

CAMERON COUNTY PURCHASING

1100 East Monroe St, Brownsville, Texas 78520 (956) 544-0871 Fax: (956) 550-7219

ADDENDUM # 4 - PAGE 1 of 7

DATE OUT: 11/09/23

RFP TITLE: DARRELL HESTER JUVENILE DETENTION CENTER SMOKE EVACUATION AND HVAC SYSTEMS UPGRADES

RFP NUMBER # 231001

DEADLINE: November 15, 2023 at 3:00 p.m.

(IN ORDER TO AVOID DISQUALIFICATION – ALL ADDENDUMS MUST BE SIGNED AND RETURNED BY DEADLINE AND INCLUDED IN THE SEALED BID PACKAGE SUBMITTED)

1- Response to request for clarifications during the last job-site visit meeting at Darrell B. Hester Juvenile Detention Center on Thursday, November 2^{nd} , 2023.

Please see response to clarifications from Project Engineering Consultant Ethos Engineering.

Note:

This addendum shall become part of the RFP and all RESPONDERS/PARTICIPANTS shall be bound by its content. All aspects of the scope of work/services not covered herein shall remain the same.

Company Name	Phone #
Vendor Signature	Date

Must include and return with RFP package



1126 South Commerce Harlingen, TX 78550 Off: (956) 230-3435 Fax: (956) 720-0830 www.ethoseng.net

November 07, 2023

Darrell Hester Smoke Evacuation and HVAC Systems Upgrades – RFQ #231001

ADDENDUM NO. 4

A. PURPOSE AND INTENT

This addendum is issued for the purpose of modifying the plans for the project referenced above. This addendum shall become part of the contract and all contractors shall be bound by its content. All aspects of the specifications and drawings not covered herein shall remain the same. The General Conditions and the Special Conditions of the specifications shall govern all parts of the work and apply in full force to this addendum.

B. CLARIFICATIONS

- 1. Please clarify the number of copies to be submitted.
 - You are to submit one (1) original marked "Original," One Copy marked "Copy," and an electronic copy in Adobe PDF format in a seal envelope.
- 2. Please clarify the evaluation criteria to be submitted. On pg. 10 of 38, Item 10 states: "At a minimum, a prospective proposal must contain in the order presented here an outlined response to the following criteria." However, Item 10 does not include the criteria. Item 11 on pg. 11 of 38 indicates four categories of criteria Commercial Quality, Cost, Customer Service/Value Engineering and Functional/Technical Qualities with points totaling up to 100 points, but this section does not include specific questions. Information to be included in Tabs 1-10 is listed on pg. 12 of 38, but it does not reflect the four categories of criteria mentioned in Item 11.

The evaluation criteria is listed on page 11 of 38:

Commercial Quality (40 points)
Cost Factor (30 points)
Customer Service (20 points
Functional & Technical (10 points)

3. Please clarify "MAG Guarantee associated with this offer" (pg. 13 of 38)

Clarification – means "Maximum Allowable Guarantee" proposal.

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- 4. Please provide a checklist of items required to be submitted. In the outline on pgs. 13 and 14 of 38 it appears that in addition to requested narratives, bonds and schedule required in Tabs 1-8, Tab 9 should include Attachment A and Tab 10 is everything else required. Does this consist of Attachments B through I and an initialed copy of pgs 1-38 of the County's RFP?
 - This is an RFP for construction; therefore, the complete package is made out of different documents which are bonded (procurement front end documents, construction specs, drawings, general conditions, instructions to responders, standard agreement, notice of award, etc.) Participants are to submit complete RFP package with all attachments (forms) completed, as well as signatures, initials on pages, and any other required information.
- 5. In the control station of each pod, we are replacing the fire alarm systems. Are these systems able to function independently of each other? When the system is down during replacement is a fire watch required?

Existing fire alarm systems to remain, relays and necessary accessories will be required to be provided to interface the fire alarm module with the motor starter coils. Refer to specification section 267210, A, 1.

"This specification describes the replacement to existing smoke control system and interface to existing addressable Fire Detection and alarm signaling system. The existing control panel is an intelligent device addressable, analog detecting, low voltage and modular, with digital communication techniques, in full compliance with all applicable codes and standards."

The owner will provide a fire watch; however, the contractor should notify the owner when the fire alarm system is shut down.

- 6. It was mentioned during the site walk that due to the facility being occupied we will only be able to work in two Active dayrooms at a time and that the removed ceiling tiles in other areas will need to be replaced at the end of each day. Please confirm this is correct.
 - Areas with suspended ceilings being removed need to have ceiling tiles replaced at the end of the day. Areas with hard deck/plaster can remain open as needed for installation and inspection.
- 7. The plumbing specification 220010 section 1.2 paragraph c lists sewer piping to serve the new chiller plant. I only see domestic water service extending to the new chiller plant on the drawings. On the drawings I only see a makeup water line to the chiller plant. Please confirm there is no sewer tie-in or service required for this project.

No sanitary sewer connections or piping is required for this project. Plumbing for make-up water is required.

- 8. For the new electrical service and transformer has the utility provider been notified of this project and is there a ESID# or work order number we can reference for this new service?

 Not yet; owner to start the process.
- 9. What is the height for the new fence and gates the encloses the New Chiller Plant.

 New chain-link fence should be 8ft tall. See attached revised drawing under this same Addendum.

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10. Please confirm if the backdraft damper schedule on Sheet M5.01 is intended to reflect the same motorized dampers shown on the plan drawings (Sheets M3.1, 3.2, 3.3, & 3.4). Additionally, please confirm if the smoke evacuation and make-up air dampers shown on the backdraft damper schedule on Sheet M5.01 are the same backdraft dampers called for under the schedule notes for the "smoke evacuation fan schedule" and "make-up air fan schedule" shown on the same sheet i.e. the fan manufacturer are to include as an accessory to the fan.

No, the backdraft dampers and motorized dampers are different from one another. The backdraft dampers will not be motorized. See attached sheet for clarification.

11. Detail 3/Sheet M6.02 shows both a backdraft damper and a separate control damper located within the ductwork for the smoke evacuation fans. Schedule note 2 on the "backdraft damper schedule" located on Sheet M5.01 show that backdraft dampers are to be supplied with actuators which includes the backdraft dampers for the smoke evacuation fans. Please confirm if both a motorized backdraft damper and a separate motorized control damper are required for the smoke evacuation fans.

No, one motorized and one non-motorized dampers should be supplied and installed as per drawings. Refer to sheet M6.02/03

12. Sequence of operations on Detail 1 on sheet M6.02 states that the fire alarm system is to energize smoke evacuation fan and makeup air fans, however, schedule note A on Sheet M5.01 for the smoke evacuation and make up air schedules state that the DDC is responsible for the start/stop of these fans. Please confirm if it is the responsibility of the DDC or fire alarm system to start/stop the smoke evacuation and makeup air fans.

Fire alarm system to energize smoke evacuation fan and make up air fans, disable RTU, DOAS and Damper positions, etc. DDC Control shall be able to monitor the system only.

C. DRAWINGS

- 1) Sheet M4.02: Added Keyed note. See attached sheet.
- 2) Sheet M5.01: Revised schedule notes and names. See attached sheet.
- 3) Sheet M6.02: Revised mechanical elevation damper. See attached sheet.

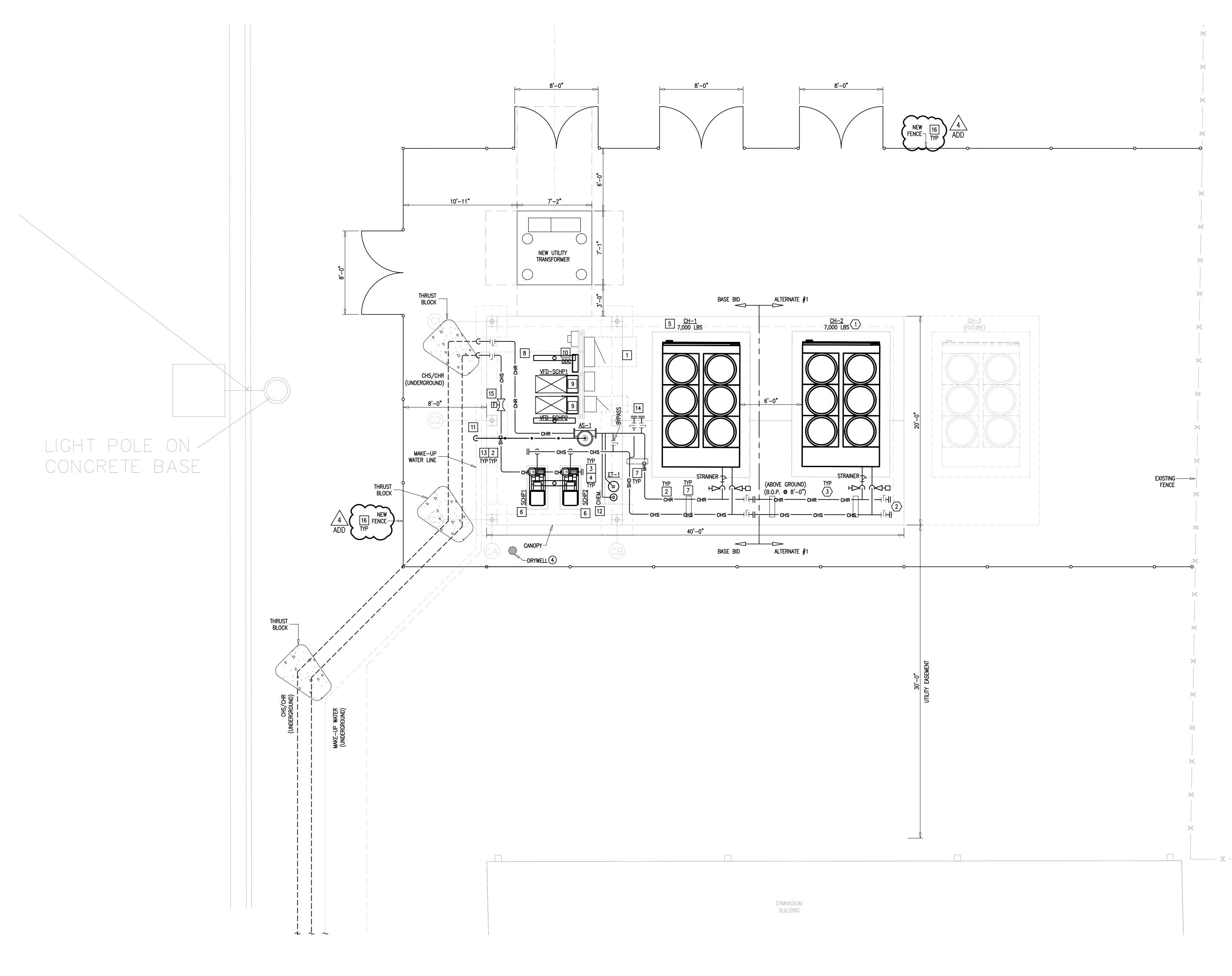


11/07/2023

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M4.02



DARRELL HESTER 01 ENLARGED CENTRAL PLANT MECHANICAL PLAN



GENERAL NOTES:

- 1. ALL PIPING WELDS MUST BE WIRE—BRUSHED AND PAINTED A MINIMUM OF 12" ON EITHER SIDE OF WELD PRIOR TO INSULATION.
- 2. AT LOWEST POINT IN PIPING ENTERING CHILLER BARRELS, PROVIDE 6" LONG DRAIN NIPPLES AND BALL VALVES FOR DRAINING NEW CHILLER.
- 3. INSULATE PER SPECIFICATIONS ALL PIPING, VALVES, FITTINGS, PUMP BODIES AND COLD SURFACES THAT ARE CAPABLE OF GENERATING CONDENSATION. FIBERGLASS INSULATION WILL NOT BE ALLOWED.
- 4. PRIOR TO INSTALLATION OF EQUIPMENT, VERIFY THAT MANUFACTURER RECOMMENDED AND CODE REQUIRED CLEARANCES ARE AVAILABLE.
- 5. INSTALL PIPES AND DUCTS AS HIGH AS POSSIBLE TO ALLOW MAXIMUM POSSIBLE HEADROOM. MIN.
- 10' A.F.F. OR AS HIGH AS POSSIBLE.
- 6. PROVIDE REFRIGERANT SIGNAGE, AND EMERGENCY CONTROLS AS PER SPECIFICATIONS AND AS PER REQUIREMENTS OF INTERNATIONAL MECHANICAL AND FIRE CODES.
- 7. PROVIDE P/T TEST PORT WITHIN 6 INCHES OF EVERY PRESSURE GAGE AND THERMOWELL. SEE PIPING SCHEMATIC FOR LOCATIONS.
- 8. REFER TO HYDRONIC PIPING SCHEMATICS FOR DETAILS AND PIPE SIZES.
- 9. PROVIDE PIPE STANCHION SUPPORTS AT SPECIFIED INTERVALS, CLOSE TO ELBOWS AND VALVES. PROVIDE CONCRETE PADS AS REQUIRED. RE: STRUCTURAL.
- 10. FOR ALL PIPING SUPPORTS LOCATED OUTDOORS, PROVIDE THE FOLLOWING:

C.) TOP COAT OF DEVOE PAINTS, DEVTHANE 379.

A.) POLYAMIDE PRIME COAT OF DEVOE PAINTS, DEVRAN 201. B.) INTERMEDIATE TOP COAT OF DEVOE PAINTS, DEVRAN 224HS.

BASE BID **KEYED NOTES:**

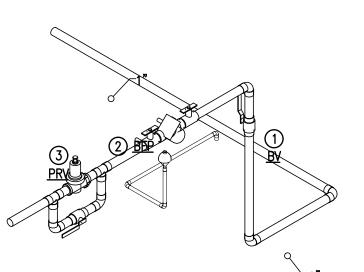
- 1 CLEARANCE FOR ELECTRICAL PANELS. DO NOT ROUTE PIPING OVER THIS AREA. REFER TO ELECTRICAL PLANS FOR EXACT LOCATION OF ELECTRICAL ROOMS (TYPICAL).
- 2 PROVIDE ALUMINUM METAL JACKETING FOR ALL CHW PIPING EXPOSED OUTDOORS. SEE SPECIFICATIONS. PROVIDE HYDRONIC PIPING WITH AUTOMATIC ISOLATION VALVES, THERMOWELLS, PRESSURE GAUGES, THERMOMETERS, FLOW SWITCHES, MANUAL VALVES, ETC. PROVIDE PIPING SPECIALTIES SUCH AS AIR SEPARATOR, EXPANSION TANK, MAKE UP WATER, CHEMICAL POT FEEDER, ETC. SEE PIPING SCHEMATIC
- PROVIDE AIR SEPARATOR, EXPANSION TANK AND CHEMICAL POT FEEDER. INSTALL ON 4" HOUSEKEEPING CONCRETE PADS PROVIDED BY STRUCTURAL. PADS SHALL BE 6" LARGER ON ALL SIDES FOR ALL EQUIPMENT EXCEPT CHILLERS. REFER TO STRUCTURAL DRAWINGS.
- 5 PROVIDE CHILLER AS SCHEDULED. INSTALL CHILLER ON 6" HOUSEKEEPING CONCRETE PAD PROVIDED BY STRUCTURAL. PAD SHALL BE 12" LARGER ON ALL SIDES FOR CHILLERS. REFER TO STRUCTURAL
- 6 PROVIDE HYDRONIC PUMP AS SCHEDULED.
- 7 PIPE SUPPORTS AND STANCHIONS SHALL BE HOT DIPPED GALVANIZED AND PAINTED. BASE PLATE SHALL BE INSTALLED ON A 4" CONCRETE PAD. (TYPICAL)
- 8 PROVIDE ISOLATION VALVES TO SERVE CENTRAL PLANT.
- 9 PROVIDE VFD PER SCHEDULE WITH NEMA-1 ENCLOSURE FOR MOUNTING INDOORS. (TYPICAL)
- 10 LOCATE DDC PANEL AT THIS APPROXIMATE LOCATION. REFER TO SPECIFICATIONS FOR DDC CONTROLS AND SEQUENCES OF OPERATION.
 - 11 PROVIDE MAKE UP WATER LINE 1" TO SERVE EXPANSION TANK. CONNECT TO BACKFLOW PREVENTER AND PRESSURE RELIEF VALVE. REFER TO "MAKE-UP DETAIL" ON DETAIL SHEET. COORDINATE WITH
- COORDINATE WITH WATER TREATMENT COMPANY TO ACHIEVE SPECIFIED WATER CONDITIONING. PROVIDE NEW FILTRATION SYSTEM AND DYE IN CHILLED WATER. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
- 13 PIPING UNDER CANOPY SHALL BE SUPPORTED FROM GROUND WITH PIPE SUPPORTS (NOT SHOWN FOR CLARITY). PROVIDE PIPE SUPPORTS AS PER SPECIFICATIONS. SUBMIT SHOP DRAWINGS WITH PIPE SUPPORT LOCATIONS FOR APPROVAL.
- 14 PROVIDE CONNECTIONS FOR EMERGENCY CHILLER TIE-IN.
- 15 PROVIDE FLOW METER AS PER SCHEMATICS AND SPECIFICATIONS. INSTALL AS PER MANUFACTURER RECOMMENDATIONS.
- 16 PROVIDE NEW 8FT. TALL CHAIN-LINK FENCE AS PER SPECIFICATIONS AND DRAWINGS. CONTRACTOR SHALL INSTALL BOTTOM LOCKING DOUBLE WALL SLATS, FLAT TUBULAR SHAPE WITH INSIDE REINFORCED LEGS. COORDINATE FINAL SLAT COLOR AND FINISH WITH OWNER.

ALTERNATE #1 MECHANICAL KEYED NOTES:

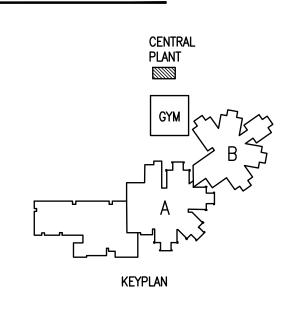
- PROVIDE CHILLER AS SCHEDULED. INSTALL CHILLER ON 6" HOUSEKEEPING CONCRETE PAD PROVIDED BY STRUCTURAL. PAD SHALL BE 12" LARGER ON ALL SIDES FOR CHILLERS. REFER TO STRUCTURAL DRAWINGS.
- 2 PROVIDE CONNECTIONS FOR FUTURE CHILLER TIE-IN.
- PROVIDE ALUMINUM METAL JACKETING FOR ALL CHW PIPING EXPOSED OUTDOORS. SEE SPECIFICATIONS.

PLUMBING KEYED NOTES:

- 1) PROVIDE BRONZE ISOLATION BALL VALVE.
- (2) PROVIDE A RPZ TYPE BACKFLOW PREVENTER (BFP) WILKINS MODEL #975XL2 OR APPROVED EQUAL. INSTALL MOUNTED ON SUPPÒRTS IN WATER LINE SËRVING MAKE UP WATER. PROVIDE A MINIMUM OF 3' CLEARANCE IN FRONT OF BFP FOR TESTING AND SERVICE. PROVIDE DRAIN RECEPTOR UNDER BFP AND RUN COPPER LINE TO NEARBY DRY WELL. SEE ASSOCIATED DETAIL ON DETAIL SHEET FOR CONCRETE PIPE SUPPORT AND BFP.
- 3 PROVIDE A PRESSURE REDUCING VALVE (PRV) WATTS SERIES LFU5B OR APPROVED EQUAL. REFER TO ASSOCIATED DETAIL ON DETAILS SHEET.
- 4 PROVIDE DRYWELL TO SERVE BACK-FLOW PREVENTER DRAIN LINE. SEE ASSOCIATE DETAIL ON DETAIL SHEET.



02 MAKE-UP WATER LINE DETAIL
SCALE : NOT TO SCALE



NO: REVISION: BY:

ADD 11-08-2023 ETHOS

RFP #231001

CESAR A. GONZALEZ

108611

	EQUIPMENT	AIRFLOW	DUCT	TEMPERATURE	MANUFACTURER	
MARK	SERVING		SIZE	RATING °F	& MODEL NUMBER	NOTES
RTU-8						
		SMOKE			GREENHECK	
MD-SEF-1A	SEF-1A	EVACUATION	30 X 14	250	VCD-20	ALL
					GREENHECK	
MD-MUA-1A	MUA-1A	MAKE-UP	24 X 12	180	VCD-20	ALL
					GREENHECK	
MD-RTU-SA	RTU-8	SUPPLY AIR	24 x 12	180	VCD-20	ALL
					GREENHECK	
MD-RTU-RA	RTU-8	RETURN AIR	38 x 12	1 80	VCD-20	ALL
RTU-9						
		SMOKE			GREENHECK	
MD-SEF-2A	SEF-2A	EVACUATION	20 X 12	250	VCD-20	ALL
					GREENHECK	
MD-MUA-2A	MUA-2A	MAKE-UP	30 X 12	180	VCD-20	ALL
					GREENHECK	
MD-RTU-SA	RTU-9	SUPPLY AIR	24 X 12	180	VCD-20	ALL
					GREENHECK	
MD-RTU-RA	RTU-9	RETURN AIR	38 X 12	180	VCD-20	ALL
RTU-10						
		SMOKE			GREENHECK	
MD-SEF-3A	SEF-3A	EVACUATION	18 X 16	250	VCD-20	ALL
					GREENHECK	
MD-MUA-3A	MUA-3A	MAKE-UP	30 X 12	180	VCD-20	ALL
					GREENHECK	
MD-RTU-SA	RTU-10	SUPPLY AIR	30 X 14	180	VCD-20	ALL
					GREENHECK	
MD-RTU-SA	RTU-10	RETURN AIR	30 X 14	180	VCD-20	ALL
RTU-11						
and the second		SMOKE			GREENHECK	
MD-SEF-4A	SEF-4A	EVACUATION	24 X 24	250	VCD-20	ALL

40 X 12

SUPPLY AIR 20 X 14

RETURN AIR 20 X 14

EVACUATION 18 X 18

MAKE-UP 20 X 14

MUA-4A

MUA-5A

MD-MUA-5A

GREENHECK

GREENHECK

VCD-20 **GREENHECK**

VCD-20

VCD-20 GREENHECK

VCD-20

MD-RTU-SA	RTU-12	SUPPLY AIR	20 X 14	180	VCD-20	ALL
MD-RTU-RA	RTU-12	RETURN AIR	34 X 14	180	GREENHECK VCD-20	ALL
RTU-13		OMORE		T	ODEENHEON	
MD-SEF-6A	SEF-6A	SMOKE EVACUATION	18 X 18	250	GREENHECK VCD-20	ALL
WID OLL OIL	OLI OIL	LVNOONION	10 % 10	200	GREENHECK	, ILL
MD-MUA-6A	MUA-6A	MAKE-UP	20 X 14	180	VCD-20	ALL
					GREENHECK	
MD-RTU-SA	RTU-13	SUPPLY AIR	30 X 14	180	VCD-20	ALL
AD DILL DA	DTII 40	DETUDNI ND	04.844	400	GREENHECK	ALL
MD-RTU-RA RTU-14	RTU-13	RETURN AIR	34 X 14	180	VCD-20	ALL
1110-14		SMOKE			GREENHECK	
MD-SEF-7A	SEF-7A	EVACUATION	18 X 18	250	VCD-20	ALL
					GREENHECK	
MD-MUA-7A	MUA-7A	MAKE-UP	20 X 14	180	VCD-20	ALL
MD DTIL CA	DTII 44	CLIDDLY AID	20 V 14	100	GREENHECK	ALI
MD-RTU-SA	RTU-14	SUPPLY AIR	20 X 14	180	VCD-20 GREENHECK	ALL
MD-RTU-RA	RTU-14	RETURN AIR	34 X 14	180	VCD-20	ALL
RTU-15			2.77.71		1,02,20	
		SMOKE			GREENHECK	
MD-SEF-8A	SEF-8A	EVACUATION	18 X 18	250	VCD-20	ALL
			201010		GREENHECK	122.0
MD-MUA-8A	MUA-8A	MAKE-UP	20 X 14	180	VCD-20	ALL
MD-RTU-SA	RTU-15	SUPPLY AIR	20 X 14	180	GREENHECK VCD-20	ALL
IVID-IXTO-SA	10-13	SOFFETAIN	20 X 14	100	GREENHECK	ALL
MD-RTU-RA	RTU-15	RETURN AIR	34 X 14	180	VCD-20	ALL
RTU-6	The street relation to the	10.5	104 (1.000.010)	1 10 300 (100)		1500.000.000.000
		SMOKE	101 BEEC - 1790		GREENHECK	
MD-SEF-6B	SEF-6B	EVACUATION	24 X 24	250	VCD-20	ALL
MD MUA 4D	MILA 4D	MAKE UD	10 V 10	100	GREENHECK	ALI
MD-MUA-1B	MUA-1B	MAKE-UP	18 X 12	180	VCD-20 GREENHECK	ALL
MD-RTU-SA	RTU-6	SUPPLY AIR	18 X 12	180	VCD-20	ALL
and the second second		COMMUNICATION RECOGNISTS	and the second	0.00000000	GREENHECK	7000 (00000000)
MD-RTU-RA	RTU-6	RETURN AIR	26 X 10	180	VCD-20	ALL
RTU-2				1		
MD OFF OD	055.05	SMOKE	10 1/ 10	050	GREENHECK	
MD-SEF-2B	SEF-2B	EVACUATION	18 X 18	250	VCD-20 GREENHECK	ALL
MD-MUA-5B	MUA-5B	MAKE-UP	18 X 12	180	VCD-20	ALL
WE WENT OF	MOTTOD	WWW	10 / 12	100	GREENHECK	7122
MD-RTU-SA	RTU-2	SUPPLY AIR	20 X 10	180	VCD-20	ALL
					GREENHECK	
MD-RTU-RA	RTU-2	RETURN AIR	26 X 10	180	VCD-20	ALL
RTU-1		CMOKE		1	ODEENIJEOV	
MD-SEF-1B	SEF-1B	SMOKE EVACUATION	18 X 18	250	GREENHECK VCD-20	ALL
361 10	JEI AID	ZVACOATION	10 /1 10	200	GREENHECK	/ NLL
MD-MUA-4B	MUA-4B	MAKE-UP	18 X 12	180	VCD-20	ALL
					GREENHECK	
MD-RTU-SA	RTU-1	SUPPLY AIR	20 X 10	180	VCD-20	ALL
MD DTU DA	DTU	DETUDU ND	00.1/ /0	400	GREENHECK	***
MD-RTU-RA RTU-3	RTU-1	RETURN AIR	26 X 10	180	VCD-20	ALL
1(10-3		SMOKE			GREENHECK	
MD-SEF-5B	SEF-5B	EVACUATION	18 X 18	250	VCD-20	ALL
					GREENHECK	
MD-MUA-6B	MUA-6B	MAKE-UP	18 X 12	180	VCD-20	ALL
	HICKORIAN PO		MARINE STATE	10.00000	GREENHECK	100000 200
MD-RTU-SA	RTU-3	SUPPLY AIR	20 X 10	180	VCD-20	ALL
MD-RTU-RA	RTU-3	RETURN AIR	26 X 10	180	GREENHECK VCD-20	ALL
RTU-4	K10-3	KLIUKN AIK	20 X 10	100	VOD-20	ALL
		SMOKE			GREENHECK	
MD-SEF-4B	SEF-4B	EVACUATION	18 X 18	250	VCD-20	ALL
					GREENHECK	
MD-MUA-7B	MUA-7B	MAKE-UP	18 X 12	180	VCD-20	ALL
MD DTU 3:	DTU	OLIDBI V. C.	00.14.15	100	GREENHECK	***
MD-RTU-SA	RTU-4	SUPPLY AIR	20 X 10	180	VCD-20	ALL
MD-RTU-RA	RTU-4	RETURN AIR	26 X 10	180	GREENHECK VCD-20	ALL
RTU-5		1				7 N.C.L.
		SMOKE			GREENHECK	

EVACUATION 18 X 18

SUPPLY AIR 20 X 10

RETURN AIR 26 X 10

EVACUATION 18 X 18

MAKE-UP 18 X 12

RETURN AIR | 26 X 10

EVACUATION 18 X 18

MAKE-UP 18 X 12

SUPPLY AIR 20 X 10

RETURN AIR 26 X 10

SUPPLY AIR | 20 X 10 | 180

MAKE-UP

VCD-20 **GREENHECK**

VCD-20 GREENHECK

VCD-20 GREENHECK

VCD-20

GREENHECK VCD-20

GREENHECK

VCD-20 GREENHECK

GREENHECK

VCD-20

VCD-20

GREENHECK

VCD-20

GREENHECK

VCD-20

GREENHECK

VCD-20

NOTES:	
1.	

MD-MUA-8E

MD-SEF-7B

MD-MUA-3B

MD-SEF-8E

MD-MUA-2E

MUA-8B

RTU-5

RTU-5

SEF-3B

MUA-3B

SEF-3B

MUA-3B

RTU-8

RTU-8

DAMPER SHALL BE GALVANIZED, TWO POSITION, SPRING RETURN. IN STRICT COORDINATION WITH CONTROLS CONTRACTOR, FIRE ALARM CONTRACTOR AND ELECTRICAL CONTRACTOR, PROVIDE ACTUATOR AND ASSOCIATED 120V/24V TRANSFORMER FOR EACH DAMPER. ACTUATOR SHALL BE CAPABLE OF RECEIVING FIRE ALARM SIGNAL TO POSITION THE DAMPER AS PER THE SMOKE EVACUATION SYSTEM SEQUENCES OF OPERATION. IN ADDITION, ACTUATOR SHALL BE CAPABLE OF INTERFACING WITH HVAC CONTROLS SYSTEM. PROVIDE ALL THE NECESSARY POWER, CONDUITS, WIRING, RELAYS, CONTACTORS, ETC. TO ACHIEVE THE SMOKE EVACUATION SEQUENCE. PRIOR TO ORDERING THE ACTUATORS AND DAMPERS, COORDINATE TYPE, SIZE, CHARACTERISTICS, POWER AND SIGNAL REQUIREMENTS, ETC. WITH HVAC CONTROLS, FIRE ALARM AND ELECTRICAL CONTRACTORS.

PUMP SCHEDULE

Olvii	OOTILDOLL										
				MANUFACTURER		HEAD	MIN.	MIN.			
MARK	LOCATION	QTY	TYPE	& MODEL NUMBER	GPM	(FT)	HP	EFF.	RPM	ELECTRICAL	NOTES
SCHWP-1, 2	CHILLER YARD	2	HORZ	BELL&GOSSET	155	80	7.5	72.5%	1,800	460V / 3PH / 60HZ	ALL
			END SUCTION	E-1510 2BD							

- PROVIDE NON-OVERLOADING, PREMIUM EFFICIENCY, TEFC MOTORS, RATED FOR VFD DUTY. PROVIDE COUPLINGS RATED FOR VFD DUTY. FALK T31 SPACER TYPE.
- FACTORY REPRESENTATIVE SHALL FIELD-VERIFY PUMP ALIGNMENT WITH LASER ALIGNMENT TOOLS.
- PROVIDE SUCTION DIFFUSERS AND SHAFT GROUNDING ON MOTORS.
- PROVIDE ONE SET OF SPARE SEALS FOR EACH PUMP. COORDINATE DELIVERY WITH OWNER

EXPANSION TANK SCHEDULE

	NICOLOIT IA	INIT OOTILD	OLL				
			ACCEPTANCE VOLUME	(DIAMETER)		MANUFACTURER &	
MARK	SERVICE	TYPE	GALLONS	X (HEIGHT)	LOCATION	MODEL NUMBER OR EQUAL	NOTES
		VERTICAL FLOOR			CENTRAL	BELL AND GOSSETT	
ET-1	CHILLED WATER	MOUNT BLADDER	53	24"x37"	PLANT	B-200	ALL

PROVIDE LINE SIZE AIR SEPARATOR, BELL AND GOSSETT ROLAIRTROL RL-6F FOR 6" CONNECTION.

2. PROVIDE FILTER FEEDER NEPTUNE MODEL FTF OR APPROVED EQUAL.

AIR COOLED CHILLER SCHEDULE

		NOMINAL	CAPACITY	AMBIENT	FLOW	MAX PD	EWT	LWT	# OF COMPRESSORS	MIN %	ELEC.			IPLV	FULL LOAD EER	SOUND POWER	DIMENSIONS	OPERATING	MANUFACTURER
MARK		(TONS)	(TONS)	TEMP (F)	(GPM)	(FT WG)	(F)	(F)	TYPE	CAPACITY	V-PH-HZ	MCA	MOCP	AT ARI	AT ARI	OVERALL dBA	(LxWxH) IN.	WEIGHT (LB)	& MODEL NUMBER
CH-1	BASE BID	80	77.71	100	154.9	11.2	56	44	4, SCROLLS	25	460/3/60	184.0	225.0	16.45	10.86	92	143 X 89 X 92	6,790	CGAM080
CH-2	ALTERNATE-1	80	77.71	100	154.9	11.2	56	44	4, SCROLLS	25	460/3/60	184.0	225.0	16.45	10.86	92	143 X 89 X 92	6,790	CGAM080

CONTRACTOR IS RESPONSIBLE FOR CHANGES TO DESIGN RESULTING FROM SELECTION OF OTHER MANUFACTURERS EQUIPMENT.

LISTED CAPACITY BASED ON ACTUAL CONDITIONS LISTED ABOVE. EFFICIENCIES LISTED AT ARI CONDITIONS.

PROVIDE CHILLER WITH FACTORY INSTALLED HAIL GUARDS, LOW SOUND ACOUSTICAL PACKAGE, CONDENSER COIL COATING (E-COAT)

PROVIDE UNIT WITH LOW AMBIENT CONTROL TO 40°F, ACROSS THE LINE STARTER, AND SUCTION SERVICE VALVES. CONDENSER COILS SHALL HAVE COPPER TUBES AND ALUMINUM FINS (PREFERRED), OR MICRO-CHANNEL COILS.

PROVIDE CHILLER WITH SINGLE POINT POWER CONNECTION, INCLUDING POWER FOR CONTROLS. PROVIDE TERMINAL BLOCK FOR POWER CONNECTION. DIV. 26 TO PROVIDE EXTERNALLY MEANS OF DISCONNECT.

PROVIDE FACTORY INSTALLED COMBINATION VALVE (CHECK, ISOLATION AND MODULATION)

PROVIDE DEMAND LIMITING VIA 4-20MA INPUT FEATURE TO LIMIT MACHINE CAPACITY. PROVIDE INTEGRAL PRIMARY DUAL PUMP PACKAGE WITH 40' TDH.

HYDRONIC - DOAS ROOF TOP UNIT SCHEDULE

							MIN	SINGLE POINT	EAT				CHILLED	WATER COO	LING COIL			ELEC	HEATING (E	AT 40F)			
	UNIT	MOUNTING	TOTAL	SERVES	ESP	ELECT.	MOTOR	MCA/MOCP	DEHUM. EAT	TOTAL	SENS.	LAT	EWT/LWT	CHW	WPD	MAX	MAX			DAT	WEIGHT	NOTES	MODEL NUMBER
MARK	TYPE		CFM		IN WG	V/P/H	# / HP	AMPS	DB/WB (F)	BTU/H	BTU/H	DB/WB (F)	(F)	GPM	(FT)	ROWS	FPI	KW	STG	DBT	(LBS.)		
DOAS-1	HYDRONIC	NEW ROOFCURB	3400	AS DOAS	1.20	460/3/60	1 / 8.05	58 / 60	83.0/80.1	358,990	126,030	50.0/49.9	44/56	59.6	12.8	8.0	12.0	30.0	SCR	68.0	1,730	ALL	TRANE PO
DOAS-2	HYDRONIC	NEW ROOFCURB	5000	AS DOAS	1.20	460/3/60	2 / 8.05	94.5 / 100	83.0/80.1	528,450	185,340	50.0/49.9	44/56	87.8	10.0	8.0	12.0	47.0	SCR	69.7	2,350	ALL	TRANE PC

- MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL". SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS AND SUBSTITUTION PROCEDURES.
- 2. ESP IS STRICTLY EXTERNAL STATIC PRESSURE, AND DOES NOT INCLUDE FILTER, COIL, CABINET LOSSES.
- 3. PROVIDE SINGLE PIECE UNIT, 2" R-13 DOUBLE WALL CONSTRUCTION ACROSS ENTIRE EXTERIOR OF UNIT, INCLUDING DRAIN PAN, WITH THERMAL BREAK 4. PROVIDE MERV8 FLAT FILTER SECTION, COIL SECTION, ACCESS SECTIONS, AND FAN SECTION WITH DOORS ACCESS SIDE FOR EACH, ELECTRIC HEATER.
- 5. PROVIDE GALVANIZED FILTER PAD FRAMES/RACKS NO LONGER THAN 24". SEE SPECIFICATIONS.
- 6. PROVIDE OUTSIDE AIR HOOD, OUTSIDE AIR DAMPERS. OUTSIDE AIR DAMPERS SHALL BE RUSKIN CD-50 ALLUMINUM DAMPERS OR EQUIVALENT. DAMPER ACTUATORS BY CONTROLS CONTRACTOR.
- PROVIDE STAINLESS STEEL DRAIN PAN AND COIL CASING, AND INSIDE LINER. EXTEND DRAIN PAN 6" PAST COIL SECTION. PROVIDE EPOXY COATED COILS. SEE SPECS FOR DETAILS.
- 8. ALL MOTORS SHALL BE NON-OVERLOADING, TEFC, VFD DUTY RATED, PREMIUM EFFICIENCY MOTORS. 9. PROVIDE DIRECT DRIVE PLENUM FANS WITH FACTORY INSTALLED VFD PER FAN AND GROUND SHAFT RING. PROVIDE BLANK OFF PLATES.
- 10. PROVIDE UNIT MOUNTED SUPPLY AIR SMOKE DETECTORS IN UNITS LARGER THAN 2000 CFM.
- 11. PROVIDE SINGLE POINT POWER FEED FOR CONNECTION TO FAN MOTORS, HEATER, CONTROLS TRANSFORMERS, WITH FUSED PROTECTION FOR DEDICATED CIRCUITS.
- 12. COORDINATE CONTROL POINT CONNECTIONS FOR FAN SPEED, AND SCR HEATER CONTROL WITH BAS. ENSURE THAT ALL DRIVERS, CONTROLLERS, AND ENGINES ARE SUPPLIED WITH THE UNIT.
- 13. ELECTRICAL DISCONNECT BY DIV. 26. COORDINATE WITH ELECTRICAL CONTRACTOR.
- 14. PROVIDE IBC 2012 COMPLIANT CURB AND ATTACHMENTS FROM UNIT TO CURB AND CURB TO STRUCTURE. EQUIPMENT OR CURB MANUFACTURER IS RESPONSIBLE FOR PROVIDING ENGINEERED DETAIL ANALYSIS OF:

3) CURB AND ATTACHMENT HARDWARE STRENGTH.

1) ATTACHMENT OF EQUIPMENT TO CURB.

2) CURB TO STRUCTURE.

REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ROOF SUBSTRATE DETAILS.

EQUIPMENT OR CURB MANUFACTURER IS ALSO RESPONSIBLE FOR PROVIDING ENGINEERED INSTALLATION DRAWINGS FOR ITEMS 1 AND 2 LISTED ABOVE.

BOTH, THE ENGINEERED ANALYSIS AND THE ENGINEERED INSTALLATION DRAWINGS SHALL BE PERFORMED SPECIFICALLY FOR THIS BUILDING AND PROJECT SITE AND STAMPED AND SEALED BY A TEXAS LICENSED ENGINEER.

EXHAUST FAN SCHEDULE

MARK	SERVING	TYPE	STATUS	ELECTR. V/P/H	DRIVE	CFM	INPUT WATTS	MOTOR HP	RPM	E.S.P. IN. H20	SOUND IN SONES	WEIGHT (LBS)	MANUFACTURER	MODEL NUMBER	CONTROL NOTES	NOTES
EF-1A	RESTROOM	ROOF MOUNTED	EXISTING TO REMAIN	120/1/60	BELT	400	-	.25	1235	0.5	-		GREENHECK	GB-80-4	Α	ALL
EF-2A	RESTROOM	ROOF MOUNTED	EXISTING TO REMAIN	120/1/60	DIRECT	700		.25	1235	0.5	8.4	50	GREENHECK	GB-90-4B	Α	ALL
EF-3A	RESTROOM	ROOF MOUNTED	EXISTING TO REMAIN	120/1/60	DIRECT	120	-	.25	1170	0.5	4.9	50	GREENHECK	GB-70-4-R4	Α	ALL
EF-4A	JANITORS CLOSET	ROOF MOUNTED	EXISTING TO REMAIN	120/1/60	DIRECT	260	-	.25	1360	0.375	-		GREENHECK	GB-70-4-R5	Α	ALL
EF-5A	RESTROOM	ROOF MOUNTED	EXISTING TO REMAIN	120/1/60	DIRECT	500	-	.25		0.5	6.4	50	GREENHECK	GB-90-4-R4	Α	ALL
EF-6A	DETENTION CELLS	ROOF MOUNTED	TO BE REPLACED	120/1/60	DIRECT	685	-	1/6	1019	0.4	6.6	7 0	GREENHECK	G-120-B	Α	ALL
EF-7A	RESTROOM	CEILING	EXISTING TO REMAIN	120/1/60	DIRECT	60	-	.0625		0.375			GREENHECK	SP-6	Α	1-4
EF-8A	DETENTION CELLS	ROOF MOUNTED	TO BE REPLACED	120/1/60	DIRECT	690		1/6	1021	0.4	6.6	70	GREENHECK	G-120-B	Α	ALL
EF-9A	DETENTION CELLS	ROOF MOUNTED	TO BE REPLACED	120/1/60	DIRECT	690	-	1/6	1021	0.4	6.6	70	GREENHECK	G-120-B	Α	ALL
EF-10A	DETENTION CELLS	ROOF MOUNTED	TO BE REPLACED	120/1/60	DIRECT	770	-	1/6	1063	0.4	7.0	70	GREENHECK	G-120-B	Α	ALL
EF-11A	DETENTION CELLS	ROOF MOUNTED	TO BE REPLACED	120/1/60	DIRECT	690	-	1/6	1021	0.4	6.6	70	GREENHECK	G-120-B	Α	ALL
EF-1B	DETENTION CELLS	ROOF MOUNTED	TO BE REPLACED	120/1/60	DIRECT	690	-	1/6	1021	0.4	6.6	70	GREENHECK	G-120-B	Α	ALL
EF-2B	DETENTION CELLS	ROOF MOUNTED	TO BE REPLACED	120/1/60	DIRECT	690	-	1/6	1021	0.4	6.6	70	GREENHECK	G-120-B	Α	ALL
EF-3B	DETENTION CELLS	ROOF MOUNTED	TO BE REPLACED	120/1/60	DIRECT	690	1	1/6	1021	0.4	6.6	70	GREENHECK	G-120-B	Α	ALL
EF-4B	DETENTION CELLS	ROOF MOUNTED	TO BE REPLACED	120/1/60	DIRECT	690	-	1/6	1021	0.4	6.6	70	GREENHECK	G-120-B	Α	ALL
EF-5B	DETENTION CELLS	ROOF MOUNTED	TO BE REPLACED	120/1/60	DIRECT	690	-	1/6	1021	0.4	6.6	70	GREENHECK	G-120-B	Α	ALL
EF-6B	DETENTION CELLS	ROOF MOUNTED	TO BE REPLACED	120/1/60	DIRECT	240	-	1/6	1036	0.4	4.7	70	GREENHECK	G-098-B	Α	ALL
EF-7B	RESTROOM	ROOF MOUNTED	TO BE REPLACED	120/1/60	DIRECT	150	-	1/6	1027	0.25	4.1	70	GREENHECK	G-097-B	Α	ALL
EF-1C	RESTROOM	ROOF MOUNTED	EXISTING TO REMAIN	120/1/60	BELT	250	-	1/6	-	0.125	6.7	70	GREENHECK	70ACE-B	Α	ALL
EF-2C	RESTROOM	ROOF MOUNTED	EXISTING TO REMAIN	120/1/60	BELT	250	-	1/6	-	0.125	6.7	70	GREENHECK	70ACE-B	Α	ALL

- PROVIDE FACTORY MOUNTED DISCONNECT
- MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL." REFER TO SPECIFICATIONS. PROVIDE FIELD-INSTALLED FAN SPEED CONTROLLER. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR.
- PROVIDE FAN WITH ALL ALUMINUM BACKDRAFT DAMPER.
- PROVIDE PREMIUM EFFICIENCY MOTOR WITH FACTORY WIRED DISCONNECT SWITCH, NEMA 1. PROVIDE SOUND ATTENUATING ALUMINUM ROOF CURB AND LORENIZED COATING.
- PROVIDE STAINLESS STEEL INSECT SCREEN, EXTENDED LUBE LINES AND BACKDRAFT DAMPER.
- PROVIDE IBC 2012 COMPLIANT CURB AND ATTACHMENTS FROM UNIT TO CURB AND CURB TO STRUCTURE. EQUIPMENT OR CURB MANUFACTURER IS RESPONSIBLE FOR PROVIDING ENGINEERED DETAIL ANALYSIS OF:
- 1) ATTACHMENT OF EQUIPMENT TO CURB. 2) CURB TO STRUCTURE.
- 3) CURB AND ATTACHMENT HARDWARE STRENGTH.
- REFER TO ARCHITECTURAL AND STRUCTURAL DRAWNGS FOR ROOF SUBSTRATE DETAILS.
- EQUIPMENT OR CURB MANUFACTURER IS ALSO RESPONSIBLE FOR PROVIDING ENGINEERED INSTALLATION DRAWINGS FOR ITEMS 1 AND 2 LISTED ABOVE. BOTH, THE ENGINEERED ANALYSIS AND THE ENGINEERED INSTALLATION DRAWINGS SHALL BE PERFORMED SPECIFICALLY FOR THIS BUILDING AND PROJECT
- SITE AND STAMPED AND SEALED BY A TEXAS LICENSED ENGINEER. SUBMITTALS WILL NOT BE APPROVED UNTIL ALL DOCUMENTATION LISTED ABOVE IS PROVIDED ACCURATELY.

CONTROL NOTES:

A. PROVIDE DDC START/STOP POINTS. REFER TO SEQUENCES OF OPERATIONS. B. FAN SHALL BE INTERLOCKED SWITCH LIGHT SWITCH. COORDINATE WITH ELECTRICAL.

SMOKE EVACUATION FAN SCHEDULE

MARK	SERVING	TYPE	STATUS	ELECTR.	DRIVE	CFM	INPUT	MOTOR	RPM	E.S.P.	SOUND	WEIGHT	MANUFACTURER	MODEL NUMBER	CONTROL	NOTES
IVIAINN	SLIVING	TIFE	SIAIUS	V/P/H	DIXIVL	OT W	WATTS	HP	IXFIVI	IN. H20	IN SONES	(LBS)	WANTO ACTORER	WODEL NOWBER	NOTES	NOTES
SEF-1A	RTU-8A	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	2020	-	1.5	1660	1.25	13.0	83.0	GREENHECK	CUBE-140	Α	ALL
SEF-2A	RTU-9A	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	2662	-	1.5	1354	1.25	17.0	116	GREENHECK	CUBE-180HP	Α	ALL
SEF-3A	RTU-10A	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	2197	-	1.5	1718	1.25	14.9	83	GREENHECK	CUBE-140	Α	ALL
SEF-4A	RTU-11A	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	5853	-	5.0	1212	1.25	24.0	171.0	GREENHECK	CUBE-220HP	Α	ALL
SEF-5A	RTU-12A	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	2377	-	1.5	1353	1.25	17.0	84	GREENHECK	CUBE-160	Α	ALL
SEF-6A	RTU-13A	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	2045	-	1.5	1668	1.25	13.4	83	GREENHECK	CUBE-140	Α	ALL
SEF-7A	RTU-14A	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	2108	-	1.5	1689	1.25	13.9	83	GREENHECK	CUBE-140	Α	ALL
SEF-8A	RTU-15A	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	2050	-	1.5	1669	1.25	13.4	83	GREENHECK	CUBE-140	Α	ALL
SEF-1B	RTU-1B	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	2283	-	1.5	1334	1.25	16.6	84.0	GREENHECK	CUBE-160	Α	ALL
SEF-2B	RTU-2B	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	1937	-	1.0	1633	1.25	12.3	83	GREENHECK	CUBE-140	Α	ALL
SEF-3B	RTU-5B	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	1930	-	1.0	1631	1.25	12.3	83	GREENHECK	CUBE-140	Α	ALL
SEF-4B	RTU-4B	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	1933	-	1.0	1632	1.25	12.3	83.0	GREENHECK	CUBE-140	Α	ALL
SEF-5B	RTU-3B	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	1947	-	1.0	1636	1.25	12.5	83	GREENHECK	CUBE-140	Α	ALL
SEF-6B	DAY ROOM	ROOF MOUNTED	NEW	208/3/60	BELT	5853	-	5.0	1212	1.25	24.0	171.0	GREENHECK	CUBE-220HP	Α	ALL
SEF-7B	RTU-7B	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	1850	-						GREENHECK		Α	ALL
SEF-8B	RTU-8B	ROOF MOUNTED	TO BE REPLACED	208/3/60	BELT	2315	-						GREENHECK		Α	ALL

PROVIDE FACTORY MOUNTED DISCONNECT.

- MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL." REFER TO SPECIFICATIONS.
- PROVIDE FAN WITH FIELD INSTALLED ALL ALUMINUM BACKDRAFT DAMPER. PROVIDE PREMIUM EFFICIENCY MOTOR WITH FACTORY WIRED DISCONNECT SWITCH, NEMA 1.
- PROVIDE HIGH WIND RATED ASSEMBLY INCLUDING FAN AND CURB. PROVIDE STAINLESS STEEL INSECT SCREEN, EXTENDED LUBE LINES AND BACKDRAFT DAMPER.
- PROVIDE IBC 2012 COMPLIANT CURB AND ATTACHMENTS FROM UNIT TO CURB AND CURB TO STRUCTURE. EQUIPMENT OR CURB MANUFACTURER IS RESPONSIBLE FOR PROVIDING ENGINEERED DETAIL ANALYSIS OF:
- 1) ATTACHMENT OF EQUIPMENT TO CURB.
- 2) CURB TO STRUCTURE. 3) CURB AND ATTACHMENT HARDWARE STRENGTH.
- REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ROOF SUBSTRATE DETAILS.
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DDC WILL SIMPLY MONITOR STATUS OF THE FANS AND DAMPERS, AND REPORT IT ON THE GRAPHICS SCREENS. REFER TO CONTROLS SEQUENCES.

SITE AND STAMPED AND SEALED BY A TEXAS LICENSED ENGINEER. SUBMITTACS WILL WOTN BE APPROVED OTH THE ALL DOOL WIEN PATHON LISTED ABOVE TO DROWNED ABOVE

SMOKE EVACUATION FANS WILL BE CONTROLLED (OFF-ENABLED, OPENED-CLOSED) BY THE FIRE ALARM SMOKE EVACUATION SYSTEM.

MAKE-UP AIR FAN SCHEDULF

MADIC	OEDVINO	TVDE	CTATUC	ELECTR.	DDIVE	OFM	INPUT	MOTOR	RPM	E.S.P.	SOUND	WEIGHT	MANUEACTURER	MODEL NUMBER	CONTROL	NOTEC
MARK	SERVING	TYPE	STATUS	V/P/H	DRIVE	CFM	WATTS	HP	RPM	IN. H20	IN SONES	(LBS)	MANUFACTURER	MODEL NUMBER	NOTES	NOTES
MUA-1A	RTU-8A	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	2020	-	2	1310	1.25	13.7	165	GREENHECK	SQ-160-VG	Α	ALL
MUA-2A	RTU-9A	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	2662		2	1427	1.25	16.4	165	GREENHECK	SQ-160-VG	Α	ALL
MUA-3A	RTU-10A	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	2197	-	2	1336	1.25	15.0	165	GREENHECK	SQ-160-VG	Α	ALL
MUA-4A	RTU-11A	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	5853	-	5	1630	1.25	19.5	191	GREENHECK	SQ-18-M2-VG	Α	ALL
MUA-5A	RTU-12A	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	2377	-	2	1366	1.25	15.1	165	GREENHECK	SQ-160-VG	A	ALL
MUA-6A	RTU-13A	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	2045	-	2	1314	1.25	13.8	165	GREENHECK	SQ-160-VG	А	ALL
MUA-7A	RTU-14A	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	2108		2	1323	1.25	14.0	165	GREENHECK	SQ-160-VG	A	ALL
MUA-8A	RTU-15A	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	2050	-	2	1314	1.25	13.8	165	GREENHECK	SQ-160-VG	A	ALL
MUA-1B	RTU-6B	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	2424	-	2	1376	1.25	15.3	165	GREENHECK	SQ-160-VG	A	ALL
MUA-2B	RTU-8B	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	2424	-	2	1376	1.25	15.3	165	GREENHECK	SQ-160-VG	A	ALL
MUA-3B	RTU-7B	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	2424	-	2	1376	1.25	15.3	165	GREENHECK	SQ-160-VG	A	ALL
MUA-4B	RTU-1B	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	2283	-	2	1348	1.25	14.6	165	GREENHECK	SQ-160-VG	A	ALL
MUA-5B	RTU-2B	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	1937	-	2	1298	1.25	14.0	165	GREENHECK	SQ-160-VG	A	ALL
MUA-6B	RTU-3B	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	1947	-	2	1300	1.25	13.4	165	GREENHECK	SQ-160-VG	A	ALL
MUA-7B	RTU-4B	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	1933	-	2	1298	1.25	13.4	165	GREENHECK	SQ-160-VG	Α	ALL
MUA-8B	RTU-5B	IN-LINE MOUNTED	TO BE REPLACED	208/3/60	DIRECT	1930	-	2	1297	1.25	13.4	165	GREENHECK	SQ-160-VG	Α	ALL

- PROVIDE FACTORY MOUNTED DISCONNECT MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL." REFER TO SPECIFICATIONS.
- PROVIDE FIELD-INSTALLED FAN SPEED CONTROLLER. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR. PROVIDE FAN WITH ALL ALUMINUM GRAVITY BACKDRAFT DAMPER. SHIPPED LOOSE. GREENHECK MODEL EM-10

MAKE-UP AIR FANS WILL BE CONTROLLED (OFF-ENABLED, OPENED-CLOSED) BY THE FIRE ALARM SMOKE EVACUATION SYSTEM. DDC WILL SIMPLY MONITOR STATUS OF THE FANS AND DAMPERS, AND REPORT IT ON THE GRAPHICS SCREENS. REFER TO CONTROLS SEQUENCES.



DATE: SEPTEMBER 25, 202

RFP #231001

CESAR A. GONZALEZ

ADDENDUM #4

11-08-2023 ETHOS

NO: REVISION: BY:

ADD 11-08-2023 ETHOS

RFP #231001

CESAR A. GONZALEZ

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