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PUBLIC SERVICES BUILDING
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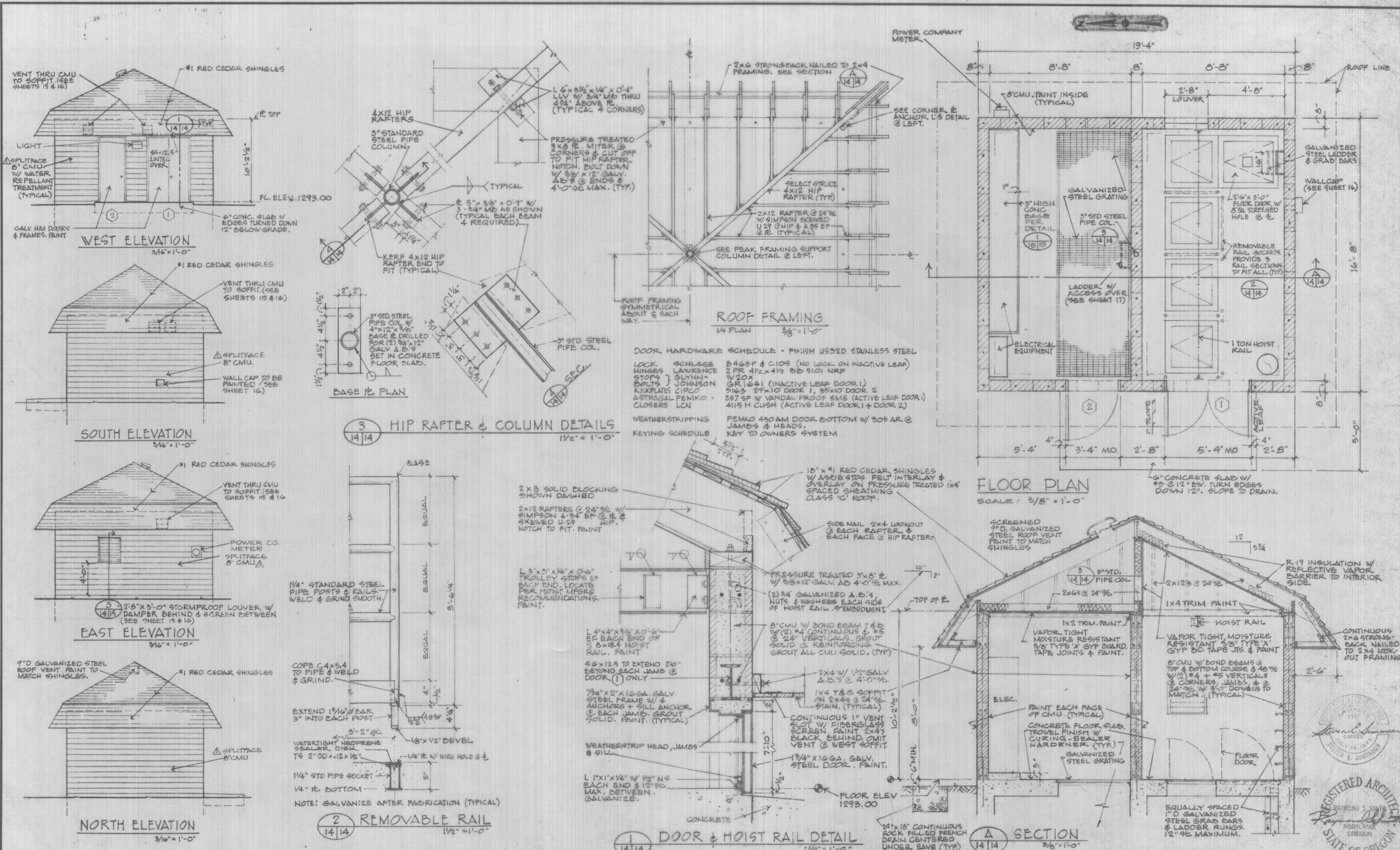
REQUEST FOR PROPOSALS #2017-33
Arrah Wanna Pump Station and
Hoodland Water Resource Recovery Facility Modernization
RESPONSE TO CLARIFYING QUESTIONS
May 16, 2017

Note that these are questions submitted by interested firms to the above referenced solicitation. The below answers are for clarification purposes only and in no way alter or amend the RFP as published.

1. Are original as-built drawings available for the Sewage Treatment Plant?

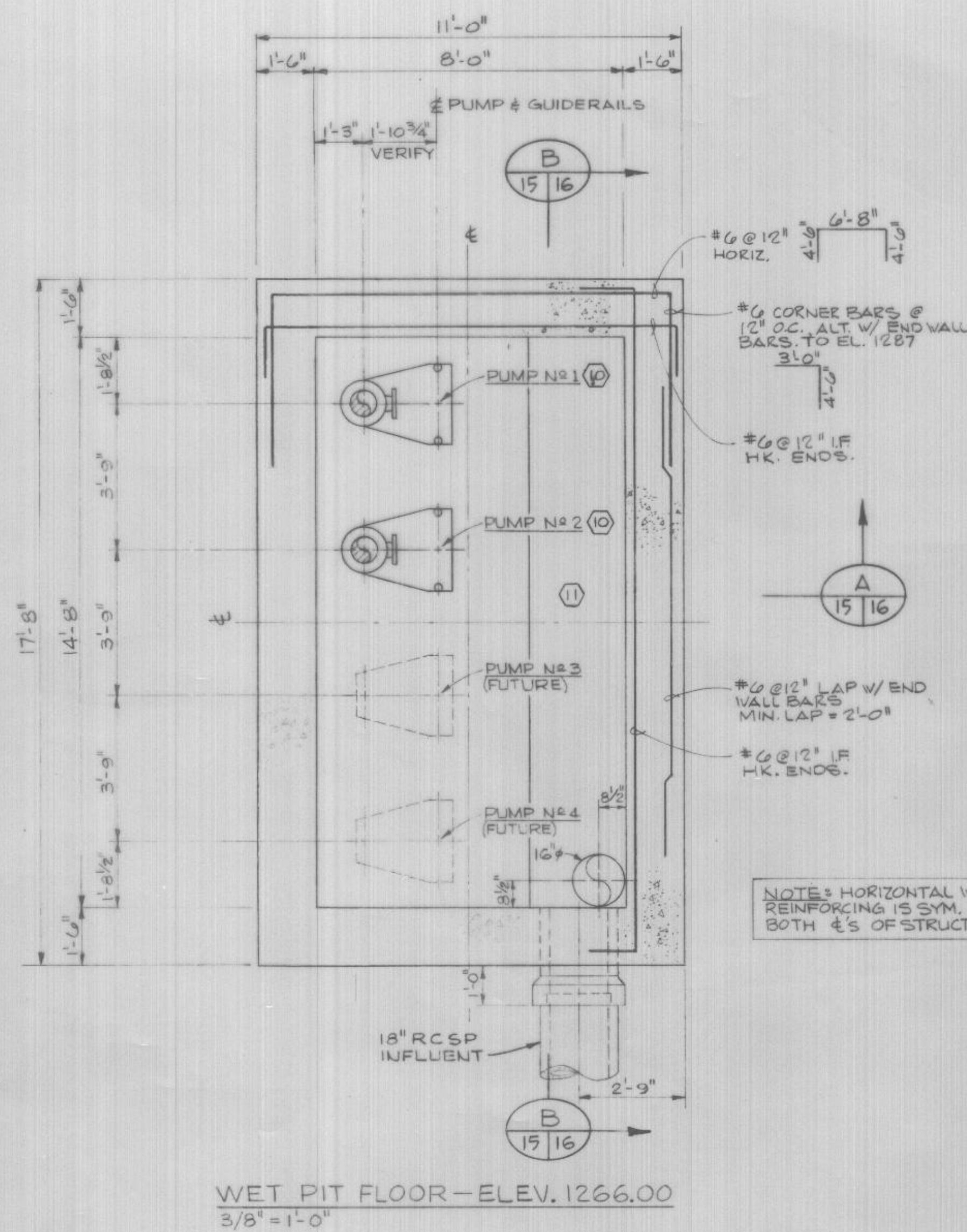
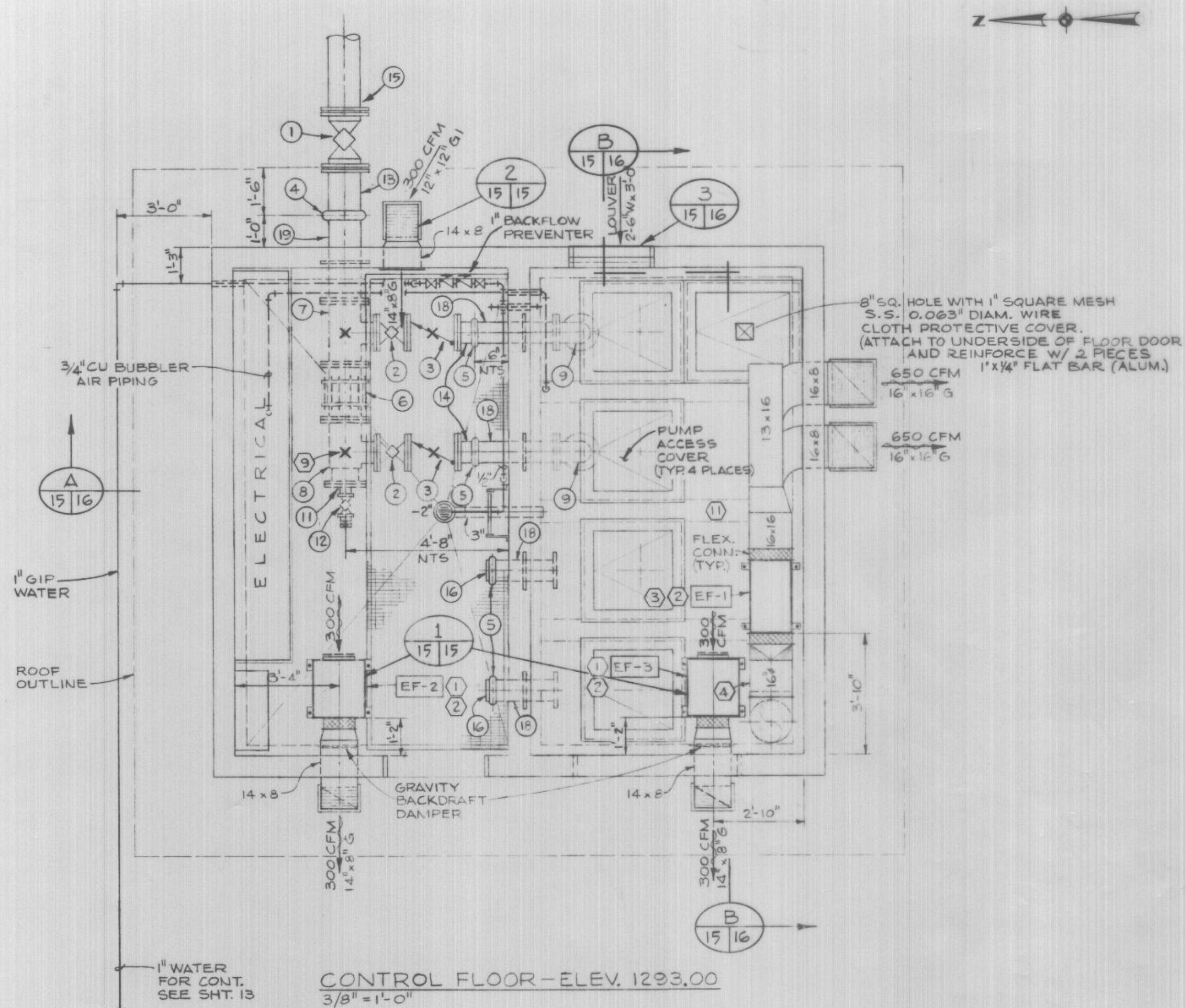
Answer: Original as-built drawings for the Hoodland Service District Sewage Treatment Plant are available for reference purposes only. Due to file size, the document cannot be attached herein. To receive a copy of the document please email Guy Melton at gmelton@clackamas.us and a link to download the document will be sent to you.

End of Clarifying Questions

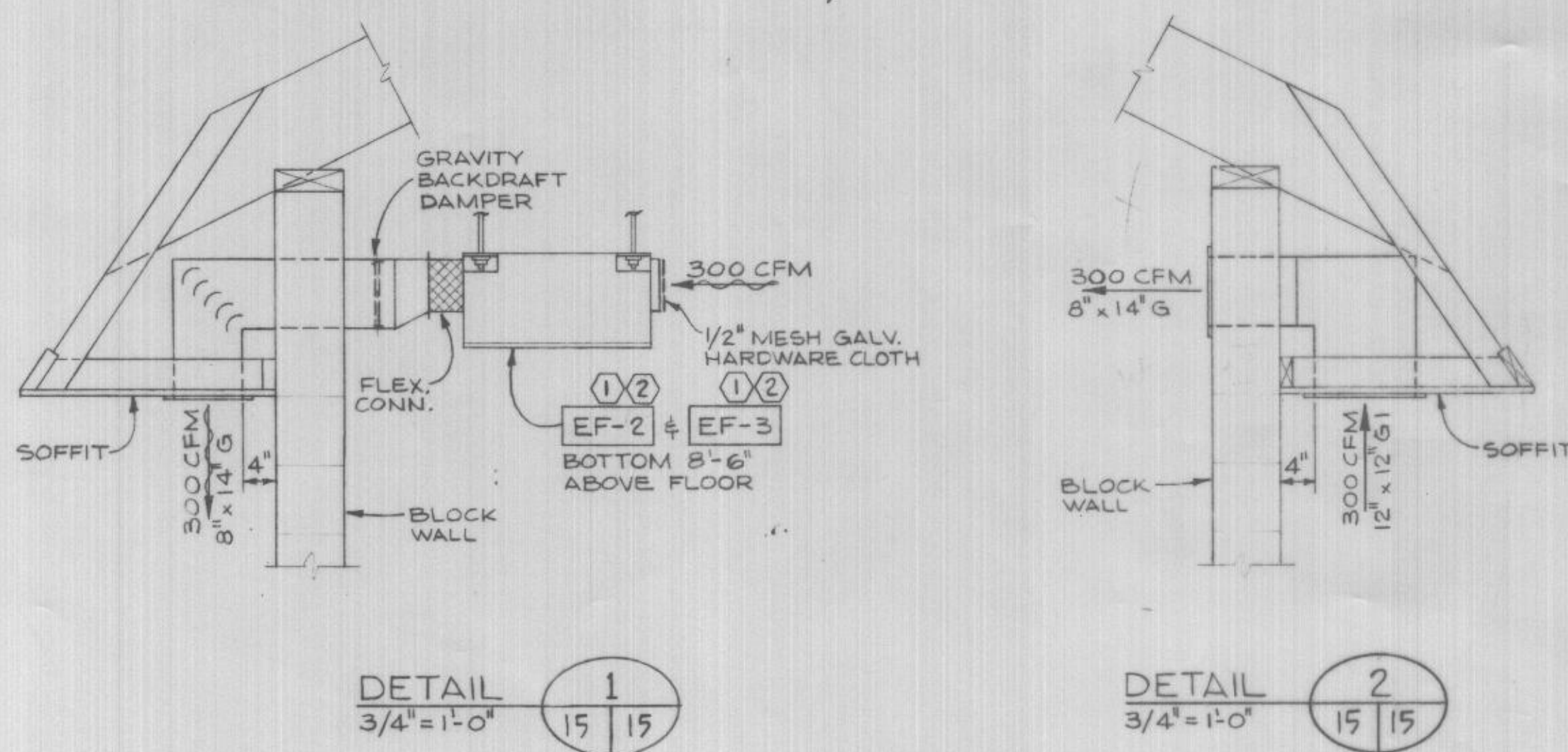


DESIGNED RGS		APPROVED		STRAAM Engineers, Inc.		HOODLAND SERVICE DISTRICT CLACKAMAS COUNTY OREGON WELCHES SEWERS AND PUMPING STATIONS		TREATMENT PLANT PUMP STATION ARCHITECTURAL DETAILS		14 29	
DRAWN DHOS		SCALE AS SHOWN		DATE FEB. 1980							
CHECKED RGS		FILE PT-C42-04-32		17300							
DATE NO.		REVISION									





- LIST OF FITTINGS AND APPURTENANCES**
- ① 12" PLUG VALVE, MECHANICAL JOINT (MJ).
 - ② 8" PLUG VALVE, FLANGED (FL'GD).
 - ③ 8" CUSHIONED CHECK VALVE, FL'GD.
 - ④ 12" VICTAULIC COUPLING.
 - ⑤ 8" VICTAULIC COUPLING.
 - ⑥ 12" LOCK COUPLING, DRESSER STYLE 167.
 - ⑦ 12" x 12" x 8" REDUCING TEE, FL'GD.
 - ⑧ 12" x 10" x 8" REDUCING TEE, FL'GD.
 - ⑨ 8" SHORT-RADIUS 90° ELBOW, FL'GD.
 - ⑩ 2" x 8" CONCENTRIC INCREASER, FL'GD.
 - ⑪ 4" x 16" REDUCING FLANGE.
 - ⑫ 4" PLUG VALVE, THREADED, WITH 1-4" SHORT NIPPLE & 1-4" x 6" LONG NIPPLE.
 - ⑬ 12" SPOOL WITH VICTAULIC FLEXIBLE GROOVE x LOCK TYPE MECHANICAL JOINT GROOVE.
 - ⑭ 8" SPOOL WITH VICTAULIC FLEXIBLE GROOVE x FL'GD.
 - ⑮ 12" CLASS 50 DIP WITH LOCK TYPE MECHANICAL JOINT GROOVE.
 - ⑯ 8" VICTAULIC CAP.
 - ⑰ 6" x 4" 90° DISCHARGE ELBOW AS FURNISHED BY PUMP SUPPLIER, TYPICAL 2 PLACES.
 - ⑱ 8" WALL SPOOL WITH VICTAULIC FLEXIBLE GROOVE x FL'GD.
 - ⑲ 12" WALL SPOOL WITH VICTAULIC FLEXIBLE GROOVE x FL'GD.



EQUIPMENT SCHEDULE	
EF-1	WET WELL VENTILATION EXHAUST AIR FAN GREENHECK SQB-10-7 1300 CFM @ 1.50-INCH S.P. 3/4 HP-460V-3-4-60~ EXPLOSION PROOF MOTOR/NON-SPARKING FAN WHEEL EXPLOSION PROOF AIR FLOW SWITCH, ETC.
EF-2	ROOM VENTILATION EXHAUST AIR FAN PACE SCF-57A (M) 300 CFM @ 0.75-INCH S.P. 1/8 HP-115V-1-4-60~
EF-3	ROOM VENTILATION EXHAUST AIR FAN PACE SCF-57A (M) 300 CFM @ 0.75-INCH S.P. 1/8 HP-115V-1-4-60~ EXPLOSION PROOF MOTOR NON-SPARKING FAN WHEEL
EF-4	WET WELL DEODORIZING EXHAUST AIR FAN GREENHECK SQD-3-A 132 CFM @ 0.375-INCH S.P. 1/8 HP-115V-1-4-60~ EXPLOSION PROOF MOTOR NON-SPARKING FAN WHEEL

- NOTES:**
- ① FAN, ELECTRIC MOTOR, AND BELT DRIVE SHALL BE CABINET INTERNALLY MOUNTED AND OPEN SPRING ISOLATED ON A COMMON BASE.
 - ② HANG FROM UNDER SIDE OF ROOF ON STEEL ROD HANGERS.
 - ③ HANGERS WITH SPRINGS & RUBBER STOPS, FOR VIBRATION CONTROL.
 - ④ ROUND DUCT WORK AND FITTINGS SHALL BE 24-GAUGE GALVANIZED SPIRAL DUCT. SEE SPECIFICATIONS.
 - ⑤ ROUND DUCT WORK SHALL BE GLASS FILAMENT REINFORCED PLASTIC. SEE SPECIFICATIONS.
 - ⑥ SLOPE DRAIN PIPE 1/4"/FT. (MIN).
 - ⑦ INSTALL GUIDE RAILS MIN. 2" SCH. 40 S.S. AS FURNISHED BY PUMP SUPPLIER.
 - ⑧ FLOOR DRAIN - J.R. SMITH 2270 OR EQUAL, CAST IRON BODY AND LOOSE SET BAR GRATE.
 - ⑨ PIPE SUPPORT (TYR. 4 PLACES)
 - ⑩ INSTALL SUBMERSIBLE PUMPS WITH BASES, DISCHARGE ELBOWS, GUIDE RAIL ASSEMBLIES AND ACCESS COVERS FURNISHED BY PUMP SUPPLIER.
 - ⑪ EXPLOSION PROOF DENOTES CLASS I, GROUP D, DIVISION 1.



DESIGNED J.R.S./P.B.B.	APPROVED
DRAWN P.B.B.	SCALE AS SHOWN DATE FEB. 1980
CHECKED SES	FILE PT-C42-04-32, 17301

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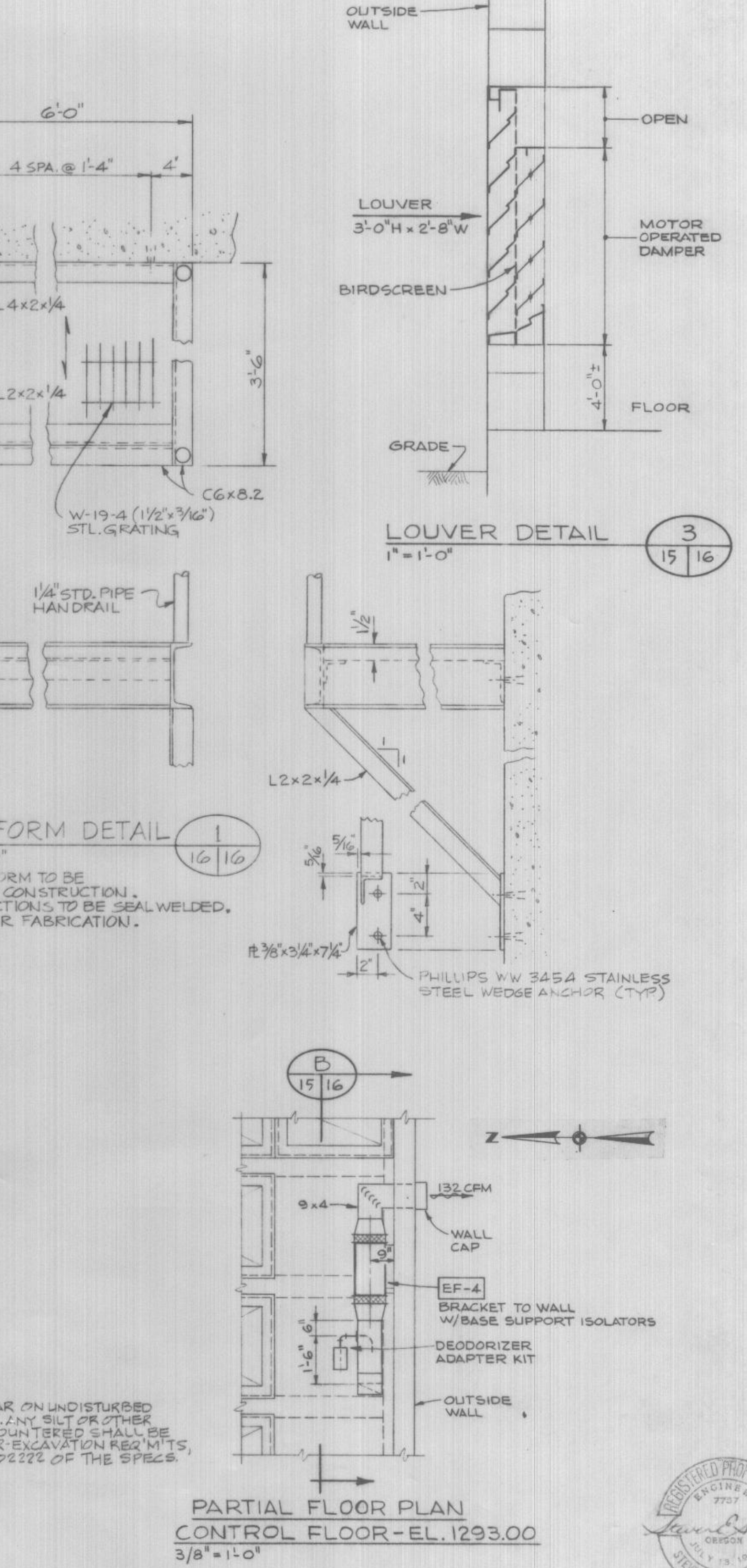
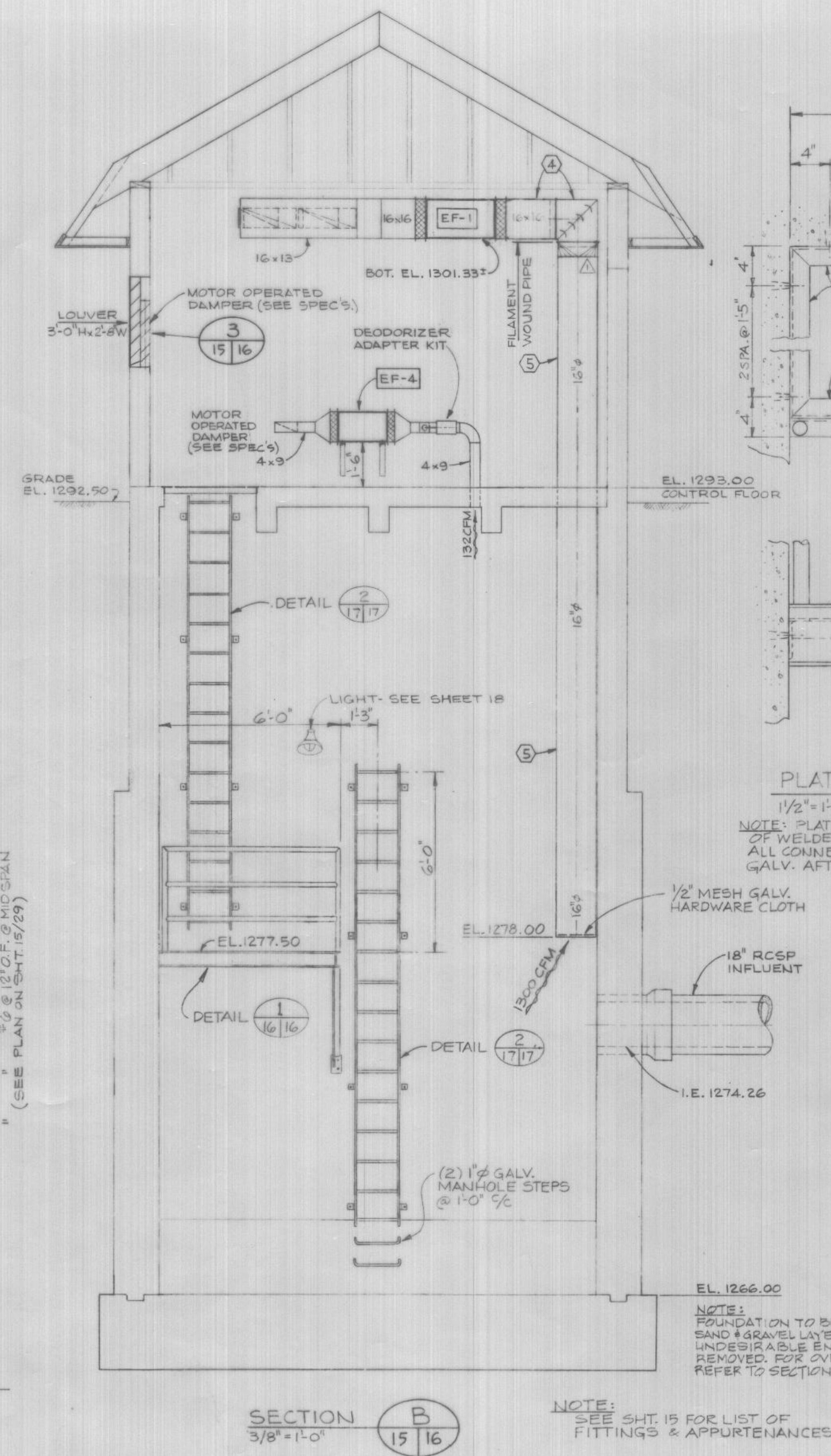
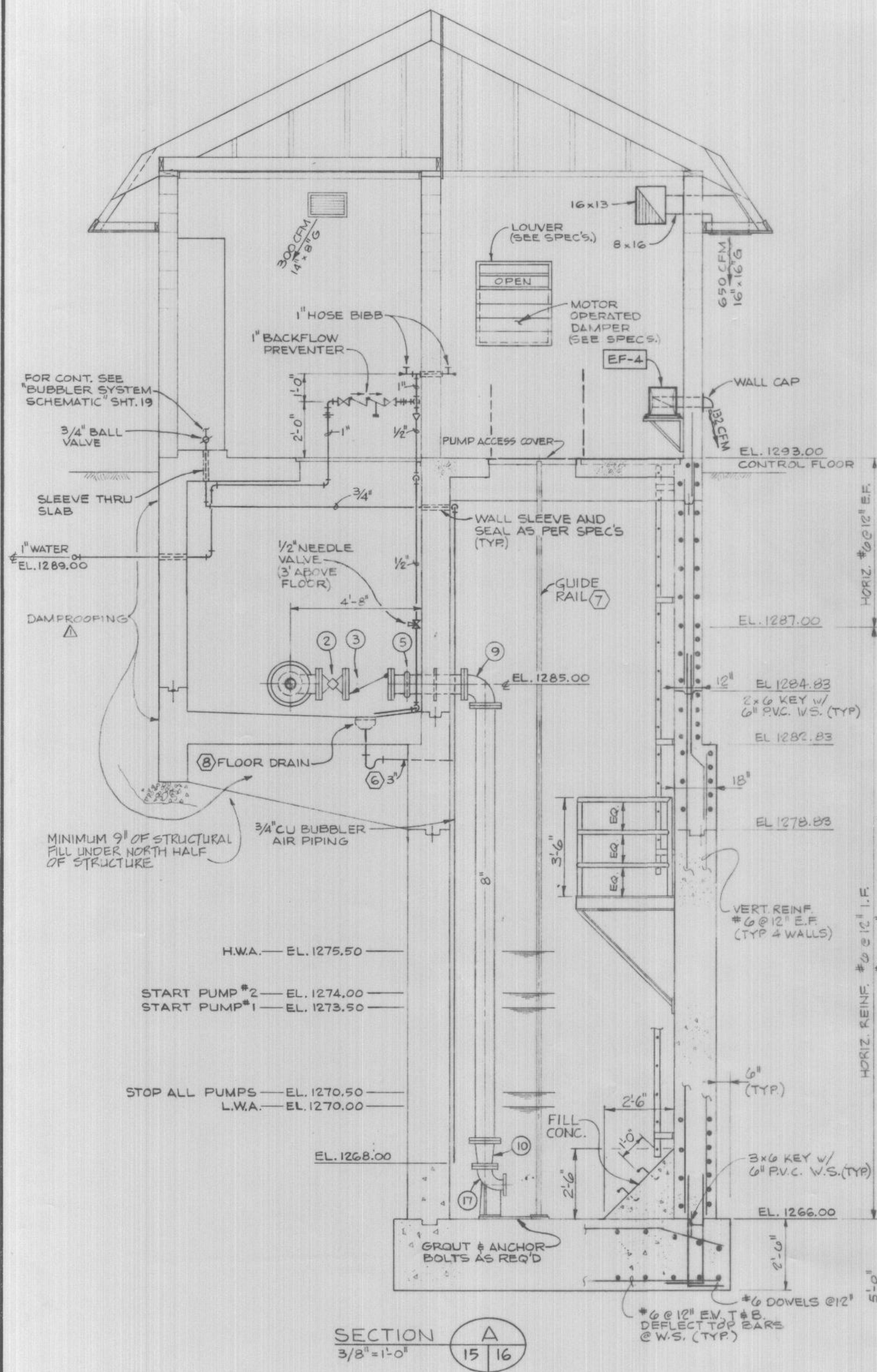
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Phoenix
Atlanta

HOODLAND SERVICE DISTRICT
CLACKAMAS COUNTY OREGON
WELCHES SEWERS AND PUMPING STATIONS

TREATMENT PLANT PUMP STATION
PLANS AND DETAILS

15
29



DESIGNED JRS/PEK	APPROVED
DRAWN PBB	SCALE AS SHOWN DATE FEB. 1980
CHECKED SES/AAP	FILE PT-C42-04-32, 17302

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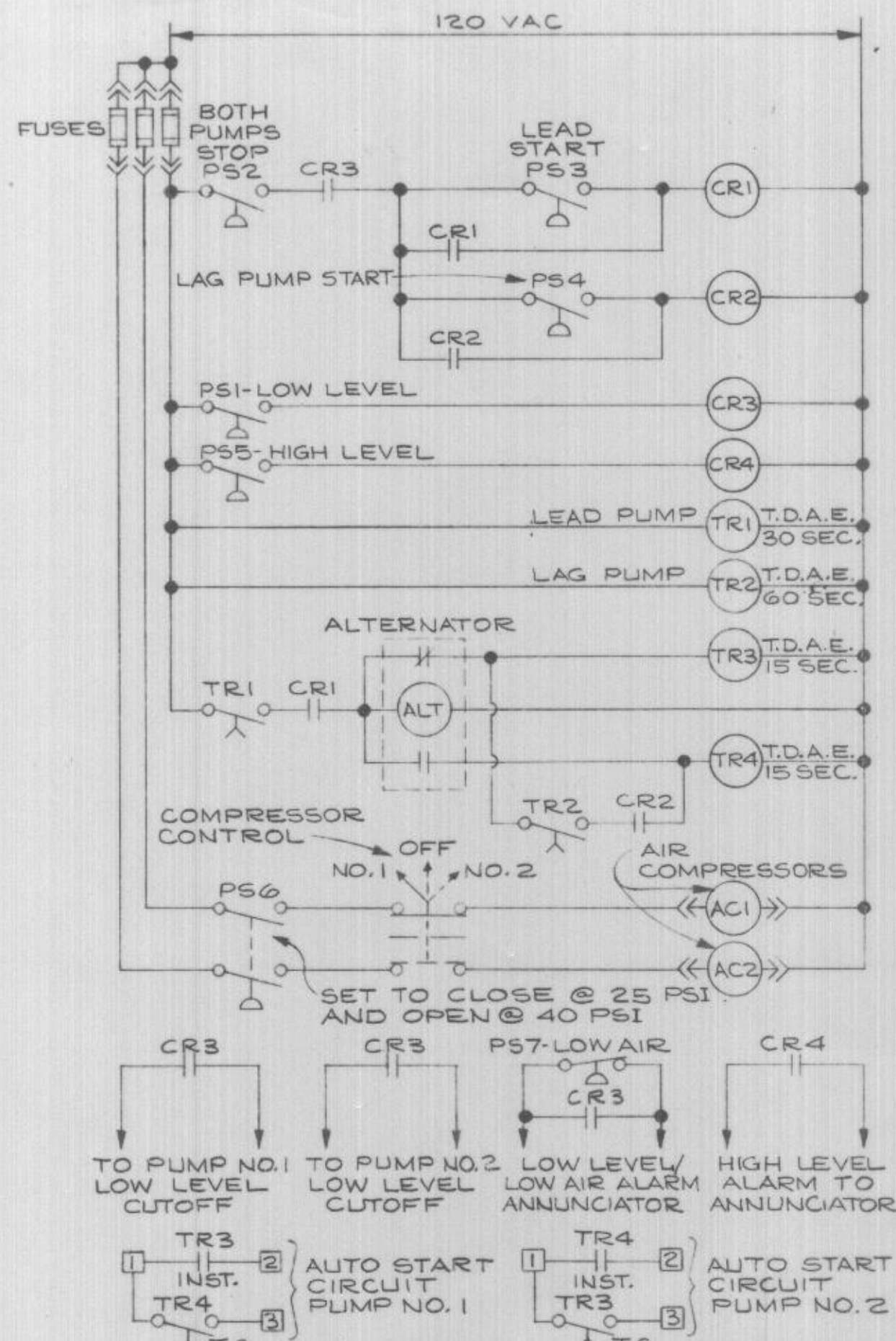
Phoenix
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HOODLAND SERVICE DISTRICT
CLACKAMAS COUNTY OREGON
WELCHES SEWERS AND PUMPING STATIONS

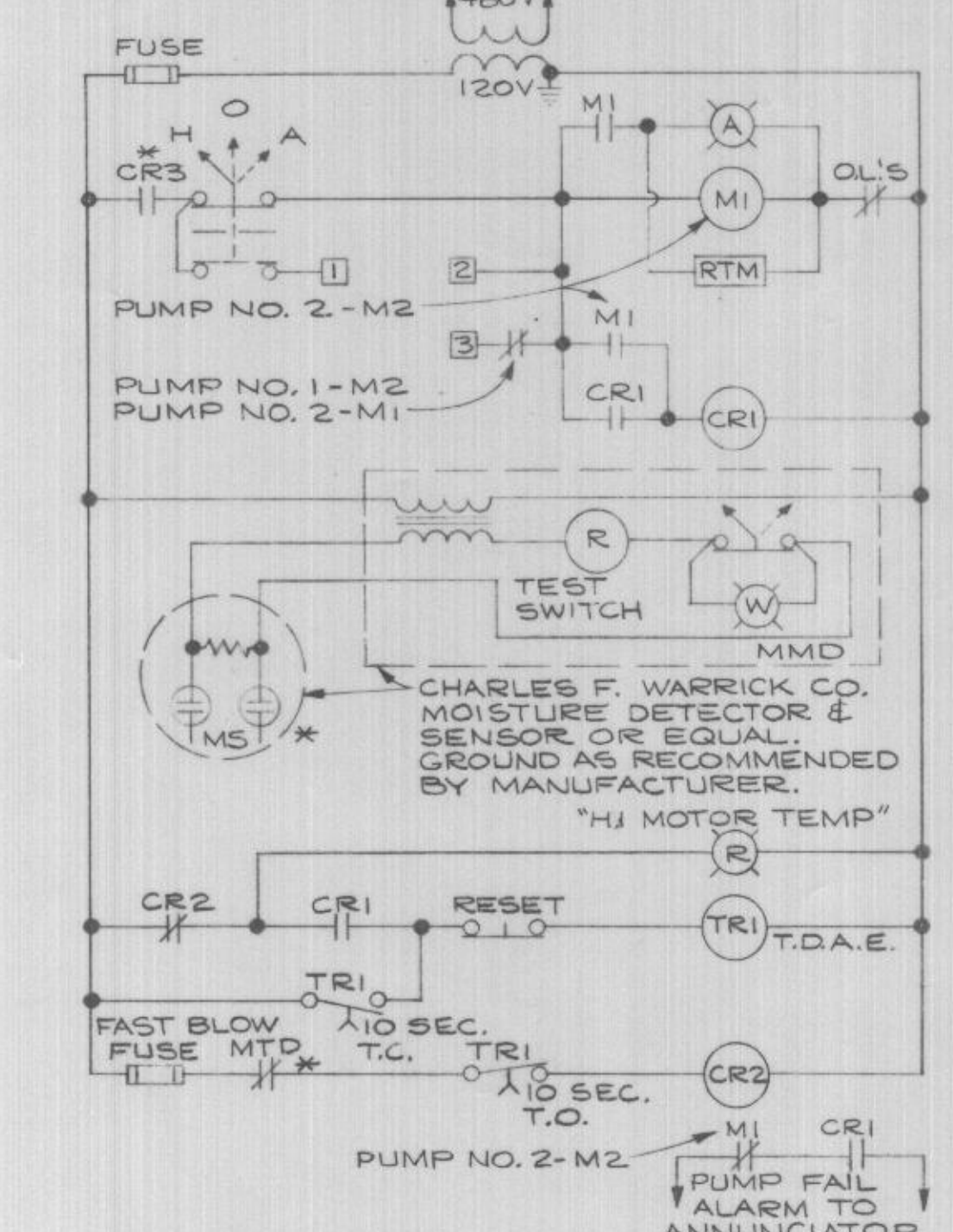
TREATMENT PLANT PUMP STATION
SECTIONS AND DETAILS

16
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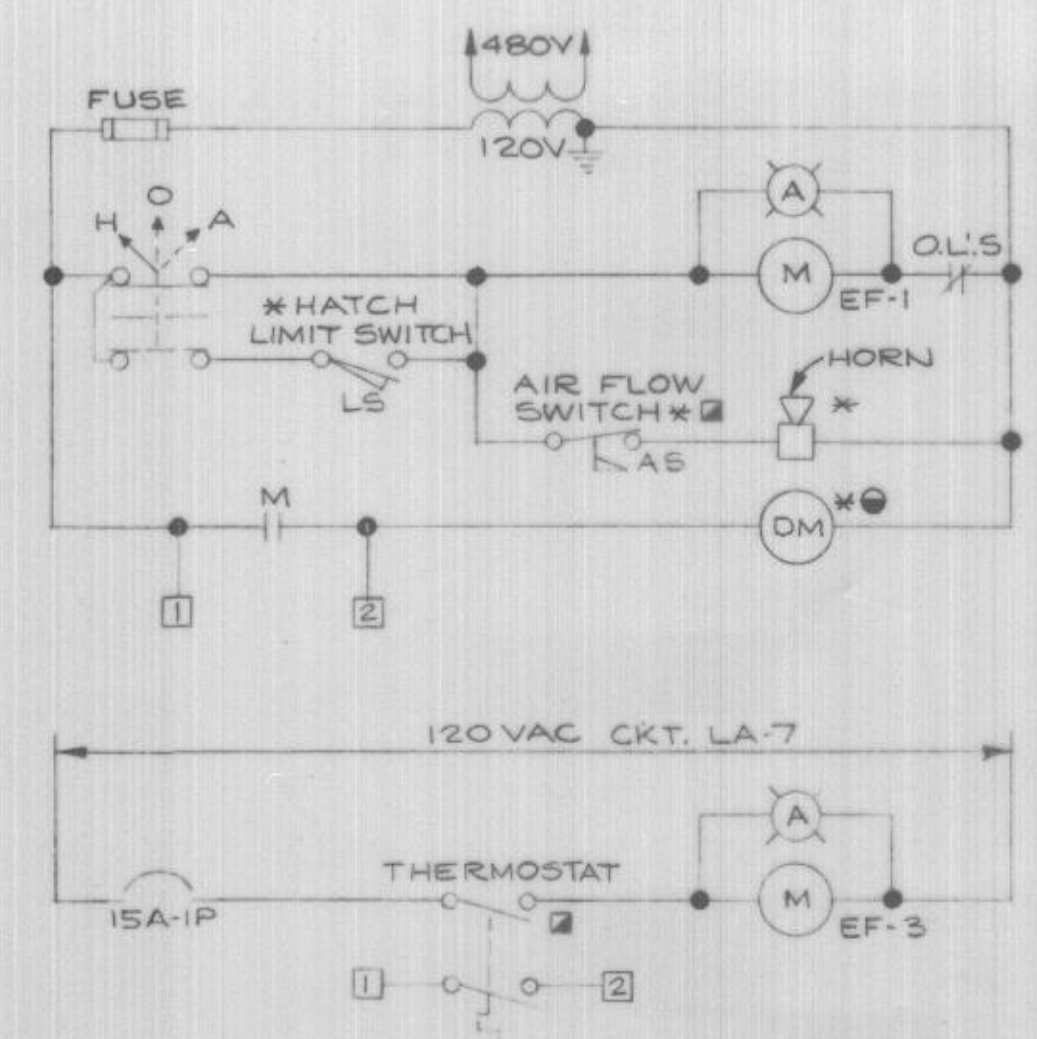




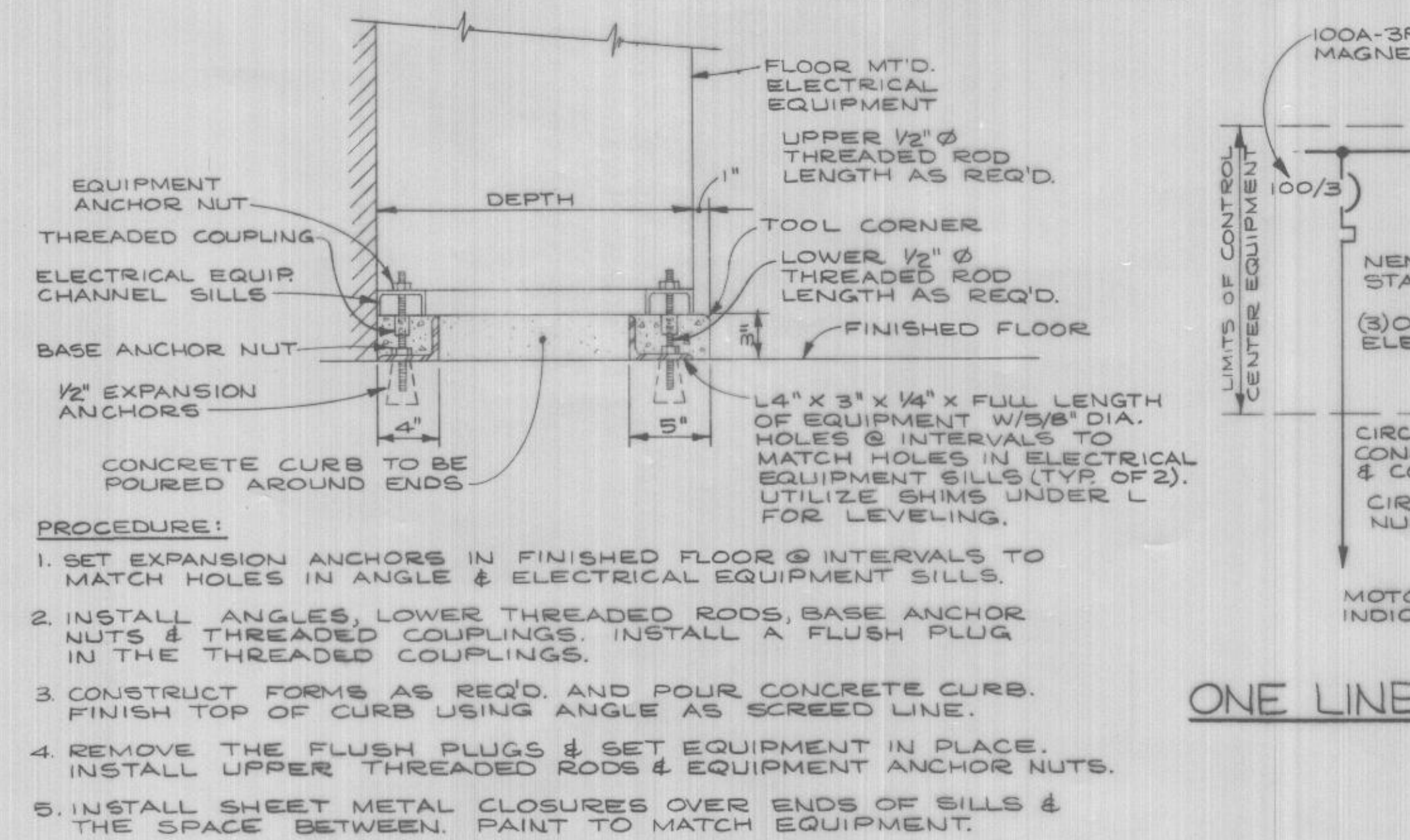
CONTROL DIAGRAM NO. 1
SEQUENCE CONTROLLER - WELCHES PUMP STATION NO. 1 & TREATMENT PLANT PUMP STATION



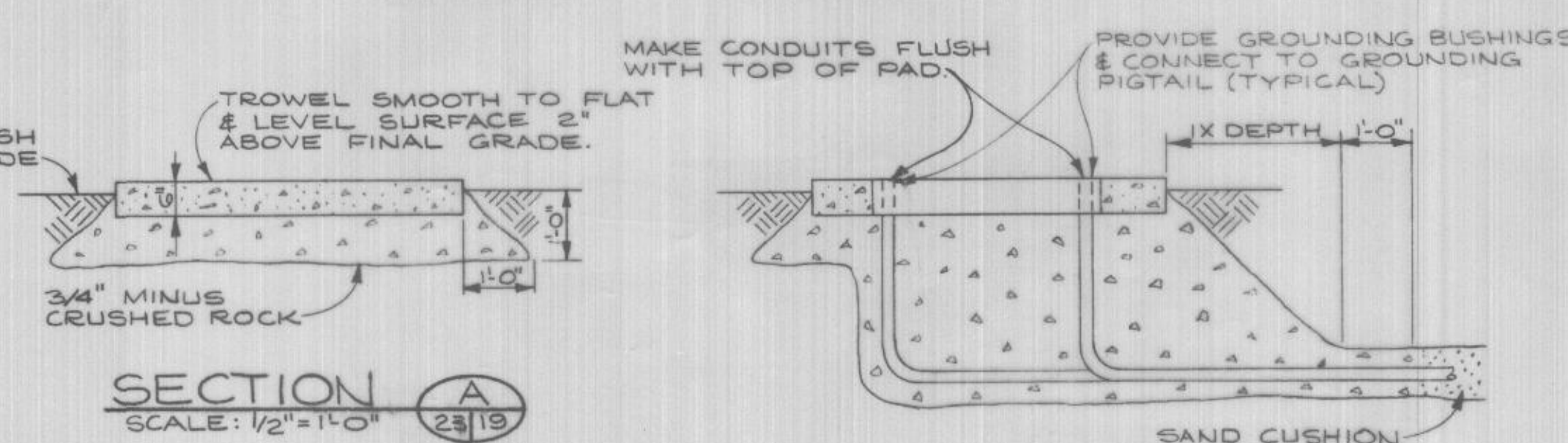
CONTROL DIAGRAM NO. 2
PUMP NO. 1 & 2 - WELCHES PUMP STATION NO. 1 & TREATMENT PLANT PUMP STATION



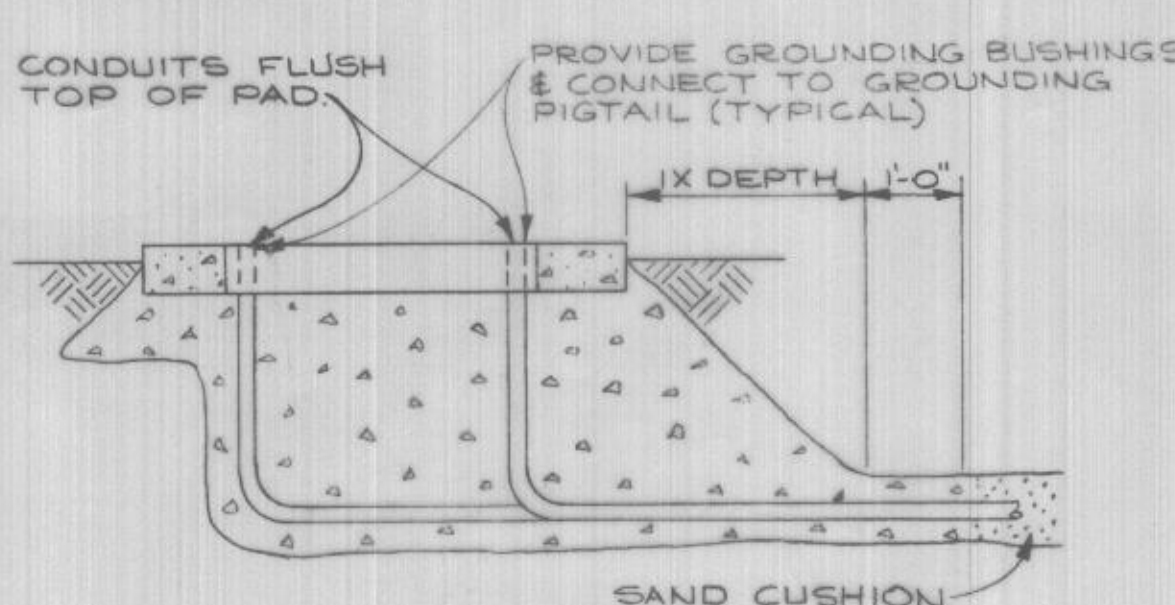
CONTROL DIAGRAM NO. 3
EXHAUST FAN EF-1 & EF-3 - TREATMENT PLANT PUMP STATION



TYPICAL ELECTRICAL EQUIPMENT PAD DETAIL
SCALE: 1 1/2" = 1'-0"



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



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

CONTROL KEY

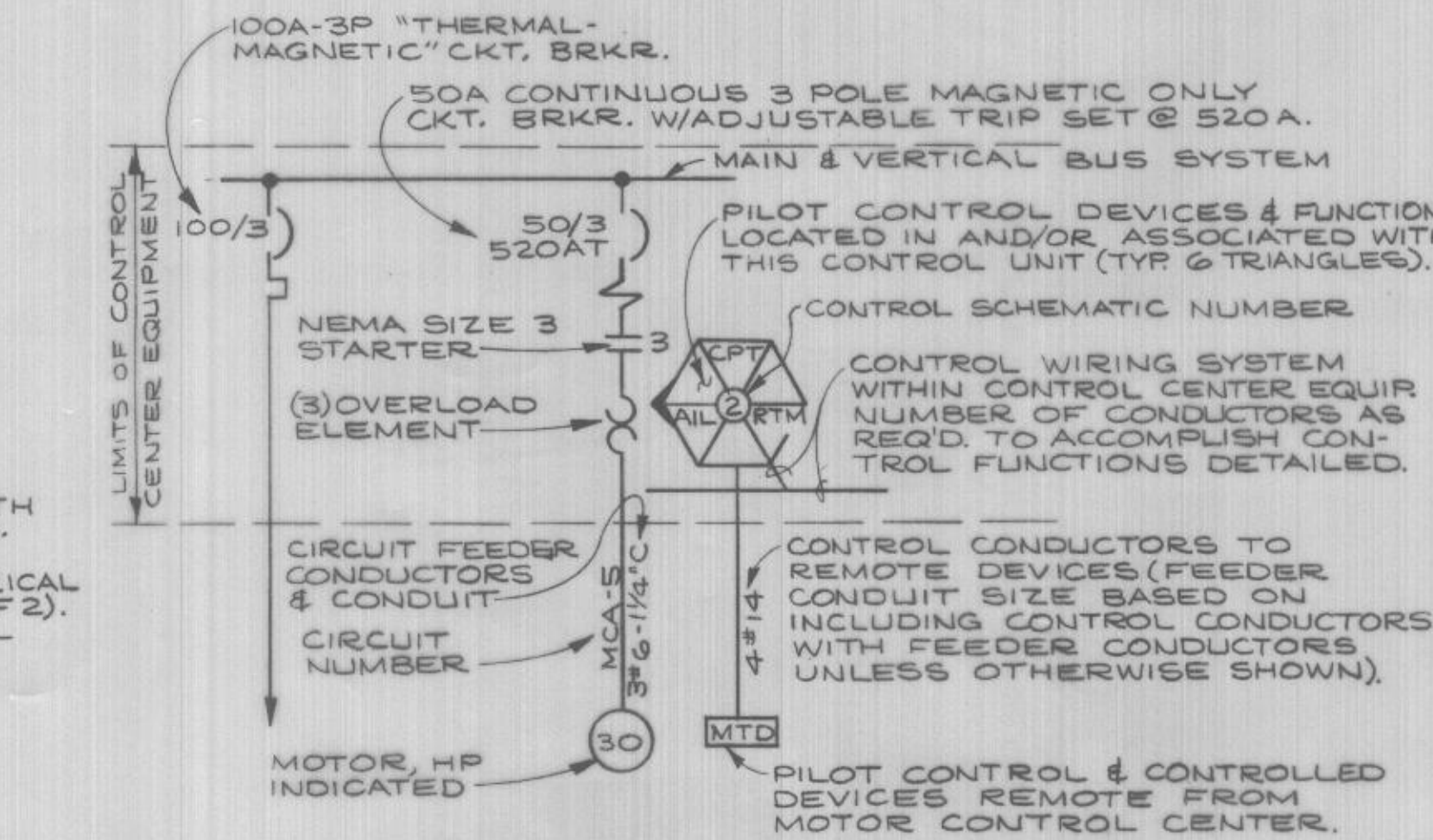
- AIL - AMBER INDICATING LIGHT
- ALT - ALTERNATOR
- AS - AIR FLOW SWITCH
- CR - CONTROL RELAY
- CPT - CONTROL POWER TRANSFORMER
- DM - DAMPER MOTOR
- LS - LIMIT SWITCH
- MTD - MOTOR THERMAL DETECTOR
- MMD - MOTOR MOISTURE DETECTOR
- MS - MOISTURE SENSOR
- PBI - RESET PUSHBUTTON
- PS - PRESSURE SWITCH
- RIL - RED INDICATING LIGHT
- RTM - RUNNING TIME METER
- SLI - HAND-OFF-AUTOMATIC SELECTOR SWITCH
- SL7 - NO.1-OFF-NO.2 SELECTOR SWITCH
- TR - TIMING RELAY
- XA - REMOTE ALARM
- YPE - REMOTE INTERLOCK OR RELAY CONTACTS CONNECTED AS A PERMISSIVE ELEMENT IN THIS DEVICE.
- ZI - AUXILIARY CONTACT FOR FUNCTION DETAILED.
- * - LOCATED REMOTE
- - SPECIFIED UNDER DIVISION 15 OF THE SPECIFICATION.
- - SPECIFIED UNDER DIVISION 10 OF THE SPECIFICATION.

FIXTURE SCHEDULE

FIXT. NO.	MANUFACTURER	CATALOG NUMBER	LAMP QTY.	DESCRIPTION	MOUNTING	REMARKS
1	GUTH	ACR6762/120	2	F40 CW	C	
2	CROUSE-HINDS	EVF220B	2	F40CW	R	
3	CROUSE-HINDS	EVBX 215	1	300M/IF	X	EXPLOSION PROOF GUARD & RA-63 30° ANGLE REFLECTOR
4	HOLOPHANE	419-120-PR-010B-TP	1	LU 70	X	C/W PHOTOELECTRIC CONTROL, CAST GUARD & TAMPER RESISTANT HARDWARE
5	CROUSE-HINDS	VXMBF22GP	1	200A	X	C/W GUARD

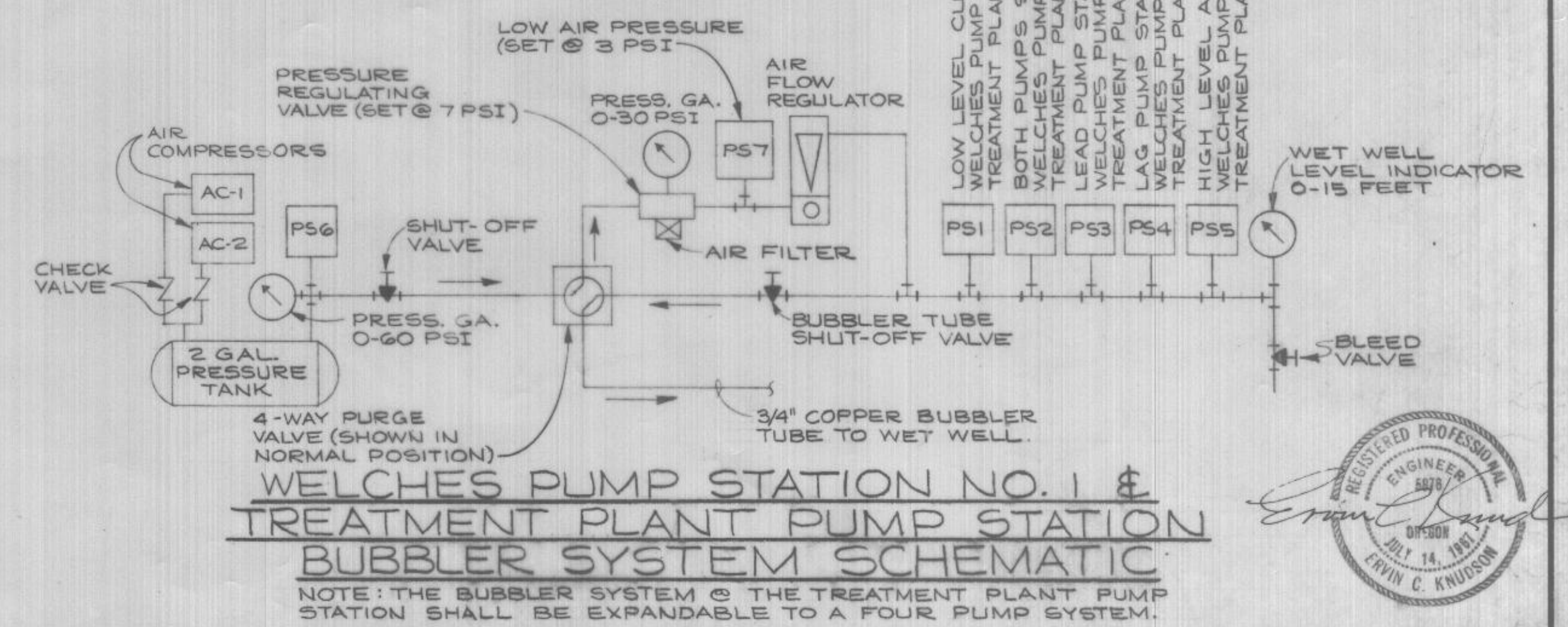
C - CEILING R - RECESSED W - WALL P - PENDANT

ONE LINE DIAGRAM DESCRIPTION



ELECTRICAL LEGEND

- - FLUORESCENT FIXTURE OUTLET } NUMERAL DENOTES FIXTURE TYPE - SEE SCHEDULE
- - WALL MTD. FIXTURE OUTLET } NUMERAL DENOTES FIXTURE TYPE - SEE SCHEDULE
- - BRANCH CIRCUIT OR FEEDER EXPOSED WITH GENERAL ROUTE INDICATED.
- - BRANCH CIRCUIT OR FEEDER CONCEALED IN SLAB OR EARTH.
- - BRANCH CIRCUIT OR FEEDER CONCEALED IN WALL OR CEILING.
- - HOME RUN TO PANEL WITH PANEL DESIGNATION & CIRCUIT NUMBER INDICATED. CROSSBARS DENOTE THE NUMBER OF CONDUCTORS. NO CROSSBARS DENOTES 2 CONDUCTORS UNLESS OTHERWISE NOTED.
- ===== FLEXIBLE CONDUIT
- CONDUIT UP OR TOWARD
- CONDUIT DOWN OR AWAY
- EXPLOSION PROOF CONDUIT SEAL
- UH-1 - 3KW, 240V-1Ø SURFACE MOUNTING EXPLOSION PROOF WALL CONVECTOR - CHROMALOX CAT. NO. FTES-3 WITH REMOTE MOUNTING EXPLOSION PROOF THERMOSTAT CHROMALOX CAT. NO. WR-80-EP
- UH-2 - 4 KW, 480V-3Ø HORIZONTAL DISCHARGE UNIT HEATER WITH BUILT-IN THERMOSTAT - CHROMALOX CAT. NO. UH-04-06 & CEILING SWIVEL MT'G. BRACKET - CHROMALOX CAT. NO. WUH-04.
- ⊞ - DUPLEX RECEPTACLE, 20A, 125V-2P, 3W.
- S - SINGLE POLE SWITCH
- M - MOTOR, HP INDICATED
- DM - DAMPER MOTOR
- T - THERMOSTAT
- LS - LIMIT SWITCH
- AS - AIR FLOW SWITCH
- PS - PRESSURE SWITCH
- MS - MOTOR MOISTURE SENSOR
- MTD - MOTOR THERMAL DETECTOR
- J - JUNCTION BOX
- S.T.P. - SEWAGE TREATMENT PLANT
- RGS - RIGID GALVANIZED STEEL
- PVC - NON-METALLIC PLASTIC CONDUIT, SCHEDULE 40 PVC
- C.O. - CONDUIT ONLY WITH NYLON PULLWIRE
- EHH - ELECTRICAL HANDHOLE - SEE SPEC'N.
- SUBSCRIPT ADDED TO ANY SYMBOL DENOTES:
 - +5'-0" - MOUNTING HEIGHT ABOVE FLOOR
 - WP - WEATHER PROOF, NEMA 4 OR EQUIVALENT
 - SUB. - SUBMERSIBLE
 - P - PILOT LIGHT
 - EX - EXPLOSION PROOF



WELCHES PUMP STATION NO. 1 & TREATMENT PLANT PUMP STATION BUBBLER SYSTEM SCHEMATIC
NOTE: THE BUBBLER SYSTEM @ THE TREATMENT PLANT PUMP STATION SHALL BE EXPANDABLE TO A FOUR PUMP SYSTEM.