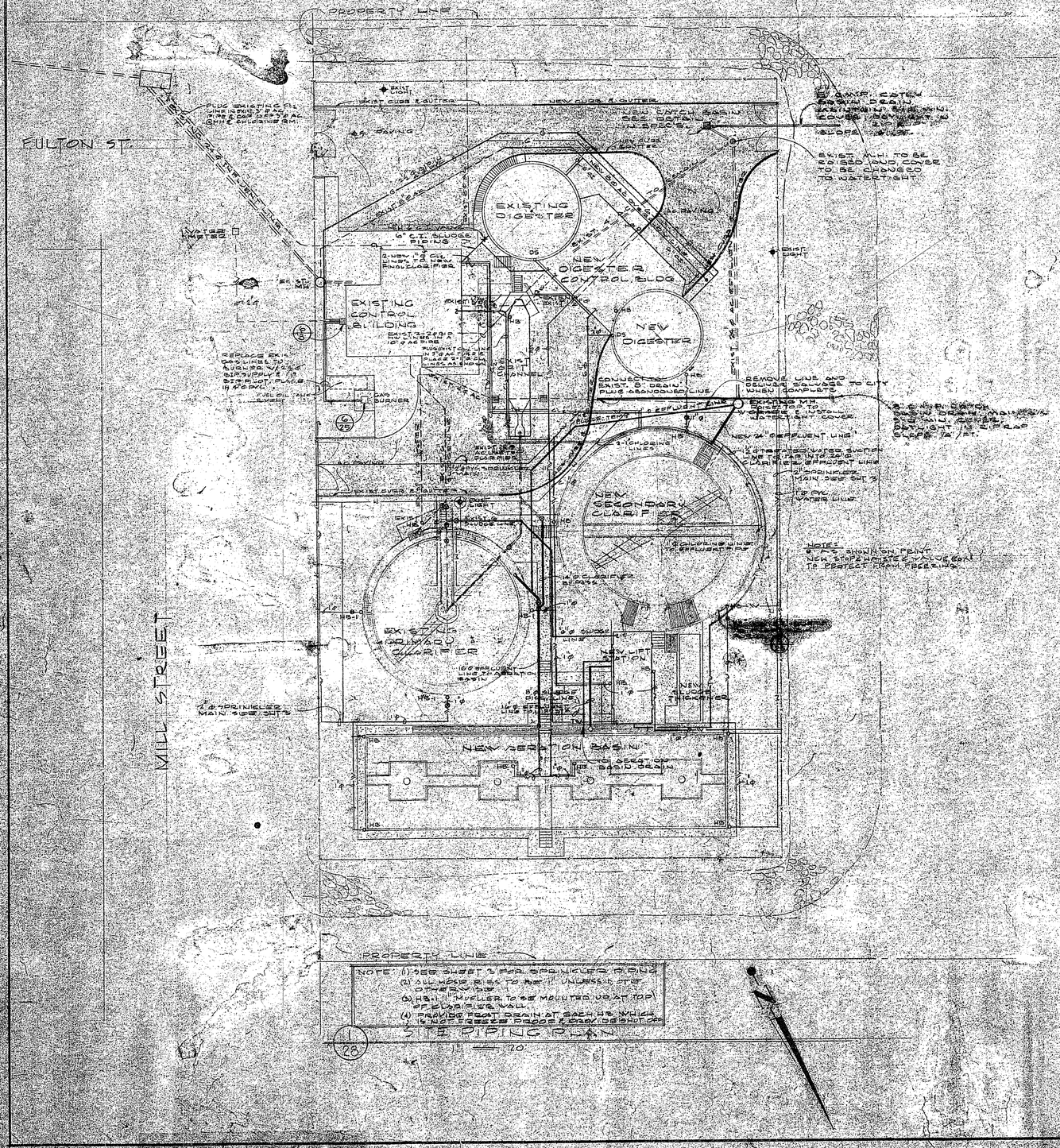
FOR RADIAL REBAR SEE 4/27 5/27
FOOTING
4" GIANT BRICK FACING SEE 1/27
4" SPACE FILLED W/ INSULATION
DIGESTER WALL 1/27
FLEXIBLE JOINTS
4/27 5/27
FL. EXPANSION JTS.
7'-9"
PILING 4/25
45° TYP.
WALL EXPANSION JT. SEE 4/27 TYP.
3'-7" PILING SPACING TYPICAL
18'-9" RAD.
CORBEL SEE 3/27
PILING LOCATION WHERE NOT SHOWN ON MODULE

17.33
FIN FL. 12.33
13.00
2/8
6" ø CF FLG SLUDGE SCUM OFF PIPE
10
2/27
2'-0"
EQUAL ℄ EQUAL ℄ EQUAL ℄
12"
4/27 5/27
3
12"
TOP OF FTG. 5.25
CTR. OF FTG. 2.50
PILING SEE 4/25

GAS BONNET
FLOATING STEEL GAS HOLDER COVER
MANWAY AND COVER PLATE
MANWAY AND COVER PLATE
PRESSURE VACUUM RELIEF AND FLAME ARRESTOR
ROLLER & GUIDE AND COVER STOP SEE 7/27
1/27 CAP
30.00 TOP OF DIGESTER
29.33 TOP OF BRICK
27.75 H.W.L.
CONC. BALLAST AS REQUIRED TO PROVIDE 8" WATER SEAL
SAMPLE TUBE
4" SPACE FILLED W/ INSULATION SEE SPECS.
4" GIANT BRICK FACING
NEW SECONDARY DIGESTER
21.75 L.W.L.
20.75 TOP OF CORBELS
CORBELS SEE 3/27
30'-0" INSIDE DIAMETER
SEE 1/30 FOR LOCATION
GAS PIPE BRACES AS REQ. MFRS DESIGN & REQUIRED
15.00 MANWAY
13.00
PROVIDE A 24" DIA CF PIPE FLANGED BOTH ENDS W/ 2" PROJECTED BASE BRICK FACING GROUT ALL AROUND. BOLT BLIND FLANGE ON OUTSIDE W/ ½" THICK NEOPRENE RUBBER GASKET ALL AROUND
1/27 3/27
2-12"ø I.S. CONC. PIPE SUPPORTS, HT TO BE DETERMINED BY SLUDGE DRAW OFF PIPE, USE 4 #5 VERT BARS INTO FOOT. 18" ℄ # SHOWN BARS @ 12" C-C (TYP.)
4/27 5/27
3
12"
5.25 TOP OF FTG.
2.50 CTR. OF FTG.
PILING SEE 4/25
9 27 NEW DIGESTER SECTION ELEVATION
1/4" = 1'-0"
AS BUILT 2-K DEC. 75

30.00 TOP OF DIGESTER
27.75 H.W.L.
21.75 L.W.L.
20.75 TOP OF CORBELS
5'-9"
2'-2"
5'-0"
2½" PROJECTION
ROLLER GUIDE & COVER STOP LOCATE AROUND DIGESTER WALLS AS REQ. MFRS RECOMMENDATION
¾" DIA. ANCHOR BOLT W/ NUT & FLAT WASHER
3/27 CORBEL
℄ VERIFY W/ MECHANICAL DRAWINGS
12"
ELEVATION
SECTION
7 27 ROLLER GUIDE (4 REQUIRED)
N.T.S.

REGISTERED PROFESSIONAL ENGINEER 5489 OREGON JULY 1, 1975 RICHARD D. NORELIUS


PROPERTY LINE
FULTON ST.
MILL STREET
EXISTING DIGESTER
NEW DIGESTER & CONTROL BLDG.
EXISTING CONTROL BUILDING
NEW DIGESTER
NEW SECONDARY CLARIFIER
EX. 50'Ø PRIMARY CLARIFIER
NEW AERATION BASIN
NEW LIFT STATION
NEW GRIT CHAMBER
EXIST. MH. TO BE RAISED (OUT. COVER TO BE UNBOLTED TO WATERTIGHT
REMOVE LINE AND CAP SEWAGE TO CITY WHEN COMPLETE
EXISTING MH. RAISED TOP TO CONFORM EXISTING GRATE & LIFT COVER
NEW 24" EFFLUENT LINE
NEW 24" EFFLUENT LINE
NEW 24" EFFLUENT LINE

EXISTING PRIMARY DIGESTER

NEW SECONDARY DIGESTER

NEW SECONDARY CLARIFIER

SLUDGE DEWATERING UNIT (BY OWNER)

CHEMICAL FEEDERS

GRIT CHANNEL

CHLORINE BLDG

STORAGE

OFFICE

CONTROL BUILDING

NEW AC PAVING

PLANTING AREA

MANWAY SEE 5/27

(1/30) DIGESTER CONTROL BLDG. & DIGESTER PIPING PLAN 1/4"=1'-0"

(2/30) CHLORINE STORAGE AREA 3/8"=1'-0"

(3/30) CHLORINE ROOM PIPING PLAN 3/8"=1'-0"

(4/30) PIPE SHIELD DET 3"=1'-0"

As Builts E.K. Dec. 75

REGISTERED PROFESSIONAL ENGINEER 6489 OREGON RICHARD H. OTTO RENEWAL 12/31/76

HG E INC ENGINEERS • PLANNERS 5TH AND HIGHLAND COOS BAY, OREGON 269-1166

COOS BAY PLANT #2 SEWAGE TREATMENT FACILITIES

DIGESTER CONTROL BLDG. PIPING PLAN

1172-6-69

30

KE Adhesive

AC PAVING

1½" Ø GAS VALVE & VALVE BOXES W/ MARKED COVERS

NEW CURB & GUTTER

PLANTING AREA

NEW CURB & GUTTER

AC PAVING

NEW CURB & GUTTER

NEW 1½" Ø SCH 80 GAS LINE IN 4" Ø PVC PIPE

8"x8"x6" HUKHUB x FLG TEE PROVIDE BLKG.

NEW 8" Ø AC LINE

8"x4" SIDE FLG REDUC. NOTE PROVIDE BLKG.

4" W.L. UP PROV. BLKG

8" Ø AC LINE W/ CLEANOUT

8"x8"x6" HUKHUB x FLG TEE PROV. BLKG

REMOVE EXISTING 8" Ø CI PIPE & RELOCATE AS SHOWN. PROVIDE BLKG.

EXTEND EXISTING 8" Ø CI PIPE AS REQUIRED

4" CI FLG LINE FROM DCG

1/20

CI FLG. SUPERNATANT LINE

1/20

36'

BUILDING LINE DOTTED

PLANTING AREA

SLOPE ¼" / FOOT

EXISTING 8" Ø AC LINE

NEW COMPRESSION COUPLING

REMOVE EXISTING 8" Ø AC LINE BACK TO SLUDGE PIPE & RELOCATE AS SHOWN

1/28

NEW 1½" Ø GAS LINE

1/28

PIPE BRACKETS @ 4'-0" C TO C OVERFLOW

ADD TO EXIST 6" FLG CI OVERFLOW PIPE TO OBTAIN PROPER CLEARANCE FROM NEW BRICK FACE

EXISTING 6" Ø CI OVERFLOW

EXISTING 12" Ø CI SLUDGE PIPE

1/28

15/11 6" CI DS PIPE TO DRAIN

PIPE SUPPORT W/ ½" Ø ANCHOR BOLTS INTO ROOF (TYPICAL)

PIPE SUPPORT

AUTOMATIC VACUUM BREEZE W/ DISCHARGE PIPING TO ROOF

PROVIDE REDUCING BRANCH TEE IN GAS PIPING W/ ¾" Ø BRASS COMPR. COCK (CHICAGO LC&CT)

NEW SLUDGE MIXER SEE 1/26

PRESSURE-VACUUM RELIEF VALVE

EXIST DRAIN THRU DIGESTER WALL. REMOVE EXIST. 6" Ø CI PLUG W/ 6" Ø CI ELBOW & PIPE. PLUMB DOWN THRU 4" INSULATED SPACE BEHIND NEW BRICK FACING & OUT EARTH UNDER BUILDING. SEE 2/25 FOR LOCATION OF DRAIN & SUPPORT PIPE AS REQUIRED. PATCH & CEMENT AT ENTRANCE TO MAKE WATERTIGHT.

2"Ø HW SUPPLY & RET. PIPING INSULATED W/ INSULATION SEE SPECIFICATIONS

EXIST PRIMARY DIGESTER

REMOVE EXIST GAS PIPING & RELOCATE AS SHOWN FROM SLUDGE MIXER TO CONTROL BLDG.

REMOVE ALL 4" Ø CI FLG PIPING, SUPPORTS, ETC. NOT TO BE USED & BLIND FLANGE PIPES WHICH ARE THRU DIGESTER WALL MAKE GAS TIGHT

15/11 6" CI DS PIPE TO DRAIN

EXIST ACCESS COVER RECONSTRUCTION AS PER SPECIFICATIONS

-10 LOADING DOCK

EXIST. 8" CI LINE FROM SLUDGE PUMP

EXIST. 8" CI LINE TO SLUDGE PUMP

1/20

EXIST CONC WALK

EXIST TRENCH DRAIN

EXIST CONC SLAB

AC PAVING

GRIT CHANNEL

FOR EQUIP. & PIPING SEE 1/13 2/13

CHLORINE ROOM

STORAGE

OFFICE

CONTROL PIPING FOR DETAILS SEE 1/24

GAS PIPING THRU DIGESTER WALL. PLUMB VERTICALLY UP TO GAS BONNET. SUPPORT TO DIGESTER WALL AS REQ'D

9/27

PROVIDE REDUCING SIDE BRANCH TEE IN GAS PIPING W/ ¾" I.P.S. GAS BRASS SAMPLE COCK (CHICAGO LC&CT)

GAS PIPE TO BONNET BY EQUIP. MFR.

11 MANHOLE

10 PRESSURE-VACUUM RELIEF VALVE AND FLAME ARRESTOR

ROLLER GUIDES AND STOPS (4 REQ'D)

2/27

SAMPLE TUBE

MANHOLE

1" HS

NEW SECONDARY DIGESTER

FLOATING GAS STORAGE COVER

15/11 6" CI DS PIPE TO DRAIN

13/11

1/31 DIGESTERS & DIGESTER CONTROL BUILDING ROOF PIPING PLAN ¼"=1'-0"

UNIT HEATERS W/ FANS

1/26 DIGESTER MIXER

TEMP. CONTROL AND THERMOMETER 5/25

MOTORIZED VALVE AND RELAY

MOTORIZED VALVE & RELAY

THERMOSTAT

120 V RECIRCULATION PUMP

120 V RECIRCULATION PUMP 4 GPM

TYP. GATE VALVES

EXIST. 2" H.W. SUPPLY

EXIST. 2" H.W. RETURN

2/31 HOT WATER PIPING SCHEMATIC

NO SCALE

AS BUILTS R.K. DEC. 75

REGISTERED PROFESSIONAL ENGINEER 5489 OREGON JULY 11, 1969 RICHARD D. NOREDI

HG HG INC ENGINEERS • PLANNERS 5TH AND HIGHLAND COOS BAY, OREGON 269-1166

COOS BAY PLANT #2 SEWAGE TREATMENT FACILITIES

DIGESTER ROOF PIPING PLAN

1172-2-69

31

11 / 32 LIFT STATION PIPING PLAN

1/4" = 1'-0"

EXISTING PRIMARY CLARIFIER SEE 18

W.S. 16.86

AERATION BASIN SEE 1/19

W.S. 14.00

W.S. 15.00

W.S. 17.00

NEW FINAL CLARIFIER SEE 23

SLUDGE THICKENER SEE 1/22

OF AERATION BASIN

OF CLARIFIER

OF EXISTING CLARIFIER

55'-0" TO CENT. CLARIFIER

10" AERATION BASIN DRAIN

12" Ø CI FLG PIPE

16"x12"x12" CI FLG TEE

AERATOR MOTORS & DRIVE UNITS AS SPECIFIED.

16" FLG PLUG VALVE, VALVE STEM EXTENSION & VALVE BOX CAST FLUSH W/ WALK

16"x16"x16" CI FLG TEE

16" CI FLG IN FLUENT PIPE ON CONC. RAISED PAD SEE 2/28

16"x16"x8" CI WYE PROVIDE BLOCKING

16" COMPRESSION COUPLING

8" CI 45° ELBOW PROVIDE BLOCKING

1" STOP & WASTE VALVE BOX

GRATING 25

7'-0"

8" CI ACTIVATED SLUDGE LINE

EFFLUENT TROUGH

1½" PVC TREATED WATER LINE

10" TEE

10" AERATION EFFLUENT PIPE

16" CI AERATION EFFLUENT PIPE

16" CI 90° ELBOWS PROVIDE BLKG

COMPRESSION COUPLING

16"x12"x12" CI FLG TEE

10" 90° ELBOW & MUD VALVE, PROVIDE STEM EXTENSION BRACKETS & HAND WHEEL TO 7'-0" ABOVE WALL

1½" PVC TREATED WATER LINE

1" PVC FROM WATER SEE 28

8" COMPRESSION COUPLING

FREEZE-PROOF HOSE BIB AS REQ'D.

16" CL. CI PIPE

2½" Ø PVC TREATED WATER SUCTION LINE, SUPPORT AS REQ'D.

12" Ø CI FLG PIPE

90° FLG ELBOW

WET WELL VENT

12" Ø CI FLG 90° ELBOW

4" FLG PLUG VALVE & VALVE BOX

4" PLUG VALVE & VALVE BOX CAST IN WALK

¼" COPPER TUBE BACK TO AIR CONTROL PANEL

2"-3" PRESSURIZED FLUSH

2"x4" REDUCER

NEW CONC. WALLS AND FLOOR SEE A-5 SHWN

PIPE SUPPORTS TO PILING SEE 3/23

INFLUENT LINE TO THICKENER

8"x8"x8" LATERAL

8" CI WASTE SLUDGE LINE

2½" PVC SUCTION LINE FROM THE OUTFALL PIPE @ THE FINAL CLARIFIER

33'-6"

3'-0"

L.J. TO E.T.

H.B.

REMOVE EXISTING 14" CI PIPE TO ELBOW, TURN ELBOW AS SHOWN PROVIDE BLKG & RE PIPE AS SHOWN

NEW 12"x16" CI INCREASER

16" COMPRESSION COUPLING

NEW 16" CI EFFLUENT RISER TO AERATION BASIN W/ 16"x16"x16" CI WYE & 16" VALVE & BOX OFF SEE CONC. WALK

16"x16"x16" WYE PROVIDE BLOCKING

16" 45° ELBOW PROVIDE BLKG

16" PLUG VALVE

NEW 14" CLARIFIER BYPASS

ENCASED IN CONCRETE

NEW 6" Ø SLUDGE LINE & PRIMARY CLARIFIER DRAIN

90° ELBOW PROVIDE BLKG.

REMOVE EXIST. MANHOLE & PIPE

EXIST. VALVE & VALVE BOX. RAISE VALVE BOX FLUSH W/ NEW CONCRETE

EXIST. 6" AC LINE TO BE RELOCATED W/ NEW 6" CI PIPE TO SLUDGE THICKENER

INSTALL TEMP. 14" DIA. BYPASS EXIST. MH. SEE AFTER CONST. REMOVE AND D SALVAGE TO O

CONC. WALK

45° ELBOW PROVIDE BLOCKING

EXIST. 12 AC PIPE FROM CHANNEL TO REMAIN

RMV. EXISTING 14" CI. EFFLUENT PIPE

NEW 12" TO 14" REDUCER

EXISTING 12" VALVE & VALVE BOX. RAISE VALVE BOX FLUSH W/ NEW CONC. WALK

NEW 90° ELBOW ENCASED IN CONCRETE

45° ELBOW PROVIDE BLOCKING

1½" PVC TREATED WATER LINE TO CHLORINE ROOM & DISINFECTION CENTER & BLDG. 1/28

28'-0"

12" COMPRESSION COUPLING

INFLUENT TROUGH

8" CLS CONTACT CHAMBER DRAIN

12" TEE

21" PLUG VALVES W/ VALVE STEM EXTENSIONS & VALVE BOXES CAST FLUSH IN THE WALK

SUPPORT PIPES AS PER DETAIL 3/23

PROVIDE ELBOWS TO CONNECT TO EQUIP. FURNISHED BY EQUIP MFGR

PILING LOCATION SEE "PILING PLAN"

COMP COUPLINGS 10" FROM ACTIVATED SLUDGE LINE

8"x8" CI WASTE SLUDGE LINE

SLUDGE SUMP SEE 2/24

8"x8"x8" CI FLG. LATERAL

PIPE SUPPORTS TO PILING SEE 3/23

ACUM VALVE BY EQUIP MFGR

90° ELBOW & VALVE BOX 3/24

TELESCOPING VALVE AS SPECIFIED

90° ELBOW UP TO WASTE SLUDGE BOX 3/24

AS BUILTS P.K. DEC. 75

REGISTERED PROFESSIONAL ENGINEER 6489 OREGON JULY 11, 1958 RICHARD D. NORED

HG INC

ENGINEERS • PLANNERS

FT. LAND HIGH LAND COOS BAY, OREGON 269-1166

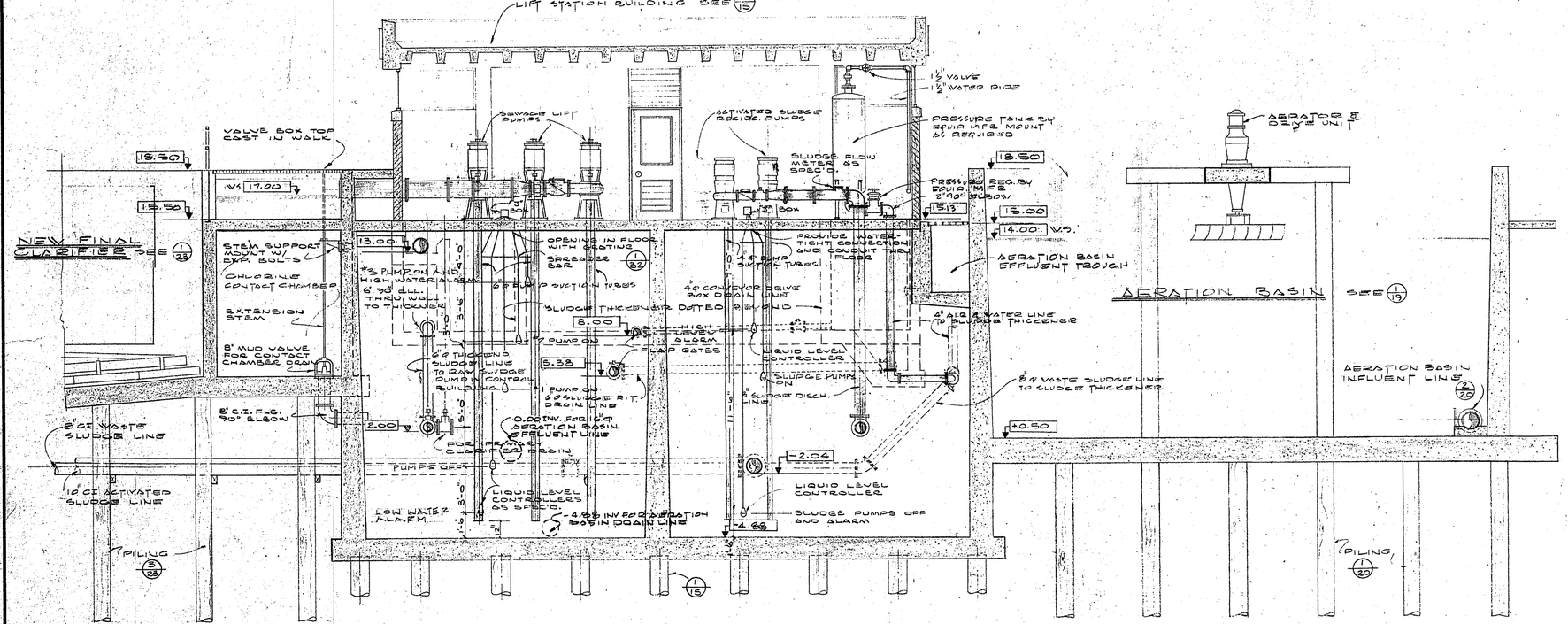
COOS BAY PLANT #2

SEWAGE TREATMENT FACILITIES

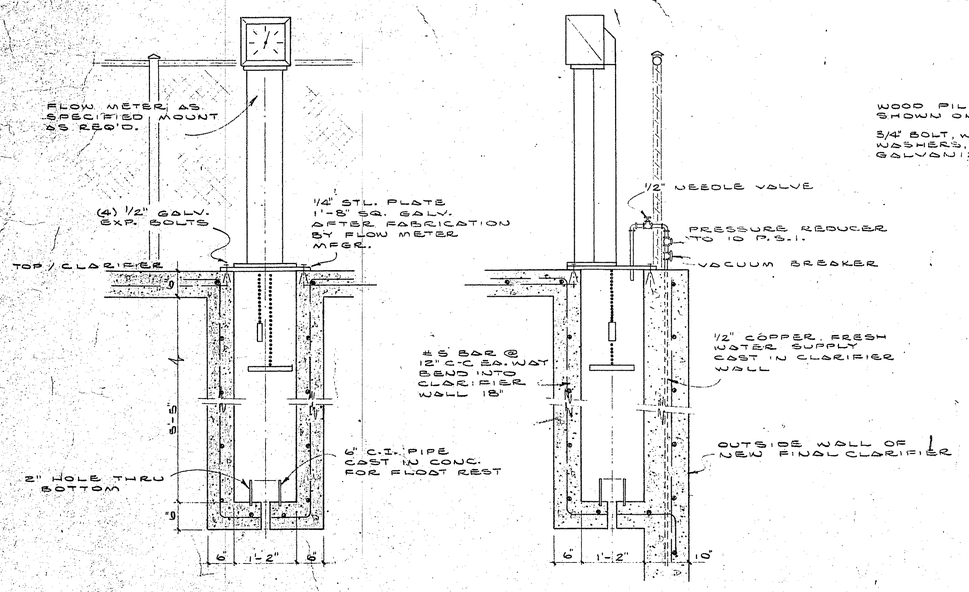
LIFT STATION PIPING PLAN

1172-A-69

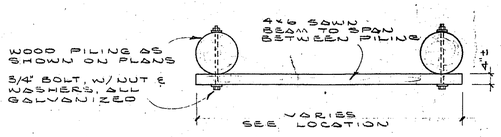
32



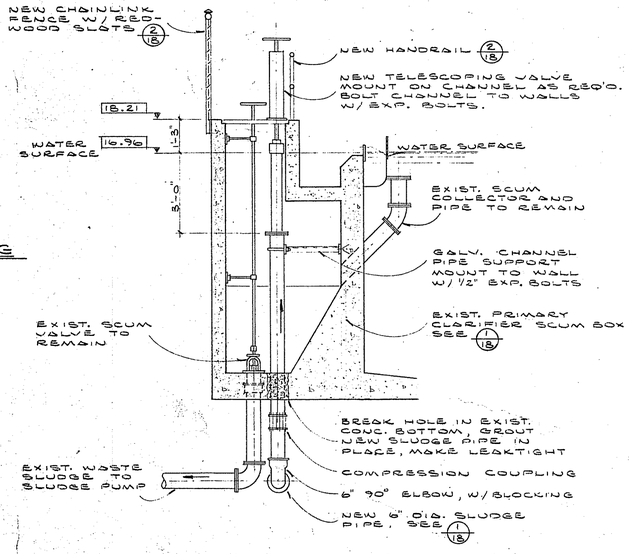
1/33 LIFT STATION SECTION
1/4" = 1'-0"



2/33 FLOAT WELL
SCALE: 3/4" = 1'-0"



3/33 PIPE SUPPORT @ PILING
NO SCALE



4/33 TELESCOPING VALVE
SCALE: 3/8" = 1'-0"

AS BUI

DEC. 75

REGISTERED PROFESSIONAL ENGINEER 6958 OREGON JULY 1, 1969 RICHARD D. NORED

HG INC
ENGINEERS • PLANNERS
5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

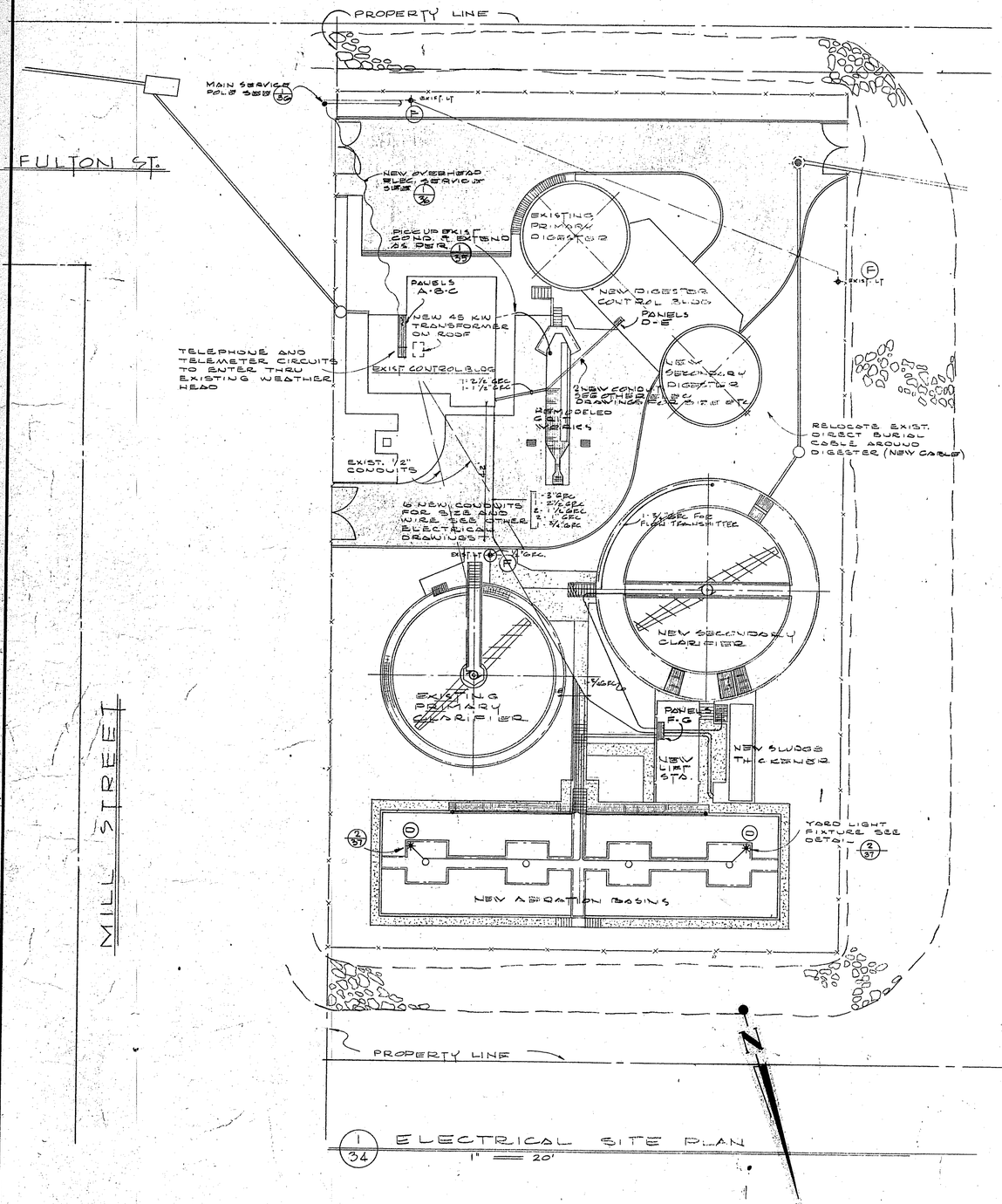
GOOS BAY PLANT #2
SEWAGE TREATMENT FACILITIES

LIFT STATION MECH. SECTION & DETAILS

1172-5-69

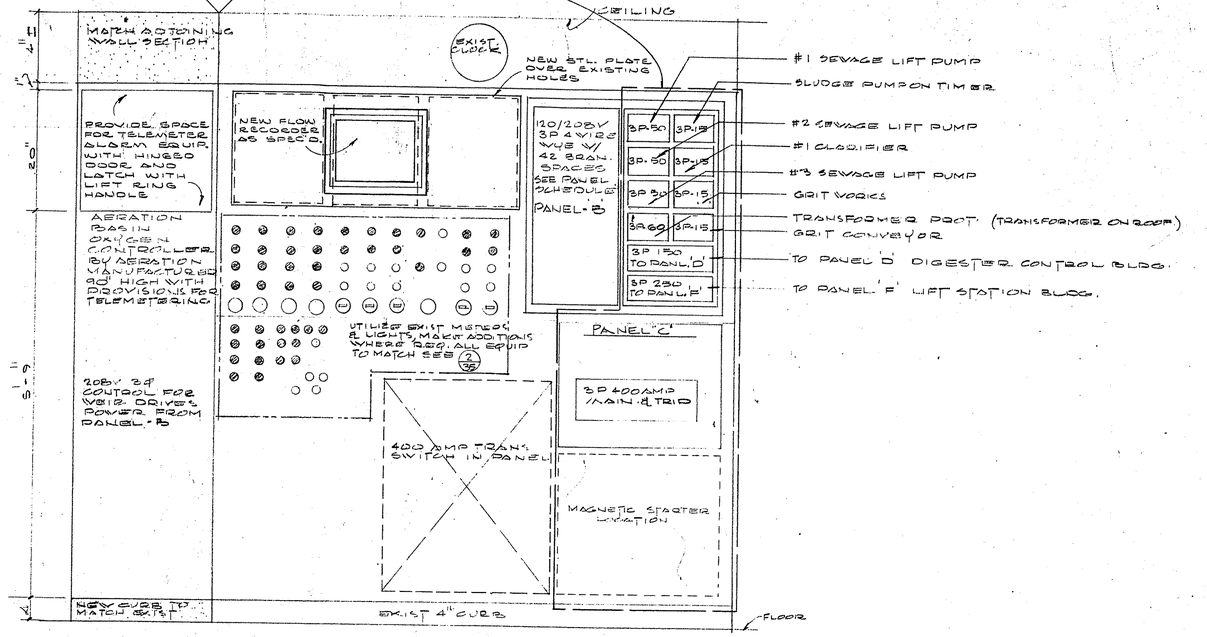
33

K&E



1/34 ELECTRICAL SITE PLAN
1" = 20'

NOTE:
PANEL 'C' EQUIPMENT INSTALLED IN SEPERATE CABINET AND PLACED BETWEEN EXISTING MAIN PANEL AND AERATION EQUIPMENT



2/34 EXISTING PANEL (REMODELED) PANEL A
1" = 1'-0"

3P-150A MAIN	3P-40A DIGESTER MIXER (REVERSING SWITCH: F R; HOA; ET M; PL)
3P-40A TRANSFORMER	
SPACE	HOA ET M PL
	SPACE
120/208 V 3P 4 WIRE WYE 20 BRANCH CIRCUITS PANEL-E	3P-15A SLUDGE TRANS PUMP TIMER HOA ET M PL
	SPACE
30 KV TRANSFORMER 460V 3Ø 3 WIRE DELTA TO 120/208V 3Ø 4 WIRE WYE	

7'-6"

3/34 PANEL-D
1" = 1'-0"

3P-250A MAIN	3P-15A FINAL CLARIFIER HOA PL	3P-30A SLUDGE PUMP #1 HOA ET M PL
2P-20A TRANSFORMER	3P-15A THICKENER HOA ET M PL	2P-30A SLUDGE PUMP #2 HOA ET M PL
3P-15A AIR COMPRESSOR HOA PL	3P-20A TREATED H_2O PUMP HOA ET M PL	3P-50A AERATOR #1 HOA ET M PL
SPACE	3P-30A LIFT PUMP #1 HOA ET M PL	3P-50A AERATOR #2 HOA ET M PL
120/208V 3P 4 WIRE WYE 20 BRANCH CIRCUITS PANEL-G	3P-30A LIFT PUMP #2 HOA ET M PL	3P-50A AERATOR #3 HOA ET M PL
15 KV TRANS 460V 3Ø 3W DELTA TO 120/208V 3Ø 4 WIRE WYE	3P-30A LIFT PUMP #3 HOA ET M PL	3P-50A AERATOR #4 HOA ET M PL

7'-6"

4/34 PANEL-F
1" = 1'-0"

AS BUILTS R.K. DEC. 75

REGISTERED PROFESSIONAL ENGINEER 5489 OREGON RICHARD D. NORKEN

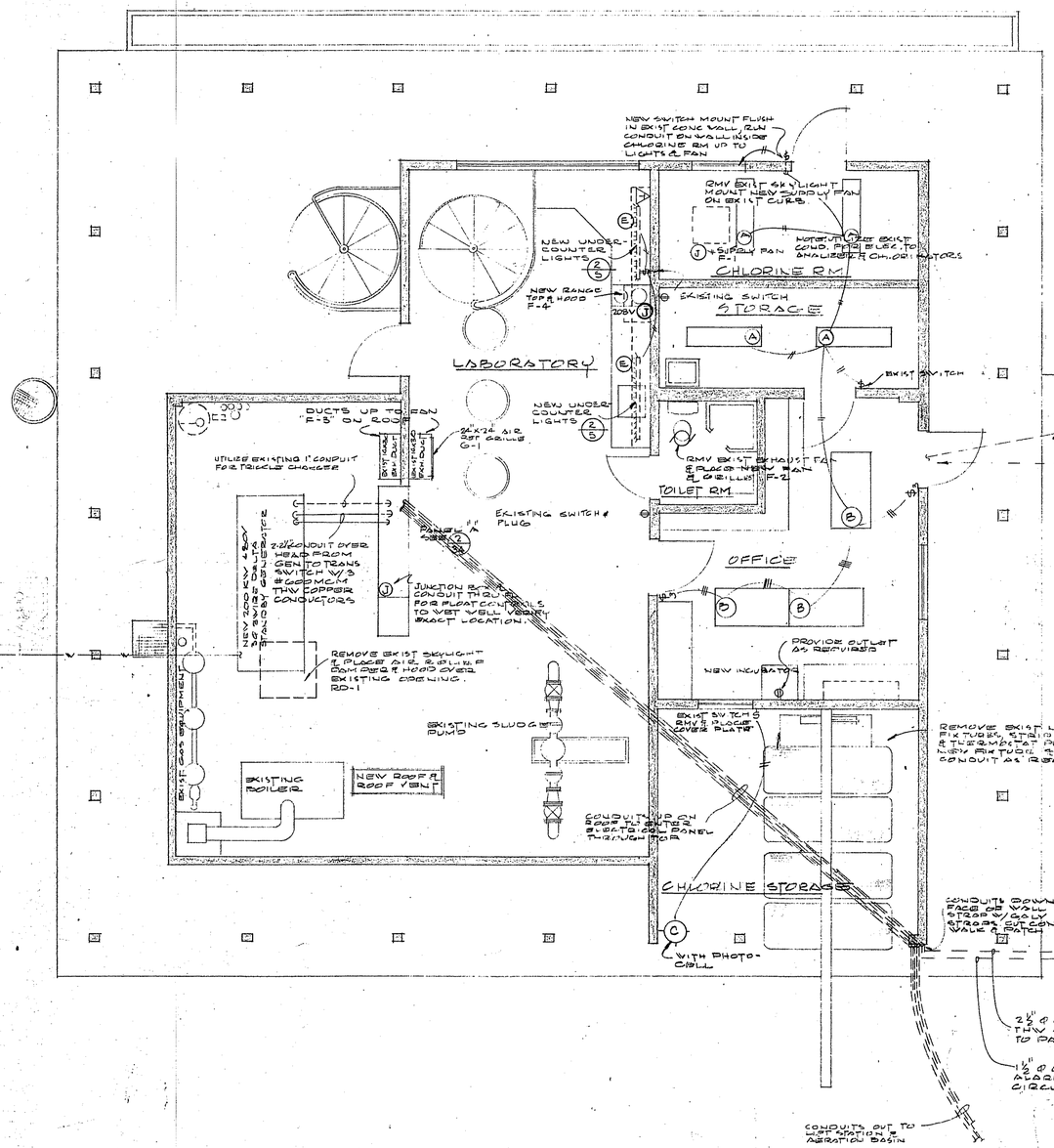
HGE INC
ENGINEERS • PLANNERS
5TH AND HIGHLAND
COOS BAY, OREGON
269-1166

COOS BAY PLANT #2
SEWAGE TREATMENT FACILITIES

ELECTRICAL SITE PLAN

1172-A-69

34



1 / 35 ELECTRICAL PLAN
1/4" = 1'-0"

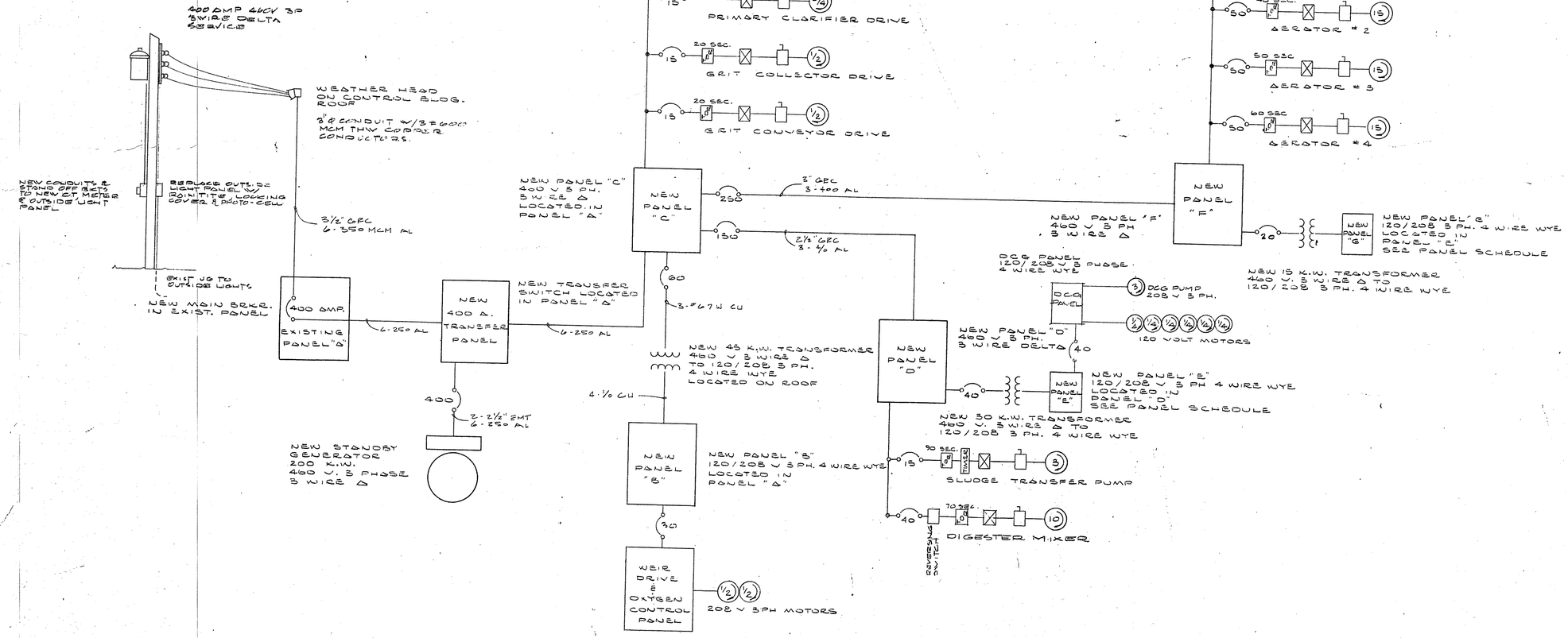
2 / 35 PANEL A CONTROLS & LIGHTS
N.T.S.

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REGISTERED PROFESSIONAL ENGINEER 6489 OREGON JULY 11, 1975 RICHARD D. NORED

11724

3



1/36 ELECTRICAL RISER DIAGRAM

NO SCALE

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REGISTERED PROFESSIONAL ENGINEER 6489 OREGON JULY 11, 1969 RICHARD D. NORED

HGE INC ENGINEERS • PLANNERS 5TH AND HIGHLAND COOS BAY, OREGON 269-1166

COOS BAY PLANT #2
SEWAGE TREATMENT FACILITIES

ELECTRICAL RISER DIAGRAM

1172-A-69

36

1 ϕ CONDUIT W/
2 # 12 TW FOR LIGHT CIRCUIT
3 # 8 TW FOR AERATORS
3 # 12 FOR AERATOR CONTROL

DISCONNECT AND ON/OFF SW ON RISER

1½ CONDUIT W/
2 # 12 TW FOR LIGHT CIRCUIT
6 # 8 TW FOR AERATORS
6 # 12 TW FOR AERATOR CONTROL

1" CONDUIT W/
3 # 12 TW FOR WEIR DRIVE
3 # 12 SHIELDED FOR WEIR CONTROL

1½" CONDUIT W/ CONTROL WIRE FOR OXYGEN SENSOR AS PER MFGR.

1½ CONDUIT W/
2 # 12 TW FOR LIGHT CIRCUIT
6 # 8 TW FOR AERATORS
6 # 12 TW FOR AERATOR CONTROL

AERATOR

DISCONNECT AND ON/OFF SW ON RISER

AERATION BASIN

1" CONDUIT W/
3 # 12 TW FOR WEIR DRIVE
3 # 12 SHIELDED FOR WEIR CONTROL

1½" CONDUIT W/ CONTROL WIRE FOR OXYGEN SENSOR AS PER MFGR.

1" CONDUIT W/
3 # 8 TW FOR LIGHT CIRC.
3 # 8 TW FOR AERATOR
3 # 12 TW FOR AERATOR CONTROL

"J" BOX

WEIR DRIVE

OXYGEN SENSOR

DISCONNECT AND ON/OFF SW ON RISER

AERATOR

½" CONDUIT W/
2 # 12 TW

YARD LIGHT FIXTURE SEE DETAIL (2/37)

NOTE: FIXTURE AND WIRING ARRANGEMENT TYPICAL AT EAST END OF AERATION BASIN

ONE GEC THROUGH FLOOR FOR FLOAT CONTROL

(2) 1" CONDUITS W/
6 # 12 TW EACH
FOR WEIR DRIVE
AND CONTROL

(2) 1½" CONDUITS W/ CONTROL WIRES FOR OXYGEN SENSORS

2½" CONDUIT W/ NECESSARY ALARM AND RUNNING LIGHT CIRCUITS TO PANEL "D"

MAIN FEED
3" CONDUIT W/ 3
400 MCM THW
ALUM. CONDUCTORS

(2) 1½" CONDUITS W/
5 # 12 TW
6 # 8 TW
EACH FOR AERATORS
AND LIGHTS

ELECTRICAL PANEL "F" SEE (4/54)

½" COND. W/ 5 # 10 TW

½" CONDUIT W/ 5 # 10 TW

½ CONDUIT W/ 5 # 10 TW EACH

1¼" GEC FOR FLOAT CONTROL

NOTE: TIE OUTSIDE BUILDING LIGHTS TO AERATION BASIN LIGHTS THRU A COMMON PHOTO CELL

ONE DRIVE MOTOR

"J" BOX

1" CONDUIT W/
6 # 12 TW FOR MOTOR DRIVE
6 # 12 TW FOR MOTOR CONTROL

TWO DRIVE MOTORS

SLUDGE THICKENER

3/4" CONDUIT W/
3 # 12 TW FOR MOTOR DRIVE
3 # 12 TW FOR MOTOR CONTROL

MOUNT CONDUIT ALONG BRIDGE BEAMS AS REQ'D.

FINAL CLARIFIER

CLARIFIER DRIVE UNIT

NOTE: ALL CONDUIT SHOWN DOTTED ARE UNDERGROUND OR CAST IN THE CONCRETE

LIGHT AND POLE AS SPEC'D.

HANDRAIL

MOUNT LIGHT POLE W/ EXP. BOLTS AS REQ'D.

12"

AERATOR SLAB, SEE (1/37)

CONC. COLUMN

(2/37) YARD LIGHT
½" = 1'-0"

(1/37) ELECTRICAL PLAN
¼" = 1'-0"

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3131 AND HIGHLAND
COOS BAY, OREGON
269-1166

HGE INC ENGINEERS • PLANNERS

COOS BAY PLANT #2
SEWAGE TREATMENT FACILITIES

LIFT STATION ELECTRICAL

1179.0.69

37

NEW RIP RAP SLOPE

AVERAGE TIDE 5.00

EXISTING 24" OUTFALL TO BE ABANDONED AND REMOVED AS REQUIRED FOR NEW CONSTRUCTION

ALL EXISTING OUTFALL PIPE AND STRUCTURES TO BE REMOVED PRIOR TO NEW CONSTRUCTION

EXIST. GROUND PROFILE

NEW 24" OUTFALL L = 880'

PROFILE

SCALES:
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'

+12.00 TOP OF PILING

TREATED 4x6 TEE ACROSS PILING TOPS AND TOP PILING W/ 5/8" BOLTS, NUTS, WASHERS, TYPICAL ALL PILING

DRIVE PILING AROUND OUTFALL PIPE AND CUT OFF EVEN WITH TOP OF PIPE AT ELEV. +12.00 POINT OR 18" DIA. WHERE PIPE IS EXPOSED ONLY

12"ø O.M.P. REDUCER FOR DIFFUSERS S.R.S.D.

END PLATE & DIFFUSER

-17.50

TREATED 4x8 TIMBERS SUPPORTS OUTFALL PIPE W/ BOLTS TO PILING W/ 5/8" BOLT, NUT & WASHERS, TYPICAL ALL PILING

EXISTING GROUND PROFILE

NOTE: ALL ELEVATIONS ARE REFERENCED TO M.S.L. (MEAN SEA LEVEL)

COOS BAY

230.07' TO BULKHEAD LINE

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00

EXIST. 24" OUTFALL TO BE ABANDONED AS REQUIRED FOR NEW CONSTRUCTION

EXIST. 24" OUTFALL TO BE ABANDONED AS REQUIRED FOR NEW CONSTRUCTION

+12.00 EXIST. M.H. INV. ELEV. 8.40 AS REQ'D. FOR NEW CONSTRUCTION

PROPERTY OWNED BY CITY OF COOS BAY

ALL EXISTING OUTFALL PIPE AND CONC. STRUCTURES TO BE REMOVED PRIOR TO NEW CONSTRUCTION

NEW RIP RAP

TOE OF NEW RIP RAP

EXISTING 15' PIPELINE EASEMENT

NEW 24" OUTFALL L = 880'

EFFLUENT DIFFUSERS

15' 15' 15' 15'

PILING AND CROSS BRACES

18' 18' 15' 15'

STA. 8+80
END OF OUTFALL
ELEV. -17.50

FLOOD

ESS

COOS BAY

PLAN

SCALE: 1" = 40'

N

MILEPOST 5

As BUILTS P.E. DEC. 75

REGISTERED PROFESSIONAL ENGINEER 6439 OREGON JULY 11, 1975 RICHARD D. NORGOT

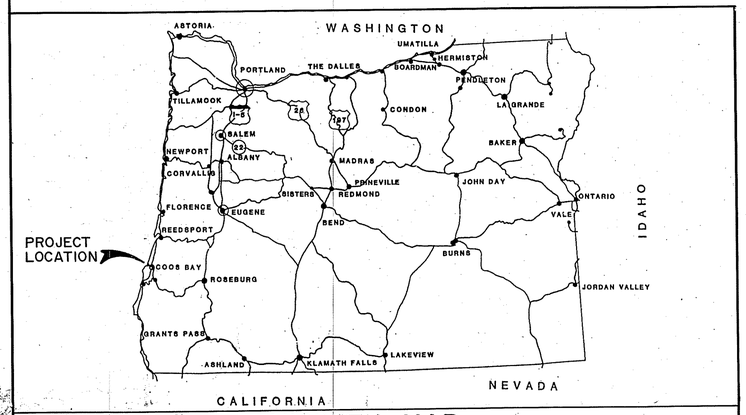
HGE INC ENGINEERS • PLANNERS 5TH AND HIGHLAND COOS BAY, OREGON 269-1166

KEUPPEL & ESSER CO.

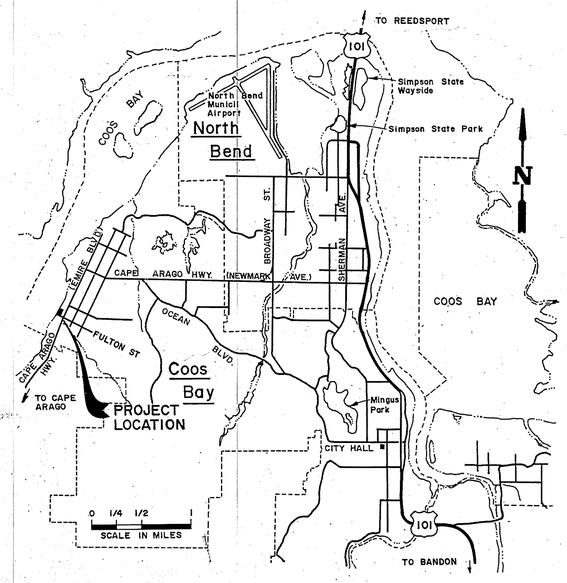
HARLAN GESSFORD ERICHSEN

COOS BAY
WASTEWATER TREATMENT
PLANT NO. 2
IMPROVEMENT PROJECT

COOS BAY, OREGON



VICINITY MAP



LOCATION MAP

INDEX

G-1	TITLE SHEET
G-2	SITE MAP & ABBREVIATIONS
G-3	HYDRAULIC PROFILE, DESIGN CRITERIA & FLOW SCHEMATIC
Y-1	SITE & GRADING PLAN - WEST
Y-2	SITE & GRADING PLAN - EAST
Y-3	YARD PIPING PLAN - WEST
Y-4	YARD PIPING PLAN & PLUMBING - EAST
Y-5	PLUMBING PLAN - WEST
Y-6	PIPING PROFILES
Y-7	PIPING PROFILES
Y-8	PIPING PROFILES
IPS-1	INFLUENT PUMP STATION PLAN & SECTIONS
HW-1	HEADWORKS PLAN & SECTIONS
HW-2	HEADWORKS SECTIONS & DETAILS
HW-3	HEADWORKS SECTIONS & DETAILS
PC-1	PRIMARY CLARIFIER PLAN & SECTIONS
PC-2	SCUM MANHOLE SECTION & DETAILS
AB-1	AERATION BASINS PLAN & SECTIONS
ILS-1	FLOW CONTROL/INTERMEDIATE LIFT STATION PLAN & SECTIONS
ILS-2	FLOW CONTROL/INTERMEDIATE LIFT STATION SECTIONS & DETAILS
ILS-3	INTERMEDIATE LIFT STATION DEMOLITION PLAN
ILS-4	INTERMEDIATE LIFT STATION FLOW CONTROL PLAN & SECTIONS
SC-1	SECONDARY CLARIFIER NO. 2 PLAN & SECTIONS
SC-2	SECONDARY CLARIFIER NO. 2 SECTIONS & DETAILS
CC-1	CHLORINE CONTACT CHAMBER PLAN & SECTIONS
DC-1	DIGESTER COMPLEX PLAN & SECTIONS
DC-2	DIGESTER COMPLEX SECTIONS & DETAILS
DC-3	DIGESTER COMPLEX ARCHITECTURAL SECTIONS & DETAILS
SLD-1	SLUDGE LOADING DOCK PLAN & SECTIONS
CB-1	CONTROL BUILDING PLAN & SECTIONS
CB-2	CONTROL BUILDING SECTIONS & DETAILS
MSB-1	MAINTENANCE/STORAGE BUILDING STRUCTURAL PLAN & SECTIONS
MSB-2	ROOFING PLAN & DETAILS
MSB-3	ARCHITECTURAL ELEVATIONS
E-1	LEGEND AND ABBREVIATIONS
E-2	ELECTRICAL ONE-LINE DIAGRAM
E-3	ELECTRICAL SITE PLAN - WEST
E-4	ELECTRICAL SITE PLAN - EAST
E-5	ELECTRICAL - INFLUENT PUMP STATION
E-6	ELECTRICAL - HEADWORKS
E-7	ELECTRICAL - AERATION BASINS
E-8	ELECTRICAL - INTERMEDIATE LIFT STATION
E-9	ELECTRICAL - DIGESTER COMPLEX (NOT COMPLETE)
E-10	ELECTRICAL - CONTROL BUILDING
E-11	CONTROL SCHEMATICS
E-12	CONTROL SCHEMATICS
I-1	PROCESS INSTRUMENTATION DIAGRAM
I-2	PROCESS INSTRUMENTATION DIAGRAM
I-3	PC INTERCONNECTION - PCP
I-4	PC INTERCONNECTION - PCP
I-5	PC INTERCONNECTION - ICP
I-6	PC INTERCONNECTION - ICP

MAYOR: ROGER GOULD

CITY MANAGER: JIM WATSON

PROGRAM MANAGER: RALPH DUNHAM

WASTEWATER SUPERINTENDENT: STAN SHARP

CITY ATTORNEY: PAULA BECHTOLD

COUNCIL MEMBERS: JOE BENETTI

GARY COMBS

BILL GRILE

RALPH LARSON

GENE MCCABE

DAVID WILLIAMS

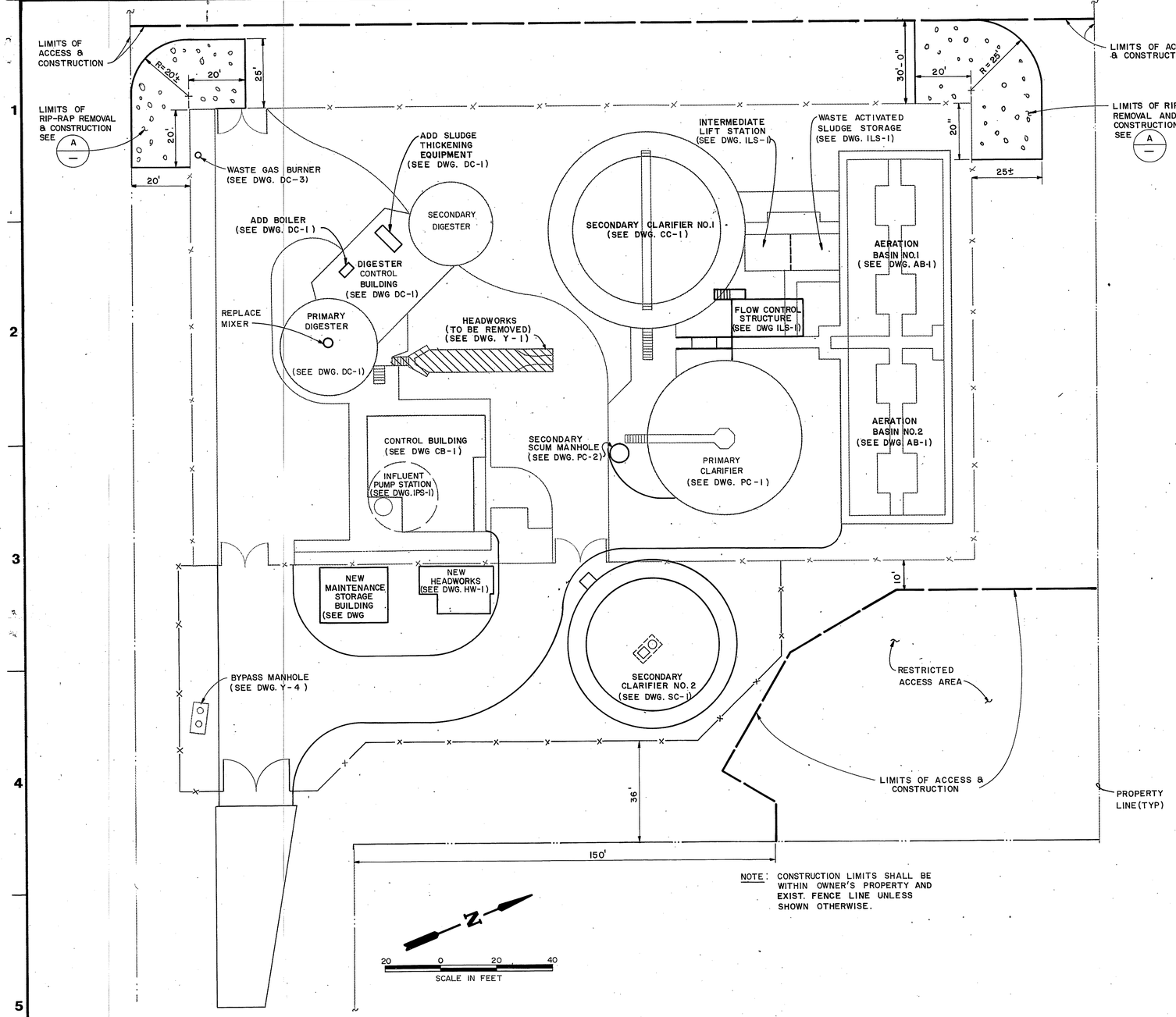
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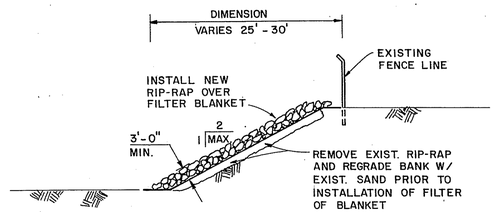
G-1 Sht. 1



NOTE: CONSTRUCTION LIMITS SHALL BE WITHIN OWNER'S PROPERTY AND EXIST. FENCE LINE UNLESS SHOWN OTHERWISE.

ABBREVIATIONS

∠	ANGLE
@	AT (MEASUREMENT)
AB	ANCHOR BOLT
AB	AERATION BASIN
ABC	AGGREGATE BASE COURSE
ABE	AERATION BASIN EFFLUENT
ABND	ABANDONED
AC	ASPHALT CONCRETE
ADD'L	ADDITIONAL
ALP	AIR, LOW PRESSURE
ALT	ALTERNATE
AL	ALUMINUM
APPROX	APPROXIMATE
BF	BLIND FLANGE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BOT	BOTTOM
BSP	BLACK STEEL PIPE
BTV	BUTTERFLY VALVE
BV	BALL VALVE
BYP	BYPASS
CANT	CANTILEVER
CB	CATCH BASIN
C.B.	CONTROL BUILDING
C.C.C	CHLORINE CONTACT CHAMBER
CCP	CONCRETE CYLINDER PIPE
CE	CLARIFIER EFFLUENT (SEDARY)
CF	CHEMICAL FEED
CG	CHLORINE GAS
CI	CAST IRON
CIRC	CIRCULAR
CIRCUM	CIRCUMFERENCE
CLAR	CLARIFIER
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT.
CO	CLEANOUT
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUATION
COP	COPPER
CP	CONCRETE PIPE
CPLG	COUPLING
CS	CHLORINE SOLUTION
CTL	CONTROL
CTR	CENTER
CU	COPPER
CV	CHECK VALVE
CW	COLD WATER (POTABLE)
D	DRAIN
DC	DECANT
DG	DIGESTER GAS
DIP	DUCTILE IRON PIPE
DI	DUCTILE IRON
DR	DOOR
DS	DIGESTED SLUDGE
DSP	DOWN SPOUT
DT	DRAIN TILE
DW	DOMESTIC WATER (POTABLE)
DWG	DRAWING
E	EAST OR EASTING
EA	EACH
EC	ELECTRICAL CONDUIT
ED	EQUIPMENT DRAIN
EDH	ELECTRIC DUCT HEATER
EF	EACH FACE
EF-	EXHAUST FAN
EFF	EFFLUENT
EL	ELEVATION
ELB	ELBOW
EMBED	EMBEDMENT
EP	EDGE OF PAVEMENT
ES	EFFLUENT SAMPLE
ET	ELECTRICAL TRENCH
EQUIP	EQUIPMENT
EW	EACH WAY
EWEF	EACH WAY EACH FACE
EWTB	EACH WAY TOP AND BOTTOM
EXP	EXPANSION
EXIST	EXISTING
EXT	EXTERIOR
FB	FLAT BAR
FC	FLEXIBLE COUPLING
FCA	FLANGE COUPLING ADAPTER
FCS	FLOW CONTROL STRUCTURE
FD	FLOOR DRAIN
FE	FINAL EFFLUENT
FG	FINISH GRADE
FIN	FINISHED
FLC	FLUSHING CONNECTION
FLG	FLANGE
FPT	FEMALE PIPE THREAD
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FEET
GA	GAUGE
GALV	GALVANIZED
GB	GRADE BREAK
GL	GLASS LINED
GLDI	GLASS LINED DUCTILE IRON
GLV	GLOBE VALVE
GRD	GRADE
GSP	GALVANIZED STEEL PIPE
GTV	GATE VALVE
GYP	GYPSUM
H1E	HOOK ONE END
H2E	HOOK TWO ENDS
HB	HOSE BIBB
HORIZ	HORIZONTAL
HP	HIGH POINT
HSB	HIGH STRENGTH BOLT
HW	HOT WATER (POTABLE)
H.W.	HEADWORKS
HWE	HEADWORKS EFFLUENT
HYD	HYDRANT
ID	INSIDE DIAMETER
IE,INV EL	INVERT ELEVATION
IL	INTERMEDIATE LIFT
ILS	INTERMEDIATE LIFT STATION
IN	INCH
INSTR	INSTRUMENT
INV	INVERT
IP	INFLUENT PUMP
IPS	INFLUENT PUMP STATION
IRR	IRRIGATION
JT	JOINT
LF	LINEAL FEET
LP	LOW POINT
LR	LONG RADIUS
LSH	LIMIT SWITCH HIGH
LSHH	LIMIT SWITCH HIGH HIGH
LSL	LIMIT SWITCH LOW
MAG	MAGNETIC
MAX	MAXIMUM
MB	MACHINE BOLT
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
MK	MARK
ML	MIXED LIQUOR
MLLW	MEAN LOWER LOW WATER
MOD	MODEL
MPT	MALE PIPE THREAD
MSL	MEAN SEA LEVEL
N	NORTH OR NORTHING
NG	NATURAL GAS
NO	NUMBER
NPT	NATIONAL PIPE THREAD
NPW	NON-POTABLE WATER
NRS	NON-RISING STEM
NTS	NOT TO SCALE
NV	NEEDLE VALVE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OVERFLOW
OPNG	OPENING
OPP	OPPOSITE
PC	PRIMARY CLARIFIER
PD	PRESSURE DRAIN
PE	PLAIN END
PCE	PRIMARY CLARIFIER EFFLUENT
PG	PRESSURE GAUGE
PLE	PLANT EFFLUENT
POC	POINT OF CURVATURE
PRC	POINT OF REVERSE CURVE
PRV	PRESSURE REGULATING VALVE
PS	PRIMARY SLUDGE
PSC	PRIMARY SCUM
PT	POINT
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
R	RADIUS
RAS	RETURN ACTIVATED SLUDGE
RCP	REINFORCED CONCRETE PIPE
RDCR	REDUCER
RECIR	RECIRCULATE
REINF	REINFORCING
REQ'D	REQUIRED
RM	RIVER MILE
RS	RAW SEWAGE
R&R	REMOVE AND REPLACE
R&S	REMOVE AND SALVAGE TO OWNER
S	SOUTH
SA	SAMPLE
SC	SECONDARY CLARIFIER
SCE	SECONDARY CLARIFIER EFFLUENT
SCH	SCHEDULE
SD	STORM DRAIN
SHT	SHEET
SIM	SIMILAR
SL	SLOPE
SNR	SUPERNATANT RETURN
SPEC	SPECIFICATIONS
SQ	SQUARE
SSC	SECONDARY SCUM
SSTL	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
STR	STRAIGHT
STRUC	STRUCTURE
STS	STORM SEWER
SUP	SUPERNATANT
SYM	SYMMETRICAL
S'SLY	SOUTHERLY
S/W	SIDEWALK
T&B	TOP AND BOTTOM
TBA	TO BE ABANDONED IN PLACE
TBR	TO BE REMOVED
TBS	TO BE SALVAGED TO OWNER
TC	TOP OF CURB
TEL	TELEPHONE
TEMP	TEMPORARY
TOB	TOP OF BERM
TOD	TOP OF DRAIN
TOW	TOP OF WALL
TR	TO REMAIN
TRAN	TRANSITION
TWAS	THICKENED WASTE ACTIVATED SLUDGE
TW	TREATED WATER
TYP	TYPICAL
UD	UNDERDRAIN
UH	UNDERHUNG
V	VENT
VERT	VERTICAL
VIF	VERIFY IN FIELD
VTR	VENT THROUGH ROOF
W	WEST
WA	WASTE
WAS	WASTE ACTIVATED SLUDGE
W.S.	WATER SURFACE
WS	WELDED STEEL
WSP	WELDED STEEL PIPE
WWF	WELDED WIRE FABRIC
W/	WITH
W/O	WITHOUT
YH	YARD HYDRANT



A/— TYPICAL SLOPE PROTECTION
N.T.S.

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VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 [redacted] 1"
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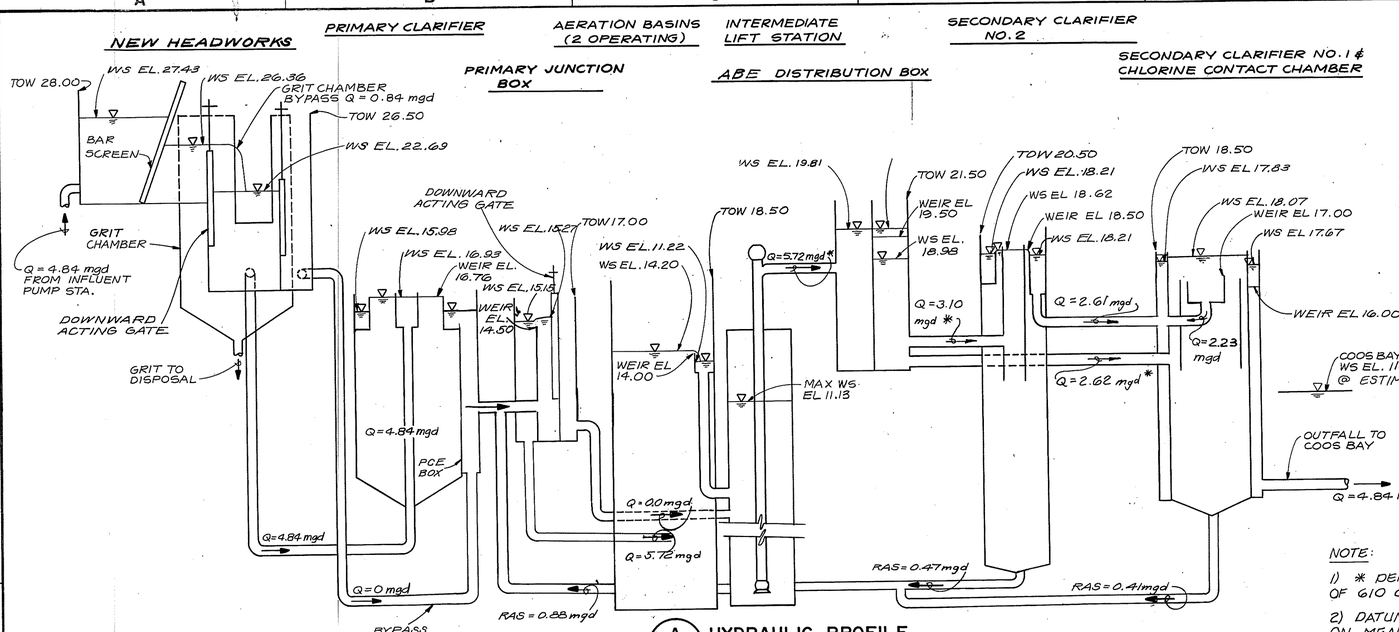
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COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

SITE MAP AND ABBREVIATIONS

DRAW
SH

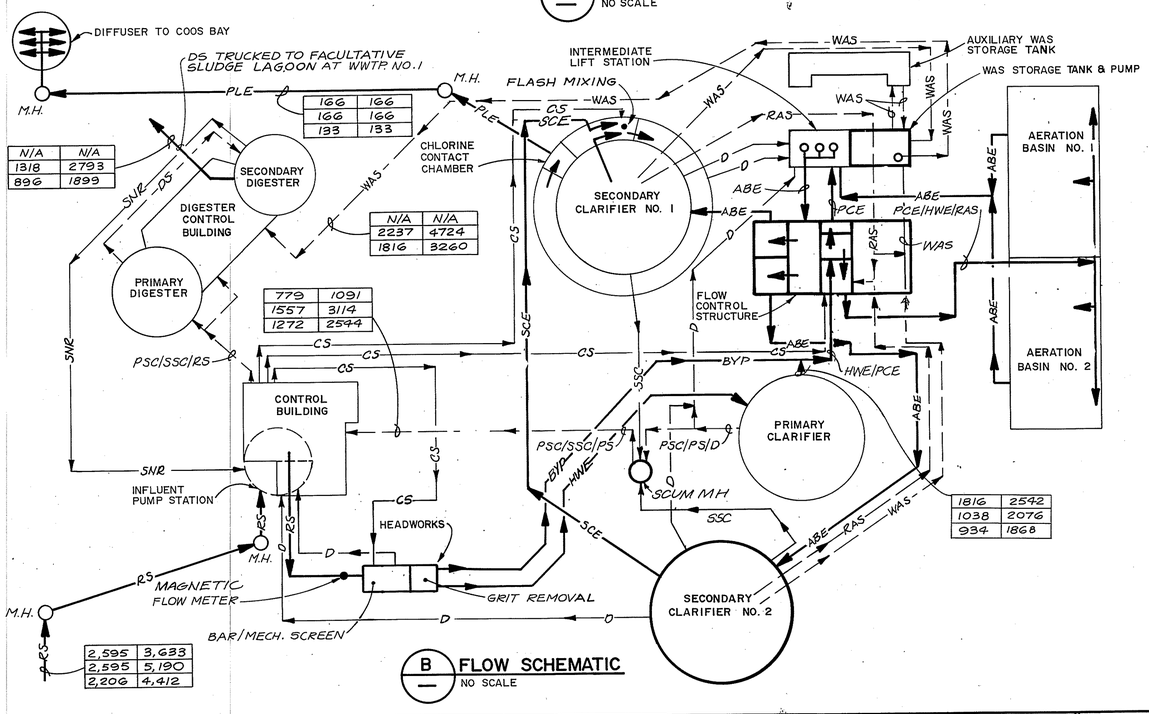


A HYDRAULIC PROFILE
NO SCALE

NOTE:

1) * DENOTES FLOW INCLUDES RAS FLOW OF 610 GPM (0.88 MGD).

2) DATUM FOR ELEVATIONS SHOWN BASED ON MEAN LOWER LOW WATER (MLLW), (-3.88 MEAN SEA LEVEL (MSL)).



B FLOW SCHEMATIC
NO SCALE

LEGEND & ABBREVIATIONS

- NEW FACILITIES
- EXISTING FACILITIES
- PROCESS FLOW
- SLUDGE
- OTHER

ABE	AERATION BASIN EFFLUENT
CS	CHLORINE SOLUTION
D	DRAIN
DS	DIGESTED SLUDGE
HWE	HEADWORKS EFFLUENT
PCE	PRIMARY CLARIFIER EFFLUENT
PLE	PLANT EFFLUENT
PS	PRIMARY SLUDGE
PSC	PRIMARY SCUM
RAS	RETURN ACTIVATED SLUDGE
RS	RAW SEWAGE
SCE	SECONDARY CLARIFIER EFFLUENT
SNR	SUPERNATANT RETURN
SSC	SECONDARY SCUM
WAS	WASTE ACTIVATED SLUDGE

LBS/DAY INFLUENT ORGANIC LOADINGS KEY AT AVERAGE DRY WEATHER LOADINGS

DAILY AVG.	DAILY MAX.	
		→ BOD_5
		→ TSS
		→ VSS

DESIGN CRITERIA

Year		1989	2009
Population		10,493	12,974
Flows (mgd)			
Average Daily Dry Weather	(ADDWF)	0.81	1.00
Average Daily Wet Weather	(ADWWF)	1.13	1.40
Maximum Monthly Dry Weather	(MMDWF)	0.94	1.17
Maximum Monthly Wet Weather	(MMWWF)	1.39	1.71
Maximum Daily Flow	(MDF)	2.58	3.19
Peak Daily Flow	(PDF)	4.07	4.84

Organic Loadings (lbs/day)	BOD	TSS	BOD	TSS
Average Daily	2,099	2,099	2,595	2,595
Maximum Daily	2,938	4,197	3,633	5,190
Maximum Weekly	2,518	2,728	3,114	3,372
Maximum Monthly	2,726	2,833	3,373	3,503

TREATMENT UNITS AND DESIGN LOADING CRITERIA @ YEAR 2009 LOADINGS

Influent Pumps		
Number	3	
Capacity, each		
No. 1	1200 gpm @ 31' TDH	
No. 2 & 3	1700 gpm @ 31' TDH	
Type	Nonclog, Centrifugal, Variable Speed	
Horsepower		
No. 1	15	
No. 2 & 3	20	
Headworks		
Mechanical Screen		
Number	1	
Size	18" W x 11' H	
Type	Traveling	
Headloss @ PDF	0.5 Ft.	
Grit Removal		
Number	1	
Size	80" Diameter	
Type	Gravity Vortex	
Peak Capacity	4.8 mgd	
Primary Clarifier		
Number	1	
Size	50' Dia. x 8.5' SWD	
Average Overflow Rate	595 gpd/ft²	
Peak Overflow Rate	2500 gpd/ft²	
Hydraulic Detention Time @ MMDWF	2.6 hours	
Aeration Basins		
Number	2	
Size, each	202,000 gallons	
Total Hydraulic Detention Time @ MMDWF	6.4 hours	
Average Volumetric Loading	32 lbs. BOD_5/1000 ft³	
Solids Retention Time	9.3 days	
Operational Mode	Complex Mix	
Aerators		
Number	4	
Type	Surface, Low Speed Mechanical	
Horsepower, each	15	
O_2 Transfer	1.8 lbs/HP hr	
Intermediate Lift Pumps		
Number	3	
Type	Submersible, Rail Mount Variable Speed	
Horsepower	10	
Secondary Clarifier		
Number	2	
Size		
No. 1	52' Dia. x 11.5' SWD	
No. 2	56' Dia. x 11.5' SWD	
Average Overflow Rate	255 gpd/ft²	
Peak Overflow Rate	1,656 gpd/ft²	
Hydraulic Detention Time @ MMDWF	8 hours	
Chlorine Contact Chamber		
Number	1	
Size	116,000 gallons	
Hydraulic Detention		
Chamber Time @ MMWWF	68 minutes	
Outfall Time @ MMWWF	38 minutes	
Flash Mixer		
Number	1	
Horsepower	3	
Velocity Gradient	900 fps/ft	
Anaerobic Digesters		
Primary		
Number	1	
Size	32' Dia. x 17' SWD	
Volumetric Loading @ Max. Month	0.19 lbs. VS/ft³/day	
Volumetric Loading @ Average Month	0.13 lbs. VS/ft³/day	
Average Detention Time @ Average Month w/6.0% WAS	16 days	
Average VSS Reduction	50%	
Secondary		
Number	1	
Size	30' Dia. x 16.5' SWD, 87,200 gallons	
Min. Average Storage Capacity @ 8% Stabilized Sludge	41 days	
WAS Pump		
Number	1, w/1 spare	
Size	150 gpm @ 29' TDH	
Type	Submersible (Immersible), Rail Mount	
Horsepower	3	
WAS Storage Pit		
Volume	28,300 gallons	
Min. Holding Time @ 1% WAS	2 days	
WAS Thickener		
Number	1	
Type	Rotary Drum Screen	
Max. Feed Rate	150 gpm @ 1% Solids	
Max. Run Time	4.2 hours	
WAS Auxiliary Storage Tank		
Volume	9,750 gallons	
Min. Holding Time @ 1% WAS	0.8 days	

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COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

HYDRAULIC PROFILE, DESIGN CRITERIA AND FLOW SCHEMATIC

DRAWING NO. G-3

SHEET NO. 3

WASTE GAS BURNER (B / DG-3)

TOE OF SLOPE

66'-0"

SLUDGE LOADING DOCK (A / SLD-1)

SECONDARY DIGESTER

PRIMARY DIGESTER

(E / CB-2) 500 GAL. PROPANE TANK

DIGESTER CONTROL BLDG.

10' 18' 4' 10'

12

LIMITS OF ADDITIVE ALTERNATE NO. 2

R & R CURB AS REQUIRED (TYP.)

RAISE CB INLET TO MATCH 1" AC. OVERLAY (TYP.)

CB

HEADWORKS

INSTALL 1" OVERLAY OVER ENTIRE EXIST & RESTORED A.C. PAVEMENT AFTER DEMOLITION & PIPING WORK COMPLETED WEST OF SAWCUT SHOWN

REMOVE HEADWORKS, SUPPORTS & BASE SLAB TO TOP OF EXIST. PILES & PATCH DISTURBED AREA W/ 8" CRUSHED ROCK & 3" A.C. PAVEMENT

12.08

SAWCUT & MATCH NEW A.C. PAVEMENT TO 1" OVERLAY

14.5'

11.55

SAWCUT CURB & GUTTER (TYP.)

REMOVE CONC. SLAB

MATCH EXIST. FLR. EL.

MATCH EXIST. SLAB AT EL. 12.03±

11.60

CONTROL BUILDING

INFLUENT PUMP STATION

ELECTRICAL TRENCH DUCT (TYP)

TRENCH DRAIN

REMOVE GAS BURNER

REMOVE CONC. CURB & GUTTER

R & R AC PAVEMENT

DIESEL FUEL TANK

4" CONC. S/W

SAWCUT & MATCH NEW A.C. PAVEMENT TO EXIST.

YARD CURBING MATCH TO EXIST. S/W (342 / TYP)

R & R A.C. PAVEMENT

EXIST AC

EXIST GRAVEL SURFACE

EXIST. MAIN ENTRANCE

REMOVE CURB & GUTTER

POC (TYP)

NEW MAINTENANCE / STORAGE BLDG.

M.H

MATCH TC TO EXIST. S/W EL. 12.05±

NEW HEADWORKS

R & S CHAIN LINK FENCE & GATES

R=6'

EXIST. AC

EXIST. GRAVEL SURFACE

SECONDARY CLARIFIER NO. 2

SECONDARY CLARIFIER NO. 1

AUXILIARY WAS STORAGE TANK

INTERMEDIATE LIFT STATION & WAS STORAGE TANK

AERATION BASIN NO. 1

AERATION BASIN NO. 2

5'

15.00

16" 4" S/W

14.92

4"

15.00 (BELOW STAIRS)

41 (TYP.) CONC. WALK W/STEPS

AIR BLOWER

FLOW CONTROL STRUCTURE

13.10TC 14.75

14.75

14.67

PCE BOX

15.10TC 14.70

MATCH REPLACEMENT S/W TO EXIST. CONC.

R & R S/W AS REQ'D

MATCH EXIST. TC 12.20±

REMOVE CONC. S/W & STAIRS; INSTALL A.C. PAVEMENT

14.65

SCUM M.H.

R & R STAIRS AS REQUIRED

PRIMARY CLARIFIER

R=20'

EXTEND S/W TO BACK OF NEW CURB THIS AREA

EFFLUENT CHANNEL OVERHANG (TYP.)

14.40

13.55

13.25TC

14.25

14.20

45°

18'

8'

11.75

12.25TC

4" S/W TO WALL OF SC NO. 2 (TYP.)

16"

13.25

A.C. PAVEMENT (341 / TYP)

14.70TC

14.5'

32'

AC PAVEMENT

SAWCUT EXIST S/W

ELECTRICAL TRENCH DUCT (TYP) SEE

14.71

14.50

14.30

INSTALL A.C. TO PRIMARY CLARIFIER WALL (TYP.)

MATCH TC TO EXIST. S/W AT EL. 14.94

MATCH LINE – FOR CONT. SEE DWG. Y-2

FOR NOTES SEE DWG. Y-2

GENERAL NOTES

1. ALL ELEVATIONS SHOWN BASED ON MEAN LOWER LOW WATER (MLLW) DATUM (-3.88 MSL).
2. DIMENSIONS SHOWN ARE TO FACE OF CURB AND OUTSIDE OF STRUCTURE WALLS.
3. ALL NEW STRUCTURES ALIGN PARALLEL WITH EXISTING AERATION BASIN WALLS.
4. FINISH GRADES SMALL SLOPE BETWEEN SPOT ELEVATIONS SHOWN.
5. FOR CURB AND PAVING DETAIL SEE (341 / TYP)

0 10 20 30 SCALE IN FEET

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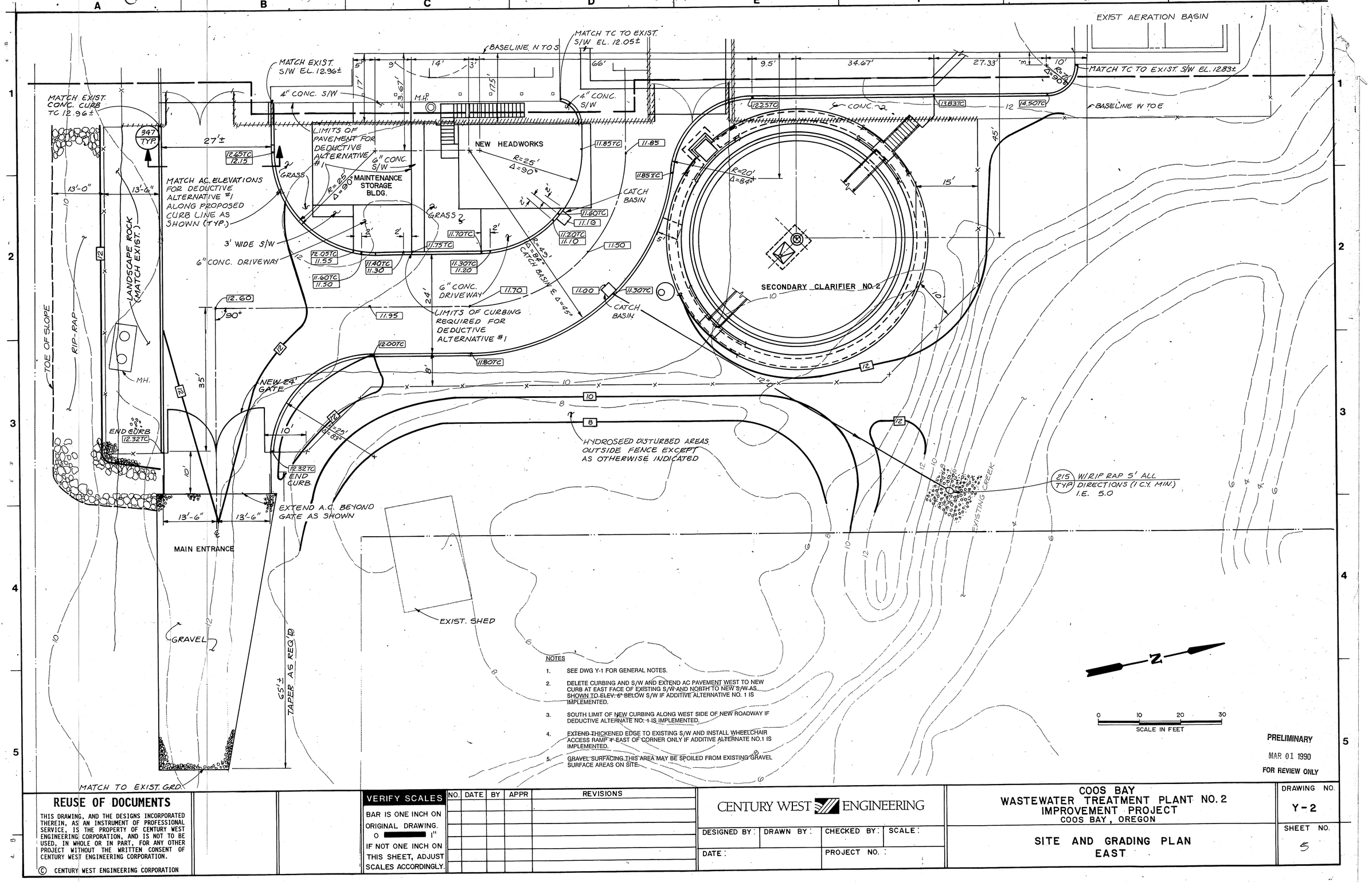
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WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

SITE AND GRADING PLAN
WEST

DRAWING NO. Y-1

SHEET NO. 4

Y-1		
A1B		A1B
B1B		B1B
C1B		C1B
D1S		D1S
E1S		
F1B		F1B



NOTES

1. SEE DWG Y-1 FOR GENERAL NOTES.
2. DELETE CURBING AND S/W AND EXTEND AC PAVEMENT WEST TO NEW CURB AT EAST FACE OF EXISTING S/W AND NORTH TO NEW S/W AS SHOWN TO ELEV. 6" BELOW S/W IF ADDITIVE ALTERNATIVE NO. 1 IS IMPLEMENTED.
3. SOUTH LIMIT OF NEW CURBING ALONG WEST SIDE OF NEW ROADWAY IF DEDUCTIVE ALTERNATE NO. 1 IS IMPLEMENTED.
4. EXTEND THICKENED EDGE TO EXISTING S/W AND INSTALL WHEELCHAIR ACCESS RAMP AT EAST OF CORNER ONLY IF ADDITIVE ALTERNATE NO.1 IS IMPLEMENTED.
5. GRAVEL SURFACING THIS AREA MAY BE SPOILED FROM EXISTING GRAVEL SURFACE AREAS ON SITE.

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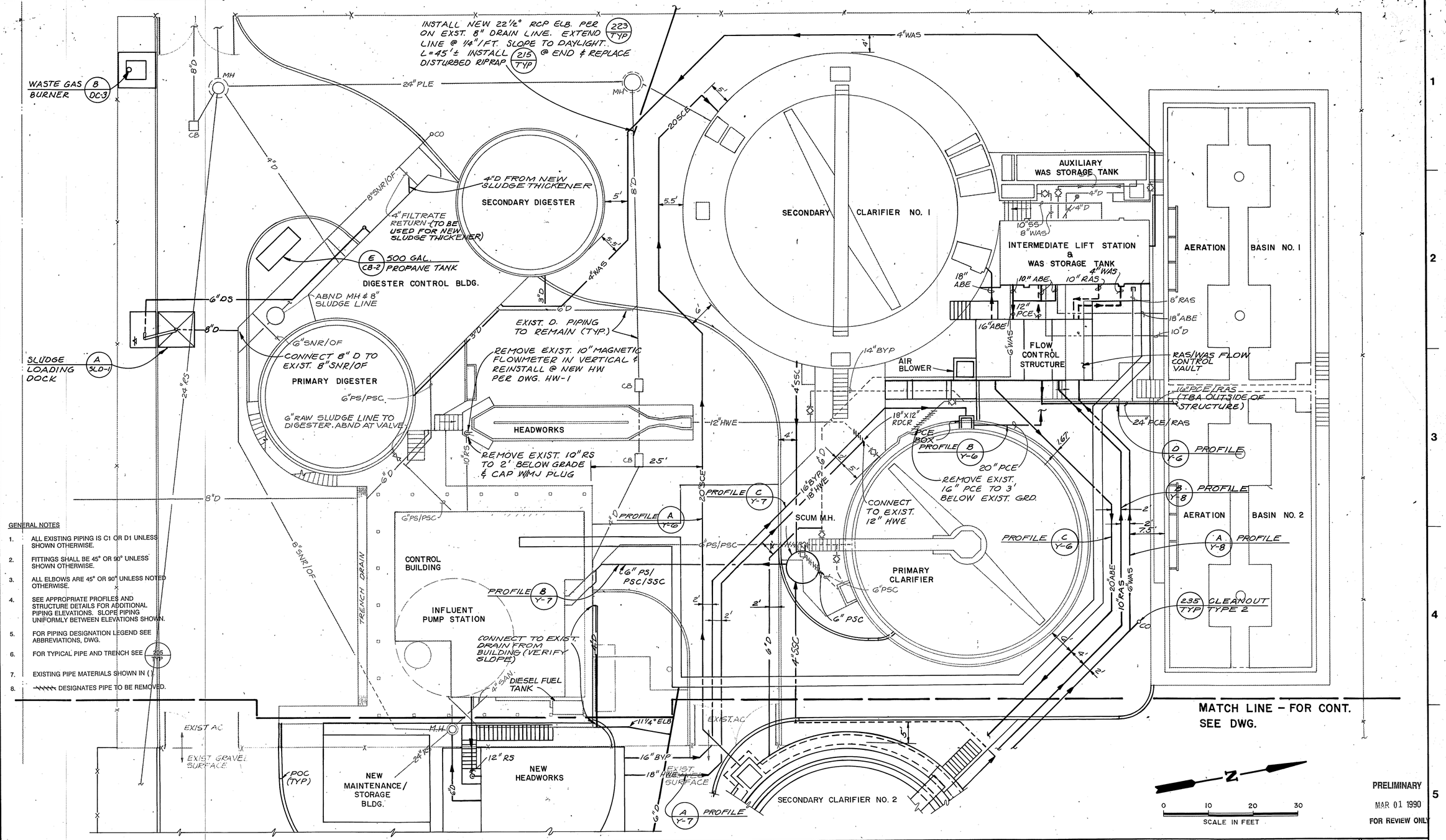
COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

SITE AND GRADING PLAN
EAST

DRAWING NO. Y-2

SHEET NO. 5

Y-2		
AIB	AIS	
GIB	GIB	
HIS	HIS	
JIB	JIB	
JIS	JIS	



GENERAL NOTES

1. ALL EXISTING PIPING IS C1 OR D1 UNLESS SHOWN OTHERWISE.
2. FITTINGS SHALL BE 45° OR 90° UNLESS SHOWN OTHERWISE.
3. ALL ELBOWS ARE 45° OR 90° UNLESS NOTED OTHERWISE.
4. SEE APPROPRIATE PROFILES AND STRUCTURE DETAILS FOR ADDITIONAL PIPING ELEVATIONS. SLOPE PIPING UNIFORMLY BETWEEN ELEVATIONS SHOWN.
5. FOR PIPING DESIGNATION LEGEND SEE ABBREVIATIONS, DWG.
6. FOR TYPICAL PIPE AND TRENCH SEE 205 TYP
7. EXISTING PIPE MATERIALS SHOWN IN ( )
8. ~~~~ DESIGNATES PIPE TO BE REMOVED.

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WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

YARD PIPING PLAN
WEST

DRAWING NO. Y-3
SHEET NO. 6

Y-3	
NJB	AJB
EJS	
KJS	KJS
LJB	LJB
–	–
FJB	FJB
–	–

EXIST AERATION BASIN

CONNECT TO EXIST. 2" DW INTO CONTROL BUILDING

CT TO CONC. TICAL DUCT I.E. 3.60

4"SSC

1½"TW

1½"TW

1½"TW

16"BYP

18"HWE

NEW HEADWORKS

WATER METER (RELOCATE)

REMOVE 2" NPW LINE UNDER STRUCTURES

2"NPW

6"D

MAINTENANCE STORAGE BLDG.

1½"TW

TOP EL. 11.10
I.E. 8.50

DW & TW DO NOT CONNECT

2"DW

Domestic & Treated

WATER

12"D

20" SCE

6"RAS
6"WAS

HB

SECONDARY CLARIFIER NO. 2

2"DW

CONNECT TO MUNICIPAL WATER SUPPLY LINE

ABND CG IN 3" AC PIPE

24"RS

LANDSCAPE ROCK (MATCH EXIST.)

PLUG EXIST. BY-PASS M.H. AS SHOWN

A

MH.

NEW 24" GATE

TOP EL. 11.00
I.E. 8.50

12"D

I.E. 5.0 INSTALL 1 C.Y. RIP RAP

24"RS

MAIN ENTRANCE

GRAVEL

EXIST. SHED

EXIST. M.H. COVER

EL. 12.0±

B

EXIST. CONC. M.H.

3'-0" MIN.

EXIST. FLAP GATE TO BE REMOVED

FILL W/ CONC. 12" THICK FROM M.H. BASE TO HEIGHT SHOWN

I.E. 4.0±

A SECTION
N.T.S.

REMOVE EXIST. 24" BYPASS FLAP GATE

FILL CONC. TO MIN. 12" THICKNESS

FILL EXIST. 24" PIPE SLEAVE W/CONC.

B SECTION
N.T.S.

GENERAL NOTES

1. ALL ELBOWS ARE 45° OR 90° UNLESS NOTED OTHERWISE.
2. SEE APPROPRIATE STRUCTURE DETAIL DWGS. FOR PIPING ENTERING STRUCTURES. SLOPE PIPING UNIFORMLY BETWEEN ELEVATIONS SHOWN.
3. FOR PIPING DESIGNATION LEGEND SEE ABBREVIATIONS, DWG.
4. FOR TYPICAL PIPE AND TRENCH SEE 205 TYP
5. ( ) EXISTING PIPE MATERIALS SHOWN IN ( ).
6. ~~~~~ DESIGNATES PIPE TO BE REMOVED.

N

0 10 20 30
SCALE IN FEET

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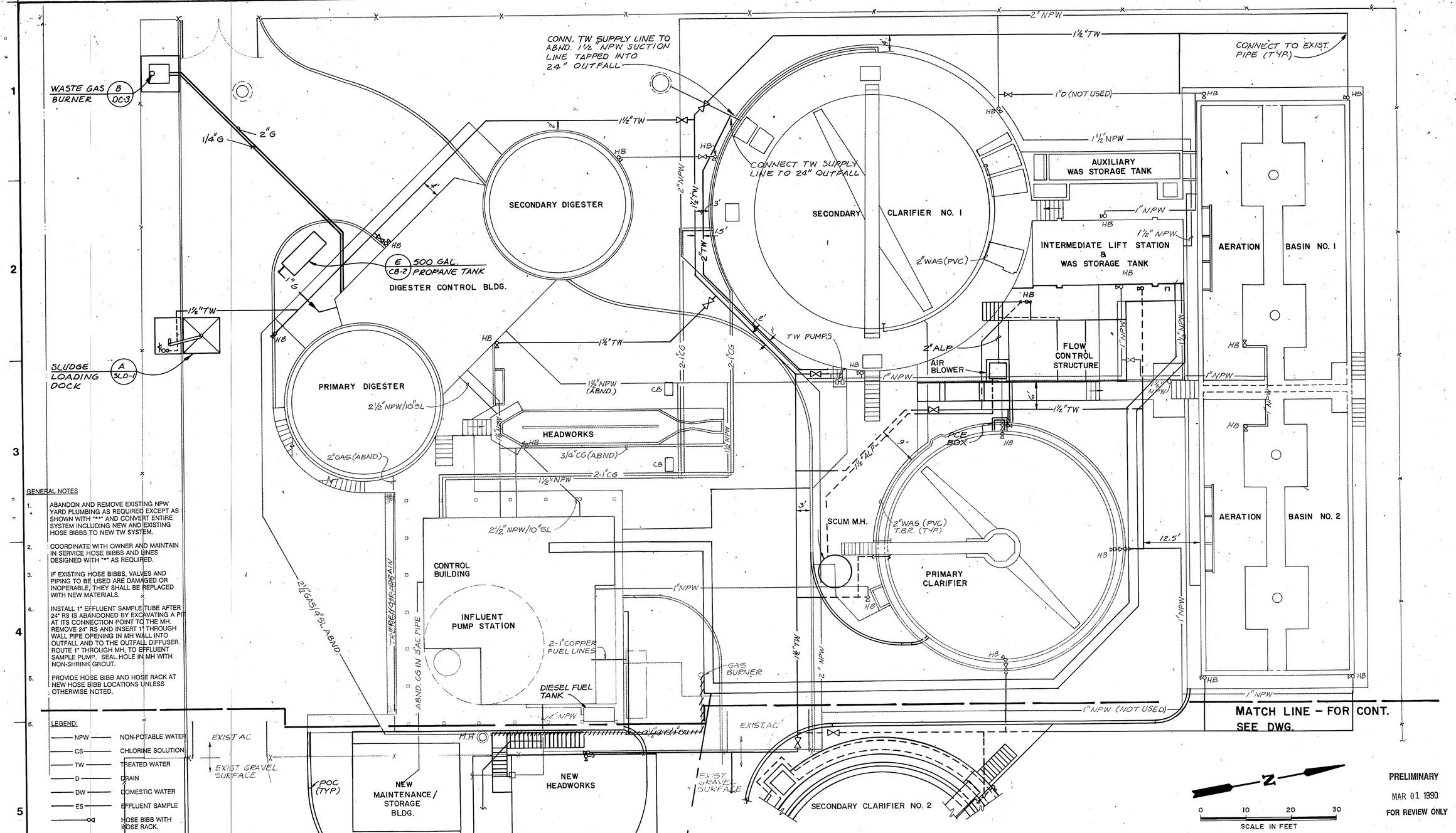
COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

YARD PIPING AND PLUMBING PLAN
EAST

DRAWING NO. Y-4

SHEET NO. 7

Y-4	
A1B	A1B
N1B	N1E
M1S	M1S
T1B	T1B
S1S	S1S
R1S	R1S



GENERAL NOTES

1. ABANDON AND REMOVE EXISTING NPW YARD PLUMBING AS REQUIRED EXCEPT AS SHOWN WITH "*" AND CONVERT ENTIRE SYSTEM INCLUDING NEW AND EXISTING HOSE BIBBS TO NEW TW SYSTEM.
2. COORDINATE WITH OWNER AND MAINTAIN IN SERVICE HOSE BIBBS AND LINES DESIGNED WITH "*" AS REQUIRED.
3. IF EXISTING HOSE BIBBS, VALVES AND PIPING TO BE USED ARE DAMAGED OR INOPERABLE, THEY SHALL BE REPLACED WITH NEW MATERIALS.
4. INSTALL 1" EFFLUENT SAMPLE TUBE AFTER 24" RS IS ABANDONED BY EXCAVATING A PIT AT ITS CONNECTION POINT TO THE MH. REMOVE 24" RS AND INSERT 1" THROUGH WALL PIPE OPENING IN MH WALL INTO OUTFALL AND TO THE OUTFALL DIFFUSER. ROUTE 1" THROUGH MH, TO EFFLUENT SAMPLE PUMP. SEAL HOLE IN MH WITH NON-SHRINK GROUT.
5. PROVIDE HOSE BIBB AND HOSE RACK AT NEW HOSE BIBB LOCATIONS UNLESS OTHERWISE NOTED.
6. LEGEND:

NPW	NON-POTABLE WATER
CS	CHLORINE SOLUTION
TW	TREATED WATER
D	DRAIN
DW	DOMESTIC WATER
ES	EFFLUENT SAMPLE
	HOSE BIBB WITH HOSE RACK

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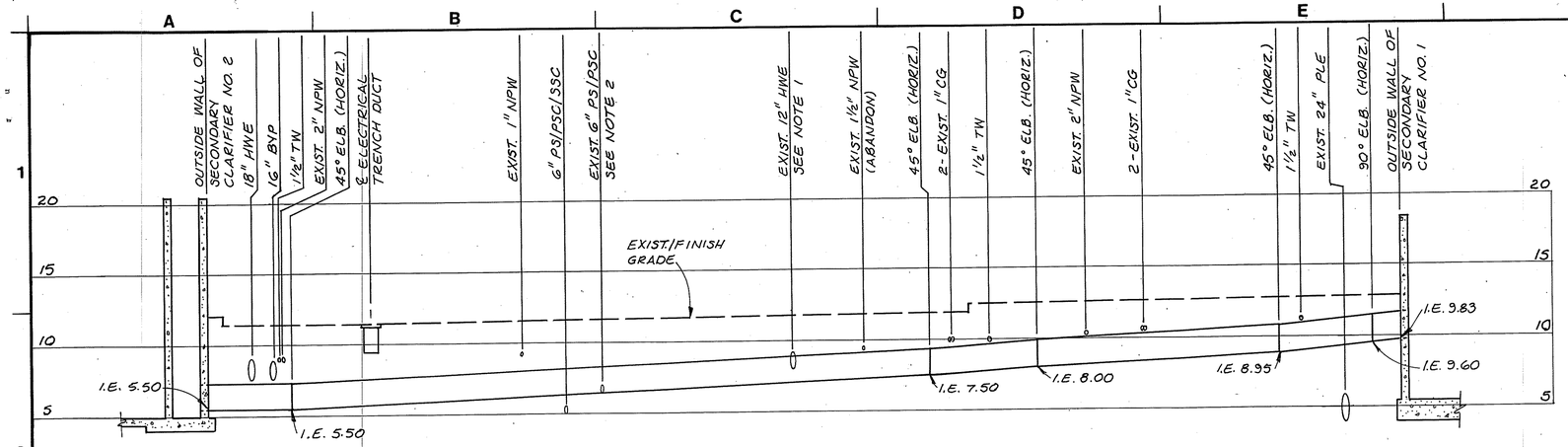
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COOS BAY, OREGON

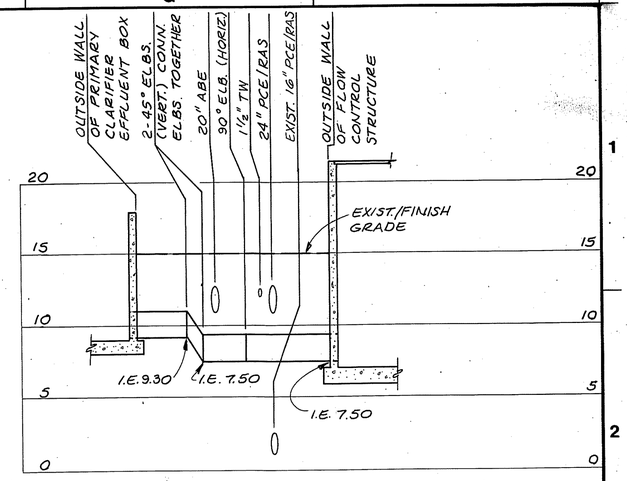
PLUMBING PLAN
WEST

DRAWING NO. Y-5
SHEET NO. 8

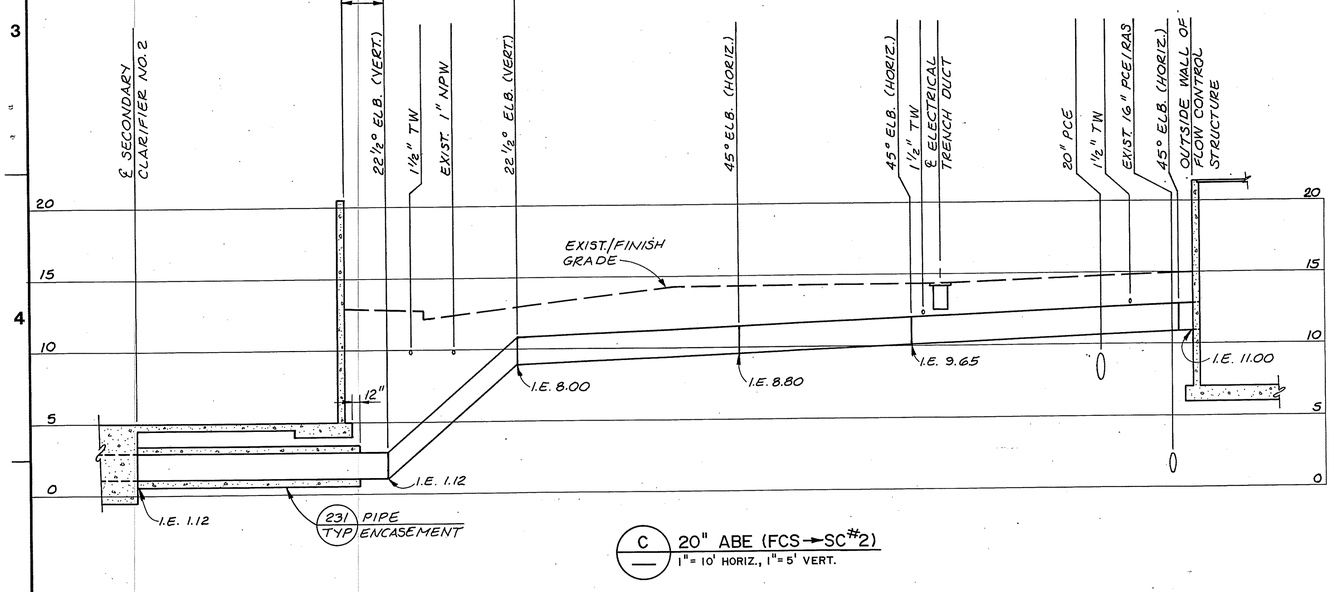
Y-3	
AIB	AIB
EJS	
PIB	PIB
DIS	DIS
—	—
FIB	FIB
—	—



A — 20" SCE (SC#2 → CCC)
1" = 10' HORIZ., 1" = 5' VERT.



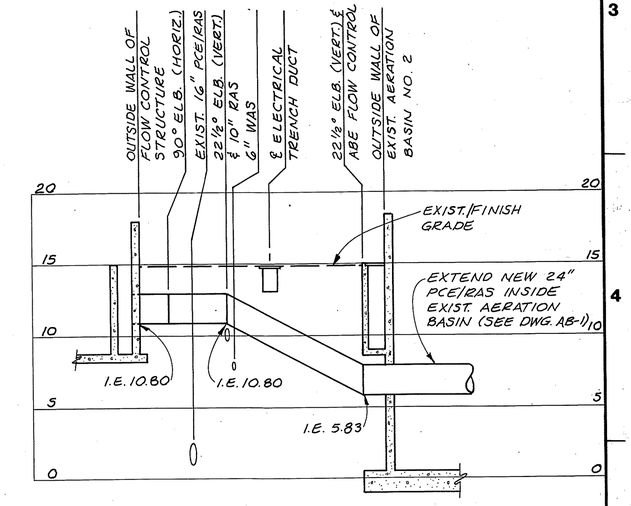
B — 20" PCE (PCE BOX → FCS)
1" = 10' HORIZ., 1" = 5' VERT.



C — 20" ABE (FCS → SC#2)
1" = 10' HORIZ., 1" = 5' VERT.

NOTES FROM DRAWINGS Y-6 TO Y-8

1. ABANDON OR REMOVE AS SHOWN AFTER START UP OF NEW HEADWORKS.
2. ABANDON OR REMOVE AS SHOWN AFTER INSTALLATION OF NEW 6" PS/PSC/SSC TO CONTROL BUILDING.
3. DO NOT INTERRUPT OR ABANDON. PIPE WILL STAY IN SERVICE AFTER COMPLETION OF CONSTRUCTION.
4. INTERRUPT ANYTIME.
5. NO LINES ARE TO BE INTERRUPTED AND/OR REMOVED WITHOUT PRIOR APPROVAL.
6. LOCATIONS AND DEPTH OF EXISTING UTILITY LINES ARE APPROXIMATE ONLY. CONTRACTOR SHALL FIELD VERIFY DEPTHS AND LOCATIONS OF EXISTING UTILITY LINES AND REPORT THEIR LOCATIONS AND POTENTIAL CONFLICTS PRIOR TO BEGINNING ANY EXCAVATION. ADDITIONAL UTILITY LINES NOT SHOWN, AND UNKNOWN BY THE OWNER, MAY ALSO EXIST.
7. ALL PIPES DESIGNATED BY ABOVE NOTES (1-4) SHALL BE FIELD LOCATED AT CROSSING POINT WITH NEW PIPING AS A MINIMUM PRIOR TO COMMENCING GENERAL STRUCTURE OR TRENCH EXCAVATION AS SPECIFIED.



D — 24" PCE/RAS (FCS → AB)
1" = 10' HORIZ., 1" = 5' VERT.

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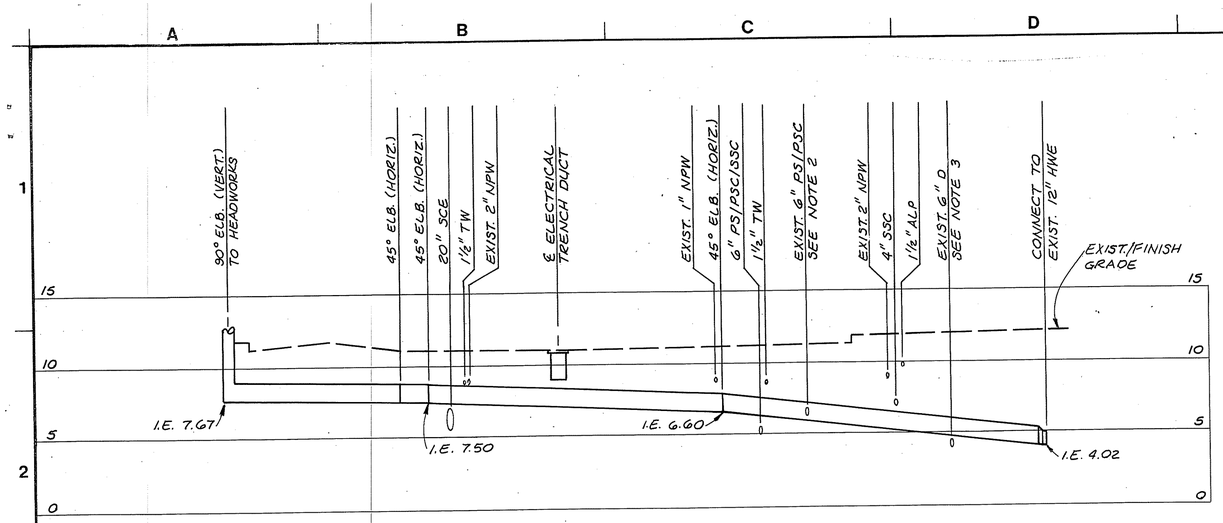
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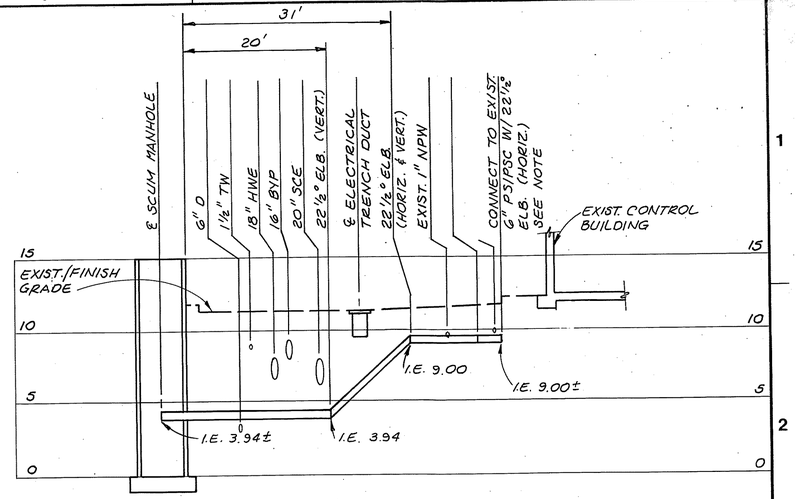
COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

PIPING PROFILES

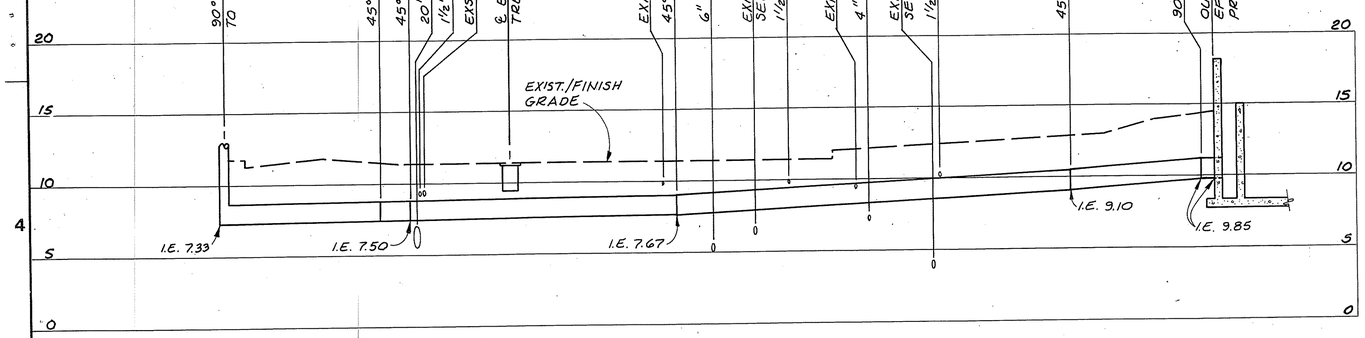
DRAWING NO. Y-6
SHEET NO. 9



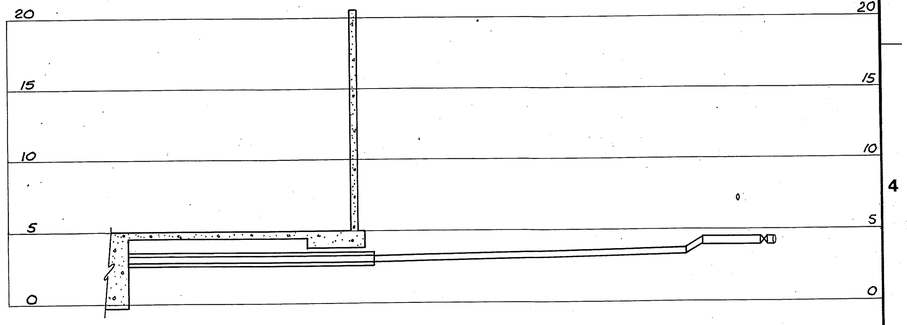
A 18" HWE (HW → PC)
1" = 10' HORIZ., 1" = 5' VERT.



B 6" PS/PSC/SSC (SCUM M.H. → EXISTING CONTROL BUILDING)
1" = 10' HORIZ., 1" = 5' VERT.



C 16" BYP (HW → PCE BOX)
1" = 10' HORIZ., 1" = 5' VERT.



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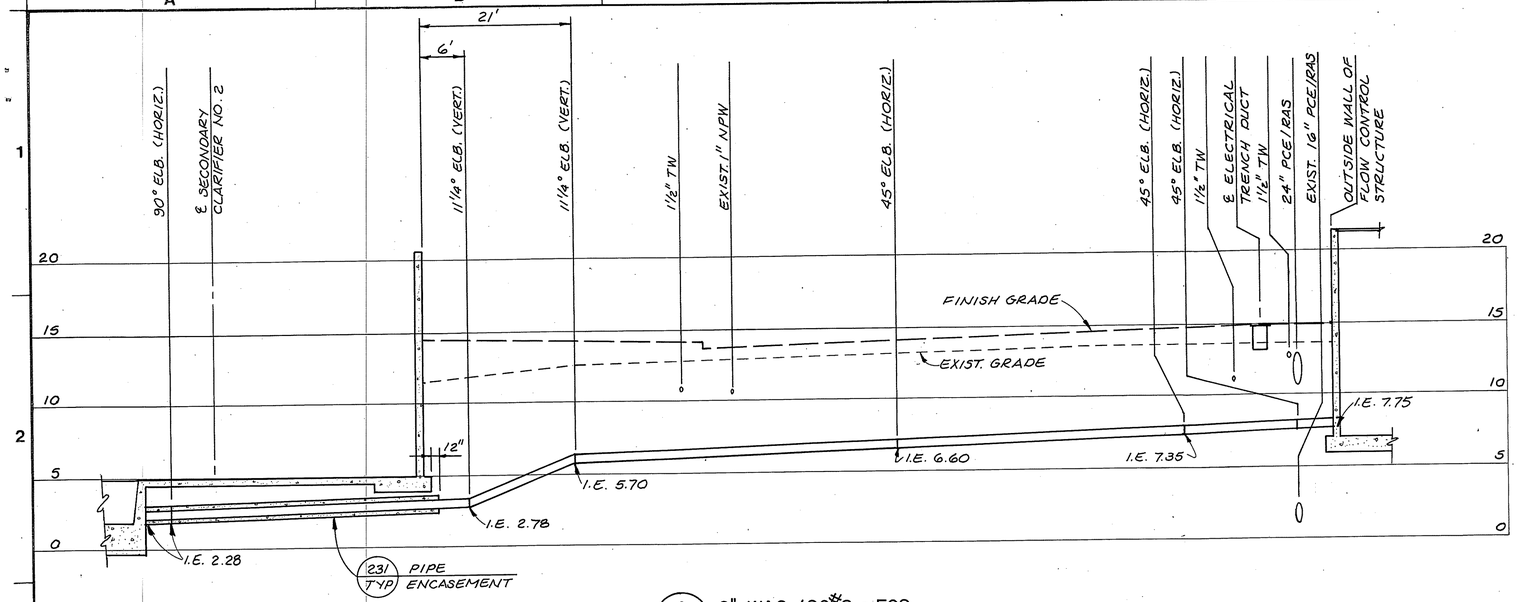
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COOS BAY, OREGON

PIPING PROFILES

DRAWING NO. Y-7
SHEET NO. 10



A — 6" WAS (SC#2→FCS RAS/WAS, FLOW CONTROL VAULT)
1" = 10' HORIZ., 1" = 5' VERT.

B — 10" RAS (SC#2→FCS RAS/WAS, FLOW CONTROL VAULT)
1" = 10' HORIZ., 1" = 5' VERT.

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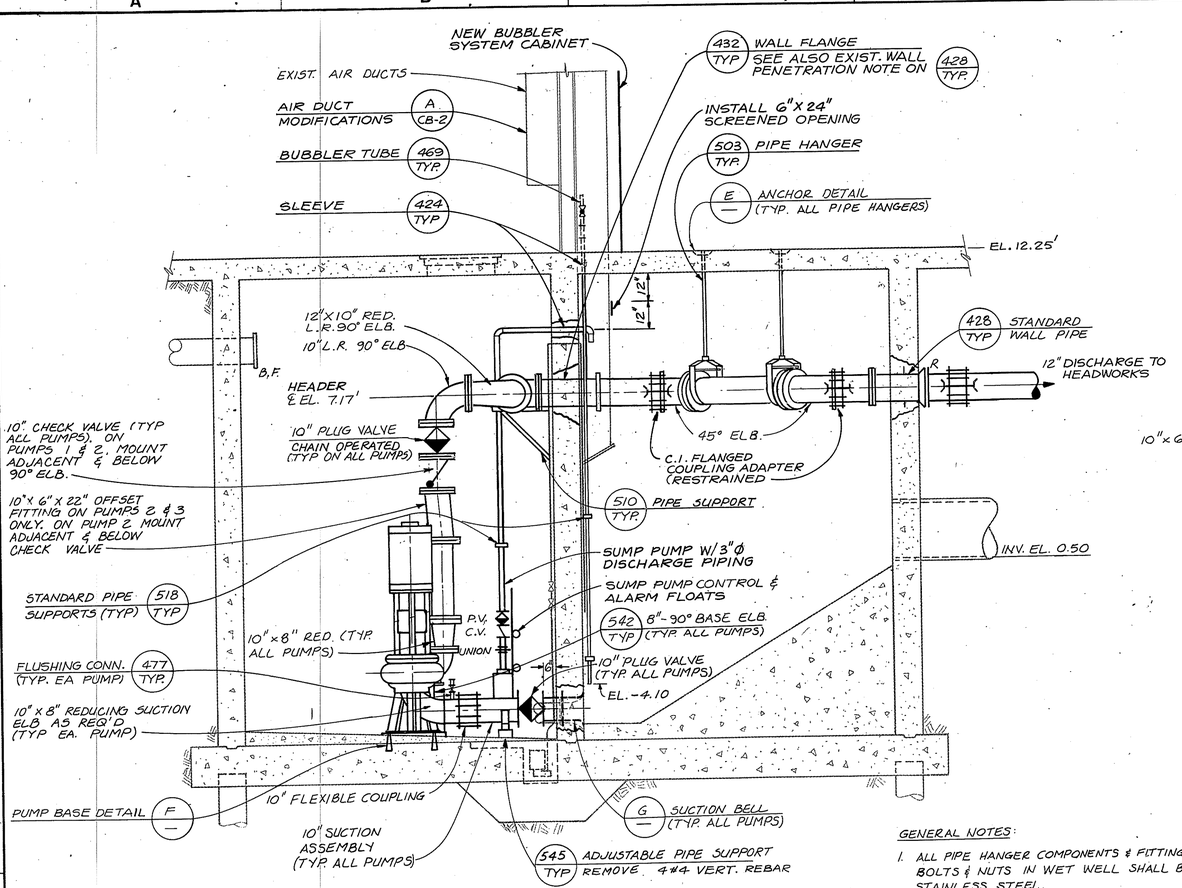
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PIPING PROFILES

DRAWING NO. Y-8

SHEET NO. 11



B — SECTION
3/8" = 1'-0"

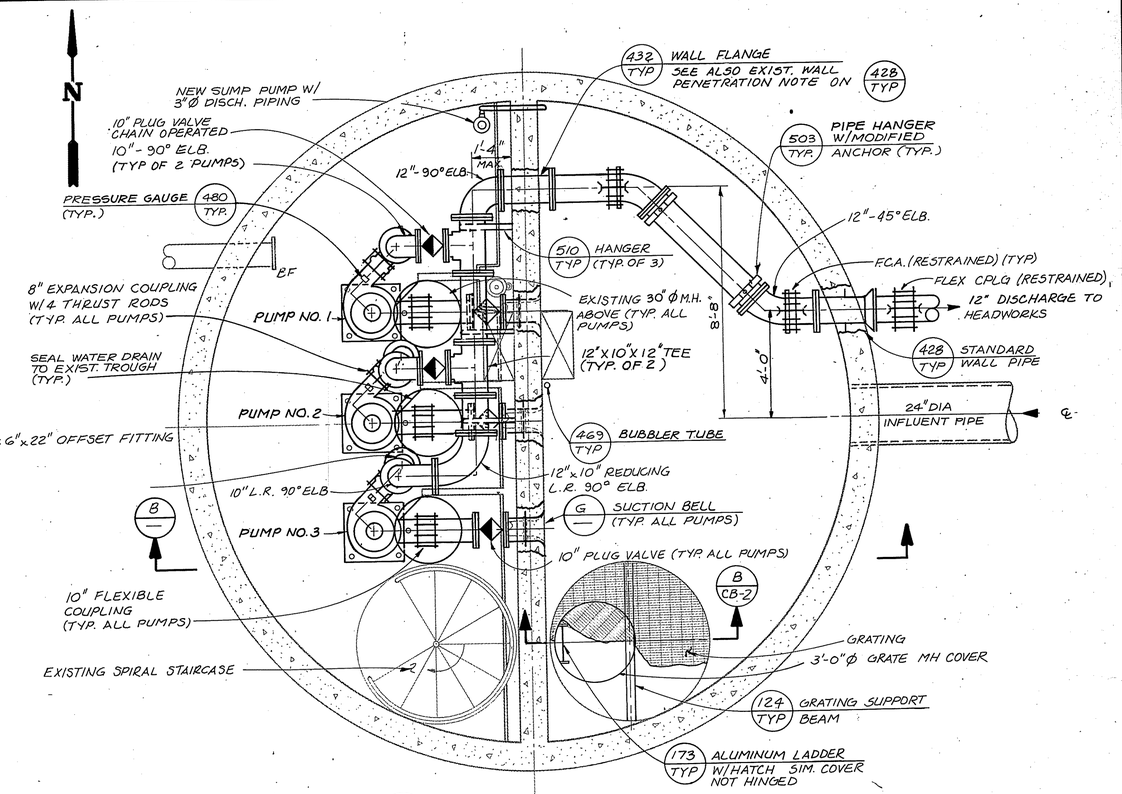
GENERAL NOTES:

1. ALL PIPE HANGER COMPONENTS & FITTING BOLTS & NUTS IN WET WELL SHALL BE STAINLESS STEEL.
2. ADAPT SEAL WATER PIPING SHOWN ON (491 TYP) TO VERTICAL PUMPS & CONNECT TO EXISTING WATER SUPPLY LINES LOCATED ABOVE EACH OF THE EXISTING PUMP SUCTION PIPES.

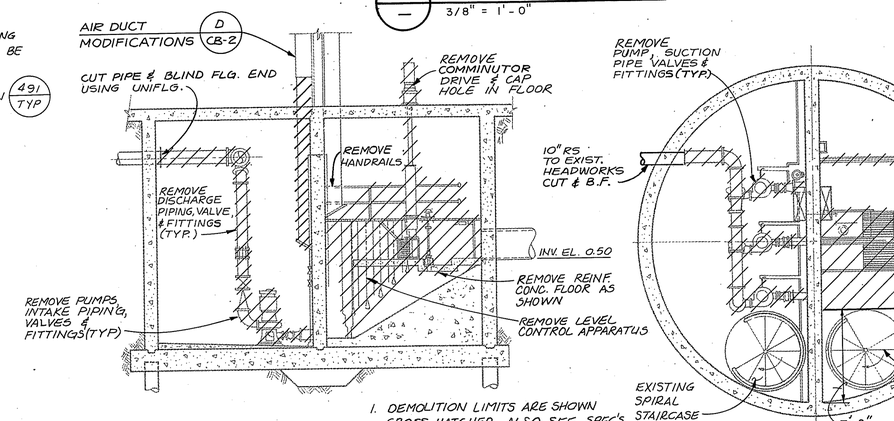
G — SUCTION BELL DETAIL
NO SCALE

F — PUMP BASE DETAIL
NO SCALE

E — ANCHOR DETAIL
NO SCALE

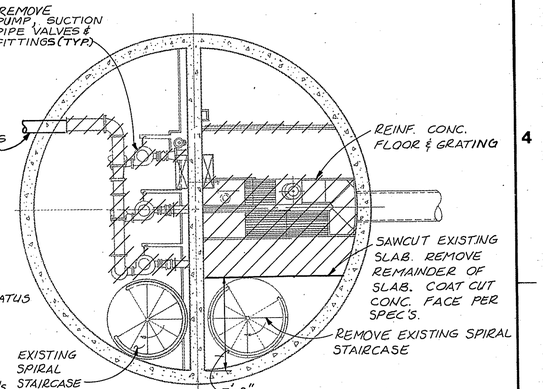


A — PUMP STATION PLAN
3/8" = 1'-0"



D — SECTION
3/16" = 1'-0"

1. DEMOLITION LIMITS ARE SHOWN CROSS HATCHED. ALSO SEE SPEC'S. FOR DEMOLITION DISCRIPTIONS & PROCEDURES.
2. RAW SEWAGE PUMPING MUST BE PROVIDED. REFERENCE SPEC'S. SECTION FOR SEQUENCE OF CONSTRUCTION.



C — PUMP STATION PLAN
3/16" = 1'-0"

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DEMOLITION PLAN & SECTION

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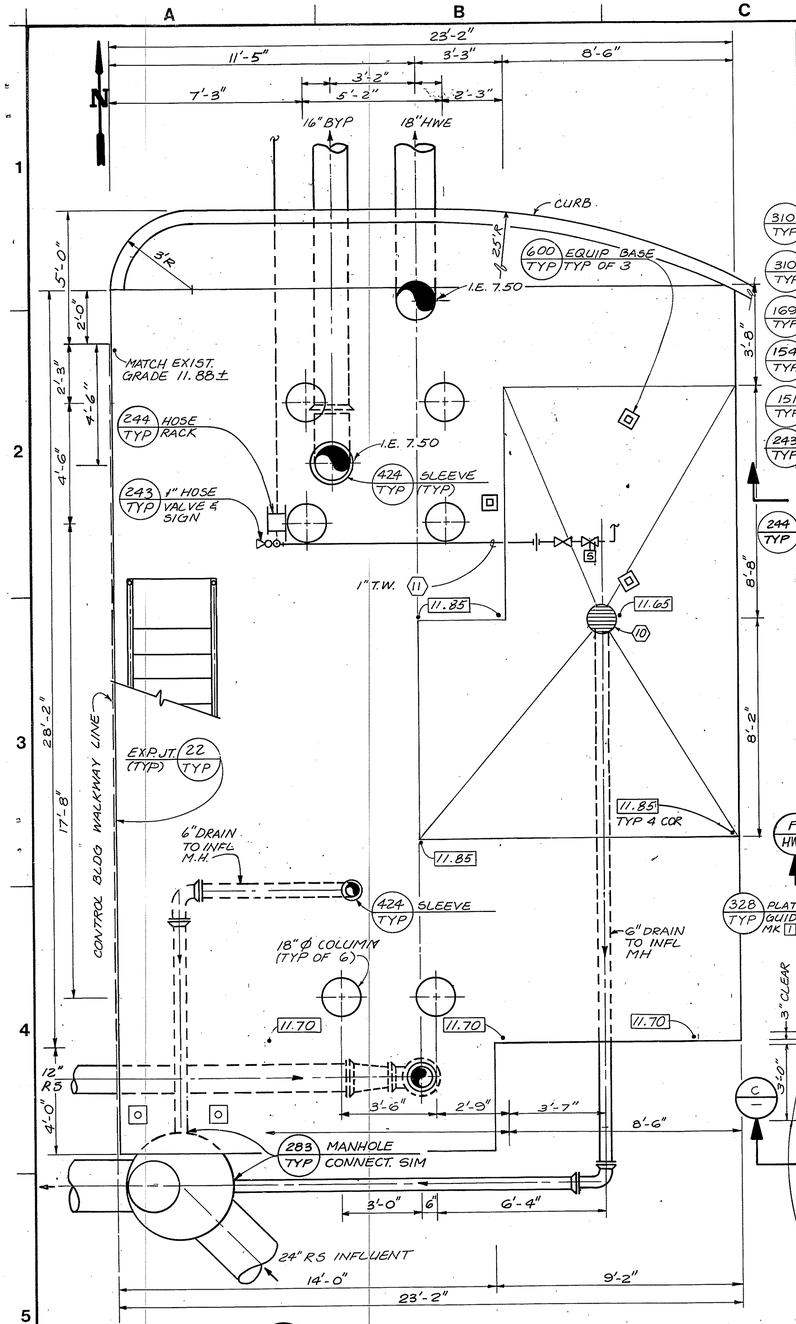
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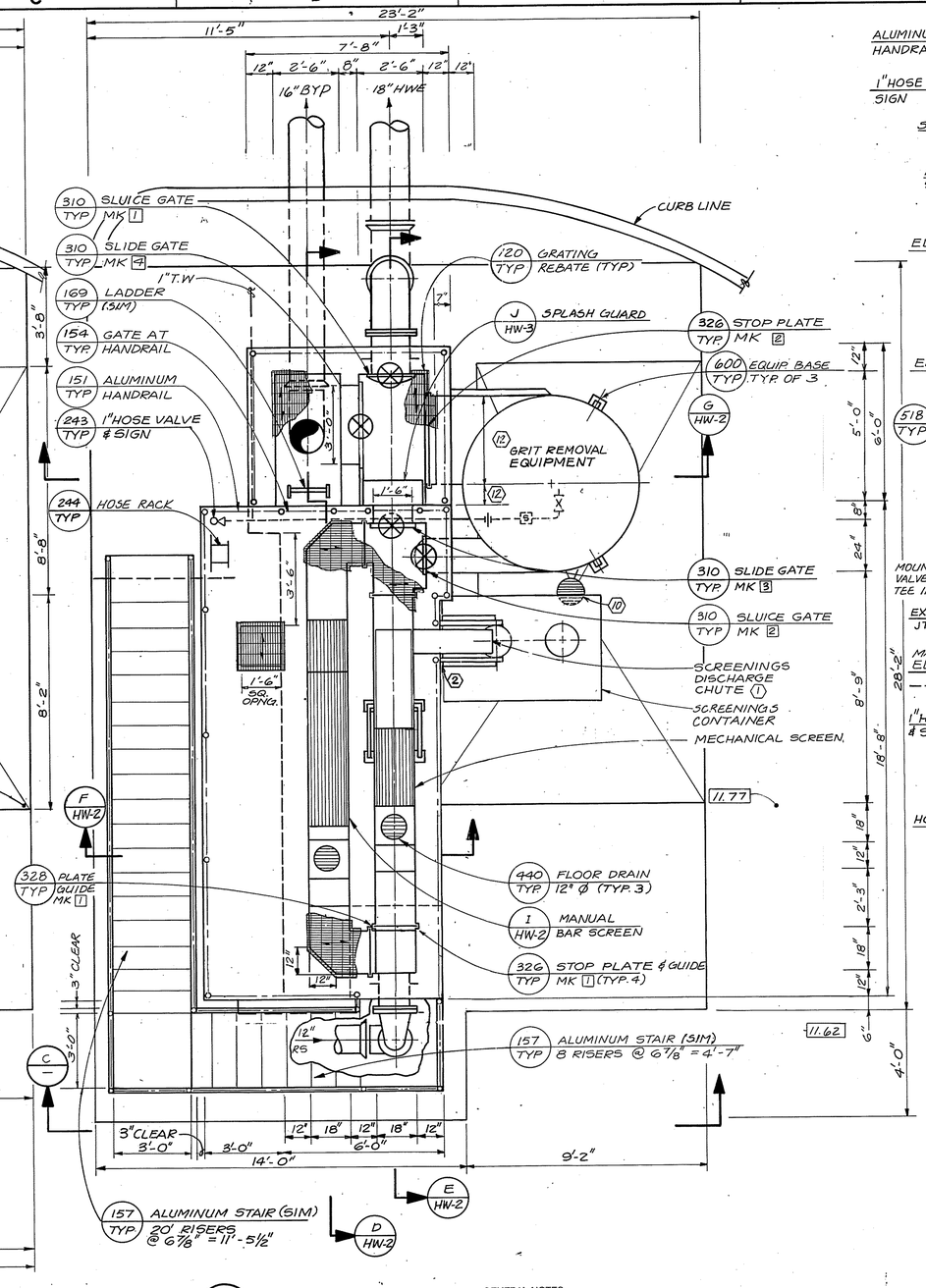
INFLUENT PUMP STATION
PLAN AND SECTIONS

DRAWING NO. IPS-1
SHEET NO. 12

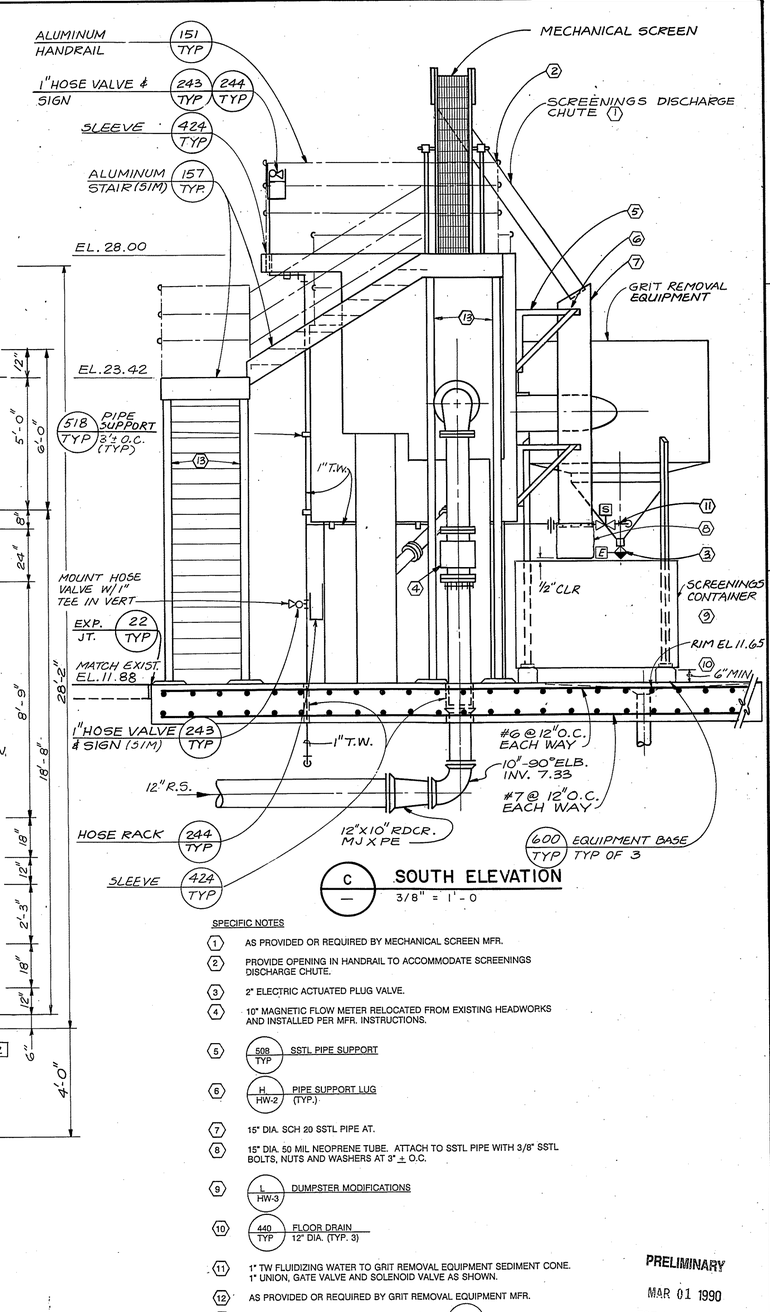
IPS-1		
A1B	A1.0	
S1B	S1.0	
T1.5	T1.1	



A — PLAN - FOUNDATION
3/8" = 1'-0"



B — PLAN — TOP
3/8" = 1'-0"



C — SOUTH ELEVATION
3/8" = 1'-0

SPECIFIC NOTES

1. AS PROVIDED OR REQUIRED BY MECHANICAL SCREEN MFR.
2. PROVIDE OPENING IN HANDRAIL TO ACCOMMODATE SCREENINGS DISCHARGE CHUTE.
3. 2" ELECTRIC ACTUATED PLUG VALVE.
4. 10" MAGNETIC FLOW METER RELOCATED FROM EXISTING HEADWORKS AND INSTALLED PER MFR. INSTRUCTIONS.
5. 508 TYP SSTL PIPE SUPPORT
6. H HW-2 PIPE SUPPORT LUG (TYP.)
7. 15" DIA. SCH 20 SSTL PIPE AT.
8. 15" DIA. 50 MIL NEOPRENE TUBE. ATTACH TO SSTL PIPE WITH 3/8" SSTL BOLTS, NUTS AND WASHERS AT 3' ± O.C.
9. I HW-3 DUMPSTER MODIFICATIONS
10. 440 TYP FLOOR DRAIN 12" DIA. (TYP. 3)
11. 1" TW FLUIDIZING WATER TO GRIT REMOVAL EQUIPMENT SEDIMENT CONE. 1" UNION, GATE VALVE AND SOLENOID VALVE AS SHOWN.
12. AS PROVIDED OR REQUIRED BY GRIT REMOVAL EQUIPMENT MFR.
13. 4" ϕ ALUMINUM PIPE STAIR SUPPORT. SEE 159 TYP

GENERAL NOTES

1. FOR CONTINUATION OF PIPING SEE DWGS Y-3 AND Y-4.
2. FOR CONTINUATION OF PLUMBING SEE DWGS Y-4 AND Y-5.

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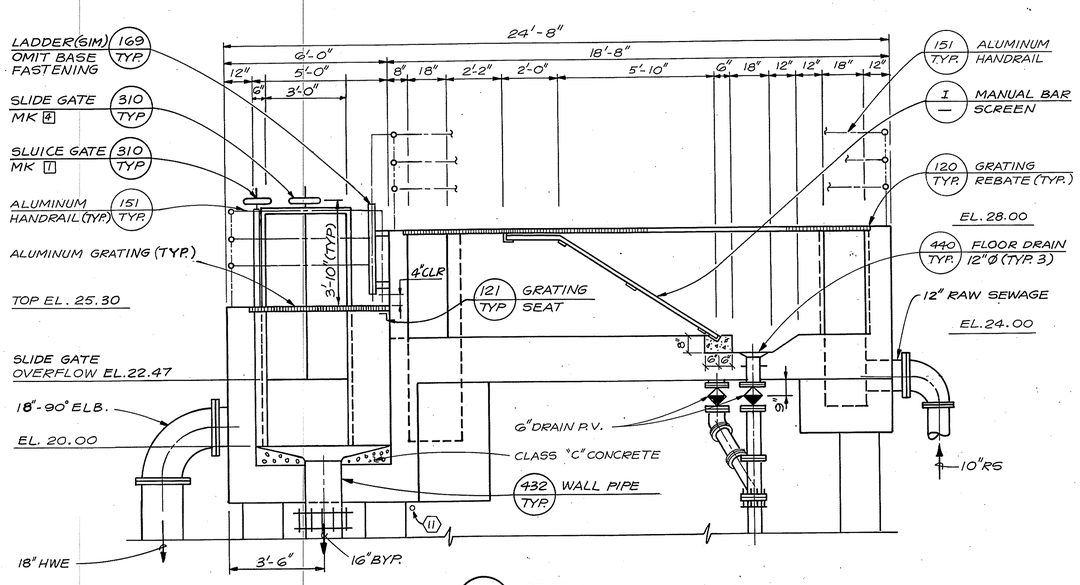
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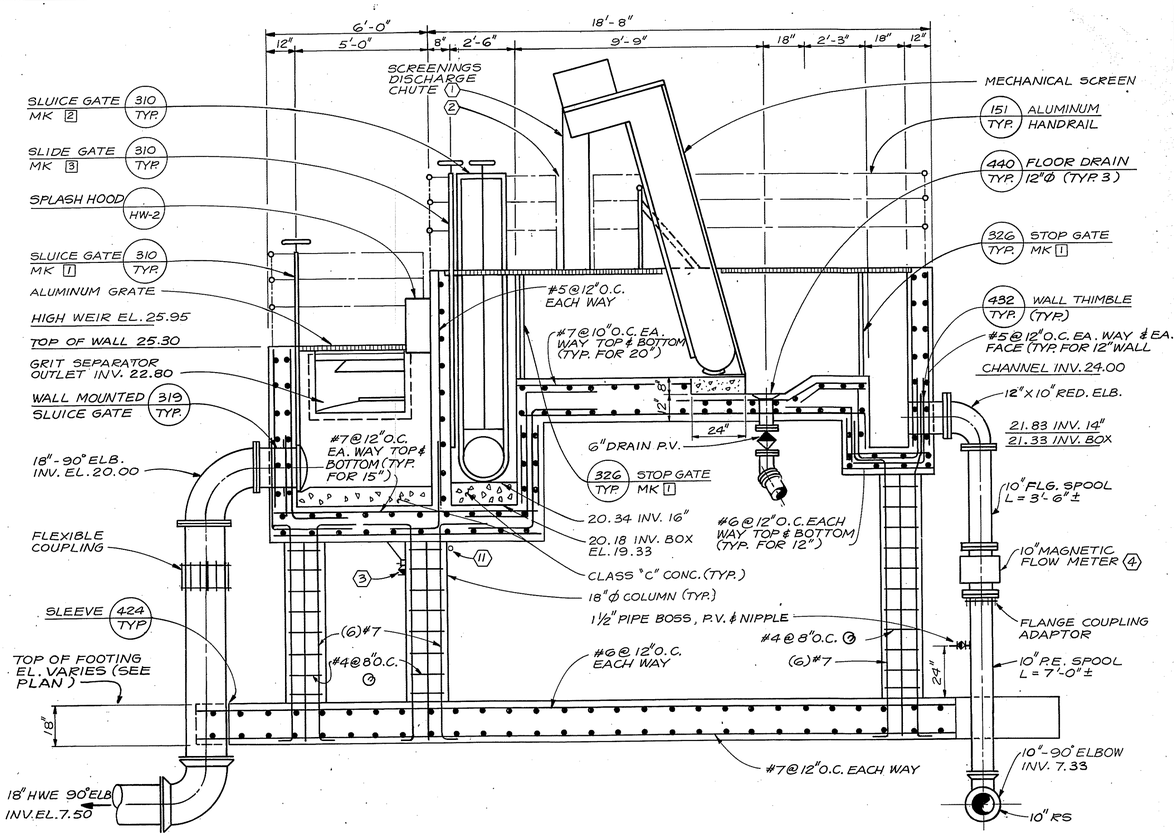
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HEADWORKS PLAN AND SECTIONS

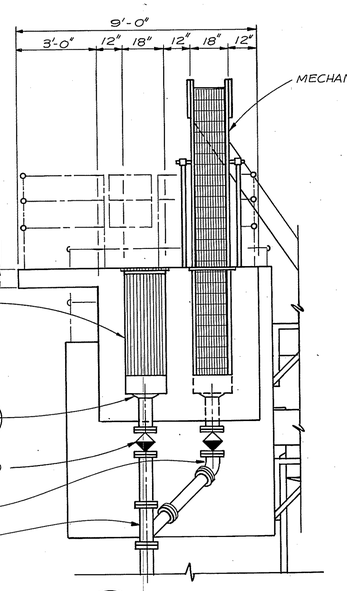
DRAWING NO. HW-1
SHEET NO. 13



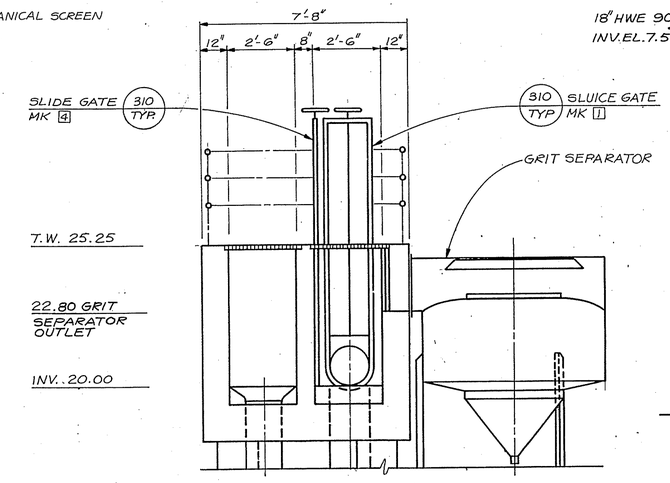
D HW-1 SECTION 3/8" = 1'-0"



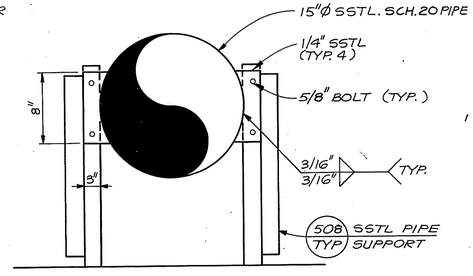
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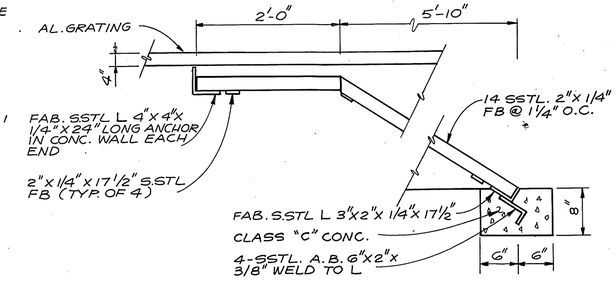
F HW-1 SECTION 3/8" = 1'-0"



G HW-1 SECTION 3/8" = 1'-0"



H HW-1 PIPE SUPPORT LUG NTS



NOTE : SEE SPECIFIC NOTES ⬡ ON SHEET HW-1

I HW-1 DETAIL - MANUAL BAR SCREEN 1" = 1'-0"

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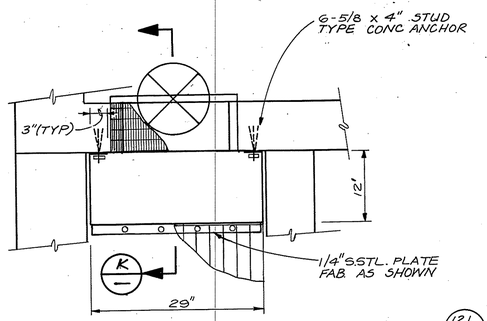
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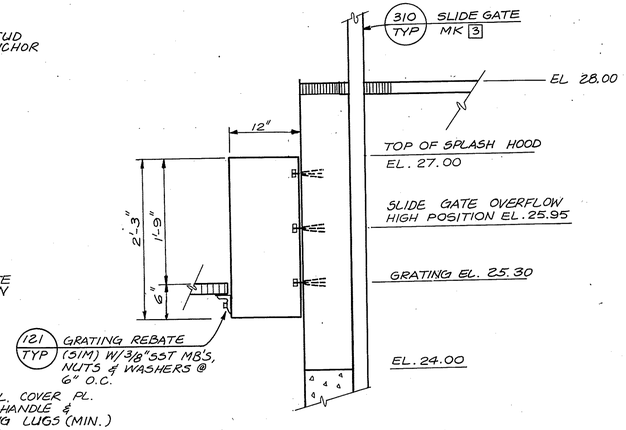
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COOS BAY, OREGON

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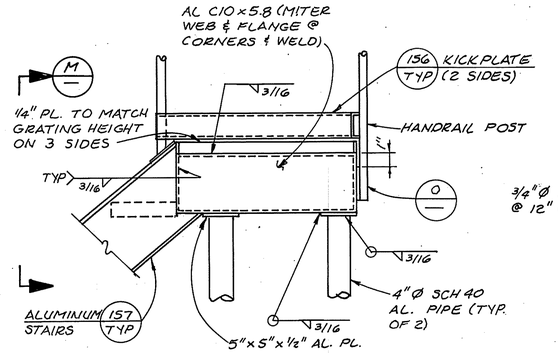
DRAWING NO. HW - 2

SHEET NO. 14

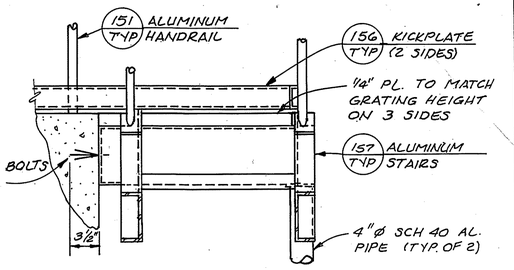




K — SECTION
1" = 1'-0"

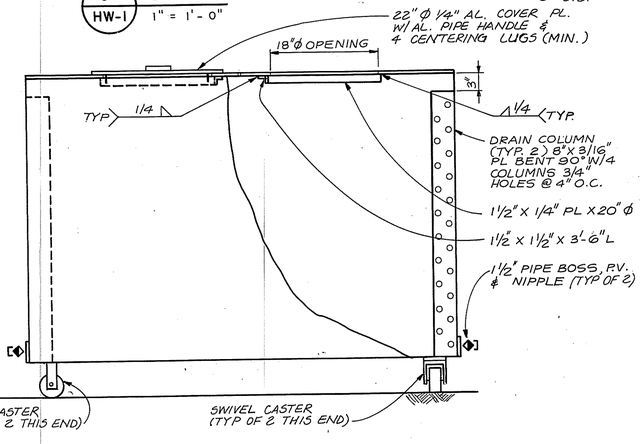


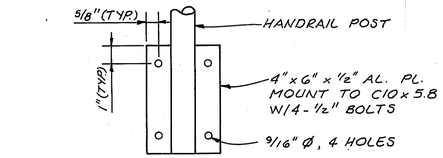
L — HW-1 — STAIR PLATFORM ELEVATION
NTS



M — STAIR PLATFORM SECTION
NTS

J — HW-1 — DETAIL
1" = 1'-0"

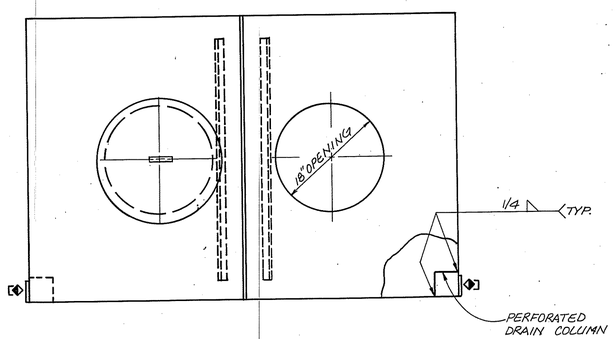




FRONT

PLAN

O — HANDRAIL BRACKET DETAIL
NTS



L — HW-1 — DUMPSTER MODIFICATIONS
NTS

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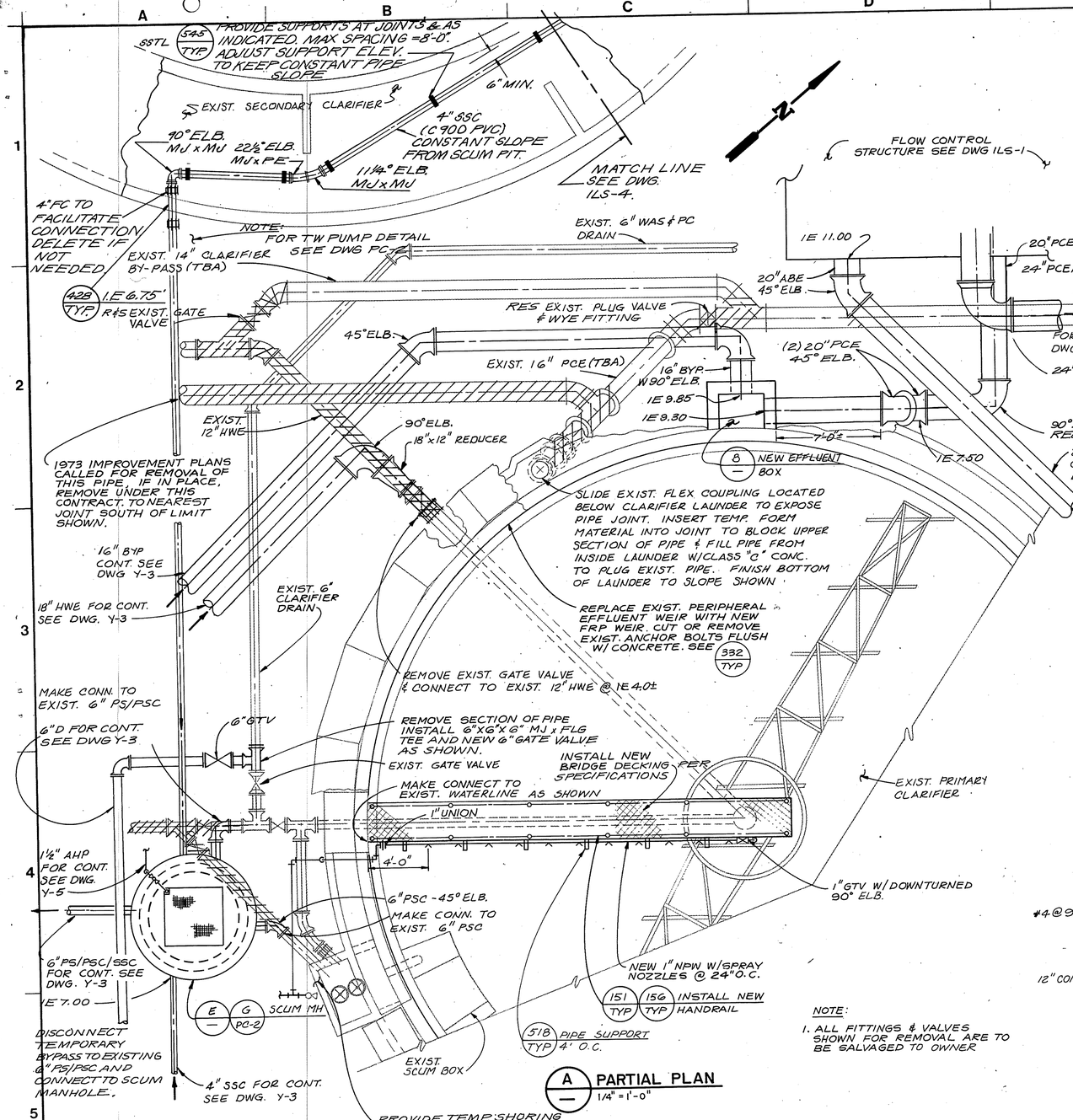
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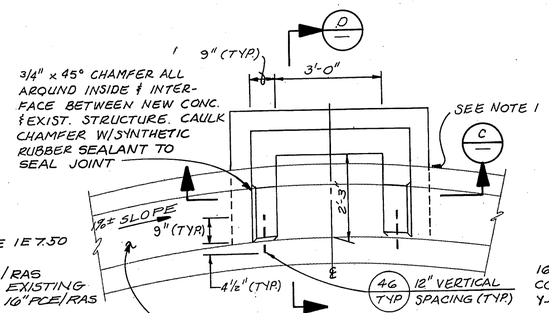
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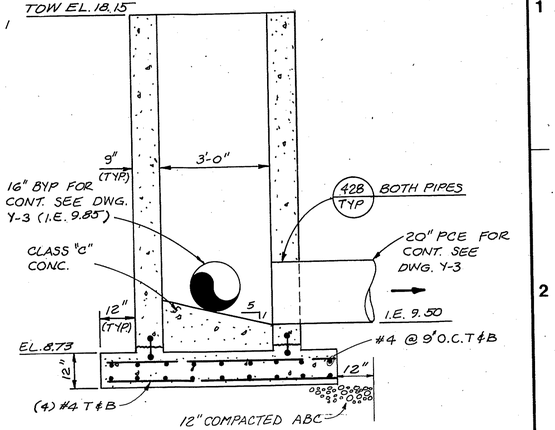
HEADWORKS SECTION AND DETAILS

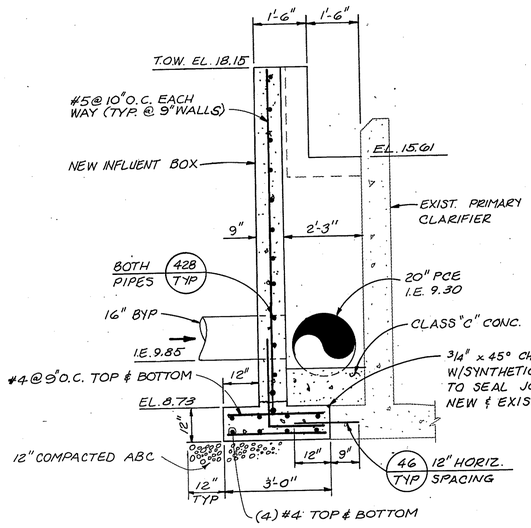
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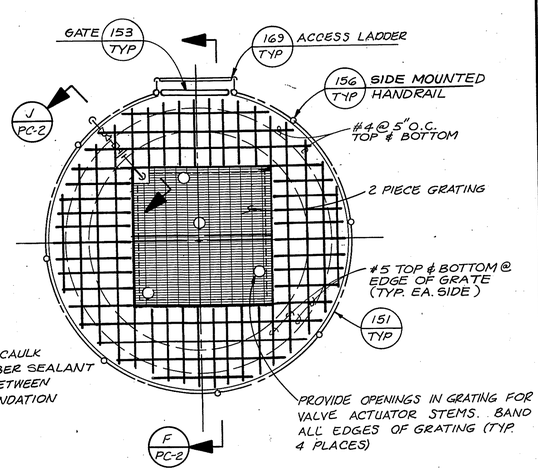
SHEET NO. 15











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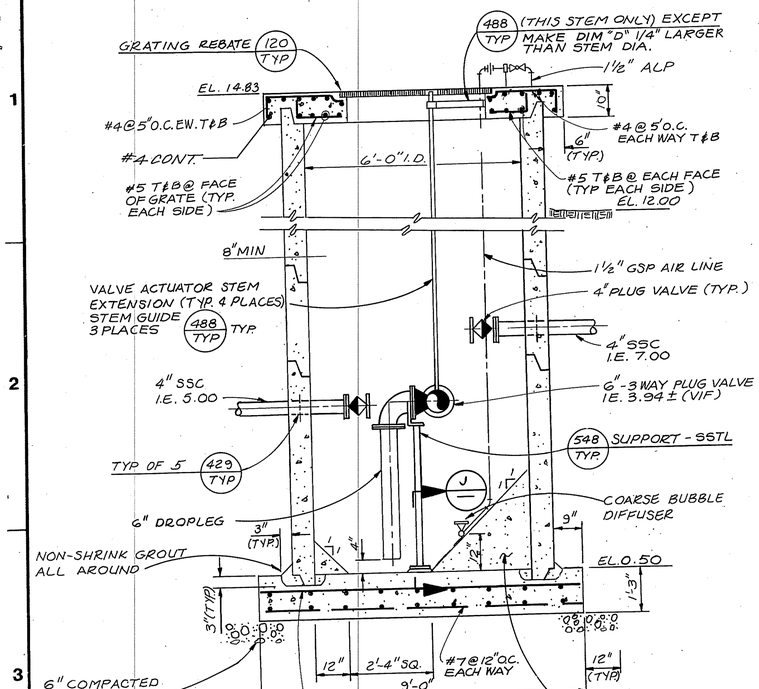
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COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

PRIMARY CLARIFIER
PLAN AND SECTIONS

DRAWING NO. PC-1

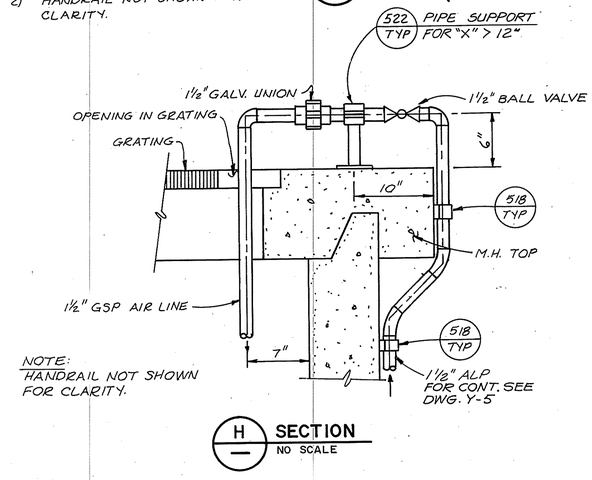
SHEET NO. 16



NOTES:

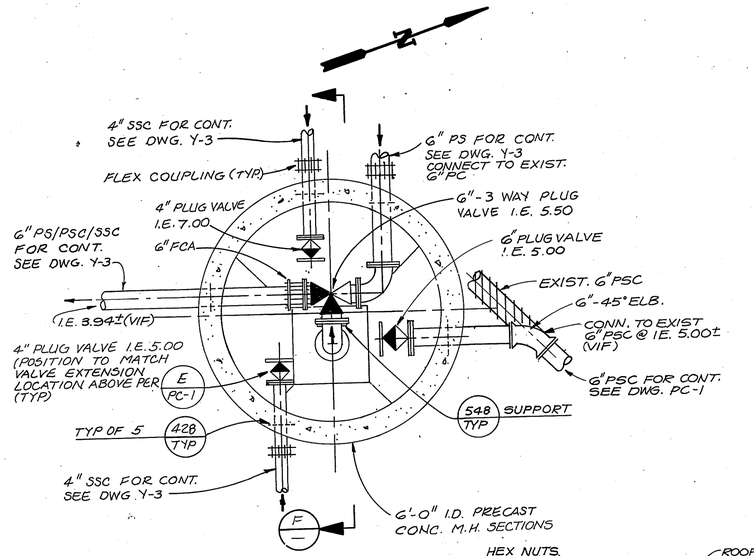
1) THREE ACTUATOR STEMS NOT SHOWN FOR CLARITY SEE 488 TYP FOR SWAY BRACES.
2) HANDRAIL NOT SHOWN FOR CLARITY.

F SECTION
1/2" = 1'-0"



NOTE:
HANDRAIL NOT SHOWN FOR CLARITY.

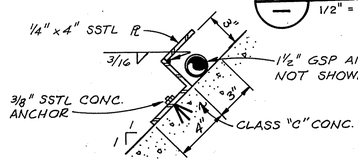
H SECTION
NO SCALE



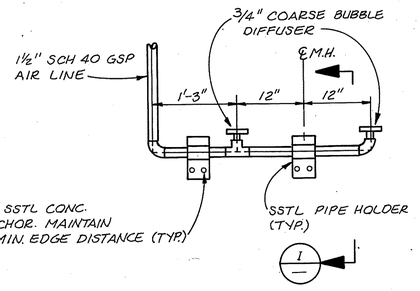
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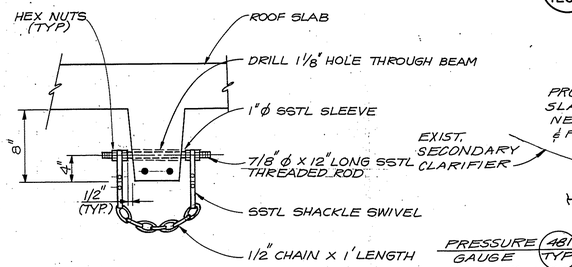
1) MAINTAIN 1" MIN. EDGE DISTANCE FOR INSTALLATION OF ANCHOR BOLTS.
2) FASTENERS & SUPPORTS TO BE STAINLESS STEEL.
3) AIR LINE NOT SHOWN FOR CLARITY.

G SECTIONAL PLAN
1/2" = 1'-0"

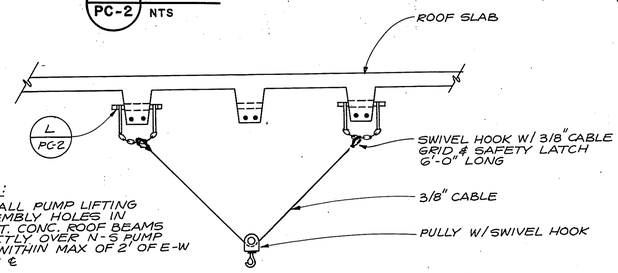


I SECTION
NO SCALE



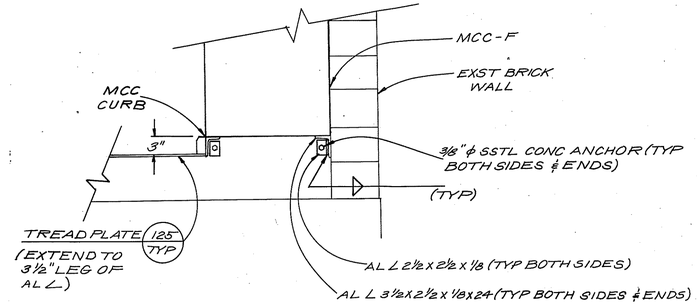


L DETAIL
PC-2 NTS

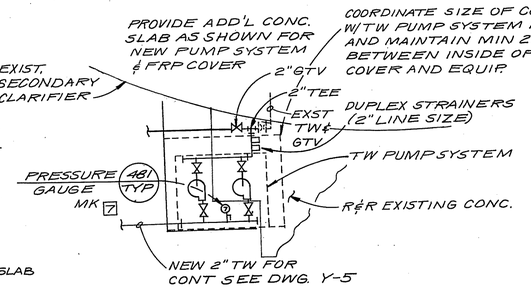


NOTE:
1. INSTALL PUMP LIFTING ASSEMBLY HOLES IN EXIST. CONC. ROOF BEAMS DIRECTLY OVER N-S PUMP ℄ & WITHIN MAX. OF 2' OF E-W PUMP ℄

K K PUMP LIFTING ASSEMBLY
ILS-2 ILS-4 NTS



F SECTION
ILS-4 1"= 1'-0"



M TREATED WATER PUMPS
PC-1 1/4"= 1'-0"

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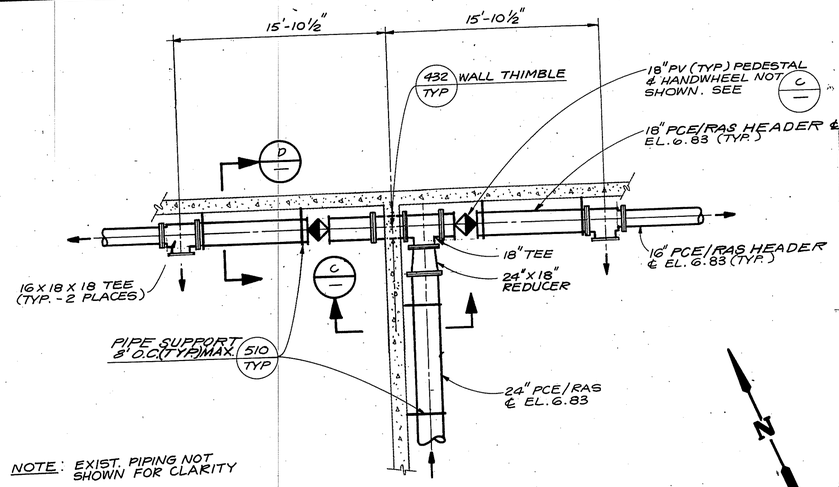
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IMPROVEMENT PROJECT
COOS BAY, OREGON

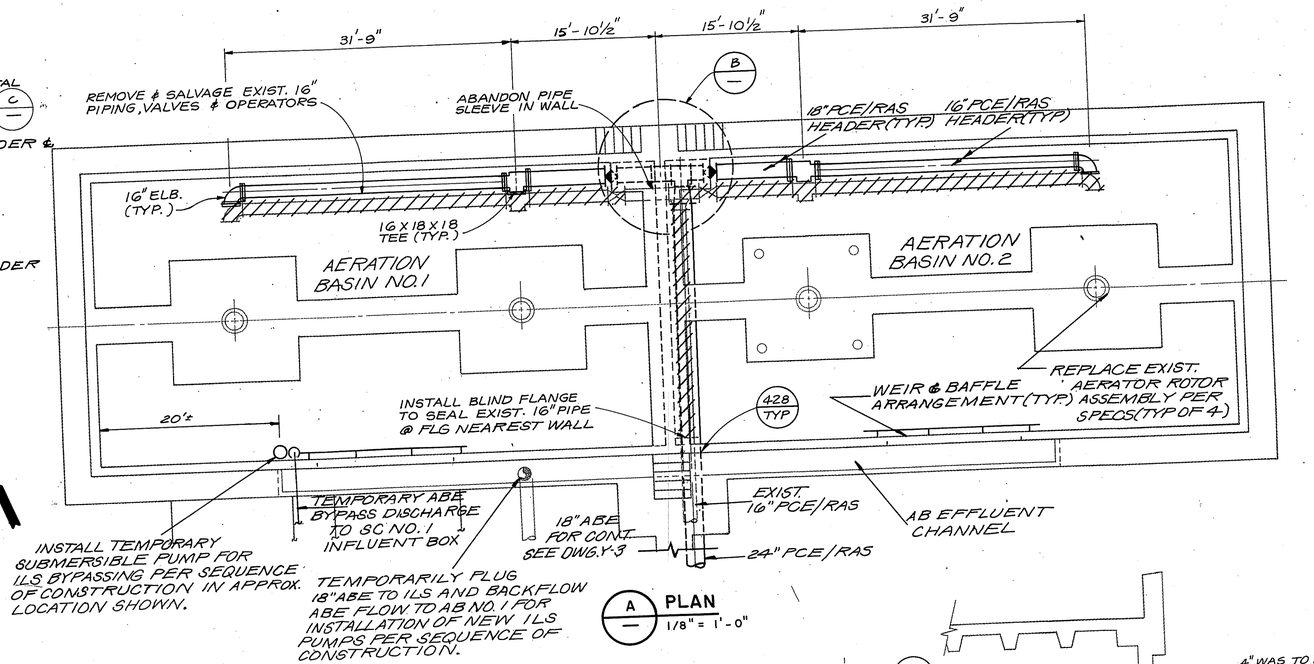
SCUM ~~MAN~~HOLE
SECTIONS AND DETAILS

DRAWING NO. PC-2
SHEET NO. 17

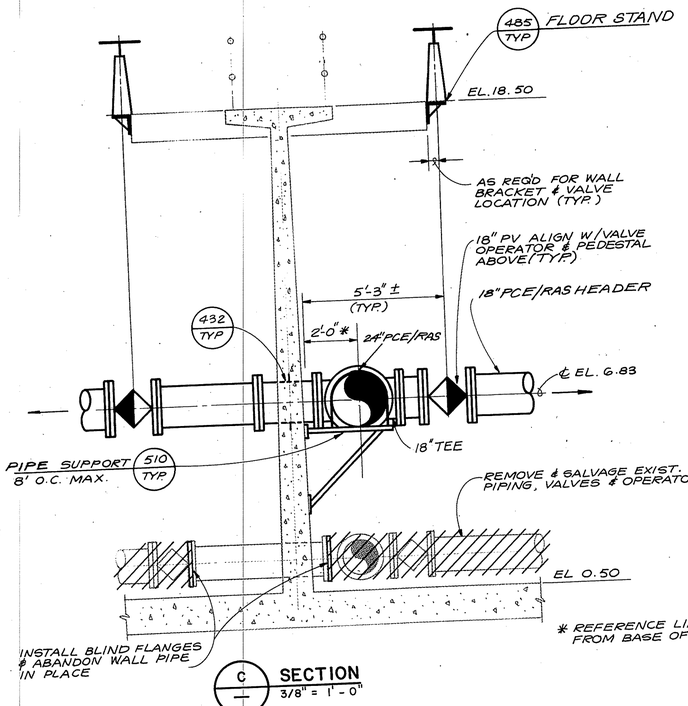


NOTE: EXIST. PIPING NOT SHOWN FOR CLARITY

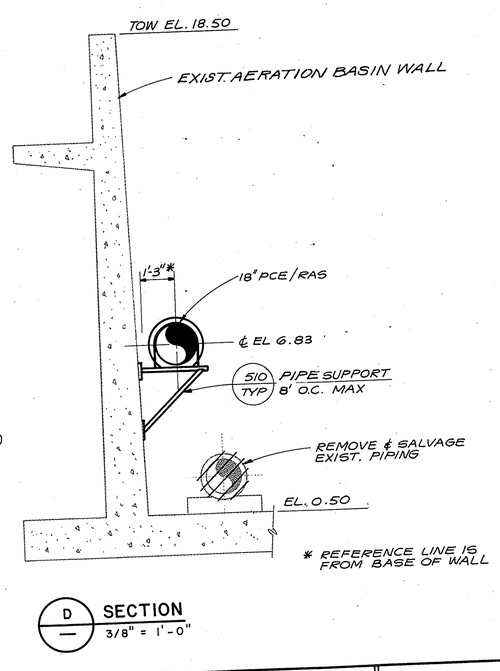
B — SECTIONAL PLAN (BELOW WALKWAY)
3/16" = 1'-0"



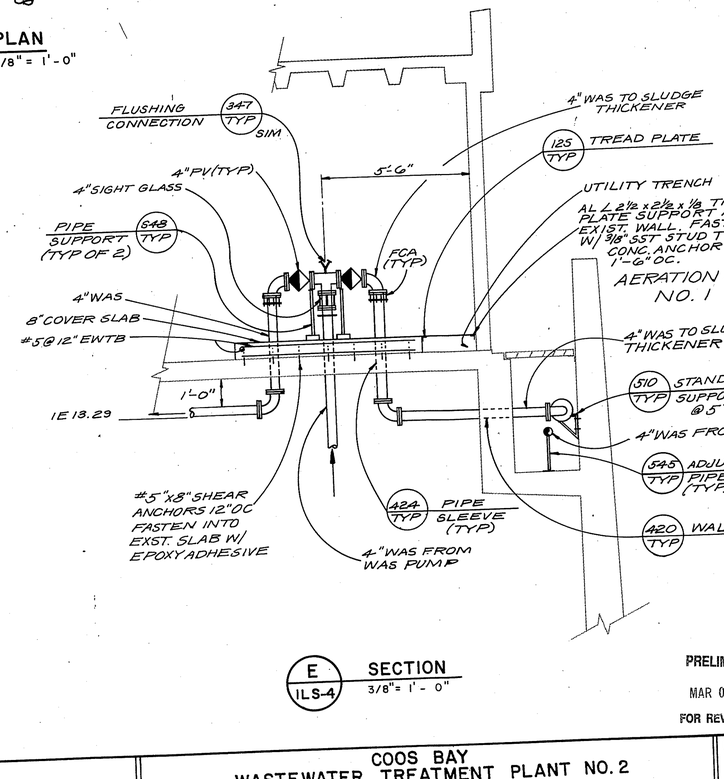
A — PLAN
1/8" = 1'-0"



C — SECTION
3/8" = 1'-0"



D — SECTION
3/8" = 1'-0"



E — SECTION
ILS-4 3/8"= 1'-0"

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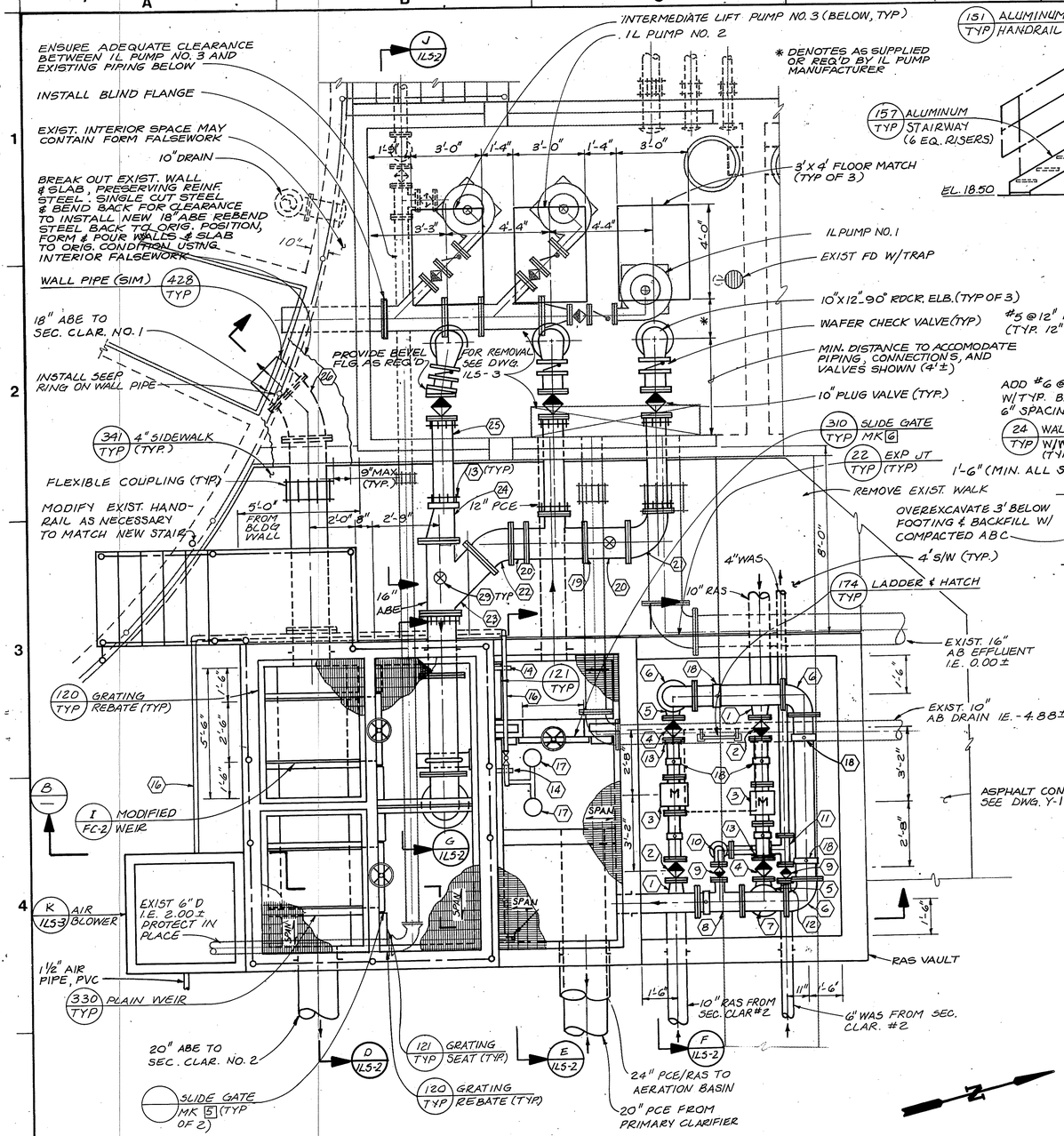
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WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

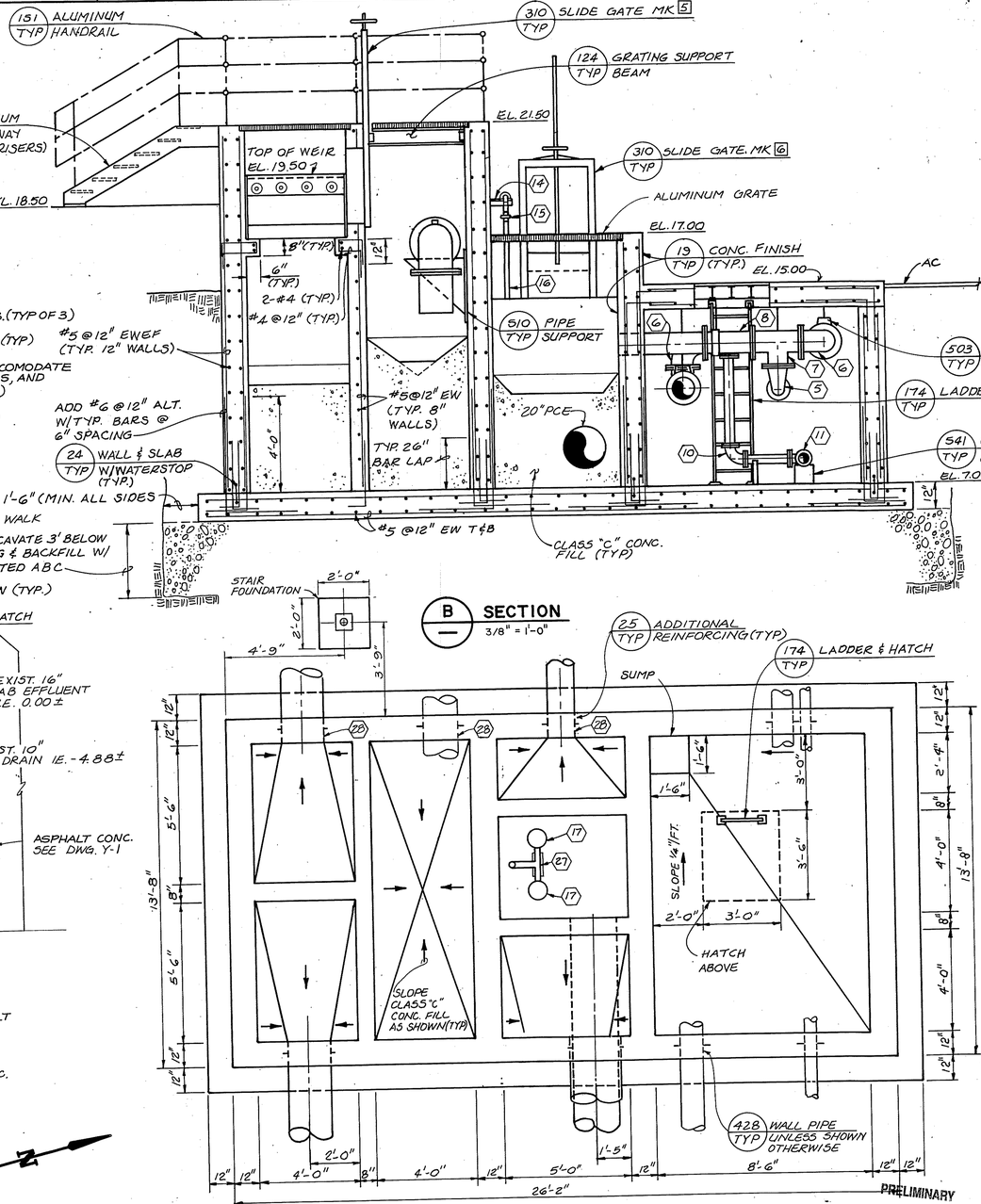
AERATION BASIN
PLAN AND SECTION

DRAWING NO. AB-1
SHEET NO. 18

AB-1	
V1B	V1E
V1S	V1S
V2S	V2S



A — PLAN - FLOW CONTROL STRUCTURE
3/8" = 1'-0"



B — SECTION
3/8" = 1'-0"

C — FOUNDATION PLAN
3/8" = 1'-0"

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SPECIFIC NOTES:

1. 10" x 8" REDUCER
2. 8" PV W/ ELECTRIC POSITIONER
3. 8" MAGNETIC FLOWMETER
4. 8" PLUG VALVE
5. 8" x 10" REDUCING ELBOW
6. 10" ELBOW
7. 10" x 10" x 10" TEE
8. 10" x 4" x 10" TEE
9. 4" PLUG VALVE
10. 4" ELBOW
11. 4" x 4" x 4" TEE
12. 6" x 4" REDUCER
13. FLANGED COUPLING ADAPTOR
14. 527 TYP PIPE SUPPORT (TYP OF 2)
15. 2" PIPE UNION, PVC
16. 2" AIR PIPE, PVC
17. AIR DIFFUSER FINE BUBBLE (TYP)
18. 503 TYP PIPE HANGER (TYP)
19. 16" x 10" x 16" TEE
20. 16" FLG. x FLG. SPOOL
21. 90° ELB. 16" x 10" RDCR
22. 16" - 45° ELB.
23. 16" WYE
24. 16" x 10 ECCENTRIC RDCR
25. 10" PExPE SPOOL (3 REQD)
26. 18" - 45° ELB.
27. K IL5-2 DIFFUSER BRACKET
28. 432 TYP WALL THIMBLE
29. 545 TYP PIPE SUPPORT
30. SUMP PUMP

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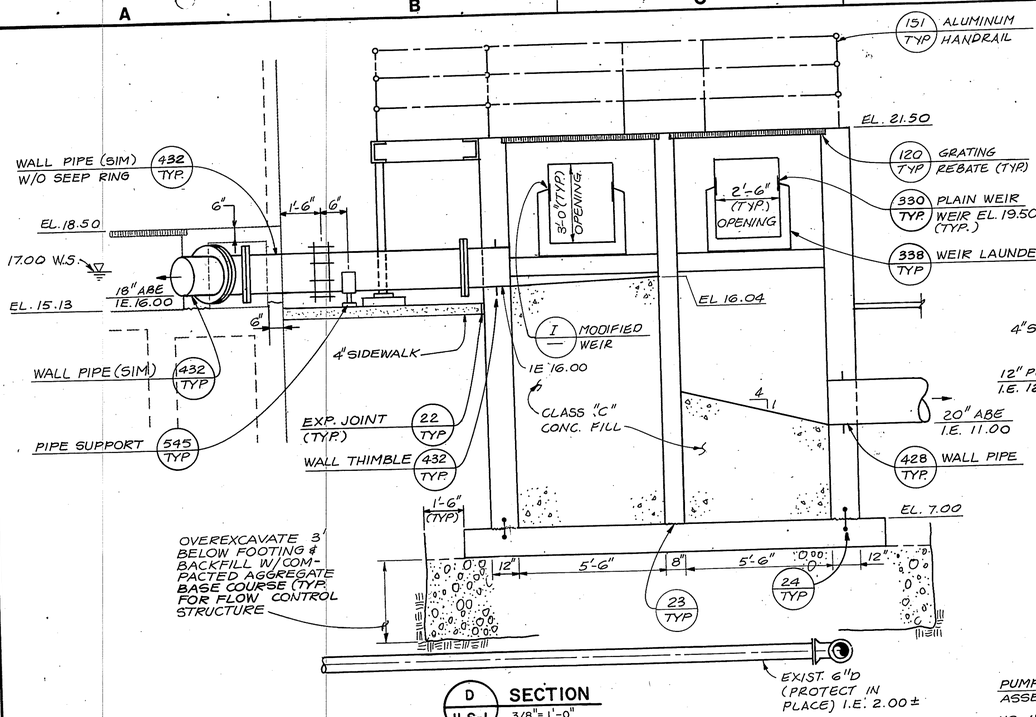
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IMPROVEMENT PROJECT
COOS BAY, OREGON

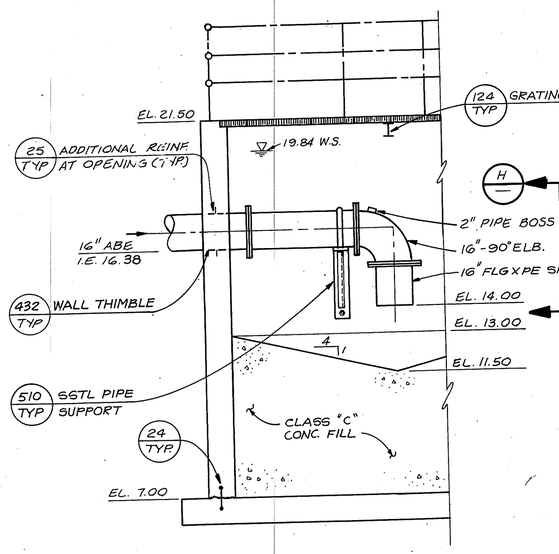
FLOW CONTROL/INTERMEDIATE LIFT STATION
PLANS AND SECTIONS

DRAWING NO. ILS-1
SHEET NO. 19

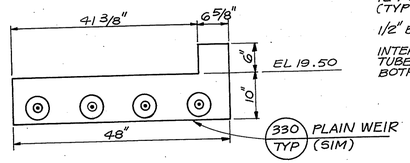
ILS-1	
A18	A13
Y18	Y13
Z15	E13



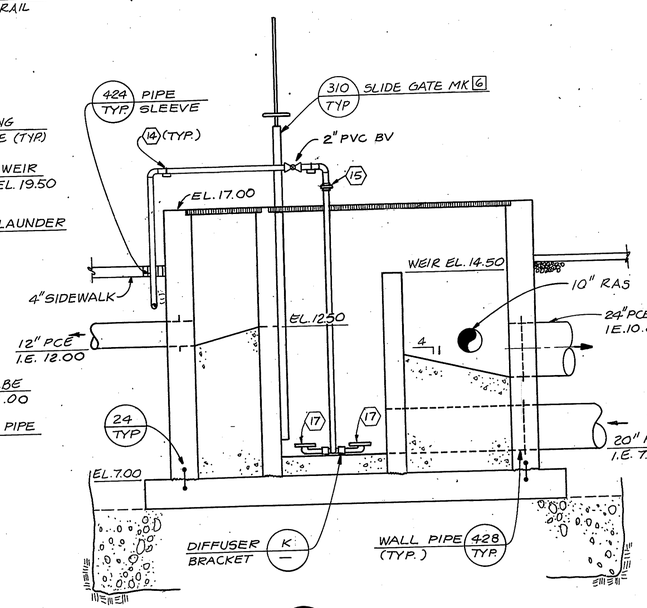
D ILS-1 SECTION 3/8"=1'-0"



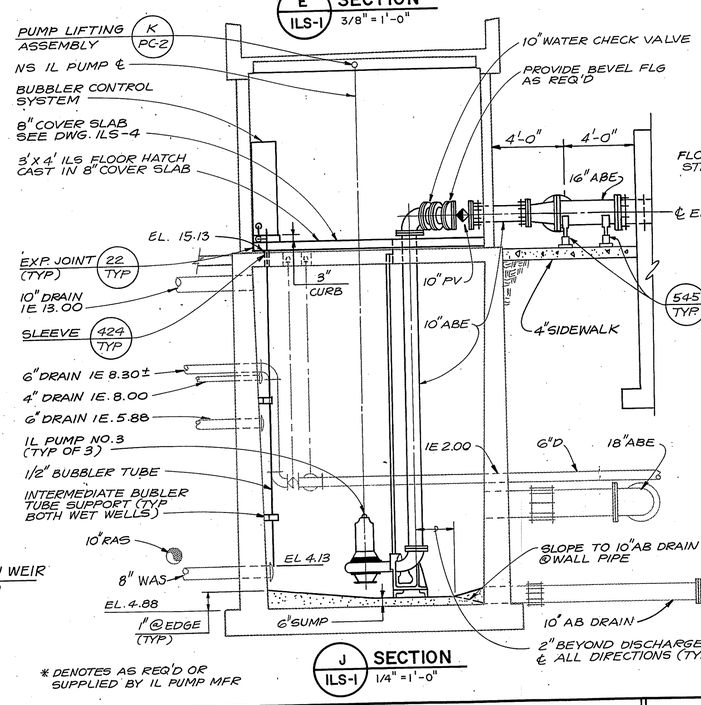
G ILS-1 SECTION 3/8"=1'-0"



I — MODIFIED WEIR
TO SEC. CLARIFIER NO. 1
3/4" = 1'-0"

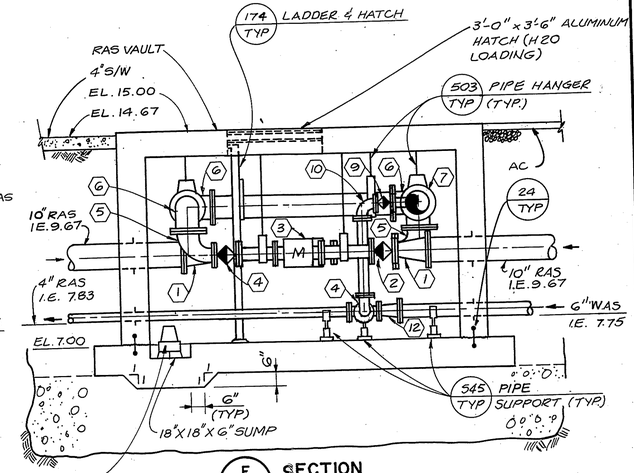


E ILS-1 SECTION 3/8"=1'-0"

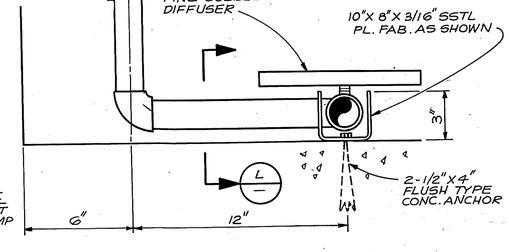


* DENOTES AS REQ'D OR SUPPLIED BY IL PUMP MFR

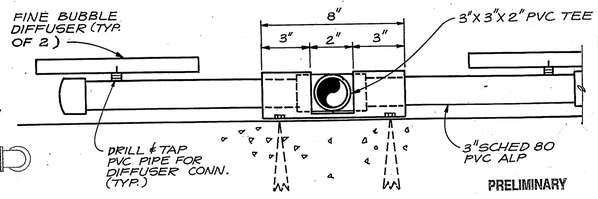
J ILS-1 SECTION 1/4"=1'-0"



F ILS-1 SECTION 3/8" = 1'-0"



K — DIFFUSER BRACKET DETAIL
NTS



L — SECTION
NTS

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GENERAL NOTE:
FOR SPECIFIC NOTES SHOWN BY ⬡ SEE DWG ILS-1

ILS-2 | WDB | WDB | 025 | 025

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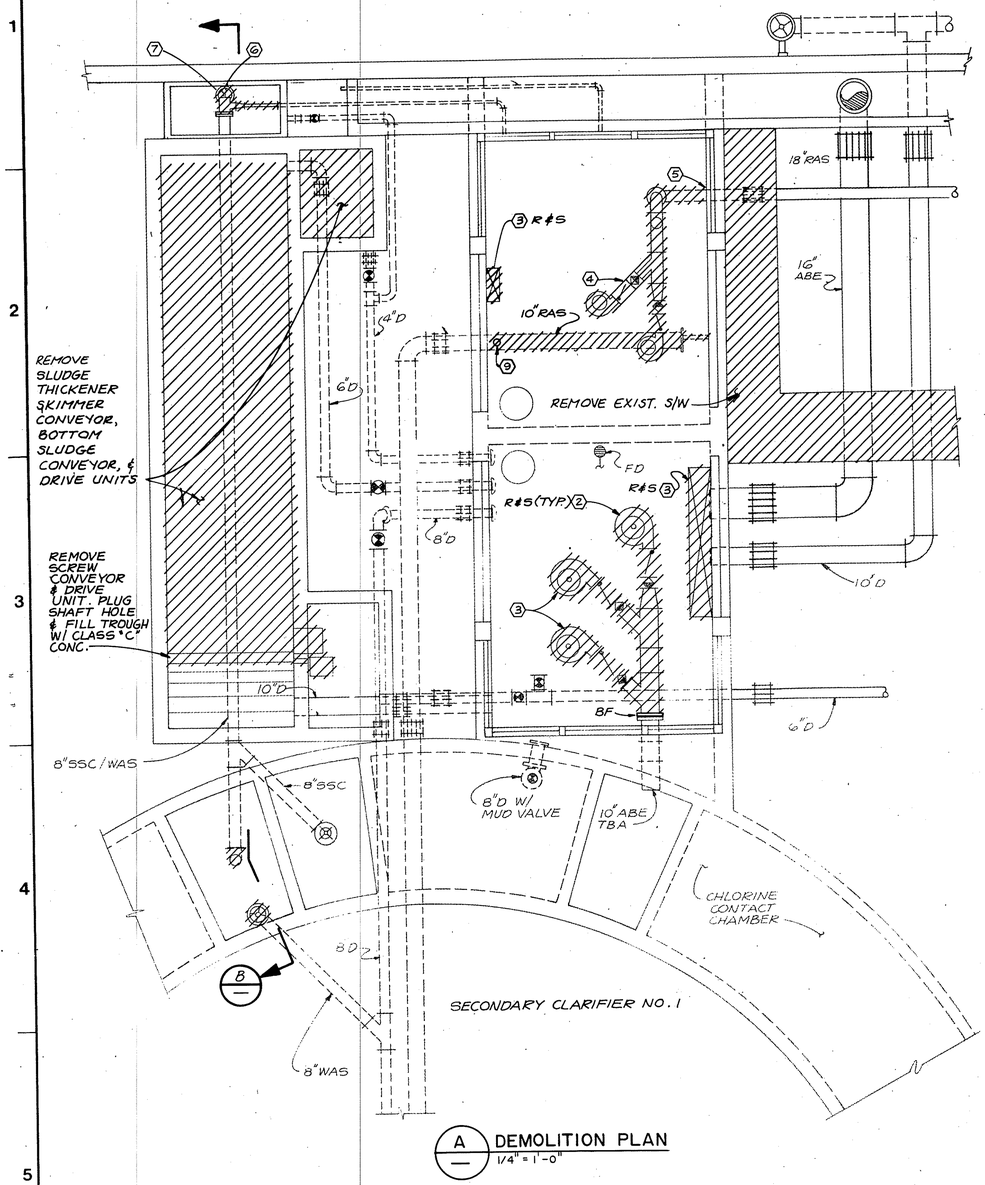
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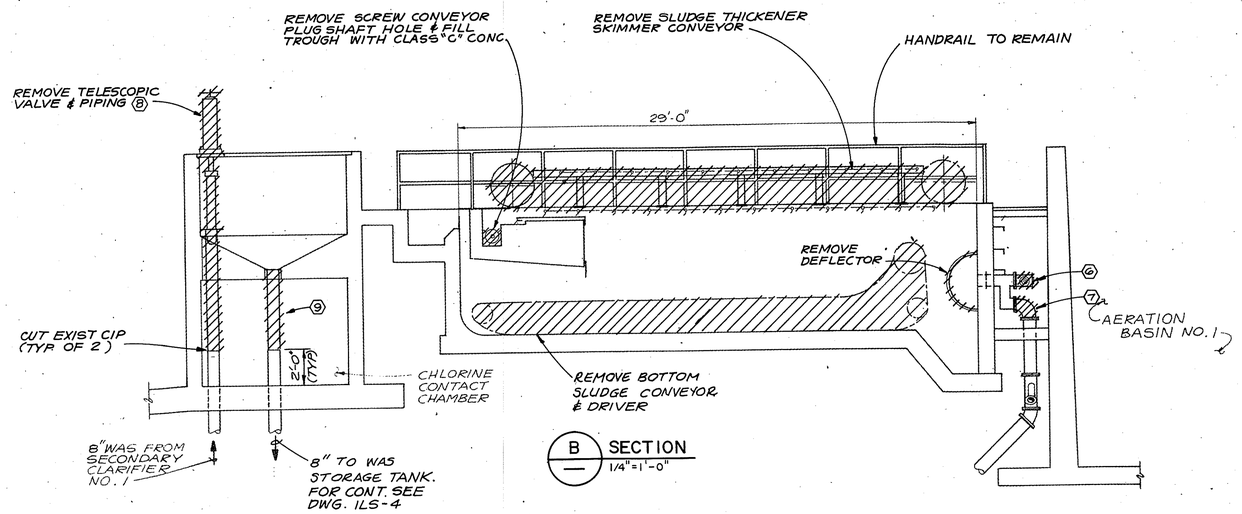
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IMPROVEMENT PROJECT
COOS BAY, OREGON

FLOW CONTROL/INTERMEDIATE LIFT STATION
SECTIONS AND DETAILS

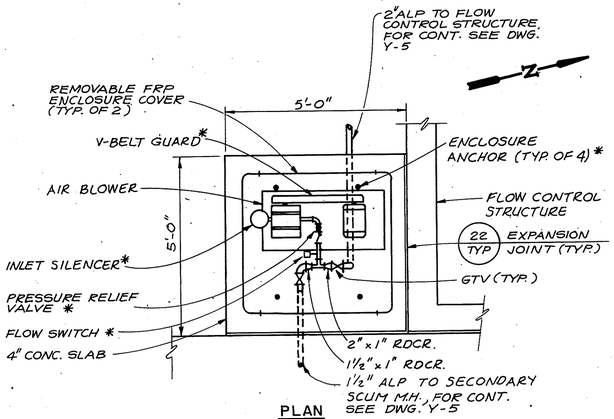
DRAWING NO. ILS-2
SHEET NO. 20



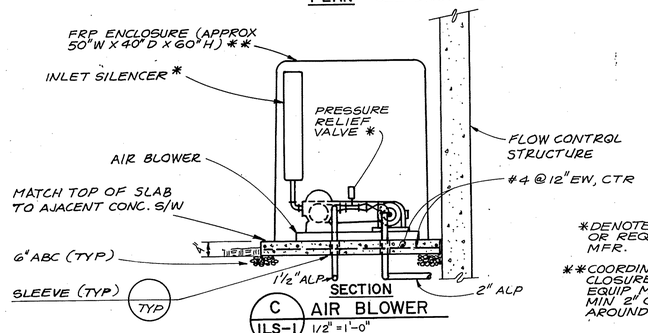
A DEMOLITION PLAN
1/4" = 1'-0"



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



PLAN



SECTION

C AIR BLOWER
ILS-1 1/2" = 1'-0"

*DENOTES AS SUPPLIED OR REQ'D BY AIR BLOWER MFR.

**COORDINATE SIZE OF ENCLOSURE W/AIR BLOWER EQUIP. MFR TO MAINTAIN MIN 2" CLR INSIDE ALL AROUND.

SPECIFIC NOTES

1. R&S EXISTING MCC AS DISCUSSED IN SEQUENCE OF CONSTRUCTION.
2. REMOVE EXISTING IL PUMPS, PIPING AND VALVES AS DISCUSSED IN SEQUENCE OF CONSTRUCTION.
3. TEMPORARILY RELOCATE EXISTING RAS PUMP VFD PANEL AND DISCONNECT HARDWARE PER SEQUENCE OF CONSTRUCTION, THEN R&S WHEN RAS PUMPS ARE TAKEN OUT OF SERVICE.
4. REMOVE EXISTING RAS PUMPS, CHECK VALVES, PLUG VALVES AND DISCHARGE PIPE, AS DISCUSSED IN SEQUENCE OF CONSTRUCTION, REMOVE PUMP BASE AND FILL HOLES IN FLOOR WITH NON-SHRINK GROUT.
5. REMOVE RAS PIPE TO FLANGE NEAREST EAST WALL AND INSTALL BLIND FLANGE.
6. REMOVE BACKPRESSURE VALVE, 6" x 2" REDUCER AND 2" SPOOL. INSTALL 6" AND 2" BLIND FLANGES PER DWG ILS-4.
7. REMOVE 6" x 8" FLANGED REDUCING ELBOW AND INSTALL 6" BLIND FLANGE PER DWG ILS-4.
8. DISCONNECT 10" RAS AT FLANGE AT FACE OF WALL AND REMOVE PIPING AS SHOWN.
9. DISCONNECT 4" VENT FC AT 10" x 10" x 4" IN 10" RAS AND REMOVE 4" VENT TO 6" BELOW UPPER FLOOR.
10. PROVIDE NEOPRENE GASKET AND SSTL BOLTED CONNECTION FOR WATERTIGHT SEAL FOR EXISTING MANHOLE LIDS AS APPROVED.
11. REMOVE FRAME AND GRATE. FORM AND SEAL EXISTING SLAB OPENING WITH 8" COVER SLAB.
12. ALUMINUM DOORS AS SPECIFIED WITH LOUVERS SIM. TO EXISTING (TYP OF 2).

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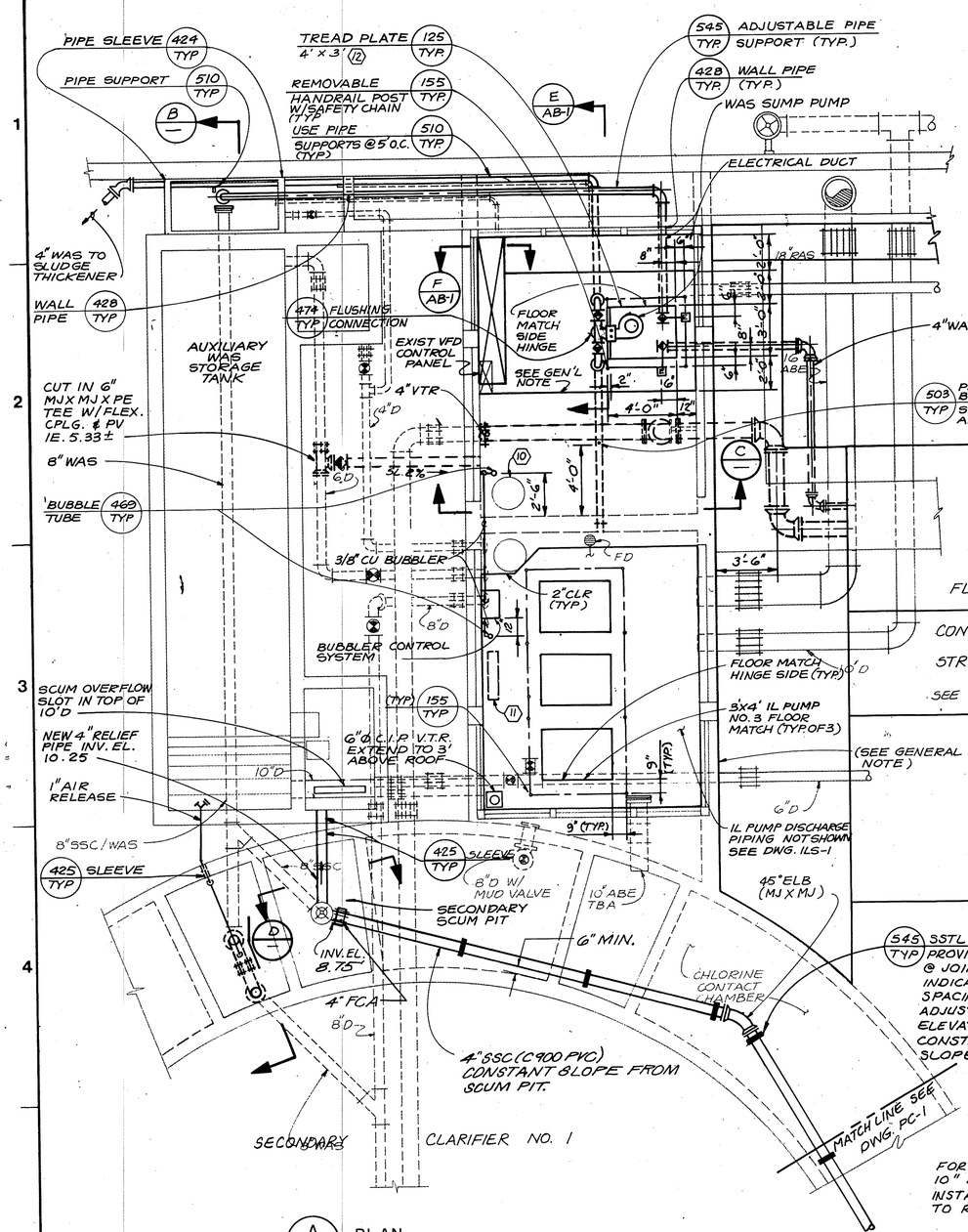
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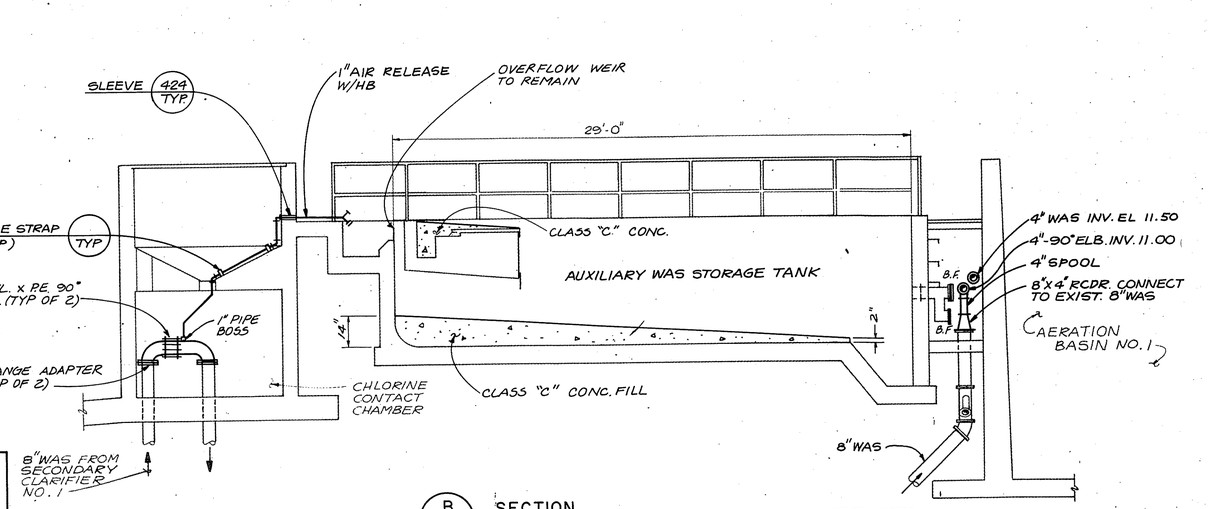
COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

INTERMEDIATE LIFT STATION
DEMOLITION PLAN/AIR BLOWER

DRAWING NO. ILS-3
SHEET NO. 21

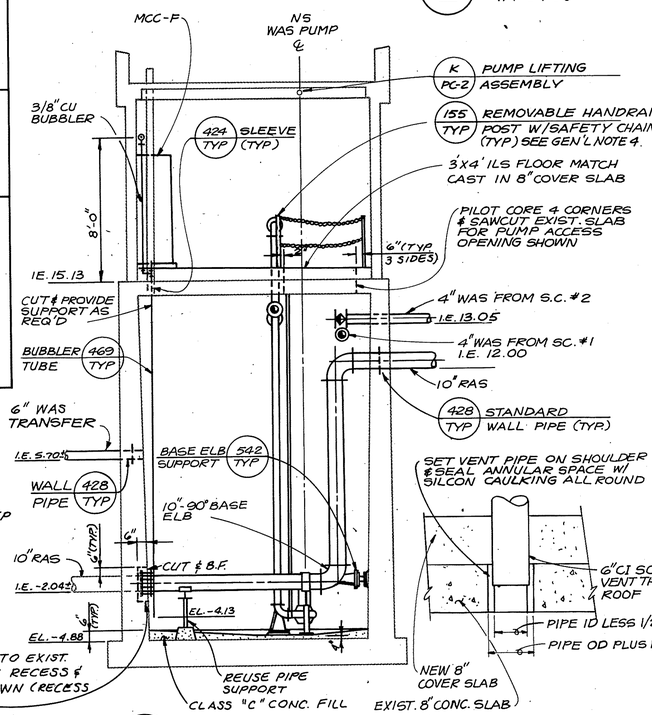
ILS-3
AIB A 3
RAS 1
TAS 2
SAS SA 3
RAB RAB 4
5

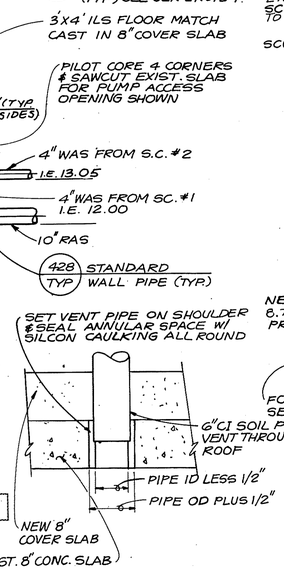


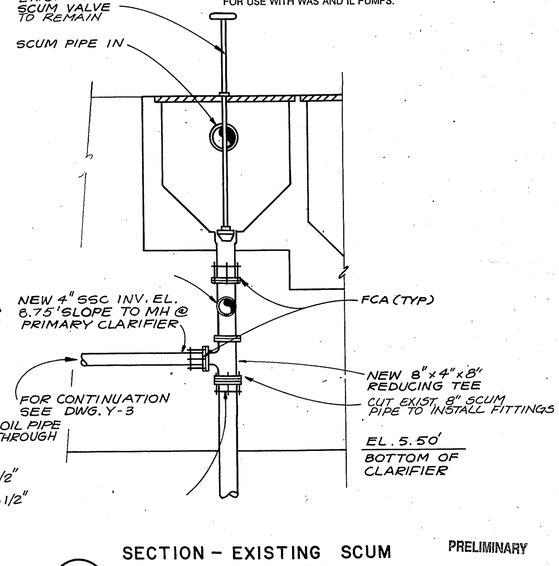


GENERAL NOTES

1. REFER TO SPECIFIC NOTES ( ) ON DWG. ILS-3.
2. ALL FLOOR AND SUBSTRUCTURE WALL PENETRATIONS IN ILS SHALL BE SEALED.
3. OUTER LIMIT OF 8" CONCRETE COVER SLAB REINFORCEMENT FOR EXISTING SLAB. PROVIDE TEMPORARY SHORING BELOW EXISTING SLAB PRIOR TO CUTTING OPENINGS FOR NEW WAS AND IL PUMPS AND POURING COVER SLAB. SHORING TO REMAIN IN PLACE UNTIL COVER SLAB CONCRETE REACHES SPECIFIED STRENGTH. PROVIDE STEEL REINFORCEMENT FOR BOTH COVER SLABS AS SHOWN. (4 / IL5-1)
4. PROVIDE ONE SET OF REMOVABLE HANDRAIL POSTS AND SAFETY CHAIN FOR USE WITH WAS AND IL PUMPS.







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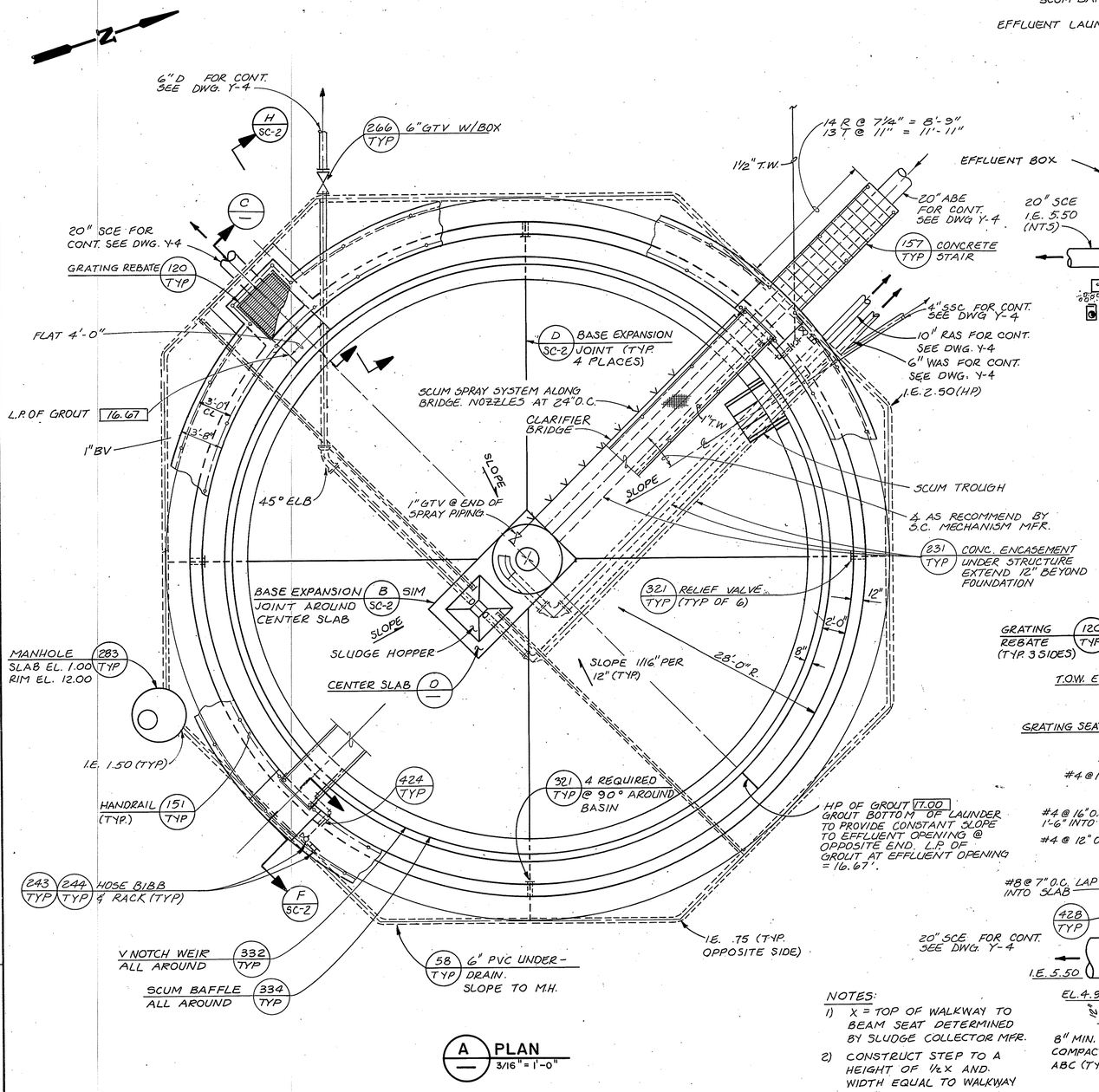
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COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

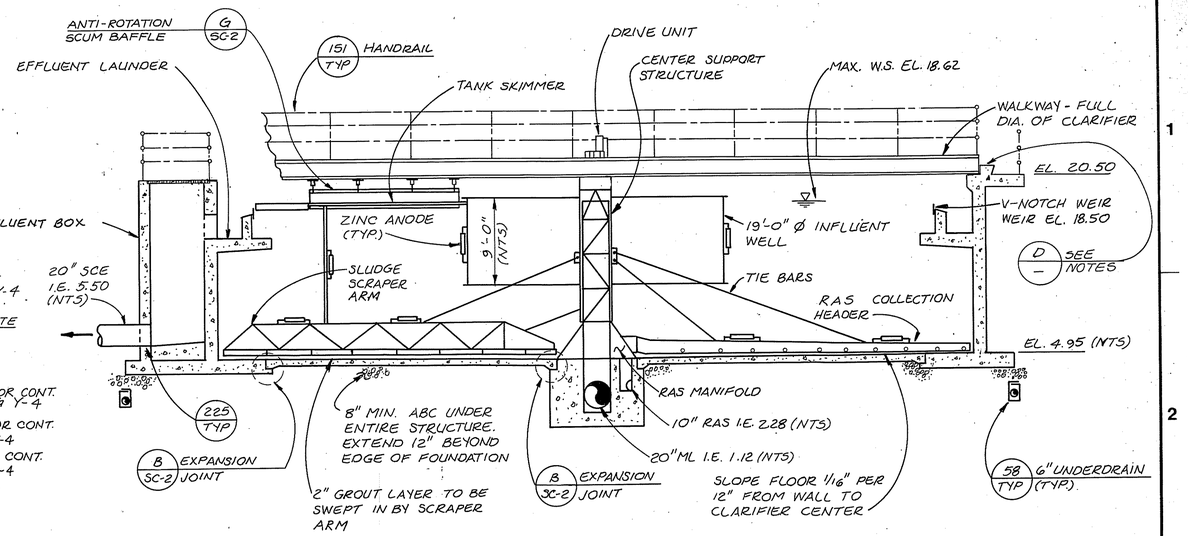
FLOW CONTROL
INTERMEDIATE LIFT STATION
PLAN AND SECTIONS

DRAWING NO. ILS-4

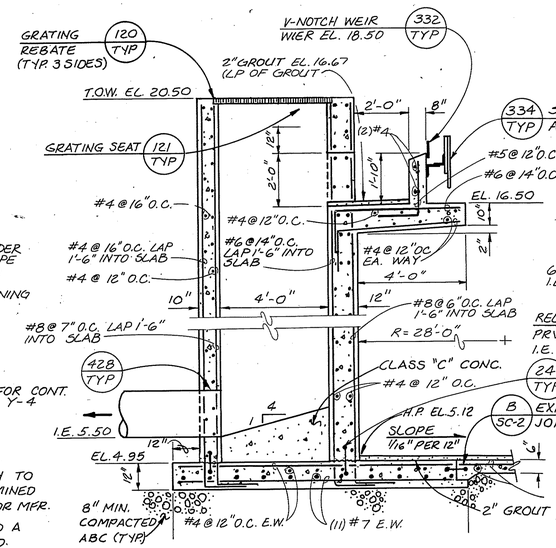
SHEET NO. 17



A — PLAN
3/16" = 1'-0"

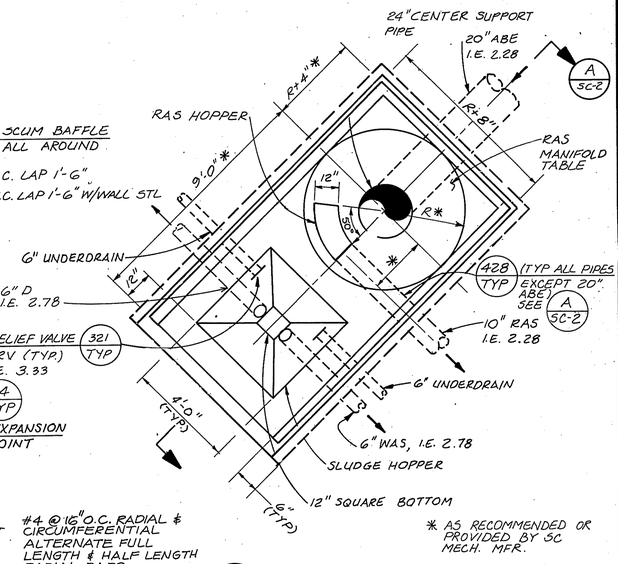


COMPOSITE TRANSVERSE SECTION.
3/16" = 1'-0"



NOTES:
1) X = TOP OF WALKWAY TO BEAM SEAT DETERMINED BY SLUDGE COLLECTOR MFR.
2) CONSTRUCT STEP TO A HEIGHT OF ½X AND WIDTH EQUAL TO WALKWAY WIDTH.

C — SECTION
3/8" = 1'-0"



* AS RECOMMENDED OR PROVIDED BY SC MECH. MFR.

D — CENTER SLAB
3/8" = 1'-0"

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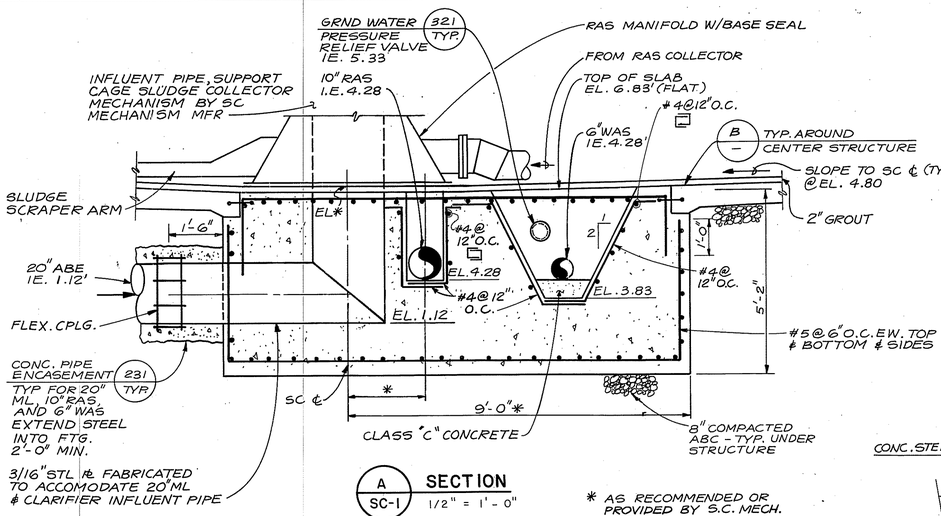
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COOS BAY, OREGON

SECONDARY CLARIFIER NO. 2
PLAN AND SECTIONS

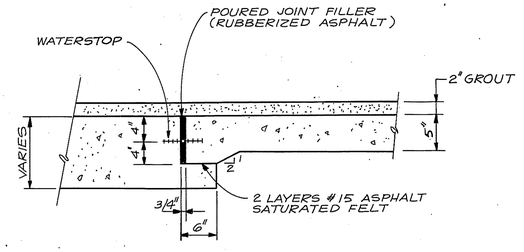
DRAWING NO. SC-1

SHEET NO. 23

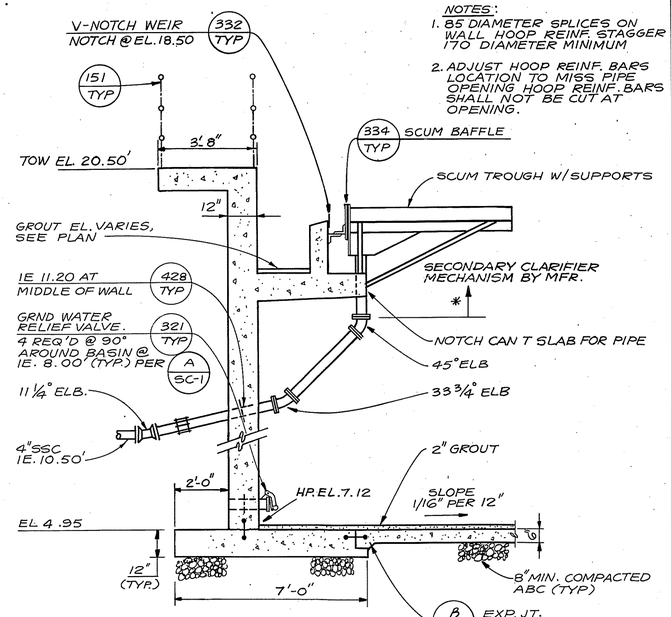


A / SC-1 SECTION
1/2" = 1'-0"

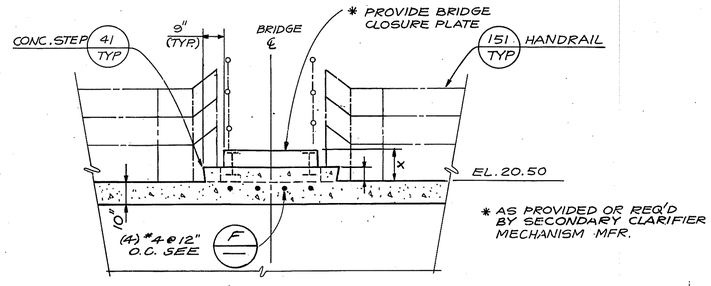
* AS RECOMMENDED OR PROVIDED BY S.C. MECH. MFR.



B / — BASE EXPANSION JOINT
1" = 1'-0"

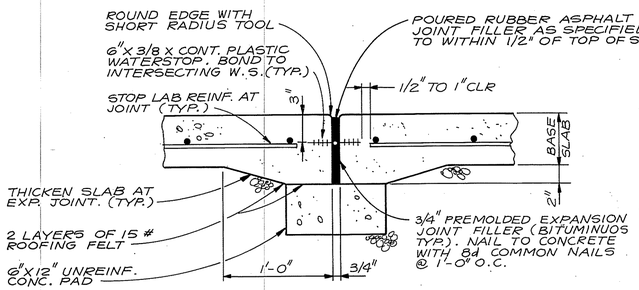


C / SC-1 SECTION
3/8" = 1'-0"

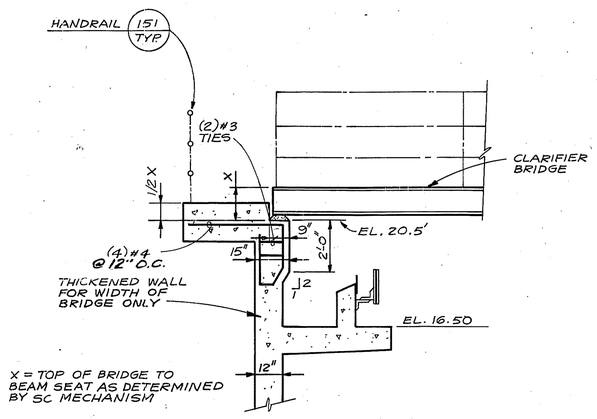


* AS PROVIDED OR REQ'D BY SECONDARY CLARIFIER MECHANISM MFR.

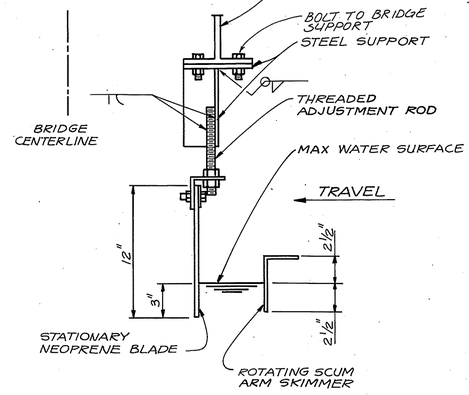
E / SC-1 SECTION
3/8" = 1'-0"



D / SC-1 BASE SLAB EXPANSION JOINT
1" = 1'-0"



F / SC-1 SECTION
3/8" = 1'-0"



SECTION ANTI - ROTATIONAL SCUM BAFFLE

G / SC-1
1-1/2" = 1'-0"

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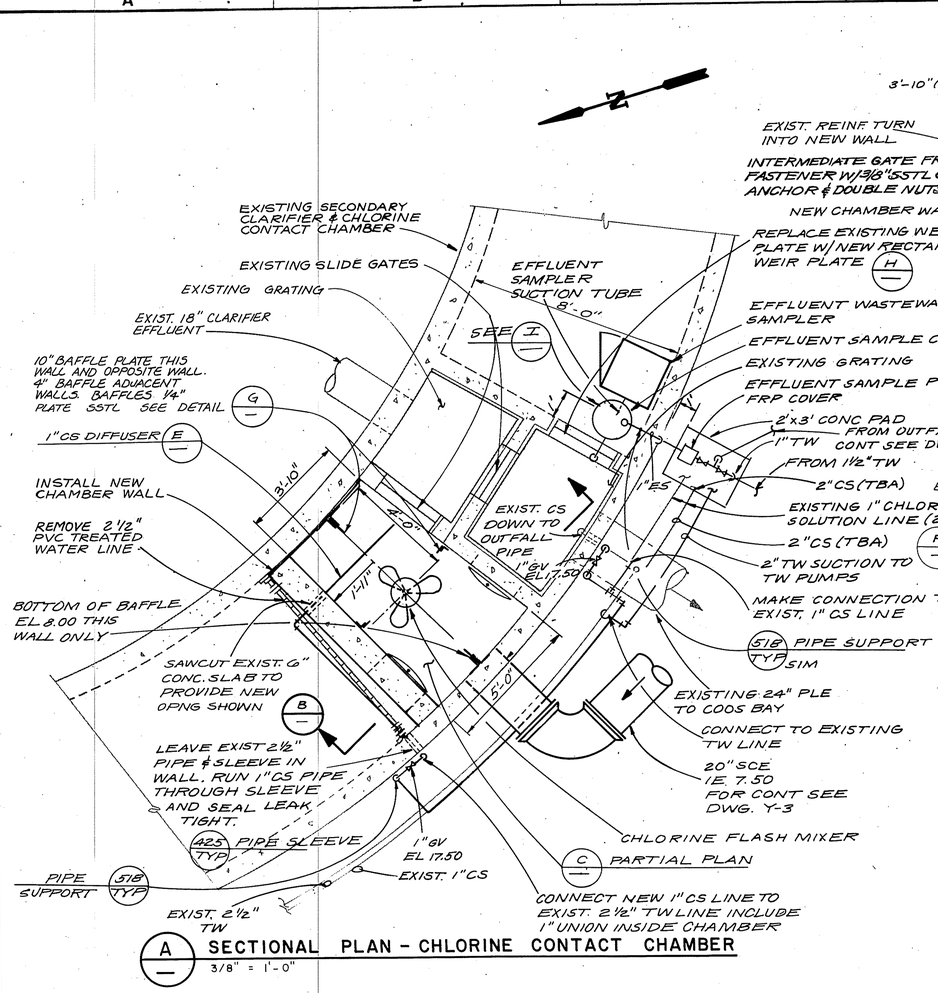
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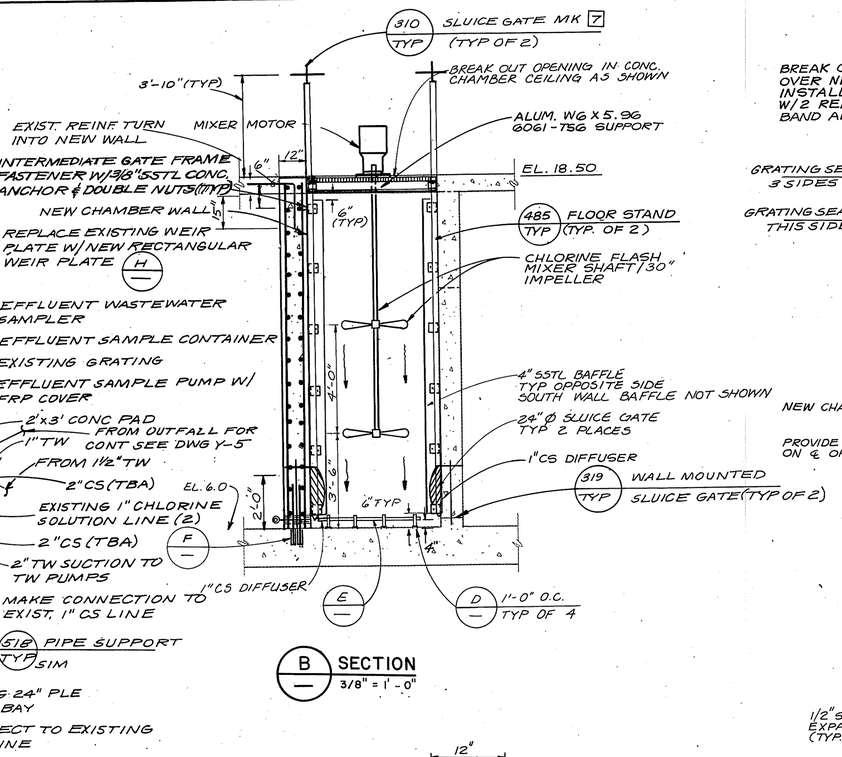
SECONDARY CLARIFIER NO. 2
SECTIONS AND DETAILS

DRAWING NO. SC-2

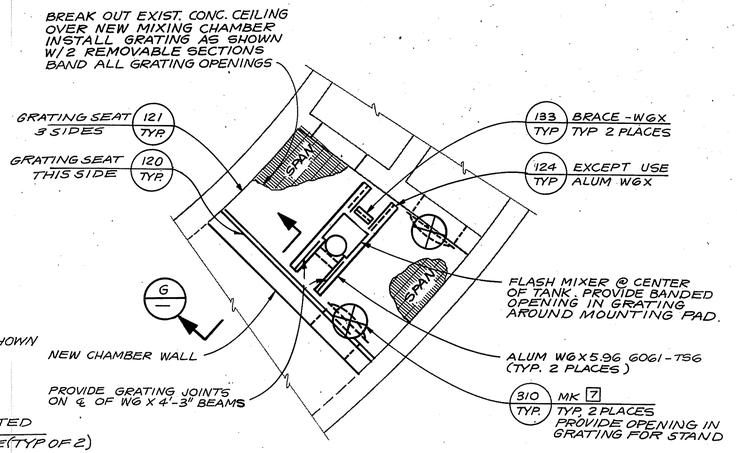
SHEET NO. 24



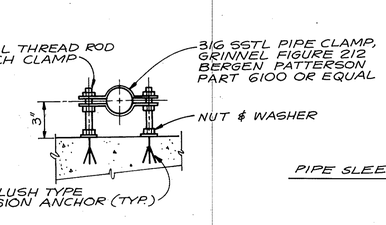
A SECTIONAL PLAN - CHLORINE CONTACT CHAMBER
3/8" = 1'-0"



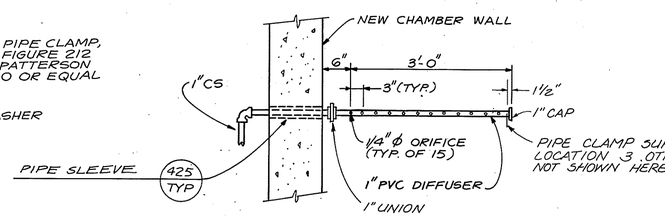
B SECTION
3/8" = 1'-0"



C PARTIAL PLAN
3/8" = 1'-0"

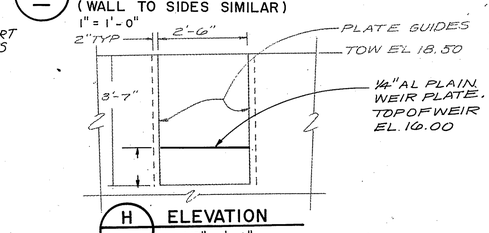


D SECTION
NTS



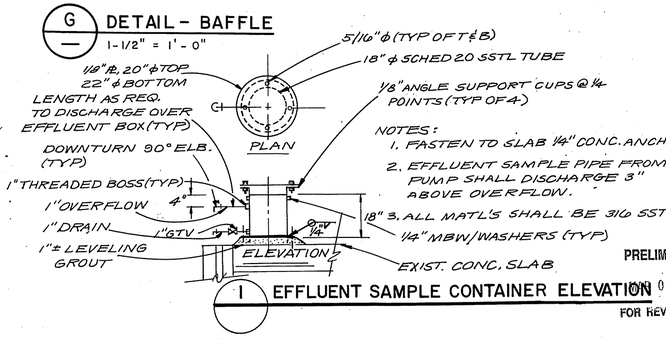
NOTE : SUPPORTS NOT SHOWN FOR CLARITY. SEE B

E PLAN - DIFFUSER PIPE
3/4" = 1'-0"



F TYPICAL SECTION
(WALL TO SIDES SIMILAR)
1" = 1'-0"

H ELEVATION
1/2" = 1'-0"



G DETAIL - BAFFLE
1-1/2" = 1'-0"

I EFFLUENT SAMPLE CONTAINER ELEVATION

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CC-1		
A1B	A1S	
W1S	W1S	
X1B	X1B	

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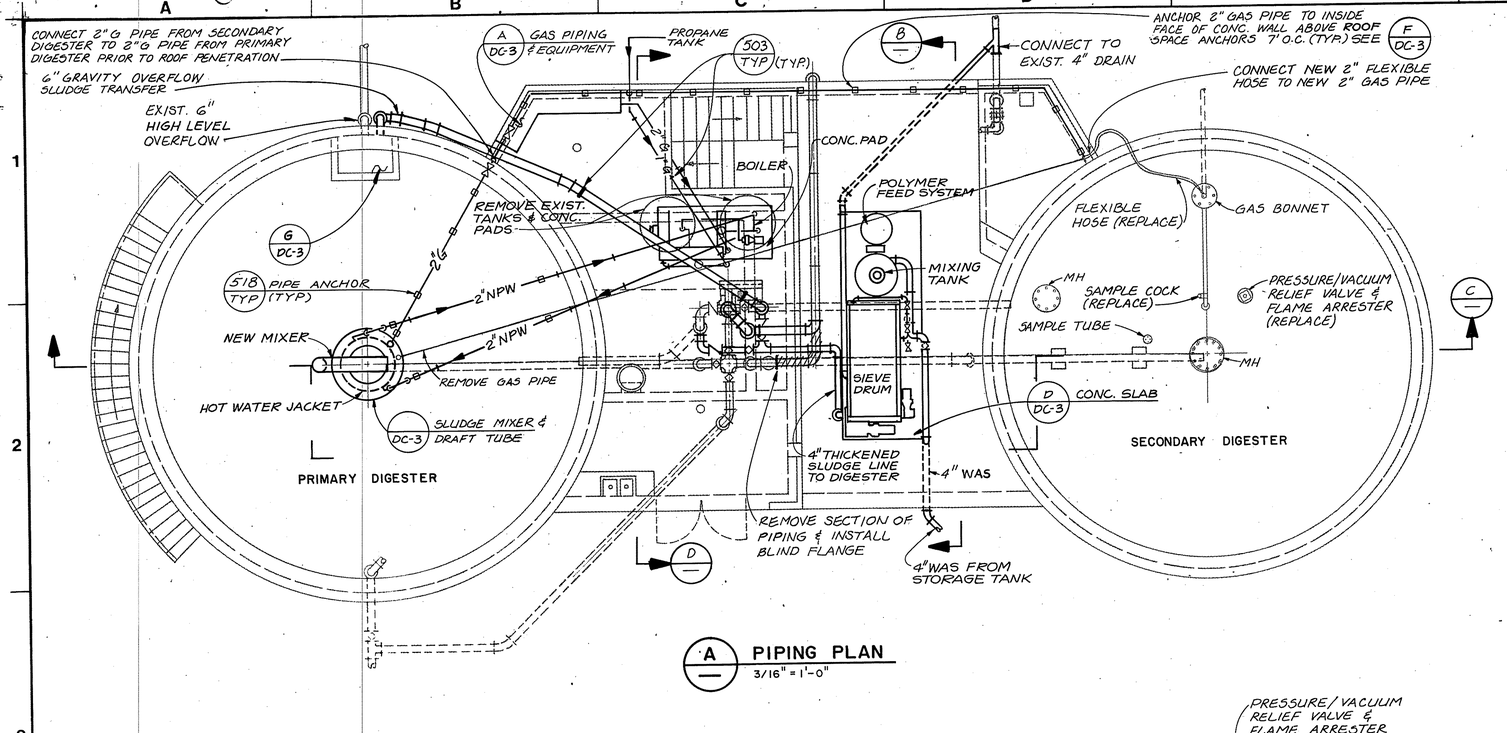
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COOS BAY, OREGON

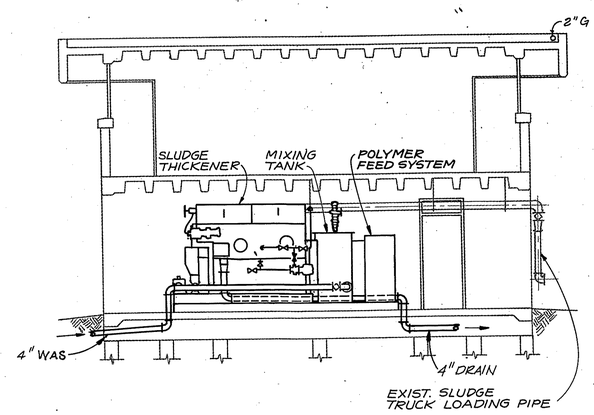
CHLORINE FLASH MIXING CHAMBER
PLANS AND SECTIONS

DRAWING NO. CC-1

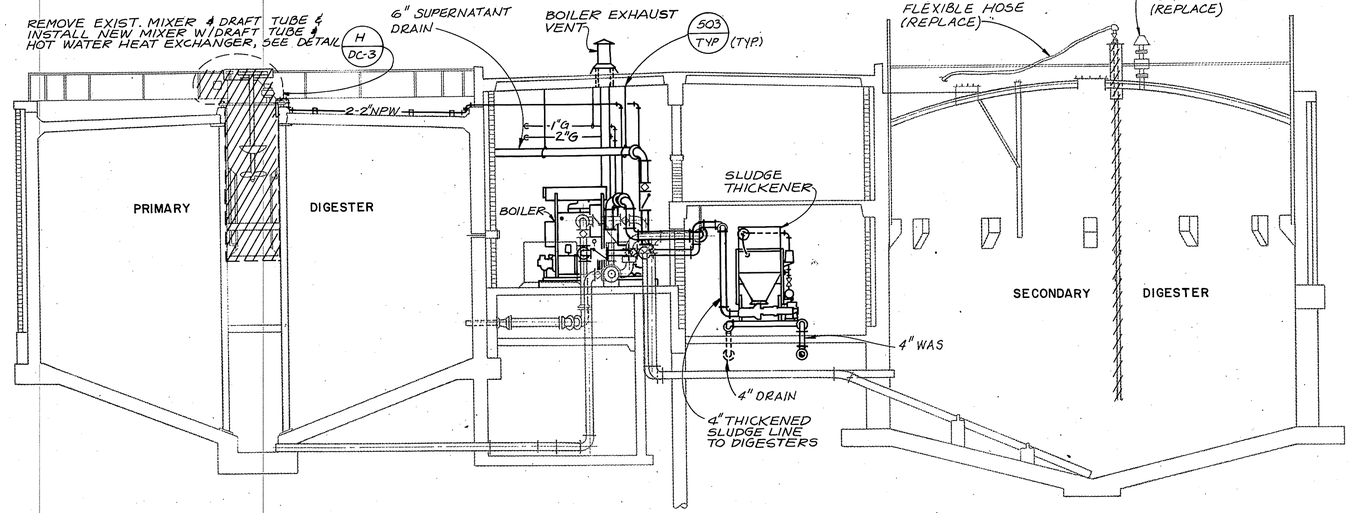
SHEET NO. 24



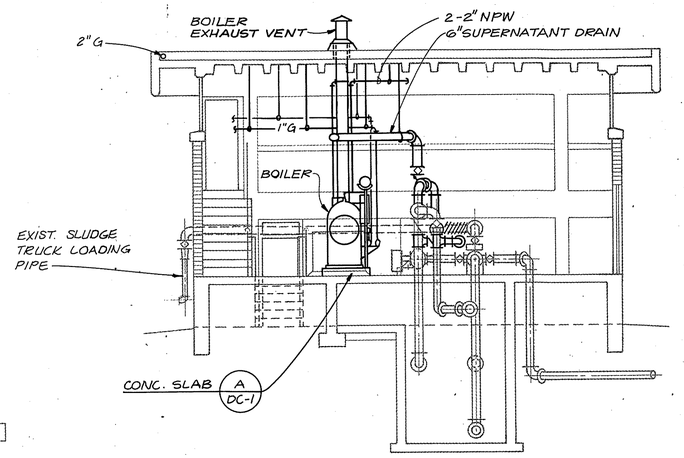
A — PIPING PLAN
3/16" = 1'-0"



B — SECTION
3/16" = 1'-0"



C — SECTION
3/16" = 1'-0"



D — SECTION
3/16" = 1'-0"

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DC-1
A1B A1C
C2B C2C
D2B D2C
E2B E2C

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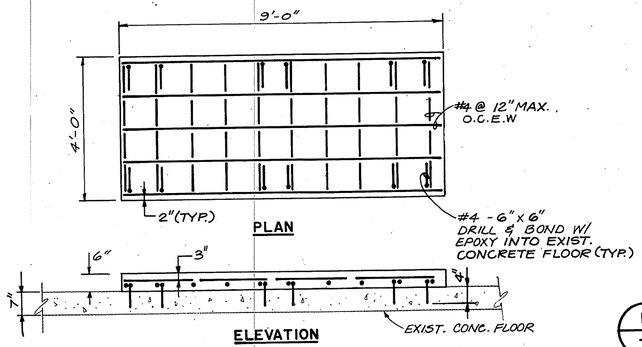
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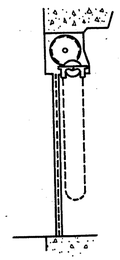
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COOS BAY, OREGON

DIGESTER COMPLEX PLAN AND SECTIONS

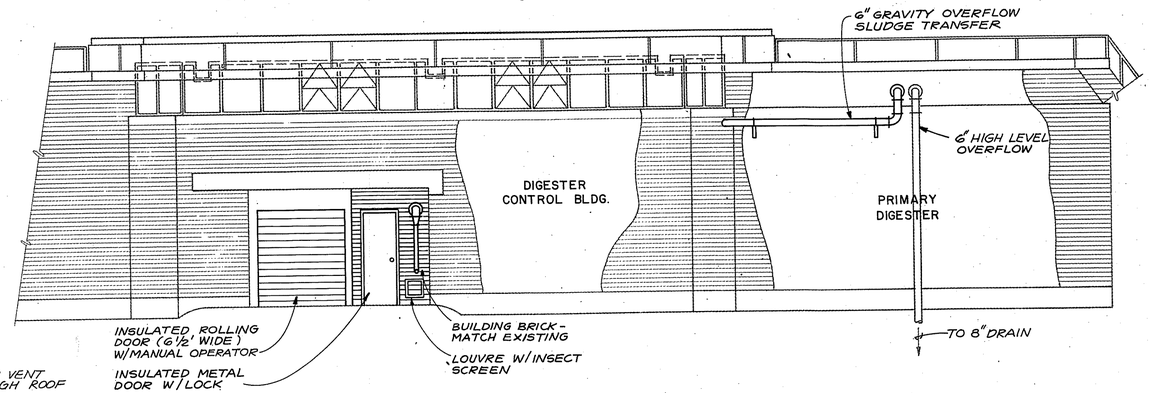
DRAWING NO. DC-1
SHEET NO. 25



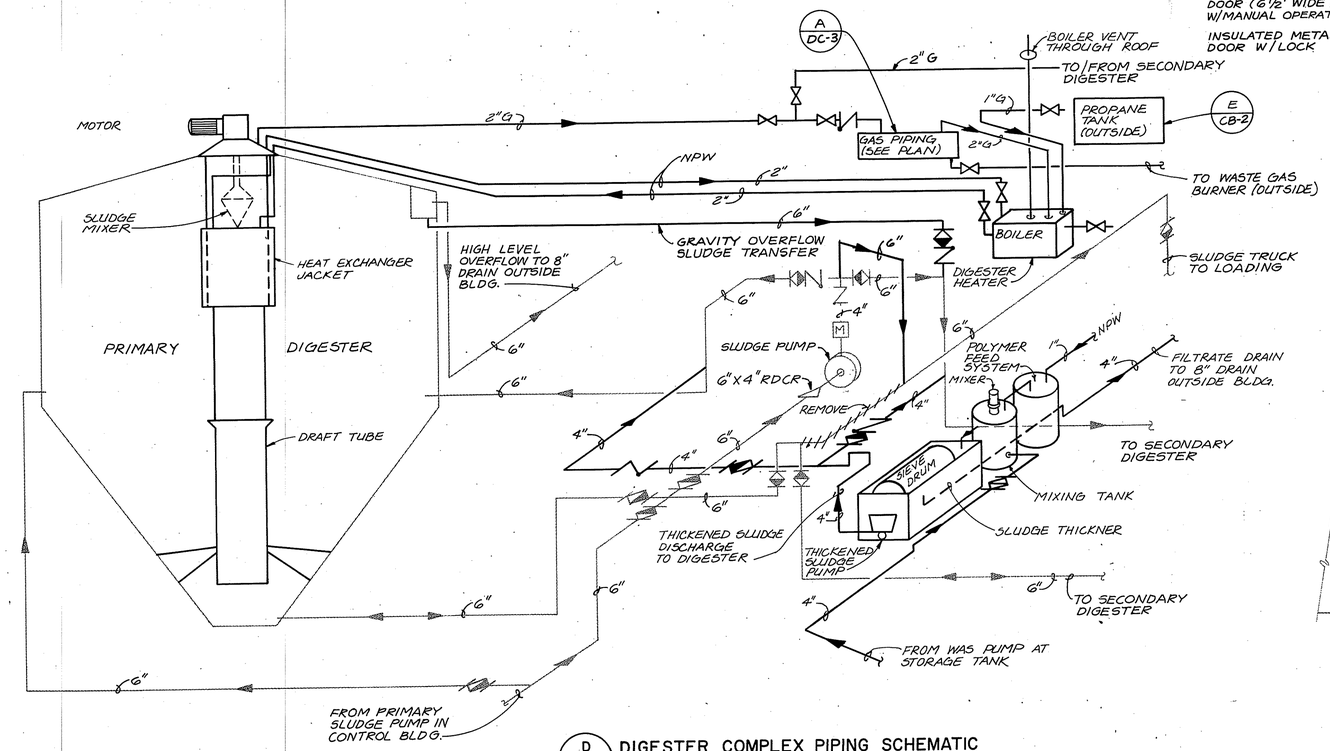
A / DC-1 CONCRETE SLAB FOR BOILER
NO SCALE



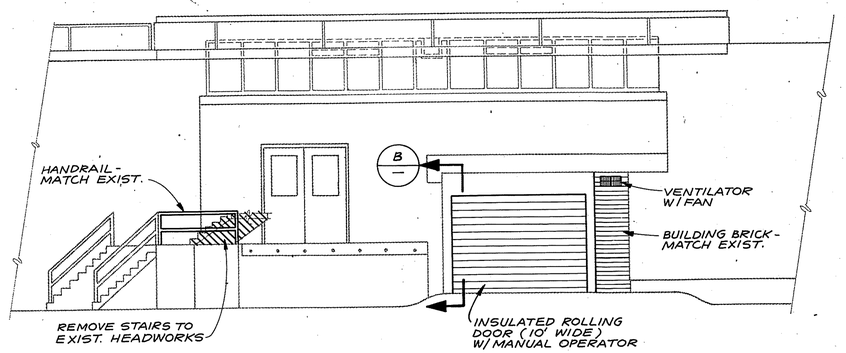
B / — ROLLING DOOR (TYP.)
(CHAIN OPERATED)
NO SCALE



C / — WEST ELEVATION
3/16" = 1' - 0"



D / — DIGESTER COMPLEX PIPING SCHEMATIC
LOOKING SOUTHWEST
NO SCALE



E / — EAST ELEVATION
3/16" = 1' - 0"

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CB-1 | RJB | 1123 | I23

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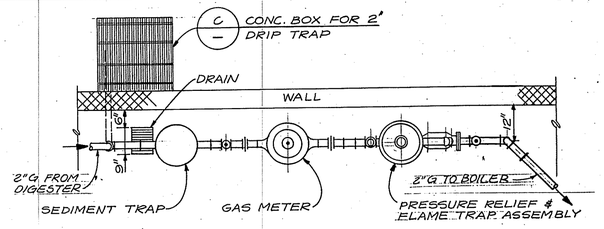
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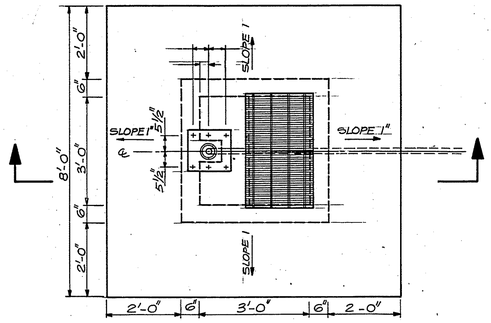
COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

DIGESTER COMPLEX
SCHEMATIC AND ARCHITECTURAL SECTIONS

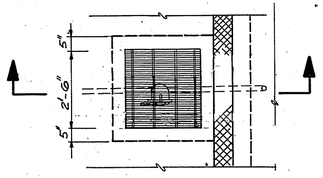
DRAWING NO. DC-2
SHEET NO. 26



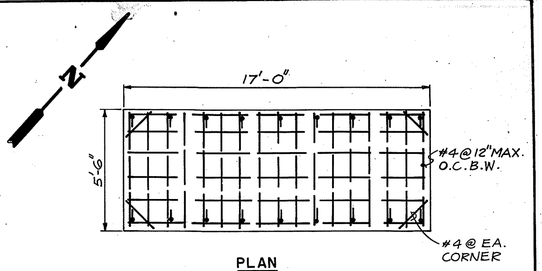
PLAN



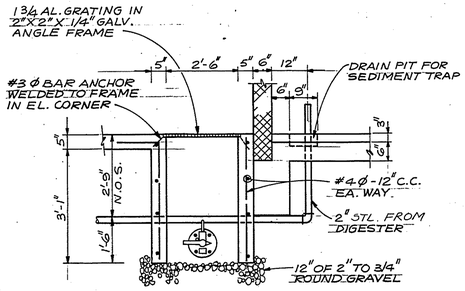
PLAN



PLAN

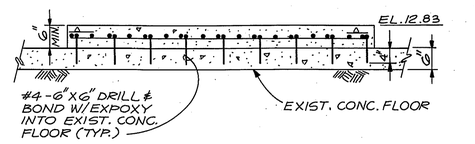


PLAN



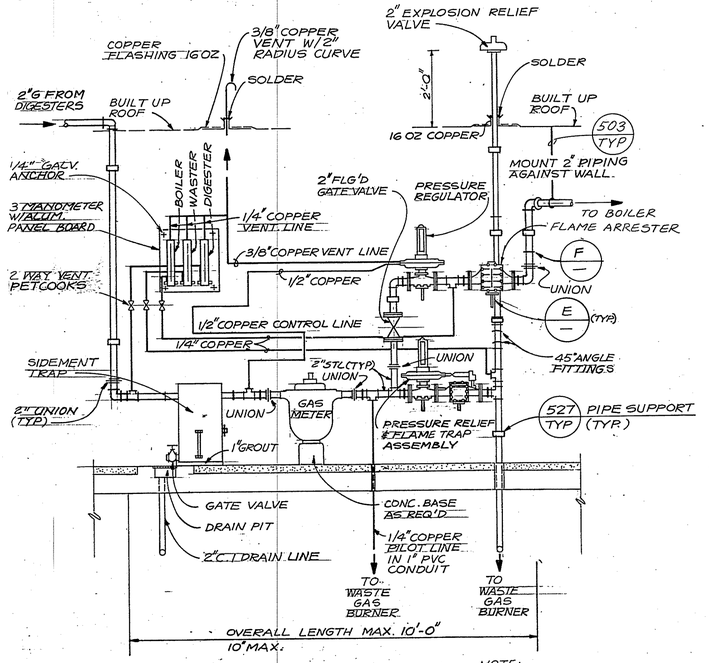
SECTION

C DC-1 **BOX FOR DRIP TRAP**



ELEVATION

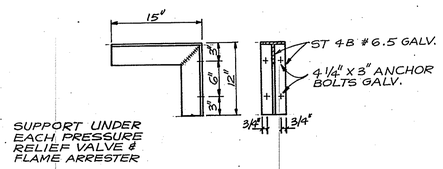
D DC-1 **CONCRETE SLAB FOR THICKENER**
NO SCALE



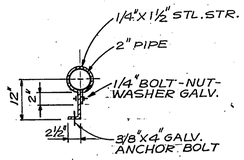
NOTE:
ALL PIPING SHALL BE BLACK STL. UNLESS INDICATED OTHERWISE

ELEVATION

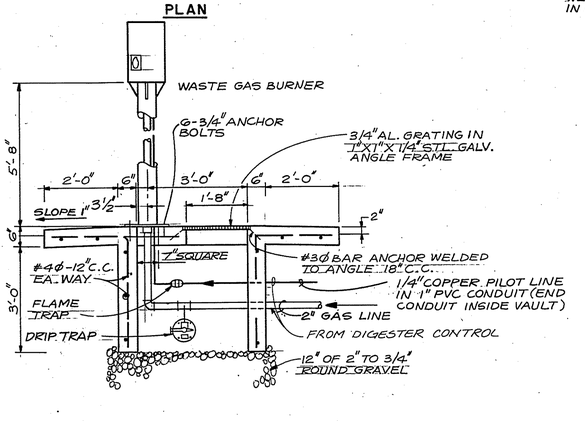
A DC-2 **GAS PIPING**



E — **DETAIL STL. BRACKET**
NO SCALE

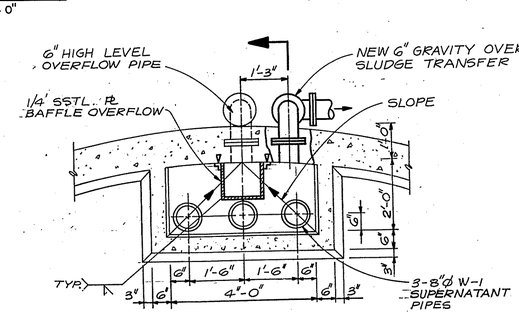


F DC-1 **SUPPORT FOR 2" PIPE**
NO SCALE



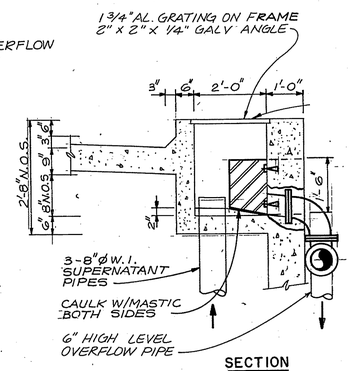
SECTION

B Y-5 **GAS BURNER**
1/2" = 1'-0"



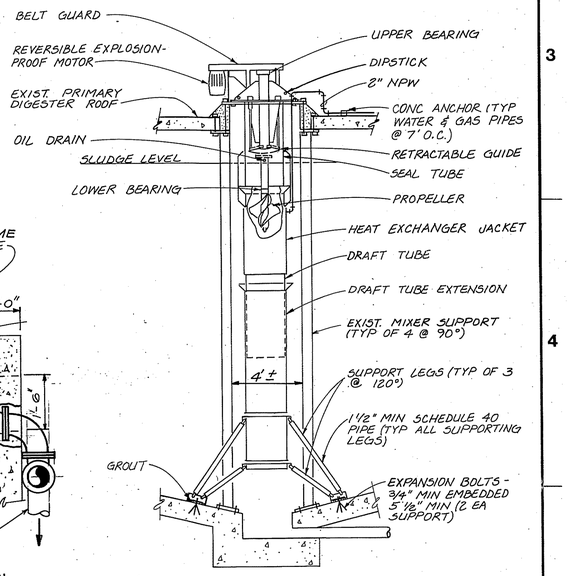
PLAN

G DC-1 **SUPERNATANT OVERFLOW**



SECTION

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H DC-1 **SLUDGE MIXER & DRAFT TUBE**
NO SCALE

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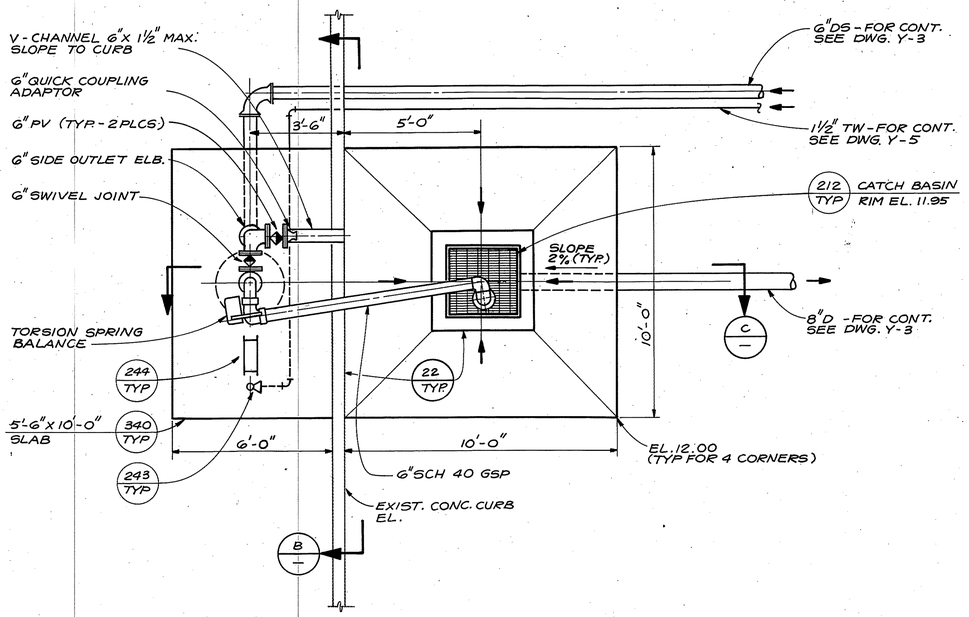
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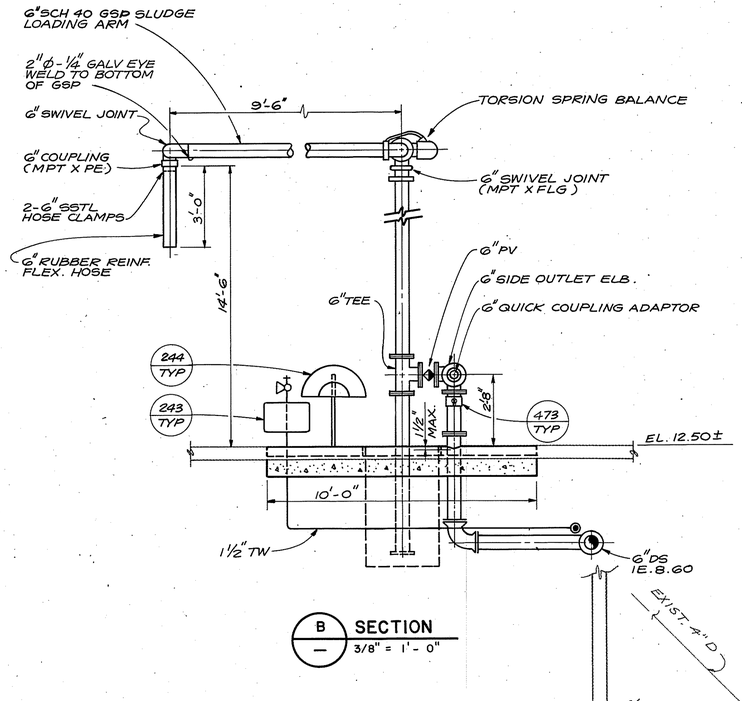
COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

DIGESTER COMPLEX
SECTIONS AND DETAILS

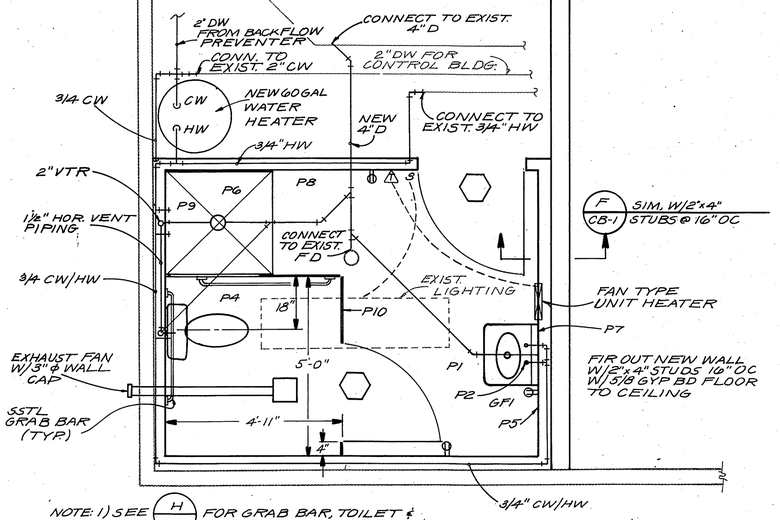
DRAWING NO. DC-3
SHEET NO. 27



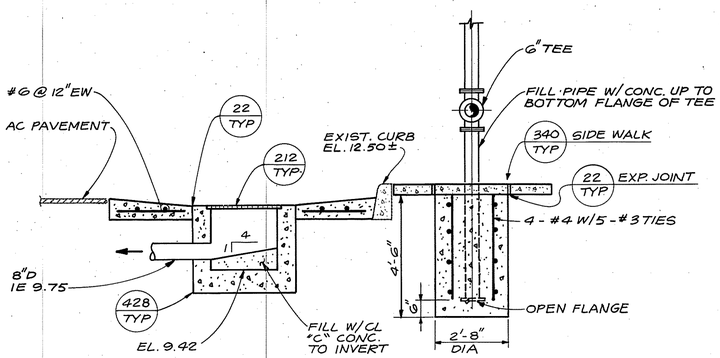
A PLAN
3/8" = 1'-0"



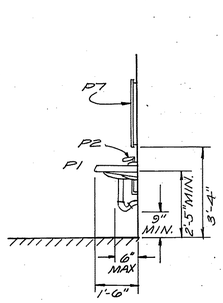
B SECTION
3/8" = 1'-0"

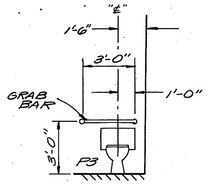


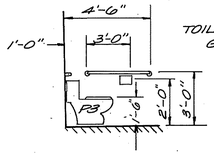
G CB-1 BATHROOM PLAN
1/2" = 1'-0"



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







NOTE: 1) SEE H — FOR GRAB BAR, TOILET & LAVATORY ELEVATIONS & DIMENSIONS.

2) SAW CUT OPENINGS IN CONCRETE FLOOR FOR NEW PIPING.

H DETAILS
1/4" = 1'-0"

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SLD-1 | W28 W28 | Y23 Y23 | X28 X28

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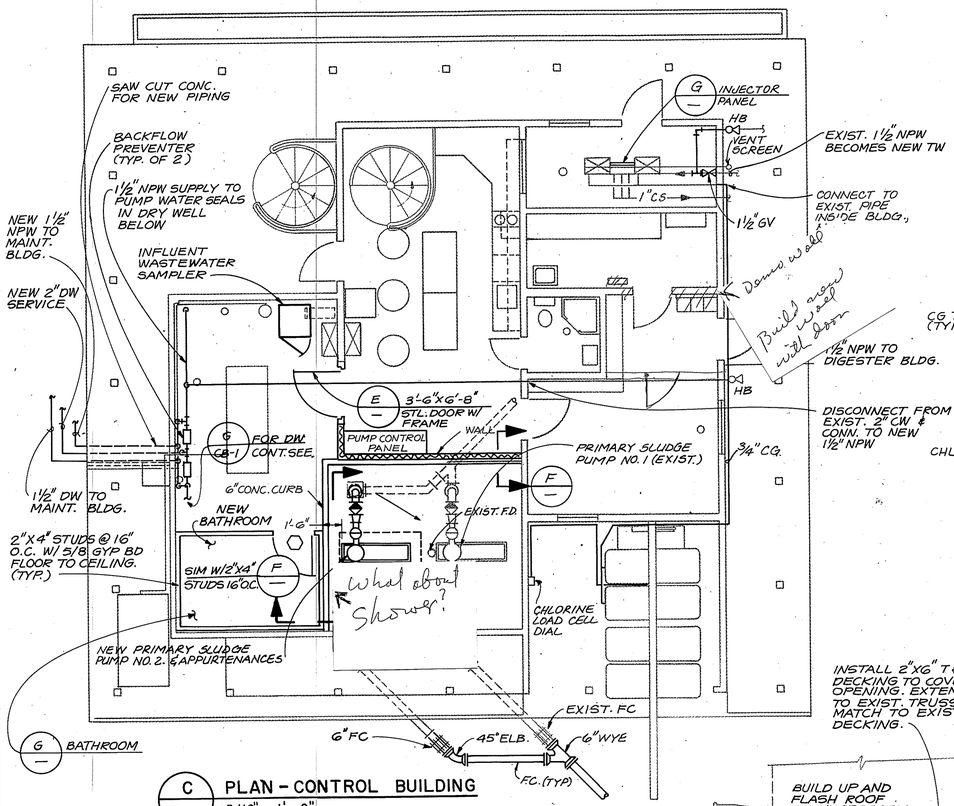
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DATE:		PROJECT NO.:	

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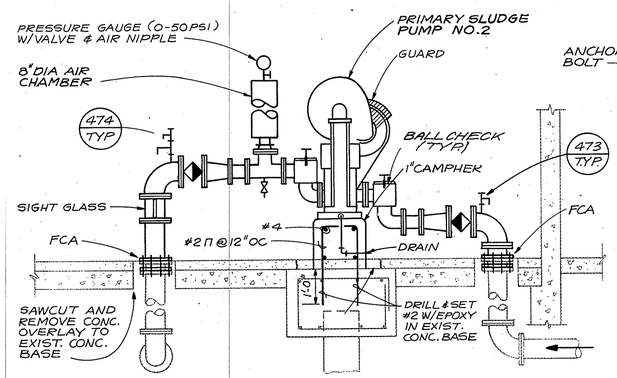
SLUDGE LOADING DOCK
PLAN & SECTIONS

DRAWING NO. SLD-1

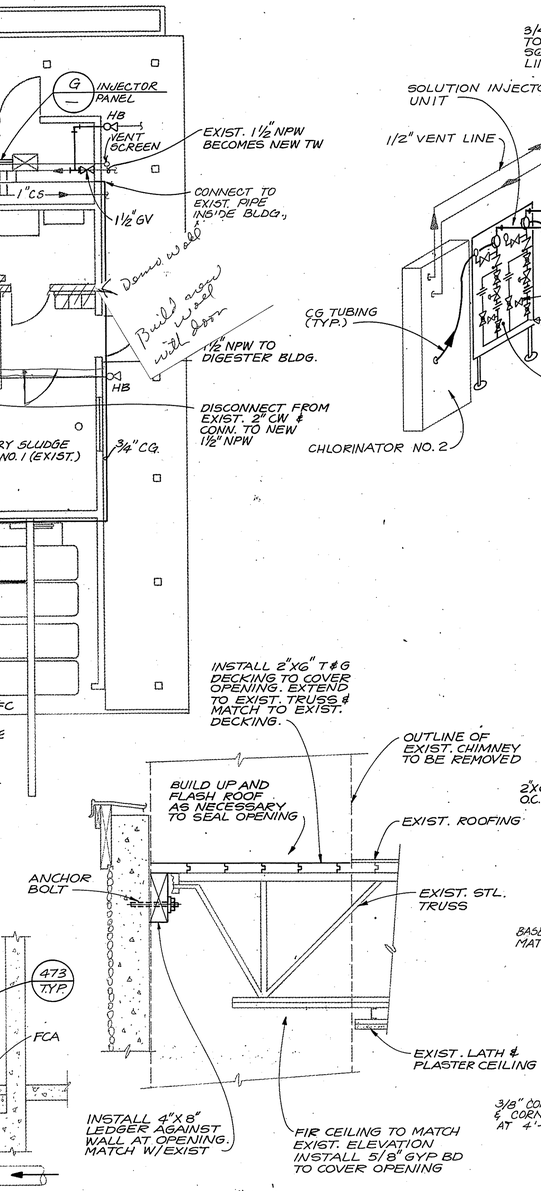
SHEET NO. 28

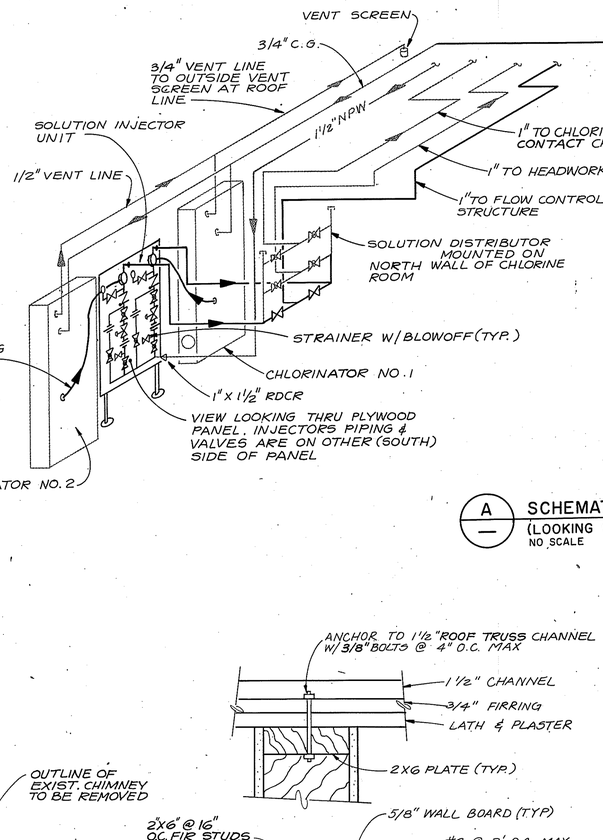


C — PLAN - CONTROL BUILDING
3/16" = 1'-0"

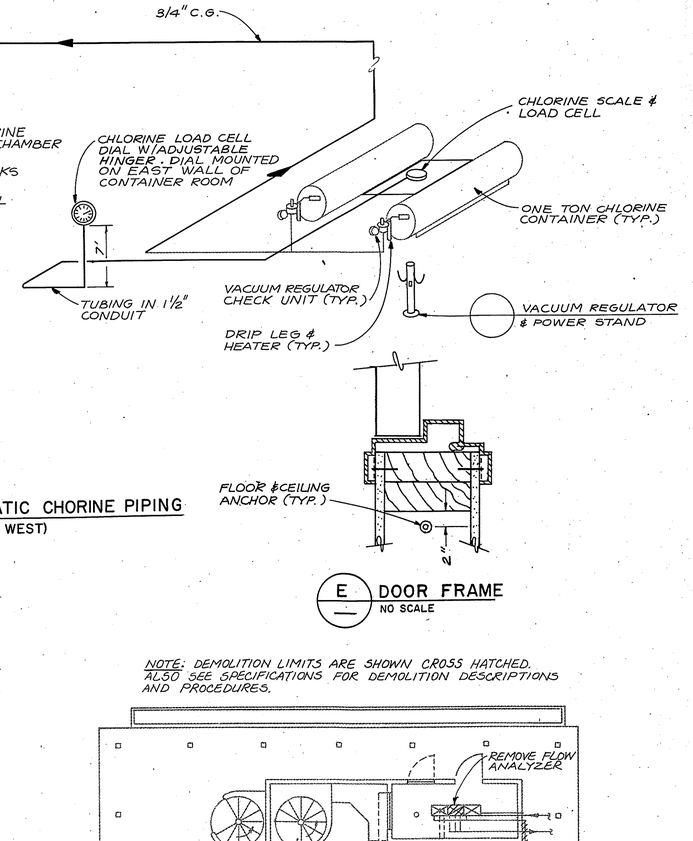


D — SECTION
1/2" = 1'-0"

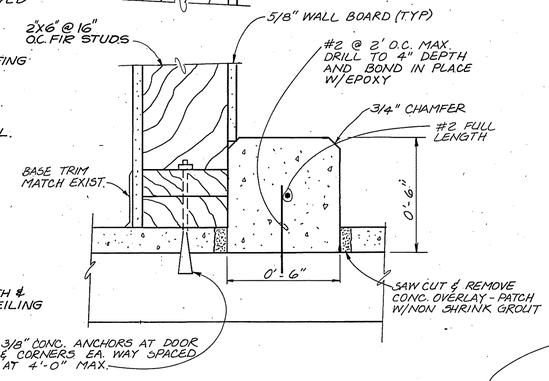




A — SCHEMATIC CHORINE PIPING
(LOOKING WEST)
NO SCALE

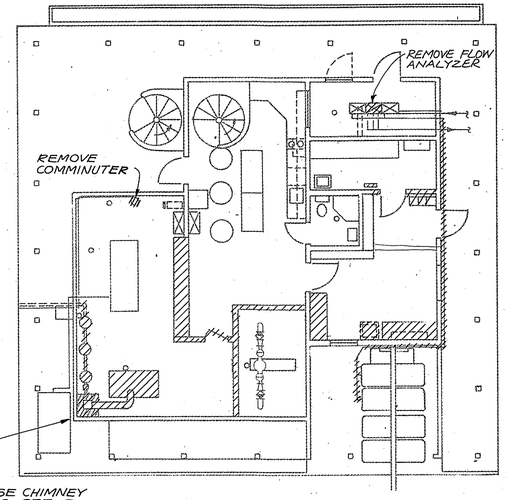


E — DOOR FRAME
NO SCALE



F — WALL AND CURB SECTION
NO SCALE

NOTE: DEMOLITION LIMITS ARE SHOWN CROSS HATCHED. ALSO SEE SPECIFICATIONS FOR DEMOLITION DESCRIPTIONS AND PROCEDURES.



B — DEMOLITION PLAN
1/8" = 1'-0"

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CB-1
R/B A/S
R/S R/S
G/B G/B

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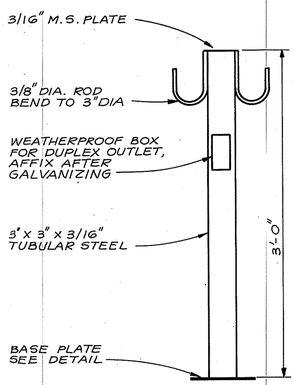
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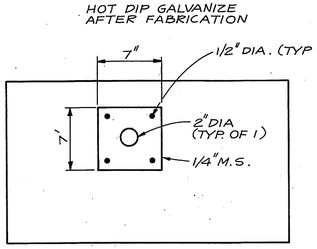
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IMPROVEMENT PROJECT
COOS BAY, OREGON

CONTROL BUILDING
PLAN AND SECTIONS

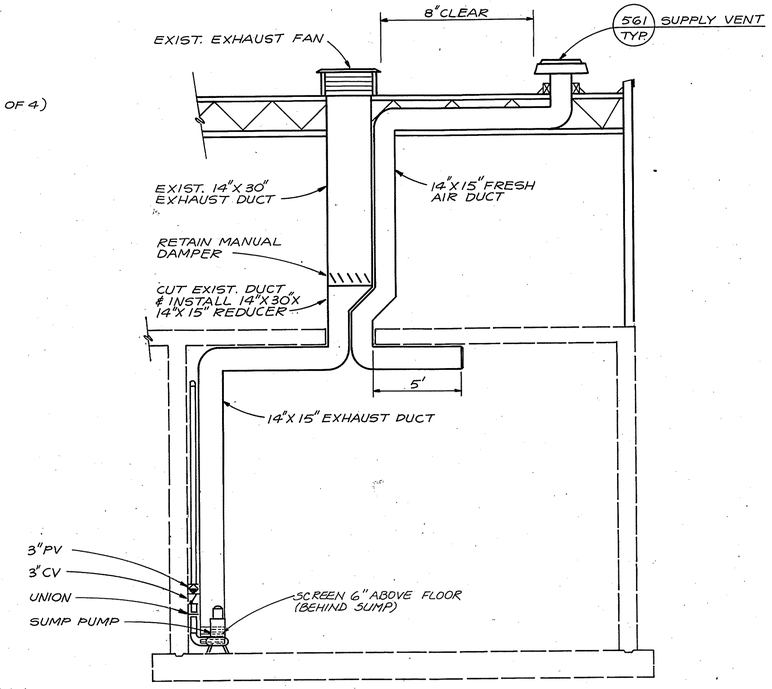
DRAWING NO. CB-1
SHEET NO. 29



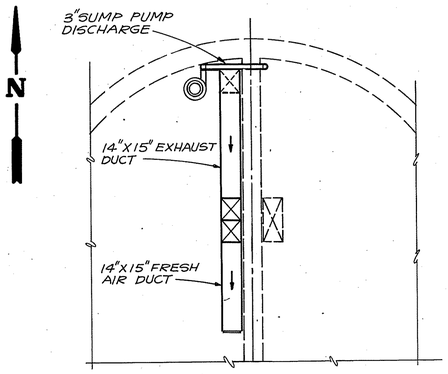


BASE PLATE

A / CB-1 **VACUUM REGULATOR AND POWER STAND**
NO SCALE

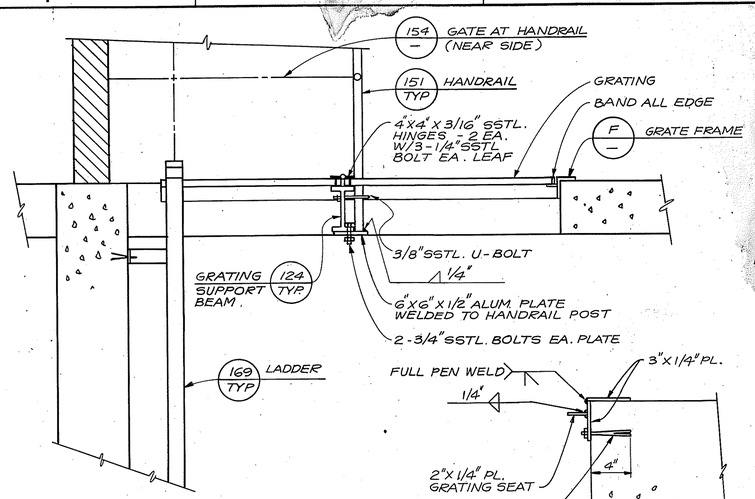


ELEVATION



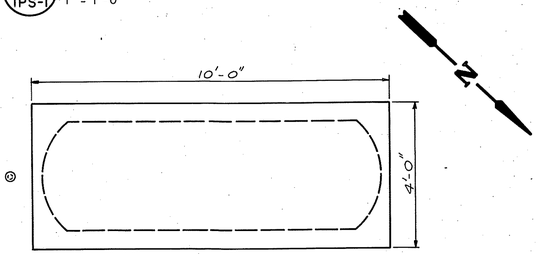
PLAN

D / IPS-1 **AIR DUCT MODIFICATIONS / SUMP**
1/4" = 1'-0"

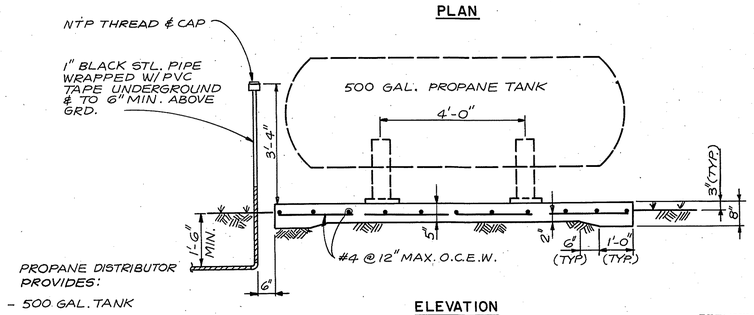


F — GRATE FRAME DETAIL
NTS

B / IPS-1 **WET WELL GRATING & LADDER**
1" = 1'-0"



PLAN



PROPANE DISTRIBUTOR PROVIDES:
- 500 GAL. TANK
- SUPPORTS
- VALVES
- PRESSURE REGULATOR

ELEVATION

E / DC-2 **CONC. SLAB FOR PROPANE TANK**
1/2" = 1'-0"

C / CB-1 **CHLORINE INJECTION PANEL - FRONT VIEW**
NO SCALE

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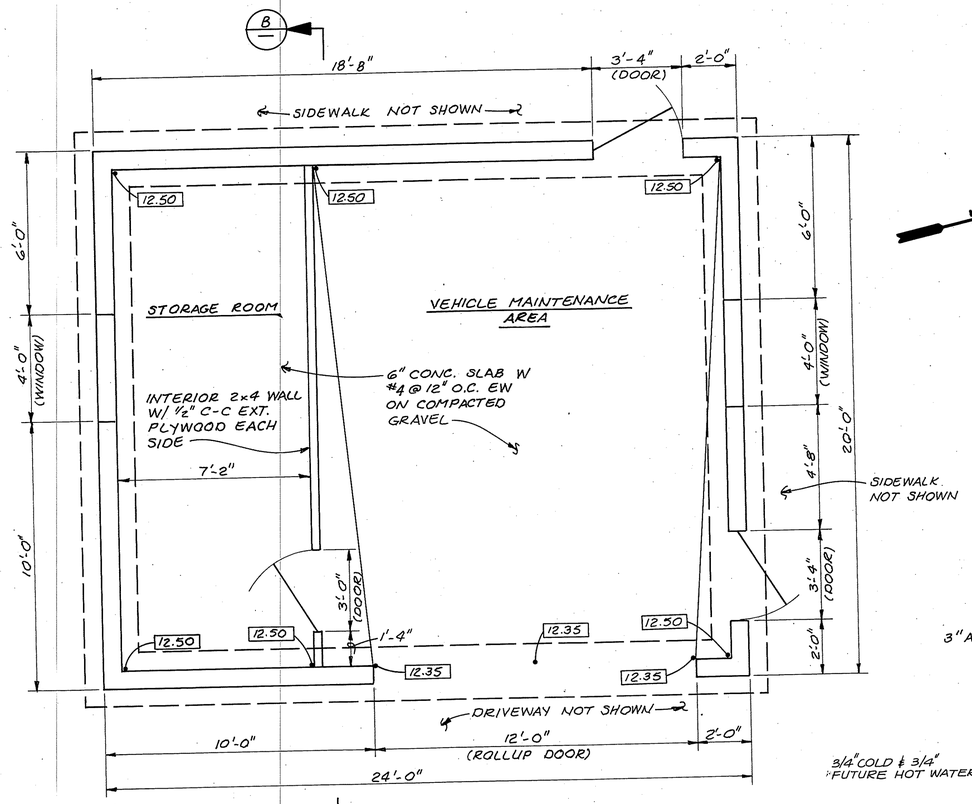
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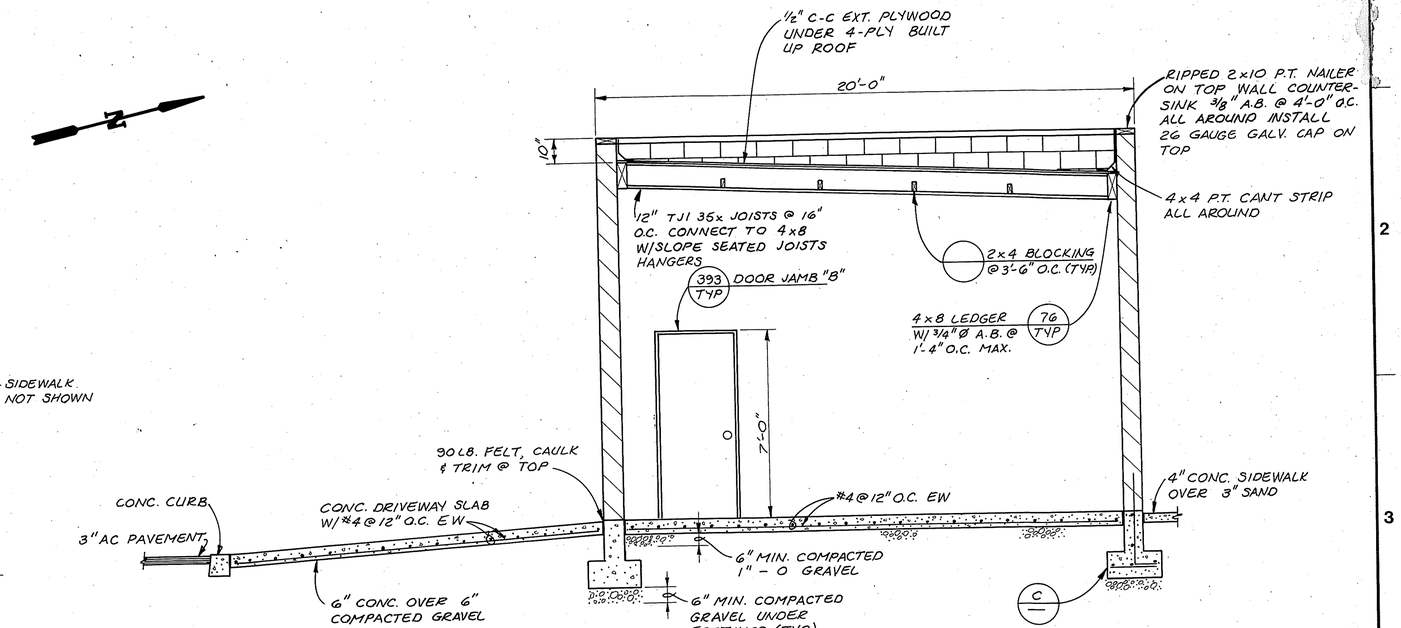
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WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

CONTROL BUILDING
SECTIONS AND DETAILS

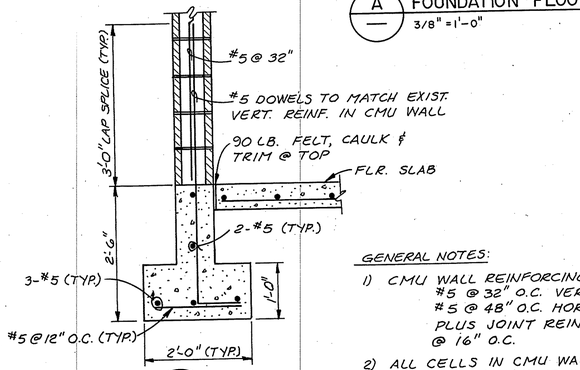
DRAWING NO. CB-2
SHEET NO. 30



A FOUNDATION FLOOR PLAN
3/8" = 1'-0"



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

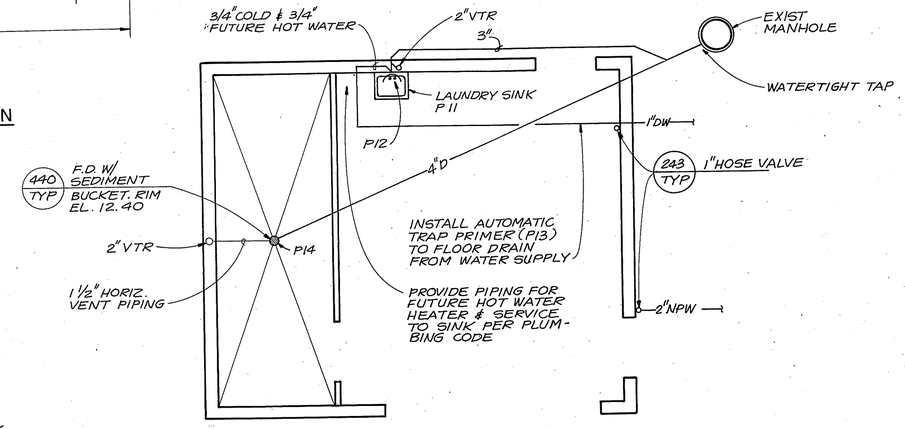


C SECTION
3/4" = 1'-0"

GENERAL NOTES:

1) CMU WALL REINFORCING:
#5 @ 32" O.C. VERTICAL
#5 @ 48" O.C. HORIZONTAL
PLUS JOINT REINFORCING @ 16" O.C.

2) ALL CELLS IN CMU WALL NOT GROUTED, SHALL HAVE INSULATION



D MECHANICAL PLAN
1/4" = 1'-0"

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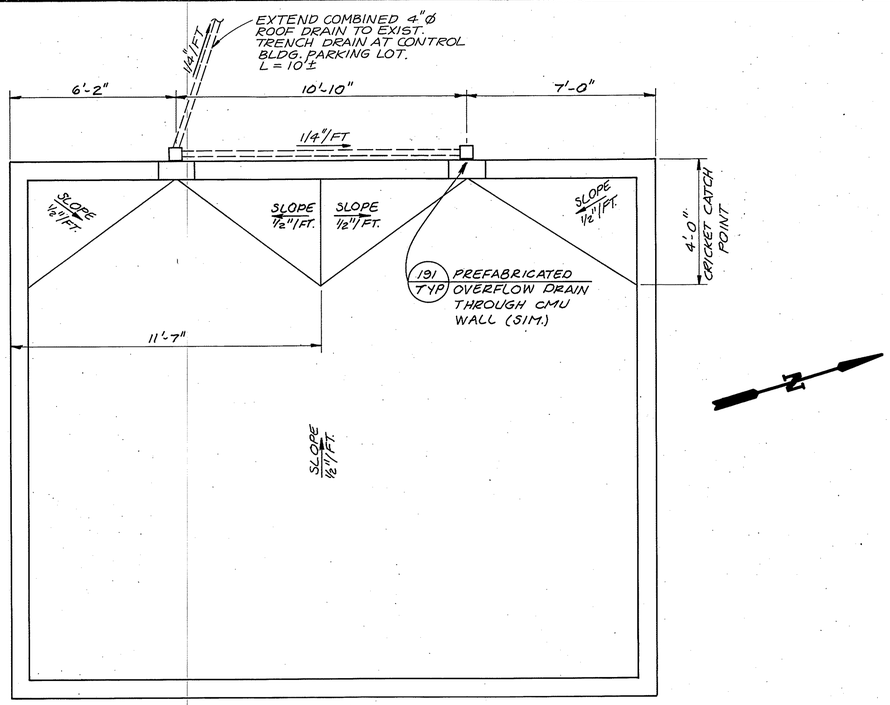
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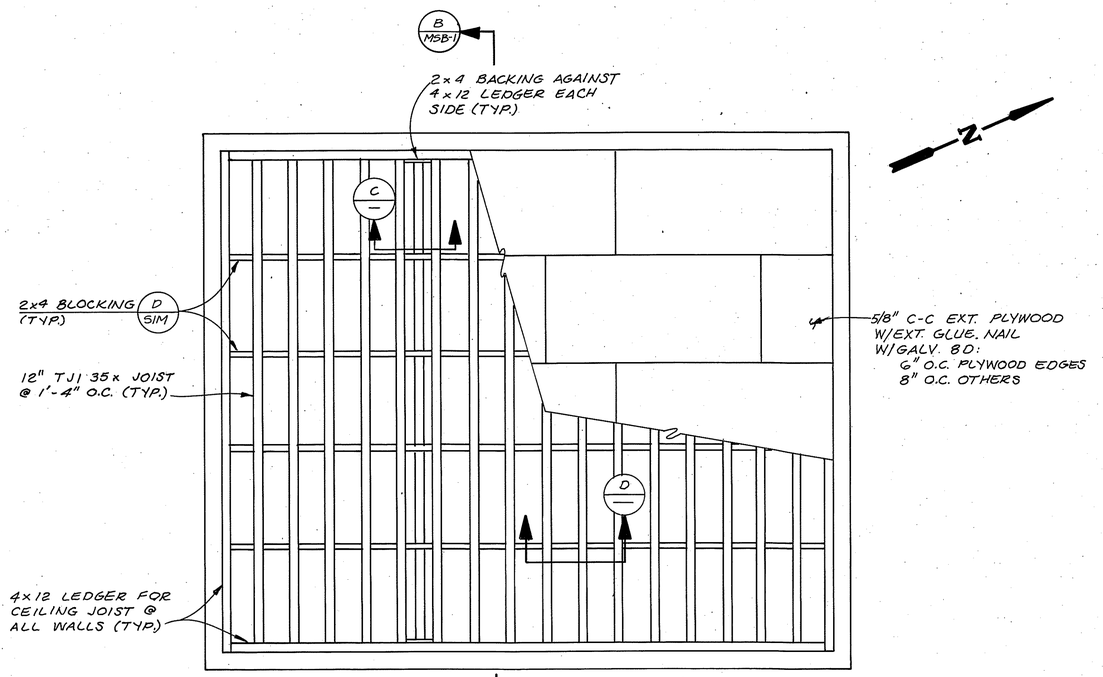
MAINTENANCE / STORAGE BUILDING
MECHANICAL, STRUCTURAL PLAN AND SECTION

DRAWING NO. MSB-1

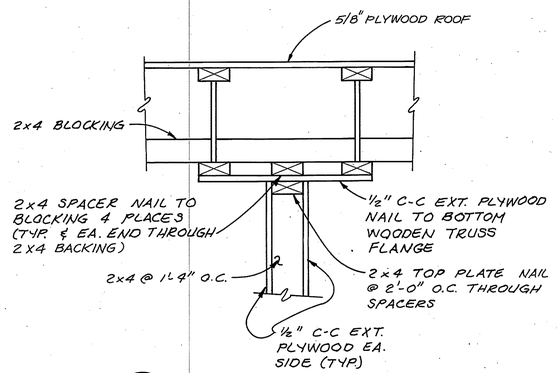
SHEET NO. 31



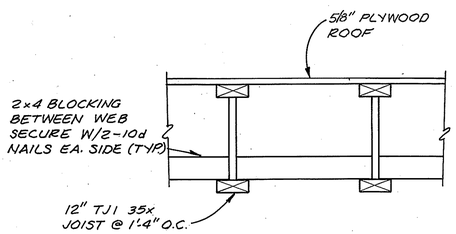
A ROOF PLAN
3/8" = 1'-0"



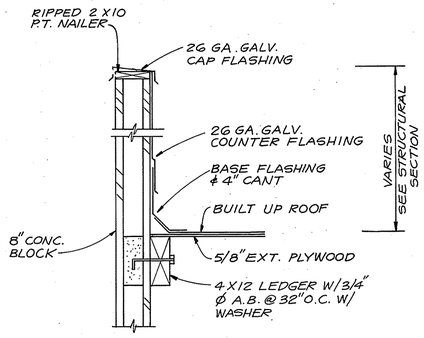
B ROOF FRAMING PLAN
3/8" = 1'-0"



C INTERIOR WALL DETAIL
NTS



D BLOCKING DETAIL
NTS

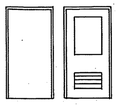


E PARAPET / LEDGER

DOOR SCHEDULE

DOOR MARKS	OPENING SIZES	TYPE	THICKNESS	CONSTRUCTION	FACING/FINISH	GLASS	FRAME
A	3⁰ X 7⁰	I	1 3/4	ALI	B	-	AL
B	3⁰ X 6⁰	I	1 3/4	ALI	B	-	AL
C	3⁰ X 7⁰	II	1 3/4	ALI	B	1"I	AL
D	3⁰ X 7⁰	I	1 3/4	HM	MP	-	HM

TYPES:



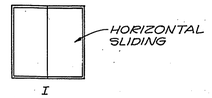
NOTES:
1"I = 1" INSULATING
ALI = ALUMINUM INSULATE
MP = METAL PAINTED
HM = HOLLOW METAL
B = BRONZE
AL = ALUMINUM

WINDOW SCHEDULE

TYPE	SIZE	MAT'L FINISH	GLASS
I	4⁰X4⁰	ALUM/BRONZE	3/4"I

NOTE:
3/4"I = 3/4 INSULATING

TYPES:



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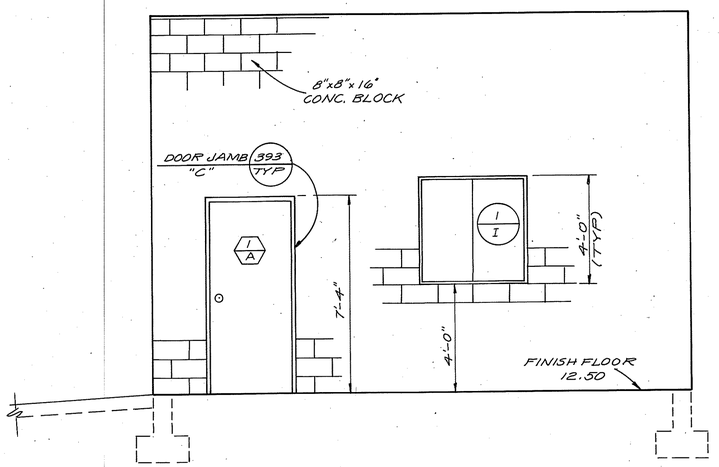
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IMPROVEMENT PROJECT
COOS BAY, OREGON

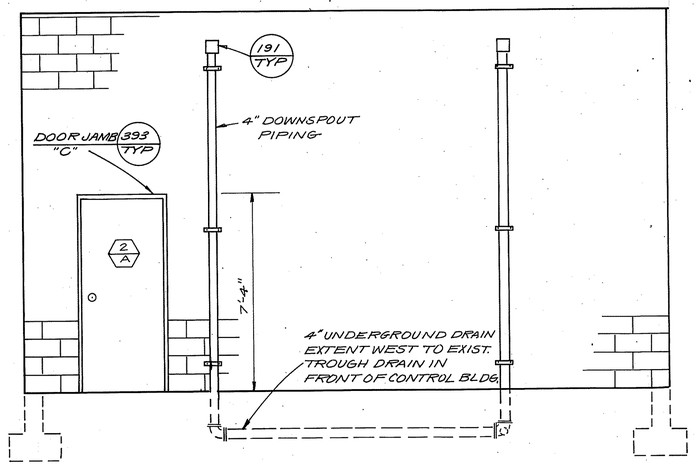
MAINTENANCE / STORAGE BUILDING
ROOFING PLAN AND DETAILS

DRAWING NO. MSB-2

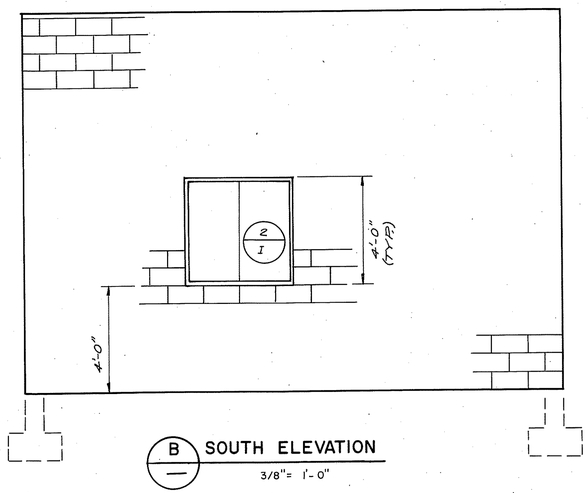
SHEET NO. 32



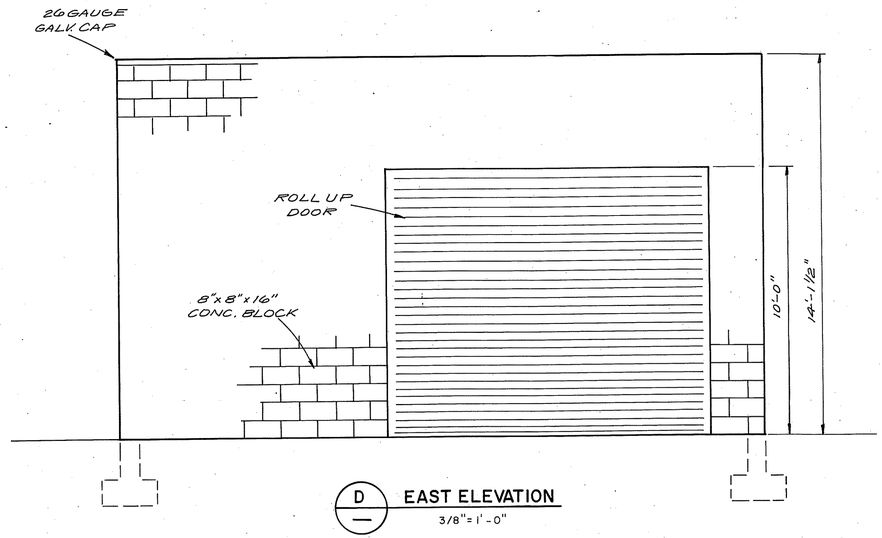
A NORTH ELEVATION
3/8"= 1'-0"



C WEST ELEVATION
3/8"= 1'-0"



B SOUTH ELEVATION
3/8"= 1'-0"



D EAST ELEVATION
3/8"= 1'-0"

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COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

MAINTENANCE / STORAGE BUILDING
ARCHITECTURAL ELEVATIONS

DRAWING NO. MSB-3

SHEET NO. 33

LEGEND

- CEILING LIGHT OUTLET ON STANDBY POWER CIRCUIT
- RECESSED LIGHT FIXTURE
- RECESSED LIGHT FIXTURE ON STANDBY POWER CIRCUIT
- WALL MOUNTED LIGHT FIXTURE
- EXIT SIGN-WITHOUT ARROWS
- SURFACE FLUORESCENT FIXTURE
- SURFACE FLUORESCENT FIXTURE ON STANDBY POWER CIRCUIT
- RECESSED FLUORESCENT FIXTURE
- RECESSED FLUORESCENT FIXTURE, 1 OR MORE LAMPS ON STANDBY POWER CIRCUIT
- BARE LAMP STRIP FIXTURE
- BARE LAMP STRIP FIXTURE ON STANDBY CIRCUIT
- AREA LIGHT - SINGLE ARM DIRECTIONAL
- FLOODLIGHT
- FIXTURE TYPE DESIGNATION
- NO. AND WATTAGE OF LAMPS (A / 3/40)
- CONTACTOR
- LIGHTING RELAY IN JUNCTION BOX ABOVE CEILING
- PHOTO ELECTRIC CONTROL
- BRANCH CIRCUIT PANEL - SURFACE, FLUSH
- MAJOR ELECTRICAL DISTRIBUTION OR MOTOR CONTROL AS INDICATED
- WALL SWITCH
  2-DOUBLE POLE
  3-THREEWAY
  WP-WEATHERPROOF
  A OR B - SUBSCRIPT IDENTIFIES FIXTURES TO BE CONTROLLED
  P - PILOT LIGHT
- MANUAL MOTOR STARTER SWITCH
- DUPLEX RECEPTACLE-NORMAL, GROUND FAULT INTERRUPTING
- 240/208V, 3W RECEPTACLE-QUADRUPLEX RECEPTACLE. 20A, UNLESS SHOWN OTHERWISE.
- FLUSH DUPLEX RECEPTACLE ON CEILING
- CONNECTION TO SPECIAL EQUIPMENT OR OUTLET AS SHOWN
- ASTERISK INDICATES RECEPTACLE ABOVE COUNTER, VERIFY
- PUSHBUTTON STATION, RAISE LOWER STATION
- MOTOR OUTLET, HORSEPOWER INDICATED.
- DISCONNECT SWITCH
- DISCONNECT SWITCH, FUSED, RATING & FUSES SHOWN (60/40)
- MANUAL MOTOR STARTER, MAGNETIC MOTOR STARTER
- UNIT HEATER
- WALL HEATER (WLH)
- BARE COPPER GROUND CONDUCTOR, BURIED IN EARTH 12" MINIMUM. SPLICE SECTIONS WITH BURNDY TYPE YGS FITTINGS.
- TAP CONNECTION TO GROUND GRID, BURNDY TYPE YGHP-C FITTING.
- GROUND WIRE CONNECTION TO BURIED 3/4" X 8-0" COPPER GROUND ROD WITH BURNDY TYPE YGLR-C FITTING.

- GROUND WIRE CONNECTION TO BUILDING STRUCTURAL STEEL. BURNDY TYPE GSTUD-HYB FITTING.
- HOME RUN, ELECTRICAL PANEL DESTINATION SHOWN. (P4)
- * CONDUIT CONCEALED UNDERFLOOR OR UNDERGROUND.
- * CONDUIT CONCEALED IN WALL OR ABOVE CEILING IN FINISHED AREAS, EXPOSED IN PROCESS AND EQUIPMENT AREAS.
- * NOTE:
  ALL UNMARKED CONDUIT RUNS CONSIST OF TWO NO.12 CONDUCTORS IN CONDUIT. RUNS MARKED WITH CROSS-HATCHES INDICATE NUMBER OF NO.12 WIRE. LARGER GAUGES ARE SHOWN. REVERSE SLANT INDICATES GREEN GROUND WIRE. SIZE CONDUIT ACCORDING TO ELECTRICAL SPECIFICATIONS AND APPLICABLE CODE. LONG CROSS HATCH INDICATES NEUTRAL.
- JUNCTION BOX (J)
- TELEPHONE OUTLET WITH 3/4" C UP TO ACCESSIBLE CEILING
- COMMUNICATION OUTLET WITH 3/4" C UP TO ACCESSIBLE CEILING (C)
- PA SPEAKER-RECESSED, CEILING
- PA SPEAKER-SURFACE, WALL
- PA VOLUME CONTROL (V)
- FIRE ALARM MANUAL PULL STATION +54" (F)
- FIRE ALARM BELL +90"
- FIRE ALARM DETECTOR-THERMAL, PHOTOCELL OBSCURATION (H, S)
- GROUND CONNECTION
- TRANSFORMER
- CCTV CAMERA
- INSTRUMENT OR CONTROL DEVICE* FIELD MOUNTED OR PART OF EQUIPMENT (XXX / 000)
- INSTRUMENT OR CONTROL DEVICE* LOCATED ON A PANEL (XXX / 000)
- INSTRUMENT OF CONTROL DEVICE* LOCATED WITHIN A PANEL (XXX / 000)
  * XXX-INSTRUMENT TYPE PER ABBREVIATIONS
  000-INSTRUMENT LOOP IDENTIFICATION NUMBER
- MOTOR THERMAL OVERLOAD RELAY
- MOTOR STARTER CONTACTOR, NEMA SIZE RATING OR IEC RATED AC3 OPERATIONAL CURRENT SHOWN (1 OR IEC34)
- THERMAL MAGNETIC CIRCUIT BREAKER, FRAME SIZE AND TRIP SETTING SHOWN (400AF 300AT OR 400AF 300AT)
- MAGNETIC ONLY CIRCUIT BREAKER (MOTOR CIRCUITS ONLY) CONTINUOUS CURRENT RATING AND TRIP SETTINGS SHOWN (MAG 140AT)
- FUSE, AMPERE RATING SHOWN. (30)
- MOTOR CONTROL CIRCUIT DIAGRAM IDENTIFICATION OR DRAWING NOTE (1)
- ELECTRICAL CIRCUIT IDENTIFICATION (3)

ABBREVIATIONS

A	AMPERES
AM	AMMETER
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
ASU	AIR SUPPLY UNIT
AN	ANNUNCIATOR
ANT	ANTENNA
ATC	AUTOMATIC TRIP CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
B	BELL
BB	BASEBOARD
C	CONDUIT
CB	CIRCUIT BREAKER
CC	CONTROL CABLE
CCTV	CLOSED CIRCUIT TELEVISION
CH	CHIME
CHH	COMMUNICATIONS HANDHOLE
CKT	CIRCUIT
CO	CONDUIT ONLY
CONT	CONTROL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CT	CURRENT TRANSFORMER
CVLS	CHECK VALVE LIMIT SWITCH
D	DISCONNECT
DC	DIRECT CURRENT
DF	DRINKING FOUNTAIN
DM	DIMMER
E	EMERGENCY
EF	EXHAUST FAN
EI	ELECTRIC INDICATOR
EIHG	ELECTRIC INDICATOR HIGH EVENT
EILG	ELECTRIC INDICATOR LOW EVENT
EMT	ELECTRICAL METALLIC TUBING
EP	EXPLOSION PROOF
ET	ELECTRIC TRANSMITTER
ETM	ELAPSED TIME METER
FU	FUSE
FE	FLOW ELEMENT
FI	FLOW INDICATOR
FLS	FLOAT SWITCH
FLUOR	FLUORESCENT
FM	FLOW METER
FS	FLOW SWITCH
FT	FLOW TRANSMITTER
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
G, GND	GROUND
GFI	GROUND FAULT INTERRUPTER
GFR	GROUND FAULT RELAY
H	HORN
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HEAT PUMP
HPS	HIGH PRESSURE SODIUM
HS	HAND SWITCH
IC	INTERRUPTING CAPACITY
IMC	INTERMEDIATE METALLIC CONDUIT
INC	INCANDESCENT
IR	INTRINSIC SAFE RELAY
J, JB	JUNCTION BOX
K	KEY INTERLOCK
L	LIGHTING CONTACTOR
LA	LIGHTNING ARRESTER
LDR	LOAD RELAY
LE	LEVEL ELEMENT-ANALOG
LOS	LOCKOUT STOP
LR	LIGHTING RELAY
LSL	LEVEL SWITCH LOW
LSH	LEVEL SWITCH HIGH
LSHH	LEVEL SWITCH HIGH-HIGH
LSLL	LEVEL SWITCH LOW-LOW
LT	LEVEL TRANSMITTER
M	MAGNETIC CONTACTOR COIL
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MH	METAL HALIDE
MS	MOTOR STARTER
N(NEUT	NEUTRAL
NA	NON AUTOMATIC
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OL	OVERLOAD RELAY
OO	ON-OFF
PA	PUBLIC ADDRESS
PB	PUSHBUTTON SWITCH
PC	PHOTOCELL
PCP	PLANT CONTROL PANEL
PI	PRESSURE INDICATOR
PNL	PANEL
PR	PHASE MONITOR RELAY
PS	PRESSURE SWITCH
PSH	PRESSURE SWITCH-HIGH
PT	POTENTIAL TRANSFORMER
PT-XXX	PRESSURE TRANSMITTER (X=LOOP NO.)
PVC	POLYVINYL CHLORIDE
R	RELAY
RB	RIGID STEEL GALVANIZED
SC	SPEED CONTROL UNIT
SS	SPEED SWITCH-MOTION SENSOR
ST	SPEED TRANSMITTER (TACHOMETER)
SV	SOLENOID VALVE
SVA	SOLENOID VALVE A DIRECTION
SVB	SOLENOID VALVE B DIRECTION
SVC	SOLENOID VALVE CLOSE
SVF	SOLENOID VALVE FORWARD
SVO	SOLENOID VALVE OPEN
SVR	SOLENOID VALVE REVERSE
SW	SWITCH
T	THERMOSTAT
TB	TERMINAL BOARD
TC	TIME CLOSING
TD	THERMAL DETECTOR
TEL	TELEPHONE
TDR	TIME DELAY RELAY
TJB	TERMINAL JUNCTION BOX
TMC	TIME CLOCK
TO	TIME OPENING
TR	TIMER-REPEAT CYCLE
TS	TEMPERATURE SWITCH
TSH	TEMPERATURE SWITCH HIGH
TSP	TWISTED SHIELD PAIR
TST	TWISTED SHIELDED TRIAD
UD	UP-DOWN
UH	UNIT HEATER
UVR	UNDER VOLTAGE RELAY
V	VOLTMETER
VP	VAPORPROOF
WH	WATER HEATER
WHD	WATTHOUR DEMAND METER
WLH	WALL HEATER
WP	WEATHERPROOF
ZSA	POSITION SWITCH - POSITION A
ZSB	POSITION SWITCH - POSITION B
ZSC	POSITION SWITCH - CLOSED POSITION
ZSF	POSITION SWITCH - FORWARD
ZSO	POSITION SWITCH - OPEN POSITION
ZSR	POSITION SWITCH - REVERSE

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E2-E3½ LEGEND

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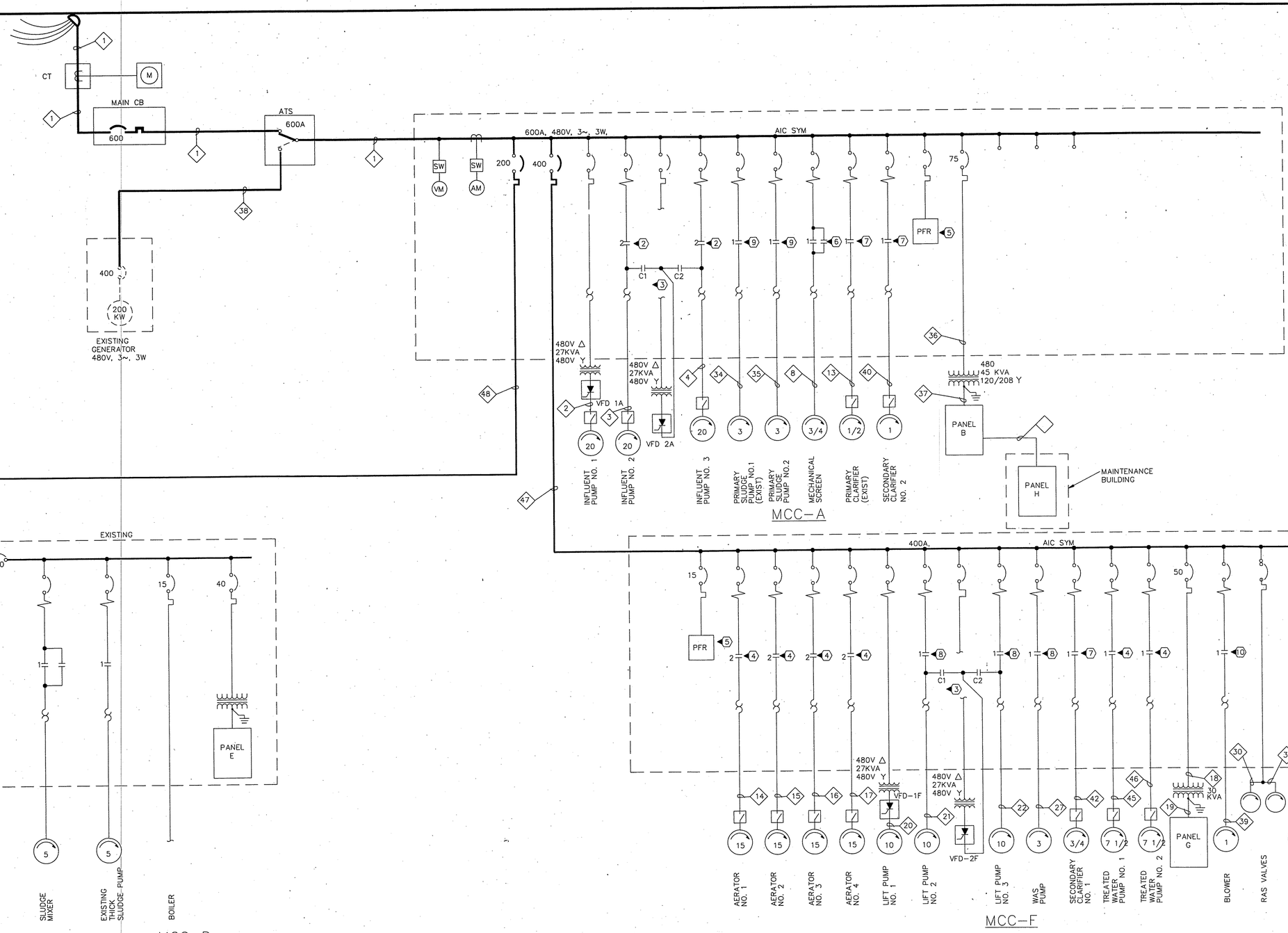
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COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

LEGEND & ABBREVIATIONS

DRAWING NO. E-1

SHEET NO. 34



132–03\ONE–LINE

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COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

ELECTRICAL ONE–LINE DIAGRAM

DRAWING NO. E–2

SHEET NO. 35

WASTE GAS BURNER (B / DC-3)

SLUDGE LOADING DOCK (A / SLD-1)

SECONDARY DIGESTER

PRIMARY DIGESTER

(E / CB-2) 500 GAL. PROPANE TANK

DIGESTER CONTROL BLDG.

MCC-D (EXIST.)

CB

HEADWORKS

MCC - A

CONTROL BUILDING

INFLUENT PUMP STATION

TRENCH DRAIN

DIESEL FUEL TANK

SEE E-6

EXIST. AC

EXIST. GRAVEL SURFACE

M.H.

POC (TYP.)

NEW MAINTENANCE / STORAGE BLDG.

NEW HEADWORKS

EXISTING LIGHT POLE

SEE 4 / E-8

SECONDARY CLARIFIER NO. 1

TO MCC-F

REUSE EXIST. CONDUIT POURED IN CONCRETE

AIR BLOWER

NOTE 1

SEE 2 / E-8

AUXILIARY WAS STORAGE TANK

MCC-F

INTERMEDIATE LIFT STATION & WAS STORAGE TANK

FLOW CONTROL STRUCTURE

AERATION BASIN NO. 1

SEE 1 / E-7

PCE BOX

SCUM M.H.

NOTE 1 PRIMARY CLARIFIER

SEE 2 / E-6

AERATION BASIN NO. 2

SECONDARY CLARIFIER NO. 2

SEE E-4

MATCH LINE – FOR CONT. SEE DWG.

NOTES

1. REMOVE EXISTING CONDUIT AND CONDUCTORS AND REPLACE WITH NEW AS SHOWN.

0 10 20 30

SCALE IN FEET

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E15

E-3	
B\B	A\B
E15	–
Q\B	Q\B
–	–
–	–
–	–
F\B	F\B
–	–

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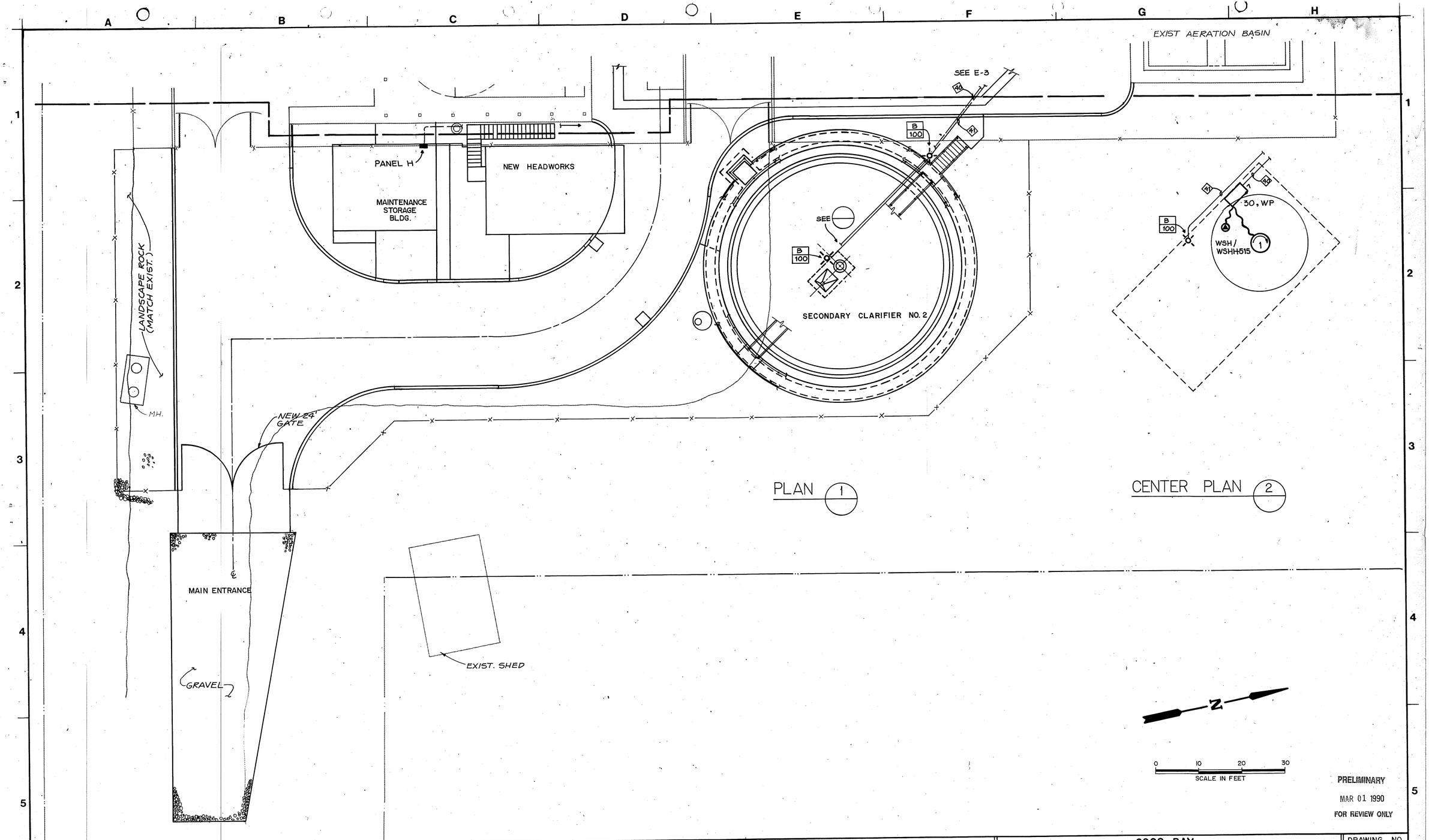
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WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

ELECTRICAL SITE PLAN-WEST

DRAWING NO. E-3

SHEET NO. 36



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E-4
NS A18
GRB R28
— —
TJB TJB
JS JS
— —
— —

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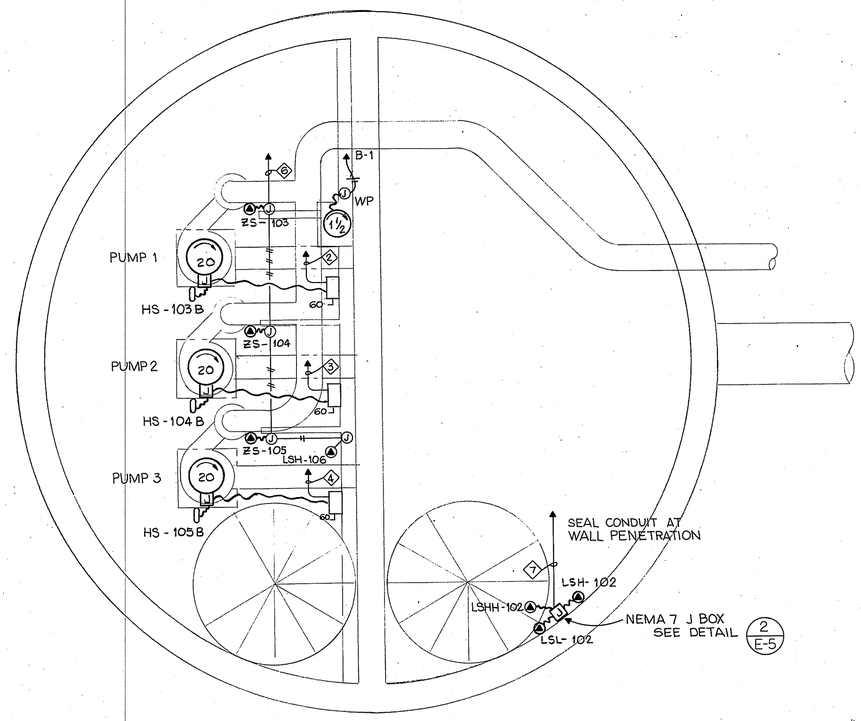
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WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

ELECTRICAL SITE PLAN-EAST

DRAWING NO. E-4

SHEET NO. 37



NORTH

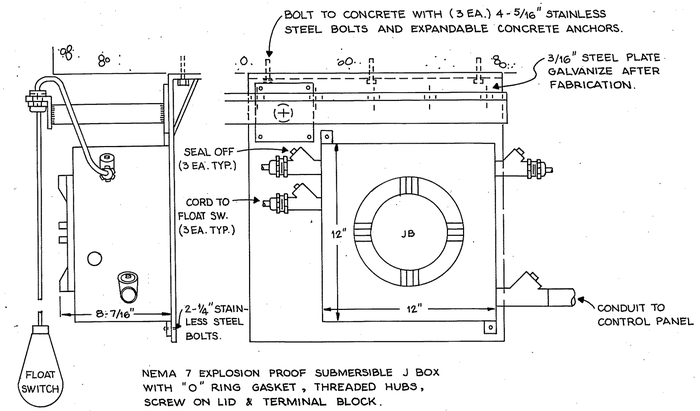
PUMP STATION PLAN

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

1/E-5

NOTE:

1. SEE DRAWING IPS-1 FOR EQUIPMENT DEMOLITION. ELECTRICAL CONTRACTOR TO DISCONNECT ALL EQUIPMENT SHOWN TO BE REMOVED.



NEMA 7 J BOX MOUNTING DETAIL

NTS

2/E-5

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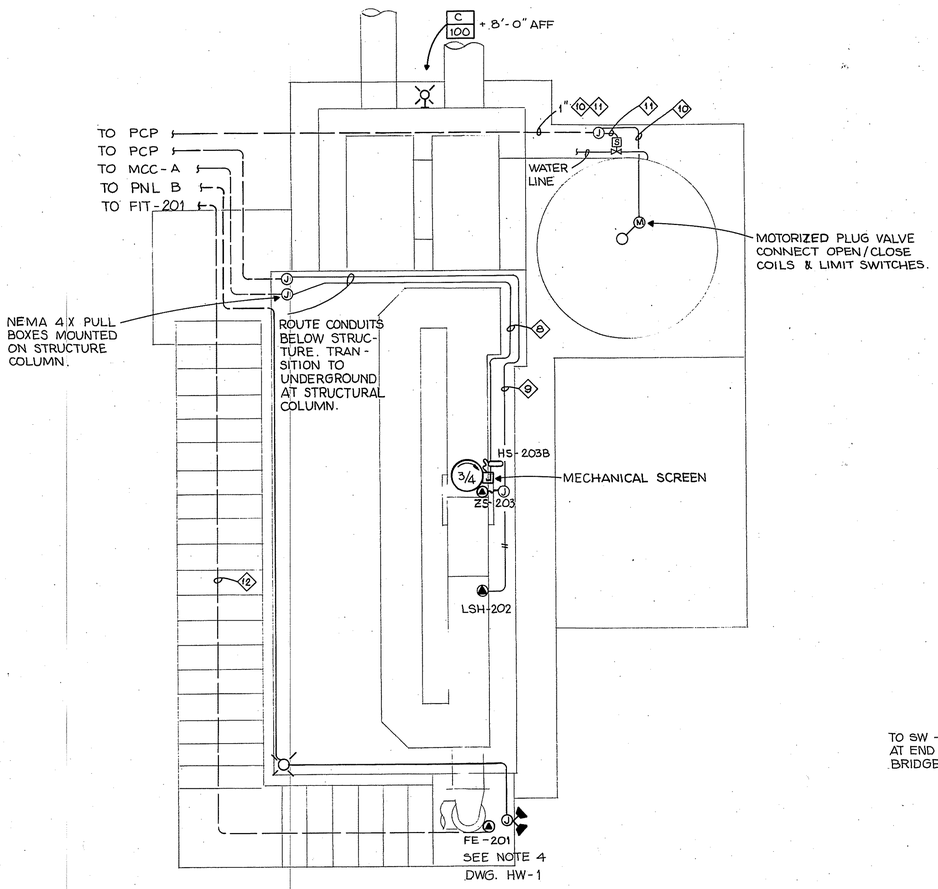
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COOS BAY, OREGON

ELECTRICAL-INFLUENT PUMP STATION

DRAWING NO. E-5

SHEET NO. 38

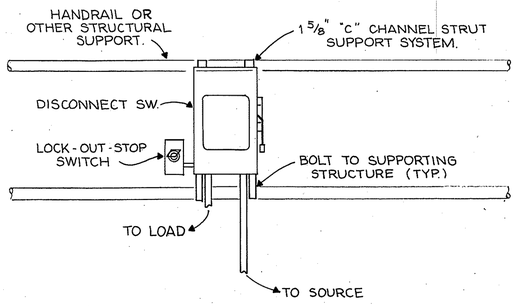


NORTH

PLAN

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

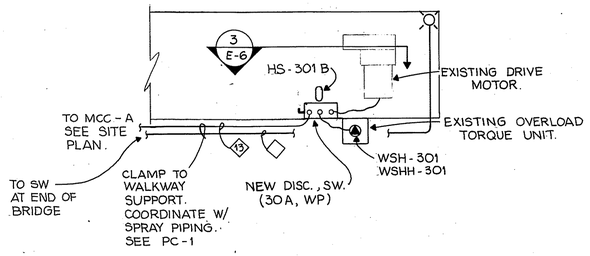
1 / E-6



ELEVATION

NTS

3 / E-6



NORTH

PRIMARY CLARIFIER CENTER PLAN

NTS

2 / E-6

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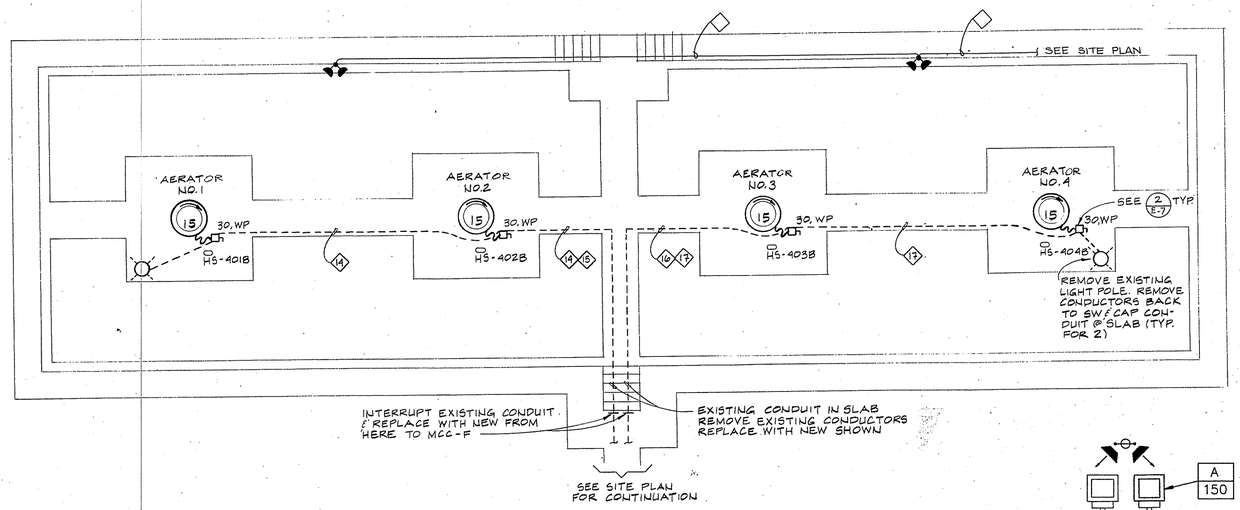
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COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
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ELECTRICAL - HEADWORKS

DRAWING NO. E-6

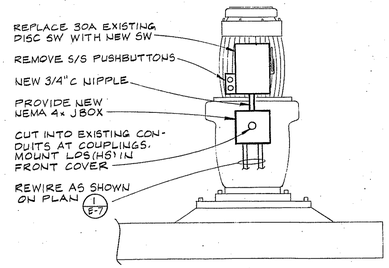
SHEET NO. 39



NORTH

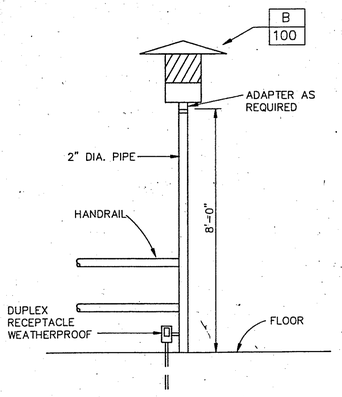
AERATION BASIN - PLAN (1/E-7)

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



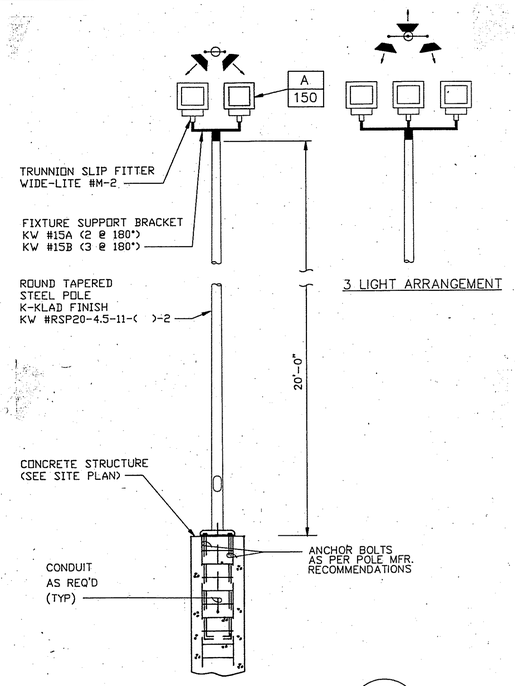
AERATOR ELEVATION (2/E-7)

TYP FOR 4



AREA LIGHT DETAIL (3/E-7)

NO SCALE



3 LIGHT ARRANGEMENT

FLOODLIGHT DETAIL (4/E-7)

NO SCALE

LIGHT FIXTURE SCHEDULE

A 150	MARINE - RATED FLOODLIGHT, 150W HPS WIDE - LITE # BMS - 150 - QVHX - 35 Y
B 100	AREA LIGHT, 100W HPS CROUSE - HINDS # PTO10SPW55A
C 100	WALL - MOUNT AREA LIGHT, 100W HPS CROUSE - HINDS # WAL10SPN - QV

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COOS BAY, OREGON

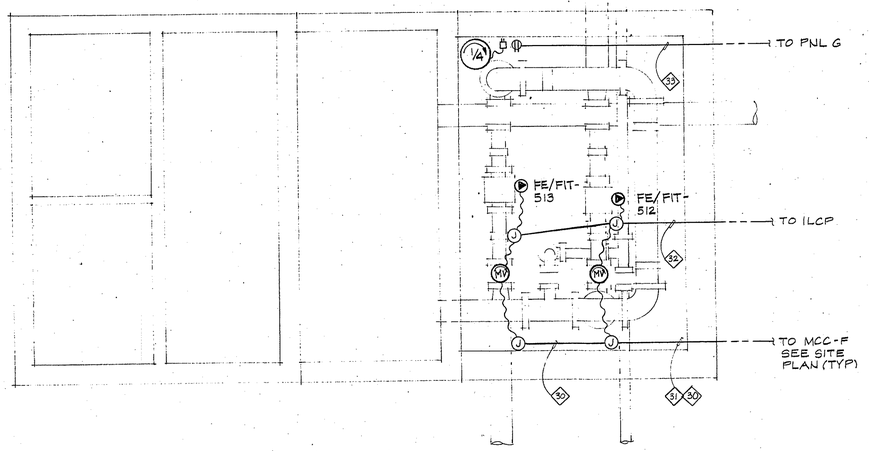
ELECTRICAL - AERATION BASINS

DRAWING NO. E-7

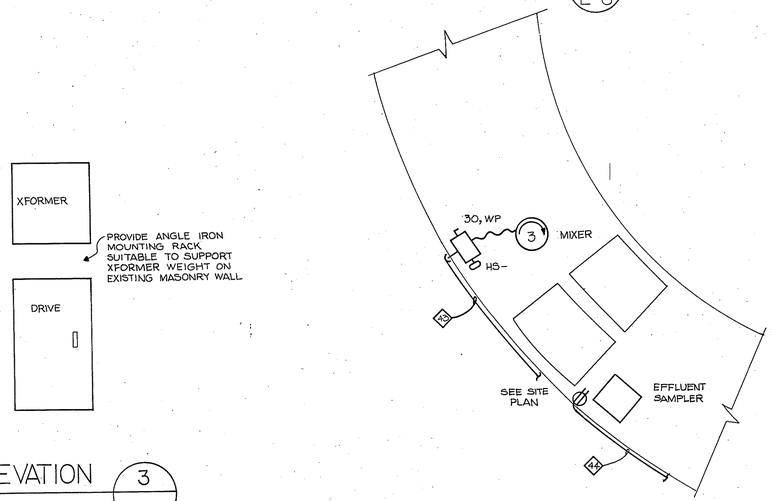
SHEET NO. 40

INTERMEDIATE LIFT PLAN 1/E-8

NORTH



RAS/FLOW CONTROL PLAN 2/E-8



ELEVATION 3

NTS

NORTH

EFFLUENT PLAN 4

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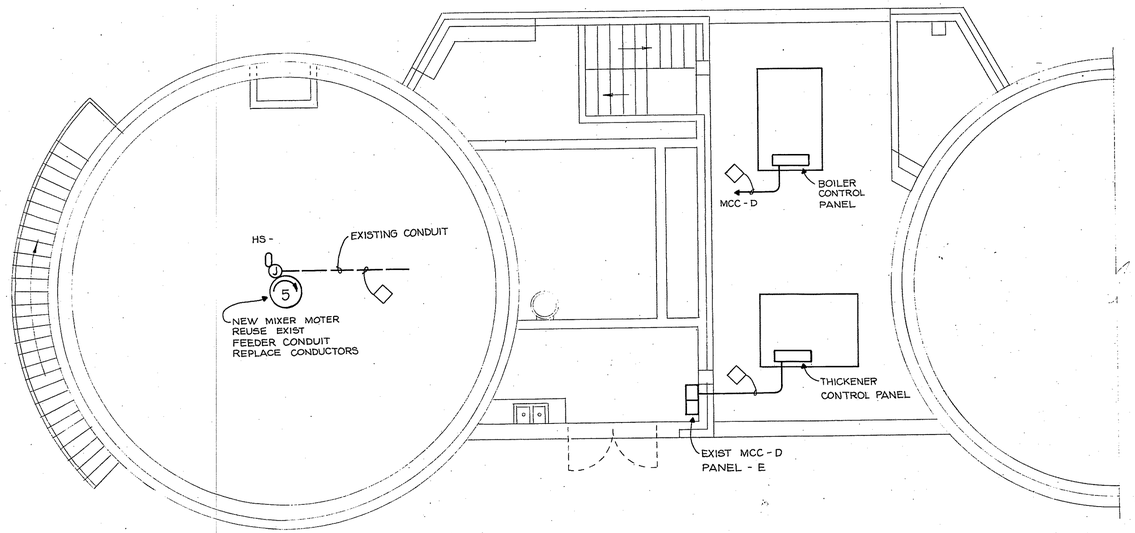
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ELECTRICAL - INTERMEDIATE LIFT STATION/RAS

DRAWING NO. E-8

SHEET NO. 41



NORTH

PLAN - ELECTRICAL

3/16" = 1'-0"

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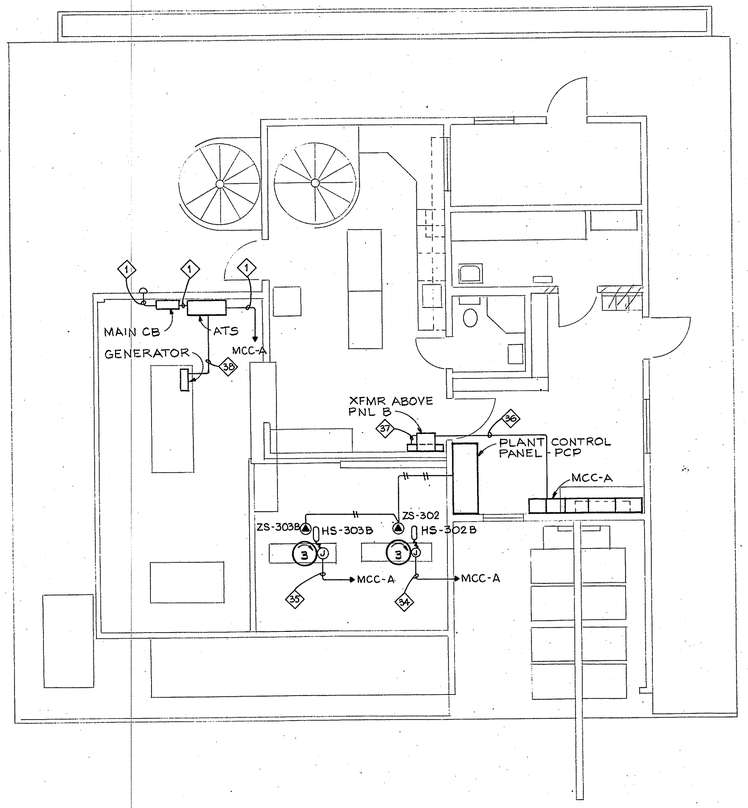
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ELECTRICAL DIGESTER COMPLEX

DRAWING NO. E-9

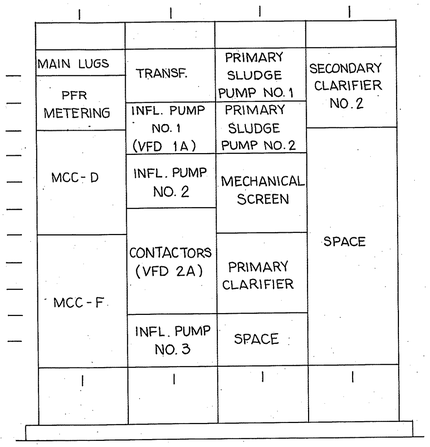
SHEET NO. 42



NORTH

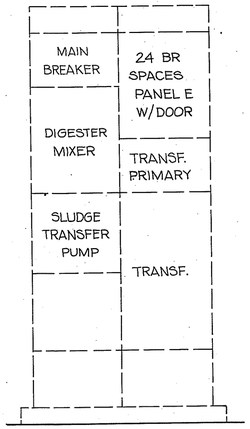
CONTROL BLDG. - ELECT.

SCALE:



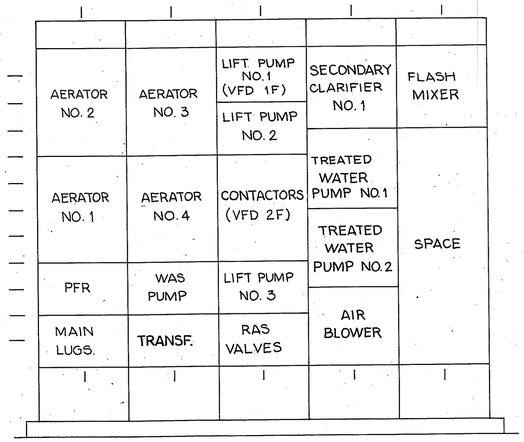
MCC-A (ELEV.)

NTS



EXISTING MCC-D (ELEV.)

NTS



MCC-F (ELEV.)

NTS

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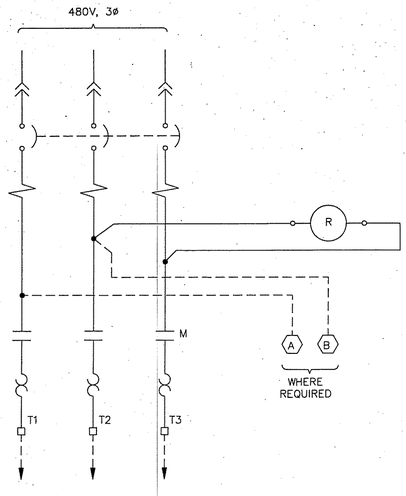
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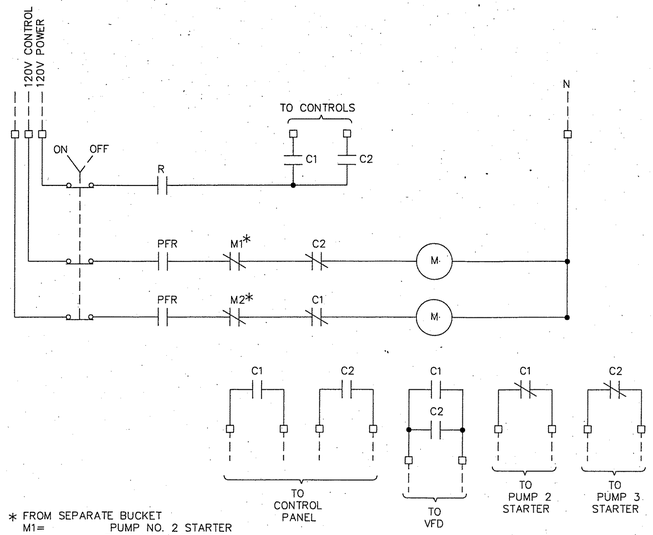
ELECTRICAL - CONTROL BUILDING

DRAWING NO. E-10

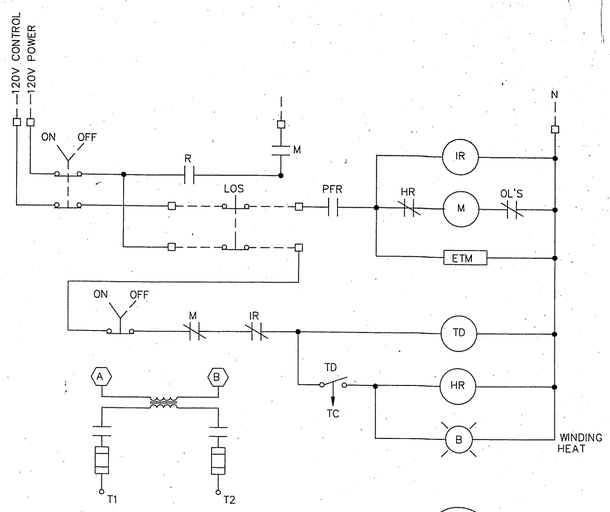
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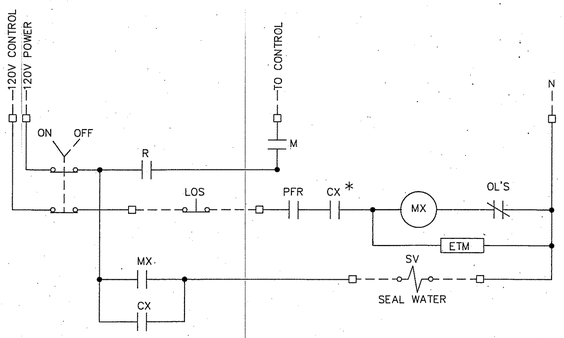
TYPICAL POWER SCHEMATIC 1



* FROM SEPARATE BUCKET
M1= PUMP NO. 2 STARTER
M2= PUMP NO. 3 STARTER

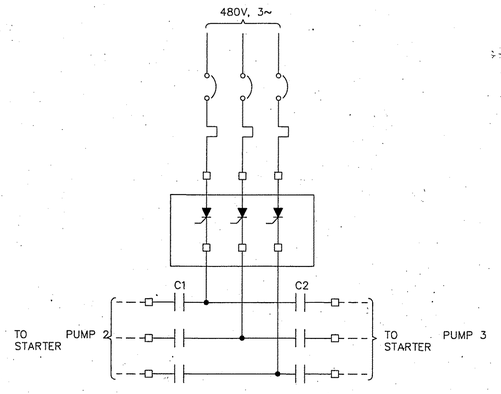


CONTROL SCHEMATIC 4



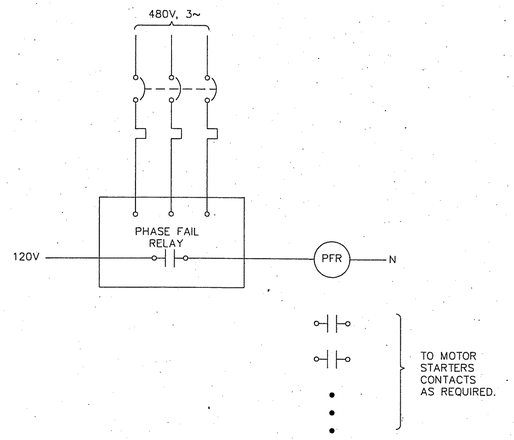
* X = 1 FOR PUMP NO. 2
X = 2 FOR PUMP NO. 3
C1 & C2 ARE IN SEPARATE BUCKET SEE

CONTROL SCHEMATIC 2



POWER SCHEMATIC

CONTROL SCHEMATIC 3



CONTROL SCHEMATIC 5

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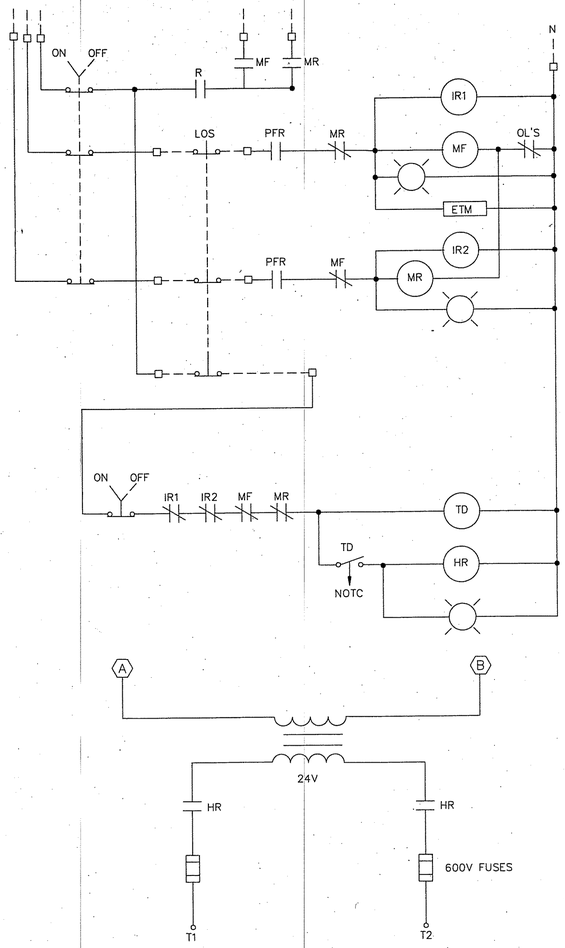
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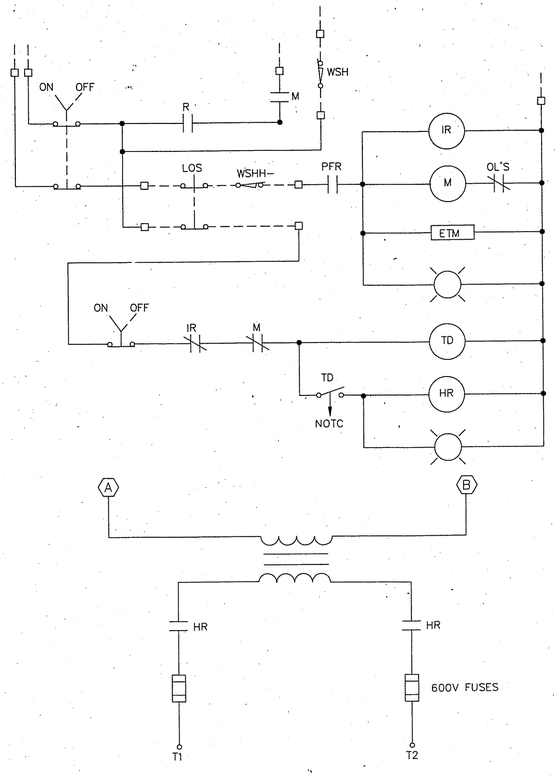
CONTROL SCHEMATICS

DRAWING NO. E-11

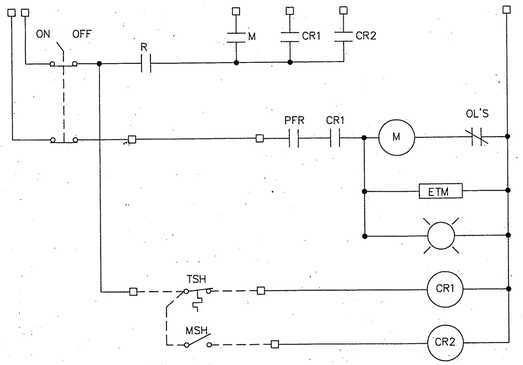
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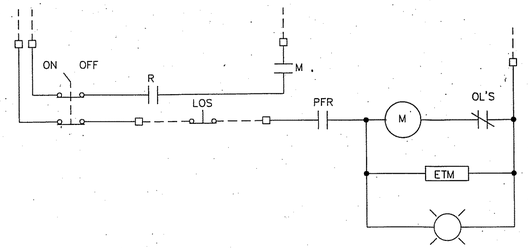
CONTROL SCHEMATIC 6



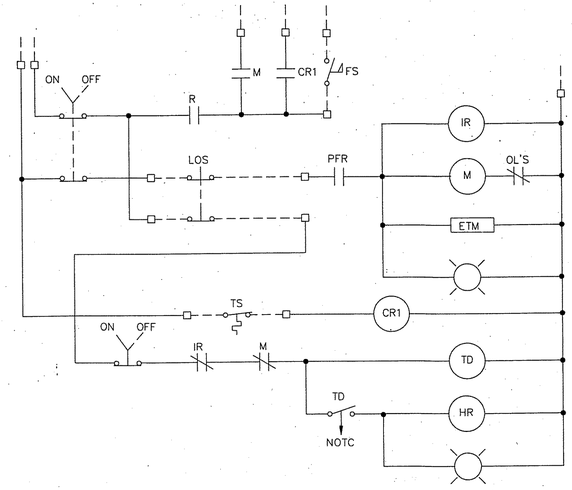
CONTROL SCHEMATIC 7

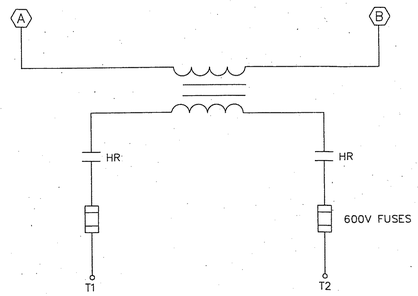


CONTROL SCHEMATIC 8



CONTROL SCHEMATIC 9





CONTROL SCHEMATIC 10

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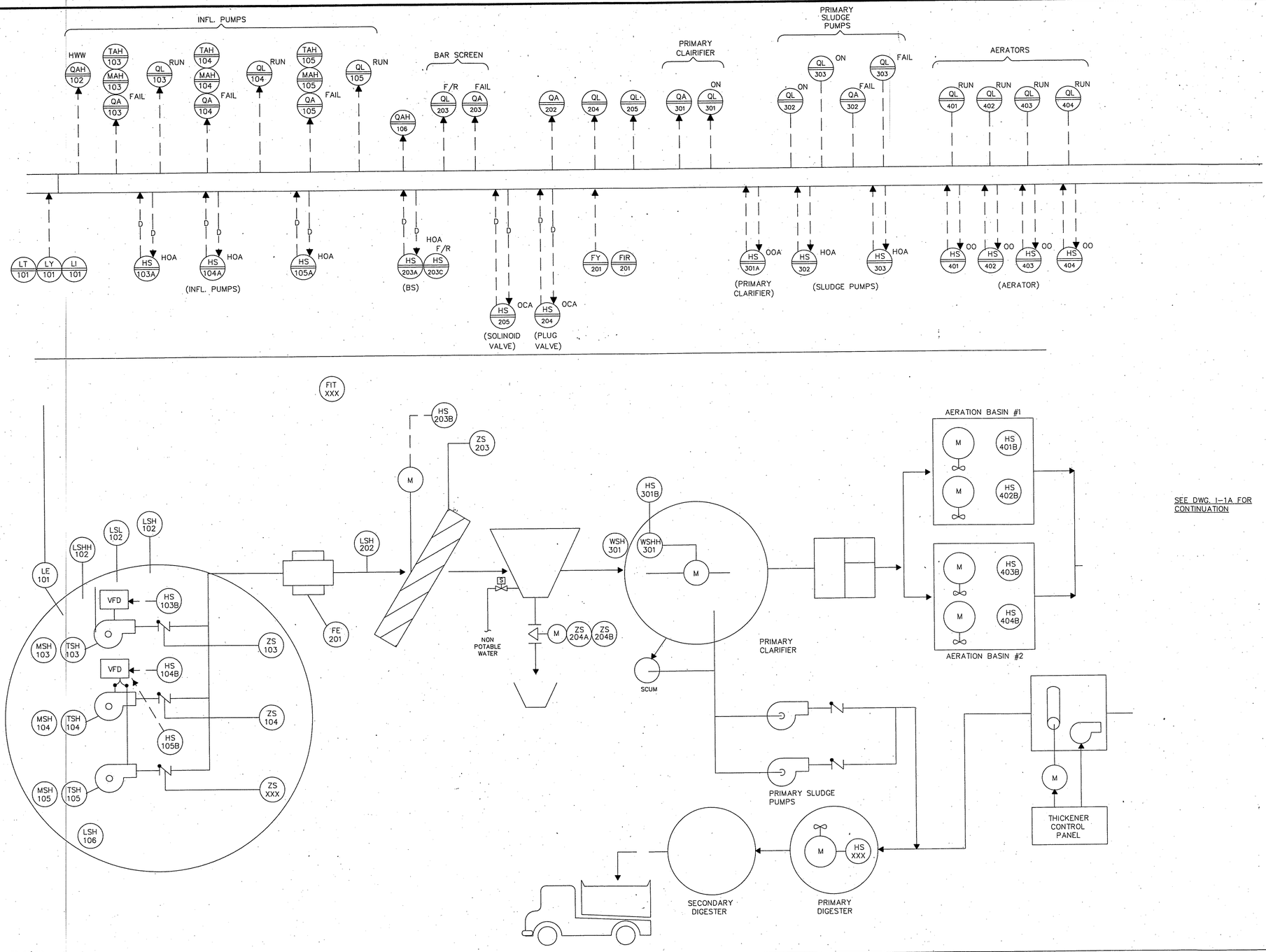
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CONTROL SCHEMATICS

DRAWING NO. E-12

SHEET NO. 45



SEE DWG. I-1A FOR CONTINUATION

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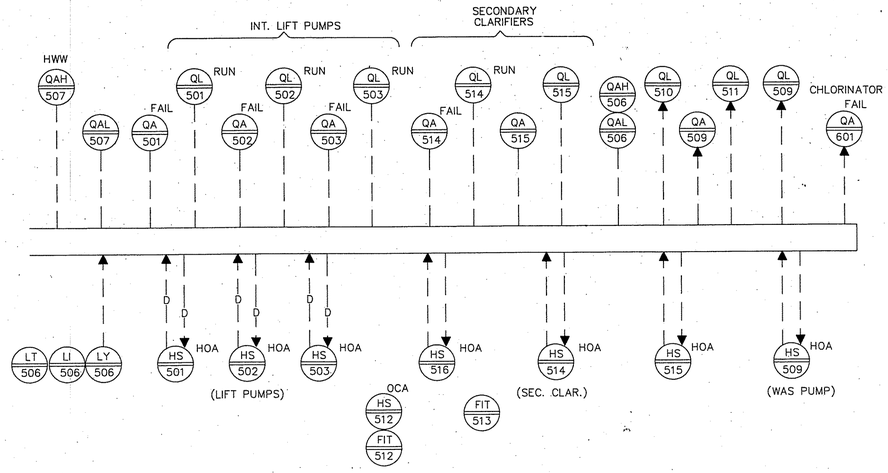
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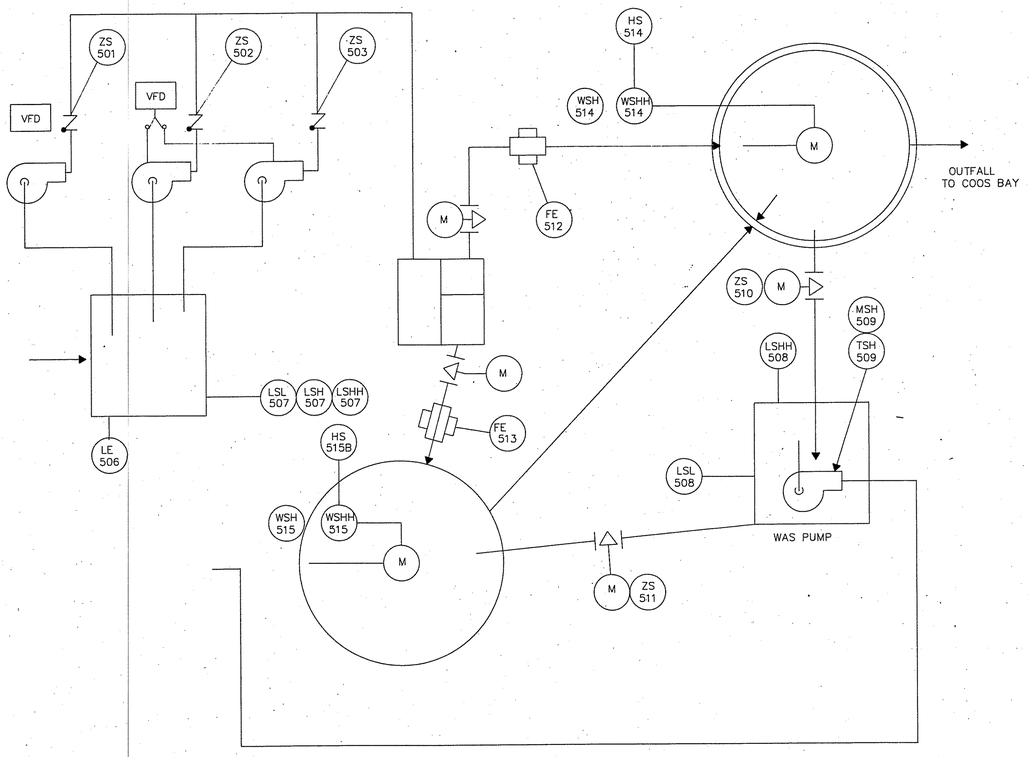
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COOS BAY, OREGON

PROCESS INSTRUMENTATION DIAGRAM

DRAWING NO. I-1

SHEET NO. 46





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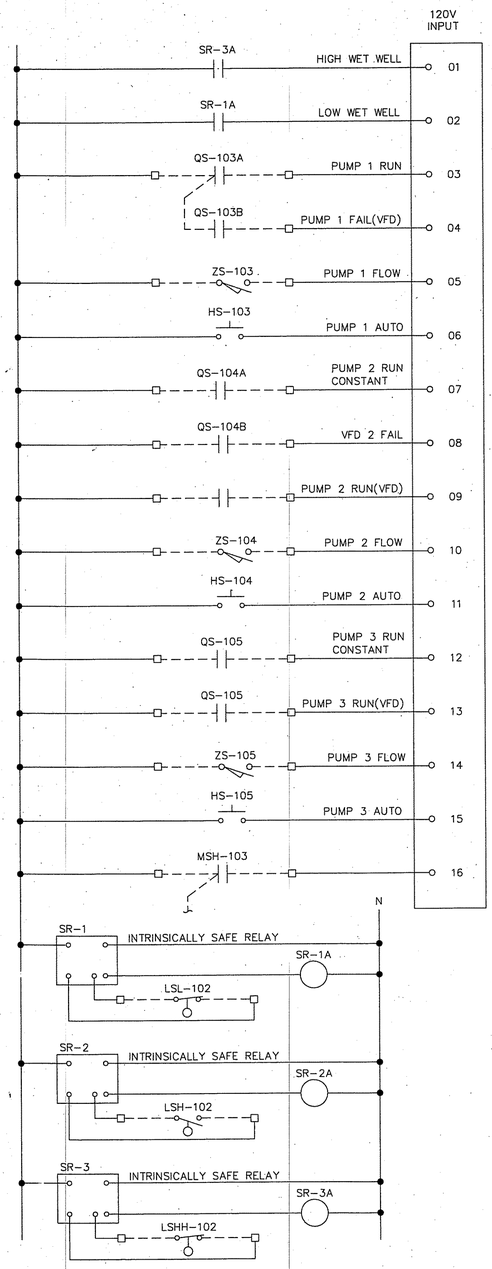
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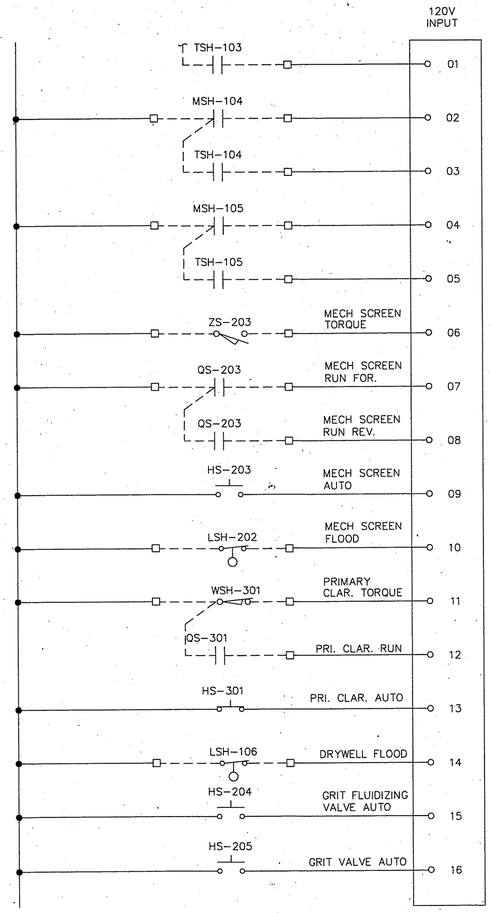
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COOS BAY, OREGON

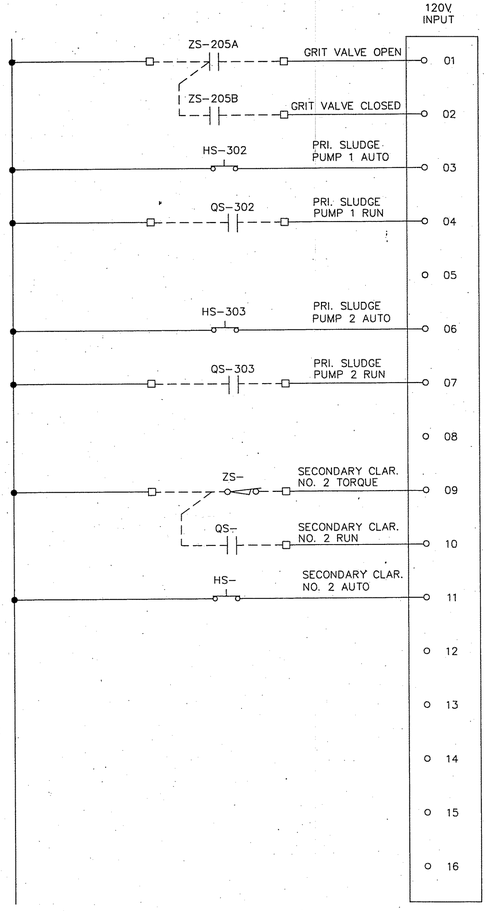
PROCESS INSTRUMENTATION DIAGRAM

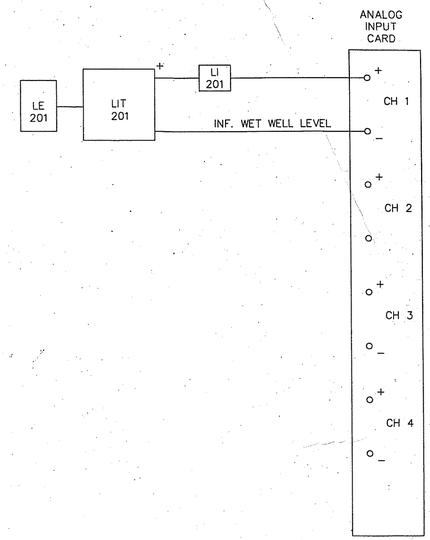
DRAWING NO. I-2

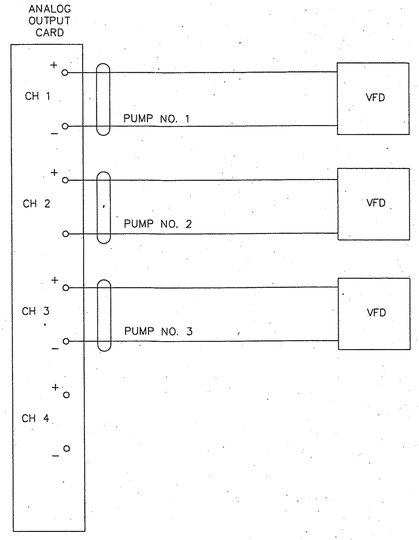
SHEET NO. 47











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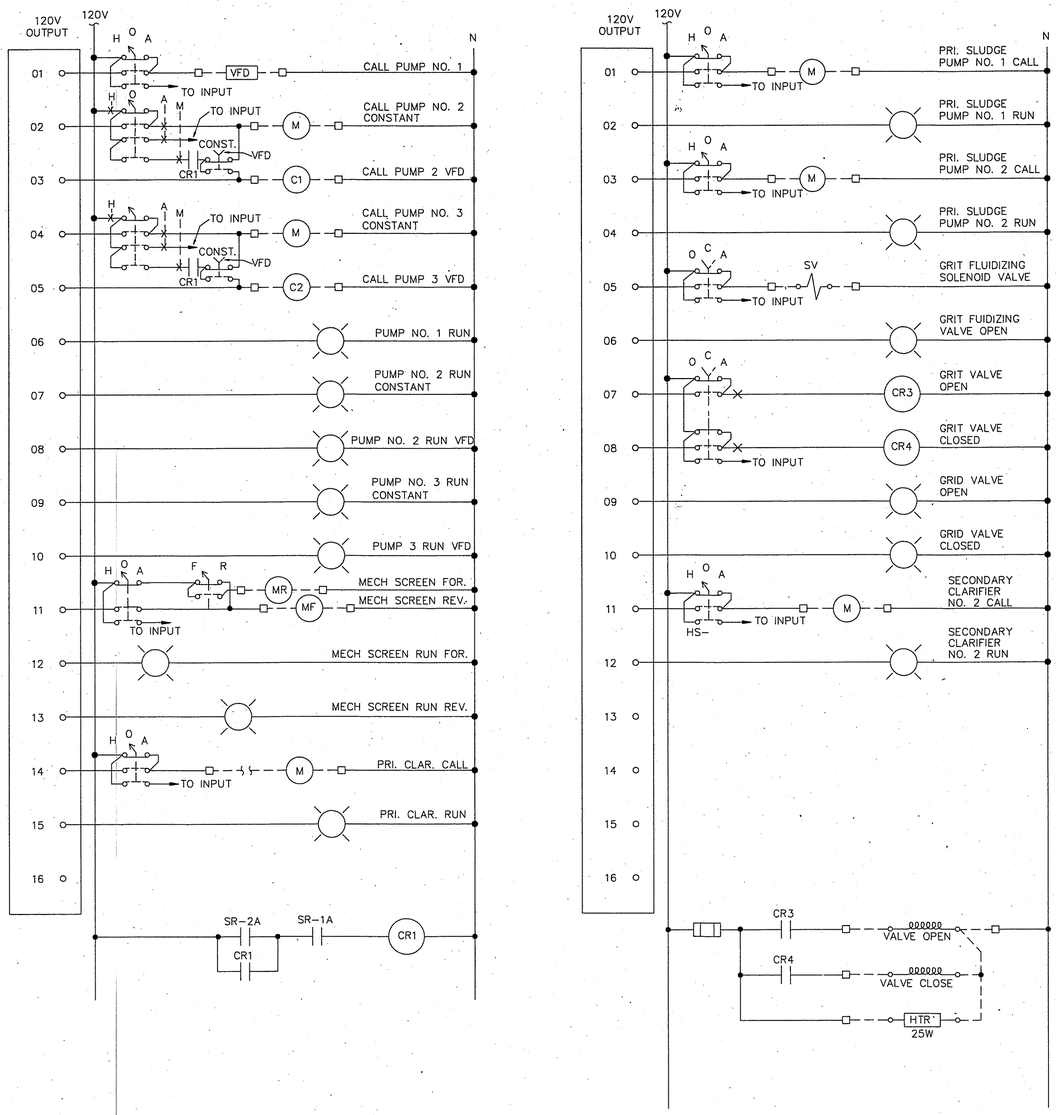
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PC INTERCONNECTION – PCP

DRAWING NO. I-3

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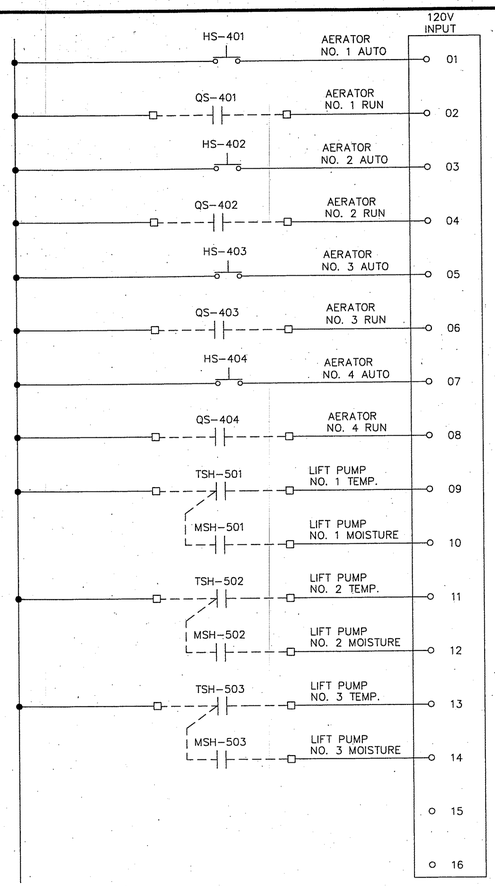
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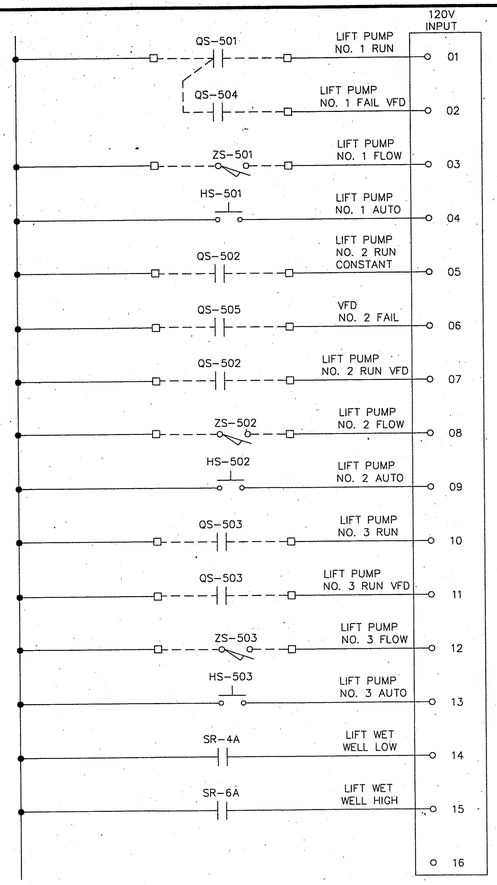
COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

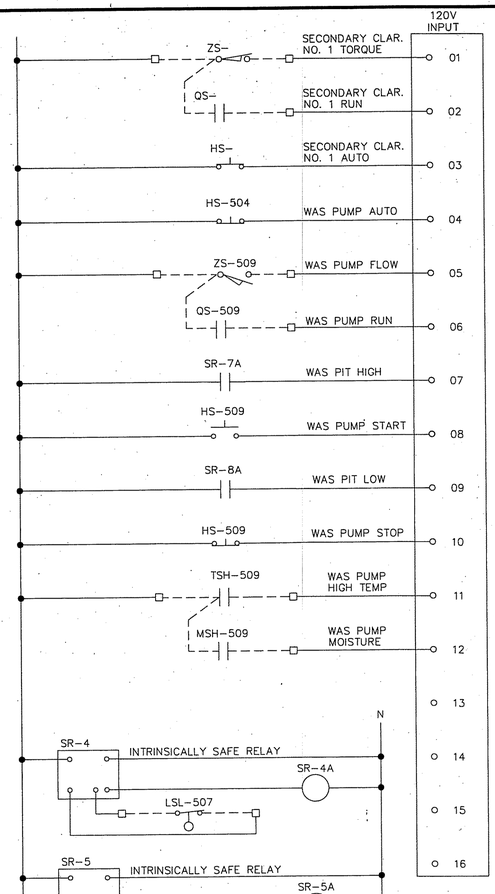
PC INTERCONNECTION – PCP

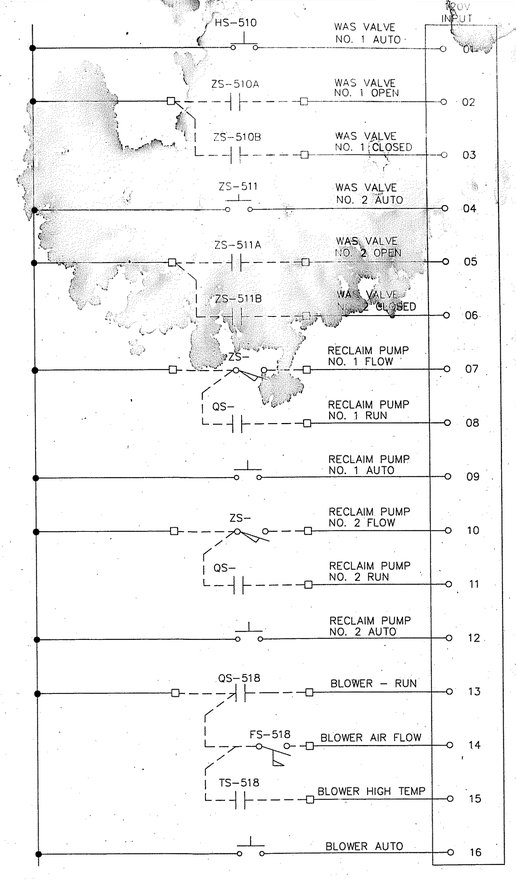
DRAWING NO. I-4

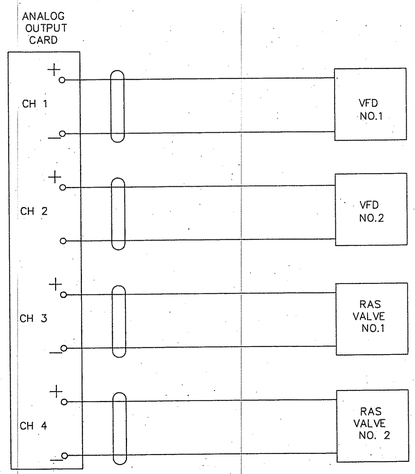
SHEET NO. 49

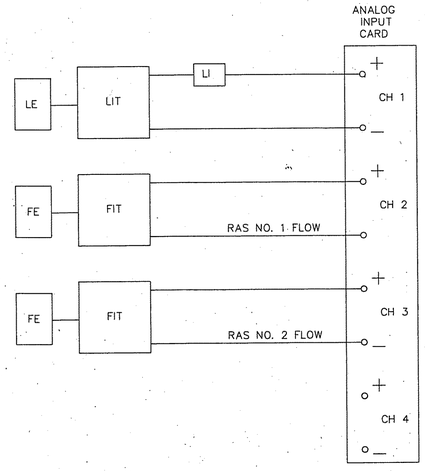












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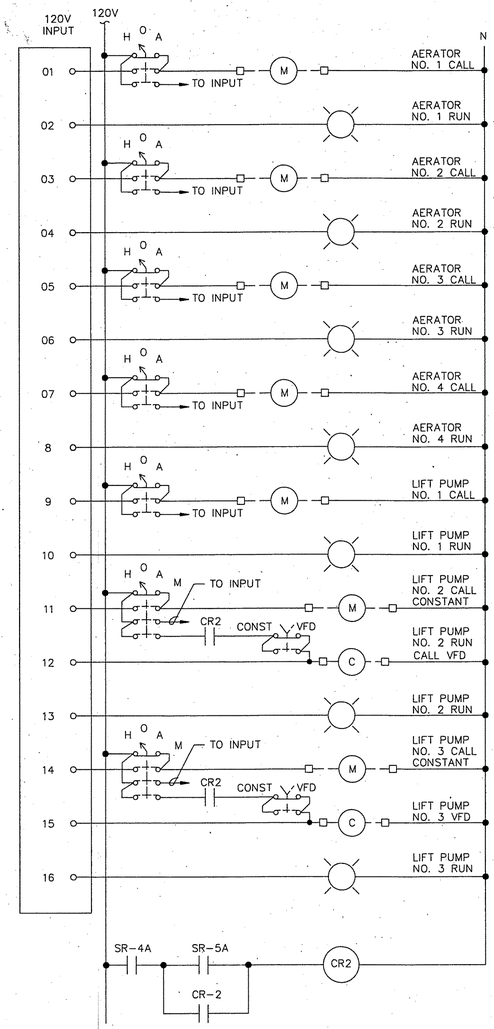
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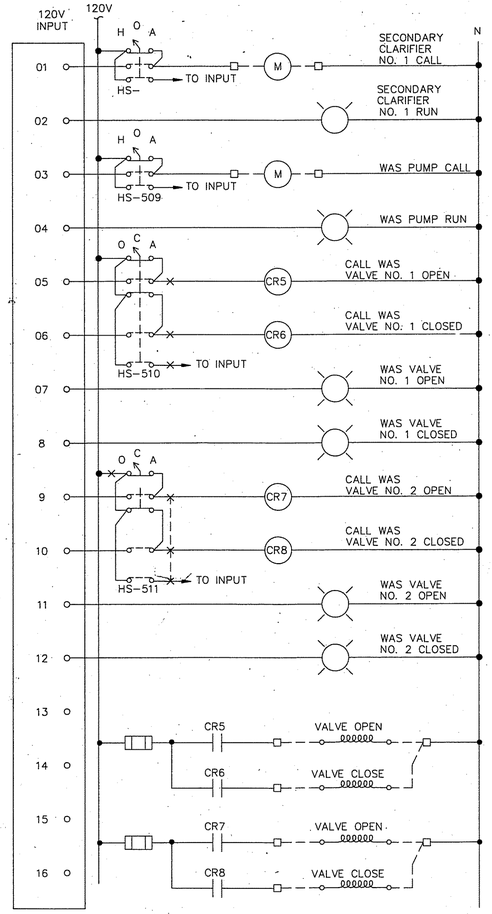
COOS BAY
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IMPROVEMENT PROJECT
COOS BAY, OREGON

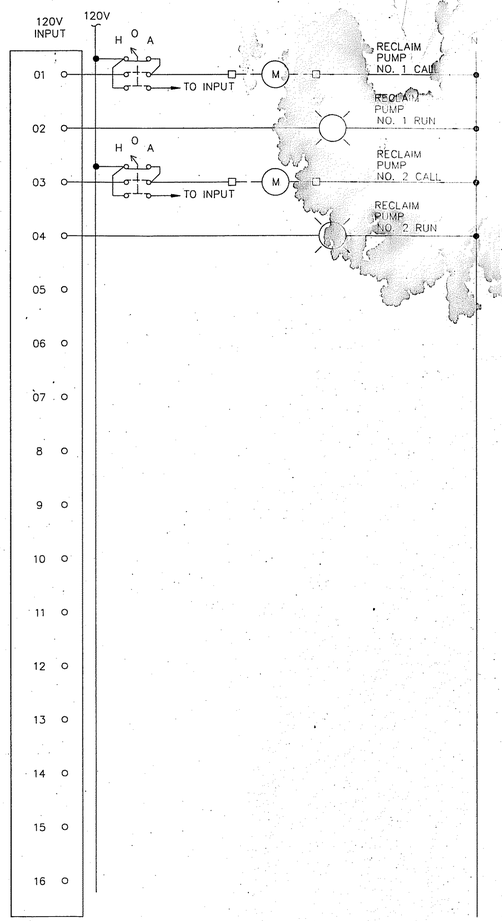
PC INTERCONNECTION - ICP

DRAWING NO. I-5

SHEET NO. 50







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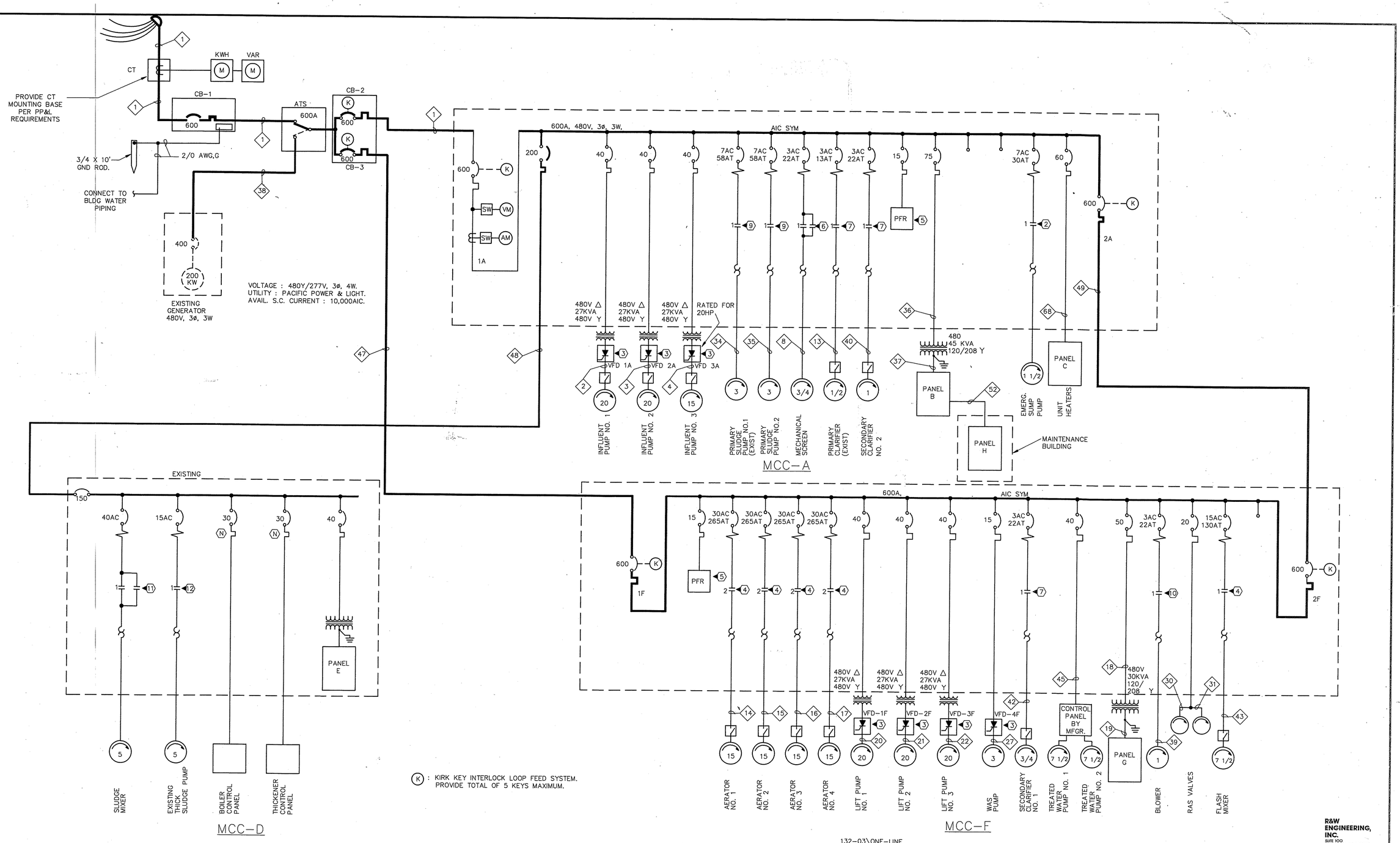
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DATE:		PROJECT NO.:	

COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

PC INTERCONNECTION – ICP

DRAWING NO. I-6

SHEET NO. 51



(K) : KIRK KEY INTERLOCK LOOP FEED SYSTEM. PROVIDE TOTAL OF 5 KEYS MAXIMUM.

132-03\ONE-LINE

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REGISTERED PROFESSIONAL ENGINEER 13142 OREGON JULY 15, 1977 GREGG H. SCHOLZ

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G. SCHOLZ	M. LOOFBOUROW	G. SCHOLZ	NONE
DATE: MAY, 1990		PROJECT NO: 10868.005.03	

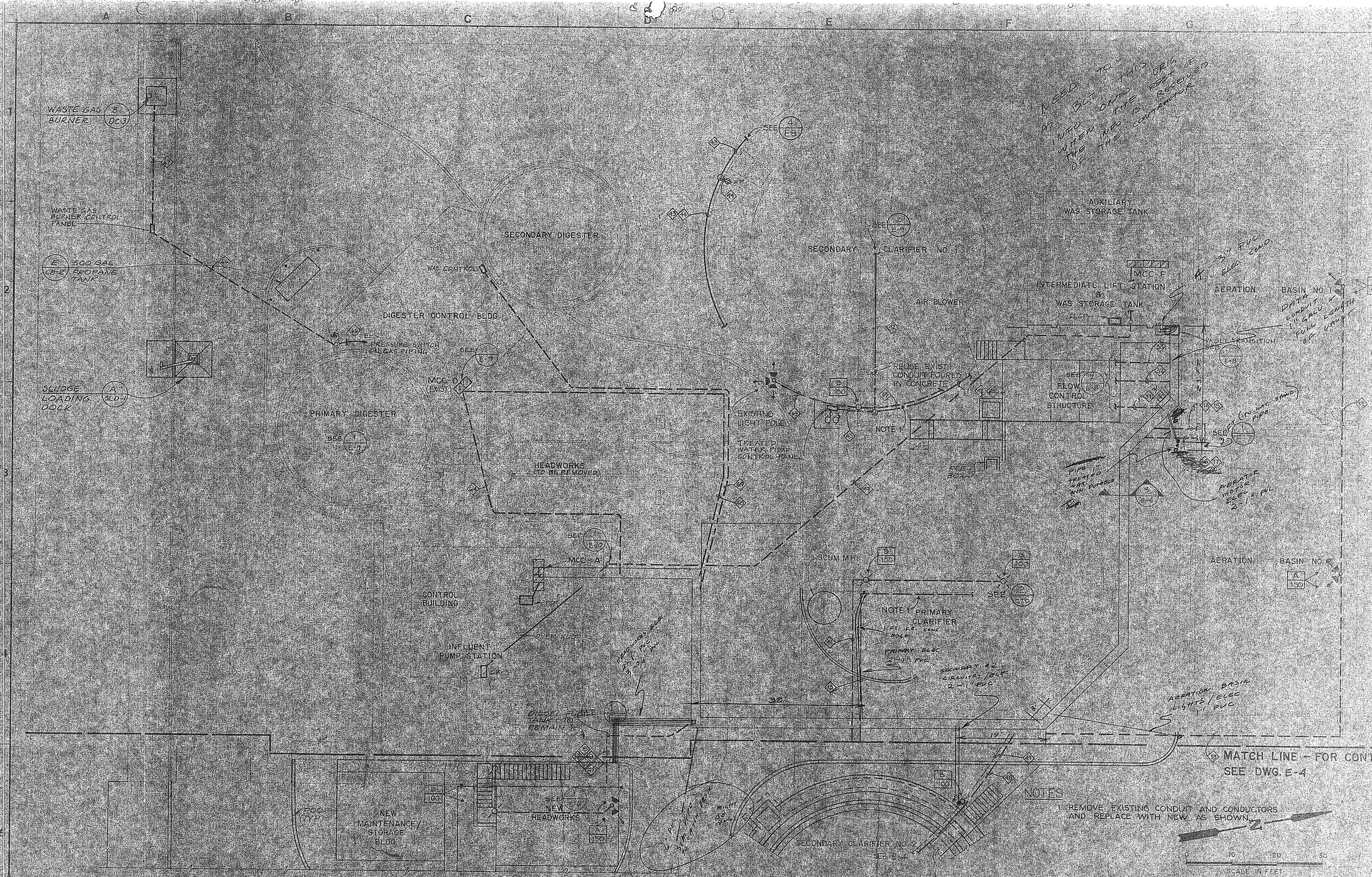
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IMPROVEMENT PROJECT
COOS BAY, OREGON

ELECTRICAL ONE-LINE DIAGRAM

DRAWING NO. E-2

SHEET NO. 37

PLANT #2



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R. SCHULZ	L. NGUYEN	M. SCHULZ	AS SHOWN
DATE: MAY 1990		PROJECT NO. 108893035	

COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

ELECTRICAL SITE PLAN-WEST

DRAWING NO. E-3

SHEET NO. 3 OF

WASTE GAS BURNER (8 / DC-3)

WASTE GAS BURNER CONTROL PANEL

(E / CB-2) 500 GAL PROPANE TANK

SLUDGE LOADING DOCK (A / SLD-1)

SECONDARY DIGESTER

WAS CONTROL

DIGESTER CONTROL BLDG.

E- PRESSURE SWITCH ON GAS PIPING

PRIMARY DIGESTER

SEE 1 / E-9

MCC-D (EXIST.)

HEADWORKS (TO BE REMOVED)

CB

SEE 1 / E-10

MCC - A

PCP

OVER ROOF

CONTROL BUILDING

INFLUENT PUMP STATION

CB-3

TRENCH DRAIN

DIESEL FUEL TANK (TO REMAIN)

SEE 1 / E-6

M.H

B 100

POC (TYP)

NEW MAINTENANCE / STORAGE BLDG.

SEE 1 / E-6 NEW HEADWORKS

A 150

SEE 4 / E8

WP

1"

SECONDARY CLARIFIER NO. 1

SEE 2 / E-9

AIR BLOWER

EXISTING LIGHT POLE

TREATED WATER PUMP CONTROL PANEL

REUSE EXIST. CONDUIT POURED IN CONCRETE

NOTE 1

AUXILIARY WAS STORAGE TANK

MCC-F

INTERMEDIATE LIFT STATION & WAS STORAGE TANK

ILCP

VAULT TRANSITION SEE 1 / E-8

SEE 2 / E-8 FLOW CONTROL STRUCTURE

AERATION BASIN NO. 1

A 150

SEE 1 / E-7

SCE BOX

3 / E-4

SCUM M.H.

B 100

NOTE 1 PRIMARY CLARIFIER

SEE 2 / E-6

AERATION BASIN NO. 2

A 150

SECONDARY CLARIFIER NO. 2 SEE E-4

52 MATCH LINE – FOR CONT. SEE DWG. E-4

NOTES

1. REMOVE EXISTING CONDUIT AND CONDUCTORS AND REPLACE WITH NEW AS SHOWN.

N

0 10 20 30

SCALE IN FEET

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REGISTERED PROFESSIONAL ENGINEER — GREGORY L. SCHOLZ

REGISTERED PROFESSIONAL ENGINEER 11021 — OREGON — MAY 7, 1981 — TERRY L. NGUYEN

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DATE: MAY 1990

PROJECT NO.: 1088800550033

COOS BAY WASTEWATER TREATMENT PLANT NO. 2 IMPROVEMENT PROJECT

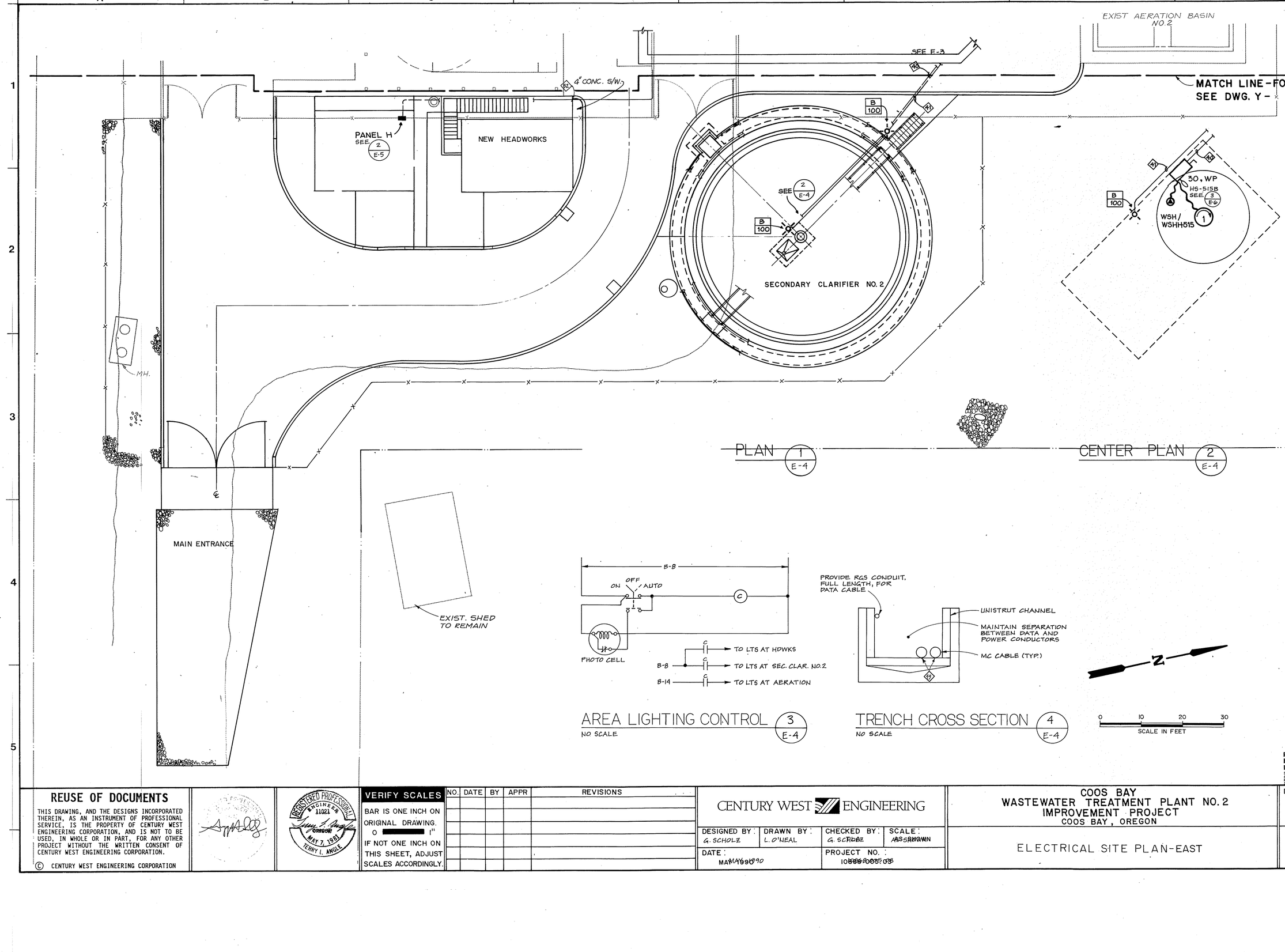
COOS BAY, OREGON

ELECTRICAL SITE PLAN-WEST

DRAWING NO. E-3

SHEET NO. 38

E-3 | B1B : 3 | E1S | Q1B Q1B | F1B F1B



AREA LIGHTING CONTROL 3 E-4
NO SCALE

TRENCH CROSS SECTION 4 E-4
NO SCALE

0 10 20 30
SCALE IN FEET

E-4

A/B	
B2B	B2B
—	—
T/B	T/B
J/S	J/S
—	—
—	—

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REGISTERED PROFESSIONAL ENGINEER 11021 OREGON MAY 7, 1981 TERRY L. ANGLE

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DATE: MAY 1990

PROJECT NO.: 1088.005.03

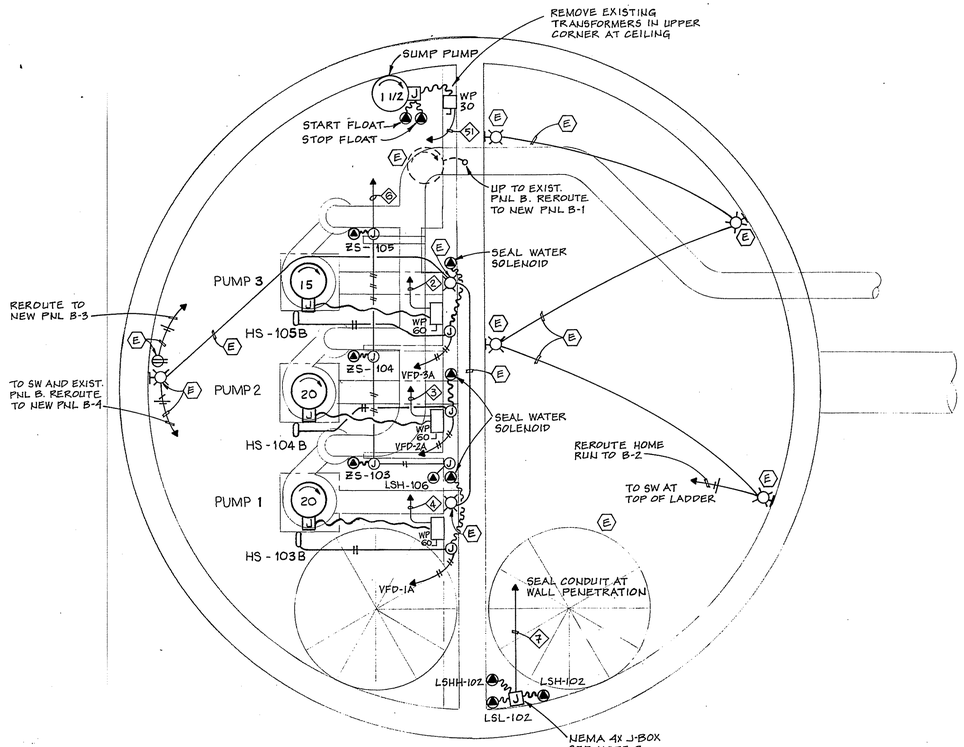
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IMPROVEMENT PROJECT
COOS BAY, OREGON

ELECTRICAL SITE PLAN-EAST

DRAWING NO. E-4

SHEET NO. 39

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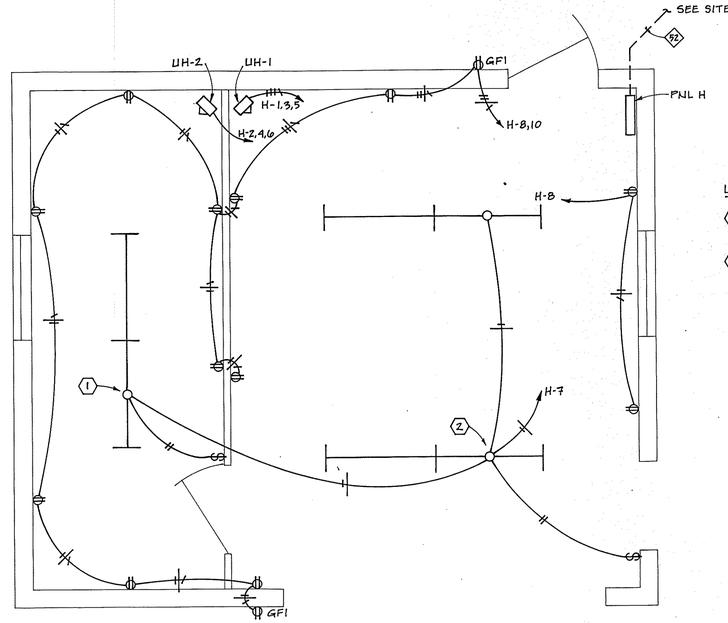
NORTH

PUMP STATION PLAN (1 / E-5)

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

NOTES:

1. SEE DRAWING IPS-1 FOR EQUIPMENT DEMOLITION. ELECTRICAL CONTRACTOR TO DISCONNECT ALL EQUIPMENT SHOWN TO BE REMOVED.
2. PROVIDE SEALING CORD GRIPS FOR FLOAT CABLES. SEAL J-BOX WATERTIGHT. SUPPORT FLOATS AT ELEVATION SPECIFIED.
3. VERIFY ALL EQUIPMENT AND WIRING SHOWN EXISTING ((E)) AND MODIFY AS REQUIRED.
4. DEMO ALL EXISTING DISC. SWS. AND DISCONNECT EXISTING PUMP MOTORS.



LIGHTING NOTES:

1. 4' LONG TANDEM STRIPLIGHT, 2-LAMP W/ WIREGUARD, SURFACE MOUNT. LITHONIA # C240-120V-WG 9
2. 4' LONG TANDEM INDUSTRIAL FLUORESCENT UNIT, W/WIREGUARD, SUSPEND @ +10'-6" AFF LITHONIA,# AF10-240-120V-WG3

MAINTENANCE BLDG. PLAN (2 / E-5)

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

PANEL.....H BUS.....100 A VOLTAGE.... 120/208V, 3PH, 4 WIRE

FEEDER....SEE POWER RISER MAIN BRKR: NONE MOUNTING.... SURFACE

CKT NO	CIRCUIT DESCRIPTION	CKT BREAKER POLES/AMPS	LOAD WATTS	PHASE	LOAD WATTS	CKT BREAKER POLES/AMPS	CIRCUIT DESCRIPTION	CKT NO
1	UH-1		1667	A	1000		UH-2	2
3	UH-1	3-20	1667	B	1000	3-20	UH-2	4
5	UH-1		1667	C	1000		UH-2	6
7	LIGHTS	1-20	600	A	1600	1-20	RECEPTS	8
9	SPARE	1-20	0	B	1200	1-20	RECEPTS	10
11	SPARE	1-20	0	C	0	1-20	SPARE	12
13	SPARE	1-20	0	A	0	1-20	SPARE	14
15	SPARE	1-20	0	B	0	1-	SPACE	16
17	SPACE	1-	0	C	0	1-	SPACE	18
19	SPACE	1-	0	A	0	1-	SPACE	20
21	SPACE	1-	0	B	0	1-	SPACE	22
23	SPACE	1-	0	C	0	1-	SPACE	24

	CONNECTED LOAD		TOTAL LOAD		.....NOTES.....
LOAD PER PHASE (WATTS)	A=	4867	A=	5247	1.
	B=	3867	B=	4247	
	C=	2667	C=	3047	2.
LOAD PER PHASE (AMPS)	A=	40.56	A=	43.73	3.
	B=	32.23	B=	35.39	
	C=	22.23	C=	25.39	4.
TOTAL LOAD (KVA)		11.40		12.54	5.
SPARE CAPACITY	10.00%	1.14	DATE	5/19/1990	

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REGISTERED PROFESSIONAL ENGINEER — OREGON — JULY 15, 1983 — GARY L. SCHOLZ

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DATE: MAY, 1990

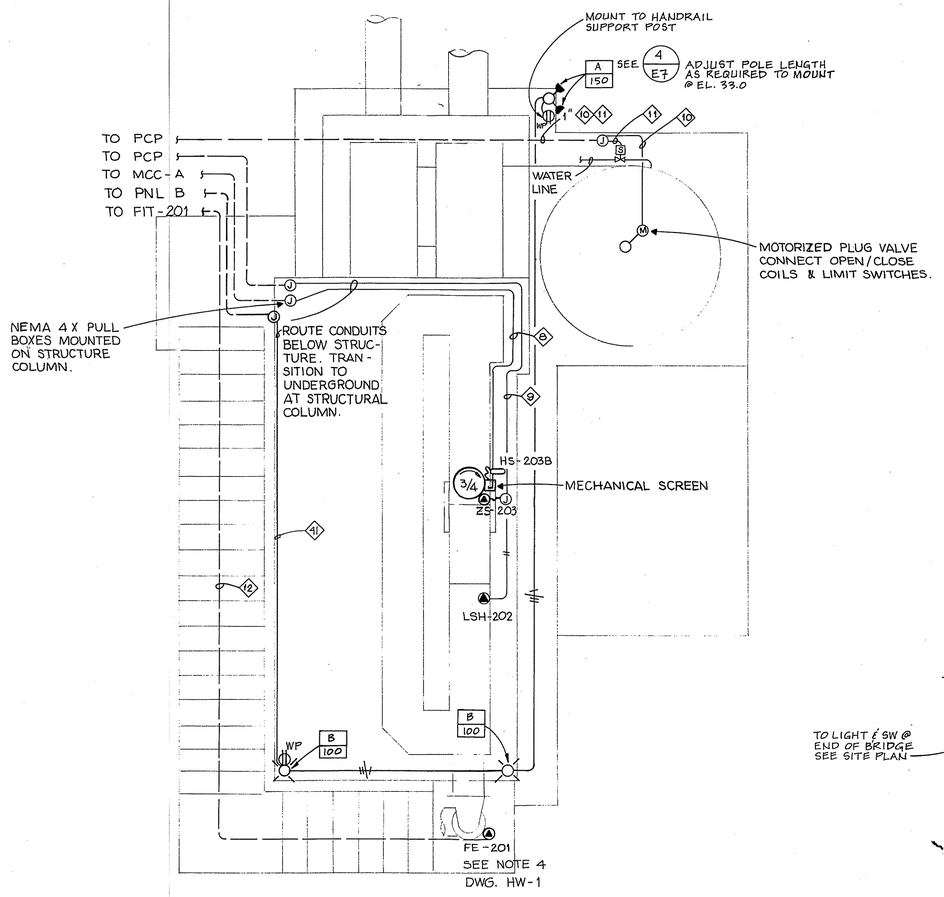
PROJECT NO.: 10868.005.03

COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

1 ELECTRICAL - INFLUENT PUMP STATION

DRAWING NO. E-5

SHEET NO. 40

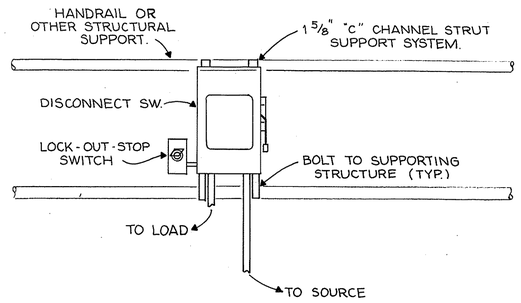


NORTH

PLAN

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

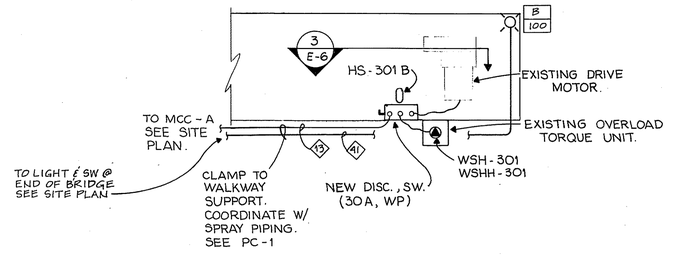
1 / E-6



ELEVATION

NTS

3 / E-6



NORTH

PRIMARY CLARIFIER CENTER PLAN

NTS

2 / E-6

PANEL.....B BUS.....200 A VOLTAGE.... 120/208V, 3PH, 4 WIRE

FEEDER....SEE POWER RISER MAIN BRKR: 175 A MOUNTING.... SURFACE

CKT NO	CIRCUIT DESCRIPTION	CKT BREAKER POLES/AMPS	LOAD WATTS	PHASE	LOAD WATTS	CKT BREAKER POLES/AMPS	CIRCUIT DESCRIPTION	CKT NO
1	SUMP PUMP	1-20	1200	A	300	1-20	LIGHTS-WETWELL	2
3	RECEPT-DRYWELL	1-20	600	B	450	1-20	LIGHTS-DRYWELL	4
5	EF-1	1-20	250	C	600	1-20	RECEPT-SITE	6
7	WLH-2		1000	A	600	1-20	RECEPT-SITE EAST	8
9	WLH-2	2-20	1000	B	900	1-20	LIGHTS-CONTROL BLDG	10
11	WLH-1		1000	C	1200	1-20	LIGHTS-CONTROL BLDG	12
13	WLH-1	2-20	1000	A	800	1-20	LIGHTS-AERATION	14
15	PCP	1-40	2500	B	200	1-20	CHLORINATORS	16
17	RECEPT-CHLORINE	1-20	200	C	150	1-20	HOIST	18
19	CL2 CYLINDER HEATERS	1-20	1000	A	250	1-20	BUBBLER	20
21	SAMPLER	1-20	1000	B	0	1-20	SPARE	22
23	SPARE	1-20	0	C	0	1-20	SPARE	24
25	SPARE	1-20	0	A	0	1-20	SPARE	26
27	SPARE	1-20	0	B	0	1-20	SPARE	28
29	SPACE	1-	0	C	0	1-20	SPARE	30
31	SPACE	1-	0	A	0	1-	SPACE	32
33	SPACE	1-	0	B	0	1-	SPACE	34
35	SPACE	1-	0	C	0	1-	SPACE	36
37	PANEL H		0	A	0	1-	SPACE	38
39	PANEL H	3-100	0	B	0	1-	SPACE	40
41	PANEL H		0	C	0	1-	SPACE	42

	CONNECTED LOAD		TOTAL LOAD	
LOAD PER PHASE (WATTS)	A=	6150	A=	6690
	B=	6650	B=	7190
	C=	3400	C=	3940
LOAD PER PHASE (AMPS)	A=	51.25	A=	55.75
	B=	55.42	B=	59.92
	C=	28.33	C=	32.83
TOTAL LOAD (KVA)		16.20		17.82
SPARE CAPACITY	10.00%	1.62	DATE	5/19/1990

.....NOTES.....

1. RECONNECT ALL NECESSARY EXISTI CIRCUITS FROM EXISTING PANEL
2.
3.
4.
5.

PANEL.....C BUS.....100 A VOLTAGE.... 120/208V, 3PH, 4 WIRE

FEEDER....SEE POWER RISER MAIN BRKR: NONE MOUNTING.... SURFACE

CKT NO	CIRCUIT DESCRIPTION	CKT BREAKER POLES/AMPS	LOAD WATTS	PHASE	LOAD WATTS	CKT BREAKER POLES/AMPS	CIRCUIT DESCRIPTION	CKT NO
1	UH-5		2500	A	2500	1-20	UH-6	2
3	UH-5	3-20	2500	B	2500	1-20	UH-6	4
5	UH-5		2500	C	2500	1-20	UH-6	6
7	UH-8		1667	A	2500	1-20	UH-7	8
9	UH-8	3-20	1667	B	2500	1-20	UH-7	10
11	UH-8		1667	C	2500	1-20	UH-7	12
13	SPARE	1-20	0	A	0	1-20	SPARE	14
15	SPARE	1-20	0	B	0	1-20	SPARE	16
17	SPARE	1-20	0	C	0	1-20	SPARE	18
19	SPARE	1-20	0	A	0	1-20	SPARE	20

	CONNECTED LOAD		TOTAL LOAD	
LOAD PER PHASE (WATTS)	A=	9167	A=	9855
	B=	9167	B=	9855
	C=	9167	C=	9855
LOAD PER PHASE (AMPS)	A=	76.39	A=	82.12
	B=	76.39	B=	82.12
	C=	76.39	C=	82.12
TOTAL LOAD (KVA)		27.50		29.56
SPARE CAPACITY	7.50%	2.06	DATE	5/18/1990

.....NOTES.....

1.
2.
3.
4.
5.

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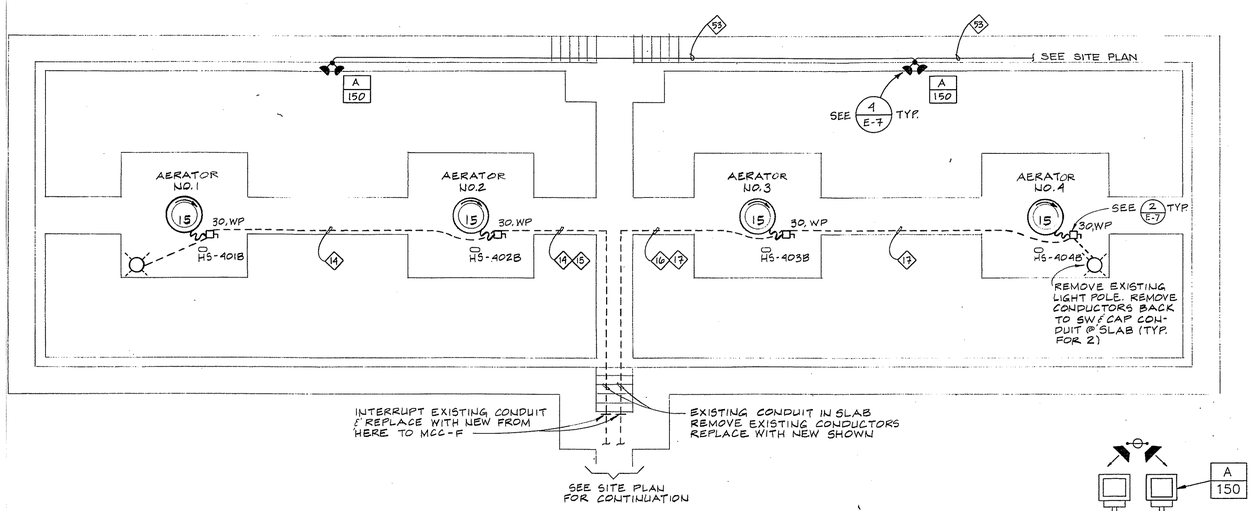
PROJECT NO.: 10868.005.03

COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

ELECTRICAL - HEADWORKS

DRAWING NO. E-6

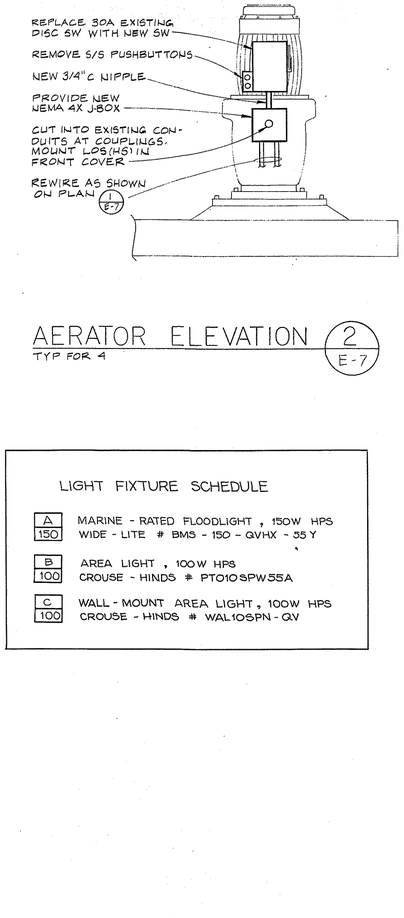
SHEET NO. 41



NORTH

AERATION BASIN - PLAN (1 / E-7)

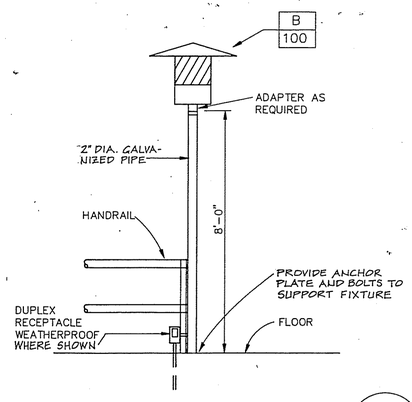
SCALE: 1/8"= 1'-0"



3 LIGHT ARRANGEMENT

FLOODLIGHT DETAIL (4 / E-7)

NO SCALE



AREA LIGHT DETAIL (3 / E-7)

NO SCALE

AERATOR ELEVATION (2 / E-7)

TYP FOR 4

LIGHT FIXTURE SCHEDULE

A 150	MARINE - RATED FLOODLIGHT , 150W HPS WIDE - LITE # BMS - 150 - QVHX - 35 Y
B 100	AREA LIGHT , 100W HPS CROUSE - HINDS # PT0105PW35A
C 100	WALL - MOUNT AREA LIGHT , 100W HPS CROUSE - HINDS # WAL105PN - QV

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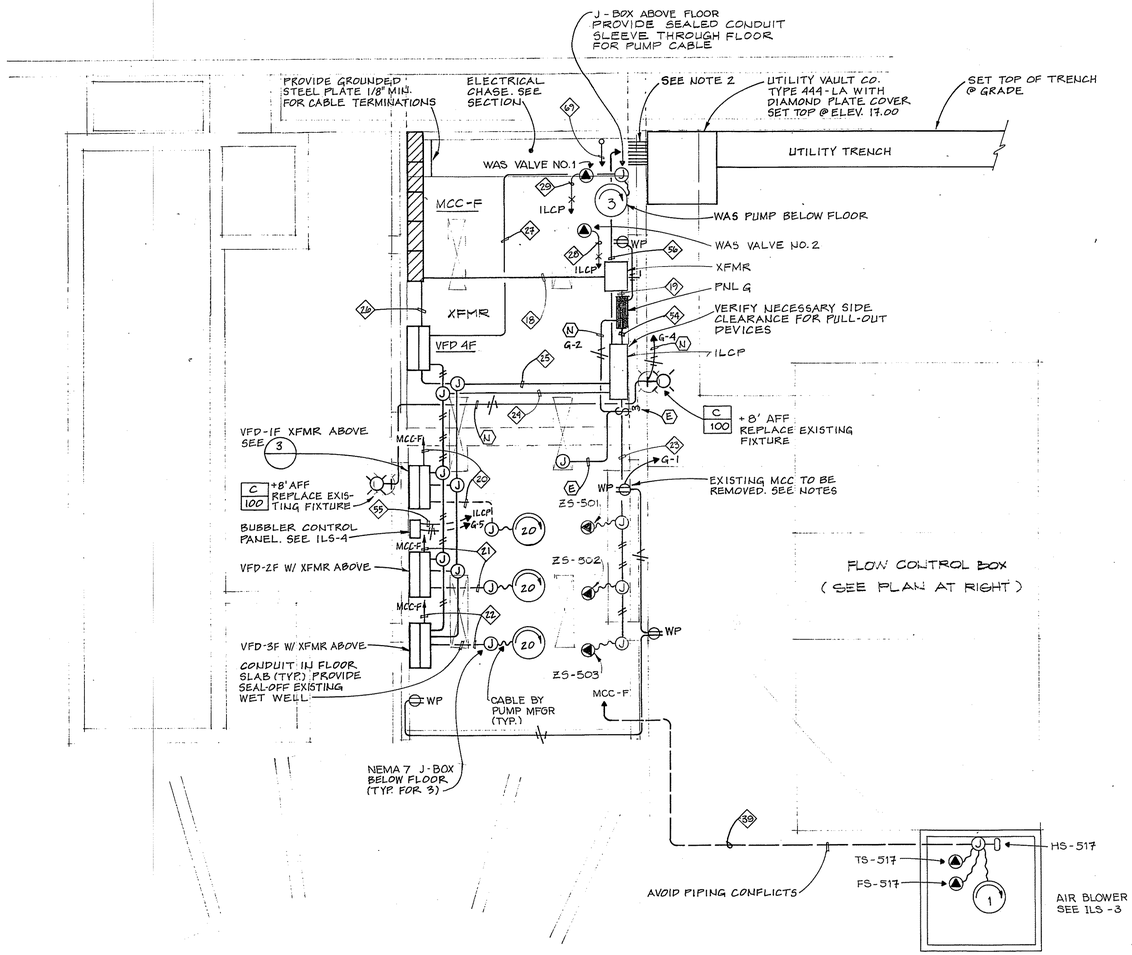
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COOS BAY
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IMPROVEMENT PROJECT
COOS BAY, OREGON

ELECTRICAL - AERATION BASINS

DRAWING NO. E-7

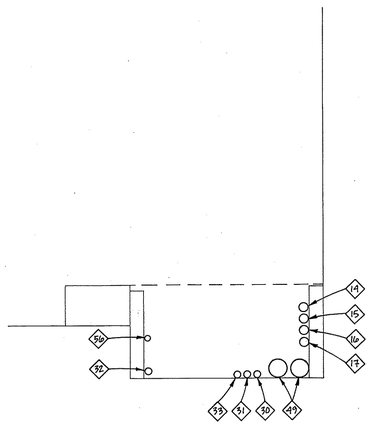
SHEET NO. 42



INTERMEDIATE LIFT PLAN 1 / E-8

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

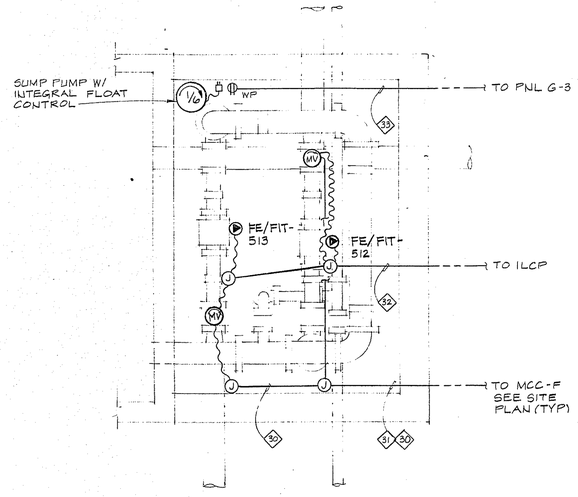
NOTES:
1. RECONNECT EXISTING CIRCUITS SHOWN FROM EXISTING PANEL G
2. PROVIDE 8-4" CONDUIT SLEEVES BETWEEN VAULT AND FLOOR CHASE. SEE ILS DRAWINGS FOR CHASE DIMENSIONS



CHASE - CROSS SECTION

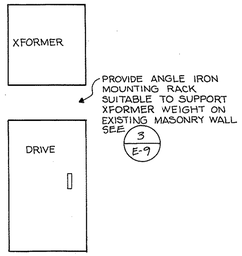
NO SCALE

NOTE: TERMINATE MC CABLES @ STEEL PLATE IN TRENCH



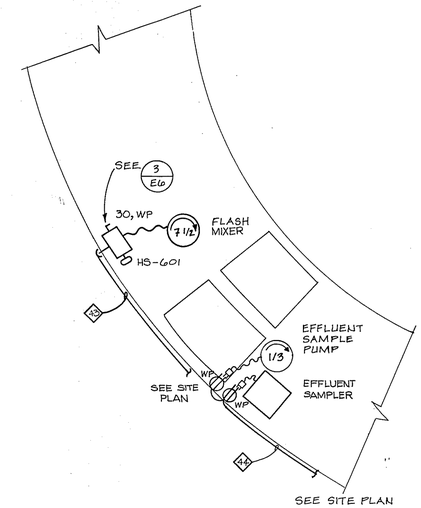
RAS/FLOW CONTROL PLAN 2 / E-8

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



ELEVATION 3

NTS



EFFLUENT PLAN 4 / E-8

NO SCALE

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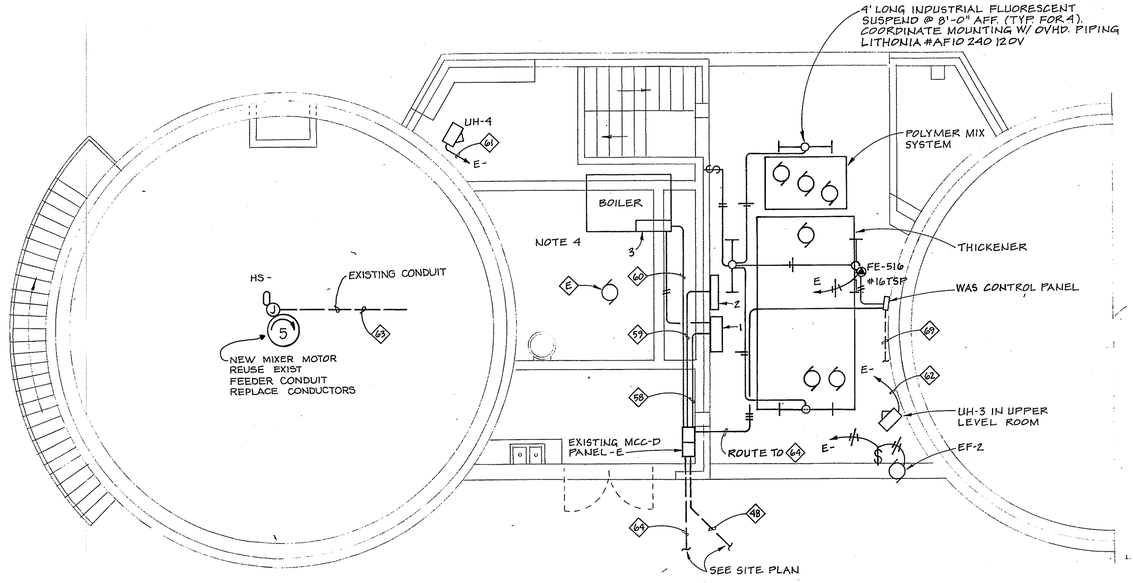
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COOS BAY
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ELECTRICAL - INTERMEDIATE LIFT STATION/RAS

DRAWING NO. E-8

SHEET NO. 43



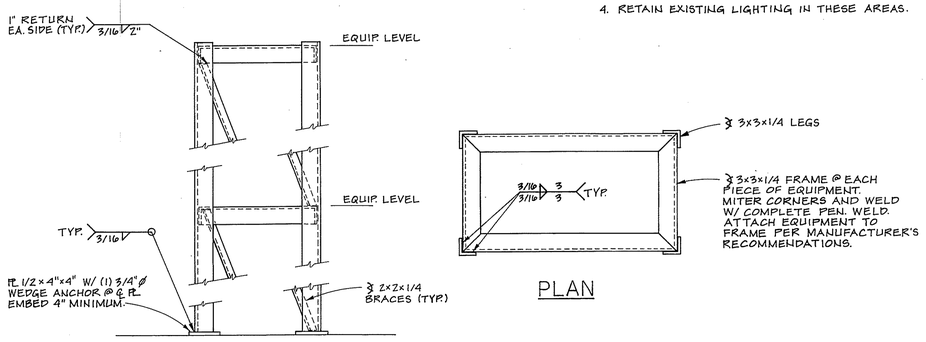
NORTH

PLAN - ELECTRICAL (1 / E-9)

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

NOTES:

1. THICKENER CONTROL PANEL. INTERCONNECTION TO MOTORS TO BE BY EQUIPMENT MFGR.
2. POLYMER CONTROL PANEL. MOTOR CORRECTIONS BY EQUIPMENT MFGR.
3. BOILER CONTROL PANEL.
4. RETAIN EXISTING LIGHTING IN THESE AREAS.

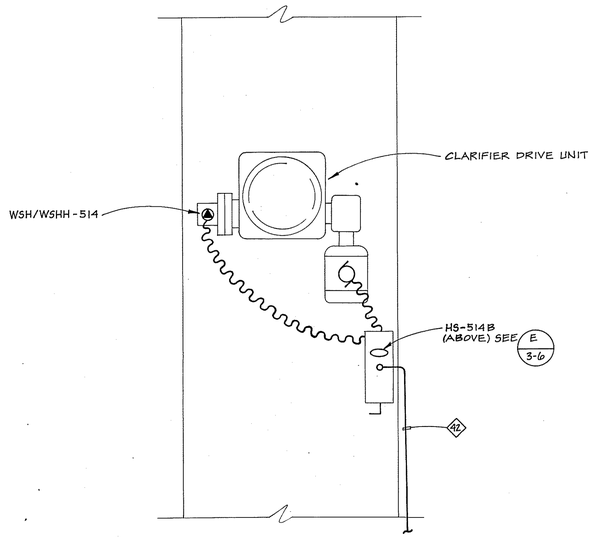


ELEVATION - SIDES AND BACK, FRONT SIMILAR (W/O BRACES)

PLAN

ELECTRICAL CABINET FRAMES (3 / E-9)

NO SCALE



SECONDARY CLARIFIER CENTER PLAN (2 / E-9)

NO SCALE

PANEL.....G BUS.....200 A VOLTAGE.... 120/208V, 3PH, 4 WIRE

FEEDER....SEE POWER RISER MAIN BRKR: 125 A MOUNTING.... SURFACE

CKT NO	CIRCUIT DESCRIPTION	CKT BREAKER POLES/AMPS	LOAD WATTS	PHASE	LOAD WATTS	CKT BREAKER POLES/AMPS	CIRCUIT DESCRIPTION	CKT NO
1	RECEPTS	1-20	800	A	600	1-20	LIGHTS-INTERIOR	2
3	SUMP PUMP AT RAS	1-20	500	B	250	1-20	LIGHTS-EXTERIOR	4
5	BUBBLER PANEL	1-20	1000	C	2000	1-40	ILCP	6
7	EFFLUENT SAMPLER	1-20	1000	A	0	1-20	SPARE	8
9	EFFLUENT SAMPLE PUMP	1-20	865	B	0	1-20	SPARE	10
11	SPARE	1-20	0	C	0	1-20	SPARE	12
13	SPARE	1-20	0	A	0	1-20	SPARE	14
15	SPARE	1-20	0	B	0	1-	SPACE	16
17	SPACE	1-	0	C	0	1-	SPACE	18
19	SPACE	1-	0	A	0	1-	SPACE	20
21	SPACE	1-	0	B	0	1-	SPACE	22
23	SPACE	1-	0	C	0	1-	SPACE	24

	CONNECTED LOAD		TOTAL LOAD		.....NOTES.....
LOAD PER PHASE (WATTS)	A=	2400	A=	2634	1. RECONNECT ALL NECESSARY EXISTI CIRCUITS FROM EXISTING PANEL G
	B=	1615	B=	1849	
	C=	3000	C=	3234	2.
LOAD PER PHASE (AMPS)	A=	20.00	A=	21.95	3.
	B=	13.46	B=	15.41	
	C=	25.00	C=	26.95	4.
TOTAL LOAD (KVA)		7.02		7.72	5.
SPARE CAPACITY	10.00%	.70	DATE	5/18/1990	

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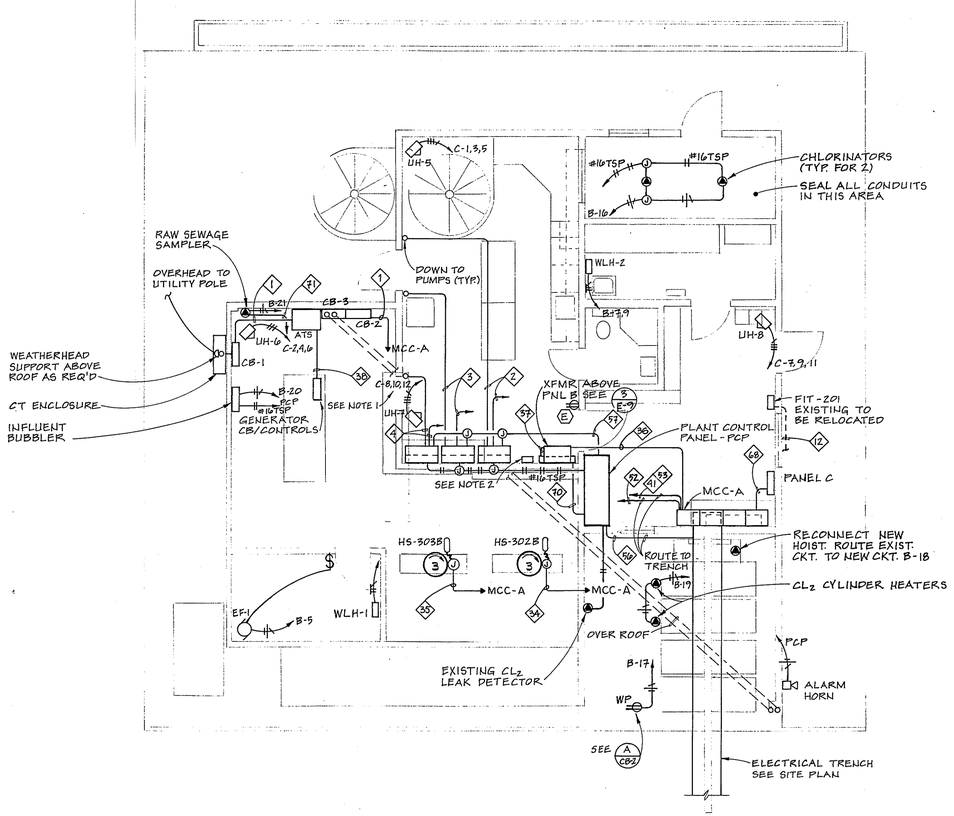
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COOS BAY
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IMPROVEMENT PROJECT
COOS BAY, OREGON

ELECTRICAL DIGESTER COMPLEX

DRAWING NO. E-9

SHEET NO. 44

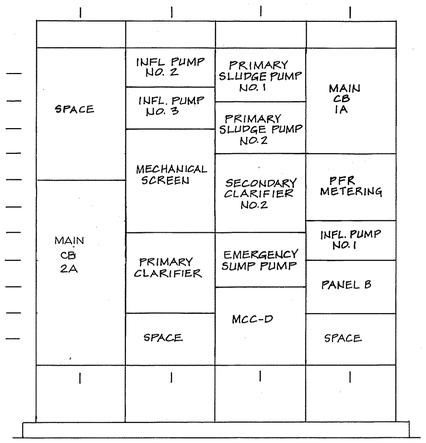


NORTH

CONTROL BLDG. - ELECT.

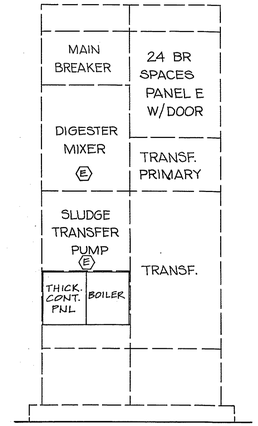
SCALE: 3/16" = 1'-0"

NOTES:
1. EXISTING PANEL B TO BE REMOVED, SPLICE AND REROUTE ALL NECESSARY CIRCUITS TO NEW PANEL B.
2. LIGHTING CONTROL - SEE 3/E-4. MOUNT PHOTO-CELL ON ROOF ABOVE. SEAL CONDUIT PENETRATIONS.



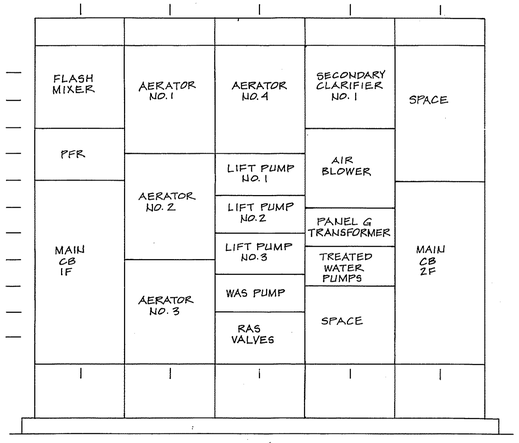
MCC-A (ELEV.)

NTS



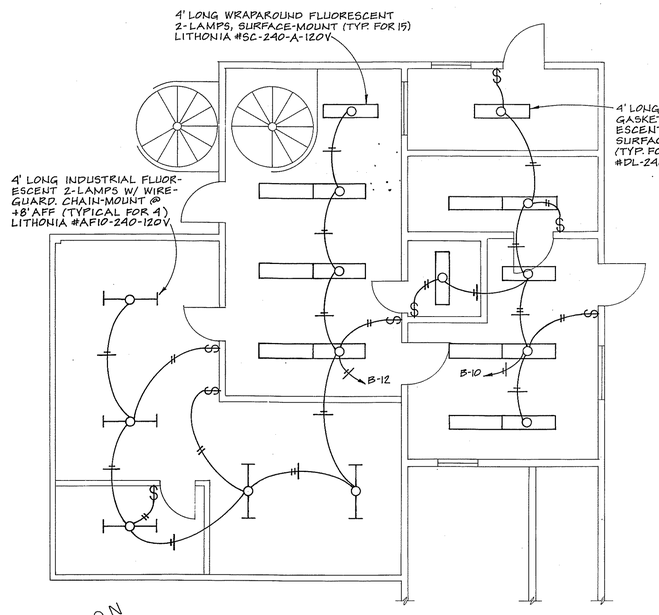
EXISTING MCC-D (ELEV.)

NTS



MCC-F (ELEV.)

NTS



NORTH

CONTROL BUILDING - LIGHTING

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

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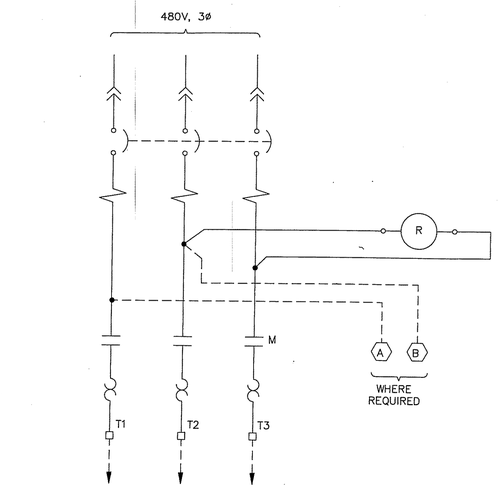
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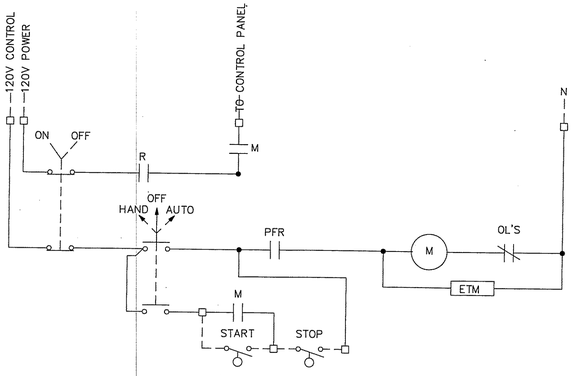
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WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

ELECTRICAL - CONTROL BUILDING

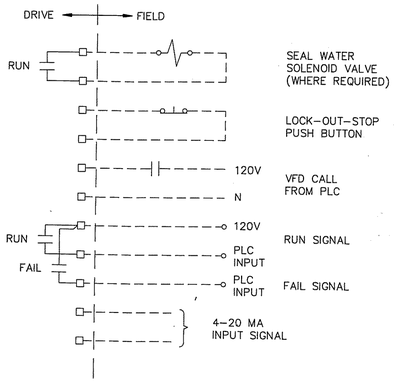
DRAWING NO. E-10
SHEET NO. 45



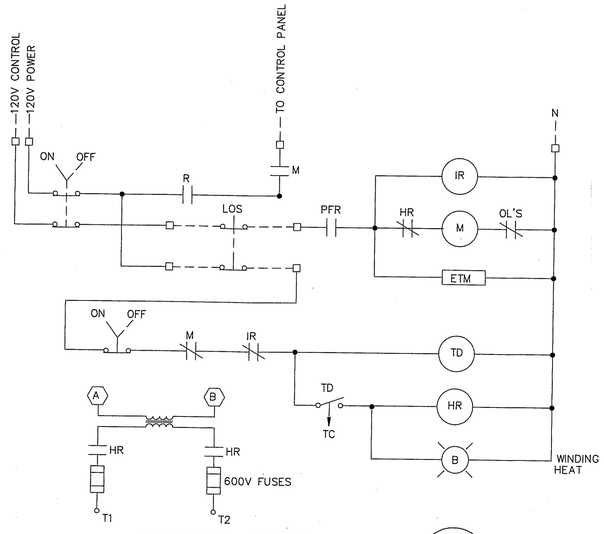
TYPICAL POWER SCHEMATIC 1 E-11



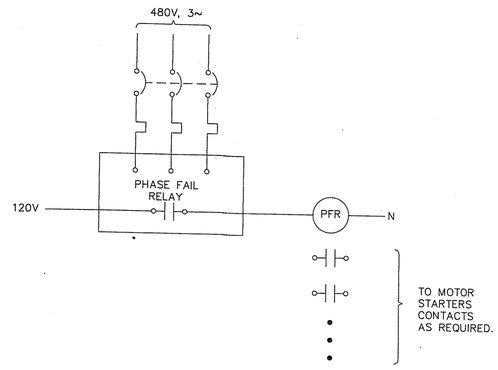
CONTROL SCHEMATIC 2 E-11



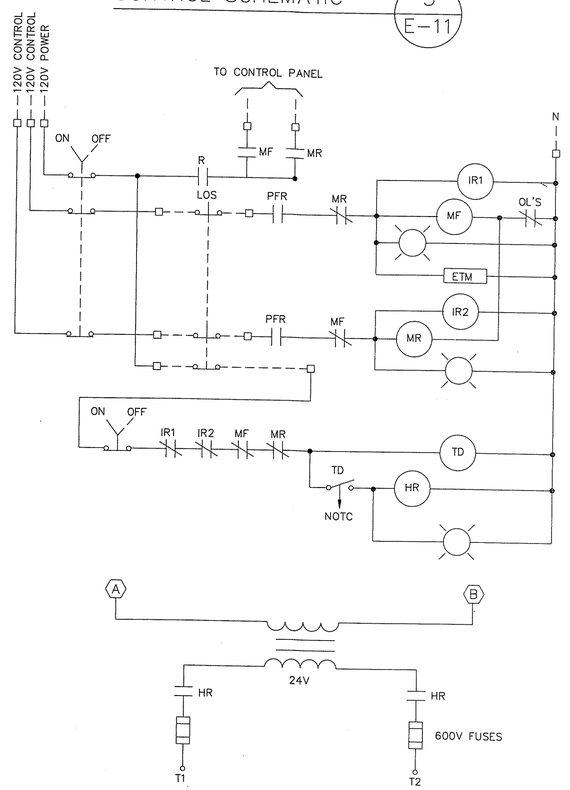
VFD INTERCONNECTIONS 3 E-11



CONTROL SCHEMATIC 4 E-11



CONTROL SCHEMATIC 5 E-11



CONTROL SCHEMATIC 6 E-11

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PROJECT NO: 10868.005.03

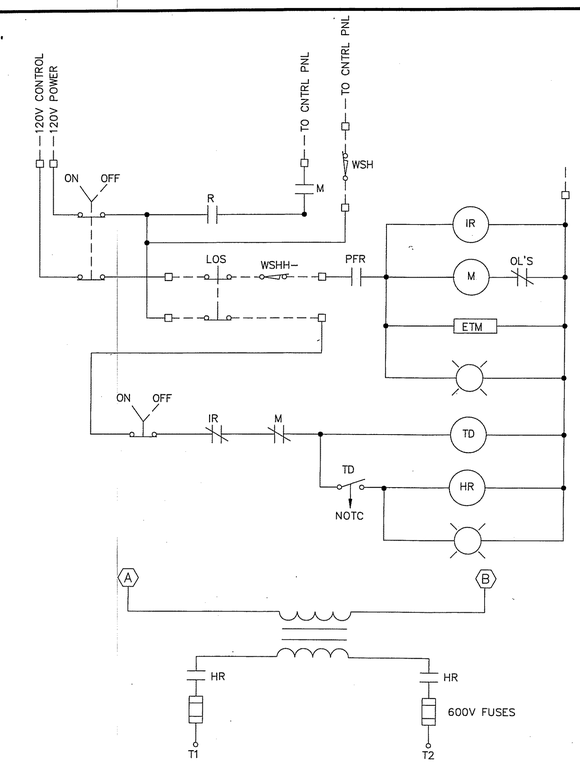
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IMPROVEMENT PROJECT
COOS BAY, OREGON

CONTROL SCHEMATICS

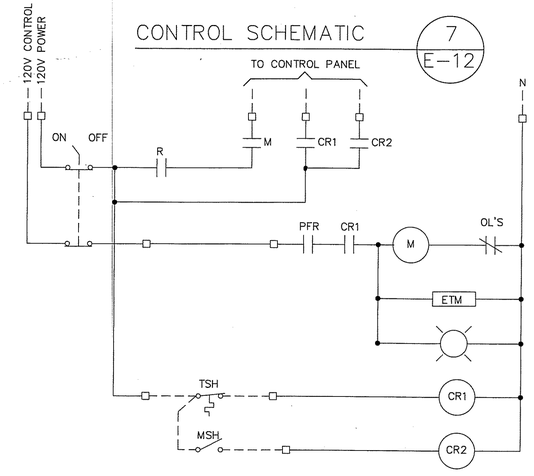
DRAWING NO. E-11

SHEET NO. 46

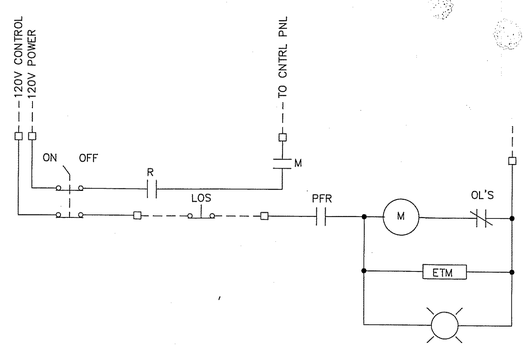
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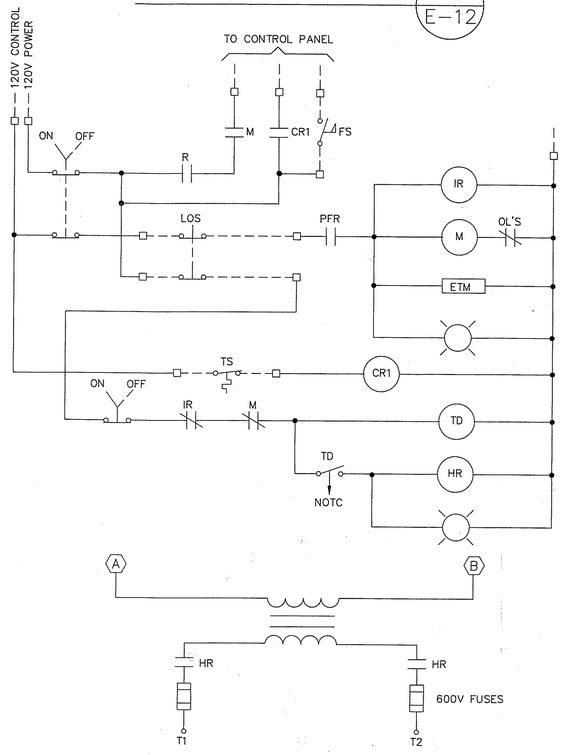
CONTROL SCHEMATIC 7 / E-12



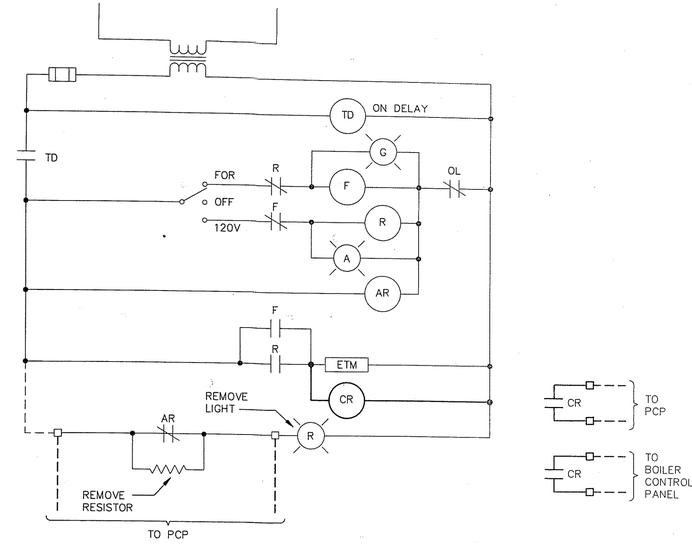
CONTROL SCHEMATIC 8 / E-12



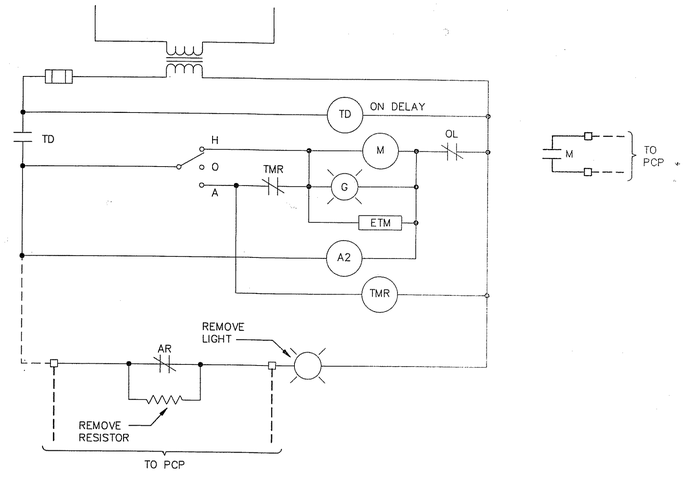
CONTROL SCHEMATIC 9 / E-12



CONTROL SCHEMATIC 10 / E-12



CONTROL SCHEMATIC 11 / E-12



CONTROL SCHEMATIC 12 / E-12

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COOS BAY
WASTEWATER TREATMENT PLANT NO. 2
IMPROVEMENT PROJECT
COOS BAY, OREGON

CONTROL SCHEMATICS

DRAWING NO. E-12

SHEET NO. 42