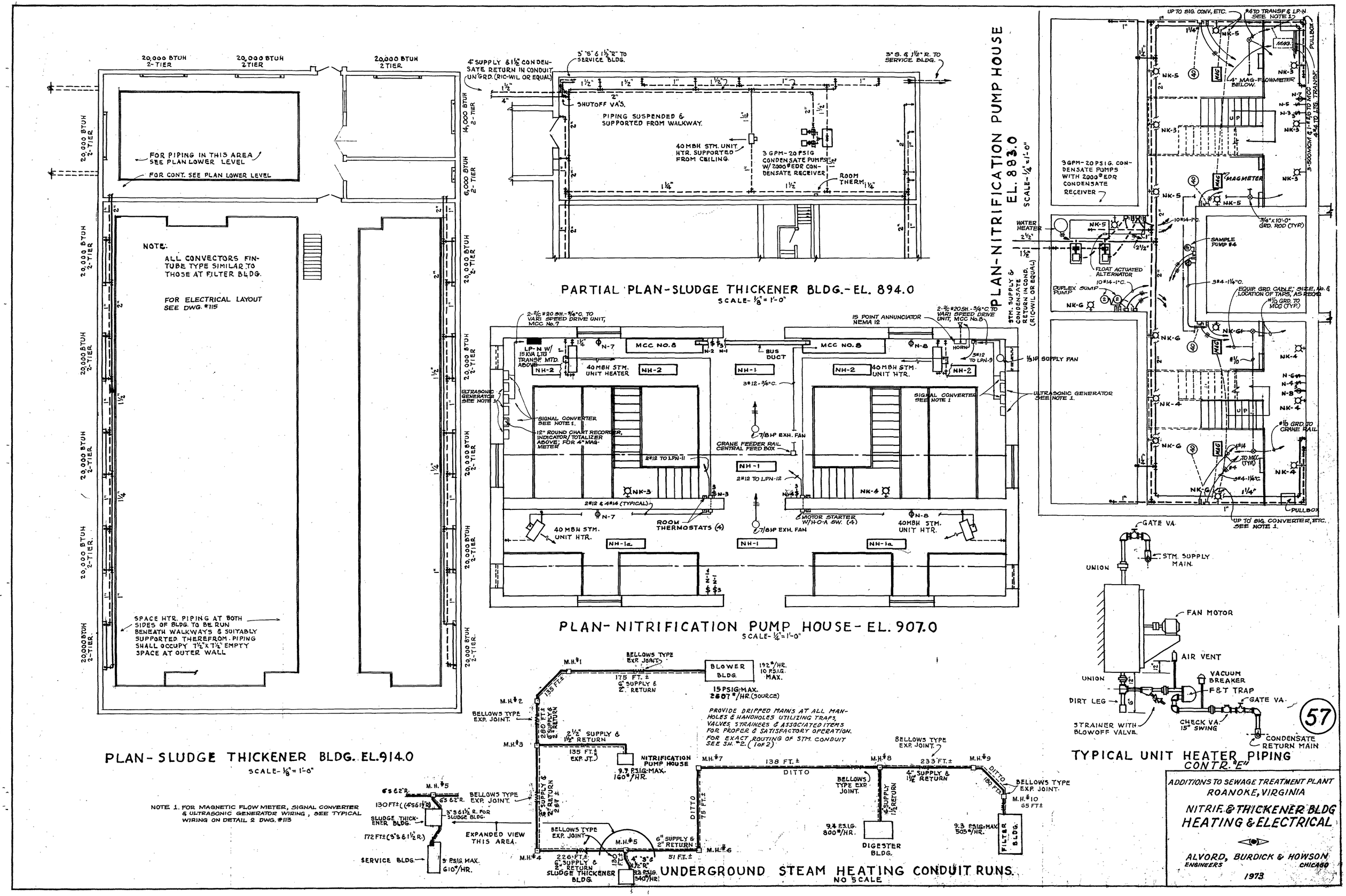
PLAN-SLUDGE THICKENER BLDG. EL. 914.0
SCALE- 1/8" = 1'-0"
20,000 BTUH 2-TIER
FOR PIPING IN THIS AREA SEE PLAN LOWER LEVEL
FOR CONT. SEE PLAN LOWER LEVEL
NOTE:
ALL CONVECTORS FIN-TUBE TYPE SIMILAR TO THOSE AT FILTER BLDG.
FOR ELECTRICAL LAYOUT SEE DWG. #115
SPACE HTR. PIPING AT BOTH SIDES OF BLDG. TO BE RUN BENEATH WALKWAYS & SUITABLY SUPPORTED THEREFROM. PIPING SHALL OCCUPY 1'-1½" X 1'-1½" EMPTY SPACE AT OUTER WALL
PARTIAL PLAN-SLUDGE THICKENER BLDG.-EL. 894.0
SCALE- 1/8" = 1'-0"
4" SUPPLY & 1½" CONDENSATE RETURN IN CONDUIT UN'GRD. (RIC-WIL OR EQUAL)
3" S. & 1½" R. TO SERVICE BLDG.
SHUTOFF VA'S.
PIPING SUSPENDED & SUPPORTED FROM WALKWAY.
40 MBH STM. UNIT HTR. SUPPORTED FROM CEILING.
3 GPM-20 PSIG CONDENSATE PUMPS W/ 2000# EDR CONDENSATE RECEIVER
ROOM THERM.
PLAN-NITRIFICATION PUMP HOUSE EL. 907.0
SCALE- 1/4" = 1'-0"
2-2/c #20 SH.-3/4"C. TO VARI SPEED DRIVE UNIT, MCC No. 7
LP-N W/ 15 KVA LTG TRANSF. MTD. ABOVE
MCC NO. 8
BUS DUCT
15 POINT ANNUNCIATOR NEMA 12
2-2/c #20 SH.-3/4"C. TO VARI SPEED DRIVE UNIT, MCC No. 8
40 MBH STM. UNIT HEATER
40 MBH STM. UNIT HTR.
½ HP SUPPLY FAN
ULTRASONIC GENERATOR SEE NOTE 1
SIGNAL CONVERTER SEE NOTE 1.
12" ROUND CHART RECORDER, INDICATOR/TOTALIZER ABOVE; FOR 4" MAG-METER
SIGNAL CONVERTER SEE NOTE 1
ULTRASONIC GENERATOR SEE NOTE 1.
7/8 HP EXH. FAN
CRANE FEEDER RAIL CENTRAL FEED BOX
ROOM THERMOSTATS (4)
MOTOR STARTER W/H-O-A SW. (4)
40 MBH STM. UNIT HTR.
PLAN-NITRIFICATION PUMP HOUSE EL. 883.0
SCALE- 1/4" = 1'-0"
UP TO SIG. CONV. ETC.
#4 TO TRANSF & LP-N SEE NOTE 1.
4" MAG-FLOWMETER BELOW.
3 GPM-20 PSIG. CONDENSATE PUMPS WITH 2000# EDR CONDENSATE RECEIVER
WATER HEATER
FLOAT ACTUATED ALTERNATOR
DUPLEX SUMP PUMP
SAMPLE PUMP #4
EQUIP. GRD. CABLE; SIZE, No. 6 LOCATION OF TAPS, AS REQD.
#1/0 GRD. TO MCC (TYP.)
#1/0 GRD. TO CRANE RAIL
3/4" X 10'-0" GRD. ROD (TYP.)
UP TO SIG. CONVERTER, ETC. SEE NOTE 1.
PLAN-UNDERGROUND STEAM HEATING CONDUIT RUNS.
NO SCALE
BELLOWS TYPE EXP. JOINT
BLOWER BLDG.
192#/HR. 10 P.S.I.G. MAX.
15 P.S.I.G. MAX. 2607#/HR. (SOURCE)
175 FT. ± 6" SUPPLY & 2" RETURN
135 FT. ± 6" SUPPLY & 2" RETURN
280 FT. ± 6" SUPPLY & 2" RETURN
2½" SUPPLY & 1½" RETURN
135 FT. ± EXP. JT.
NITRIFICATION PUMP HOUSE
9.7 P.S.I.G. MAX. 160#/HR.
PROVIDE DRIPPED MAINS AT ALL MANHOLES & HANDHOLES UTILIZING TRAPS, VALVES, STRAINERS & ASSOCIATED ITEMS FOR PROPER & SATISFACTORY OPERATION.
FOR EXACT ROUTING OF STM. CONDUIT SEE SH. #2. (1 of 2)
138 FT. ± DITTO
233 FT. ± 4" SUPPLY & 1½" RETURN
180 FT. ± 4" SUPPLY & 1½" RETURN
9.4 P.S.I.G. 800#/HR.
DIGESTER BLDG.
9.3 P.S.I.G. MAX. 505#/HR.
FILTER BLDG.
75 FT. ± 6" SUPPLY & 2" RETURN
51 FT. ± 4" SUPPLY & 2" RETURN
226 FT. ± 4" SUPPLY & 2" RETURN
SLUDGE THICKENER BLDG.
82 P.S.I.G. 540#/HR.
130 FT. ± (4 S 6 1½ R.)
172 FT. ± (3 S & 1½ R.)
SERVICE BLDG.
9 P.S.I.G. MAX. 610#/HR.
EXPANDED VIEW THIS AREA.
NOTE 1. FOR MAGNETIC FLOW METER, SIGNAL CONVERTER & ULTRASONIC GENERATOR WIRING, SEE TYPICAL WIRING ON DETAIL 2 DWG. #113
TYPICAL UNIT HEATER PIPING
CONTR. "E"
GATE VA.
STM. SUPPLY MAIN.
UNION
FAN MOTOR
AIR VENT
VACUUM BREAKER
F&T TRAP
DIRT LEG
STRAINER WITH BLOWOFF VALVE.
CHECK VA. 15" SWING
CONDENSATE RETURN MAIN
57
ADDITIONS TO SEWAGE TREATMENT PLANT
ROANOKE, VIRGINIA
NITRIF. & THICKENER BLDG
HEATING & ELECTRICAL
ALVORD, BURDICK & HOWSON
ENGINEERS
CHICAGO
1973