

# INVITATION FOR BIDS CCK-2689-23

## IMPROVE SANDERS-BROWN CENTER ON AGING/NEUROSCIENCE FACILITIES Project #2571.0 ADDENDUM# 5 03/10/2023

### IMPORTANT: BID AND ADDENDUM MUST BE RECEIVED BY 03/22/2023 @ 3:00 P.M. LEXINGTON, KY TIME

Bidder must acknowledge receipt of this and any addendum as stated in the Invitation for Bids.

- 1. Please refer to and incorporate in your bid, that attached information from the Project Consultants.
- 2. If you have any questions, please contact Ken Scott at the number below or at Kenneth.Scott@uky.edu.

#### OFFICIAL APPROVAL UNIVERSITY OF KENTUCKY

**SIGNATURE** 

Ken Scott 03/10/2023

Contracting Officer / (859) 257-9102

Typed or Printed Name

#### ADDENDUM NUMBER FIVE

Bidders shall conform to the following changes, as same shall become binding on the Contract to be issued in response to this Invitation to Bid.

#### **PROJECT INFORMATION**

1. **Bid Opening** – Bid opening date has changed to March  $22^{nd}$ . Time, location, and other details remain the same.

### **QUESTIONS / CLARIFICATIONS**

2. Drawing A-8.2 – SF7 can be found in numerous instances on sheet A-8.2.

#### **CORRECTIONS / CHANGES**

- 3. Specification 08 4213 Fire-Rated Glazing Systems Article 2.3.A. Revise Basis-of-Design product to SAFTI FIRST Fire Rated Glazing Solutions; GPX Curtainwall framing with SuperClear 45-HS.
- 4. **Glazing Legend, All Affected Sheets** Remove FRPG-2 from legend. Revise FRPG-1 description to read, "LOW-E COATED, 45 MINUTE FIRE RESISTIVE CLEAR GLAZING."
- 5. Drawing A-8.4R1 Change glazing type for CW39 to FRPG-1.
- 6. **Drawing A-8.5R1** Change glazing type for CW40 to FRPG-1.
- 7. Drawing A-8.6R1 Detail 1 is not applicable to the project. Remove from set.
- 8. **Drawing A-8.6R1** Detail 2 is not applicable to the project. Remove from set.
- 9. Drawing A-8.6R1 Detail 4 is not applicable to the project. Remove from set.
- 10. Drawing A-8.8 Update detail 1 according to AD-A-5.1.
- 11. Drawing A-8.8 Update detail 2 according to AD-A-5.2.
- 12. Drawing A-8.8 Update detail 3 according to AD-A-5.3.
- 13. **MEP Drawings** There was mistakenly multiple versions of the same drawing included in Addendum #4. The below list of drawings with associated time stamp are to be omitted completely. Refer to the lower left corner of each drawing.

M2.1aR1: 3/6/23 8:33 am

M3.6bR1: 3/6/23 7:13 pm

M3.7R2: 3/7/23 9:06 am

- M7.00R1: 3/9/23 9:58am
- M3.7R1: 3/7/23 10:41am
- M7.00R1: 3/7/23 10:41am
- P2.0aR1: 3/7/23 8:53am
- P3.0aR1: 3/7/23 10:41am
- P3.0aR1: 3/7/23 8:53am
- P3.1aR1: 3/7/23 10:41am
- P3.1aR1: 3/8/23 9:26am
- P3.1aR1: 3/6/23 8:46pm
- P3.1bR1: 3/7/23 10:42am

Improve Sanders-Brown Center on Aging/ Neuroscience Facilities University of Kentucky – Lexington, Kentucky

P3.1bR1: 3/7/23 9:42am E4.1aR3: 3/7/23 10:57am

- 14. Drawing P3-1aR See attached for revised sheet.
- 15. Drawing M3-7R1 See attached for revised sheet.
- 16. Drawing P3-1aR1 See attached for revised sheet.

End of Addendum No. 5



	ADDENDUM 5	03/10/23	The Drowing and the Design shown thereon are the property of Ommi Architects. The reproduction, copying or other use of this Drawing or design without the written consent of Ommi Architects is prohibited.
09 2900-10 GYPSUM BOARD - SEE SPECIFICATION FOR TYPE BASED ON APPLICATION 09 2216-01 NON-STRUCTURAL METAL FRAMING EXTEND AIR BARRIER TO INTERIOR FACE OF PRE CAST PANEL	E FACILITIES		
09 2900-13) GYPSUM BOARD TRIM - TEAR AWAY MASK BEAD 07 9200-01) JOINT SEALANT AND BACKER ROD 07 2100-05) SPRAY POLYURETHANE FOAM INSULATION - FILL VOIDS AT PERIMETER	ENTER ON AGING/NEUROSCIENCI	)ES	eel 40507
- FILL VOIDS AT PERIMETER, TYPICAL	IMPROVE SANDERS-BROWN CE	FIRE-RATED CURTAINWALL CHANG	A C H I T E C T S www.amflorchilects.co
	A	D	-A-5.1



(07 2100-05)	ADDENDUM 5	03/10/23	e Drawing and the Design shown thereon are the openty of Omni Architects. The reproduction, pyving or other use of this Drawing or design thout the written consent of Omni Architects is ohibited.
SPRAY POLYURETHANE FOAM INSULATION - FILL VOIDS AT PERIMETER, TYPICAL 07 9200-01 JOINT SEALANT AND BACKER ROD 12 3661-01 SOLID SURFACE WALL PANEL OR COUNTERTOP (SS-1) 06 4116-12 COMPOSITE WOOD/AGRIFIBER PRODUCT	:ILITIES		
<ul> <li>EXTEND AIR BARRIER TO INTERIOR FACE OF PRE CAST PANEL</li> <li>09 2216-01 NON-STRUCTURAL METAL FRAMING 3 5/8" METAL STUDS @ 16" O.C. MAX</li> <li>09 2900-10 GYPSUM BOARD - SEE SPECIFICATION FOR TYPE BASED ON APPLICATION</li> <li>09 9123-01 INTERIOR PAINTED FINISH</li> </ul>	IMPROVE SANDERS-BROWN CENTER ON AGING/NEUROSCIENCE FAC	FIRE-RATED CURTAINWALL CHANGES	A C H I T E C T S WW.omforchilect.com
		AD	-A-5.2





NT DATE: 3/10/2023 09:49:54







212 North Upper Street Lexington, Kentucky 40507 p. 859.252.6664 www.omniarchitects.com







PLAN

**P3.1aR1** 







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ADDENDUM 4

ADDENDUM 5

ENLARGED MECHANICAL

**ROOM PLAN** 

**M3.7R1** 

03/07/23 03/10/23

			REGISTERS, C	GRILLES, AI	ND DIFF	USERS \$	SCHEDULE										LO	UVER \$	SCHEDL	JLE					
						DUCT INLET				NOISE	THROW						CONSTRUCTI			FREE AREA	VELOCITY		D	RAINABLE	
MARK	MANUFACTURER	MODEL #	ТҮРЕ	GRILLE SIZE	PANEL SIZE	SIZE	DUCT BRANCH SIZE	MAX CFM	P.D.	CRITERIA	PATTERN	REMARKS		MARK	MANUFACTURER MODEL # SERVICE	DEPTH (IN)	ON mm					APD (IN WG.)	HRDSGREEN	BLADE RE	.MARKS
	TITUO			40" × 40"	401 × 401	0"	01	100	0.42	20				L-1	GREENHECK ESJ-602 GENERATOR INT	KE 6		18000	$\frac{70}{10000000000000000000000000000000000$	80 56.6	81/	0.11	Yes	Yes { 1,2,5	
E-1				12" X 12"	12" X 12"	6"	6"	120	0.13	20	-			L-2	GREENHECK ESJ-602 GENERATOR INT	KE 0	FASTENED	28000	152	100 61.3	909	0.17	res	2,3,4	
E-2 E-3	TITUS	ΡΔΡ-ΔΔ		24 X 24 24" x 24"	24 X 24 24" x 24"	0 8"	8"	210	0.13	20	-		NO	DTES:											
E 0	TITUS	PAR-AA		24" x 24"	24 x 24 24" x 24"	22" x 22"	SEE PLANS	1350	0.06	20			4 5								A				
R-1	TITUS	PAR-AA		12" x 12"	12" x 12"	8"	8"	120	0.13	20	-		1. E 2. F	BASE BID BLACK FINIS	H FINISH TO MATCH EXISTING TO REMAIN LOUVERS						$\overline{}$				
R-2	TITUS	PAR-AA	ALUMINUM PERFORATED GRILLE	24" x 24"	24" x 24"	8"	8"	240	0.13	20	-		2. L 3. E	BID ALTERN	ATE										
R-3	TITUS	PAR-AA	ALUMINUM PERFORATED GRILLE	24" x 24"	24" x 24"	10"	10"	325	0.13	20	-		4. A	APD AND FA	CE VELOCITY ARE BASED ON OVERALL LOUVER FAC	BEING DIVIDED IN	ITO INTAKE AND EXI	HAUST.							
R-4	TITUS	PAR-AA	ALUMINUM PERFORATED GRILLE	24" x 24"	24" x 24"	22" x 22"	SEE PLANS	1350	0.06	20	-		5. F	PROVIDE W	ITH FULL SIZE MOTORIZED DAMPER.										
R-5	TITUS	FL-20	ALUMINUM LINEAR DIFFUSER	48" x 5.75"	48" x 5.75"	8"	8"	210	0.08	20	-		6. F	PROVIDE WI	TH SEPARATE AIR STREAM MOTORIZED DAMPERS. C	JORDINATE QTY A	ND SIZES WITH OVE	RALL AIR ST	REAM PLENUM/	LOUVER PORTION SIZE.					
S-1	TITUS	PAS-AA	ALUMINUM PERFORATED DIFFUSER	12" x 12"	12" x 12"	6"	6"	120	0.06	16	4-WAY		$\{ \neg \neg$	$\cdots$	$\cdots$	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		·····		$\cdots$	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	man g			
S-2	TITUS	PAS-AA	ALUMINUM PERFORATED DIFFUSER	24" x 24"	24" x 24"	8"	8"	210	0.07	20	4-WAY		<u>ا</u> ع		<b>ΕΧΡΔΝΩΙΟΝ ΤΔ</b>	NK SCHEI						\$			
S-3	TITUS	PAS-AA	ALUMINUM PERFORATED DIFFUSER	24" x 24"	24" x 24"	10"	10"	325	0.08	27	4-WAY		} ∟					·				3			
S-4	TITUS	271FL	ALUMINUM AEROBLADE, 22.5 DEG	12" x 8"	12" x 8"	10" x 6"	10" x 6"	238	0.05	18	LINEAR		<u>ا</u> ع			PHYSICAL SIZ	E (IN) CAI	PACITY				}			
S-5	TITUS	FL-15	ALUMINUM LINEAR DIFFUSER	60" x 5.75"	60" x 5.75"	8"	8"	230	0.07	20	LINEAR		<b>ξ</b>									3	•		
S-6	TITUS	FL-15	ALUMINUM LINEAR DIFFUSER	48" x 5.75"	48" x 5.75"	8"	8"	210	0.08	20	LINEAR		ξ <u> </u>		MANUFACTURER MODEL # TYPE	DIAMETER	HEIGHI (C	JALS)	REMARKS			}	—⁄4		
S-7	TITUS	PAS-AA	ALUMINUM PERFORATED DIFFUSER	24" x 24"	24" x 24"	10"	10"	350	0.10	30	4-WAY		} <u></u>	E1-1	BELL AND GOSSETT D-80V DIAPHRAGM	20	38	45.0 <i>A</i>	ALL			3			
													{ NO	DTES:								}			
MARK LEF-1 NOTES: 1. PROVIDE 2. PROVIDE 3. PROVIDE 4. PROVIDE 5. PROVIDE	MANUFACTURER STROBIC	MODEL # M42C305150 M42C305150 DLATION DAMPERS PASS DAMPERS. NG WITH MAXIMU R NOZZLE	SERVICE TYPE 6 LAB EXHAUST MIXED FLOW INDUCED DILUSION 9 PLUME 5. DAMPER SHALL ALLOW SINGLE FAN OPERATION M 30" FRONT-TO-BACK DIMENSION	EXHAUS I INLET AIRFLOW (CFM) DN HIGH 7500	E.S.P. 3.00	DRIVE DIRECT	E RPM F 1200	FAN HP 15	ELEC VOLTAGE 208 V	CTRICAL DATA PHASE 3	HZ 60	SONES REMAR	A. 5. 5. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.	MARK AS-1 DIES: ASME SEC RATED FO SHELL IS C	MANUFACTURER MODEL # SERVICE BELL AND RL-4F HEATING WATER GOSSETT CONVIII, DIVISION 1 R 125PSI, 350F CARBON STEEL		RATOR SC INLET PIPE OUT SIZE 4"	HEDUL TLET PIPE SIZE 4"	LE WATER FLOW (GPM) 200	RATE WATER PRESSUR HD) 1.00	E DROP (FT REI ALL	MARKS			
			C					SCHER									$\cdots$		$\cdots$			$\cdots$	$\cdots$	$\cdots$	
			3						JULE											DAT TAINK SU					}
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						1053323 07	2020.10														100	22	22	50 1 2 C	3/67
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<ol> <li>MOTES:</li> <li>MOUNT</li> <li>PROVIDE</li> <li>SHELL S</li> <li>SHELL S</li> <li>SHELL D</li> <li>TUBE SII</li> <li>TUBE SII</li> <li>TUBE SII</li> <li>TUBE SII</li> <li>4" FLANC</li> <li>4" NPT T</li> </ol>	HEAT EXCHANGERS ON E MANUFACTURER'S K-I IDE DESIGN PRESSURE ESIGN TEMPERATURE: DE DESIGN PRESSURE DE DESIGN TEMPERATU GED INLET SHELL SIZE UBE CONNECTIONS	N EXISTING STANE HEAD AT TUBE PI 5: 150 PSI 375F 125 PSI JRE 375F														REMARKS: 1. UL LISTED 2. DIMENSIOI 3. RUPTURE 4. RUPTURE 5. LENGTH A DIMENSIOI 6. STORACE	NS LISTED INCLUDE BASIN TO HAVE 1" N BASIN SHALL BE 150 ND WIDTH DIMENSIONS. VENDOR SHALL	OVERALL FO NPT DRAIN AN 0% CAPACITY ONS LISTED A PROVIDE TAN	OOTPRINT AND S ID 1/2" NPT. CONTAINMENT ARE BOTH MAXI NK HEIGHT BAS	STORAGE TANK HEIGHT. T. MUM ALLOWABLE OUTER S GED ON SCHEDULED CAPAC	HELL ITY.				

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			REGISTERS,	GRILLES, A	ND DIFF	USERS	SCHEDULE	=											LOUVE	<b>R SCHED</b>	ULE					
MARK	MANUFACTURER	MODEL #	TYPE	GRILLE SIZE	PANEL SIZE	DUCT INLET SIZE	DUCT BRANCH SIZE	MAX CFM	P.D.	NOISE CRITERIA	THROW PATTERN	REMARKS	MAR	MANUFACTURER	MODEL #		DEPT	H (IN) CONS		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		FREE AREA VE	ELOCITY			BLE REMARKS
E-1	TITUS	PAR-AA	ALUMINUM PERFORATED GRILLE	12" x 12"	12" x 12"	6"	6"	120	0.13	20	-		L-1 L-2	GREENHECK	ESJ-602	GENERATOR IN		FAST	ENED 28000			$\sim 1000$	909	funding	es re	2,3,4
E-2	TITUS	PAR-AA	ALUMINUM PERFORATED GRILLE	24" x 24"	24" x 24"	6"	6"	120	0.13	20	-															
E-3	TITUS	PAR-AA	ALUMINUM PERFORATED GRILLE	24" x 24"	24" x 24"	8"	8"	210	0.13	20	-		NOTES:										L L			
E-4	TITUS	PAR-AA	ALUMINUM PERFORATED GRILLE	24" x 24"	24" x 24"	22" x 22"	SEE PLANS	1350	0.06	20	-		1. BASE B	D									<u>/4</u>			
R-1	TITUS	PAR-AA	ALUMINUM PERFORATED GRILLE	12" x 12"	12" x 12"	8"	8"	120	0.13	20	-		2. BLACK	FINISH. FINISH TO MATCI	H EXISTING TO	REMAIN LOUVER	S.									
R-2	TITUS	PAR-AA	ALUMINUM PERFORATED GRILLE	24" x 24"	24" x 24"	8"	8"	240	0.13	20	-		3. BID ALT	ERNATE												
R-3	TITUS	PAR-AA	ALUMINUM PERFORATED GRILLE	24" x 24"	24" x 24"	10"	10"	325	0.13	20	-			E WITH FULL SIZE MOTO	RIZED ON OVE	RALL LOUVER FA R	CE BEING DIV	DED INTO INTA	KE AND EXHAUST.							
R-4	TITUS	PAR-AA	ALUMINUM PERFORATED GRILLE	24" x 24"	24" x 24"	22" x 22"	SEE PLANS	1350	0.06	20	-		6. PROVIE	E WITH SEPARATE AIR S	STREAM MOTO	RIZED DAMPERS.	COORDINATE	QTY AND SIZE	S WITH OVERALL A	R STREAM PLENU	M/LOUVER PORTIC	ON SIZE.				
R-5	TITUS	FL-20		48" x 5.75"	48" x 5.75"	8"	8"	210	0.08	20	-		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	$\cdots$	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	$\cdots$	$\cdots$	$\sim$		
S-1	TITUS	PAS-AA		12" x 12"	12" x 12"	6"	6"	120	0.06	16	4-WAY		{						<b></b>					ł		
5-2		PAS-AA		24" X 24"	24" X 24"	8° 10"	8	210	0.07	20	4-VVAY		ξ		EXPA	NSION IA	ANK SC	HEDULI						3		
5-3				24" X 24"	24 X 24	10" x 6"	10"	325	0.08	2/			{				DHVSI		CAPACITY					ł		
5-4							10 X 0	230	0.05	10			ξ				FIIIG			E				3		
	TITUS	FL-15		00 X 5.75	48" x 5 75"	0 8"	8"	230	0.07	20			E MARI		MODEL #	TYPE	DIAMETER	HEIGHT	(GALS)	REMARKS				{ /	λ	
S-7	TITUS			24° × 3.73	24° × 3.73	10"	10"	350	0.00	30			{ ET-1	BELL AND GOSSET	TT D-80V	DIAPHRAGM	20	38	45.0	ALL					<u>1 \</u>	
0-1	moo	1 40-44		24 7 24	24 7 24	10	10	550	0.10	50			{											ł		
MARK LEF-1 NOTES: 1. PROVIDE 2. PROVIDE 3. PROVIDE 4. PROVIDE 5. PROVIDE	MANUFACTURER STROBIC WITH MOTORIZED ISOL WITH MOTORIZED BYP/ WITH BOTTOM OPENIN WITH LARGE SILENCEF WITH RAIN HOOD.	MODEL # M42C305150 ASS DAMPERS. IG WITH MAXIMU R NOZZLE	SERVICE TYPE 6 LAB EXHAUST MIXED FLOW INDUCED DILUSIO PLUME 5. DAMPER SHALL ALLOW SINGLE FAN OPERATION M 30" FRONT-TO-BACK DIMENSION	EXHAUS INLET AIRFLOW (CFM) DN HIGH 7500	T FAN SC / E.S.P. 3.00	DRIVE	_E 	FAN HP 15	ELEC /OLTAGE 208 V	TRICAL DATA PHASE 3	HZ 60	SONES REM. ALL	AS-1	GLASS D FOR 175PSI, 240F ED STEEL WITH CARBON RAGM HEAVY DUTY BUT MANUFACTURER BELL AND GOSSETT SECTION VIII, DIVISION - D FOR 125PSI, 350F IS CARBON STEEL	N STEEL SHELL FYL RUBBER MODEL # RL-4F	 SERVICE HEATING WATE		PARAT ING INLET SIZ E 4"	DR SCHED	PULE PE WATER FLO (GPM 200		R PRESSURE DROP HD) 1.00	P (FT REMARKS ALL		······	
				STEAM-TO-	WATER I	HEAT E	XCHANGE	R SCHED	ULE												DAY TA	<b>NK SCHE</b>	DULE			
							SHEL	L (STEAM)			Т	TUBE (WATER)					ξ —					TANK	VOLUME	PHYSIC	AL SIZE (IN)	}
MARK	MANUFACTURER	MODEL #	TYPE SERVICE DIAMETER (IN)	LENGTH (IN) PASS	SES (S&T) TOTAL	HEATING (BT	J/H) LBS/HR E	NTERING PRES	G. (PSI) GP	M P.D. (F	PSIG) EW	/T (°F) LWT (°F)	JLING FACTOR (°F/Btu)	REMARKS			۲ <u>ک</u>	IARK MA	NUFACTURER		TYPE	(G	GALS) LEN	IGTH V	/IDTH HEI	GHT REMARKS
HX-1	BELL AND GOSSETT	SU-104-2	U-TUBE HEATING WATER 10.75	55.38	3	1953333.97	2029.19	30	20	0 6.5	50 1	160 180	0.0005	ALL			ξ –	DT-1	PRYCO D	OUBLE WALL PROT	ECTED W/ RAPTUF	RE BASIN	100 3	32	32 5	0 1,2,3,4,6,7
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mm														2	DT-2	PRYCO D	OUBLE WALL PROT	ECTED W/ RAPTUF	RE BASIN (	600 1	17	32 TE	D 1,2,3,4,5,6,8,9
<ol> <li>MOUNT H</li> <li>PROVIDE</li> <li>SHELL SID</li> <li>SHELL DE</li> <li>TUBE SIDI</li> <li>TUBE SIDI</li></ol>	EAT EXCHANGERS ON MANUFACTURER'S K-H DE DESIGN PRESSURE: SIGN TEMPERATURE: 3 E DESIGN PRESSURE 1 E DESIGN PRESSURE 1 E DESIGN TEMPERATUI ED INLET SHELL SIZE BE CONNECTIONS TUBES 3/4", 20 BWG	EXISTING STANI IEAD AT TUBE PI : 150 PSI 375F I25 PSI IRE 375F	S. PING CONNECTIONS														REMA 1. UL 2. DIN 3. RU 4. RU 5. LEN DIN 6. STO	RKS: ISTED. ENSIONS LISTE TURE BASIN T TURE BASIN S GTH AND WID ENSIONS. VEN PRAGE TANK SI	D INCLUDE OVERA D HAVE 1" NPT DRA HALL BE 150% CAPA H DIMENSIONS LIS DOR SHALL PROVIE HALL BE PROTECTE	LL FOOTPRINT AND IN AND 1/2" NPT. ACITY CONTAINMEI FED ARE BOTH MA E TANK HEIGHT BA D TANK AND UL208	D STORAGE TANK NT. XIMUM ALLOWABL ASED ON SCHEDU 85 LISTED.	HEIGHT. LE OUTER SHELL JLED CAPACITY.				

					S	STEAM-	TO-WAT	ER HEAT EXC	HANGE	ER SC	HEDULE						
									SI	HELL (STEAN	(N			TUBE (W)	ATER)		
MARK	MANUFACTURER	MODEL #	TYPE	SERVICE	DIAMETER (IN)	LENGTH (IN)	PASSES (S&T)	TOTAL HEATING (BTU/H)	LBS/HR		PRESS. (PSI)	GPM	P.D. (PSIG)	EWT (°F)	LWT (°F)	FOULING FACTOR (°F/Btu	) REMARKS
HX-1	BELL AND GOSSETT	SU-104-2	U-TUBE	HEATING WATER	10.75	55.38	3	1953333.97	2029.19		30	200	6.50	160	180	0.0005	ALL
NOTES: 1. MOUNT H 2. PROVIDE 3. SHELL SIE 4. SHELL DE 5. TUBE SID 6. TUBE SID 7. 4" FLANG 8. 4" NPT TU 9. COPPER 10. SHELL MA 11. BAFFLE M 12. TUBE SHE 13. HEAD TYF 14. GASKET M 15. ROLLER E 16. ASME SEC 17. PROVIDE	EAT EXCHANGERS ON E MANUFACTURER'S K-HE DE DESIGN PRESSURE: 1 SIGN TEMPERATURE: 37 E DESIGN PRESSURE 12 E DESIGN TEMPERATUR ED INLET SHELL SIZE BE CONNECTIONS TUBES 3/4", 20 BWG ATERIAL: STEEL IATERIAL: STEEL ET MATERIAL: STEEL PE MATERIAL: CAST IRON MATERIAL: COMP FIBER EXPANDED TUBE TO TUB CTION VIII DIVISION 1 w/L SADDLES TO MATCH NEY	XISTING STANDS. AD AT TUBE PIPIN 150 PSI 75F 5 PSI E 375F N BESHEET JOINT J STAMP W HEX FOR EXIST		S S													
								HYDRONIC P	PUMP S	CHED	ULE						
											MIN.				ELECTRICAL DA	ATA	
MARK	MANUFACTURER	MODEL		TYPE	SER\	VICE GI	PM PRESSUR	RE (FEET HEAD) IMPELLER	DIAMETER (IN)	VFD	EFFICIENCY(%	) RPM	HZ	HP	BRAKE HP	VOLTAGE PHAS	SE SUCTION I
P-1	BELL AND GOSSETT	e1510-2BD	BAS	SE MOUNTED END SU	CTION   HEATING	WATER 2	00	75.00	9.5	Yes	71.8	1800	60	7.5	5	208 V 3	YE
NOTES:																	

1. PROVIDE WITH GROUNDING RING KIT PROVIDE SINGLE POINT POWER CONNECTION AND DISCONNECT
 PROVIDE WITH SUCTION STRAINER AND MESH FILTER. FILTER SHALL BE CLEANED UPON START-UP 4. PROVIDE WITH CHECK VALVE AND FLEXIBLE CONNECTIONS.

					V	AV/C	AV BO	X SCHE	DULE
				DIN	/ENSIONS	5 (IN)	DUCT CC	NNECTIONS	INLET STATIC PRE
MARK	MANUFACTURER	MODEL #	BOX TYPE	LENGTH	WIDTH	HEIGHT	INLET SIZE	OUTLET SIZE	WC
VAV-6	NAILOR	D3001	SINGLE-DUCT SUPPLY	21	10	10.0	6"	12"	0.7
VAV-8	NAILOR	D3001	SINGLE-DUCT SUPPLY	21	12	12.5	8"	16" x 12"	0.7
VAV-10	NAILOR	D3001	SINGLE-DUCT SUPPLY	21	14	12.5	10"	13" x 11"	0.7
VAV-12	NAILOR	D3001	SINGLE-DUCT SUPPLY	21	18	12.5	12"	17" x 11"	0.7

REMARKS:

1. MAXIMUM N.C. VALUE OF 25. 2. PROVIDE DUAL WALL VAV BOX WITH 1" INSULATION.

3. REHEAT COIL IS DUCT MOUNTED.

4. VAV SHALL	INCLUDE CFM READI	NG WITH +/-5% ACCU	RACY							Ę												
		V	ENTUR	VALVE	SCHEDU	ILE				<pre>}</pre>										FA	N CC	)L
MARK	MANUFACTURER	MODEL #	AIR TYPE	DUCT INI ET		VALVE MINIMUM CAPACITY (CFM)	VALVE MAXIMUM CAPACITY (CFM)	MIN. INLET STATIC PRESSURE ("W.C.)	REMARKS		TYPE		MODEL #	WEIGHT		MENSIONS	(IN)			SUF	PPLY FAN	2
EAV-8a	PHOENIX	EXVC110M-AMEHO	EXHAUST	10"	10"	50	100	0.60	ALL	FC-1	HORIZONTAL	JOHNSON CONTROLS	FHX-D10	186	72.25	25.38	11.00	400			0.25	2.25
1	CONTROLS									FC-2	VERTICAL	JOHNSON CONTROLS	FWX-C02	80	41.00	10.50	25.25	200	0.10	DIRECT	0.25	1.25
EAV-8b	PHOENIX CONTROLS	EXVC108M-AMEHO	EXHAUST	8"	8"	35	700	0.60	ALL												0.20	
EAV-8c	PHOENIX CONTROLS	EXVC212M-AMEHO	EXHAUST	2" X 12"	2" X 12"	180	300	0.60	ALL		WITH BACNET	MS/TP CONTROL CARD.										
HAV-8a	PHOENIX CONTROLS	EXVC108M-AMHHO	EXHAUST	8"	8"	35	700	0.60	ALL	2. PROVIDE 3. REMOTE	WITH 2-WAY CO THERMOSTAT.	ONTROL VALVE.										
HAV-8b	PHOENIX CONTROLS	EXVC210M-AMHHO	EXHAUST	8"	8"	100	200	0.60	ALL	<pre>{ 4. MOUNT A</pre>	T 84" A.F.F. WITH INTEGRA	L FACTORY MOUNTED D	SCONNECT.									
SAV-8a	PHOENIX CONTROLS	MAVA212L-AMEHC	SUPPLY	2" X 12"	2" X 12"	180	2100	0.30	ALL	6. COOLING	ONLY. ONLY.											
SAV-8b	PHOENIX CONTROLS	MAVA108L-AMEHC	SUPPLY	8"	8"	35	500	0.30	ALL	······	······		uuuu		uuuu	, www.	·····	uuuuu	·····	, , , , , , , , , , , , , , , , , , ,	·····	m

REMARKS:

1. TRANSFORMERS FOR VENTURI VALVES TO BE LOCATED NO GREATER THAN 100FT FROM THE VALVES THEY SERVE. 2. FAILURE STATE FUME HOOD VALVES SHALL FAIL OPEN. ALL OTHER VALVES SHALL FAIL CLOSED.

					HO		R REHEA	T COIL	SCHE	DULE						
		[	DIMENSIONS (IN	)			AIR								RUNOUT	
							PRESSURE				WATER PRESSURE			CAPACITY	PIPE SIZE	
MARK	MANUFACTURER	LENGTH	WIDTH	HEIGHT	CFM	NO. OF ROWS	DROP (IN WC)	EAT (°F)	LAT (°F)	GPM	DROP (FEET HEAD)	EWT (°F)	LWT (°F)	(MBH)	(IN)	REMARKS
RHC-6	JCI	4	12	12	400	2	0.25	55	90	1.2	0.50	180	160	12.0	3/4	ALL
RHC-8	JCI	4	12	18	700	2	0.25	55	90	2.1	2.00	180	160	21.0	3/4	ALL
RHC-8L	JCI	4	12	18	700	2	0.25	55	90	2.1	2.00	180	160	21.0	3/4	ALL
RHC-10	JCI	4	15	21	1100	2	0.25	55	90	4.2	2.00	180	160	42.0	3/4	ALL
RHC-12	JCI	4	24	24	1750	2	0.25	55	90	6.6	2.00	180	160	66.0	3/4	ALL

REMARKS:

 ALL COILS SUPPLIED MUST CONFORM TO UNIVERSITY OF KENTUCKY STANDARD COIL REQUIREMENTS. TUBE THICKNESS: 0.035". FIN THICKNESS: 0.0075".
 UNIVERSITY ECM REQUIRES HOT WATER RESET BACK TO 140 DEG. ALL REHEAT COILS MUST BE SIZED SUCH THAT THEY CAN PROVIDE MINIMUM 75 DEGREE DISCHARGE AT THE LISTED CFM WITH AN ENTERING WATER TEMPERATURE OF 140 DEGREES.

3. PROVIDE PHENOLIC COATING ON COIL AND HOUSING FOR ON ALL LABORATORY REHEAT COILS. 4. AHRI 410 CERTIFIED.

5, 22 GAUGE GALVANIZED STEEL HOUSING. MECHANICALLY SEALED LEAK RESISTANT

		MINI SF	PLIT S	YSTE	M IND	OOR UN	IIT SCH	HEDULE									MINI	SPLIT	SYSTEM O	JTDOOR UNI	T SCHEDULE						
MARK	MANUFACTURER	MODEL #	DI LENGTH		G (IN.)	WEIGHT (LBS)	AIRFLOW (CFM)	ELEC VOLTAGE	TRICAL	REMARKS	ŗ	MARK	MANUFACTURER	MODEL #	LENGTH		S (IN.) HEIGHT	WEIGHT (LBS)	TOTAL COOLING (MBH)	SENSIBLE COOLING (MBH)	HEATING CAPACITY (MBH)	MINIMUM SEER	VOLTAGE	ELECT PHASE	RICAL MCA	MOCP	REMARK
AC-1	DAIKIN	FTXS12LVJU	31	9	12	22	400	208 V	1	ALL		CU-1	DAIKIN	RXS12LVJU	33	12	22	7.5	12.0	9.3	14.4	23	208 V	1	9 A	15	ALL
NOTES:											NO	TES:															

3. PROVIDE WITH HAIL GUARD.

PROVIDE WITH FACTORY DISCONNECT.
 INDOOR UNIT POWERED FROM OUTDOOR UNIT. ALL WIRING AND CONDUIT BY THE ELECTRICAL CONTRACTOR

3. PROVIDE WITH CONDENSATE PUMP.

PROVIDE WITH BACnet/IP BAS CARD.
 REFRIGERANT PIPE SIZING BY MANUFACTURER





4 PROVIDE WITH 4"X6" HAND HOLE	
{ 5. PROVIDE WITH NPT FOR ALL PIPE CONNECTIONS. }	
6. MOUNT ON STAND AT ELEVATION THAT ALLOWS CONNEC	TIC

1. PROVIDE EQUIPMENT RAILS THAT PROVIDES MINIMUM 12" CLEARANCE BETWEEN ROOF SURFACE AND EQUIPMENT. 2. PROVIDE WITH LOW AMBIENT COOLING CONTROLS

7. BASE BID 8. BID ALTERNATE #2 9. PROVIDE WITH REMOTE FILL STATION WITH OVERFILL CONTROLS. 

# FLASH TANK SCHEDULE

	PHYSICAL	SIZE (IN)	CAPACITY	
			TANK VOLUME	
	DIAMETER	HEIGHT	(GALS)	REMARKS
L	16	38	30.0	ALL

5	CH	EDUL	E											
4	MOP	VOLTAGE	PHASE	EAT DB (°F)	LAT DB (°F)	EAT WB (°F)	LAT WB (°F)	COOL TOTAL COOLING CAPACITY (MBH)	ING COIL SENSIBLE COOL CAPACITY (MBH)	EWT (°F)	LWT (°F)	GPM	WPD (FT. WG)	REMARKS
	15 A	208 V	1	75.0	48.6	63.0	48.4	15.6	10.9	45	55	3.2	6.57	1, 2, 5, 6
	15 A	115 V	1	70.0	114.5	63.0	48.4	0.0	0.0	180	160	1.0	2.09	1, 2, 3, 4, 7



MECHANICAL	
SCHEDULES	

	01/25/202
<b>RUCTION D</b>	OCUMENT
M 1	02/09/2
VI 1 VI 2	02/09/2 02/17/2
M 1 M 2 M 3	02/09/2 02/17/2 02/21/2
VI 1 VI 2 VI 3 VI-4	02/09/2 02/17/2 02/21/2 ~~~ <del>03/07/2</del>

PROJECT NUMBER

<u>∠5\</u>†--

UK: 2571.0







**Omni**