 <p>Invitation for Bids Amendment #2</p>	Solicitation Number	TCTC-22-Wilson RTU's
	Date Issued	5/12/2022
	Procurement Officer	Matt Whitten
	Phone	(864) 646-1633
	E-Mail Address	mwhitten@tctc.edu

DESCRIPTION: **This solicitation is for the purchase and installation of 3 HVAC Roof Top Units.**

USING GOVERNMENTAL UNIT: **Tri-County Technical College**

*The Term "Offer" Means Your "Bid" or "Proposal". Your offer must be submitted in a sealed package. Solicitation Number & Opening Date must appear on package exterior. See "Submitting Your Paper Offer or Modification" provision.*

SUBMIT YOUR SEALED OFFER TO EITHER OF THE FOLLOWING ADDRESSES:

<b>MAILING ADDRESS:</b> TRI-COUNTY TECHNICAL COLLEGE PURCHASING OFFICE PO Box 587 Pendleton SC 29670-8876	<b>PHYSICAL ADDRESS:</b> TRI-COUNTY TECHNICAL COLLEGE PURCHASING OFFICE – RH 280 7900 Highway 76 Pendleton SC 29670-8876
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SUBMIT OFFER BY (Opening Date/Time): **6/8/2022 2:00 PM** (See "Deadline For Submission Of Offer" provision)

QUESTIONS MUST BE RECEIVED BY: **5/20/2022 10:00 AM** (See "Questions From Offerors" provision)

NUMBER OF COPIES TO BE SUBMITTED: **One (1) Original in Hardcopy and One Copy (Marked Copy).**

<b>CONFERENCE TYPE:</b> Pre-Bid – Non-Mandatory <b>DATE &amp; TIME:</b> 5/19/2022 11AM EST. <small>(As appropriate, see "Conferences - Pre-Bid/Proposal" &amp; "Site Visit" provisions)</small>	<b>LOCATION:</b> Tri-County Technical College Physical Plant Conference Room 7900 Highway 76 Pendleton SC 29670-8876
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<b>AWARD &amp; AMENDMENTS</b>	Award will be posted at <a href="http://www.tctc.edu/Content/About_TCTC/PurchasingSolicitation/Award_Postings.xml">http://www.tctc.edu/Content/About_TCTC/PurchasingSolicitation/Award_Postings.xml</a> on or around <b>6/10/2022.</b> The award, this solicitation, and any amendments will also be posted on the website above.
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You must submit a signed copy of this form with Your Offer. By signing, You agree to be bound by the terms of the Solicitation. You agree to hold Your Offer open for a minimum of thirty (30) calendar days after the Opening Date. (See "Signing Your Offer" provision.)

<b>NAME OF OFFEROR</b>  <small>(full legal name of business submitting the offer)</small>	Any award issued will be issued to, and the contract will be formed with, the entity identified as the Offeror. The entity named as the offeror must be a single and distinct legal entity. Do not use the name of a branch office or a division of a larger entity if the branch or division is not a separate legal entity, i.e., a separate corporation, partnership, sole proprietorship, etc.
<b>AUTHORIZED SIGNATURE</b>  <small>(Person must be authorized to submit binding offer to contract on behalf of Offeror.)</small>	<b>DATE SIGNED</b>
<b>TITLE</b>  <small>(business title of person signing above)</small>	<b>STATE VENDOR NO.</b>  <small>(Register to Obtain S.C. Vendor No. at <a href="http://www.procurement.sc.gov">www.procurement.sc.gov</a>)</small>
<b>PRINTED NAME</b>  <small>(printed name of person signing above)</small>	<b>STATE OF INCORPORATION</b>  <small>(If you are a corporation, identify the state of incorporation.)</small>

OFFEROR'S TYPE OF ENTITY: (Check one) (See "Signing Your Offer" provision.)

Sole Proprietorship       Partnership       Other \_\_\_\_\_  
 Corporate entity (not tax-exempt)       Corporation (tax-exempt)       Government entity (federal, state, or local)



Amendment #2 – Posted 5/31/2022

TCTC-22-Wilson RTU's  
Notice of Bid Deadline Extension and additional requirements

**Bid Deadline Extended Until 6/8/2022 @ 2:00 PM**

The bid due date has been extended due to the revisions listed below and detailed by the accompanying drawing schedule to allow more time for vendors to create their bid. Bids are due no later than 6/8/2022 @ 2:00 PM.

## Scope Modifications

### **Revised BAC NET Requirement:**

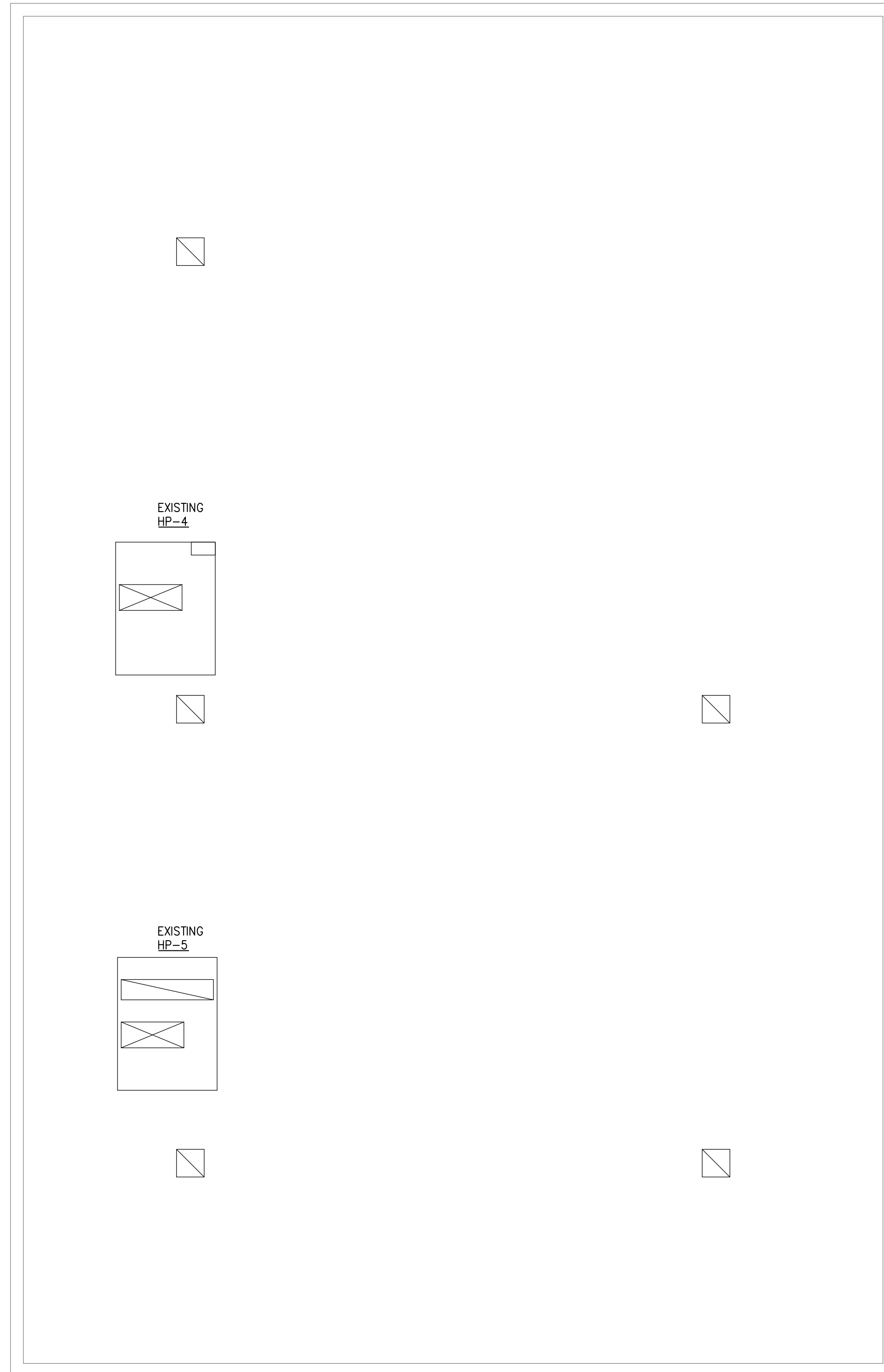
Note that the BAC NET card has been removed from the units and must be connected and interlocked with the existing Automated Logic Building Controls System.

### **Installation Window Requirement:**

In response to market conditions that are unlikely to favor equipment delivery that meets our original installation window of December 7 – January 6, the installation timeframe will be negotiated with the successful low bidder and based on equipment availability from the supplier.

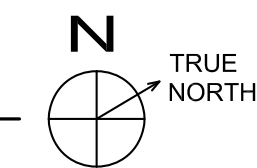
This amendment includes the updated drawings below.

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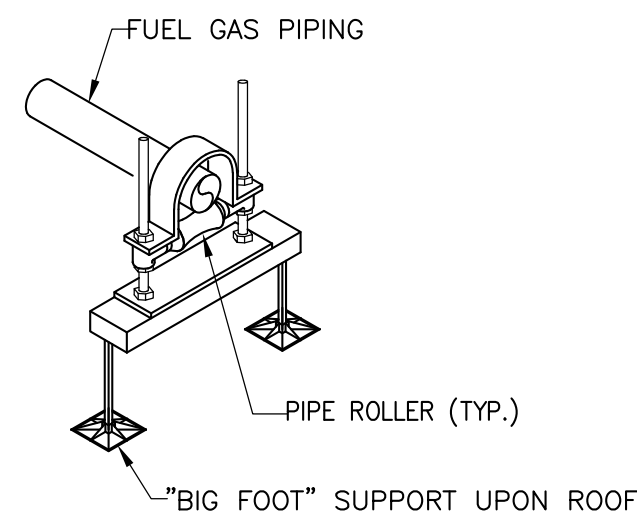


**HVAC ROOF PLAN**

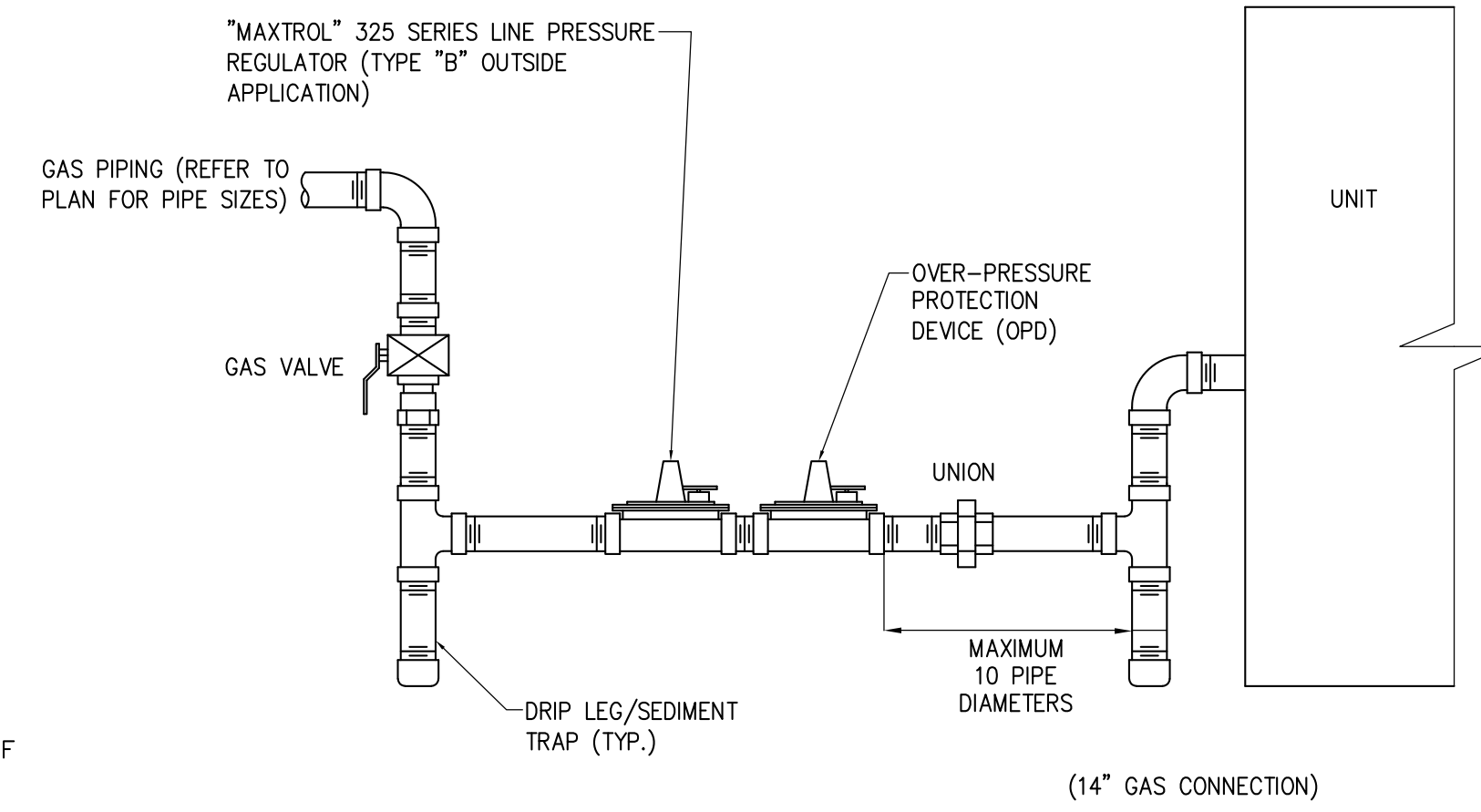
1/8" = 1'-0"



**ABOVE ROOF FUEL GAS PIPING SUPPORT DETAIL**  
NO SCALE  
TYPICAL EVERY 8'-0"

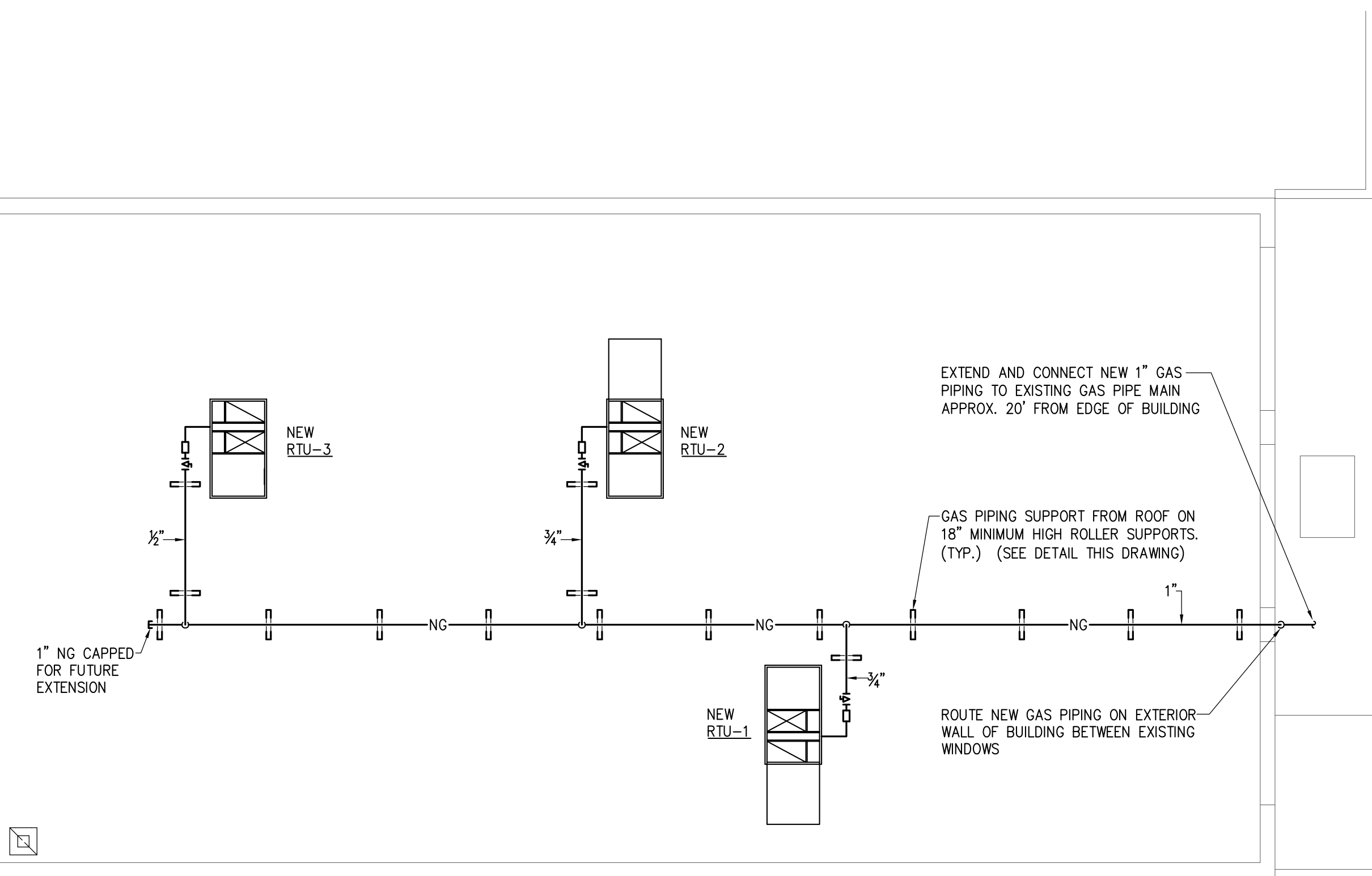


**GAS PIPING CONNECTION DETAIL - RTU-1 THRU RTU-3**  
NO SCALE



NATURAL GAS LOAD SCHEDULE	
UNIT No.	MBH INPUT
RTU-1	120.0
RTU-2	120.0
RTU-3	60.0
FUTURE RTU-4	250.0
FUTURE RTU-5	250.0
<b>TOTAL</b>	<b>800.0</b>

GAS PIPE SIZING BASED UPON 5 PSIG SERVICE DELIVERY PRESSURE FROM UTILITY AND 300 FT. EQUIVALENT LENGTH.

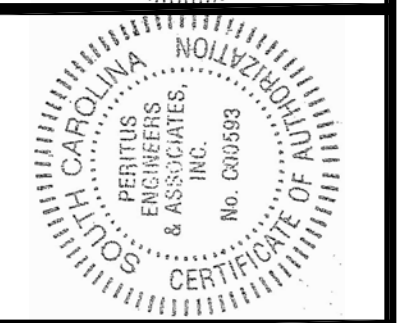
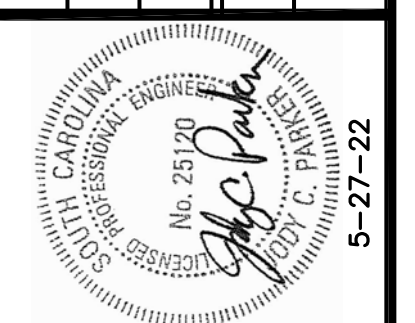


GAS FIRED A/C UNIT WITH HOT GAS REHEAT/ "BOLT ON" ENERGY RECOVERY VENTILATOR UNIT SCHEDULE																																									
UNIT No.	NOMINAL TONNAGE	TRANE MODEL No.	C.F.M.		MAX. E.S.P. INCHES	FAN H.P.	E.E.R.	VOLTAGE	COOLING DATA			HEATING DATA			HOT GAS REHEAT DATA				ELECTRICAL DATA			ENERGY RECOVERY MODULE							REMARKS												
			TOTAL	O/A					TOTAL MBH	ENT. AIR DB°F	WB°F	INPUT MBH	OUTPUT MBH	STAGES	ENT. AIR DB°F	WB°F	LVG. AIR DB°F	REHEAT MBH	M.C.A.	M.F.S.	VOLTAGE	UNIT NO.	SEMCO MODEL NO.	SUPPLY C.F.M.	EXHAUST C.F.M.	SUPPLY FAN H.P.	EXHAUST FAN H.P.	RECOVERED ENERGY (MBH) SUMMER			RECOVERED ENERGY (MBH) WINTER			M.C.A.	M.O.P.	VOLTAGE					
RTU-1	7.5	YHC092F4	3000	900	0.75	2.75	12.6	460/3/60	92.0	80.0	67.0	120.0	96.0	1	58.8	57.1	80.4	56.0	70.2	20.0	25	460/3/60	ERV-1	SP-2000	900	900	0.75	0.75	44.6	95.0/78.0	79.3/65.9	77.0	0.0/-1.0	56.6/48.2	3.9	15	460/3/60	1-10, 13			
RTU-2	7.5	YHC092F4	3000	900	0.75	2.75	12.6	460/3/60	92.0	80.0	67.0	120.0	96.0	1	58.8	57.1	80.4	56.0	70.2	20.0	25	460/3/60	ERV-2	SP-2000	900	900	0.75	0.75	44.6	95.0/78.0	79.3/65.9	77.0	0.0/-1.0	56.6/48.2	3.9	15	460/3/60	1-10, 13			
RTU-3	5	YHC060E4	2000	500	0.75	1.0	11.9	460/3/60	63.5	80.0	67.0	60.0	49.0	1	58.1	56.7	75.7	55.8	38.2	12.0	15	460/3/60	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1-4, 6, 8-13

**NOTES:**

- PROVIDE WITH ADAPTER CURB.
- FIVE YEAR COMPRESSOR AND GAS HEAT EXCHANGER WARRANTY.
- 2" THROW AWAY FILTERS (HINGED FILTER ACCESS PANELS), MERV 8 FILTERS.
- DISCONNECTS BY ELECTRICAL.
- OUTSIDE AIR DAMPER WITH ACTUATOR ON ERV UNIT.
- MANUFACTURER'S START-UP SERVICE AND FIRST YEAR LABOR WARRANTY.
- COMMON PLATFORM MOUNTING CURB, 12" HIGH MINIMUM.
- BELT DRIVE SUPPLY FAN MOTOR.
- HOT GAS REHEAT.
- HAIL GUARD SCREENS.
- ENTHALPY CONTROLLED OUTSIDE AIR ECONOMIZER.
- POWERED EXHAUST FAN.

NO.	DATE	BY	DESCRIPTION
2	5-27-22	SEM	DRAWING CLARIFICATION
0	5-3-22	SEM	ISSUED FOR BID



ROOFTOP UNIT REPLACEMENTS FOR WILSON HALL CLASSROOM AREAS  
PENDLETON, SOUTH CAROLINA

DESIGN SEM	DRAWN TCM
CHECKED JCP	
DATE 5-27-22	
JOB NO.	



# MECHANICAL SPECIFICATIONS

## MECHANICAL GENERAL PROVISIONS

### COORDINATION OF MECHANICAL WORK:

GENERAL: IT IS RECOGNIZED THAT THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC IN SHOWING CERTAIN PHYSICAL RELATIONSHIPS WHICH MUST BE ESTABLISHED WITHIN THE MECHANICAL WORK, AND IN ITS INTERFACE WITH OTHER WORK INCLUDING UTILITIES AND ELECTRICAL WORK, AND THAT SUCH ESTABLISHMENT IS THE EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR.

### QUALITY ASSURANCE, STANDARDS AND SYMBOLS:

GENERAL: THE FOLLOWING STANDARDS ARE IMPOSED, AS APPLICABLE TO THE WORK IN EACH INSTANCE:  
 INTERNATIONAL BUILDING CODE (IBC), 2018 EDITION  
 NFPA CODE  
 INTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2009 EDITION  
 INTERNATIONAL MECHANICAL CODE (IMC) 2018 EDITION  
 NATIONAL ELECTRICAL CODE, NFPA 70

### ELECTRICAL PROVISIONS OF MECHANICAL WORK:

WIRING: THE CONTRACTOR IS RESPONSIBLE FOR ALL CONTROL WIRING. ALL CONTROL WIRING SHALL BE IN CONDUIT.

### SYSTEMS INSULATION

#### DESCRIPTION:

#### DUCTWORK:

EXTENT OF INSULATION WORK IS INDICATED AS DESCRIBED HEREIN. IN GENERAL, THE WORK TO INCLUDE INSULATING ALL NEW SUPPLY/RETURN DUCT THAT CONNECTS TO HVAC EQUIPMENT.

DUCT INSULATION SHALL COMPLY WITH PARAGRAPH 803.2.8 IN THE 2009 INTERNATIONAL ENERGY CONSERVATION CODE.

DUCTWORK SHALL BE INSULATED WITH 2" THICK TYPE OWENS CORNING FRK-25 SERIES ED150 DUCT WRAP (1.5 PCF). SEAL INSULATION JOINTS WITH FIRE RETARDANT MASTIC.

#### DUCTWORK

ALL SHEET METAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS STIPULATED IN THE CURRENT ISSUE OF NFPA PAMPHLET NO. 90.

SHEET METAL CONSTRUCTION: DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED STEEL. GAUGES (U.S. STANDARDS) OF METAL WHICH SHALL BE USED, TOGETHER WITH THE TYPE OF JOINTS AND METHODS OF STIFFENING AND BRACING FOR VARIOUS SIZE DUCTS SHALL BE AS FOLLOWS:

FABRICATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA HVAC DUCT CONSTRUCTION STANDARDS FOR THE CLASS AND STATIC PRESSURES REQUIRED.

ALL DUCTS SHALL HAVE ALL SEAMS AND JOINTS SEALED AIRTIGHT WITH UNITED SHEET METAL SEALER TO BE APPLIED AS PER MFG. BULLETIN DS-3. NO DUCT TAPE WILL BE ALLOWED.

DUCT HANGERS AND SUPPORTS: SHALL BE EITHER STRAP HANGERS OR TRAPEZE HANGERS PROPERLY SECURED TO THE BUILDING CONSTRUCTION. STRAP HANGERS, METAL ATTACHED TO DUCTS, SHALL BE FASTENED TO SUPPORTING MEMBER BY CLAMPS, ANCHOR BOLTS, OR METAL SCREWS WHICHEVER IS MOST APPLICABLE.

### FUEL GAS PIPING AND EQUIPMENT

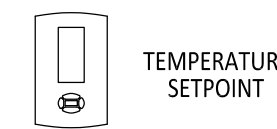
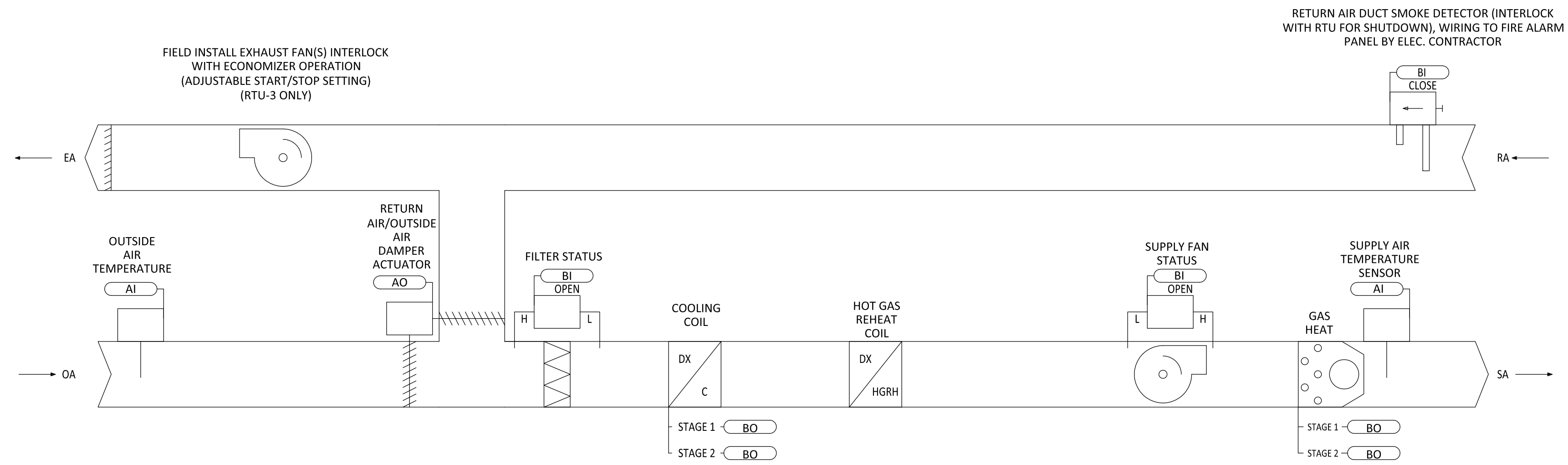
COMPLY WITH APPLICABLE PROVISIONS OF "NATIONAL FUEL GAS CODE", ANSI Z 223.1 (NFPA STANDARD NO. 54). PIPE SIZE 2" AND SMALLER: BLACK STEEL PIPE, SCHEDULE 40, SOCKET WELDED JOINTS AND FITTINGS. PIPING LOCATED OUTDOORS SHALL RECEIVE 2 COATS OF RUST PREVENTATIVE PAINT.

### BUILDING AUTOMATION:

NEW ROOFTOP UNITS SHALL CONNECT AND INTERLOCK TO EXISTING "AUTOMATED LOGIC" BUILDING AUTOMATION SYSTEM, INCLUDING REQUIRED SHUTDOWN INTERLOCK WIRING FROM SMOKE DETECTOR, TEMPERATURE, AND HUMIDITY SENSOR WIRING. IN ADDITION, CONTROLS SUBCONTRACTOR SHALL PROVIDE AND INSTALL "DDC" CONTROLLER, SENSORS, AND END DEVICES OVER-LAYED ON ROOF TOP UNITS TO CONNECT TO EXISTING "AUTOMATED LOGIC" SYSTEM.

### TEST AND BALANCE

PROVIDE INDEPENDENT NEBB CERTIFIED TEST AND BALANCE AGENCY TO PERFORM HVAC AIR BALANCE OF THE FOLLOWING SYSTEMS:  
 RTU-1 THRU 3. TEST AND ADJUST TO DESIGN SUPPLY, RETURN, AND OUTSIDE AIRFLOWS.



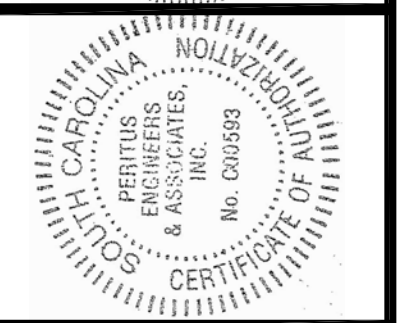
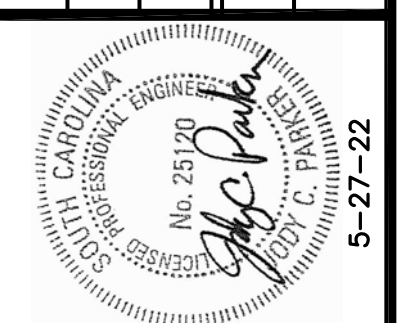
## RTU-3 CONTROLS SCHEMATIC (SINGLE ZONE CONSTANT VOLUME WITH HOT GAS REHEAT)

NO SCALE

SIMILAR FOR RTU-1/RTU-2 EXCEPT WITH ENERGY RECOVERY OPTION INTERLOCK

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DRAWING CLARIFICATION		DRAWING CLARIFICATION		ISSUED FOR BID		DESCRIPTION	
SEM	5-27-22	SEM	5-19-22	SEM	5-3-22	BY	DATE
2	1	0	NO	NO	NO	NO	NO



ROOFTOP UNIT REPLACEMENTS FOR WILSON HALL CLASSROOM AREAS  
 PENDLETON, SOUTH CAROLINA

DESIGN	SEM	DRAWN	TCM
CHECKED	JCP	DATE	5-27-22
JOB NO.			
SHEET	M-3		
3 OF 3 SHEETS			