

1. ALL WORK SHALL CONFORM WITH ALL LOCAL, STATE, FEDERAL ORDINANCES AND BUILDING CODES GOVERNING THE INSTALLATION OF THE MECHANICAL SYSTEM. IF WORK AS LAID OUT, INDICATED OR SPECIFIED CONTRARY TO OR IN CONFLICT WITH ANY ORDINANCES, LOCAL ORDINANCES, BUILDING CODES AND REGULATIONS, THE CONTRACTOR SHALL REPORT IN WRITING TO THE ARCHITECT/ENGINEER BEFORE SUBMITTING A BID OR PROCEEDING WITH WORK. THE ARCHITECT/ENGINEER WILL THEN ISSUE INSTRUCTIONS AS HOW TO PROCEED.

2. THE DRAWINGS ARE TO BE CONSIDERED DIAGRAMMATIC, NOT NECESSARILY SHOWING IN DETAIL OR TO SCALE ALL OF THE MINOR ITEMS. THE SPECIFIC DIMENSIONS SHOWN SHALL GOVERN THE STRUCTURAL, ARCHITECTURAL, AND SITE CONDITIONS THAT GOVERN THE EXISTING CONDITIONS. CONTRACTOR SHALL FOLLOW DRAWINGS IN LAYING OUT WORK. CHECK DRAWINGS OF ALL TRADES TO VERIFY SPACES IN WHICH WORK IS TO BE PERFORMED. VERIFY ALL DIMENSIONS, ELEVATIONS, AND SPACE CONDITIONS AT ALL POINTS. COORDINATE LOCATION OF DUCTWORK WITH OTHER TRADES, PARTICULARLY WHERE DUCTS RUN THROUGH STRUCTURAL ELEMENTS. PROVIDE ALL NECESSARY SLEEVES THROUGH STRUCTURAL ELEMENTS WHERE REQUIRED. IF ANY OF THE CONDITIONS APPEAR INADEQUATE, ARCHITECT/ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH INSTALLATION. THIS CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE FIELD MODIFICATION IN LAYOUT OF WORK WHERE NECESSARY TO ACCOMMODATE THE VARIOUS TRADES FOR PROPER EXECUTION OF THE WORK.

3. EXAMINE ALL DRAWINGS CAREFULLY PRIOR TO SUBMITTING A BID. CONTRACTOR WILL BE REQUIRED TO FURNISH, INSTALL AND/OR CONNECT WITH APPROPRIATE SERVICES ALL PLUMBING ITEMS SHOWN ON ANY OF THE ARCHITECTURAL, AIR CONDITIONING, ELECTRICAL AND SPRINKLER DRAWINGS WITHOUT ADDITIONAL EXPENSE TO THE OWNER. IN DISCREPANCIES, CONFLICTS, INTERFERENCE OR OMISSIONS OCCUR BETWEEN DRAWINGS, NOTIFY IN WRITING THE ARCHITECT/ENGINEER IN AMPLE TIME TO PERMIT REVISIONS BEFORE THE BIDS ARE SUBMITTED.

4. INSTALL MATERIALS AND EQUIPMENT IN A NEAT AND FIRST CLASS WORKMANLIKE MANNER. THE OWNER RESERVES THE RIGHT TO DIRECT REMOVAL AND REPLACEMENT OF ITEMS WHICH, IN HIS OPINION, DO NOT PRESENT A NEAT AND WORKMANLIKE APPEARANCE. REMOVAL AND REPLACEMENT IS TO BE DONE IMMEDIATELY WHEN DIRECTED BY THE OWNER IN WRITING, AT THE SOLE EXPENSE OF CONTRACTOR.

5. START OF WORK BY CONTRACTOR SHALL BE CONSIDERED AS ACCEPTANCE BY HIM OF ALL CLAIMS OR QUESTIONS AS TO SUITABILITY OF THE WORK OF OTHER TRADES OR OTHER CONTRACTORS TO RECEIVE HIS WORK. THIS CONTRACTOR SHALL REMOVE AND REPLACE, AT HIS EXPENSE, ALL MECHANICAL WORK WHICH MAY HAVE TO BE REMOVED BECAUSE OF INTERFERENCE WITH OTHER TRADES.

6. THIS CONTRACTOR SHALL OBTAIN AND PAY ALL INSURANCE, FEES, PERMITS, ASSOCIATION DUES, ROYALTIES AND TAXES OF WHATEVER NATURE SHALL APPLY TO THIS WORK. HE SHALL ALSO PAID ALL THE INSPECTION FEES AS MAY BE REQUIRED BY LAW OR ORDINANCE AND SHALL KEEP THE OWNER HARMLESS FROM ANY DAMAGE AND EXPENSE ARISING FROM ANY VIOLATION OF LAWS, RULES OR ORDINANCES.

7. PROVIDE MEANS "FURNISH AND INSTALL".

8. DO A COMPLETE JOB, EVERYTHING CONNECTED, READY FOR USE.

9. SHOP DRAWINGS: CONTRACTOR SHALL FURNISH THE ENGINEER WITH SHOP DRAWINGS OF EQUIPMENT PRIOR TO PURCHASE FOR APPROVAL.

10. AT COMPLETION OF JOB THE MECHANICAL CONTRACTOR SHALL GIVE THE OWNER AN AS-BUILT SET OF REPRODUCIBLE DRAWINGS SHOWING THE EXACT LOCATION OF ALL INSTALLATIONS.

11. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL AND EQUIPMENT FOR A COMPLETE H.V.A.C. SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE FLORIDA BUILDING CODE AND THE LATEST EDITION OF THE FOLLOWING PUBLICATIONS:

- a) ANS B91. MECHANICAL REFRIGERATION
- b) NFPA PAMPHLETS 90A & 91
- c) SMACNA
- d) ASHRAE

12. ALL SUPPLY AIR CONDITIONING DUCTWORK SHALL BE 1.5" STANDARD DUTY (R-6) FULL REINFORCED FIBERGLASS WITH MANUFACTURE LOGO PRINTED ON THE VAPOR BARRIER WHEN IN UNCONDITIONED SPACE, AND 3/4" STANDARD DUTY FOIL REINFORCED FIBERGLASS (R-4) WITH MANUFACTURE LOGO PRINTED ON THE VAPOR BARRIER IN CONDITIONED SPACE OR RETURN PLENUM SPACE. R-8 FLEXIBLE DUCTS ARE ACCEPTABLE AS SHOWN ON DRAWINGS.

13. ALL EXHAUST AIR DUCTWORK SHALL BE CODE GAGE GALVANIZED SHEET METAL.

14. DUCT SIZES SHOWN ARE NET FREE AREA.

15. ALL AIR DEVICES (DIFFUSERS, REGISTERS, AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION, WITH EXPOSED SURFACE CHEMICALLY TREATED TO RECEIVE PAINT TO MATCH COLOR OF AIRGUIDE OR APPROVED EQUAL.

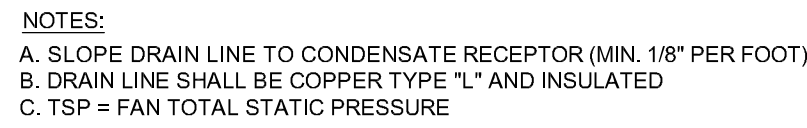
16. PROVIDE TURNING VANES AT ALL ELBOWS. PROVIDE MULTIPLE VANE EXTRACTORS OR SPLITTERS WITH CONTROL RODS AT ALL OUTLETS CONNECTED CLOSER THAN TWO DUCT DIAMETERS TO MAIN SUPPLY DUCT AND WHERE SHOWN ON DRAWINGS. PROVIDE ALL NECESSARY ACCESS PANELS TO CONTROL VALVES, DAMPERS, ETC.

17. REFRIGERANT PIPING SHALL BE SEAMLESS COPPER TYPE "L" HARD OR SOFT DRAWN OR ACR COPPER TUBING WITH WROUGHT COPPER SOLDER JOINT FITTINGS. SOLDER SHALL BE 95/5, APPLIED WITH SUITABLE FLUX. INSULATE REFRIGERANT SUCTION PIPING WITH 3/4" FIRE RESISTANT FOAM PLASTIC OR CLOSED CELL POLYETHYLENE PRE-MOLDED PIPE INSULATION.

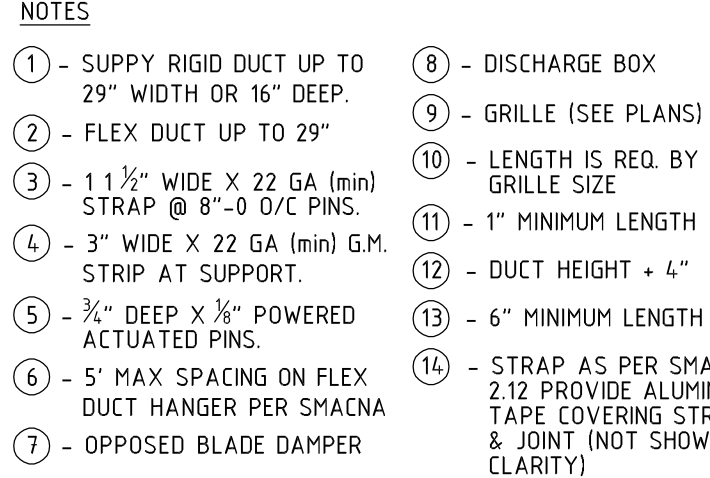
18. ALL CONTROL WIRING SHALL BE THE RESPONSIBILITY OF THE MECHANICAL SUB-CONTRACTOR. MECHANICAL SUB CONTRACTOR TO FURNISH ALL MOTORS, STARTERS, AND RELAYS, ETC.

19. FOR INSTALLATION OF ANY ROOF OR WALL MOUNTED EQUIPMENT  
REFER TO ARCHITECTURAL STRUCTURAL ENGINEERING DRAWINGS.

| HVAC DESIGN REQUIRES:                  | YES | NO |
|----------------------------------------|-----|----|
| DUCT SMOKE DETECTOR                    |     | X  |
| FIRE DAMPER(S)                         |     | X  |
| SMOKE DAMPER(S)                        |     | X  |
| FIRE RATED ENCLOSURE                   |     | X  |
| FIRE RATED ROOF/FLOOR CEILING ASSEMBLY |     | X  |
| FIRE STOPPING                          |     | X  |
| SMOKE CONTROL                          |     | X  |



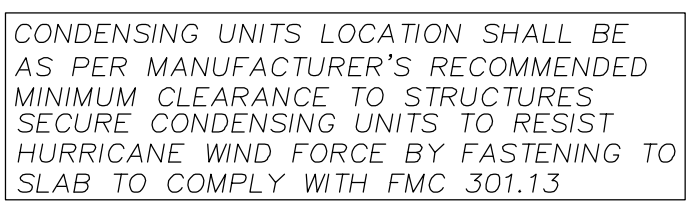
PIPING AND FITTINGS FOR REFRIGERANT VAPOR (SUCTION) LINES SHALL BE INSULATED WITH INSULATION HAVING A THERMAL RESISTIVITY OF AT LEAST R-4 AND HAVING EXTERNAL SURFACE PERMEANCE NOT EXCEEDING 0.05 PERM [2.87 NG/(S • M<sup>2</sup> • PA)] WHEN TESTED IN ACCORDANCE WITH ASTM E 96.



(TYPICAL) (DISCHARGE BOX DETAIL PER SMACNA 2.16)



## N.T.S.



**NOTES:**

1. INSTALL CONDENSING SUEP EITHER ABOVE THE BASE FLOOR ELEVATION LEVEL OR TO THE EXTERIOR OF THE BUILDING TO PREVENT WATER FROM ENTERING OR ACCUMULATING WITH THE CONDENSING SUEP DURING FLOODUPS UP TO THE BASE FLOOR ELEVATION.
2. INSTALLATION MUST MEET MINIMUM OF 175 MPH WIND LOADING. MIN. REQUIREMENTS ARE HERBY INCATED HOWEVER BASED ON ACTUAL EQUIPMENT INSTALLED EPA (ELECTRIC PROJECT) MUST PROVIDE ADDITIONAL SECURING SHALL BE PROVIDED PER 2018 IBC CODE SECTION 1607.
3. REFRIGERANT CIRCUIT ACCESS PORTS LOCATED OUTDOORS SHALL BE FITTED WITH LOCKING-TYPE TAMPER-RESISTANT CAPS OR SHALL BE OTHERWISE SECURED TO PREVENT UNAUTHORIZED ACCESS.
4. ALL EXPOSED ELASTOMERIC INSULATION SHALL BE JACKETED OR PAINTED WITH AN PROTECTIVE PAINT.

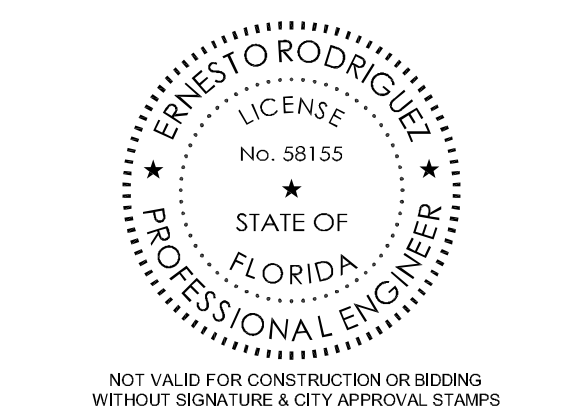
MECHANICAL ELECTRICAL & PLUMBING  
ENGINEERING DESIGN  
PH: (786) 234-7046  
E-mail: gorgoy127@hotmail.com  
Address: 106 Florida Blvd. Miami FL 33144  
Qualifier: Ernesto Rodriguez P.E. # 58155

## Interior Remodeling & Addition

6783 SW 104th St Pinecrest, FL  
33156

[illegible]

|                |            |
|----------------|------------|
| Project number | 24-011     |
| Date           | 10-24-2024 |
| Drawn by       | O.G.       |
| Checked by     | E.R.       |



Digitally signed  
by Ernesto  
Rodriguez  
Date:  
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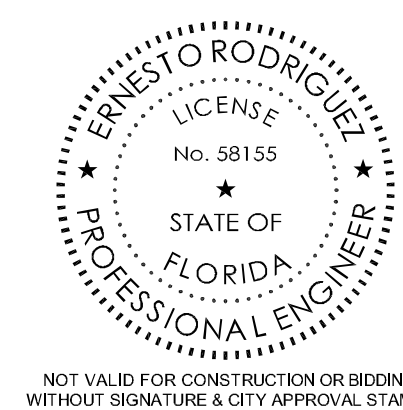
SHEET TITLE

MECHANICAL  
NOTES & DETAILS

SHEET No.

# M100

|                |            |
|----------------|------------|
| Project number | 24-011     |
| Date           | 10-24-2024 |
| Drawn by       | O.G.       |
| Checked by     | E.R.       |



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SHEET TITLE

SHEET No. \_\_\_\_\_

M200

| A/C UNIT SCHEDULE                                                                                                                                                                           |                                                |              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|--------------|
| AIR HANDLING UNIT                                                                                                                                                                           | DESIGNATION                                    | AHU-3        |
|                                                                                                                                                                                             | MANUFACTURER                                   | RHEEM        |
|                                                                                                                                                                                             | MODEL NO.                                      | RHP1780/STAN |
|                                                                                                                                                                                             | TOTAL AIR (CFM)                                | 60           |
|                                                                                                                                                                                             | E.S.P. (IN OF W.G.)                            | 0.4          |
|                                                                                                                                                                                             | H.P. (F.L.A.)                                  | 1/3-1.7      |
|                                                                                                                                                                                             | AVAILABLE SERVICE                              | 240-60       |
|                                                                                                                                                                                             | TOTAL COOLING CAPACITY - BTU/H (*)             | 17,100       |
|                                                                                                                                                                                             | SENSIBLE HEATING CAPAC. - BTU/H (*)            | 13,100       |
|                                                                                                                                                                                             | TOTAL COOLING - BTU/H                          | 12,287       |
| CONDENSING UNIT                                                                                                                                                                             | ELECTRIC HEATER TOTAL KW                       | 3.6          |
|                                                                                                                                                                                             | DESIGNATION                                    | CU-3         |
|                                                                                                                                                                                             | MANUFACTURER                                   | RHEMM        |
|                                                                                                                                                                                             | MODEL NO.                                      | RA14A/18A/J  |
|                                                                                                                                                                                             | AVAILABLE SERVICE                              | 240-60       |
|                                                                                                                                                                                             | NUMBER OF COMPRESSORS                          | 1            |
|                                                                                                                                                                                             | COMPRESSORS RLA (EACH)                         | 9.0          |
|                                                                                                                                                                                             | FAN H.P./Z/LA EACH                             | 1/8 - 0.7    |
|                                                                                                                                                                                             | SERV. 2/MAINTED AHU (#)                        | 13.2         |
|                                                                                                                                                                                             | CONDENSING UNIT MCA (AMPS)                     | 14           |
|                                                                                                                                                                                             | CONDENSING UNIT MAX. FUSE OR CKT. BREAKER AMPS | 20           |
|                                                                                                                                                                                             | LIQUID LINE                                    | 3/8"         |
|                                                                                                                                                                                             | SUCTION LINE                                   | 3/4"         |
|                                                                                                                                                                                             |                                                | 3/8"         |
|                                                                                                                                                                                             |                                                | S/S          |
| REMARKS:                                                                                                                                                                                    |                                                |              |
| 1. ALTERNATE MANUFACTURERS OF EQUAL QUALITY MAY BE SUBMITTED FOR APPROVAL. (TRANS, RUUD, LENNOX, RHEEM, GOODMAN OR FAN H.P. 2/MAINTED AHU (#) 13.2)                                         |                                                |              |
| 2. PROVIDE TIME GUARD IL START CAPACITOR AND RELAY, LIQUID LINE FILTER DRYER & SOLENOID VALVE, 24 V CONTROL TRANSFORMER & THERMOSTAT WITH SYSTEM "OFF-HEAT-AUTO-COOL" AND FAN "ON-AUTO" S/S |                                                |              |

| FAN SCHEDULE                                                                        |                 |
|-------------------------------------------------------------------------------------|-----------------|
| FAN DESIGNATION                                                                     | EF-1            |
| AREA SERVED                                                                         | MASTER BATHROOM |
| LOCATION                                                                            | CEILING         |
| MANUFACTURER                                                                        | PANASONIC       |
| MODEL NO.                                                                           | FV11VHZ         |
| TOTAL AIR (CFM)                                                                     | 100             |
| LE-PF (INCHES OF WATER)                                                             | 0.125           |
| SONES                                                                               | 0.5             |
| H.P. (A=AMP - W=WATTS)                                                              | 0.13            |
| PH-PH-HZ                                                                            | 120V-60         |
| DRIVE                                                                               | DIRECT          |
| BACKDRAFT DAMPER                                                                    | YES             |
| INTERLOCK                                                                           | LIGHT SWITCH    |
| REMARKS:                                                                            |                 |
| 1. ALTERNATE MANUFACTURERS OF EQUAL OR BETTER QUALITY MAY BE SUBMITTED FOR APPROVAL |                 |
| 2. UNLESS OTHERWISE NOTED ALL FANS SHALL BE EQUIPPED WITH SAFETY DISCONNECT SWITCH. |                 |

| AIR DISTRIBUTION SCHEDULE |                                                                                                                                                                                                                                                                                               |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DESIGNATION               | A                                                                                                                                                                                                                                                                                             |
| MANUFACTURER              | TITUS                                                                                                                                                                                                                                                                                         |
| MODEL                     | FL-15-JT-1 (7.5") SLOT                                                                                                                                                                                                                                                                        |
| CATALOG NO.               | BORDER TYPE 11                                                                                                                                                                                                                                                                                |
| FRAME TYPE                | SURFACE<br>(CEILING/WALL)                                                                                                                                                                                                                                                                     |
| FUNCTION                  | SUPPLY                                                                                                                                                                                                                                                                                        |
| PATTERN                   | SEE DRAWINGS                                                                                                                                                                                                                                                                                  |
| OPPOSED BLADE DAMPERS     | SEE NOTE 4                                                                                                                                                                                                                                                                                    |
| REMARKS                   | 1. ALTERNATE MANUFACTURERS OF EQUAL QUALITY MAY BE SUBMITTED FOR APPROVAL.<br>2. ALL AIR DEVICES SHALL BE ALL ALUMINUM CONSTRUCTION AND FULLY GASKETED.<br>3. ALL AIR DEVICES FINISHES SHALL BE PER ARCHITECT/OWNER REQUIREMENTS.<br>4. SUPPLY OUTLETS SHALL BE SUPPLIED WITH INTEGRAL O.B.D. |

