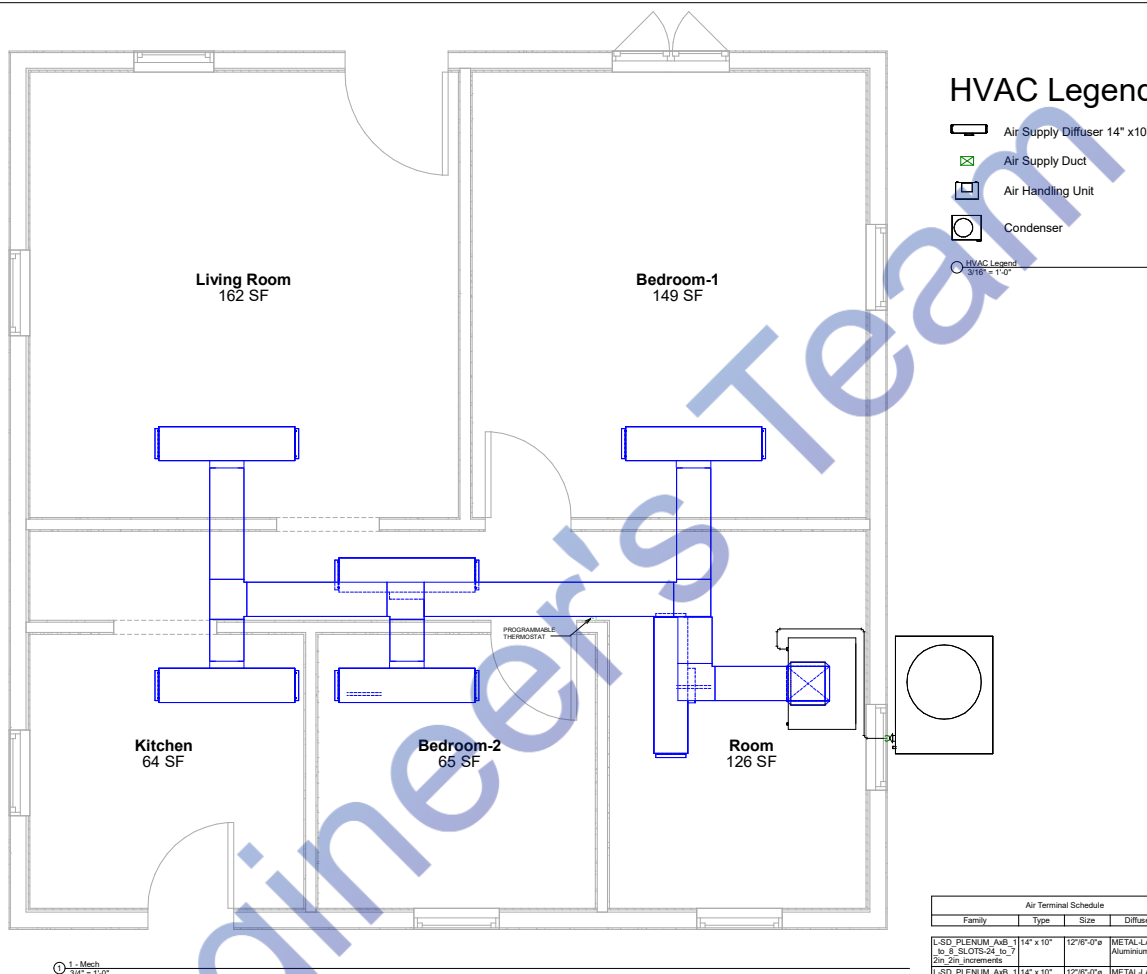


This HVAC Layout Plan for 1166 NW 104th St, Miami, FL 33150, has been developed in strict adherence to the following updated codes and regulations:

1. Florida Building Code (FBC) - Mechanical, 2020 Edition: Ensures all mechanical installations meet state standards.
2. Miami-Dade County Code of Ordinances, Chapter 8 - Building Code: Addresses local building requirements specific to Miami-Dade County.
3. Florida Statutes, Chapter 489: Mandates that all HVAC contractors obtain necessary permits for installation, removal, or replacement of AC systems.
4. Florida Statutes, Chapter 553.904: Details thermal efficiency standards for new non-residential buildings, including HVAC system design.
5. Florida Building Code - Energy Conservation, Section R405.5.2: Specifies requirements for duct insulation to enhance energy efficiency.
6. Florida Product Approval Codes: Ensures all materials and products used are approved for use in Florida's climate and conditions.

- **Supply Duct Material:** Galvanized metal ducts will be utilized for their durability and compliance with FBC-M 603.4.1, which requires mechanically fastened round metallic ducts with a minimum of three sheet metal screws or rivets.
- **Insulation Type:** Fiberglass insulation will be applied to all ducts, in accordance with FBC-M 603.9, ensuring all joints, seams, and connections are properly sealed to prevent air leakage.
- **Supply Diffuser Size:** Each supply diffuser is specified at 14" x 10" to ensure adequate air distribution throughout the space.

By adhering to these codes and specifications, this HVAC system is designed to provide efficient performance, safety, and compliance with all relevant regulations.

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☐ Exhaust Fan Schedule
1/4" = 1'-0"

 Air Supply Diffuser 14" x10"
 Air Supply Duct
 Air Handling Unit
 Condenser

Air Terminal Schedule			
Family	Type	Size	Diffuser Material
L-SD PLenum_Air_7 to 8_SLOTS-24_to_7 2in_increments	14" x 10"	12"/6" o/a	METAL-LAMINAR Aluminum 6063T5
L-SD PLenum_Air_7 to 8_SLOTS-24_to_7 2in_increments	14" x 10"	12"/6" o/a	METAL-LAMINAR Aluminum 6063T5
L-SD PLenum_Air_1 to 8_SLOTS-24_to_7 2in_increments	14" x 10"	12"/6" o/a	METAL-LAMINAR Aluminum 6063T5
L-SD PLenum_Air_1 to 8_SLOTS-24_to_7 2in_increments	14" x 10"	12"/6" o/a	METAL-LAMINAR Aluminum 6063T5
L-SD PLenum_Air_1 to 8_SLOTS-24_to_7 2in_increments	14" x 10"	12"/6" o/a	METAL-LAMINAR Aluminum 6063T5
L-SD PLenum_Air_1 to 8_SLOTS-24_to_7 2in_increments	14" x 10"	12"/6" o/a	METAL-LAMINAR Aluminum 6063T5

Mechanical Equipment Schedule			
Family	Type	Model	Count
Air Handling Unit - Split System - Vertical	AHU CBA27UHE, 2.5 Tons	03	1
M. Condenser for VPAC - Air Cooled - 11-26 kW	Condenser ML17XC1, 2.5 Tons		1



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1166 NW 104th St
Miami FL 33150

HVAC Layout Plan

Project Number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker
H. 1	
Scale	As indicated

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1166 NW 104th St
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3D HVAC Plan

Project Number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker
H. 2	
Scale	

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Condenser Installation Note:

The installation of the ML17XC1 Condenser Unit must comply with the following specifications to ensure optimal performance, safety, and efficiency:

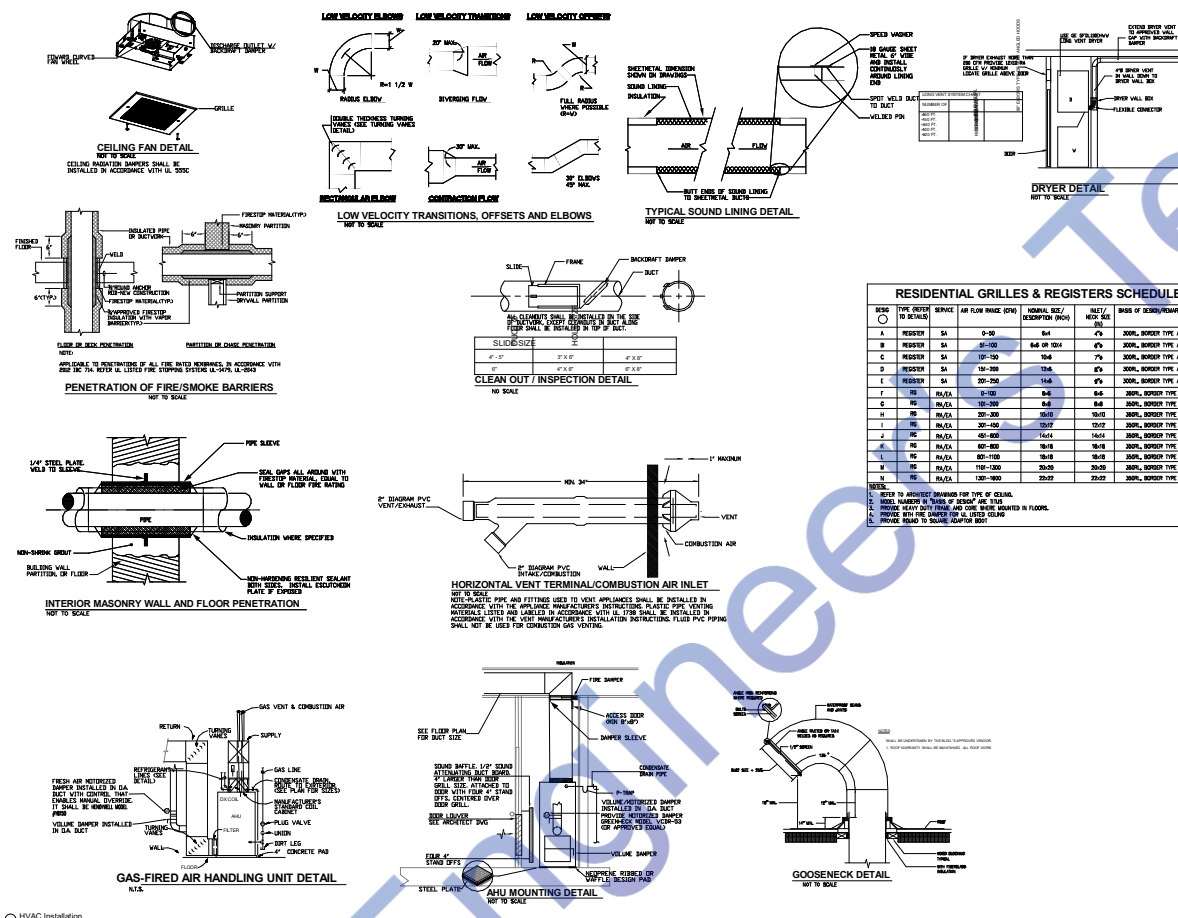
- Unit Placement & Clearance:**
 - Maintain a minimum clearance of 30 inches from one side adjacent to the control box for servicing.
 - Maintain 36 inches clearance on one side and at least 12 inches on another side, while the last side may have a minimum of 6 inches clearance.
 - Ensure 48 inches of vertical clearance above the unit for proper airflow.
 - Maintain 24 inches of clearance between two adjacent condenser units.
- Electrical & Power Requirements:**
 - Voltage: 208/230V, 1-phase, 60Hz.
 - Maximum Overcurrent Protection (MOC) varies by model, ranging from 15A to 50A.
 - Minimum Circuit Ampacity (MCA) ranges from 12A to 35.5A, depending on the unit's tonnage.
 - Proper grounding and adherence to National Electrical Code (NEC) and local electrical codes is required.
- Refrigerant Line Connections:**
 - Factory pre-charged with R-410A refrigerant for a standard 15 ft. line set. Additional refrigerant may be required for longer runs.
 - Suction line sizes: 3/4" to 1-1/8" OD depending on unit size.
 - Liquid line size: 3/8" OD for all models.
- Mounting & Structural Support:**
 - The unit should be installed on a level, rigid concrete or non-combustible pad.
 - If needed, Unit Stand-Off Kits (high-density polyethylene feet) should be used to elevate the unit for drainage and airflow.
- Refrigeration System Components:**
 - Equipped with a high-pressure switch and a low-pressure switch for system protection.
 - Includes a scroll compressor with rubber mounts to minimize vibration and noise.
 - Features a Quantum™ Coil with enhanced aluminum alloy tubes for corrosion resistance.
- Optional Accessories:**
 - Crankcase Heater (recommended for low ambient conditions).
 - Low Ambient Kit for operation down to 30°F outdoor temperature.
 - Compressor Hard Start Kit for enhanced starting under low-voltage conditions.

By following these installation guidelines, the ML17XC1 Condenser will operate efficiently, meeting manufacturer and regulatory requirements. Ensure that all work is performed by a licensed HVAC contractor in compliance with Florida Building Codes and local ordinances.

Rafael De La Rosa
1166 NW 104th St
Miami FL 33150
HVAC Installation

Project Number: _____ Project Number: _____
Date: _____ Issue Date: _____
Drawn by: _____ Author: _____
Checked by: _____ Checker: _____
H. 3
Scale: 1/4" = 1'-0"

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○ HVAC Installation
1/4" = 1'-0"



Designed By Engr. Al Amin (MEP Engineer | Director - Engineer's Team LTD)

 support@engrteam.com

 <https://engrteam.com>

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