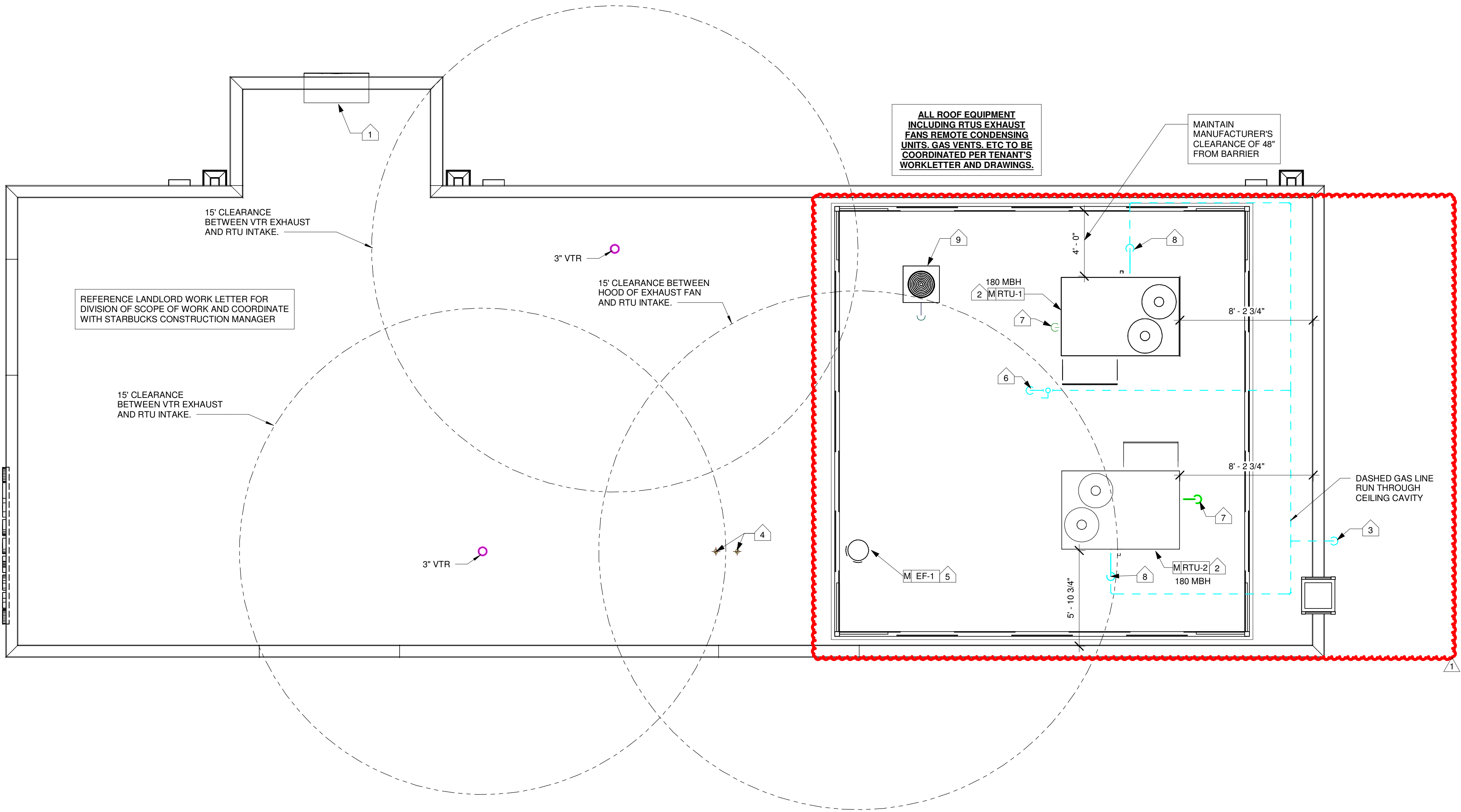


C:\Users\CTW\Documents\30786 - Pentbroke - R23 - MEP_CTWPL6T8.rvt

1 ROOF PLAN

Scale: 1/4" = 1'-0"



GENERAL PLAN NOTES

ALL HVAC UNITS TO BE INSTALLED BY TENANT, TENANT DRAWINGS TO DICTATE FINAL HVAC UNIT SPECIFICATIONS.

COORDINATE FINAL LOCATIONS WITH TENANT DOCUMENTS.

EXHAUST FAN AND ACCESSORIES BY LANDLORD:
ROOFTOP EXHAUST FAN, CURB, AND BACKDRAFT DAMPER.

MECHANICAL PLAN NOTES

- SERVICE WINDOW AIR CURTAIN, COORDINATE EXACT TYPE, MANUFACTURER, AND LOCATION WITH TENANT CONSTRUCTION DOCUMENTS.
- CARRIER 48FC 10 TON, 878 LBS OPERATING WEIGHT.
- GAS PIPING FROM METER UP WALL BELOW ROOF STRUCTURE. MIN. 1 1/2" GAS DOWN TO EXISTING GAS METER. PIPES ARE SIZED FOR LOW PRESSURE WITH A MAX PRESSURE DROP OF 0.3" W.C. AND AN APPROXIMATE TOTAL CONNECTED LOAD OF 758 MBH. VERIFY EXACT LOCATION, PRESSURE AND CONNECTION REQUIREMENTS WITH LOCAL GAS COMPANY.
- WATER HEATER CONCENTRIC VENT ROOF TERMINATION. INSTALL PER MANUFACTURERS GUIDELINES. LOCATION TO BE DETERMINED BY TENANT DRAWINGS.
- EXHAUST FAN AND DUCT BY LL. EXHAUST FAN ROOF PENETRATION. SIZE AND LOCATION TO BE DETERMINED BY TENANT DRAWINGS. REF 3/M2.0.
- PROVIDE 1-1/2" GAS PIPING WITH BALL VALVE FOR CONNECTION TO FUTURE WATER HEATER(S). LOCATION TO BE DETERMINED BY TENANT DRAWINGS.
- PROVIDE PVC P-TRAP FOR CONDENSATE. SIZE P-TRAP EQUAL TO CONNECTION SIZE. PROVIDE SECONDARY DRAIN PAN AND / OR OVERFLOW KILL SWITCH. EXTEND CONDENSATE LINE TO NEAREST APPROVED RECEPTOR TO TERMINATE PER LOCAL AHJ. TYPICAL.
- GAS PIPING UP THRU ROOF. PROVIDE SHUT-OFF VALVE, DIRT LEG AND UNION.
- REMOTE ICE MACHINE CONDENSER ON ROOF BY STARBUCKS. FOR REFERENCE ONLY. REF 1/M2.0

SYMBOL LEGEND

	ELBOW DOWN
	WALL CLEANOUT
	PIPE CAP
	ELBOW UP
	TEE, OUTLET UP
	TEE, OUTLET DOWN
	CHECK VALVE
	SHUTOFF VALVE
	PRESSURE REDUCING VALVE (SETTING AS NOTED, PSI)
	BALL VALVE
	BUTTERFLY VALVE
	REDUCED PRESSURE ZONE BACK FLOW PREVENTER
	SOLENOID VALVE
	GAS PRESSURE REGULATOR VALVE
	PIPE UNION
	SHOCK ABSORBER
	ELBOW
	FLOOR DRAIN
	FLOOR SINK
	WALL HYDRANT
	HOSE BIBB
	FLOOR CLEANOUT
	GAS COCK VALVE
	POINT OF CONNECTION, NEW TO EXISTING
	POINT OF DISCONNECTION



Joshua B. Clyde
P.E.

SUITE 5968 479-635-5004
1805 N 2ND ST JO8 NO.: 30786
ROGERS, AR 72756 DESIGNED BY: JBC/D

MOUNT OAK
CAPITAL, LLC

500 6TH STREET
SAN ANTONIO, TX 78215

STARBUCKS
SHELL

503 WEST THIRD ST.
PEMBROKE, NC 28372

REVIEW SET

10/31/23

23331

NO.	DESCRIPTION	DATE
1	REVISION 1	11/16/23

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MECHANICAL
DESIGN PLAN

M101



COMcheck Software Version COMcheckWeb
Mechanical Compliance Certificate

Project Information

Energy Code: 90.1 (2013) Standard
Project Title: 503 WEST THIRD ST. PEMBROKE
Location: Pembroke, North Carolina
Climate Zone: 3a
Project Type: New Construction

Construction Site: 503 WEST THIRD ST.
PEMBROKE, North Carolina 28372
Owner/Agent: Starbucks Coffee Company
2401 Utah Avenue South
Seattle, Washington 98134
206.318.1575
Designer/Contractor: Josh B. Clyde
1805 N 2nd St.
Rogers, Arkansas 72756
479.636.5004
jos@teamofchoice.com

Mechanical Systems List

QuantitySystem Type & Description

1 RTU 1 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 148 kBtu/h
Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et (or 78% AFUE)
Cooling: 1 each - Single Package DX Unit, Capacity = 118 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 11.00 IEER, Required Efficiency = 11.00 IEER
Proposed Part Load Efficiency = 15.00 IEER, Required Part Load Efficiency = 12.70 IEER
1 RTU 2 (Single Zone):
Heating: 1 each - Central Furnace, Gas, Capacity = 148 kBtu/h
Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00 % Et (or 78% AFUE)
Cooling: 1 each - Single Package DX Unit, Capacity = 118 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 11.00 IEER, Required Efficiency = 11.00 IEER
Proposed Part Load Efficiency = 15.00 IEER, Required Part Load Efficiency = 12.70 IEER

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2013) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

Project Title: 503 WEST THIRD ST. PEMBROKE
Data filename: Report date: 10/31/23
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Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.1.4, 6.4.1.5 [ME1] ¹	HVAC equipment efficiency verified. Non-NAECA HVAC equipment labeled as meeting 90.1.	Efficiency: ____	Efficiency: ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Mechanical Systems list for values.
6.4.3.4.1 [ME3] ¹	Stair and elevator shaft vents have motorized dampers that automatically close.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.4.3.4.5 [ME39] ¹	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.4.3.4.4 [ME5] ¹	Ventilation fans >0.75 hp have automatic controls to shut off fan when not required.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.4.3.8 [ME6] ¹	Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.5.3.2.1 [ME40] ¹	DX cooling systems >= 75 kBtu/h (>= 65 kBtu/h effective 1/2016) and chilled-water and evaporative cooling fan motor hp >= 1/2 designed to vary indoor fan airflow as a function of load and comply with operational requirements.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. See the Mechanical Systems list for values.
6.4.4.1.1 [ME7] ¹	Insulation exposed to weather protected from damage. Insulation outside of the conditioned space and associated with cooling systems is vapor retardant.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.4.4.1.2 [ME8] ¹	HVAC ducts and plenums insulated. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation Inspection.	R-____	R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.4.4.1.3 [ME9] ¹	HVAC piping insulation thickness. Where piping is installed in or under a slab, verification may need to occur during Foundation Inspection.	____ in.	____ in.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.4.4.1.4 [ME41] ¹	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.4.4.2.1 [ME10] ²	Ducts and plenums sealed based on static pressure and location.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

1 | High Impact (Tier 1) 2 | Medium Impact (Tier 2) 3 | Low Impact (Tier 3)
Project Title: 503 WEST THIRD ST. PEMBROKE
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COMcheck Software Version COMcheckWeb
Inspection Checklist

Energy Code: 90.1 (2013) Standard

Requirements: 100.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
4.2.2, 6.4.4.2.1, 6.7.2 [PR2] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
4.2.2, 8.4.1.1, 8.4.1.2, 8.7 [PR6] ²	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder connectors sized in accordance with approved plans and branch circuits sized for maximum drop of 3%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.7.2.4 [PR5] ¹	Detailed instructions for HVAC systems commissioning included on the plans or specifications for projects >=50,000 ft2.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 | High Impact (Tier 1) 2 | Medium Impact (Tier 2) 3 | Low Impact (Tier 3)
Project Title: 503 WEST THIRD ST. PEMBROKE
Data filename: Report date: 10/31/23
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Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.4.2.2 [ME11] ¹	Ductwork operating >3 in. water column requires air leakage testing.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.5.2.3 [ME19] ¹	Dehumidification controls provided to prevent reheating, recooling, mixing of hot and cold airstreams or concurrent heating and cooling of the same airstream.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.5.2.4.1 [ME68] ¹	Humidifiers with airstream mounted preheating jackets have preheat auto-shutoff value set to activate when humidification is not required.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.5.2.4.2 [ME69] ¹	Humidification system dispersion tube hot surfaces in the airstreams of ducts or air-handling units insulated >= R-0.5.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.5.2.5 [ME70] ¹	Preheat coils controlled to stop heat output whenever mechanical cooling, including economizer operation, is active.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.5.3.3 [ME42] ¹	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met. See the Mechanical Systems list for values.
6.5.4.2 [ME25] ¹	HVAC pumping systems >10 hp designed for variable fluid flow.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.5.6.1 [ME56] ¹	Exhaust air energy recovery on systems meeting Tables 6.5.6.1-1, and 6.5.6.1-2.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.5.7.1.1 [ME32] ²	Kitchen hoods >5,000 cfm have make up air >=50% of exhaust air volume.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.5.7.1.5 [ME49] ¹	Approved field test used to evaluate design air flow rates and demonstrate proper capture and containment of kitchen exhaust systems.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.5.8.1 [ME34] ¹	Unenclosed spaces that are heated use only radiant heat.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.5.9 [ME35] ¹	Hot gas bypass limited to: <=240 kBtu/h - 15% >240 kBtu/h - 10%			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

1 | High Impact (Tier 1) 2 | Medium Impact (Tier 2) 3 | Low Impact (Tier 3)
Project Title: 503 WEST THIRD ST. PEMBROKE
Data filename: Report date: 10/31/23
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Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
6.4.3.7 [F09] ¹	Freeze protection and snow/ice melting system sensors for future connection to controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 | High Impact (Tier 1) 2 | Medium Impact (Tier 2) 3 | Low Impact (Tier 3)
Project Title: 503 WEST THIRD ST. PEMBROKE
Data filename: Report date: 10/31/23
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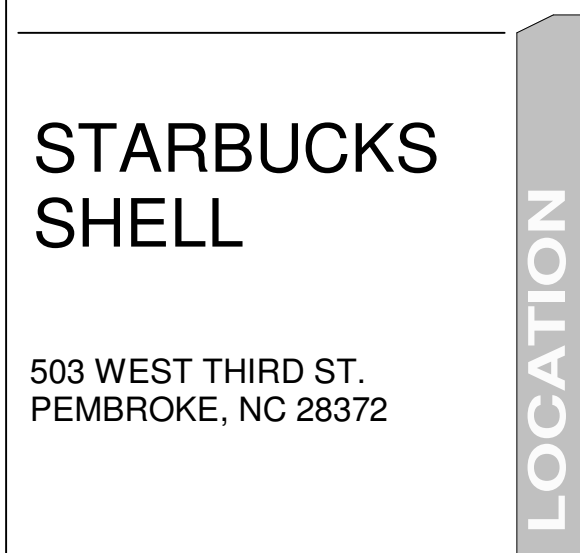
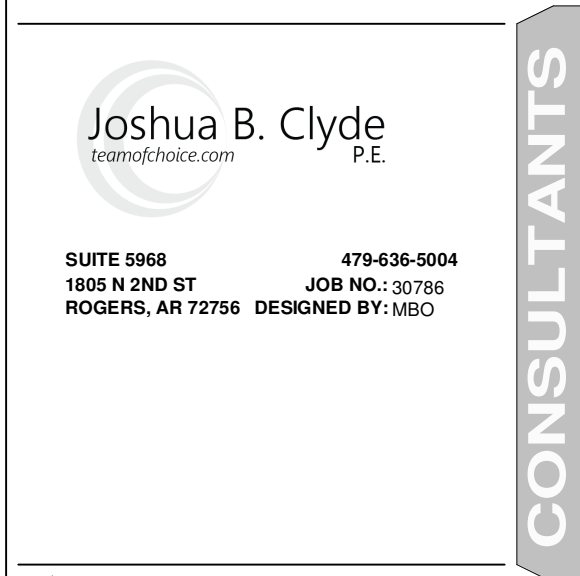
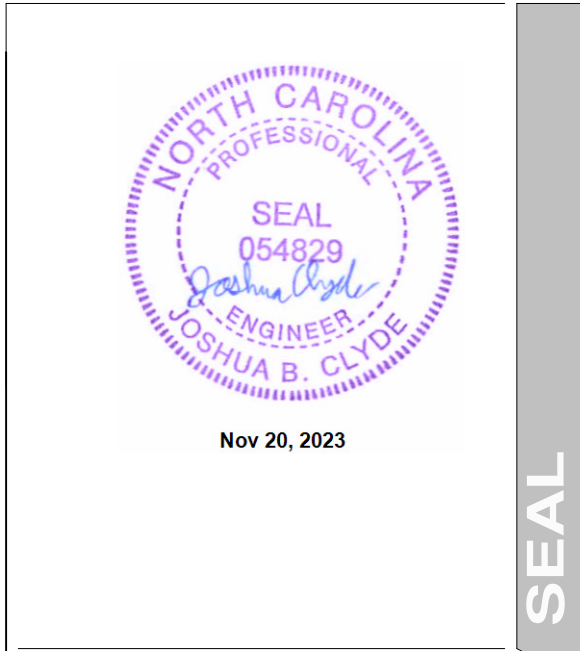
Section # & Req.ID	Mechanical Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
6.4.3.9 [ME63] ¹	Heating for vestibules and air curtains include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating systems controlled by a thermostat in the vestibule with setpoint <= 60F.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
6.5.10 [ME73] ¹	Doors separating conditioned space from the outdoors have controls that disable/reset heating and cooling system when open.			<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 | High Impact (Tier 1) 2 | Medium Impact (Tier 2) 3 | Low Impact (Tier 3)
Project Title: 503 WEST THIRD ST. PEMBROKE
Data filename: Report date: 10/31/23
Page 6 of 8



ARCHITECTURE 2948 SIDCO DRIVE
PLANNING NASHVILLE, TN 37204
ENGINEERING (p) 615.244.8170
GRAPHICS (f) 615.244.8141
www.mjmarch.com



REVIEW SET
10/31/23
23331

NO.	DESCRIPTION	DATE
1	REVISION 1	11/16/23

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ENERGY COMPLIANCE

M102

SHEET

SEAL

CONSULTANTS

OWNER

LOCATION

DATE

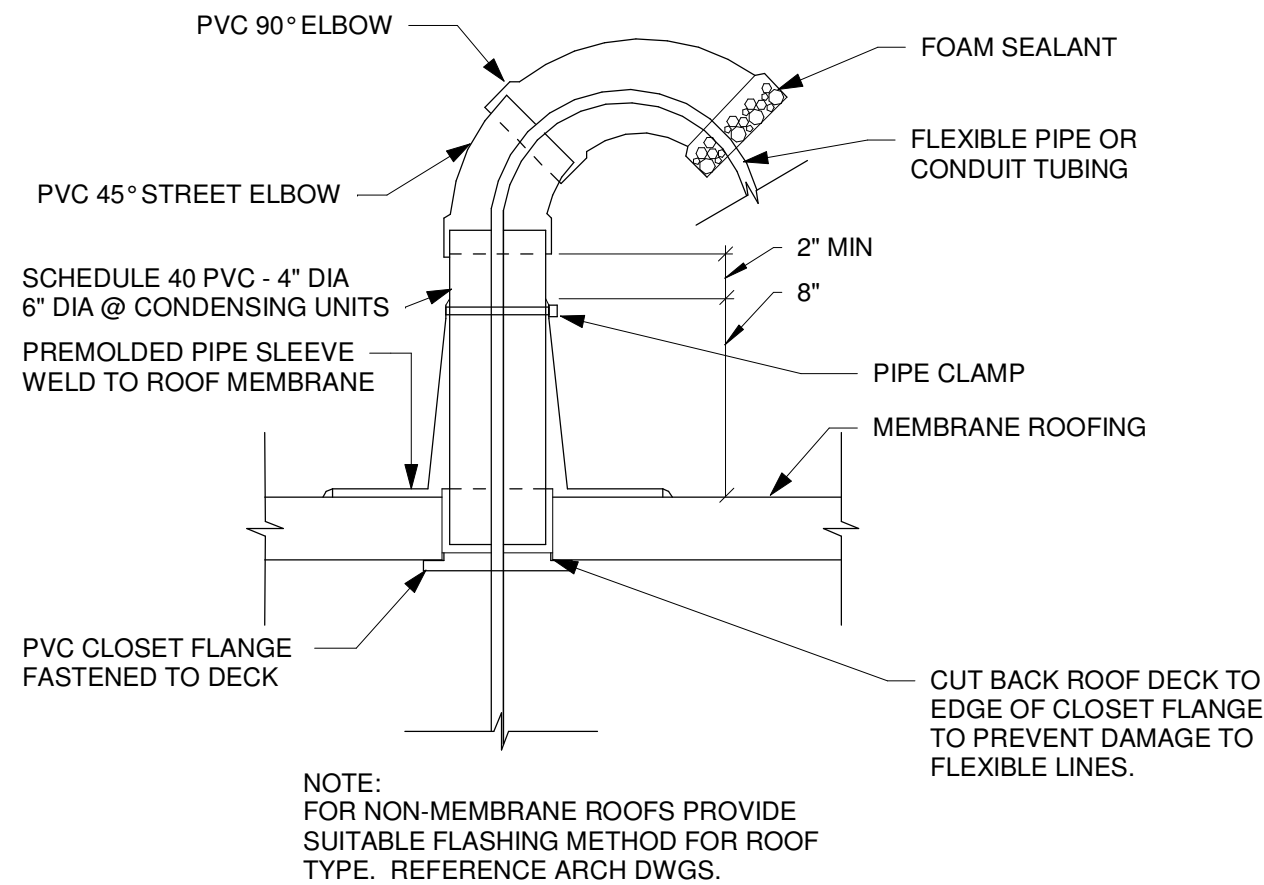
REVISIONS

ROOF TOP UNIT (RTU) SCHEDULE

DESIGN ID	SERVES	NOMINAL TONS	MANUFACTURER	MODEL	CFM	OUTSIDE AIR		ESP	COOLING CAPACITY			HEATING CAPACITY		IEER	EER	HP	VOLTAGES	MCA	MOCP	WEIGHT - LBS	NOTES
						DESIGN MIN	DCV MIN		TOTAL SENSIBLE - MBH	EDB	EWB	GAS INPUT	GAS OUTPUT								
RTU-1	ENGINE / WORKROOM	10	CARRIER	48FCND12	4000	TBD	TBD	1.00 in-wg	TBD	80	67	180	148	15.0	11.0		208 / 3 / 60	60	70	878	1,2,3,4,5,6,7,8,9,10,11
RTU-2	SEATING / CAFE	10	CARRIER	48FCND12	4000	TBD	TBD	1.00 in-wg	TBD	80	67	180	148	15.0	11.0		208 / 3 / 60	60	70	878	1,2,3,4,5,6,7,8,9,10,11

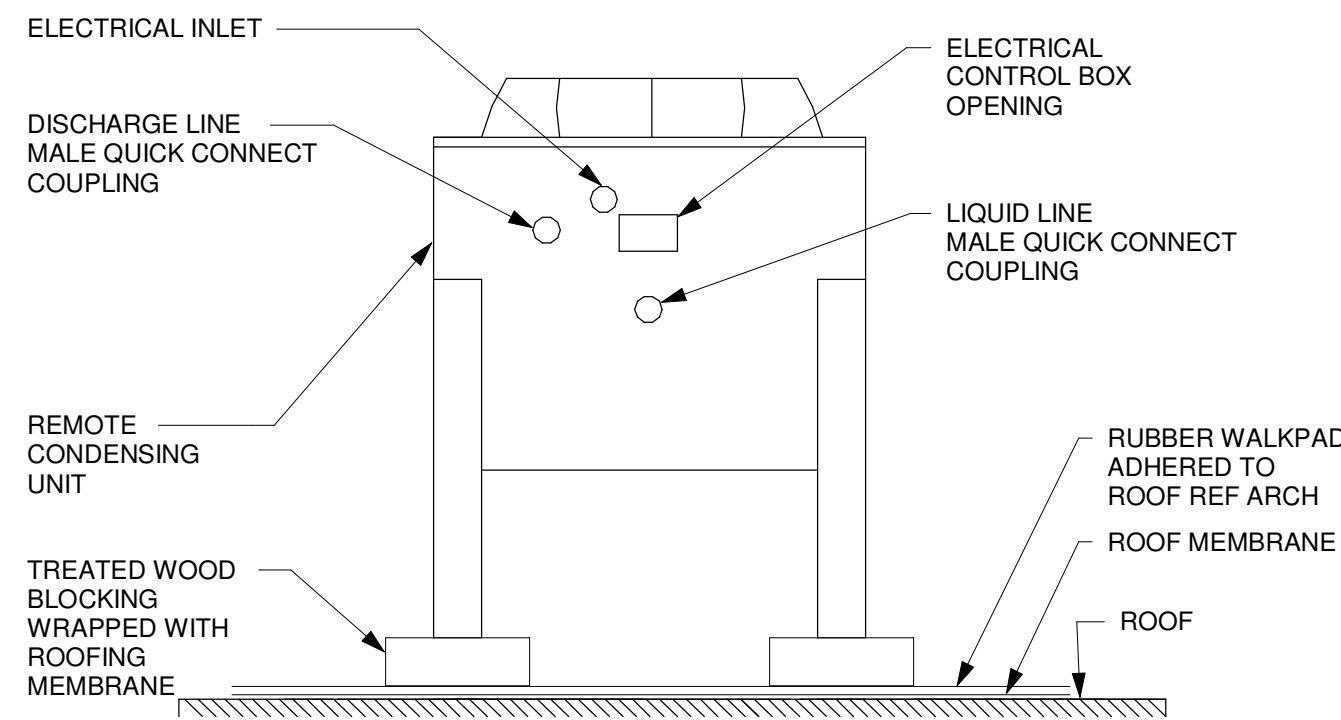
1. ROOF CURB-ADJUSTABLE.
2. PROVIDE WITH BAROMETRIC RELIEF.
3. FULLY MODULATING DRY BULB ECONOMIZER.
4. RETURN AIR SMOKE DETECTOR AND/OR SUPPLY AIR SMOKE DETECTOR AS REQUIRED BY LOCAL CODE, PROVIDED BY CONTRACTOR.
5. FACTORY GFCI RECEPTACLE.
6. FACTORY DISCONNECT WITH FUSING.
7. NEW ROOFTOP PACKAGED UNIT. VERIFY FINAL LOCATIONS AT JOBSITE.
8. HIGH EFFICIENCY, DOWN DISCHARGE CONFIGURATION.
9. PROGRAMMABLE THERMOSTAT WITH REMOTE SENSOR. SEE CONTROLS SPECIFICATION.
10. PROVIDE WITH HASPIRDS.
11. UNIT SERVING THE CAFE/SEATING SHALL BE FURNISHED WITH DEMAND CONTROL VENTILATION AND CO2 SENSOR.

MECHANICAL EQUIPMENT SCHEDULE - "M" FUTURE TENANT			
DESIGN ID	COUNT	DESCRIPTION	COMMENTS
AIR DISTRIBUTION SYSTEMS			
EF-1	1	DOWNBLAST EXHAUST FAN	CENTRIFUGAL ROOF MOUNTED, 440 CFM, DIRECT DRIVE
GENERAL NOTES (ALL UNITS):			
1. COORDINATE EXACT SIZE AND TYPE WITH TENANT DRAWINGS BEFORE ORDERING.			
2. COORDINATE EXACT LOCATION WITH TENANT DRAWINGS BEFORE INSTALLING.			



1 REFRIGERATION PIPING PENETRATION

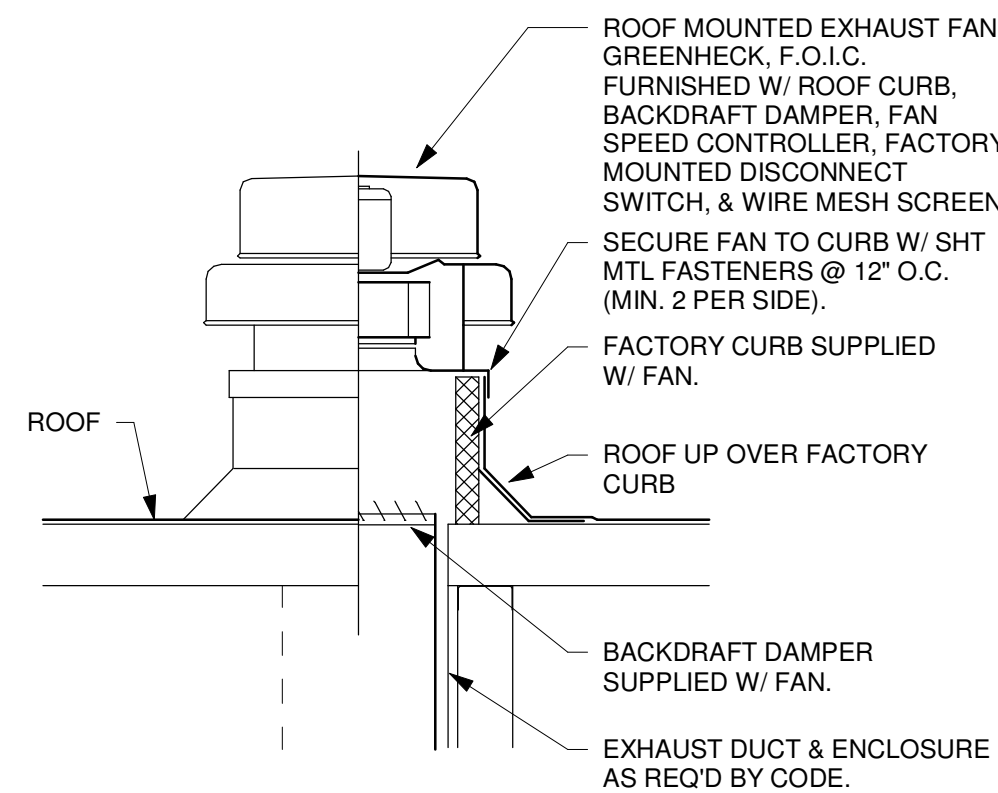
Scale: NTS



- NOTES:
1. INSTALLATION MUST MEET ALL LOCAL AND NATIONAL BUILDING, PLUMBING, AND ELECTRICAL CODES.
 2. SECURE BLOCKING TO WALKPAD VIA HOT AIR WELD AND MINIMUM 6" WIDE ROOF MEMBRANE STRIPS 12" O.C.
 3. SECURE CONDENSING UNIT TO WOOD BLOCKING USING MANUFACTURER'S APPROVED FASTENERS.
 4. CALCULATED LINE SET LENGTH BETWEEN ICE MAKER AND CONDENSING UNIT SHALL BE LESS THAN 100'-0".

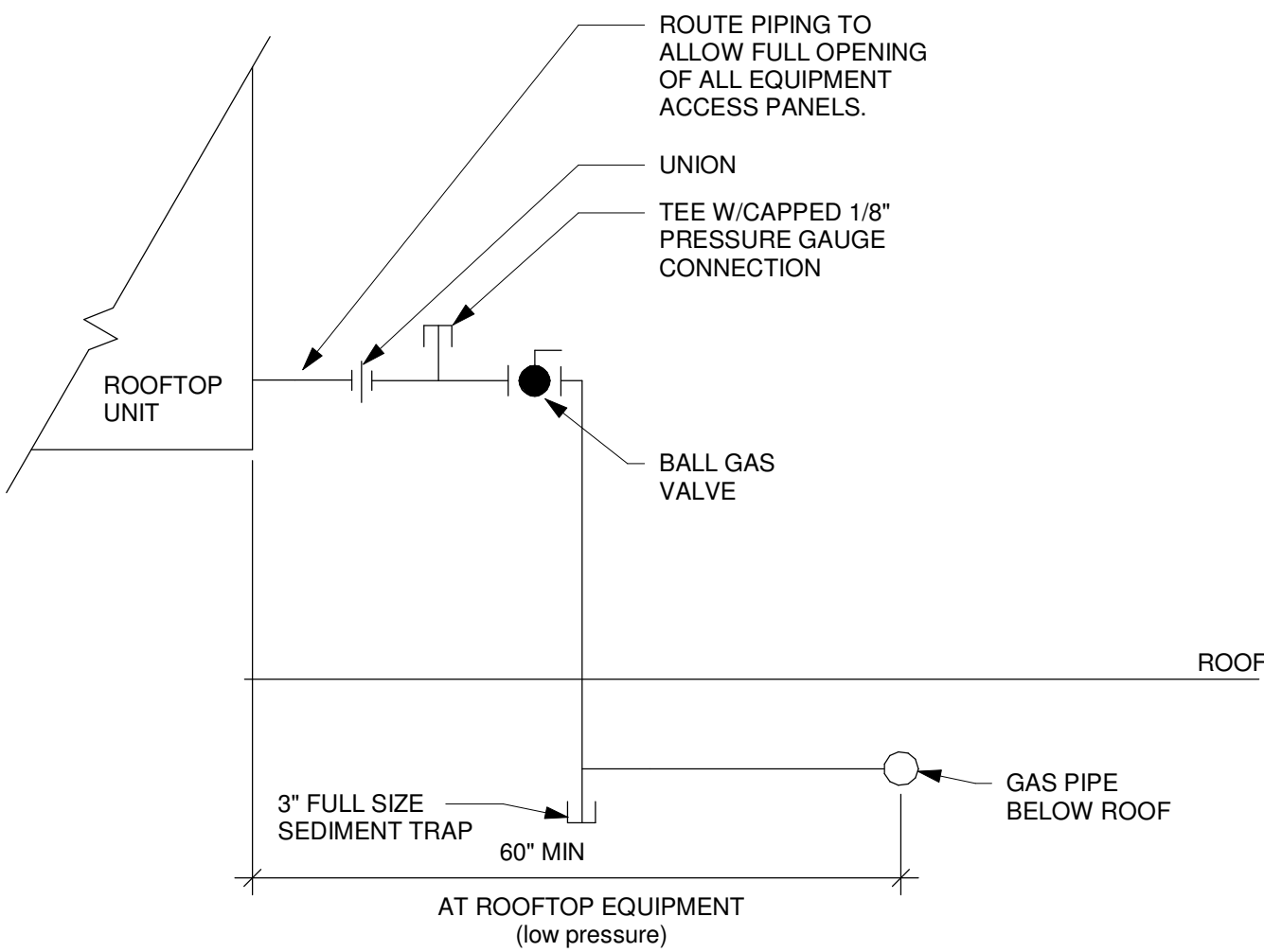
2 REMOTE CONDENSING UNIT

Scale: NTS



3 ROOF MOUNTED FAN

Scale: NTS



4 RTU GAS CONNECTION

Scale: NTS



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PLANNING NASHVILLE, TN
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SUITE 5968 479-636-5004
1805 N 2ND ST JOB NO.: 30786
ROGERS, AR 72756 DESIGNED BY: MBO



STARBUCKS
SHELL

503 WEST THIRD ST.
PEMBROKE, NC 28372

REVIEW SET

10/31/23

23331

[illegible]

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MECHANICAL SCHEDULES & DETAILS

M201

