

FBISD CENTRAL KITCHEN, HS KITCHEN AND JR. HIGH GYM HVAC EQUIPMENT REPLACEMENTS - 2024/2025

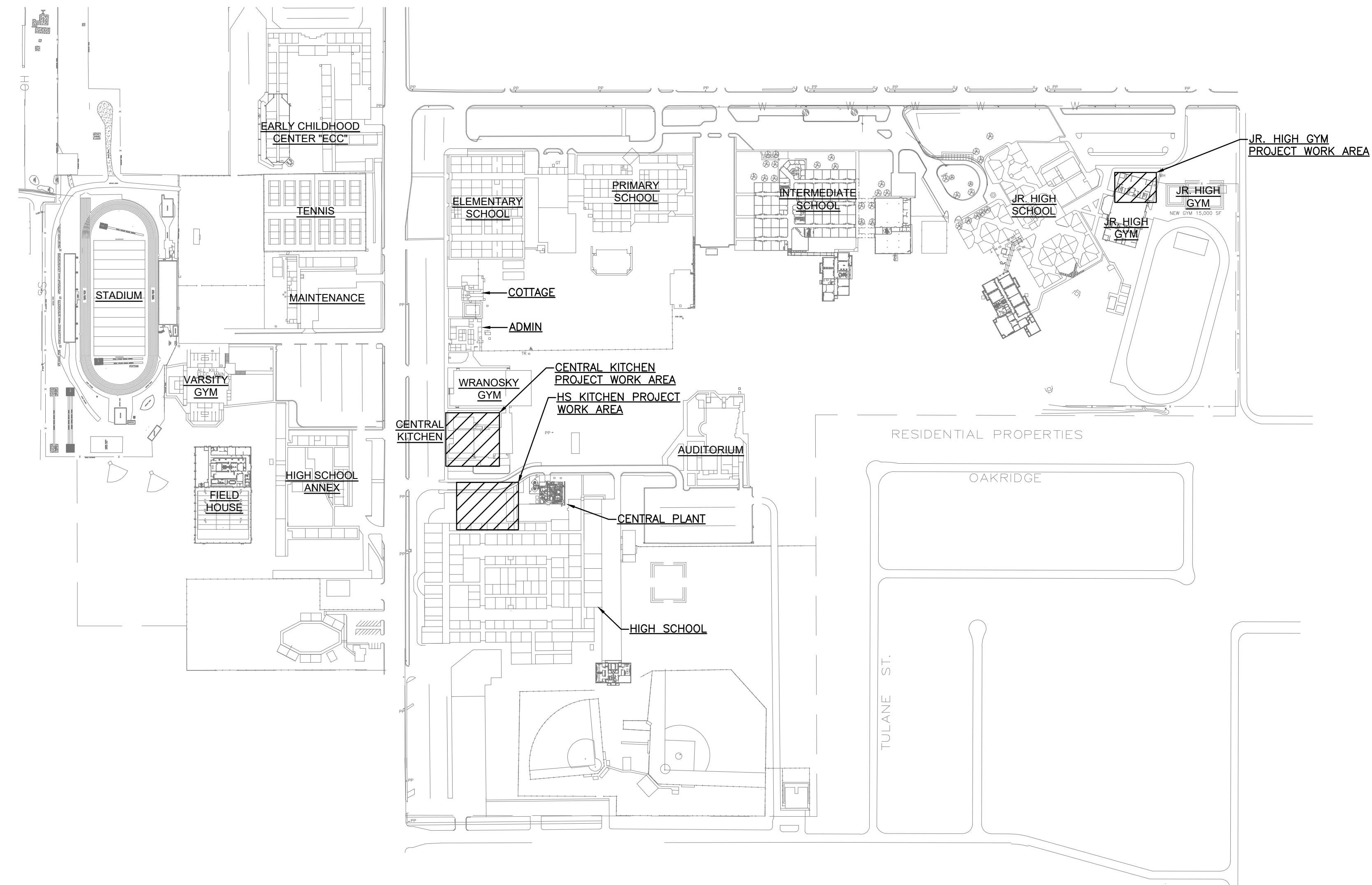
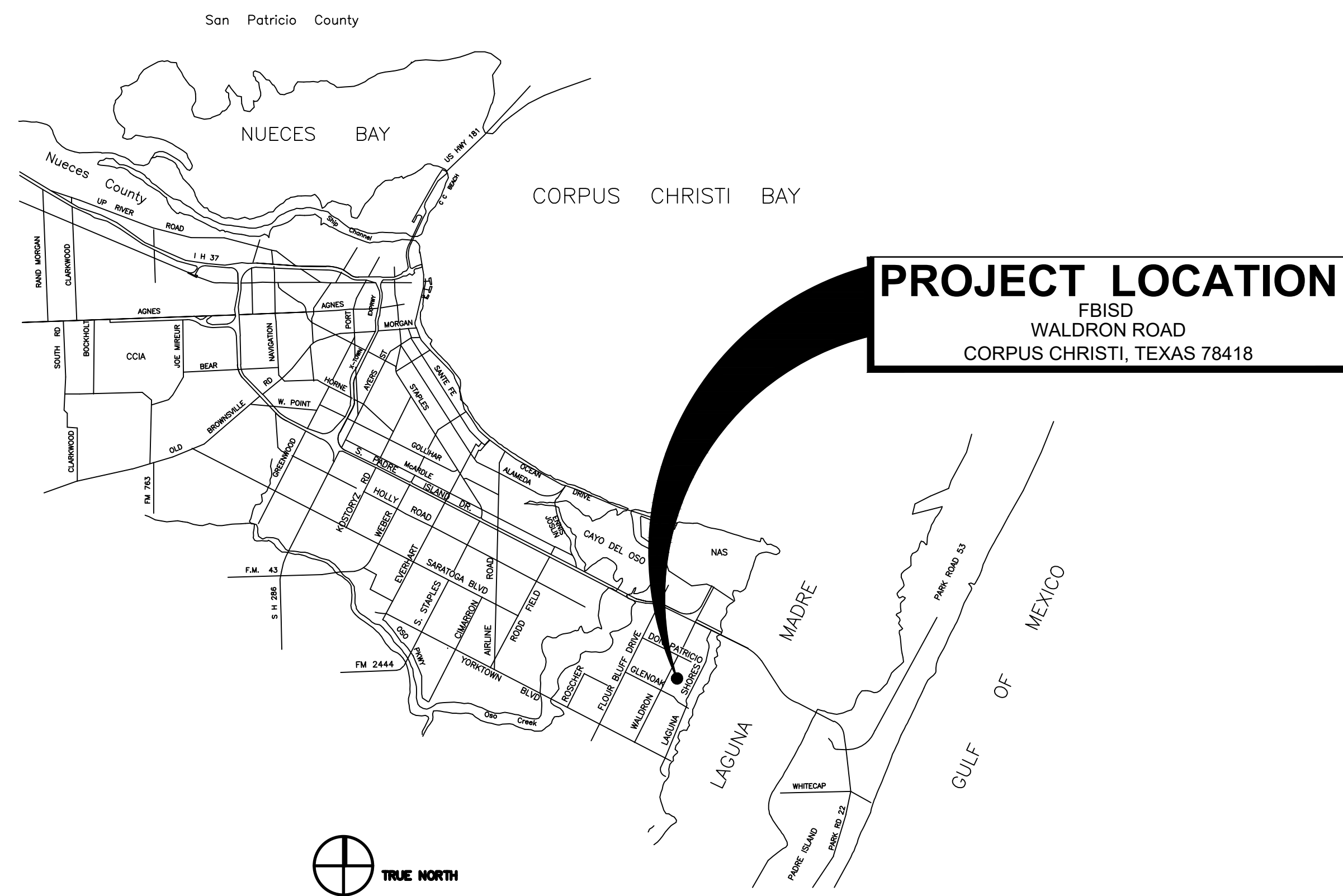
FLOUR BLUFF INDEPENDENT SCHOOL DISTRICT CORPUS CHRISTI, TEXAS

MEP ENGINEERS
STRIDDE, CALLINS & ASSOCIATES INC.
 342 S. NAVIGATION BLVD.
 P.O. BOX 4146-7869, CORPUS CHRISTI, TEXAS 78405
 PHONE 361.883.9199 FAX 361.883.9177

STRUCTURAL AND WINDSTORM ENGINEER
WILKERSON AND SANDERS, INC.
 3530 SOUTH ALAMEDA ST, CORPUS CHRISTI, TEXAS 78411
 PHONE 361.853.2071 FAX 361.853.3274

CODE SUMMARY
 2015 IECC
 2021 INTERNATIONAL BUILDING CODES
 2020 NEC

NO.	DESCRIPTION
T1	TITLE SHEET
ME1	CENTRAL KITCHEN PLANS
ME2	HIGH SCHOOL KITCHEN ROOF PLANS
ME3	HIGH SCHOOL KITCHEN FLOOR PLAN
ME4	JR. HIGH GYM ROOF PLANS
ME5	JR. HIGH GYM FLOOR PLAN
ME6	SCHEDULES, NOTES AND DETAILS



VICINITY MAP
 SCALE: NOT TO SCALE
 (HATCHING INDICATES WORK AREA)

No.	Revision/Issue	Date

Project Name and Address

FBISD CENTRAL KITCHEN, HS KITCHEN AND JR. HIGH GYM HVAC EQUIPMENT REPLACEMENTS - 2024/2025
 FLOUR BLUFF INDEPENDENT SCHOOL DISTRICT
 WALDRON ROAD
 CORPUS CHRISTI, TEXAS 78418

Sheet Title

TITLE SHEET

Firm Name and Address

STRIDDE, CALLINS & ASSOCIATES INC.
 CONSULTING ENGINEERS
 MECHANICAL ELECTRICAL
 (361) 883-9199
 Fax (361) 883-9177
 342 S. Navigation Blvd.
 Corpus Christi, TX 78405-3615
 Registration # F-006328

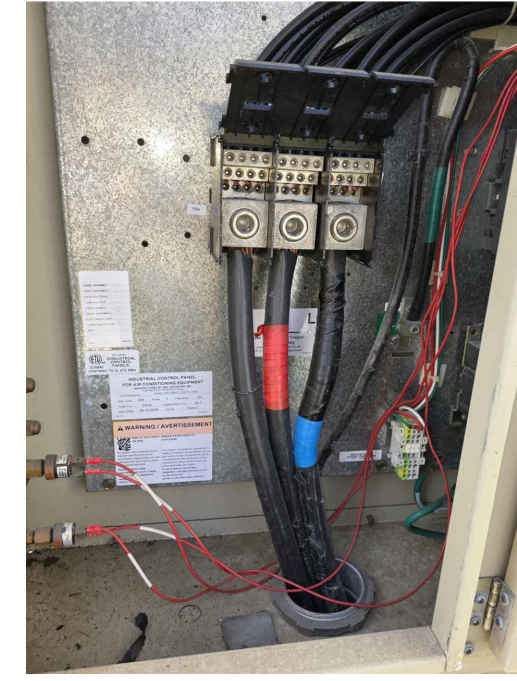
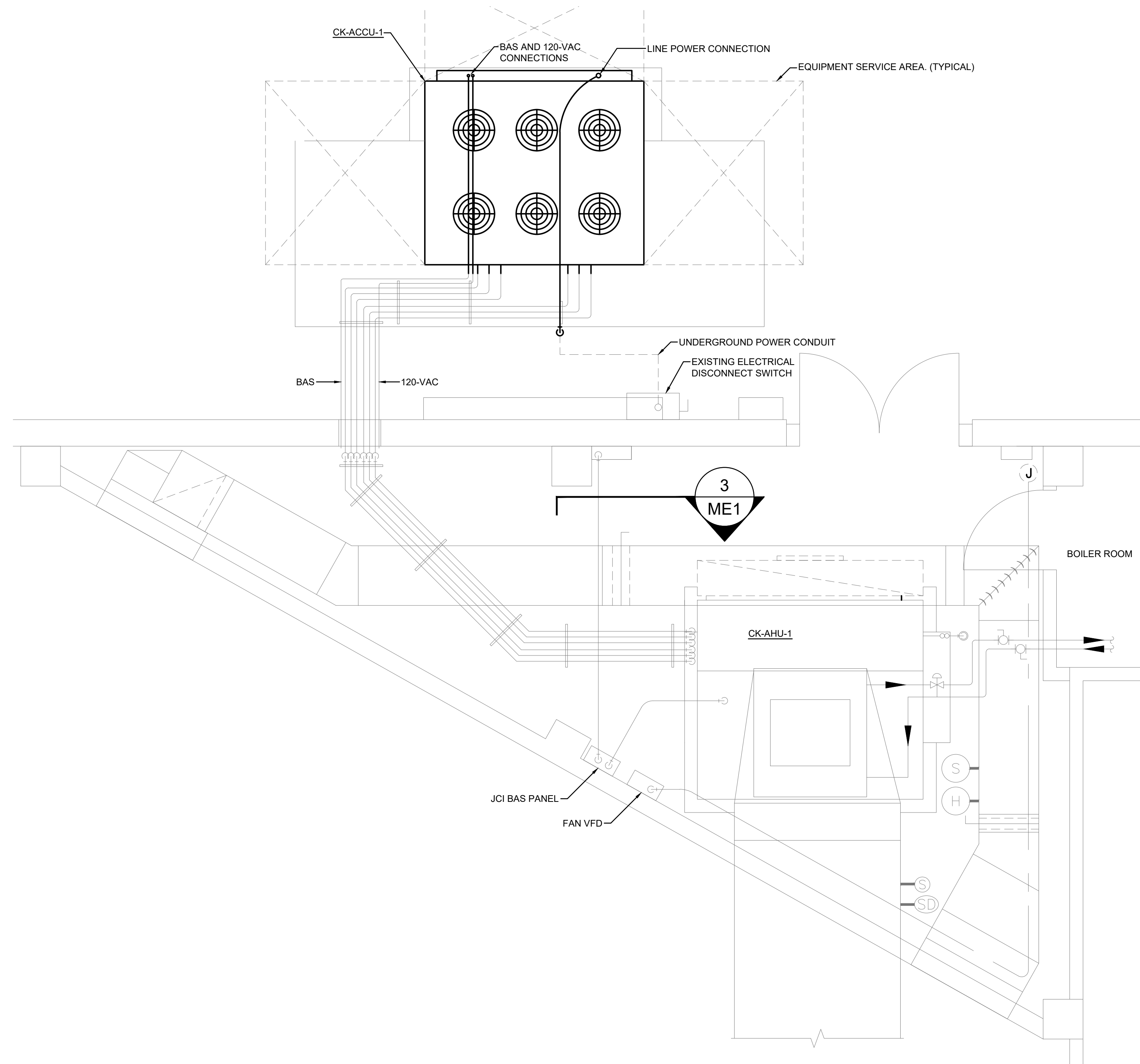
Seal

JARED M. MERDES
 100145
 LICENSE
 PROFESSIONAL ENGINEER
 STATE OF TEXAS

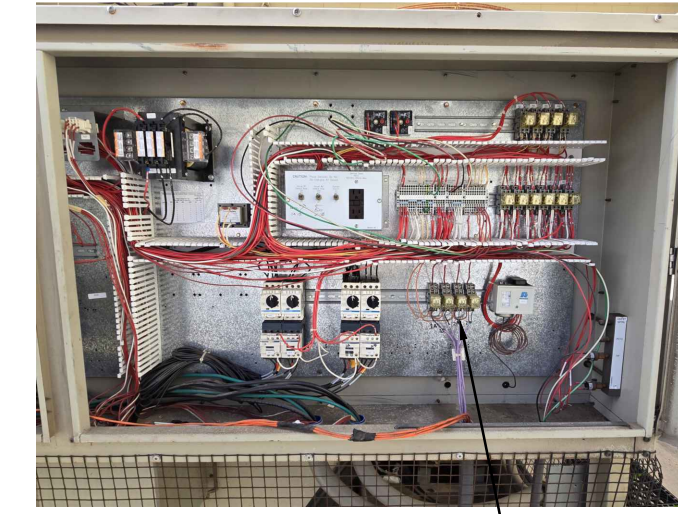
11/05/2024

Sheet Information

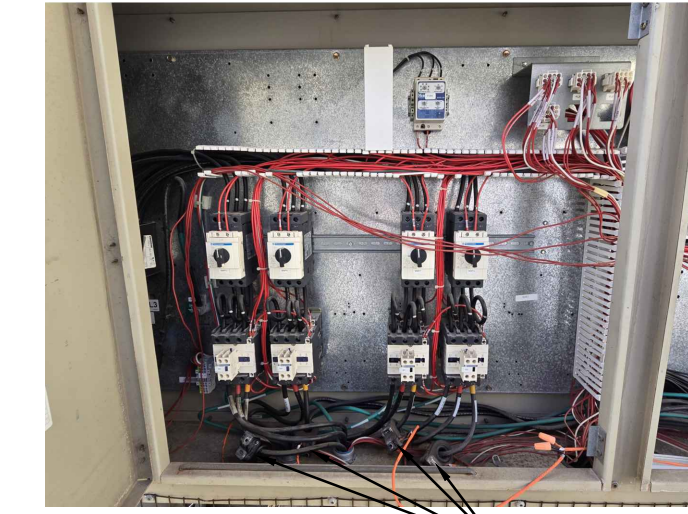
Project # 2024170	Sheet No.
Date 11/05/2024	T1
Drawn By JM	Scale
Checked By JM	AS NOTED
Code File 24170-T1	Sheet 1 of 7



POWER LINE SIDE CONNECTIONS



REMOVE EXISTING BAS CONTROL RELAYS FOR 4-STAGE COOLING AND REINSTALL IN NEW EQUIPMENT WITH SAME STAGING CONFIGURATION AS EXISTING



REMOVE EXISTING CTs FOR EACH COMPRESSOR LOAD SIDE CONNECTION AND REINSTALL IN NEW EQUIPMENT WITH SAME STAGING CONFIGURATION AS EXISTING

2 CK-ACCU-1 PHOTOS
ME1 SCALE: NOT TO SCALE



REPLACE EACH DRIER CORE WITH NEW INCLUDING GASKET WITH LEAK LOCK

PROVIDE NEW REFRIGERATION CAP ON THE EXISTING HGB ISOLATION VALVE

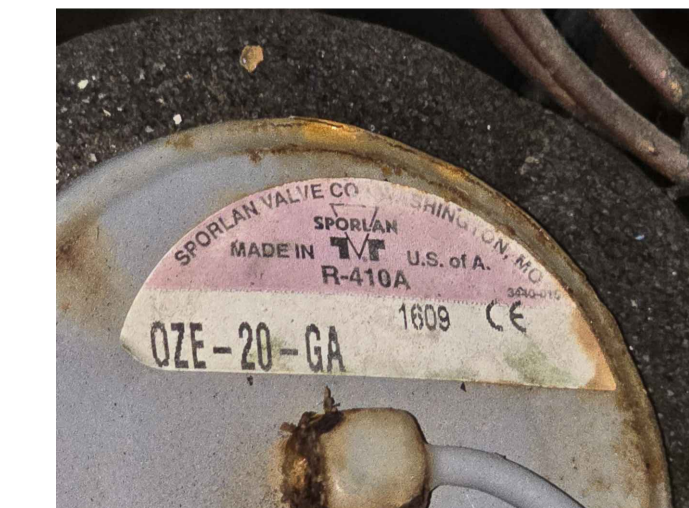
REPLACE EACH LIQUID PIPE SOLENOID VALVE WITH NEW TO MATCH EXISTING

DEMOLISH EXISTING HOT GAS BYPASS VALVES AND REPLACE WITH NEW VALVES FURNISHED WITH THE ACCU. NEW VALVES SHALL BE PIPED TO THE SUCTION PIPE LEAVING THE UNIT IN LIEU OF DOWN STREAM OF THE TXV. PATCH AND MODIFY PIPING AS NEEDED FOR THIS CHANGE. REFER TO DETAIL 4, SHEET ME1 FOR INSTALLATION REQUIREMENTS AND ADJUSTMENTS

REPLACE EACH SIGHT GLASS WITH NEW TO MATH EXISTING

REPLACE EACH TXV WITH NEW TO MATCH EXISTING. ADJUST EACH VALVE FOR 8-14 DEGREE SUPERHEAT AT FULL LOAD CAPACITY WITH HGB VALVES TURNED OFF.

GENERAL: REPLACE ALL SHRADER VALVES AND SERVICE CAPS WITH NEW (TYPICAL)



TXV



DRIER

3 DETAIL - EXISTING CK-AHU-1 PIPING
ME1 SCALE: NOT TO SCALE

Hot Gas Bypass Valve

Part Number: 258951301

Description

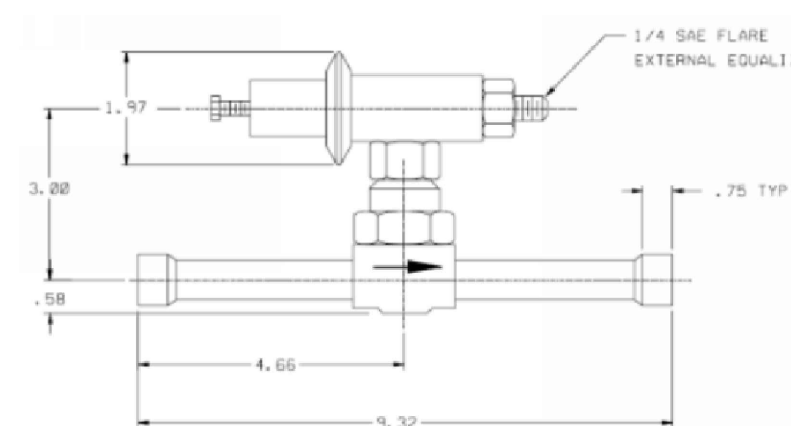
Hot gas bypass provides protection against low suction pressure. It also helps keep the unit operating at light load without excessive cycling. The hot gas bypass valve is shipped loose in a kit (PN: 193330721). One valve is used for the entire tonnage range. Field will downsize piping to mate to valve.

The system consists of a pressure regulating valve that starts to modulate open at 100 psig (32°F). The valve is fully open at 90 psig (26°F). The factory settings can be modified in the field as the valve is adjustable.

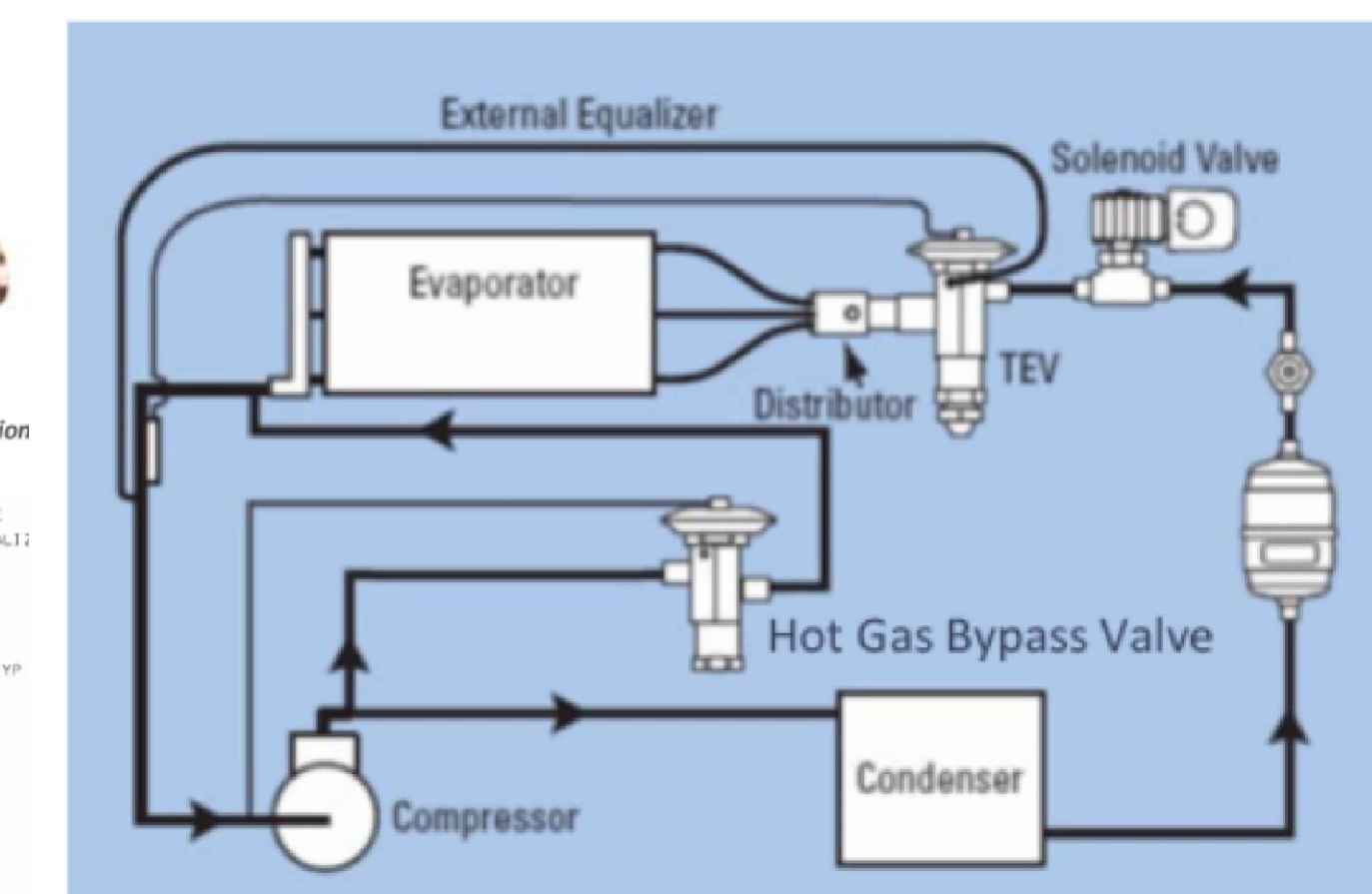
VERIFY THAT THE EVAPORATOR COIL DOES NOT FREEZE WITH FACTORY SETTINGS AND ADJUST AS NEEDED TO PREVENT COIL FREEZING.



Images courtesy of Sporlan Division - Parker Hannifin Corporation



Diagram



4 DETAIL - NEW HOT GAS BYPASS VALVE INSTALLATION REQUIREMENTS
ME1 SCALE: NOT TO SCALE

1 CENTRAL KITCHEN PLAN
ME1 SCALE: 3/8"=1'-0"

GENERAL NOTES: ME1

- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE THE START OF WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES THAT ARE PERTINENT.
- NOTIFY OWNER 2 WEEKS BEFORE THE DEMOLITION OF ACCU. OWNER SHALL BE ALLOWED TO REMOVE AND SALVAGE PARTS FROM THE EQUIPMENT AS NEEDED.

MECHANICAL GENERAL DEMOLITION NOTES: ME1

- DEMOLISH EXISTING ACCU AND REPLACE WITH NEW AT SAME LOCATION AS EXISTING.
- DEMOLISH REFRIGERANT PIPING AT ACCU AND AHU CONNECTION AS NEEDED TO PERFORM THE WORK.
- PROTECT EXISTING PIPING WITH CAPS, EVACUATION AND NITROGEN-HOLDING CHARGE DURING CONSTRUCTION.

MECHANICAL GENERAL RENOVATION NOTES: ME1

- INSTALL NEW ACCU AT THE SAME LOCATION AS EXISTING AND SET ON NEW NEOPRENE ISOLATION PADS.
- SECURE THE NEW ACCU TO THE EXISTING WINDSTORM SUPPORT ANCHORS AT THE FOUNDATION WITH BOLTS SAME SIZE AS EXISTING, HDG OR 316 SS CONSTRUCTION.
- PROVIDE NEW REFRIGERANT PIPING AS NEEDED TO CONNECT TO NEW EQUIPMENT CONNECTIONS. ACCU WILL BE PROVIDED WITH ISOLATION VALVES BY THE EQUIPMENT MANUFACTURER.
- PROVIDE REFRIGERANT SPECIALTY REPLACEMENTS AND HOT GAS BYPASS RE-PIPING AS INDICATED BY DETAILS 3 AND 4, SHEET ME1.

MECHANICAL GENERAL REFRIGERATION NOTES: ME1

- RECOVER R-410A REFRIGERANT FROM THE EXISTING SYSTEM THROUGH NEW REFRIGERANT DRIER TO FILTER AND DRY THE REFRIGERANT. TEST THE REFRIGERANT FOR ACID. IF ACID IS PRESENT, DISPOSE OF THE REFRIGERANT AT AN EPA APPROVED FACILITY. IF THE REFRIGERANT IS IN GOOD CONDITION, PROCEED WITH THE FOLLOWING REUSE CONDITIONS.
- STORE THE REFRIGERANT IN CYLINDERS AT THE PROJECT LOCATION. LET THE CYLINDERS SET FOR 24-HRS IN A STABLE TEMPERATURE LOCATION. BLOW OFF THE TOP OF THE TANK TO RELEASE ANY NON-CONDENSABLE GASSES FOR ABOUT 5 SECONDS.
- PRESSURE TEST NEW SYSTEMS AND EVACUATE DOWN TO 350 MICRONS PRIOR TO RECHARGING.
- RECHARGE THE NEW SYSTEM WITH THE EXISTING REFRIGERANT TO MEET THE MANUFACTURER'S RECOMMENDED 15 F SUB-COOLING TEMPERATURE AT FULL LOAD WITH THE HOT GAS BYPASS VALVES TURNED OFF. IF ADDITIONAL REFRIGERANT IS NEEDED, FBISD WILL FURNISH THE REFRIGERANT TO THE CONTRACTOR FOR CONTRACTOR USE. CONTRACTOR SHALL NOT INCLUDE THE COST OF NEW REFRIGERANT WITHIN THEIR PROPOSAL.

BAS GENERAL NOTES: ME1

- DISCONNECT EXISTING BAS WIRING, RELAYS, CTs AND THE LIKE AND RECONNECT TO NEW EQUIPMENT SAME AS EXISTING. PROVIDE NEW WEATHERPROOF SEAL-TIGHT CONDUIT TO REPLACE EXISTING AT UNIT CONNECTIONS. REFER TO PHOTOS 2, SHEET ME1.
- ALTERNATE NO. CK3: PROVIDE ADDITIONAL COMPRESSOR SAFETY CONTROLS FOR EXCESSIVE SUPERHEAT PROTECTION.

GENERAL ELECTRICAL NOTES: ME1

- EXISTING ACCU SHALL BE REPLACED BY NEW AT SAME LOCATION AS EXISTING.
- DISCONNECT FEEDER CONDUCTORS AS REQUIRED TO REPLACE ACCU HVAC UNIT. TERMINATE EXISTING FEEDER CONDUCTORS, ROUTED THROUGH OPEN CONDENSER SECTION WITH NEW WEATHERPROOF SEAL-TIGHT CONDUIT, TO NEW ACCU AS REQUIRED.

No. Revision/Issue Date

Project Name and Address
FBISD CENTRAL KITCHEN, HS KITCHEN AND JR. HIGH GYM HVAC EQUIPMENT REPLACEMENTS - 2024/2025
FLOUR BLUFF INDEPENDANT SCHOOL DISTRICT
WALDRON ROAD
 CORPUS CHRISTI, TEXAS 78418

Sheet Title
CENTRAL KITCHEN PLAN

Rev. Plot

STRIDDE, CALLINS & ASSOCIATES INC.
 CONSULTING ENGINEERS
 MECHANICAL ELECTRICAL
 (361) 883-9199
 Fax (361) 883-9197
 342 S. Navigation Blvd.
 Corpus Christi, TX 78405-3615
 Registration # F-006328

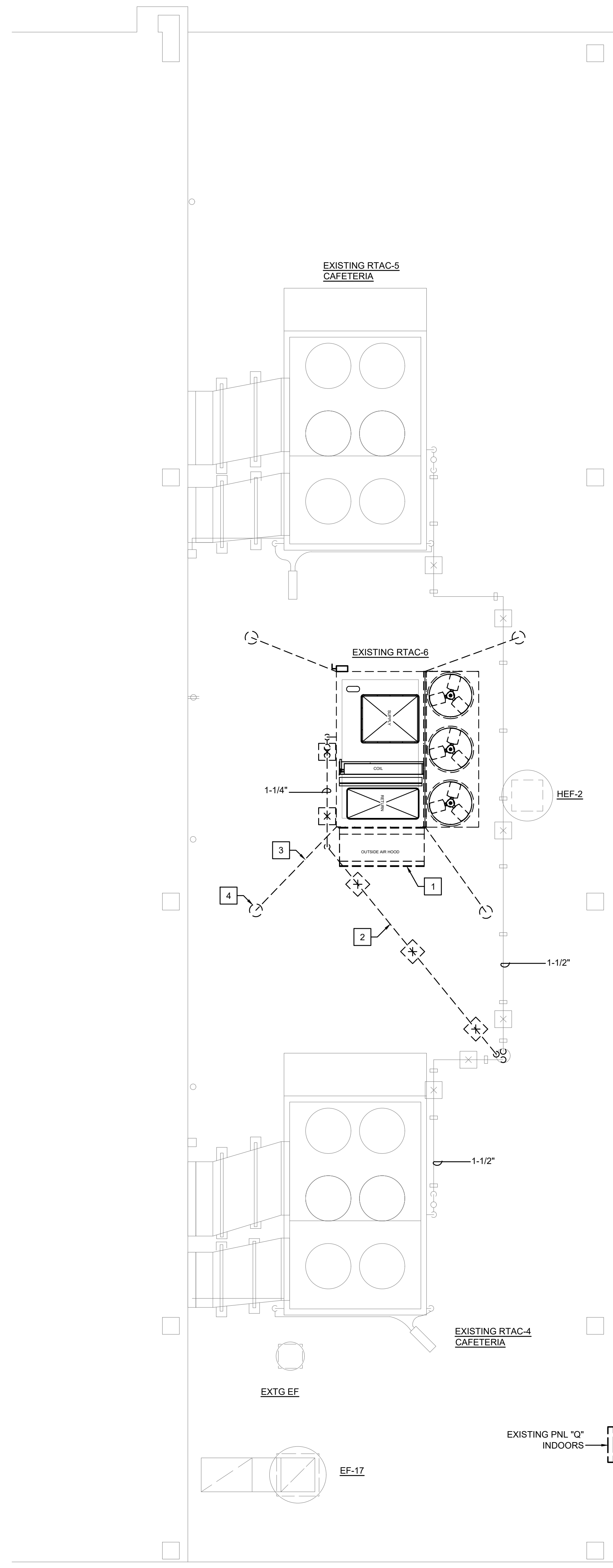
Firm Name and Address

Seal

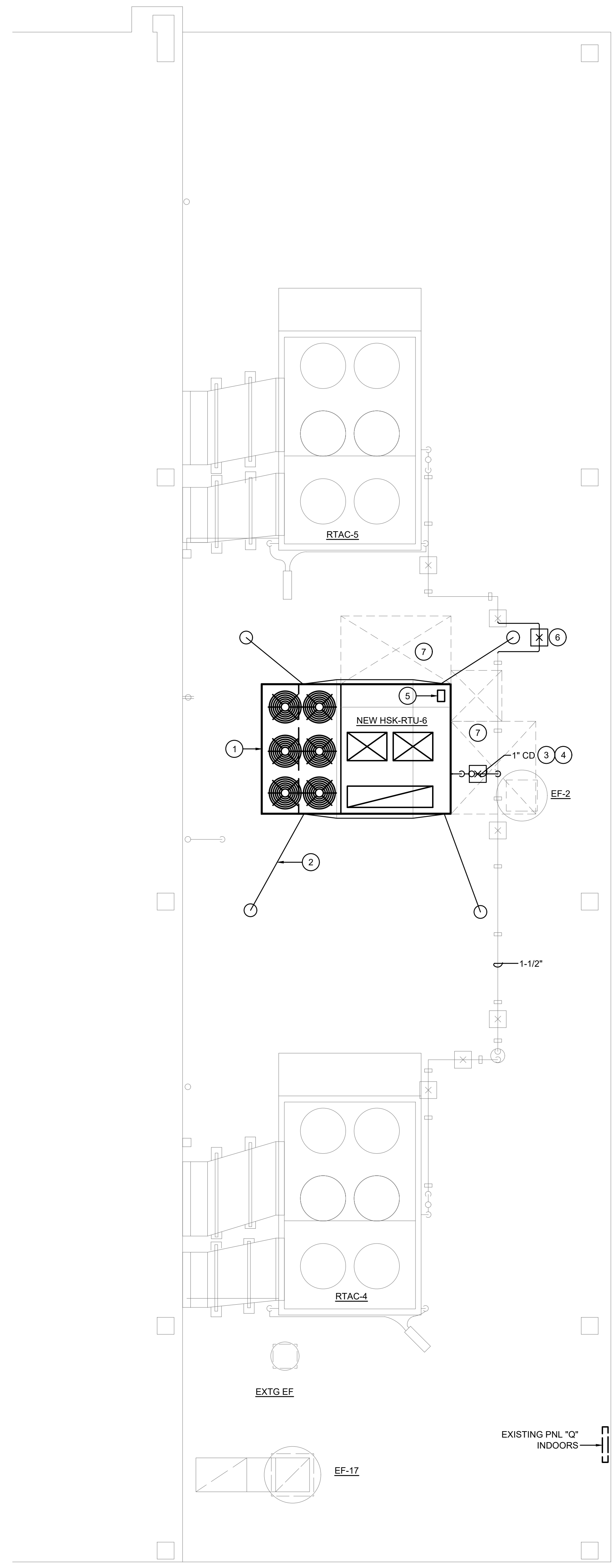
 11/05/2024

Project # 2024170 Sheet No.
 Date 11/05/2024
 Drawn By JM
 Check By JM
 Scale AS NOTED Sheet
 Cad File 24104ME1 2 of 7

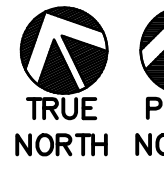
ME1



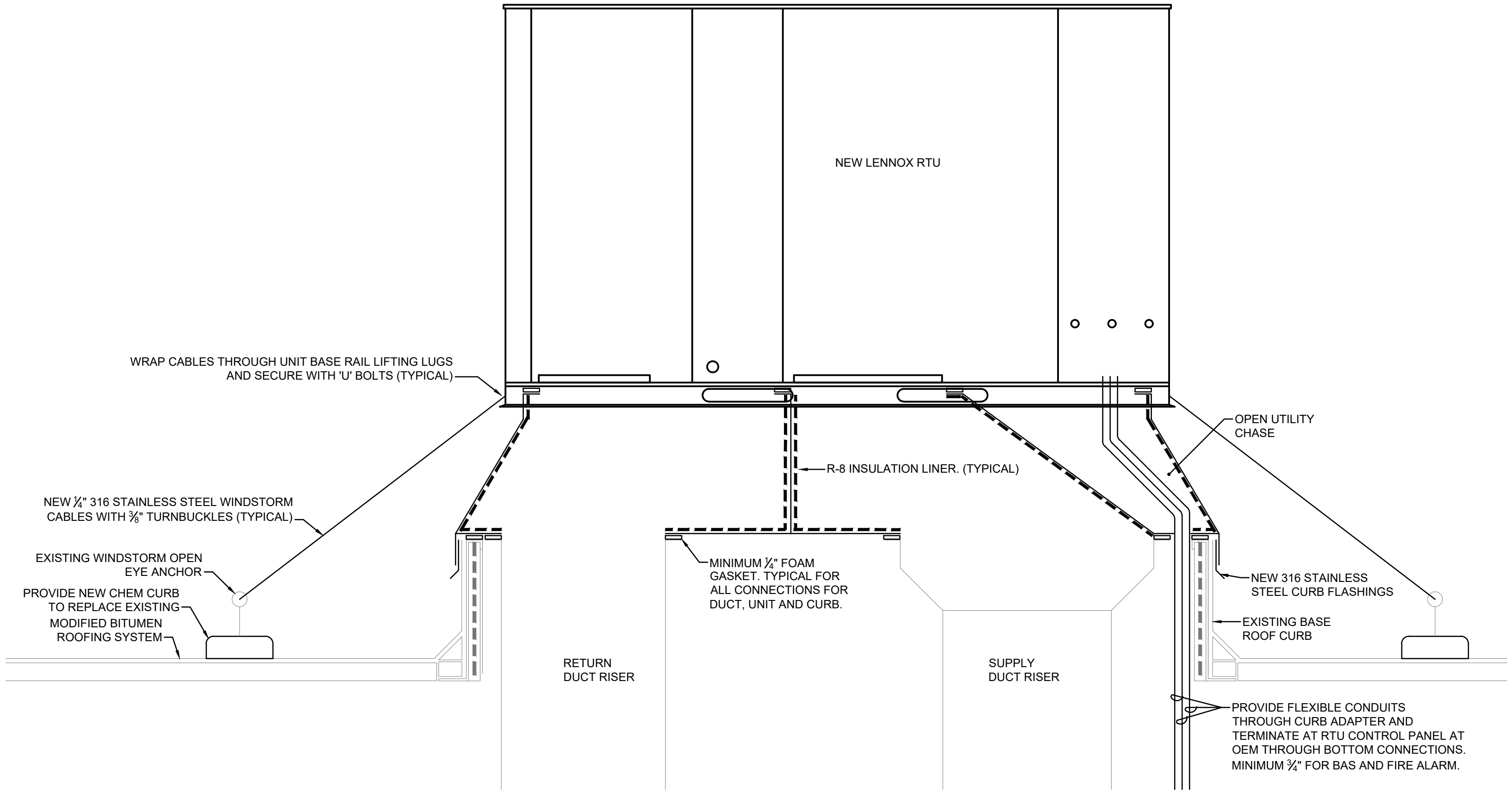
1 HIGH SCHOOL KITCHEN – DOMOLITION ROOF PLAN
 ME2 SCALE: 1/4"=1'-0"



2 HIGH SCHOOL KITCHEN – RENOVATION ROOF PLAN
 ME2 SCALE: 1/4"=1'-0"



3 EXISTING HSK-RTU-6 PHOTOS
 ME2 SCALE: NOT TO SCALE



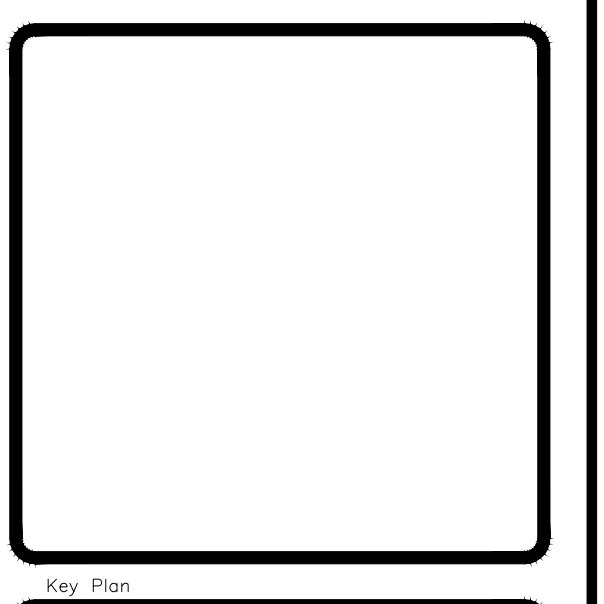
4 DETAIL – HSK-RTU-6 CURB INSTALLATION
 ME2 SCALE: NOT TO SCALE

- GENERAL ROOF NOTES, ME2**
1. TAKE SPECIAL PRECAUTIONS TO PROTECT EXISTING AND NEW ROOFING FROM DAMAGE DURING CONSTRUCTION. COORDINATE ALL ROOFING WORK WITH ROOFING CONTRACTOR.
 2. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE THE START OF WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES THAT ARE PERTINENT.
 3. NOTIFY OWNER 2-WEEKS BEFORE THE DEMOLITION OF RTU. OWNER SHALL BE ALLOWED TO REMOVE AND SALVAGE PARTS FROM THE EQUIPMENT AS NEEDED TO REPAIR OTHER EQUIPMENT AT PROJECT LOCATION.
- MECHANICAL DEMOLITION KEYED NOTES, ME2**
1. DEMOLISH EXISTING ROOFTOP UNIT. EXISTING BASE CURB SHALL REMAIN FOR REUSE WITH NEW EQUIPMENT.
 2. DEMOLISH EXISTING CONDENSATE DRAIN PIPING IN ITS ENTIRETY INCLUDING ROOF SUPPORTS.
 3. DEMOLISH EXISTING WINDSTORM SUPPORT CABLES. (TYPICAL)
 4. EXISTING ROOF ANCHORS SHALL REMAIN FOR REUSE WITH NEW EQUIPMENT. PROVIDE NEW CHEM CURBS. REFER TO RENOVATION SCOPE OF WORK. (TYPICAL)
- MECHANICAL RENOVATION KEYED NOTES, ME2**
1. INSTALL NEW RTU ON EXISTING ROOF CURB WITH NEW CUSTOM FABRICATED CURB ADAPTER. REFER TO SPECIFICATIONS AND DETAIL 4, SHEET ME2.
 2. PROVIDE NEW WINDSTORM SUPPORT CABLES AND NEW REPLACEMENT CHEM CURBS. REFER TO DETAIL 4, SHEET ME2, (TYPICAL). REFER TO DETAIL 1, SHEET ME6.
 3. PROVIDE NEW COPPER CONDENSATE DRAIN PIPING WITH NEW P-TRAP AND CONNECT TO EXISTING CONDENSATE DRAIN PIPING. REFER TO DETAIL 1, SHEET ME6.
 4. SUPPORT PIPING TO ROOF WITH NEW CONCRETE BLOCK TYPE ROOF SUPPORTS. REFER TO DETAIL 1, SHEET ME6.
 5. NEW UNIT THROUGH BOTTOM UTILITY CONNECTION OVER CURB ADAPTER UTILITY CHASE.
 6. REROUTE EXISTING CONDENSATE DRAIN PIPING AROUND WINDSTORM SUPPORT CABLE.
 7. EQUIPMENT SERVICE AREA. KEEP CLEAR OF OBSTRUCTIONS. (TYPICAL).
- BAS GENERAL NOTES, ME2**
1. DISCONNECT EXISTING BAS WIRING AND PROVIDE NEW BAS SYSTEM AS APPLICABLE.
 2. ALTERNATE HSK-1A. CAREFULLY REMOVE THE EXISTING JCI CONTROLLER AND CTS FOR COMPRESSORS AND FAN. REINSTALL THE EXISTING CONTROLLER AND REPROGRAM THE SYSTEM FOR 2-STAGE HEAT/COOL AND SINGLE STAGE DEHUMIDIFICATION. PROVIDE NEW SPACE SENSOR (TEMPERATURE AND HUMIDITY) AND DUCT MOUNTED SUPPLY AND RETURN AIR TEMPERATURE SENSORS.
 3. ALTERNATE HSK-1B. CAREFULLY REMOVE THE EXISTING JCI CONTROLLER AND DELIVER TO THE OWNER. REMOVE THE COM WIRING AND PULL DOWN TO ABOVE CEILING. SOLDER THE CONNECTIONS AND INSTALL HEAT SHRINK TAPE TO ENSURE THAT THE EXISTING COM TO REMAIN IS CONNECTED IN GOOD WORKING CONDITION. HVAC CONTRACTOR SHALL PROVIDE A NEW STANDALONE DIGITAL SPACE THERMOSTAT HONEYWELL VISION PRO 8000 SERIES WITH TOUCH SCREEN DISPLAY, 2-STAGE HEAT AND COOL, WITH HUMIDITY CONTROL. WIRE TO RTU CONTROL PANEL AND TERMINATE AS NEEDED.
- GENERAL ELECTRICAL NOTES, ME2**
1. EXISTING ROOFTOP HVAC UNIT SHALL BE REPLACED BY NEW AT SAME APPROXIMATE LOCATION AS EXISTING ON EXISTING ROOF CURB WITH NEW CURB ADAPTER.
 2. DISCONNECT FEEDER CONDUCTORS AND FIRE ALARM CABLE AS REQUIRED TO REPLACE ROOFTOP HVAC UNIT. TERMINATE EXISTING FEEDER CONDUCTORS AND FIRE ALARM CABLE, ROUTED WITHIN NEW CURB ADAPTER WITH NEW WEATHERPROOF SEAL-TIGHT CONDUIT, AT NEW ROOFTOP HVAC UNIT AS REQUIRED. FIRE ALARM SHALL BE CONNECTED TO RTU EMERGENCY STOP FOR FAST ACTION TERMINATION. TEST FIRE ALARM OPERATION AT PROJECT COMPLETION.
 3. IF THE EXISTING FEEDER CONDUCTOR LENGTH IS NOT ADEQUATE TO REACH THE NEW TERMINAL LUGS AT THE REPLACED ROOFTOP HVAC UNIT, THE FEEDER CONDUCTORS CAN BE SPLICED WITHIN THE NEW CABINET WITH NSI OR EQUAL INSULATED COMPRESSION LUGS.

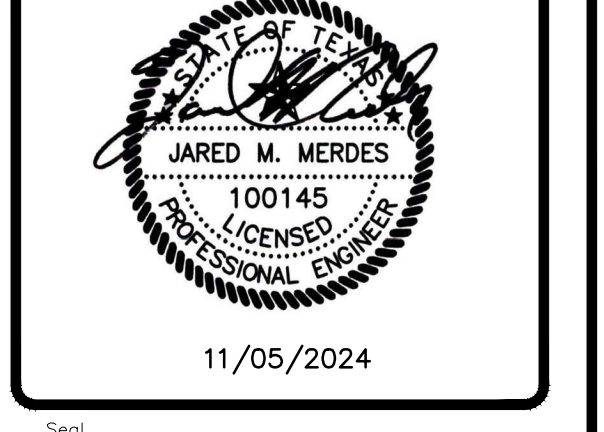
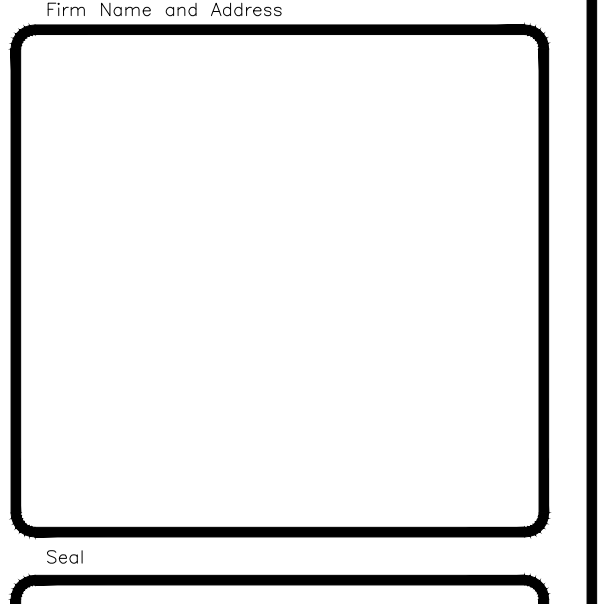
No. Revision/Issue Date

Project Name and Address
FBISD CENTRAL KITCHEN, HS KITCHEN AND JR. HIGH GYM HVAC EQUIPMENT REPLACEMENTS - 2024/2025
FLOUR BLUFF INDEPENDANT SCHOOL DISTRICT
WALDRON ROAD
 CORPUS CHRISTI, TEXAS 78418

Sheet Title
HIGH SCHOOL KITCHEN ROOF PLANS

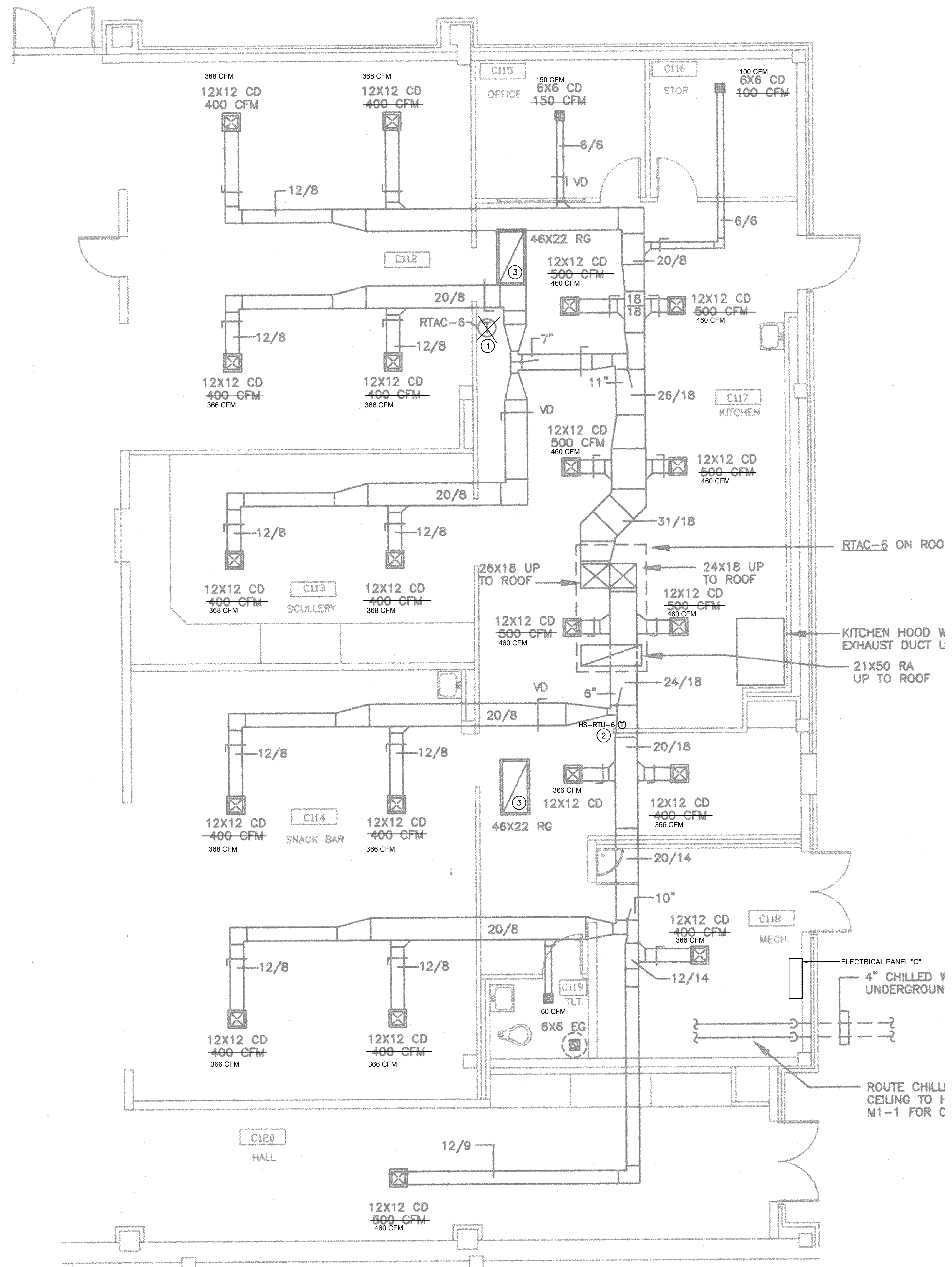


Firm Name and Address
STRIDDE, COLLINS & ASSOCIATES INC.
 CONSULTING ENGINEERS
 MECHANICAL ELECTRICAL
 (361) 883-9199
 Fax (361) 883-9177
 342 S. Navigation Blvd.
 Corpus Christi, TX 78405-3618
 Registration # F-006328



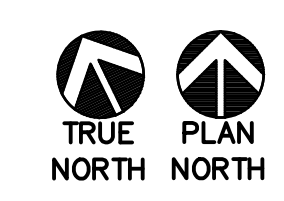
Project # 2024170 Sheet No.
 Date 11/05/2024
 Drawn By JM
 Check By JM
 Scale AS NOTED Sheet
 Cust File 241704ME2 3 of 7

ME2



- GENERAL RENOVATION NOTES, ME3**
1. CEILINGS: CONTRACTOR SHALL CAREFULLY REMOVE EXISTING LAY-IN CEILING GRID AND TILES AS NEEDED TO PERFORM WORK AND REINSTALL AT PROJECT COMPLETION. ANY DAMAGED SYSTEMS SHALL BE REPLACED WITH NEW TO MATCH EXISTING CONSTRUCTION AND FINISHED COLOR.
 2. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE THE START OF WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES THAT ARE PERTINENT.
- MECHANICAL KEYED NOTES, ME3**
1. DEMOLISH EXISTING SPACE SENSOR AND WIRING UP TO RTU LOCATION. PROVIDE STAINLESS STEEL BLANK COVER AT EXISTING WALL PENETRATION.
 2. PROVIDE NEW SPACE SENSOR OR THERMOSTAT ON WALL AT NEW LOCATION AS SHOWN. REFER TO SCOPE OF WORK FOR ALTERNATES HSK-1A AND 1B.
 3. REMOVE EXISTING RETURN AIR GRILLES, PRESSURE WASH AND REINSTALL IN THE EXISTING CEILING GRID AT SAME LOCATION AS EXISTING.
- TAB GENERAL NOTES, ME3**
1. BALANCE EXISTING AIR DEVICES TO NEW AIR VOLUMES AS SHOWN.

1 HIGH SCHOOL KITCHEN FLOOR PLAN
 ME3 SCALE: 1/4"=1'-0"



No. Revision/Issue Date

Project Name and Address
FBISD CENTRAL KITCHEN, HS KITCHEN AND JR. HIGH GYM HVAC EQUIPMENT REPLACEMENTS - 2024/2025
FLOUR BLUFF INDEPENDANT SCHOOL DISTRICT
WALDRON ROAD
 CORPUS CHRISTI, TEXAS 78418

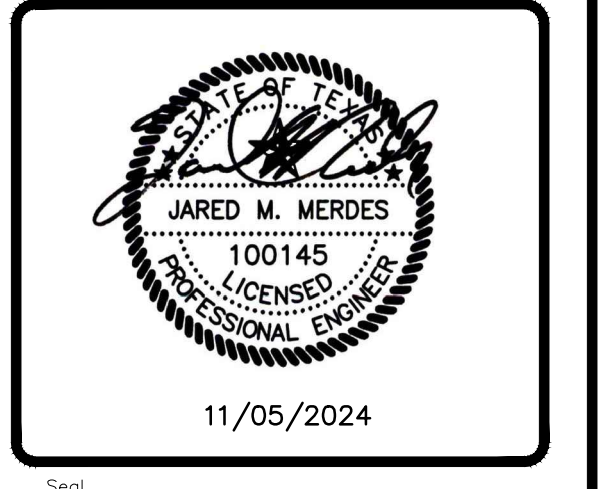
Sheet Title
HIGH SCHOOL KITCHEN FLOOR PLAN

Key Plan

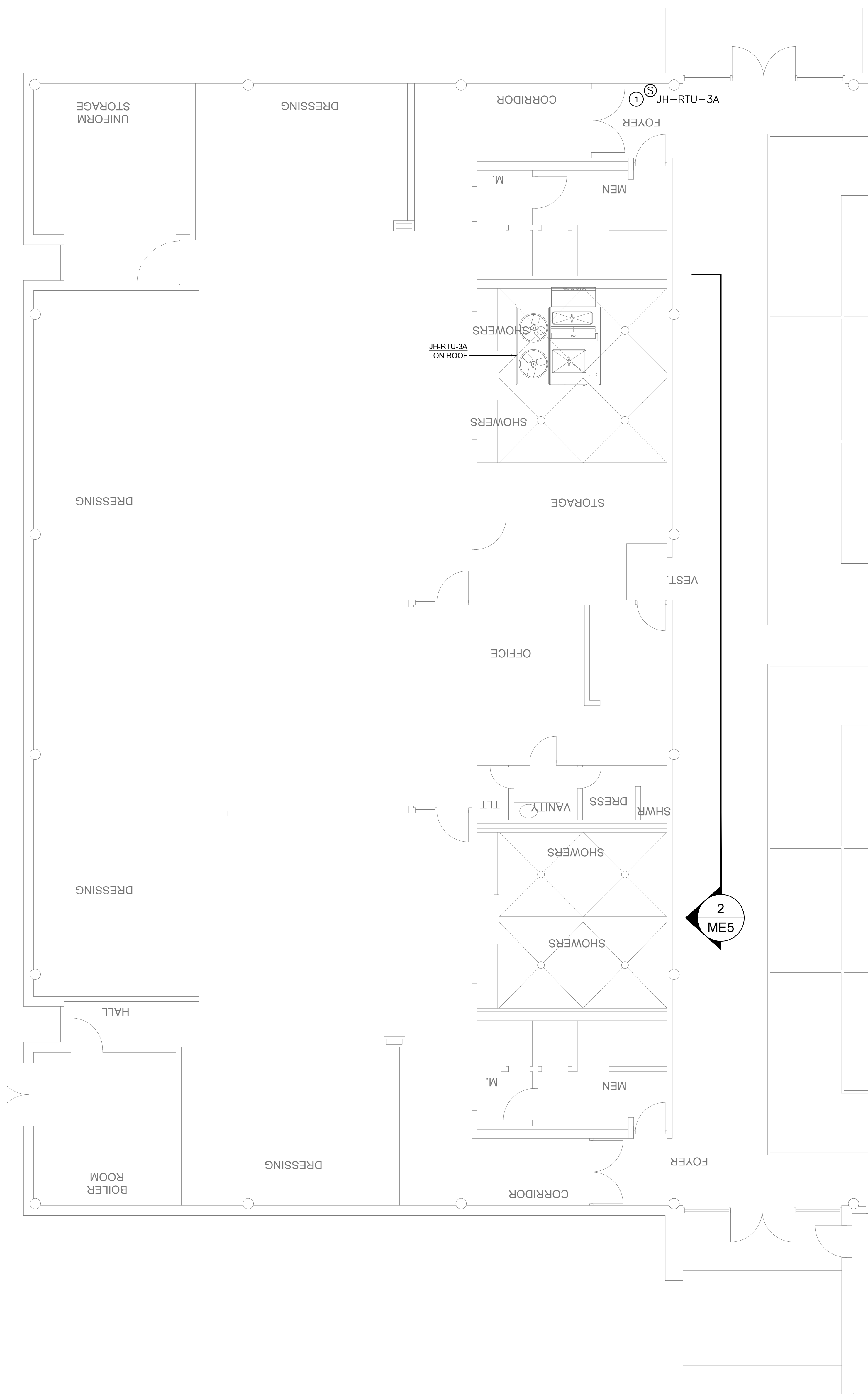
STRIDDE, CALLINS & ASSOCIATES INC.
 CONSULTING ENGINEERS
 MECHANICAL ELECTRICAL

(361) 883-9199
 Fax (361) 883-9177
 342 S. Navigation Blvd.
 Corpus Christi, TX 78405-3618
 Registration # F-006328

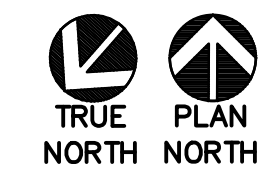
Firm Name and Address



Project # 2024170	Sheet No.
Date 11/05/2024	ME3
Drawn By JM	
Check By JM	
Scale AS NOTED	Sheet 4 of 7
Doc File 24104ME3	



1 JR. HIGH GYM FLOOR PLAN
 ME5 SCALE: 3/16"=1'-0"



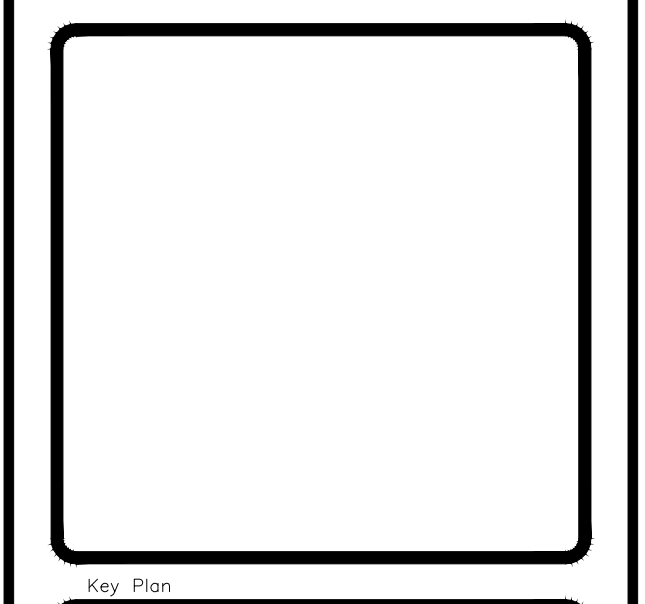
- MECHANICAL KEYED NOTES:** ME5 ○
1. DEMOLISH EXISTING JCI SPACE SENSOR AND WIRING UP TO RTU LOCATION. PROVIDE NEW AAOON SPACE SENSOR WITH NEW DIGITAL CONTROL. WIRING BACK TO RTU CONTROL BOARD IN RTU. PROVIDE WALL ADAPTER PLATE AS APPLICABLE. PROVIDE WIRE GUARD COVER OVER FINAL INSTALLED SENSOR.



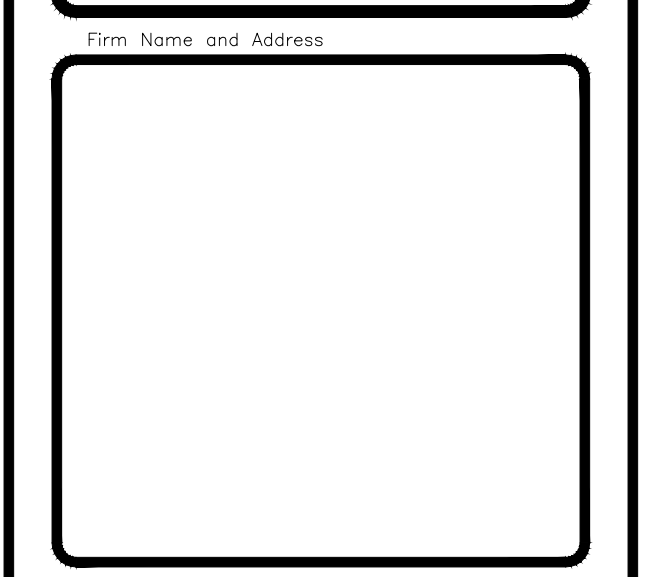
2 JR. HIGH GYM EXISTING SUPPLY DUCTWORK
 ME5 SCALE: NOT TO SCALE

SPACE SENSOR

No.	Revision/Issue	Date
Project Name and Address FBISD CENTRAL KITCHEN, HS KITCHEN AND JR. HIGH GYM HVAC EQUIPMENT REPLACEMENTS - 2024/2025 FLOUR BLUFF INDEPENDANT SCHOOL DISTRICT WALDRON ROAD <small>CORPUS CHRISTI, TEXAS 78418</small>		
Sheet Title JR. HIGH GYM FLOOR PLAN		



STRIDDE, CALLINS & ASSOCIATES INC.
 CONSULTING ENGINEERS
 MECHANICAL ELECTRICAL
 (361) 883-9199
 Fax (361) 883-9177
 342 S. Navigation Blvd.
 Corpus Christi, TX 78405-3615
 Registration # F-006328



Project # 2004170	Sheet No.
Date 11/05/2024	ME5
Drawn By JM	Scale AS NOTED
Check By JM	Sheet 6 of 7
Code File 24104ME5	

PACKAGED ROOFTOP UNIT SCHEDULE "AON" (OWNER FURNISHED/CONTRACTOR INSTALLED)																																								
DESIGNATION	SUPPLY FAN STAGE AIR VOLUMES (CFM)			OUTSIDE AIR CFM	RETURN AIR CFM	E.S.P. IN (W.C.)	RETURN AIR ("FDB"/"FWB")	OUTSIDE AIR ("FDB"/"FWB")	AIR ON COND. "FDB"	COOLING COIL			COOLING DATA - FULL CAPACITY				HOT GAS REHEAT COIL			NATURAL GAS HEATING				ELECTRICAL DATA						EER @ ARI	SEER @ ARI	APPROX. INSTALLED UNIT WEIGHT (LBS)	MANUFACTURER MODEL & NO.							
	COOL STAGE 1	COOL STAGE 2	HEAT ALL STAGES							FACE AREA FT²	ROWS	FPI	ENT. AIR ("FDB"/"FWB")	LVG. AIR @ COIL ("FDB"/"FWB")	GROSS TOTAL CAP. (MBH)	GROSS SENSIBLE CAP. (MBH)	OUTSIDE AIR "F DB"	ENTERING AIR "F DB/ WB"	LEAVING AIR "F DB/ WB"	INPUT CAPACITY (MBTUH)	OUTPUT CAPACITY (MBTUH)	ENT. AIR / LVG. AIR "F"	NO. OF STAGES	QTY.	STAGES	RLA	V/PH	CONDENSER FANS QTY.	FLA					V/PH	MOTOR HP	FLA	V/PH	MCA	MOCP	V/PH
JR-RTU-3A	1,640	4,100	4,100	1,200	2,900	1.2	75/64	100/80	100	19.9	6	12	82.3/69.3	53.9/53.9	192.0	124.1	70	82.3/69.3	75/61.9	270	218.7	56.9/105.5	VARY	2	VARY	12.8/11.0	460/3/60	2	1.8	460/3/60	3.0	4.8	460/3/60	35	45	460/3/60	11.76	15.78	2,791	AON MODEL NO. RNA-016-C-A-3

* REFER TO SUBMITTAL FOR ALL EQUIPMENT CONSTRUCTION AND ACCESSORIES

PACKAGED ROOFTOP UNIT SCHEDULE "LENNOX" (OWNER FURNISHED/CONTRACTOR INSTALLED)																																							
DESIGNATION	SUPPLY FAN STAGE AIR VOLUMES (CFM)			OUTSIDE AIR CFM	RETURN AIR CFM	E.S.P. IN (W.C.)	RETURN AIR ("FDB"/"FWB")	OUTSIDE AIR ("FDB"/"FWB")	AIR ON COND. "FDB"	COOLING COIL			COOLING DATA - FULL CAPACITY				HOT GAS REHEAT COIL (STAGE1)			ELECTRIC HEATING				ELECTRICAL DATA						EER @ ARI	SEER @ ARI	INSTALLED UNIT WEIGHT (LBS)	MANUFACTURER MODEL & NO.						
	COOL STAGE 1	COOL STAGE 2	HEAT ALL STAGES							FACE AREA FT²	ROWS	FPI	ENT. AIR ("FDB"/"FWB")	LVG. AIR @ COIL ("FDB"/"FWB")	GROSS TOTAL CAP. (MBH)	GROSS SENSIBLE CAP. (MBH)	OUTSIDE AIR "F DB"	ENTERING AIR "F DB/ WB"	LEAVING AIR "F DB/ WB"	EAT "F"	LAT "F"	KW	STEPS	V/PH	QTY.	STAGES	RLA	V/PH	CONDENSER FANS QTY.					FLA	V/PH	MOTOR HP	FLA	V/PH	MCA
HSK-RTU-6	4,150	8,300	8,300	7,500	1,65	100	21.4	4	14	75/64	53.4/53.2	269.9	190.2	85	7,500	75/66	72.4/64	68	90.9	60	2	460/3/60	4	2	-	460/3/60	6	-	-	10.0	14.0	460/3/60	90	90	460/3/60	10.8	14.5	2,668	LENNOX MODEL NO. LCT300HSM

* REFER TO SUBMITTAL FOR ALL EQUIPMENT CONSTRUCTION AND ACCESSORIES

AIR HANDLING UNIT SCHEDULE - DIRECT EXPANSION (ORIGINAL CENTRAL KITCHEN)																	
DESIGNATION	FAN SECTION				DX COOLING COIL				UNIT DIMENSIONS			MANUFACTURER & MODEL NO.					
	SUPPLY CFM	O/A CFM	FAN HP	V/P/H	ESP IN. WG	TOTAL ESP IN. WG	ROWS	FPI	COIL FACE AREA (SQ.FT.)	ENTERING AIR ("FDB"/"FWB")	LEAVING AIR ("FDB"/"FWB")		GROSS SENSIBLE CAPACITY BTUH	GROSS TOTAL CAPACITY BTUH	LENGTH	WIDTH	HEIGHT
AHU-1	15,000	1,500	10	208/3/60	1.1	2.01	6	10	33.38	76.2/65.0	51.0/50.5	413,924	632,776	90	102	72	McQUAY CAH035GDAC_HAF_UBR_SZVAV

NOTES: (ALL NOTES APPLY)

- PROVIDE HORIZONTAL DRAW THROUGH CENTRAL STATION AHU WITH REMOVABLE FAN AND COIL SECTIONS. UNIT PHYSICAL DIMENSIONS SHALL NOT EXCEED REQUIREMENTS LISTED IN SCHEDULE. UNIT INDIVIDUAL SECTIONS SHALL FIT THROUGH A 7" WIDE BY 6"-10" HIGH DOOR OPENING.
- PROVIDE SINGLE POINT POWER CONNECTION PER NEC.
- PROVIDE DOUBLE WALL CONSTRUCTION WITH INJECTED FOAM INSULATION, MIN R-13.
- PROVIDE SERVICE ACCESS DOORS ON BOTH SIDES OF UNIT FOR AIR FILTER AND FAN SECTIONS. DOORS SHALL HAVE HANDLE OPERATED CAM LOCKS AND AIR TIGHT SEALS. FAN SECTION DOORS SHALL OPEN TOWARDS COOLING COIL SECTION.
- PROVIDE FAN SECTION WITH INTERNALLY MOUNTED AND ISOLATED BELT DRIVEN AIRFLOW FAN AND HIGH EFFICIENCY VFD RATED MOTOR.
- PROVIDE DUAL CIRCUIT FULLY INTERTWINED COPPER TUBE AND ALUMINUM FIN DIRECT EXPANSION COOLING COIL WITH STAINLESS STEEL CASINGS AND COPPER PIPE CONNECTIONS.
- PROVIDE FILTER SECTION 2 INCH THICK MERV 8 FLAT FILTERS.
- PROVIDE INSULATED STAINLESS STEEL IAQ DRAIN PAN.
- PROVIDE MAXIMUM 6 INCH BASE RAIL AROUND PERIMETER OF UNIT.
- ALTERNATE BID NO. 4 = PROVIDE FACTORY APPLIED "ELECTROFIN" EPOXY COOLING COIL ANTI-CORROSION COATING.

ABBREVIATIONS:

- H - HORIZONTAL
- AF - AIR-OIL FAN
- UBR - UP BLAST REAR
- SZVAV - SINGLE ZONE VAV

CONDENSING UNIT SCHEDULE (OWNER FURNISHED/CONTRACTOR INSTALLED) R-410A																		
DESIGNATION	AIR ON CONDENSER ("F")	SUCTION TEMP COND ("F")	TOTAL CAP BTUH	EER @ARI	ELECTRICAL DATA				MANUFACTURER & MODEL NO.	REFRIGERANT PIPING			HOT GAS PIPING QTY. SIZE (O.D.)					
					V/PH	COMPRESSORS QTY.	RLA	FANS QTY.		FLA	MOCP	LIQUID PIPING QTY. SIZE (O.D.)		SUCTION PIPING QTY. SIZE (O.D.)				
CK-ACCU-1	95	45"	637,028	10.8	208/3/60	4	56.7 EA.	6	4.2 EA.	269	300	DAIKIN RCS062D	2	1 1/8"	2	2 1/8"	2	1 3/8"

* REFER TO SUBMITTAL FOR ALL EQUIPMENT CONSTRUCTION AND ACCESSORIES

SYMBOLS AND ABBREVIATIONS

- DUCT SIZE, (FIRST OR TOP NO. INDICATES SIDE FACING VIEWER)
- DUCTWORK WITH INTERNAL INSULATION
- SUPPLY DUCT UP
- SUPPLY DUCT DOWN
- RETURN, EXHAUST, OR O/A DUCT UP
- RETURN, EXHAUST, OR O/A DUCT DOWN
- FLEXIBLE DUCT CONNECTION
- RECTANGULAR DUCT ELBOW WITH TURNING VANES
- MANUAL MULTI-LEAF VOLUME DAMPER WITH LOCKING QUADRANT
- DUCT RISE IN DIRECTION OF AIR FLOW
- DUCT DROP IN DIRECTION OF AIR FLOW
- DUCT ACCESS PANEL
- FIRE/ SMOKE DAMPER
- MOTORIZED DAMPER
- AIRFLOW METER
- DEWPOINT SENSOR (SUBSCRIPT IDENTIFIES ZONE)
- TEMPERATURE SENSOR (SUBSCRIPT IDENTIFIES ZONE)
- CARBON DIOXIDE SENSOR
- AIR HANDLING UNIT
- OUTSIDE AIR
- VARIABLE FREQUENCY DRIVE

MECHANICAL GENERAL NOTES

- THESE GENERAL NOTES APPLY TO ALL HVAC DRAWINGS.
- DUCT SIZES ARE INSIDE CLEAR DIMENSIONS. ADJUST AS NECESSARY TO ALLOW FOR LINER.
- INSULATE ALL DUCTWORK IN ACCORDANCE WITH SPECIFICATIONS.
- PROVIDE FLEXIBLE CONNECTION AT DUCT ATTACHMENTS TO EQUIPMENT AS INDICATED ON DRAWINGS.
- HVAC EQUIPMENT SUBMITTED OTHER THAN SCHEDULED MANUFACTURER'S SHALL NOT EXCEED PHYSICAL DIMENSIONS DUE TO SPACE LIMITATIONS.
- ALL PIPING AND DUCTWORK PENETRATIONS OF FIRE-RATED BARRIERS SHALL BE PROTECTED WITH FIRE BLOCKING MATERIAL PER SPECIFICATIONS.
- MANUAL VOLUME DAMPERS INSTALLED IN RECTANGULAR DUCTWORK SHALL BE OPPOSED BLADE TYPE. MANUAL VOLUME DAMPERS INSTALLED IN ROUND DUCTWORK SHALL BE BUTTERFLY TYPE.
- BALANCING DAMPERS IN EXTERNALLY INSULATED DUCTWORK SHALL BE PROVIDED WITH A BUILD-OUT ON DAMPER OPERATOR TO EXTEND OPERATOR HANDLE TO OUTSIDE OF INSULATION.
- CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID AND DETERMINE ALL EXISTING CONDITIONS WHICH MAY AFFECT HIS WORK. ANY CONDITIONS RESULTING IN ADDITIONAL WORK ARISING AFTER AWARD OF CONTRACT AND START OF CONSTRUCTION WHICH COULD HAVE BEEN AVOIDED AND/OR RESOLVED HAD THE CONTRACTOR VISITED THE SITE AND OBSERVED EXISTING CONDITIONS SHALL BE PERFORMED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
- IT IS THE INTENT OF THESE CONTRACT DOCUMENTS TO PROVIDE COMPLETE, PROPERLY ADJUSTED AND OPERABLE MECHANICAL SYSTEMS. PROVIDE ALL NECESSARY SUPERVISION, COORDINATION LABOR, MATERIALS, EQUIPMENT, FIXTURES, DRAYAGE, HOISTING, TOOLS, MACHINERY AND CONNECTIONS TO UTILITIES FOR THE INSTALLATION OF COMPLETE AND OPERABLE MECHANICAL SYSTEMS. IF DETAILS OR SPECIAL CONDITIONS ARE REQUIRED IN ADDITION TO THOSE SHOWN ON DRAWINGS, PROVIDE ALL MATERIAL AND EQUIPMENT REQUIRED TO COMPLETE THEIR INSTALLATION, WHETHER NOTED IN PLANS OR NOT.
- MECHANICAL AND ELECTRICAL CONTRACTORS SHALL COORDINATE TO ENSURE CORRECT ELECTRICAL SERVICE TO MECHANICAL EQUIPMENT. COORDINATION SHALL PRECEDE PURCHASE OF EQUIPMENT. IMMEDIATELY REPORT ALL DISCREPANCIES TO THE OWNER'S REPRESENTATIVE. ALL DISCREPANCIES FOUND AFTER THE PURCHASE OR INSTALLATION OF EQUIPMENT SHALL BE REMEDIED BY THE CONTRACTOR AT NO COST TO THE OWNER OR DESIGN PROFESSIONALS.
- CONTRACTOR SHALL MAKE HIMSELF FAMILIAR WITH OTHER TRADES WHICH DIRECTLY AFFECT CONTRACTOR'S SCOPE OF WORK.
- ALL HOLES IN CONCRETE, MASONRY, AND PLASTER SHALL BE CORE DRILLED WHEN POSSIBLE. VERIFY STRUCTURE BEFORE DRILLING. DO NOT CUT STRUCTURE OR STRUCTURAL REINFORCEMENT. IMMEDIATELY REPORT ANY DAMAGE CAUSED BY DRILLING TO THE OWNER'S REPRESENTATIVE.
- ANY DAMAGE TO BUILDING STRUCTURE SHALL BE PATCHED TO THE COMPLETE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
- CONTRACT DRAWINGS ARE DIAGRAMMATIC IN NATURE. FIELD VERIFY EXACT DIMENSIONS AND LOCATIONS OF WALLS, DOORS, AND OTHER BUILDING STRUCTURE FROM FIELD MEASUREMENTS AND LOCATE EQUIPMENT, DUCTS, PIPING, FIXTURES, ETC., AS REQUIRED AND NECESSARY. IF CHANGES FROM PLANS ARE REQUIRED, PROVIDE SKETCH TO OWNER'S REPRESENTATIVE SHOWING CHANGES FOR APPROVAL. ALTERATIONS TO THE ROUTING OF PIPING, DUCT, ETC., OR LOCATION OF EQUIPMENT, FIXTURES, ETC., SHALL BE WITHOUT COST TO THE OWNER OR DESIGN PROFESSIONALS.
- ADJUSTMENT OF MECHANICAL EQUIPMENT, DUCT WORK, AND PIPING MAY BE NECESSARY TO FIT FIELD CONDITIONS. COORDINATE WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS AND OTHER TRADES. SUCH WORK SHALL BE COMPLETED AT NO COST TO THE OWNER OR DESIGN PROFESSIONALS.
- COORDINATE ALL CEILING MOUNTED AIR DISTRIBUTION DEVICE LOCATIONS WITH CEILING PLANS.

CONDENSING UNIT SCHEDULE (ORIGINAL CENTRAL KITCHEN)																		
DESIGNATION	AIR ON CONDENSER ("F")	SUCTION TEMP COND ("F")	TOTAL CAP BTUH	EER @ARI	ELECTRICAL DATA				MANUFACTURER & MODEL NO.	REFRIGERANT PIPING			HOT GAS PIPING QTY. SIZE (O.D.)					
					V/P/H	COMPRESSORS QTY.	RLA	FANS QTY.		FLA	MOCP	LIQUID PIPING QTY. SIZE (O.D.)		SUCTION PIPING QTY. SIZE (O.D.)				
ACCU-1	96	44"	632,776	10.4	208/3/60	4	56.7 EA.	4	4 EA.	257	300	McQUAY RCS060D	2	1 1/8"	2	2 1/8"	2	1 3/8"

NOTES: (ALL NOTES ARE APPLICABLE)

- REFRIGERANT R-410A.
- REFRIGERANT PIPE SIZES SHOWN ARE FOR REFERENCE PURPOSES ONLY. CONFIRM EXACT SIZES WITH MANUFACTURER AND ADJUST AS NECESSARY. COMPLETE REFRIGERANT PIPING INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE SINGLE POINT POWER CONNECTION IN ACCORDANCE WITH NEC.
- PROVIDE UNIT WITH TWO INDEPENDENT REFRIGERATION CIRCUITS WITH TWO TANDEM SCROLL COMPRESSORS PER CIRCUIT, COMPRESSOR STARTERS, AND CONDENSER FANS WITH PVC COATED GUARD. CONDENSER COIL HAIL GUARDS, AND REFRIGERANT PIPE CONNECTS WITH REFRIGERANT ISOLATION VALVES.
- PROVIDE REFRIGERANT SIGHT GLASS AND FILTER DRIER UPSTREAM OF INDOOR COOLING COIL BEFORE THERMAL EXPANSION VALVE.
- PROVIDE WITH ADJUSTABLE SET POINT CONDENSER FAN LOW AMBIENT FAN CYCLING CONTROL.
- PROVIDE HIGH AND LOW REFRIGERANT PRESSURE SAFETY CONTROLS FOR EACH CIRCUIT.
- PROVIDE COMPRESSOR CRANK CASE HEATERS.
- PROVIDE WITH ADJUSTABLE HOT GAS BYPASS VALVES AND ONE HOT GAS BYPASS PIPE CONNECTION PER CIRCUIT. HOT GAS BYPASS VALVES SHALL MODULATE IN RESPONSE TO REFRIGERANT SUCTION PRESSURE.
- PROVIDE FACTORY APPLIED "ELECTROFIN" EPOXY CONDENSER COIL ANTI-CORROSION COATING. CONDENSER COIL SHALL HAVE ALL ALUMINUM CONSTRUCTION.
- ALTERNATE NO. 3 = COAT ENTIRE UNIT WITH ADSIL SUCH AS: COMPRESSOR, PIPING, FAN AND BLADE, CASING INSIDE AND OUT, AND THE LIKE. CONDENSER COIL SHALL NOT BE COATED WITH ADSIL AND SHALL BE COATED IN ACCORDANCE WITH NOTE 10.
- PROVIDE PHASE MONITORS FOR ALL 3-PHASE UNITS WIRED TO SHUT UNIT DOWN UPON LOSE OF PHASE OR LOW VOLTAGE OCCURRENCE. PROVIDE WEATHERPROOF CONTROL PANEL FOR ALL REQUIRED CONTACTORS, RELAYS, CONTROLS, AND POWER CONNECTIONS.
- MAINTAIN MANUFACTURER'S RECOMMENDED DISTANCE FOR MAINTENANCE.

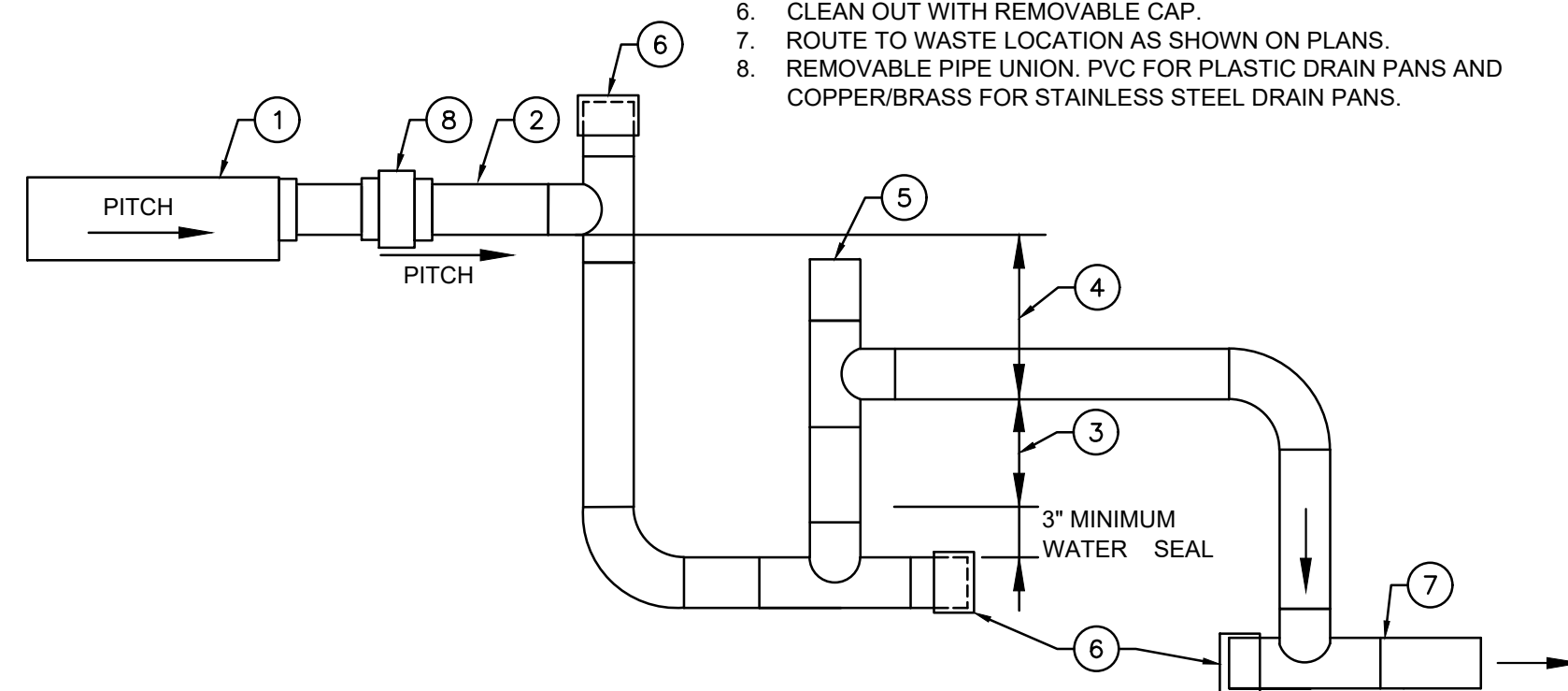
HEATING COIL SCHEDULE - HYDRONIC (ORIGINAL CENTRAL KITCHEN)												
DESIGNATION	SUPPLY CFM	HYDRONIC HEATING COIL			ROWS/FPI	COIL WATER PD FT. H ₂ O	AIR SIDE MAX PD IN. H ₂ O	GPM	COIL DIMENSIONS			MANUFACTURER & MODEL NO.
		AIR EDB/LDB	WATER EWT/LWT	TOTAL CAPACITY BTUH					LENGTH	WIDTH	HEIGHT	
HWC-1	15,000	65/80	180/120	245,628	1/12	0.4	0.33	8.2	57.6"	51"	6.0"	McQUAY SMQ1201B

NOTES: (ALL NOTES ARE APPLICABLE)

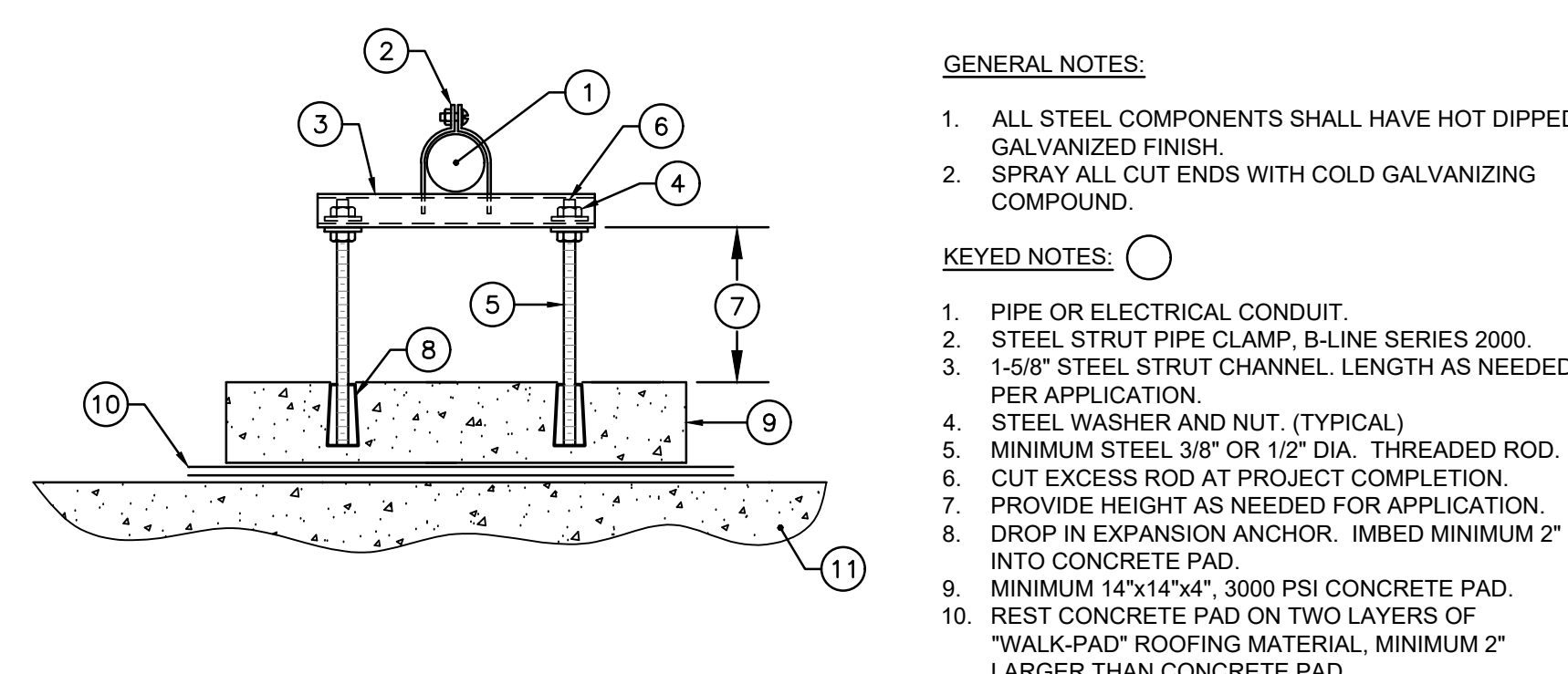
- PROVIDE DUCT MOUNTED COPPER TUBE AND ALUMINUM FIN HYDRONIC HEATING COIL WITH GALVANIZED STEEL CASINGS AND COPPER OR BRASS PIPE CONNECTIONS.
- PROVIDE COIL WITH EXTERNAL FLANGES ON ALL SIDE FOR CONNECTION TO EXTERNAL DUCTWORK. FLANGES SHALL BE DESIGNED FOR BOLT TYPE CONNECTION TO DUCTWORK.
- ALTERNATE BID NO. 4 = PROVIDE FACTORY APPLIED "ELECTROFIN" EPOXY COIL ANTI-CORROSION COATING.

KEYED NOTES:

- CONDENSATE DRAIN PAN.
- DRAIN PIPE SIZE AS SHOWN ON DRAWING OR PER MANUFACTURER'S RECOMMENDATIONS.
- THIS DIMENSION MUST BE GREATER THAN STATIC PRESSURE MEASURED AT DRAIN PAN POSITIVE OR NEGATIVE (IN W.C.).
- THIS DIMENSION MUST BE GREATER THAN 1.5 PRESSURE RECORDED BY NOTE 3.
- AIR VENT.
- CLEAN OUT WITH REMOVABLE CAP.
- ROUTE TO WASTE LOCATION AS SHOWN ON PLANS.
- REMOVABLE PIPE UNION, PVC FOR PLASTIC DRAIN PANS AND COPPER/BRASS FOR STAINLESS STEEL DRAIN PANS.



1 DETAIL - CONDENSATE DRAIN TRAP
ME6 SCALE: NOT TO SCALE



GENERAL NOTES:

- ALL STEEL COMPONENTS SHALL HAVE HOT DIPPED GALVANIZED FINISH.
- SPRAY ALL CUT ENDS WITH COLD GALVANIZING COMPOUND.

KEYED NOTES:

- PIPE OR ELECTRICAL CONDUIT.
- STEEL STRUT PIPE CLAMP, B-LINE SERIES 2000.
- 1-5/8" STEEL STRUT CHANNEL, LENGTH AS NEEDED PER APPLICATION.
- STEEL WASHER AND NUT, (TYPICAL).
- MINIMUM STEEL 3/8" OR 1/2" DIA. THREADED ROD.
- CUT EXCESS ROD AT PROJECT COMPLETION.
- PROVIDE HEIGHT AS NEEDED FOR APPLICATION.
- DROP-IN EXPANSION ANCHOR. IMBED MINIMUM 2" INTO CONCRETE PAD.
- MINIMUM 14"x14"x4", 3000 PSI CONCRETE PAD.
- REST CONCRETE PAD ON TWO LAYERS OF "WALK-PAD" ROOFING MATERIAL, MINIMUM 2" LARGER THAN CONCRETE PAD.
- EXISTING ROOF DECK.

2 DETAIL - ROOF PIPE SUPPORT
ME6 SCALE: NOT TO SCALE

No. Revision/Issue Date

Project Name and Address
FBISD CENTRAL KITCHEN, HS KITCHEN AND JR. HIGH GYM HVAC EQUIPMENT REPLACEMENTS - 2024/2025
FLOUR BLUFF INDEPENDANT SCHOOL DISTRICT
WALDRON ROAD
 CORPUS CHRISTI, TEXAS 78418

Sheet No.
SCHEDULES, NOTES AND DETAILS

11/05/2024

STRIDDE, CALLINS & ASSOCIATES INC.
 CONSULTING ENGINEERS
 MECHANICAL ELECTRICAL
 (361) 883-9199
 Fax (361) 883-9177
 342 S. Navigation Blvd.
 Corpus Christi, TX 78405-3615
 Registration # F-006328

Code Review

- 2021 INTERNATIONAL MECHANICAL CODE
- 2020 NEC
- 2021 INTERNATIONAL ENERGY CONSERVATION CODE - PRESCRIPTIVE COMPLIANCE PATH

11/05/2024

JAMES M. MEREDITH
 00145
 100% AS
 100% AS
 11/05/2024

Project # 2024170 Sheet No.
 Date 11/05/2024
 Drawn By JM
 Chkd By JM
 Scale AS NOTED Sheet
 Cnd File 24104865 7 of 7

ME6