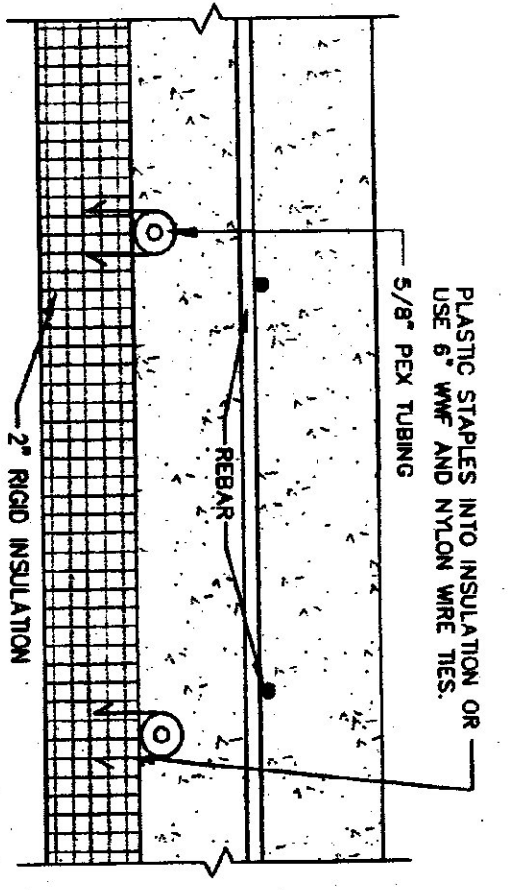


SEQUENCE OF CONTROL

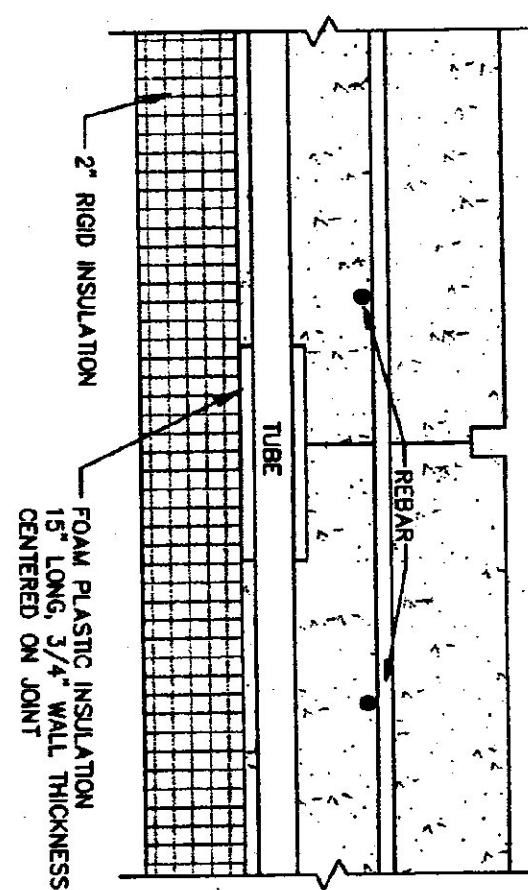
1. WHEN OUTDOOR AIR FALLS BELOW 60° (A.O.):
2. BOILER IS ENABLED.
3. TRANSFER PUMP IS ENABLED.
4. CIRCULATORS C-1 AND C-2 ARE STARTED.
5. CIRCULATORS C-3 THROUGH C-7 ARE ENABLED.
6. OPERATING AQUASTAT ON BOILERS TO MAINTAIN BOILER BETWEEN 150°F AND 170°F.
7. CIRCULATOR C-3 TO BE CONTROLLED BY A WAGO DIJUK CONTROLER. CONTROLER MODULATE INJECTOR CIRCULATOR C-3 TO MAINTAIN CALCULATED LOOP SUPPLY SETPOINT. SETPOINT, OFFSET AND RATIO TO BE ADJUSTABLE AT CONTROLLER. SETPOINT TO BE RESET ON OUTDOOR AIR TEMPERATURE BASED ON THE FOLLOWING SCHEDULE:

OUTSIDE AIR TEMP.	SETPOINT
-20°F	57°F
-10°F	57°F
40°F	77°F

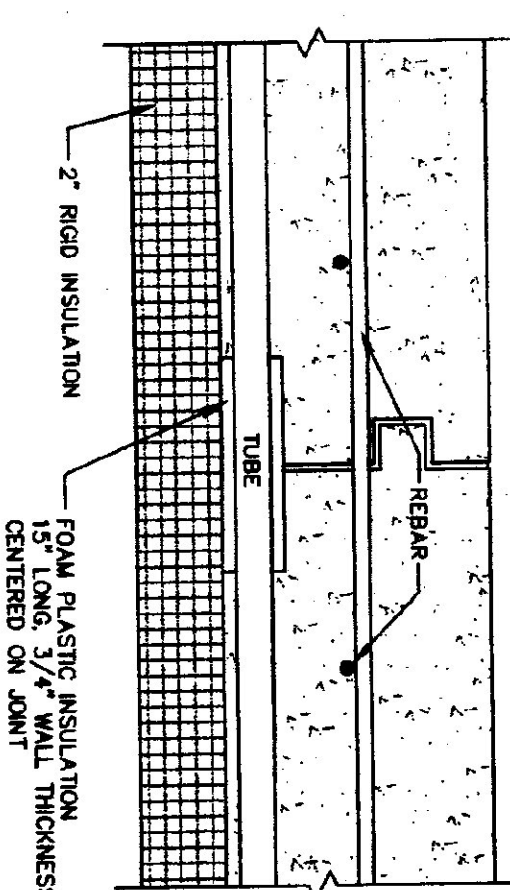
8. CIRCULATOR C-4 TO CYCLE ON AND OFF BY THERMOSTAT IN THE OFFICE TO MAINTAIN SETPOINT.
9. CIRCULATOR C-5 TO CYCLE ON AND OFF BY THERMOSTAT IN THE BATHROOM TO MAINTAIN SETPOINT.
10. CIRCULATOR C-6 TO CYCLE ON AND OFF BY THERMOSTAT IN THE BREAK ROOM TO MAINTAIN SETPOINT.
11. AQUASTAT IN DOMESTIC HOT WATER TANK TO CYCLE CIRCULATOR C-7 TO MAINTAIN SETPOINT.
12. FUEL OIL TRANSFER PUMP TO OPERATE WHENEVER BOILER OPERATES. EMERGENCY BOILER SHUT-OFF SWITCH TO SHUT OFF TRANSFER PUMP ALSO.
13. FAN F-1 TO COME ON WITH LIGHT SWITCH, AND OPERATE FOR 5 MINUTES AFTER LIGHT IS TURNED OFF.
14. FAN F-2 TO BE CONTROLLED BY A SPRING WOUND TIMER SWITCH. SEE ELEC. DWG. FOR DETAILS.
15. MOD-1 TO OPEN WHENEVER FAN F-2 OPERATES AND CLOSE WHEN F-2 STOPS.
16. FAN F-3 TO BE CONTROLLED BY SWITCH IN HOOD.



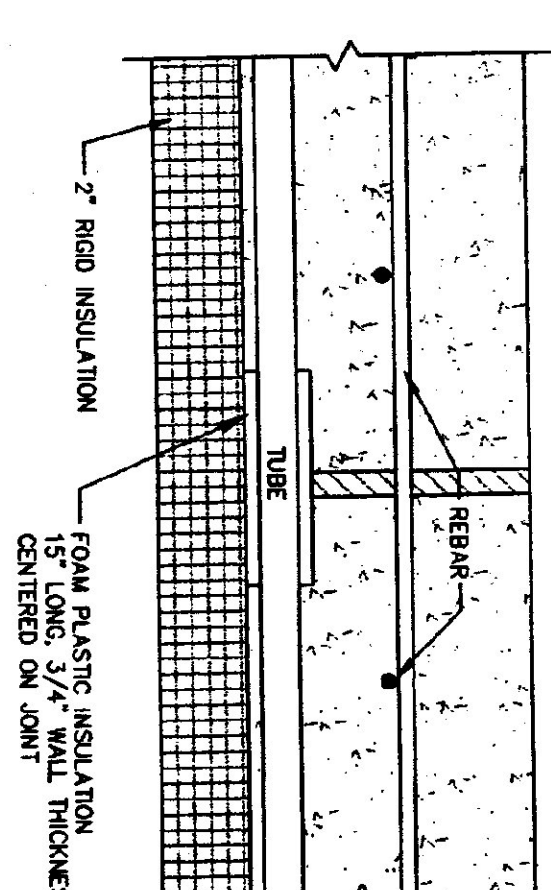
TYPICAL CROSS SECTION
NOT TO SCALE



SAW CUT JOINT
NOT TO SCALE



CONSTRUCTION JOINT
NOT TO SCALE



EXPANSION JOINT
NOT TO SCALE

EQUIPMENT SCHEDULE

PLAN SYMBOL	DESCRIPTION	MANUF. & MODEL	CHARACTERISTICS	ELECTRIC	NOTES
B-1	BOILER	BUERUS G315-5	300,000 BTU GROSS, 30,000 BTU NET, 120V, 40 BRMS, 7.5 AMPER	120V/1/60 4.0 A	
XT-1	EXP. TANK	AMTROL SX-90V	44 GALLON TANK, 34 GALLON ACCEPTANCE		
L-1	RELIEF LOWER VENT	PRODUCTS 2750	36" x 36"	120V/1/60	SEAL DIRECT COULDED AIRWAY SYSTEM W/ALUM. N.C.
MOD-1	RELIEF DAMPER VENT	PRODUCTS 5703	36" x 36"	120V/1/60	SEAL DIRECT COULDED AIRWAY SYSTEM W/ALUM. N.C.
GF	GLYCOL FEEDER	LMI	SEE TANK MAN. ASST 2700 7/1600 LABEL SWITCH ASST 22412, MONITORIAL PRESSURE/TEMP. CONTROLLED METERING PUMP LMI 151-191	120V/1/60	

CIRCULATOR SCHEDULE

PLAN SYMBOL	SYSTEM	MANUF. & MODEL	G.P.M.	FEET HEAD	H.P.	ELECTRICAL	R.P.M.	NOTES
C-1	MAIN	TACO 0014	25	6.0	1/9	120V/1/60 1.8 A	3250	
C-2	GARAGE ZONE	TACO 0013	30	12.0	1/8	120V/1/60 2.0 A	3250	
C-3	GARAGE INJECTION	TACO 005	4.4	5.5	1/35	120V/1/60 .53 A	3250	
C-4	OFFICE ZONE	TACO 005	1.1	7.3	1/35	120V/1/60 .53 A	3250	
C-5	PARTS/BATHROOM ZONE	TACO 005	0.5	1.2	1/35	120V/1/60 .53 A	3250	
C-6	BREAK ROOM	TACO 005	1.1	7.3	1/35	120V/1/60 .53 A	3250	
C-7	DOMESTIC HOT WATER	TACO 009	6.0	16.0	1/15	120V/1/60 .53 A	3250	ALTERNATE ITEM, SEE SH-V-1
C-8								

FAN SCHEDULE

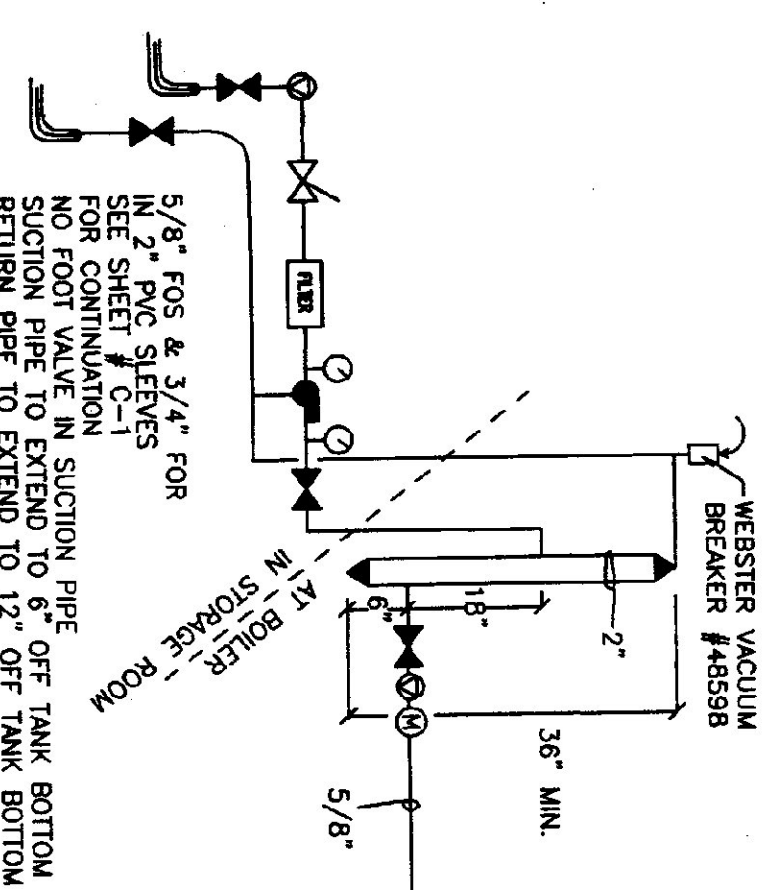
PLAN SYMBOL	SYSTEM	MANUF. MODEL & TYPE	C.F.M.	S.P. IN.	SONES	FAN RPM	HP.	ELECTRICAL	NOTES
F-1	BATHROOM	GREENHECK SET-8-440-E	100	.125	1050	1/100	120V/1/60	W/WEATHER HOOD, SCREEN & MOD W/ BEARD CIRC.	
F-2	GARAGE VENT	GREENHECK SRS-1L20-4	3000	.125	11.8	764	1/4	120V/1/60	W/WEATHER HOOD, SCREEN & MOD
F-3	RANGE HOOD	NUTONE RL6100	160	.12		1/8	120V/1/60	30" WIDTH W/ EXHAUST WALL CAP	

NOTES:

1. TUBING BENDS TO BE RADUSED.
2. DEVIATION FROM LAYOUT SHALL BE SUBMITTED FROM TUBING MANUFACTURERS AUTHORIZED REPRESENTATIVE.
3. TUBING INSTALLATION SHALL BE BY MANUFACTURERS AUTHORIZED REPRESENTATIVE.

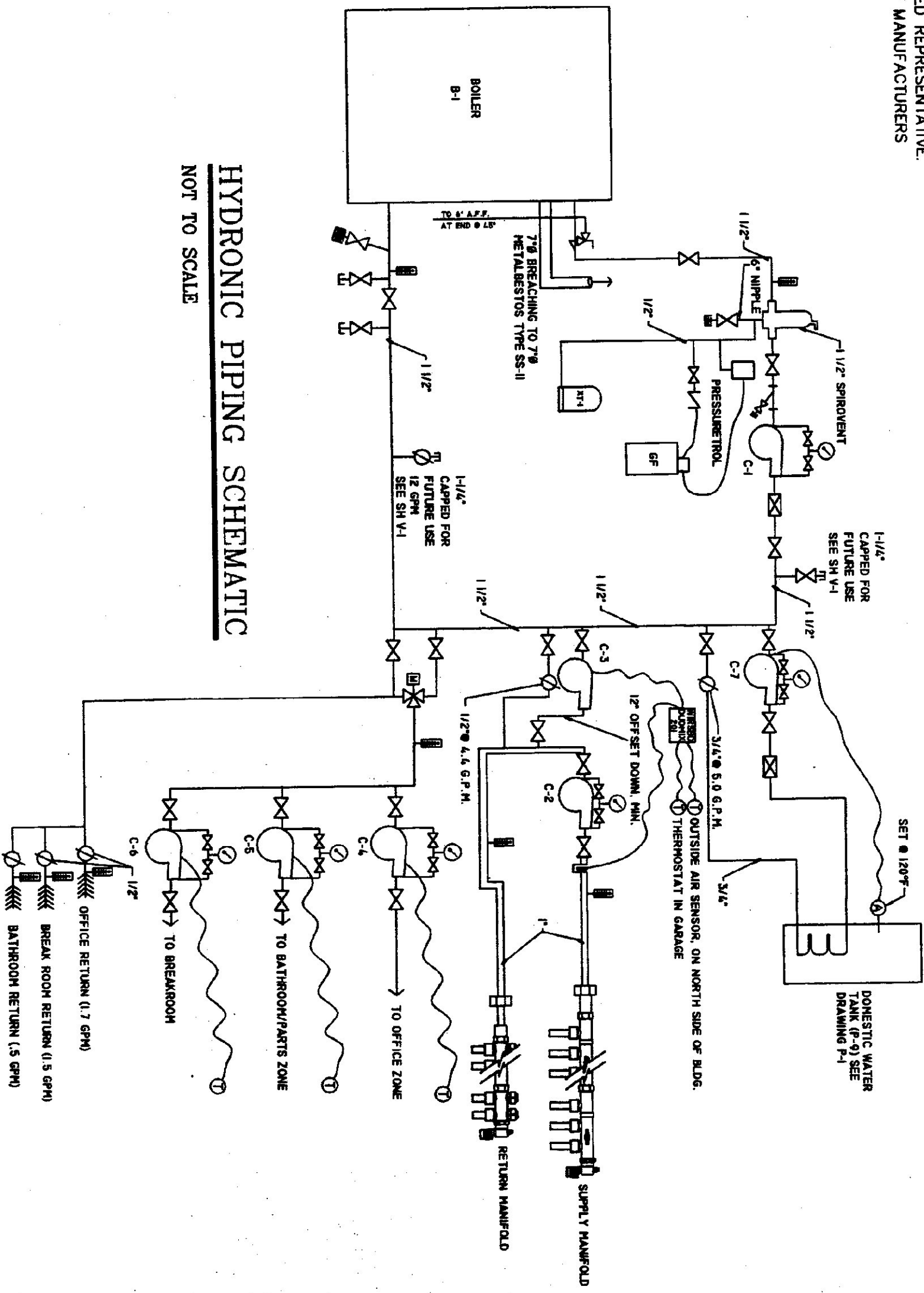
LEGEND

- ⊕ BALL VALVE FULL PORT, S.S. BALL
- ⊖ BALL VALVE V/ROE THROTTLE & BRASS CAP
- ⊙ SHOWER & BALL VALVE SLOW DOWN
- ⊙ MANIF. VALVE SET @ 93°F
- ⊙ TACO 3000-01
- ⊙ PRESSURE RELIEF VALVE, PIPE TO F.A.F.
- ⊙ THERMOSTAT, MOUNT @ 54" A.F.F.
- ⊙ THERMISTOR
- ⊙ TACO FID CHECK
- ⊙ SPRING 1-1/2" AIR SEPARATOR
- ⊙ PRESSURE GAUGE
- ⊙ TACO-ANDERSON STD. BALLROOM VALVE
- ⊙ KEPT OIL WATER
- ⊙ FUEL OIL THERMOST. PUMP, SENSIT. BR-1020
- ⊙ FUEL OIL PUMP, FULL PORT, S.S. BALL
- ⊙ SENSIT. PUMP-S
- ⊙ PRESS. VALVE
- ⊙ CHECK VALVE



FUEL SUPPLY SCHEMATIC
NOT TO SCALE

HYDRONIC PIPING SCHEMATIC



HYDRONIC PIPING SCHEMATIC
NOT TO SCALE



STATE OF VERMONT
Department of Buildings
and General Services
Agency of Administration
Montpelier, Vermont



READSBORO AOT GARAGE
RADIANT HEATING
DETAILS & SCHEDULES

READSBORO, VERMONT

REVISIONS

SCALE: AS NOTED
DATE: AUGUST 2001
DRAWN BY: N. HERSEY
APPR. BY: SOUTHWORTH

READSBORO AOT
RADIANT HEATING
DETAILS
M-2
OF