

SPRINKLER GENERAL NOTES

- [illegible]

EXPANSION TANK SCHEDULE

EXPANSION TANK SCHEDULE											
DESIG	LOCATION	SYSTEM	TYPE	TANK VOL. (GAL.)	AIR CHARGE				BASIS OF DESIGN	REMARKS	
					PRESSURE PSIG	QOR DIA.	STROKE INCH	COIN DIA.			
E-0-1	MCH ROOM	HEATING	BUBBLER	5.3	12	30	24	37	1	BELL & GOSSETT / B-200	-
E-0-2	MCH ROOM	CILLED	BUBBLER	5.3	12	30	24	37	1	BELL & GOSSETT / B-200	-

NOTES:

1. ALL EXPANSION TANKS SHALL BE FACTORY PRECHARGED TO CAPACITIES
2. BLADDER SHALL BE REMOVABLE THRU ACCESS HANDHOLE.
3. PROVIDE ALL PIPING SPECIALTIES AS SHOWN IN TYPICAL PIPING DIAGRAM
4. ALL TANKS SHALL BE A.S.M.E. STAMPED.
5. ALL TANKS SHALL HAVE A MAXIMUM WORKING PRESSURE OF 125 PSI.

AIR DEVICE SCHEDULE

DESIG.	DUTY	SIZE (IN.)	GPM RANGE	INLET / MTRK SIZE (IN.)	W.P. S.P.	W.C. MC.	DESCRIPTION	BASIS OF DESIGN
A	SUPPLY	24 x 24 MODULE	0 - 150	6 x 6	0.10"	25	18 x 18 LOWERVED FACE PANEL	TITUS IDC
B	SUPPLY	24 x 24 MODULE	151 - 335	9 x 9	0.10"	30	18 x 18 LOWERVED FACE PANEL	TITUS IDC
C	SUPPLY	24 x 24 MODULE	0 - 120	6*4	0.10"	20	18 x 18 LOWERVED FACE PANEL	TITUS IDC
D	SUPPLY	24 x 24 MODULE	121 - 210	8*6	0.10"	20	18 x 18 LOWERVED FACE PANEL	TITUS IDC
E	SUPPLY	24 x 24 MODULE	211 - 325	10*8	0.10"	25	18 x 18 LOWERVED FACE PANEL	TITUS IDC
F	SUPPLY	18 x 4	0 - 250	18 x 4	0.10"	30	SINGLE DISSECTION - REGISTER 3/4" SPACING	TITUS 271 RL
G	RETURN	24 x 24 LAY-IN	N/A	N/A	0.10"	20	PREPARED FACE - REGISTER (FUSH)	TITUS 246

NOTE: MANUFACTURERS MAY PROVIDE ALUMINUM OR STEEL AIR DEVICES UNLESS OTHERWISE INDICATED. ALL AIR DEVICES IN HIGH HUMIDITY AREAS SHALL BE ALUMINUM.

AIR SEPARATOR SCHEDULE

AIR SEPARATOR SCHEDULE							
DESIG	LOCATION	SYSTEM	SIZE	GPM	STRAINER	BASES OF DESIGN	REMARKS
AS-1	MCH ROOM	HEATING	3"	80	N	BELL & GOSSETT	-
AS-2	MCH ROOM	CHILLED	6"	175	N	BELL & GOSSETT	-

NOTE

1. MAXIMUM PRESSURE DROP THRU AIR SEPARATORS SHALL BE ONE FOOT OF DROP.
2. PROVIDE HIGH CAPACITY AUTOMATIC AIR VENT ON AIR VENT PORT OF SEPARATOR.
3. CONSTRUCTION SHALL BE A.S.M.E. STAMPED FOR 125 PSI WORKING PRESSURE.

COOLING COIL DATA												
DESC	TOTAL GPM	TYPE	FAN SPEED	FAN MOTOR				EAT (°F)	EAT (°F)	LAT (°F)	LAT (°F)	FAN (°F)
				WATTS	VOLTS/PHASE	TOTAL BTU/R	SPS/BTU/R					
1	157	VERTICAL SLOPE TOP	MEDIUM	44	277/1	3,250	3,040	75.0	62.5	56.5	55.3	45
2	215	VERTICAL SLOPE TOP	MEDIUM	56	277/1	5,430	4,000	75.0	62.5	54.3	53.4	45
3	372	VERTICAL SLOPE TOP	MEDIUM	68	277/1	7,470	7,240	75.0	62.5	56.5	55.5	45
4	463	VERTICAL SLOPE TOP	MEDIUM	82	277/1	10,350	9,290	75.0	62.5	55.3	54.3	45
5	639	VERTICAL SLOPE TOP	MEDIUM	124	277/1	14,440	12,950	75.0	62.5	55.3	54.3	45
6	652	VERTICAL SLOPE TOP	MEDIUM	138	277/1	14,700	13,750	75.0	62.5	55.4	54.5	45
7	679	VERTICAL RECESSED	MEDIUM	138	277/1	15,170	13,560	75.0	62.5	55.4	54.4	45
8	173	HORIZONTAL CONCEALED	MEDIUM	100	277/1	5,680	4,820	75.0	62.5	56.6	55.2	45
9	227	HORIZONTAL CONCEALED	MEDIUM	170	277/1	5,680	4,820	75.0	62.5	55.5	54.3	45
10	483	HORIZONTAL CONCEALED	MEDIUM	240	277/1	11,080	9,780	75.0	62.5	56.0	54.7	45

NOTES:

1. PROVIDE WITH INTEGRAL DISCONNECT.
2. WALL-MOUNTED TEMPERATURE SENSORS PROVIDED BY DDC SYSTEM CONTRACTOR. COORDINATE.
3. CONCEALED UNITS SHALL BE FULLY ENCLOSED WITH INLET AND OUTLET DUCT COLLARS.
4. DRAIN PAN SHALL BE STAINLESS STEEL WITH INSULATION.
5. PROVIDE HIGH LEVEL CONDENSATE SENSOR AND ALARM FOR DRAIN PAN FOR EACH HORIZONTAL CONCEALED FAN COIL UNIT. COORDINATE WITH DDC SYSTEM CONTRACTOR.
6. PROVIDE WITH PREMIUM EFFICIENT MOTOR.

HEATING AND VENTILATING UNIT SCHEDULE

HEATING AND VENTILATING UNIT SCHEDULE																					
		FAN DATA					HEATING COIL DATA								FILTER						
DESCR	AEC. SERVED	CFM	ESP (IN.)	TSP (IN.)	HP	VOLTS/ PHASE	FAN RPM	O.A. %	TYPE	MBH	EAT (°)	LAT (°)	EWT (°)	LWT (°)	SPN @ 40° AIR (°)	MAX WPD (°)	ROOMS	OPER. AT (°)	FILT. DIRTY (IN.)	BASIS OF DESIGN	
		2420	0.5	1.5	3	480/3	3,570														100
HV-1	CONNECTING CORRIDOR	2420	0.5	1.5	3	480/3	3,570	100		HOT WATER	158	60	120	160	140	7.9	12	2	728	0.5	TRANE - CLIMATE CHANGER

NOTES:
1. PROVIDE WITH PREMIUM EFFICIENT MOTOR

PRESSURE REDUCING STATION SCHEDULE

PRESSURE REDUCING STATION SCHEDULE											
LOCATION	STEADY PRESSURE (PSI)		PIPE SIZES (I)						REMARKS		
	INLET	REDUCED	D1	D2	D3	D4	D5	D6			
PRO-1	MECHANICAL ROOM	100	20	2,500	3"	1 1/2"	2"	2 1/2"	3"	4"	VALVES BASED ON 2-VALVE ARRANGEMENT

NOTES:

MECHANICAL GENERAL NOTES

1. THE MECHANICAL CONTRACT DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO INDICATE SCOPE AND THE GENERAL ARRANGEMENT OF THE SYSTEMS, WHERE APPLICABLE THE FOLLOWING NOTES SHALL APPLY TO ALL MECHANICAL (HVAC AND PIPING) SYSTEMS.

1. THROUGH SUE DUCTWORK AND PIPING OPERATIONS ARE INDICATED, IT IS NOT THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE MECHANICAL WORK WITH ITSELF AND WITH THE WORK OF ALL OTHER TRADES TO PROVIDE COMPLETE AND OPERABLE SYSTEMS WITHOUT INTERFERENCE.
2. PROVIDE APPROVED FIRE STOPPING MATERIAL AROUND ALL DUCTWORK AND PIPING PENETRATIONS THROUGH FIRE RATED FLOORS AND WALLS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF THE RATED FLOORS AND WALLS. PROVIDE THE DAMPERS AT ALL DUCT PENETRATIONS THROUGH ENCLOSURES. PROVIDE THE RATED WALLS AND FIVE/SEVEN DAMPERS AT ALL PENETRATIONS THROUGH SHIM ENCLOSURES.
3. PROVIDE ACCESS PANELS WHERE REQUIRED FOR ADEQUATE ACCESS TO ALL CONCEALED EQUIPMENT VALVES, DAMPERS AND CONTROLS.
4. ALL DUES REFER TO INTERNAL REEF AREA. REFER TO DRAWINGS AND SPECIFICATIONS FOR INTERNAL INSULATION AND SOUND LINING PRIOR TO FABRICATION.
5. FLEXIBLE DUCTWORK SHALL NOT BE REINSTALLED.
6. COORDINATE DEFUSER, REGISTER AND GRILLE LOCATIONS AND BORDER TYPES WITH ARCHITECTURAL DRAWINGS.
7. REFLECTED LIGHTING FAN.
8. INSTALL DUCTWORK AND PIPING MAINS TIGHT TO UNDERGO OF STRUCTURE UNLESS OTHERWISE INDICATED.
9. REFER TO MECHANICAL DETAILS FOR TYPICAL EQUIPMENT CONNECTIONS.
10. PATCH AND SEAL ALL BEAMING OPENINGS THROUGH FLOORS, WALLS AND ROOF RESULTING FROM DEMOLITION OF NEW WORK WITH MATERIALS AND FINISHES TO MATCH EXISTING CONSTRUCTION AND FINISHING.
11. ALL EXISTING PIPE TRENCHES AND THE EXISTING CRAM SPACE SHALL BE CONSIDERED OSHA CONFINED SPACES.
12. AS AN INTERNAL PART OF THESE DOCUMENTS, THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
13. CONTRACTOR SHALL VISIT THE SITE AND VERIFY EXISTING CONDITIONS PRIOR TO THE BEGINNING OF ANY WORK. FAILURE TO VISIT THE SITE SHALL IN NO WAY RELIEVE THE CONTRACTOR FROM ANY RESPONSIBILITY.
14. CONTRACTOR SHALL USE CARE WHEN PERFORMING SELECTIVE DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO BUILDING FINISHES, EQUIPMENT, FURNITURE, STRUCTURE AND CONTENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES AND SHALL RESTORE DAMAGED AREAS/ITEMS TO ORIGINAL CONDITION TO MEET THE OWNER'S SATISFACTION.
15. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE OWNER ANY UTILITY OUTAGES. OWNER SHALL BE GIVEN NOTICE FOR ANY OUTAGES AS DENIED IN SPECIFICATIONS SECTION 01 00 00 GENERAL CONDITIONS.
16. HVAC SHALL BE MAINTAINED TO ALL AREAS OUTSIDE OF THE CURRENT PHASE OF THE RENOVATED AREA AT ALL TIMES. PROVIDE TEMPORARY CONNECTIONS AS REQUIRED. COORDINATE OUTAGES WITH THE OWNER AS DENIED IN SPECIFICATIONS SECTION 01 00 00 GENERAL CONDITIONS.
17. DEMOLITION AND NEW WORK THAT WILL RESULT IN DOWN TIME OF SERVICES (H.V.A.C., PLUMBING, S.P.A.S., COORDINATE ALL OUTAGES WITH OWNER).
18. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL PLUMBING INFORMATION. ALL WORK AND ASSOCIATED OUTAGES SHALL BE COORDINATED WITH THE PLUMBING SCHEDULE AND THE OWNER.
19. BUILDING IS CONSIDERED OCCUPIED BETWEEN THE HOURS OF 7:00 AM AND 5:00 PM. WORK WITHIN THE BUILDING SHALL BE COMPLETED WITHIN THE SPECIFIED TIME FRAME. SCHEDULE ALL WORK IN OCCUPIED SPACES WITH THE CLIENT AT LEAST 15 DAYS IN ADVANCE. REFER TO SPECIFICATIONS SECTION 01 00 00 GENERAL CONDITIONS.
20. RETURN TO OWNER, AT THEIR DISCRETION, ALL UNUSED MECHANICAL EQUIPMENT (I.E. HEATERS, FANS, PUMPS, FAN COIL UNITS, AIR DEVICES, THERMOSTATS AND CONTROLS).
21. COORDINATE WITH CORP AND OTHER DISPLACES FOR ANY REQUIRED HAZARDOUS MATERIALS ABANDONMENT. REFER TO SPECIFICATION SECTION 02 82 13.19 FOR ANY HAZARDOUS MATERIALS.
22. ALL MATERIALS WILL BE DISTRIBUTED DUE TO CONSTRUCTION WORK. REFER TO DRAWING 69-4421 FOR FURTHER DIRECTION.

MECHANICAL LEGEND

CHILLED WATER SUPPLY	CHWS	HOSE END VALVE		DUCTWORK TO BE REMOVED	
CHILLED WATER RETURN	CHWR	BUCKET STRAINER		DOUBLE THICKNESS TURNING VANES	
CONDENSER WATER SUPPLY	CS	W/VE STRAINER W/HOSE END VALVE		DUCT TRANSITION ROUND TO RECTANGULAR	
CONDENSER WATER RETURN	CR	FLANGED CONNECTION		DUCT TRANSITION	
HEATING WATER SUPPLY	HWS	Gauge and Valve		CHANGE IN DUCT ELEVATION (R-RISE, D-DROP)	
HEATING WATER RETURN	HR	TEMPERATURE/PRESSURE TEST PORT		DUCT SIZE (FIRST FIGURE IS DUCT SIZE)	
CONDENSATE DRAIN LINE	CD	THERMOMETER		BALANCING DAMPER	
LOW PRESSURE STEAM	LPS	UNION		TERMOSTAT	
LOW PRESSURE STEAM RETURN	LPR	PIPING CAP		CONNECT TO EXISTING	
MEDIUM PRESSURE STEAM	MPS	MANUAL AIR VENT		DISCONNECT EXISTING	
MEDIUM PRESSURE STEAM SUPPLY (16-60 PS)	MPS	AUTOMATIC AIR VENT			
HIGH PRESSURE STEAM SUPPLY (MIN. 61 PS)	HPS	FLOOR DRAIN			
HIGH PRESSURE STEAM RETURN	HR	PIPE CATCH OR SLEEVE		ABBREVIATIONS	
CHECK VALVE	HCR	PIPE ANCHOR		ABOVE FINISHED FLOOR	AFE
BALL VALVE	BV	PIPE ELBOW		ABOVE FINISHED INT.	AFI
GATE VALVE	GV	PIPING ELBOW DOWN		DRY BULB AIR TEMPERATURE	DB
BUTTERFLY VALVE	BV	PIPING ELBOW UP		LEAVING AIR TEMPERATURE	LAT
GLOBE VALVE	GV	PIPE CONNECTION BOTTOM		EXISTING TO REMAIN	EIR
BALANCING VALVE	BV	PIPE CONNECTION TOP		EXTERNAL STATIC PRESSURE	ESP
MULTI-PURPOSE VALVE	MPV	FLOOR CLEANOUT		FACE VELOCITY	FV
WALL-TO-PURPOSE VALVE	WPV	SWALL CLEANOUT		FACE VELOCITY	FV
3 PORT MODULATING CONTROL VALVE	3PV	SUPPLY AIR DUCT UP (DASHED LINES FOR DOWN)		FACE VELOCITY	FV
2 PORT MODULATING CONTROL VALVE	2PV	RETURN & EXHAUST AIR DUCT UP (DASHED LINES FOR DOWN)		FACE VELOCITY	FV
RELIEF VALVE	RV	NEW DUCTWORK		FACE VELOCITY	FV
BACKFLOW PREVENTER	BFP	EXISTING DUCTWORK		FACE VELOCITY	FV

STEAM TO WATER HEAT EXCHANGER SCHEDULE



STEAM TO WATER HEAT EXCHANGER SCHEDULE											
		WATER SIDE				STEAM SIDE		CONDENSER SIDE			
DESIG	SERVICE	MMH	GPM	ENT (°F)	MAX. WPD (°F)	WATER TYPE	INITIAL PRESSURE	LB'S/HR	TRAP CAPACITY (GAL/HR)	TYPE	BASIS OF DESIGN
HX-1	HEATING WATER	1,600	75	140	180	3.0	5 PSIG	1,666	4,998	SHELL & TUBE	BELL & GOSSETT /
HX-2	DOMESTIC WATER	400	10	40	120	3.0	WATER	5 PSIG	417	SHELL & TUBE	BELL & GOSSETT /
									1,251		OSU 4-4-4

PUMP SCHEDULE

PUMP SCHEDULE												
DENIG	SERVICE	LOCATION	GPM	HEAD (ft.)	HP	MOTOR			RPM	CONTROL		
						MAX. BHP	VOLTS	PHASE			BASIS OF DESIGN	
											TYPE	
CHWP-1	COOLED WATER	MECH ROOM	175	80	7.5	6.4	480	3	1720	A/C	BELL & GOSSETT SERIES 160 / SIZE 28C	BAS-MOUNTED END-SUCTION
CHWP-2	COOLED WATER	MECH ROOM	175	80	7.5	6.4	480	3	1750	A/C	BELL & GOSSETT SERIES 160 / SIZE 28C	BAS-MOUNTED END-SUCTION
HWP-1	HEATING WATER	MECH ROOM	80	90	5.0	4.25	480	3	1750	A/C	BELL & GOSSETT SERIES 150 / SIZE 1-1/2BIC	BAS-MOUNTED END-SUCTION
HWP-2	HEATING WATER	MECH ROOM	80	90	5.0	4.25	480	3	1750	A/C	BELL & GOSSETT SERIES 150 / SIZE 1-1/2BIC	BAS-MOUNTED END-SUCTION

NOTES:

1. PROVIDE WITH PREMIUM EFFICIENT MOTOR.

Consultants	Date	Revisions
Consolidator's		
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