

Construction Contracts Administration, Procurement Contracts & Materials Management (PCMM) Oregon State University 644 SW 13th Ave. Corvallis, Oregon 97333

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4/5/2019

Oregon State University Construction Contract Administration ITB 198622 - OWEN HALL MECHANICAL RENEWAL

ADDENDUM NO. 2

THIS ADDENDUM IS BEING ISSUED for clarification and/or revisions of the Solicitation Documents as noted. This document is hereby made a part of the Solicitation Documents to the extent as though it was originally included therein.

- ITEM NO. 1 Included with this addendum is Sheet M0.02.
- ITEM NO. 2 Substitution requests and OSU responses below:
 - Nailor Dual Duct VAV Boxes No exceptions
 - <u>Daikin Water Cooled Magnetic Bearing Centrifugal Chiller</u> Design intent is for a water cooled screw machine. Substitution not acceptable.
 - <u>Daikin Water Cooled Screw Chiller</u> OSU has multiple chiller plants on site with various manufactures, but a majority are Carrier. They are trying to minimize maintenance, spare parts inventory, and training costs on campus and, therefore, Daikin would not be acceptable in this situation.
 - <u>Daikin Air Cooled Scroll Chiller</u> OSU has multiple chiller plants on site with various manufactures, but a majority are Carrier. They are trying to minimize maintenance, spare parts inventory, and training costs on campus and, therefore, Daikin would not be acceptable in this situation.
 - <u>Reymsa Cooling Tower</u> Fiberglass towers are not acceptable.
 - <u>Wilo Pumps</u> Pump manufacturer is not acceptable.
 - <u>Tranter Heat Exchangers</u> No exceptions.

END OF ADDENDUM NO. 2

TAG							EVAPORATO	R				W
TAG				DESIGN				DE	esign Low	MAX		
NUMBER	LOCATION		TYPE	CAPACITY (TONS)	EWT (°F)	LWT (°F)	FLUID	(0	ATE SPM)	WPD (FT. WG.)	EWT (°F)	
CH-1 ENERAL NOTES: DESIGN EFFICIENCIE	BASEMENT		E SPEED SCREW	150 ULE.	58	42	WATER		230	5.01	80	
AHRI EFFICIENCIES A UNITS MOUNTED ON	RE AT ARI STAN	DARD CONDITION	NS.									
				THE PANELBOARD OR S	WITCHBOARD FROM WH	IICH THE UNIT IS FED	. COORDINATE WIT	'H ELECTRICAL	. DRAWINGS AM	ND ELECTRICAL (CONTRACTOR.	
<u>NOTES:</u>												
								SPLIT	SYSTE	M HEAT	PUMP S	CHEE
						-	SUP	PLY	тс	DX COOLIN	G	TOT
TAG NUMBER		OCATION		SERVICE		ГҮРЕ	AIRFLOW CFM	ESP (IN. WG.)		,	EAT (°F DB/WB)	CAPAC (MBI
HP-1 GENERAL NOTES:				EVATOR MACHINE ROOM	1 WALL	MOUNTED	480	-		9	90/73	10
A. MINIMUM EFFICIEN NOTES:					. Route condensate [
2. INDOOR UNIT RECE				E, U.24 AMPS, 20 WATTS.	. ROUTE CONDENSATE L	JRAIN TO JANITOR R	JUM MOP SINK.					
								PU	MP SCH	IEDULE		
					CWP-1 BASEMENT		CWP-2 BASEMEN				MENT	
	SERVICE TYPE			BAS	CONDENSOR LOOP E MOUNTED END SUCTIO	DN	CONDENSOR BASE MOUNTED EN	ID SUCTION			D END SUCTION	
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PERFORMANCE		HEAD SHUTOFF HEAD	FT. V	NC.	45 49		45 49			6	88 15 167	
		UMP EFFICIENCY HP			49 83 5		49 83 5			7	37 3 1/2	
		RPM VFD			1784 YES		1784 YES			17		
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MAN	IUFACTURER & M NOTES	IODEL			B&G e-1510 3AD		B&G e-1510	3AD		B&G e-1	510 2BD	
<u>SENERAL NOTES:</u> A. PROVIDE TEFC TYP	PE MOTORS WHI	ERE SCHEDULED	AND WHERE PUMP I	S LOCATED WITHIN THE	AIRSTREAM.							
<u>IOTES:</u> . FLUID TO BE 30% P	PROPOLYNE GLY	COL WATER MIX.										
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NOTES: 1. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT.

	WATER (COOLED CH	ILLER										
		CONDENSER						COL	DE AHRI EFFICIEI	NCY	REFR	IGERANT	
			DESIGN			ELECTRICAL							
			FLOW	MAX				FULL		FULL			APPROX.
EWT	LWT		RATE	WPD			VOLT/	LOAD	NPLV	LOAD		QUANTITY	WEIGHT
(°F)	(°F)	FLUID	(GPM)	(FT. WG.)	MCA	VFD	PHASE	(kW/Ton)	(kW/Ton)	(EER)	TYPE	(LBS)	(LBS)
80	95	WATER	300	5.75	222	YES	460/3	0.6	0.6	17.58	R-134A	840	7,500

UMP S	SCHEDULE							
	DX HEA	TING	ELEC	TRICAL	MINIMUM EFFICIENCY			
	TOTAL					APPROX.		
EAT	CAPACITY	EAT		VOLT/		WEIGHT	MANUFACTURER &	
DB/WB)	(MBH)	(°F)	FLA	PHASE	(S)EER	(LBS)	MODEL	NOTES
90/73	10	61	15	208/1	16.0	20	PANASONIC RE9SKUA	1, 2

		1	1
2BD	B&G e-1510 2BD	B&G e-1510 1.5BC	B&G e-1510 1.5BC
	350	305	305
	480/3	480/3	480/3
	YES	YES	YES
	1736	1726	1726
	7 1/2	7 1/2	7 1/2
	73	50	50
	87	99	99
	65	95	95
	38	35	35
	225	120	120
	WATER	GLYCOL	GLYCOL
ND SUCTION	BASE MOUNTED END SUCTION	BASE MOUNTED END SUCTION	BASE MOUNTED END SUCTION
WATER	MAIN CHILLED WATER	LAB CHILLED WATER	LAB CHILLED WATER
NT	BASEMENT	BASEMENT	BASEMENT
1	CHWP-2	CHWP-3	CHWP-4

SPACE		WINTER	SUMMER			
	TEMPERATURE	HUMIDITY	TEMPERATURE	HUMIDITY		
OUTDOOR	25.0° F DB	15.6° F DP / 12.2 HR / 29.1 ° F MCDB	92.9° F DB / 67.0° F MCWB	61.0° F DP / 80.7 HR / 76.7° F MCD		
INDOOR	68° F ± 2° F DB	50% RH MAX, 40% RH MIN	76° F ± 2° F DB	50% RH MAX, 40% RH MIN		

							FAN SCHI	EDULE										
					AIRI	LOW		МС	DTOR									
											APPROX.							
TAG	TAG								HIGH	LOW	TSP	FAN		VOLT/		WEIGHT	MANUFACTURER &	
NUMBER	LOCATION	SERVICE	TYPE	CFM	CFM	(IN WG)	RPM	HP	PHASE	VFD	(LBS)	MODEL	NOTES					
EF-1	WELL	MECH RM	INLINE	2170	-	0.45	1750	1/3	115/1	NO	200	GREENHECK SQ	1					

		NOMINAL STEAM	EL	ECTRICAL	
TAG		CAPACITY		VOLT/	MANUFACTURER &
NUMBER	LOCATION	(LBS/HR)	KW	PHASE	MODEL
H-1	ATTIC	11	4	277/1	DRISTEEM VAPORSTREAM
H-2	ATTIC	11	4	277/1	DRISTEEM VAPORSTREAM
H-3	ATTIC	11	4	277/1	DRISTEEM VAPORSTREAM
H-4	ATTIC	11	4	277/1	DRISTEEM VAPORSTREAM
H-5	ATTIC	11	4	277/1	DRISTEEM VAPORSTREAM

A. HUMIDIFIER CONTROLLS SHALL BE BACNET CAPABLE FOR INTEGRATION INTO EXISTING BUILDING MANAGEMENT SYSTEM. B. PROVIDE DISPERSION TUBE INSTALATION IN DUCT.

			OLING COIL SC	HEDULE					
								MIN	
TAG			AIRFLOW	EAT	LAT		EWT	WTD	
NUMBER	LOCATION	SERVICE	CFM	(°F DB/WB)	(°F DB/WB)	GPM	(°F)	(°F)	NOTES
CC-2	MECHANICAL ROOM	SU-5	12,000	80/64	55/55	60.0	45	16	1

B. PROVIDE DRAIN PAN WITH DRAIN LINE TO NEAREST FLOOR DRAIN. NOTES:

1. COOLING COIL FLUID TO BE 30% PROPOLYNE GLYCOL.

TAG	MODEL		HOT SIZE					MANUFACTURER	
IUMBER	MODEL	COLD SIZE		COLD MAX	COLD MIN	HOT MAX CFM			NOTES
MB-416	DDR	14	08	2400	2200	800	400	ENVIROTEC	1

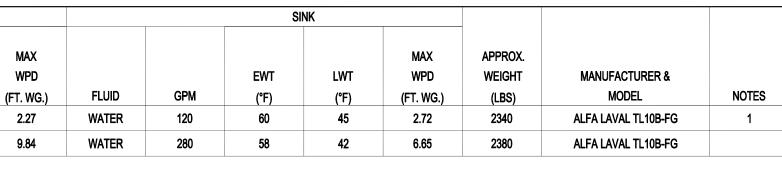
			SL	JMP SWE	EP SCH	IEDULE					_							
		DESIGN	FLANGED	GROOVED	ELECT		APPROX.											
TAG		FLOW	INLET	OUTLET		VOLT/	WEIGHT	MANUF	FACTURER &									
NUMBER	LOCATION	(GPM)	(IN)	(IN)	HP	PHASE	(LBS)	N	MODEL	NOTES								
SS-1	BASEMENT	65	2	1-1/2	3	460/3	450	l	LAKOS	-								
		I							LED CHIL	LER SCI			1	T				
							EVAPO	RATOR			ELEC.	TRICAL	EFFICIENCY	REFRI	IGERANT			
				NOMINAL DESIGN				DESIGN FLOW	MAX	MINIMUM FLOW	SINGLI	E POINT ECTION	FULL			APPROX.		
TAG					EWT	LWT			MAX WPD		SINGLI	e point			QUANTITY	approx. Weight	MANUFACTURER &	
TAG NUMBER	LOCATION	TYPE	SERVICE	DESIGN	EWT (°F)	LWT (°F)	FLUID	FLOW		FLOW	SINGLI	E POINT ECTION	FULL	TYPE			MANUFACTURER & MODEL	N

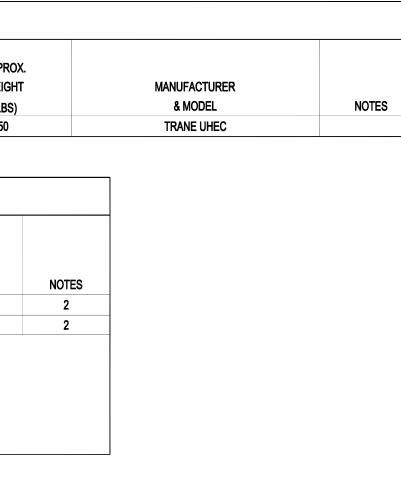
C. UNITS MOUNTED ON VIBRATION BASE WITH SPRINGS.

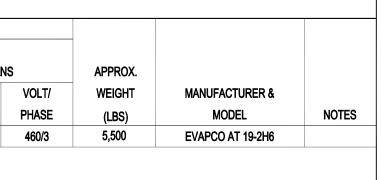
D. CODE AHRI EFFICIENCY REQUIREMENTS PROVIDED FOR REFERENCE.

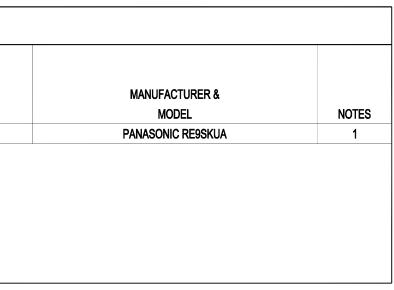
ELECTRICAL CONTRACTOR.

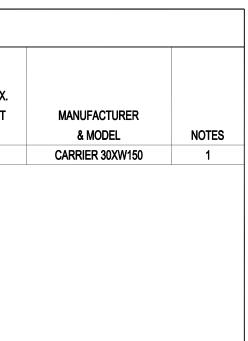
F. CHILLED LOOP TO CONTAIN 30% PROPOLYNE GLYCOL.











		EL	ECTRICAL	
TAG			VOLT/	MANUFACTURER &
NUMBER	LOCATION	кw	PHASE	MODEL
HT-1	ATTIC	0.18	120/1	CHROMALOX SRM

	RO SCHEDULE										
			E	LECTRICAL							
NUMBER	LOCATION	(GPM)	KW	VOLT/PHASE	MANUFACTURER/MODEL						
RO-1	ATTIC	0.8	12	120/1	MILLIPORE SIGMA						
NOTES:											
A. INSTALL PE	R MANUFACTURERS	S REQUIRMENTS.									
	ELOOR LISING ELOO		IANUFACTURER								

B. MOUNT ON FLOOR USING FLOOR MOUNT PROVIDED BY MANUFACTURER.

C. ROUTE DRAIN LINE TO MOP SINK IN JANITOR CLOSET BELOW.

HUMIDIFIER	

E. PROVIDE SCCR SUFFICIENT TO MEET THE AVAILABLE FAULT CURRENT AT THE PANELBOARD OR SWITCHBOARD FROM WHICH THE UNIT IS FED. COORDINATE WITH ELECTRICAL DRAWINGS AND

