

EQUIPMENT LIST

BUILDING WITH -20°F DESIGN

- ① VERTICAL FLOOR TYPE AIR CONDITIONING UNIT WITH REMOTE CONDENSING UNIT. 5.6 TONS MIN. CAP. (19% SBTU) AT 81.5° F.D.B. AND 68.0° F.W.B. AIR TO COOLING COIL. 2400 CFM AT .5" EXTERNAL S.P. 208/60/3 ELECTRIC SERVICE. 1 1/2 HP FAN MOTOR. HOT WATER COIL 85,800 BTUH WITH 9 GPM OF 180° F WATER AND 20° F WATER TEMP. DROP.
- ② AIR COOLED CONDENSING UNIT 7 1/2 TON NOMINAL RATING AT 135° F CONDENSING AND 40° F SUCTION TEMPERATURE AND 95° F ENTERING AIR 208/60/3 ELECTRIC SERVICE. 7 1/2 HP COMPRESSOR MOTOR AND 1 HP FAN MOTOR.
- ③ SELF CONTAINED AIR CONDITIONING UNIT WITH INTEGRAL AIR COOLED CONDENSER 5.2 TONS MIN. CAP. (81% SBTU) AT 81.5° F.D.B. AND 68.0° F.W.B. AIR TO COOLING COIL 2400 CFM AT .5" EXTERNAL S.P. 208/60/3 ELECTRIC SERVICE 7 1/2 HP COMPRESSOR MOTOR 1 1/2 HP FAN MOTOR 1 HP CONDENSER FAN MOTOR. CONDENSER RATING AT 135° F CONDENSING AND 40° F SUCTION TEMPERATURE AND 95° F ENTERING AIR.
- ④ SELF CONTAINED AIR CONDITIONING UNIT WITH INTEGRAL AIR COOLED CONDENSER 6.3 TONS MIN. CAP. (82% SBTU) AT 81.5° F.D.B. AND 68.0° F.W.B. AIR TO COOLING COIL 3000 CFM AT .5" EXTERNAL S.P. 208/60/3 ELECTRIC SERVICE 7 1/2 HP COMPRESSOR MOTOR 1 1/2 HP FAN MOTOR 1 HP CONDENSER FAN MOTOR. CONDENSER RATING AT 135° F CONDENSING AND 40° F SUCTION TEMPERATURE AND 95° F ENTERING AIR.
- ⑤ OIL FIRED HOT WATER BOILER. GROSS I-B-R OUTPUT 668,000 BTU/HR NET I-B-R RATING 501,100 BTUH WATER. I-B-R BURNER CAPACITY 6.30 GPH OF NO. 2 GRADE FUEL OIL. BOILER TO SUPPLY 50 GPM OF 180° F WATER. RETURN WATER 160° F 120/60/3 ELECTRIC SERVICE. 1/2 HP OIL BURNER MOTOR.
- ⑥ HOT WATER CIRCULATING IN-LINE PUMP 50 GPM 25 FT HEAD 120/60/1 ELECTRIC SERVICE. 1/2 HP MOTOR.
- ⑦ AUTOMATIC 40 GAL. ELECTRIC WATER HEATER. TWO ELEMENTS. 750 WATT AND 1250 WATT. 208/60/3 ELECTRIC SERVICE.
- ⑧ EXPANSION TANK ASME CONSTRUCTION 125 PSI WORKING PRESSURE. 60 GAL CAPACITY 10" DIA. 70" LONG.
- ⑨ AIR COMPRESSOR. 15 CFM FREE AIR. SINGLE STAGE 80-100 PSI WITH MOTOR AND COMPRESSOR MOUNTED ON 80 GAL. ASME RECEIVER. 208/60/3 ELECTRIC SERVICE. 5 HP MOTOR.
- ⑩ DUCT TYPE HOT WATER COIL FOR ③ 130,100 BTUH 2400 CFM. 32"x20" FACE AREA. 535 FPM FACE VELOCITY. 65.5° F ENTERING AIR. 115.7° F LEAVING AIR. 14 GPM OF 180° F WATER AND 20° F DROP.
- ⑪ TOILET EXHAUST FAN. ROOF TYPE. 260 CFM AT 1/4" S.P. 120/20/1 ELECTRIC SERVICE. 1/2 HP MOTOR.
- ⑫ DUCT TYPE HOT WATER COIL FOR ④ 162,300 BTUH 3000 CFM. 32"x20" FACE AREA. 667 FPM FACE VELOCITY. 67.5° F ENTERING AIR. 115.6° F LEAVING AIR. 17 GPM OF 180° F WATER AND 20° F DROP.
- ⑬ FUEL OIL STORAGE TANK 5'-4" DIA. x 24'-0" LONG 4000 GAL.
- ⑭ HOT WATER VALVES: THREE WAY MODULATING TYPE, NORMALLY CLOSED TO BOTTOM INLET. SIZE FOR CORRESPONDING COIL GPM AT 4 PSI PRESSURE DROP.

BUILDING WITH 0°F DESIGN

- ① SAME EXCEPT FOR HOT WATER COIL CAPACITY 69,750 BTUH WITH 7 GPM OF 180° F WATER AND 20° F WATER TEMP. DROP.
- ② SAME
- ③ SAME
- ④ SAME
- ⑤ OIL FIRED HOT WATER BOILER GROSS I-B-R OUTPUT 508,000 BTU/HR NET I-B-R RATING 381,100 BTUH WATER. I-B-R BURNER CAPACITY 4.75 GPH OF NO. 2 GRADE FUEL OIL. BOILER TO SUPPLY 38 GPM OF 180° F WATER RETURN WATER 160° F 120/60/3 ELECTRIC SERVICE. 1/2 HP OIL BURNER MOTOR.
- ⑥ HOT WATER CIRCULATING IN-LINE PUMP 38 GPM 25 FT HEAD 120/60/1 ELECTRIC SERVICE. 1/2 HP MOTOR.
- ⑦ SAME
- ⑧ SAME
- ⑨ SAME
- ⑩ DUCT TYPE HOT WATER COIL FOR ③ 104,400 BTUH 2400 CFM. 32"x20" FACE AREA. 535 FPM FACE VELOCITY. 67.5° F ENTERING AIR. 107.8° F LEAVING AIR. 11 GPM OF 180° F WATER AND 20° F DROP.
- ⑪ SAME
- ⑫ DUCT TYPE HOT WATER COIL FOR ④ 130,700 BTUH 3000 CFM. 32"x20" FACE AREA. 667 FPM FACE VELOCITY. 67.5° F ENTERING AIR. 107.8° F LEAVING AIR. 13 GPM OF 180° F WATER AND 20° F DROP.
- ⑬ FUEL OIL STORAGE TANK 5'-4" DIA. x 18'-0" LONG 3000 GAL.
- ⑭ SAME

BUILDING WITH 20°F DESIGN

- ① SAME EXCEPT FOR HOT WATER COIL CAPACITY 53,650 BTUH WITH 6 GPM OF 180° F WATER AND 20° F WATER TEMP. DROP.
- ② SAME
- ③ SAME
- ④ SAME
- ⑤ OIL FIRED HOT WATER BOILER GROSS I-B-R OUTPUT 426,000 BTU/HR NET I-B-R RATING 319,600 BTUH WATER. I-B-R BURNER CAPACITY 4.00 GPH OF NO. 2 GRADE FUEL OIL. BOILER TO SUPPLY 32 GPM OF 180° F WATER RETURN WATER 160° F 120/60/3 ELECTRIC SERVICE. 1/2 HP OIL BURNER MOTOR.
- ⑥ HOT WATER CIRCULATING IN-LINE PUMP 32 GPM 25 FT HEAD 120/60/1 ELECTRIC SERVICE. 1/2 HP MOTOR.
- ⑦ SAME
- ⑧ SAME
- ⑨ SAME
- ⑩ DUCT TYPE HOT WATER COIL FOR ③ 75,750 BTUH 2400 CFM. 32"x20" FACE AREA. 535 FPM FACE VELOCITY. 69.5° F ENTERING AIR. 98.7° F LEAVING AIR. 8 GPM OF 180° F WATER AND 20° F DROP.
- ⑪ SAME
- ⑫ DUCT TYPE HOT WATER COIL FOR ④ 99,120 BTUH 3000 CFM. 32"x20" FACE AREA. 667 FPM FACE VELOCITY. 69.5° F ENTERING AIR. 100.1° F LEAVING AIR. 10 GPM OF 180° F WATER AND 20° F DROP.
- ⑬ FUEL OIL STORAGE TANK 5'-4" DIA. x 12'-0" LONG 2000 GAL.
- ⑭ SAME

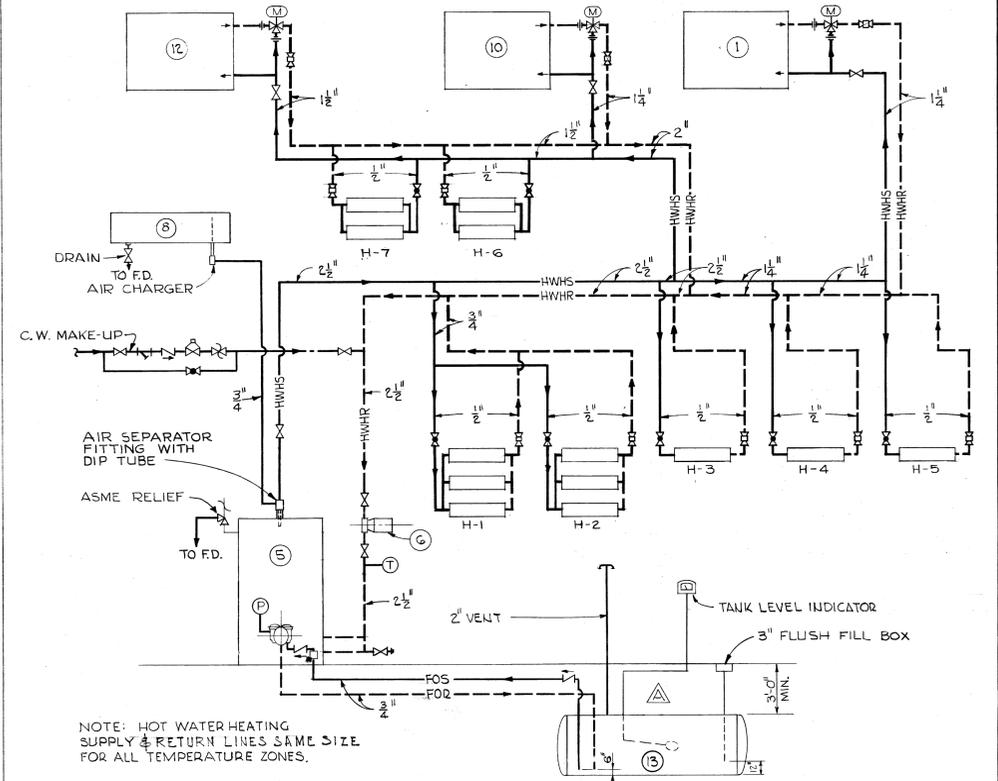
NOTE: ALL MOTOR HORSEPOWER NOTED IN EQUIPMENT LIST ABOVE ARE APPROXIMATE

PLUMBING FIXTURE SCHEDULE					
MARK	FIXTURE	C.W.	H.W.	WASTE	OUTFIT NO.
P-1	SERVICE SINK	1/2"	1/2"	3"	ES24G
P-2	WATER CLOSET	1"	-	4"	VW16
P-3	URINAL	3/8"	-	2"	VUI2W
P-4	LAVATORY	1/2"	1/2"	1 1/2"	EL20B
P-5	KITCHEN SINK	1/2"	1/2"	1 1/2"	EK24GF
D.W.D.	DRINKING WATER DISPENSER	1/2"	-	1 1/2"	*

NOTE: OUTFIT NO. REFERS TO FED. SPEC. WW-P-541B
* TYPE I, SIZE 5, FED. SPEC. OO-C-566.

FIN-TUBE HEATER SCHEDULE											
MARK	PIPE φ	FINS/FT	TIERS			LENGTH			BTUH		
			-20 F	0 F	20 F	-20 F	0 F	20 F	-20 F	0 F	20 F
H-1	1 1/2"	40	3 AT 12" C TO C	2 AT 12" C TO C	2 AT 6" C TO C	4'-0"	4'-0"	4'-0"	9,500	7,100	5,400
H-2	"	"	3 AT 12" C TO C	2 AT 12" C TO C	2 AT 6" C TO C	4'-0"	4'-0"	4'-0"	9,500	7,100	5,400
H-3	"	"	1	1	1	5'-0"	4'-0"	3'-0"	4,000	3,500	2,600
H-4	"	"	1	1	1	15'-0"	13'-0"	10'-0"	13,250	11,400	8,500
H-5	"	"	1	1	1	11'-0"	9'-0"	12'-0"	16,350	13,100	10,250
H-6	"	"	2 AT 6" C TO C	2 AT 6" C TO C	1	7'-0"	6'-0"	8'-0"	10,400	8,900	6,850

NOTE: FINNED LENGTH WILL VARY WITH TYPE RADIATION ELEMENT SELECTED



PIPING SYMBOLS:

- GLOBE VALVE
- GLOBE VALVE (RADIATOR)
- CHECK VALVE
- SELF CONTAINED REGULATING VALVE
- RELIEF VALVE
- MOTOR OPERATED 3-WAY VALVE
- LOCAL THERMOMETER
- LOCAL PRESSURE GAUGE
- ROOM THERMOSTAT
- SQ. HD. BALANCING COCK
- CA COMPRESSED AIR
- CD CEILING DIFFUSER
- AAV AUTOMATIC AIR VENT
- A COMPRESSED AIR
- SOIL PIPE ABOVE FLOOR
- SOIL PIPE BELOW FLOOR
- VENT
- DOMESTIC COLD WATER
- DOMESTIC HOT WATER
- HWHS HOT WATER HEATING SUPPLY
- HWHR HOT WATER HEATING RETURN
- FOS FUEL OIL SUPPLY
- FOR FUEL OIL RETURN
- FD FLOOR DRAIN
- CO CLEAN OUT
- FUEL LINE FILTER (STRAINER)
- RL REFRIGERANT LIQUID LINE
- RS REFRIGERANT SUCTION LINE

REVISIONS		DATE	APPROVAL
Δ	DELETED MANHOLE ON FUEL OIL STORAGE TANK	8-23-65	[Signature]

BLACK & VEATCH CONSULTING ENGINEERS KANSAS CITY, MISSOURI	DEPARTMENT OF THE ARMY OFFICE OF THE CHIEF OF ENGINEERS MILITARY CONSTRUCTION - ENGINEERING DIVISION WASHINGTON, D. C.
WEAPONS SURVEILLANCE WORKSHOP MECHANICAL EQUIPMENT LIST, FLOW DIAGRAM, AND PIPING SYMBOLS	
DRAWN BY: G.C. E.C.K. TRACED BY: G.C. E.C.K. CHECKED BY: JBL. A.G. SUBMITTED: [Signature] APPROVED FOR: [Signature]	APPROVED: [Signature] CHIEF, ENGINEERING DIVISION, MIL. CONST. & C.E. DATE: 26 APRIL 1966 SCALE: NONE SPEC. NO. DRAWING NUMBER 35-69-06 SHEET 13 OF 18