

GRILLE AND REGISTER SCHEDULE										
SYM.	SIZE	THROW	CFM	CONSTR.	FINISH	BRANCH DUCT	F.D.	O.B.	REMARKS	
CGP-1	12 x 12		100-400	STEEL	WHITE	10" Dia.	NO	NO	PRICE SMD IN 24x24 LAY-IN MODULE	
CGP-2	12 x 12		100-200	STEEL	WHITE	8" Dia.	NO	NO	PRICE SMD WITH BEVELED FRAME	
CGP-3	9 x 9		50-150	STEEL	WHITE	8" Dia.	NO	NO	PRICE SMD WITH BEVELED FRAME	
SR-1	12 x 10		200-400	STEEL	WHITE	12 x 10	NO	NO	PRICE SERIES 520	
SR-2	12 x 10		200-400	STEEL	WHITE	IN DUCT	NO	YES	PRICE SERIES SDGE WITH EXTRACTION DAMPER	
RG-1	12 x 12		50-400	STEEL	WHITE	12 x 10	NO	NO	PRICE SERIES 535FF IN 24x24 LAY-IN MODULE	
RG-2	18 x 18		400-900	STEEL	WHITE	18 x 18	NO	NO	PRICE SERIES 535FF IN 24x24 LAY-IN MODULE	
RG-3	12 x 12		50-400	STEEL	WHITE	12 x 10	NO	NO	PRICE SERIES 535FF	
RG-4	18 x 18		400-900	STEEL	WHITE	18 x 18	NO	NO	PRICE SERIES 535FF	
TG-1	12 x 8		200-450	STEEL	WHITE	14 x 8	NO	NO	PRICE SERIES 535	
TG-2	18 x 10		---	STEEL	WHITE	18 x 10	NO	NO	PRICE SERIES 535	
ER-1	18 x 18		300-800	STEEL	WHITE	18 x 18	NO	YES	PRICE SERIES 535 IN 24x24 LAY-IN MODULE	
OC-1	72 x 18		100-2400	ALUM	ANODIZED	72 x 18	NO	NO	AMERICAN WARMING LE-31 WITH DRAINABLE BLADES AND BIRD SCREEN.	
OC-2	36 x 18		100-2400	ALUM	ANODIZED	36 x 18	NO	NO	AMERICAN WARMING LE-31 WITH DRAINABLE BLADES AND BIRD SCREEN.	
OC-3	24 x 16		---	ALUM	ANODIZED	12" Dia.	NO	NO	AMERICAN WARMING LE-31 WITH DRAINABLE BLADES AND BIRD SCREEN.	
OC-4	32 x 48		---	ALUM	ANODIZED	32 x 16	NO	NO	AMERICAN WARMING LE-31 WITH DRAINABLE BLADES AND BIRD SCREEN.	
OC-5	CUSTOM BUILT		---	ALUM	COLOR TO MATCH EXIST.	---	NO	NO	NEW LOUVER TO MATCH EXISTING STYLE AND COLOR. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND PROVIDE NEW LOUVER TO FIT IN EXISTING WINDOW FRAMES. TYPICAL OF 8 LOUVERS. REFER TO PHOTOGRAPH ON SHEET M1.2	

WATER SOURCE HEAT PUMP SCHEDULE																							
SYM.	TYPE	C.F.M.	O.A.	S.P.E.	CHAR.	MCA	HEATING				COOLING				GPM	PD	PIPE SIZE	WEIGHT	REMARKS				
							EAT	LAT	MIN. COP	EWT	LWT	EAT	LAT	MIN. EER						EWT	LWT		
HP-1	HIGH STATIC UNIT HORIZONTAL	1800	350	0.5'	208/603	25.3	72,100	65°F	95°F	4.3	60°F	50°F	60,400	75°F	55°F	13.0	80°F	90°F	11.3	13.0'	1-1/4"	300#	CLIMATE MASTER MODEL TCH884H WITH BACK DISCHARGE AND RIGHT RETURN
HP-2	HIGH STATIC UNIT HORIZONTAL	1800	200	0.5'	208/603	25.3	72,100	65°F	95°F	4.3	60°F	50°F	60,400	75°F	55°F	13.0	80°F	90°F	11.3	13.0'	1-1/4"	300#	CLIMATE MASTER MODEL TCH884H WITH BACK DISCHARGE AND LEFT RETURN
HP-3	HIGH STATIC UNIT HORIZONTAL	1800	200	0.5'	208/603	25.3	72,100	65°F	95°F	4.3	60°F	50°F	60,400	75°F	55°F	13.0	80°F	90°F	11.3	13.0'	1-1/4"	300#	CLIMATE MASTER MODEL TCH884H WITH BACK DISCHARGE AND LEFT RETURN
HP-4	HIGH STATIC UNIT HORIZONTAL	1200	150	0.5'	208/603	16.0	41,900	65°F	95°F	4.3	60°F	50°F	35,300	75°F	55°F	13.0	80°F	90°F	6.8	2.3'	1"	225#	CLIMATE MASTER MODEL TCH884H WITH BACK DISCHARGE AND LEFT RETURN
HP-5	HIGH STATIC UNIT HORIZONTAL	1800	200	0.5'	208/603	25.3	72,100	65°F	95°F	4.3	60°F	50°F	60,400	75°F	55°F	13.0	80°F	90°F	11.3	13.0'	1-1/4"	300#	CLIMATE MASTER MODEL TCH884H WITH BACK DISCHARGE AND LEFT RETURN
HP-6	HIGH STATIC UNIT HORIZONTAL	1800	200	0.5'	208/603	25.3	72,100	65°F	95°F	4.3	60°F	50°F	60,400	75°F	55°F	13.0	80°F	90°F	11.3	13.0'	1-1/4"	300#	CLIMATE MASTER MODEL TCH884H WITH BACK DISCHARGE AND RIGHT RETURN
HP-7	HIGH STATIC UNIT HORIZONTAL	1000	500	0.5'	208/603	14.1	33,300	65°F	95°F	4.3	60°F	50°F	21,000	75°F	55°F	13.0	80°F	90°F	5.6	3.8'	1"	185#	CLIMATE MASTER MODEL TCH884H WITH BACK DISCHARGE AND RIGHT RETURN
HP-8	HIGH STATIC UNIT HORIZONTAL	1800	350	0.5'	208/603	25.3	72,100	65°F	95°F	4.3	60°F	50°F	60,400	75°F	55°F	13.0	80°F	90°F	11.3	13.0'	1-1/4"	300#	CLIMATE MASTER MODEL TCH884H WITH STRAIGHT DISCHARGE AND LEFT RETURN
HP-9	HIGH STATIC UNIT HORIZONTAL	1800	0	0.5'	208/603	25.3	72,100	65°F	95°F	4.3	60°F	50°F	60,400	75°F	55°F	13.0	80°F	90°F	11.3	13.0'	1-1/4"	300#	CLIMATE MASTER MODEL TCH884H WITH STRAIGHT DISCHARGE AND LEFT RETURN
HP-10	HIGH STATIC UNIT HORIZONTAL	1800	300	0.5'	208/603	25.3	72,100	65°F	95°F	4.3	60°F	50°F	60,400	75°F	55°F	13.0	80°F	90°F	11.3	13.0'	1-1/4"	300#	CLIMATE MASTER MODEL TCH884H WITH BACK DISCHARGE AND RIGHT RETURN
HP-11	HIGH STATIC UNIT HORIZONTAL	1800	300	0.5'	208/603	25.3	72,100	65°F	95°F	4.3	60°F	50°F	60,400	75°F	55°F	13.0	80°F	90°F	11.3	13.0'	1-1/4"	300#	CLIMATE MASTER MODEL TCH884H WITH BACK DISCHARGE AND LEFT RETURN
HP-12	HIGH STATIC UNIT HORIZONTAL	1800	300	0.5'	208/603	25.3	72,100	65°F	95°F	4.3	60°F	50°F	60,400	75°F	55°F	13.0	80°F	90°F	11.3	13.0'	1-1/4"	300#	CLIMATE MASTER MODEL TCH884H WITH BACK DISCHARGE AND LEFT RETURN
HP-13	HIGH STATIC UNIT HORIZONTAL	1800	150	0.5'	208/603	16.0	41,900	65°F	95°F	4.3	60°F	50°F	35,300	75°F	55°F	13.0	80°F	90°F	6.0	3.0'	1"	275#	CLIMATE MASTER MODEL TCH884H WITH BACK DISCHARGE AND RIGHT RETURN
HP-14	HIGH STATIC UNIT HORIZONTAL	1200	150	0.5'	208/603	16.0	41,900	65°F	95°F	4.3	60°F	50°F	35,300	75°F	55°F	13.0	80°F	90°F	6.8	2.3'	1"	225#	CLIMATE MASTER MODEL TCH884H WITH BACK DISCHARGE AND LEFT RETURN
HP-15	HIGH STATIC UNIT HORIZONTAL	1200	150	0.5'	208/603	16.0	41,900	65°F	95°F	4.3	60°F	50°F	35,300	75°F	55°F	13.0	80°F	90°F	6.8	2.3'	1"	225#	CLIMATE MASTER MODEL TCH884H WITH BACK DISCHARGE AND LEFT RETURN
HP-16	HIGH STATIC UNIT HORIZONTAL	700	100	0.5'	208/603	14.1	33,300	65°F	95°F	4.3	60°F	50°F	21,000	75°F	55°F	13.0	80°F	90°F	5.6	3.8'	1"	185#	CLIMATE MASTER MODEL TCH884H WITH STRAIGHT DISCHARGE AND RIGHT RETURN
HP-17	HIGH STATIC UNIT HORIZONTAL	1000	500	0.5'	208/603	14.1	33,300	65°F	95°F	4.3	60°F	50°F	21,000	75°F	55°F	13.0	80°F	90°F	5.6	3.8'	1"	185#	CLIMATE MASTER MODEL TCH884H WITH BACK DISCHARGE AND RIGHT RETURN
HP-18	HIGH STATIC UNIT HORIZONTAL	1800	350	0.5'	208/603	25.3	72,100	65°F	95°F	4.3	60°F	50°F	60,400	75°F	55°F	13.0	80°F	90°F	11.3	13.0'	1-1/4"	300#	CLIMATE MASTER MODEL TCH884H WITH STRAIGHT DISCHARGE AND LEFT RETURN
HP-19	HIGH STATIC UNIT HORIZONTAL	1800	0	0.5'	208/603	25.3	72,100	65°F	95°F	4.3	60°F	50°F	60,400	75°F	55°F	13.0	80°F	90°F	11.3	13.0'	1-1/4"	300#	CLIMATE MASTER MODEL TCH884H WITH STRAIGHT DISCHARGE AND RIGHT RETURN

- PLAN NOTES:**
- PROVIDE AND INSTALL SEPARATED COMBUSTION CONDENSING BOILERS AS SPECIFIED. MOUNT BOILERS IN UPPER MECHANICAL ROOM ON 4" HIGH CONCRETE HOUSEKEEPING PAD. BOILERS TO COME COMPLETE WITH FACTORY SUPPLIED CIRCULATING PUMP. PROVIDE AND INSTALL ALL FITTINGS, CONTROLS, AND VALVES REQUIRED TO CONNECT TO HEAT PUMP HEATING SYSTEM. REFER TO SPECIFICATIONS, RISE 4" INTAKE VENT AND 6" EXHAUST VENT FROM EACH BOILER UP THRU ROOF WITH HEATER CAP.
 - BOILER CIRCULATING PUMP TO BE FURNISHED BY FACTORY AND INSTALLED BY CONTRACTOR. CONTRACTOR TO RIG-IN AND CONNECT 2" HEAT PUMP SYSTEM PIPING AS SHOWN. INTERLOCK PUMP WITH BOILER OPERATION.
 - CONDENSATE TRAP TO BE FURNISHED AS PART OF BOILER SYSTEM. CONNECT TRAP TO BOILER AND RUN DRAIN LINE TO NEAREST FLOOR SINK.
 - PROVIDE AND INSTALL 4" SARGO LOW LOSS HEADER AS SPECIFIED. CONNECT TO HEAT PUMP LOOP AND TO BOILER LOOP PIPING AS RECOMMENDED BY MANUFACTURER OF EQUIPMENT SUPPLIED. MOUNT HEADER ABOVE BOILERS AND SUPPORT FROM ROOF STRUCTURE.
 - PROVIDE AND INSTALL MITROL MODEL SX-160V EXPANSION TANK AS SPECIFIED. MOUNT TANK AT FLOOR. RUN DRAIN LINE TO NEAREST FLOOR SINK.
 - PROVIDE AND INSTALL HEAT PUMP LOOP CIRCULATING PUMPS AS SPECIFIED. MOUNT PUMPS ABOVE BOILERS AND SUPPORT FROM ROOF STRUCTURE. PROVIDE SHEET METAL DRAIN PAN BELOW PUMPS AND RUN DRAIN LINE TO FLOOR SINK.
 - PROVIDE AND INSTALL BACKFLOW PREVENTION DEVICE ON COLD WATER FEED LINE. REFER TO DETAIL GRS 1 FOR TYPICAL INSTALLATION AND TO LARGE SCALE PLAN AND 1 FOR LOCATION IN MAIN LEVEL MECHANICAL ROOM.
 - RUN DRAIN LINE TO NEAREST FLOOR SINK OR FLOOR DRAIN.
 - PROVIDE AND INSTALL PLATE TYPE HEAT EXCHANGER IN MAIN LEVEL MECHANICAL ROOM AS SPECIFIED. CONNECT TO 4" COOLING TOWER SUPPLY AND RETURN LINES AND TO 4" HEAT PUMP SYSTEM SUPPLY AND RETURN LINES AS RECOMMENDED BY MANUFACTURER. ALL PIPE CONNECTIONS TO HAVE SHUT-OFF VALVES. RUN DRAIN LINES TO NEAREST FLOOR SINK.
 - PROVIDE AND INSTALL LAKOS MODEL RTS-9409-B VERTICAL SAND SEPARATOR AS SPECIFIED. CONNECT TO 4" COOLING TOWER PIPING WITH PASS VALVE AS SHOWN. RUN PURGE LINE TO NEAREST FLOOR SINK.
 - 8" SQUARE BY 9" DEEP CONCRETE COOLING TOWER SUMP INSTALLED AT SITE. CONTRACTOR TO VERIFY LOCATION, MAINTAIN CLEARANCE ALL AROUND TOWER. RUN PIPING TO UNDERGROUND SUMP PIT AS SHOWN.
 - COOLING TOWER TO BE LOCATED IN MECHANICAL EQUIPMENT YARD. REFER TO SHEET M1.1 FOR LOCATION. MAINTAIN CLEARANCE ALL AROUND TOWER. RUN PIPING TO UNDERGROUND SUMP PIT AS SHOWN.
 - PACKAGED AIR COOLED CHILLER TO BE LOCATED IN MECHANICAL EQUIPMENT YARD. REFER TO SHEET M1.1 FOR LOCATION. MAINTAIN MANUFACTURERS RECOMMENDED CLEARANCES ALL AROUND CHILLER. PROVIDE RIGID FIBERGLASS PIPE INSULATION ON ALL EXPOSED PIPING AND COVER WITH METAL COVER.
 - 3" HEAT PUMP SUPPLY AND RETURN PIPING TO MAIN LEVEL UNITS. REFER TO MAIN LEVEL HYDRONIC PIPING PLAN ON SHEET M1.3 FOR CONTINUATION OF PIPING ON UPPER LEVEL.
 - 3" HEAT PUMP SUPPLY AND RETURN PIPING TO UPPER LEVEL UNITS. REFER TO UPPER LEVEL HYDRONIC PIPING PLAN ON SHEET M1.3 FOR CONTINUATION OF PIPING ON UPPER LEVEL.
 - 4" CHILLED WATER SUPPLY AND RETURN PIPING TO EXISTING AIR HANDLERS LOCATED IN EXISTING UNIT #3 (GYMNASIUM BUILDING). REFER TO MAIN LEVEL HYDRONIC PLAN ON SHEET M1.3 FOR CONTINUATION OF PIPING.

CIRCULATING PUMP SCHEDULE									
SYM.	TYPE	G.P.M.	HEAD	H.P.	CHAR.	RPM	REMARKS	MANUFACTURER & MODEL NO.	
CP-1	TURBINE PUMP	175	40'	5	480/603	1750	COOLING TOWER CIRCULATING	B&G TYPE F VERTICAL TURBINE PUMP WITH NON OVERLOADING MOTOR	
CP-2	TURBINE PUMP	175	40'	5	480/603	1750	COOLING TOWER CIRCULATING	B&G TYPE F VERTICAL TURBINE PUMP WITH NON OVERLOADING MOTOR	
CP-3	IN-LINE	175	70'	5	480/603	1750	HEAT PUMP LOOP CIRCULATING WITH VFD	B&G SERIES 80, MODEL 2-1/2 x 2-1/2 x 9-1/2B WITH ALL BRONZE CONSTRUCTION	
CP-4	IN-LINE	175	70'	5	480/603	1750	HEAT PUMP LOOP CIRCULATING WITH VFD	B&G SERIES 80, MODEL 2-1/2 x 2-1/2 x 9-1/2B WITH ALL BRONZE CONSTRUCTION	
CP-5	IN-LINE	240	70'	5	480/603	1750	CHILLER LOOP CIRCULATING	B&G SERIES 80, MODEL 2-1/2 x 2-1/2 x 9-1/2B WITH ALL BRONZE CONSTRUCTION. WEATHER-PROOF CONSTRUCTION FOR EXTERIOR INSTALLATION.	

CHILLER SCHEDULE														
SYM.	TYPE	NOMINAL TONS	EWT		CHAR.	MCA	IPLV	MIN. GPM	DES. GPM	MAX. GPM	PSI	MOC	LBS	REMARKS
			EWT	LWT										
CH-1	PACKAGED AIR COOLED	150	55°F	45°F	480/603	350	14.0	120	240	400	15	450	11,500#	TRANE MODEL RTE150 WITH ROTARY COMPRESSORS. UNIT TO BE COMPLETE WITH FACTORY MOUNTED CIRCULATING PUMPS, EXPANSION TANK AND GLYCOL FILL STATION.

BOILER SCHEDULE												
SYM.	TYPE	GROSS BTU INPUT	GROSS BTU OUTPUT	CHAR.	AMPS	WORKING PRESSURE	FUEL TYPE	FLUE P/V IN	FLUE P/V OUT	PIPE SIZE	WEIGHT	REMARKS
B-1	SEP. COMB. CONDENSING	850,000	816,000	120/601	16	30 psi	NAT.	4" Dia. IN	1-1/2"	2"	1000#	LAARS NTV-850 COMPLETE WITH CONDENSATE TRAP AND FACTORY FURNISHED CIRCULATING PUMP
B-2	SEP. COMB. CONDENSING	850,000	816,000	120/601	16	30 psi	NAT.	4" Dia. IN	1-1/2"	2"	1000#	LAARS NTV-850 COMPLETE WITH CONDENSATE TRAP AND FACTORY FURNISHED CIRCULATING PUMP

HEAT EXCHANGER SCHEDULE												
SYM.	TYPE	SIDE "A"			SIDE "B"			CONNECTION SIZE	WEIGHT	REMARKS		
		EWT	LWT	GPM	EWT	LWT	GPM					
HEX-1	PLATE (COOLING)	90°F	80°F	175	10'	75°F	85°F	175	10'	(4) 4"	1200#	B&G PLATE TYPE GPX

COOLING TOWER SCHEDULE											
SYM.	CFM	HP	CHAR.	PD	EAT	WB	EWT	LWT	GPM	WEIGHT	REMARKS
CT-1	14,830	1-1/2	208/603	62'	95°F	67°F	85°F	75°F	175	1700#	RSD SIZE 060 FIBERGLASS COOLING TOWER

OUTSIDE AIR UNIT SCHEDULE									
SYM.	TYPE	C.F.M.	S.P.E.	HP	CHAR.	BTU INPUT	BTU OUTPUT	CONTROL	REMARKS
OA-1	HORIZONTAL	2100	50"	34	120/601	200,000	160,000	DDC SYSTEM	TRANE MODEL GXAA, SIZE 20 INDOOR UNIT (GAS FIRED)
OA-2	HORIZONTAL	2400	50"	34	120/601	200,000	160,000	DDC SYSTEM	TRANE MODEL GXAA, SIZE 20 INDOOR UNIT (GAS FIRED)

SPLIT SYSTEM A/C UNIT SCHEDULE											
INDOOR UNIT						OUTDOOR UNIT					
SYM.	CFM	BTU	CHAR.	MCA	SEER	SYM.	BTU	MCA	SEER	CHAR.	MANUFACTURER
SI-1	600-700	30,000	208/601	1	1	SI-1	30,000	25	19.6	208/601	MITSUBISHI MODEL PUA-430N47 WITH WALL MOUNTED CONTROLLER AND COND. PUMP
											LOW AMBIENT "HARD-START" KIT

EXHAUST FAN SCHEDULE									
SYM.	TYPE	C.F.M.	S.P.E.	WATTS	CHAR.	R.F.M.	CONTROL	REMARKS	
EF-1	CEILING MOUNTED	100	25"	87	120/601	640	WITH LIGHTS	TWIN CITY MODEL T100 WITH CEILING GRILLE, BACK-DRAFT DAMPER AND 6" Dia. DUCT TO ROOF CAP.	
EF-2	CEILING MOUNTED	100	25"	87	120/601	640	WITH LIGHTS	TWIN CITY MODEL T100 WITH CEILING GRILLE, BACK-DRAFT DAMPER AND 6" Dia. DUCT TO ROOF CAP.	
EF-3	CEILING MOUNTED	300	25"	212	120/601	905	DDC SYSTEM	TWIN CITY MODEL T300 WITH CEILING GRILLE, BACK-DRAFT DAMPER AND 6" Dia. DUCT TO ROOF CAP.	
EF-4	CEILING MOUNTED	300	25"	212	120/601	905	DDC SYSTEM	TWIN CITY MODEL T300 WITH CEILING GRILLE, BACK-DRAFT DAMPER AND 6" Dia. DUCT TO ROOF CAP.	
EF-5	CEILING MOUNTED	300	25"	212					