

GENERAL HVAC NOTES

- 1. ALL MECHANICAL EQUIPMENT SHALL BE PROVIDED WITH PROPER CLEARANCE. A MINIMUM OF 4' IS CONSIDERED SUFFICIENT SPACE AROUND AIR HANDLING UNITS. 2014 F.B.C.M SECTION 603.1.1 AND SECTION 306.
2. ALL DUCT SYSTEMS INSTALLED IN UNCONDITIONED AREAS SHALL BE CONSTRUCTED WITH APPROVED MATERIAL AND OF A VALUE OF NO LESS THAN R-4.2 RATING. DUCT SYSTEMS AT THE EXTERIOR OF A BUILDING SHALL BE CONSTRUCTED WITH A VALUE OF NO LESS THAN R-6 RATING. ALL SEAMS SHALL BE SEALED WITH GLASS FAB & MASTIC "OR" APPROVED TAPES THAT EXTEND NOT LESS THAN 1 INCH AND LABELED IN ACCORDANCE WITH THE UL-181A, PART 1 FOR DUCT BOARD OR UL-181C PART 1 FOR FLEX. ALL CLOSURES AND INSTALLATIONS SHALL BE INSTALLED AS PER 2014 F.B.C.M. SECTION 603.4.1 THRU-WALL, FLOOR & CEILING PENETRATIONS INTO THE DUCT SECTION SHALL CONTAIN A BRANCH DUCT FABRICATED OF RIGID FIBROUS GLASS DUCT BOARD OR RIGID METAL AND IS SEALED TO BOTH DUCT SECTION AND GRILLE SIDE WALL SURFACE.
3. FABRICATE AND ERECT ALL DUCTWORK TO SMACNA STANDARDS FOR GALVANIZED STEEL. COMPLY WITH NFPA 90A REQUIREMENTS.
4. DUCTWORK SHALL BE SMACNA LOW PRESSURE CONSTRUCTION 2" STATIC PRESSURE RATING WITH SEAL CLASS B SEAMS AND JOINTS.
5. INCLUDE ALL ACOUSTIC, AIRFOIL SHAPED PERFORATED ALUMINUM TURNING VANES, MANUAL DAMPERS, FLEXIBLE CONNECTORS, GRILLES AND DIFFUSERS, ACOUSTIC LINING, AND OTHER SHEET METAL ACCESSORIES FOR THE PROJECT.
6. ALL BRANCH CONNECTIONS SHALL BE AS PER THE DETAILS SHOWN ON THE DRAWINGS.
7. ACOUSTICALLY LINE ALL RECTANGULAR DUCTS INDICATED ON DRAWINGS WITH ONE (1) INCH THICK NON-FLAKING, COATED MEDIUM DENSITY LINER, WITH 0.26 THERMAL CONDUCTIVITY, MAXIMUM FLAME SPREAD RATING OF 25 AND SMOKE DEVELOPED RATING OF 50. CONFORM TO MANUFACTURER'S RECOMMENDATIONS.
8. DUCT DIMENSIONS INDICATED ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS (FREE AREA)
9. FURNISH ALL MATERIAL, LABOR AND EQUIPMENT AS REQUIRED TO INSTALL COMPLETE PLUMBING AND HVAC INSULATION AS INDICATED ON MECHANICAL DRAWINGS AND IN THESE SPECIFICATIONS.
10. INSTALL IN FULL ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
11. PLUMBING INSULATION (AS MANUFACTURED BY OWENS CORNING, KNAUF, SCHULLER OR CERTAINTED)
12. INSULATE ALL ABOVE GRADE HOT AND COLD WATER PIPING WITH MOLDED FIBER GLASS HAVING AN ALL SERVICE JACKET.
13. INSULATION THICKNESS SCHEDULE: 1) LESS THAN 2" DIAMETER PIPE: 1" THICK; 2) 2"-8" DIAMETER PIPE: 1-1/2" THICK
14. INCLUDE INSULATION OF FITTINGS AND VALVES. KEEP VAPOR BARRIERS INTACT. CONFORM TO MANUFACTURER'S RECOMMENDATIONS.
15. ADA COMPLIANT LAVATORY INSULATION - INSULATE ALL EXPOSED WASTE AND WATER SUPPLY PIPING UNDER LAVATORY WITH SAFETY COVERS PER ADA REQUIREMENTS.
16. HVAC INSULATION (AS MANUFACTURED BY OWENS CORNING, KNAUF, SCHULLER, OR CERTAINTED). INSULATE ALL NON-LINED SUPPLY, RETURN, AND EXHAUST DUCTS WITH 1-1/2" THICK FOIL FACED REINFORCED KRAFT JACKET, FIBERGLASS DUCT WRAP FULLY SECURED TO DUCT LAP AND TAPE SEAMS AND SECURE TO DUCT WALLS WITH STICK PINS. ALL INSULATION TO BE APPLIED IN FULL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND COMPLY WITH 25/50 FLAME AND SMOKE HAZARD RATINGS PER ASTM E-84, NFPA 255 AND UL 723.
17. EXTERIOR DUCTWORK SHALL BE INSULATED WITH 2" THICK FIBERGLASS DUCT WRAP WITH ALUMINUM JACKET, SEALED WATERTIGHT.
18. DUCT LINER SHALL COMPLY WITH NFPA 90A AND 90B (LATEST EDITION) REQUIREMENTS AND NAIMA "FIBROUS GLASS DUCT LINER STANDARD".
19. FLEXIBLE DUCTWORK (AS MANUFACTURED BY CLEVAFLX, FLEXMASTER OR WIREMOLD). FLEXIBLE DUCTS SHALL BE INDEPENDENTLY SUPPORTED FROM THE STRUCTURE AND CONNECTED WITH PLASTIC DRAW BANDS AND TIGHTENED. FLEXIBLE DUCTS SHALL BE LIMITED TO 7' MAXIMUM STRAIGHT LENGTHS. FLEXIBLE DUCTS SHALL BE CONSTRUCTED OF 1 1/2" INSULATION WITH VINYL VAPOR BARRIER JACKET AND RATED AT 10" WC FOR SIZES THROUGH 12". UL LISTED, AND MEET 25/50 FLAME AND SMOKE TEST. FLEXIBLE DUCTS ARE NOT PERMITTED IN ROOMS WITHOUT CEILINGS.
20. ALL DUCT TRUNK 90 DEGREE TURNS OR TEE'S, SHALL HAVE TURNING VANES. 3 PIECE OR 45 DEGREE TURNS CAN BE USED IN PLACE OF 90 DEGREE TURNS AND DO NOT NEED TURNING VANES.
21. ALL GRILLES, DIFFUSERS MUST BE TESTED IN ACCORDANCE WITH ASTM E 84. AND VOLUME DAMPERS OR OTHER MEANS OF SUPPLY AIR ADJUSTMENT SHALL BE PROVIDED IN DUCTS OR AT EACH INDIVIDUAL REGISTER, GRILLE OR DIFFUSER.
22. CONSTRUCT DOCUMENT REQUIRE THAT A WRITTEN BALANCE REPORT BE PROVIDED TO THE OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER FOR HVAC SYSTEMS SERVING ZONES WITH A TOTAL CONDITIONED AREA EXCEEDING 5000 SQ. FT. AIR DISTRIBUTION SYSTEMS SHALL BE TESTED, ADJUSTED AND BALANCED BY A LICENSED ENGINEER OR A COMPANY OR INDIVIDUAL HOLDING A CURRENT CERTIFICATION FROM A RECOGNIZED TESTING AND BALANCING AGENCY ORGANIZATION IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING STANDARDS. F.B.C.M. 2014 SECTION 408.2.2. EXCEPTIONS: 1) BUILDINGS WITH COOLING OR HEATING SYSTEM CAPACITIES OF 15 TONS OR LESS PER SYSTEM MAY BE TESTED AND BALANCED BY A MECHANICAL CONTRACTOR LICENSED TO DESIGN AND INSTALL SUCH SYSTEMS. 2) BUILDINGS WITH COOLING OR HEATING SYSTEM CAPACITIES OF 65,000 BTUH OR LESS PER SYSTEM ARE EXEMPT FROM THE REQUIREMENTS OF THIS SECTION. F.B.C.M. 2014 SECTION 408.2.2.
23. SMOKE DETECTORS SHALL BE INSTALLED IN RETURN AIR SYSTEMS WITH A DESIGN CAPACITY GREATER THAN 2000 CFM. IN THE RETURN AIR DUCT OR PLENUM UPSTREAM OF ANY FILTERS, EXHAUST AIR CONNECTIONS, OUTDOOR AIR CONNECTIONS, OR DECONTAMINATION EQUIPMENT AND APPLIANCES. F.B.C.M. 2014 SECTION 606.2.1. WHERE MULTIPLE AIR HANDLING SYSTEMS SHARE COMMON SUPPLY OR RETURN AIR DUCTS OR PLENUMS WITH A COMBINED DESIGN CAPACITY GREATER THAN 2000 CFM, THE RETURN AIR SYSTEM SHALL BE PROVIDED WITH SMOKE DETECTORS IN ACCORDANCE WITH F.B.C.M. 2014 SECTION 606.2.1. SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72. SMOKE DETECTOR TEST STATIONS SHALL HAVE A TROUBLE INDICATOR LIGHT, INUNDATING ANY AIR DUCT TROUBLE. NFPA 90A 2002, CHAPTER 6 NOTE: A "PLENUM" CAN NOT BE USED AS AN OCCUPANCY SPACE OR STORAGE AREAS. AS PER NFPA-90A, SEC. 4.3.10.1.1
24. FIRE DAMPERS (AS MANUFACTURED BY RUSKIN, NAILOR OR SAFE-AIR). FABRICATE IN ACCORDANCE WITH NFPA 90A AND UL555. F.B.C.M.2014 SECTION 607.3. DAMPERS SHALL BE SUITABLE FOR USE IN THE VERTICAL OR HORIZONTAL POSITION AS INDICATED ON THE DRAWINGS, BE TYPE 'B' WITH BLADES OUT OF AIRSTREAM, AND BE RATED FOR 1-1/2 HOURS MINIMUM (UNLESS NOTED OTHERWISE).
25. FIRE AND SMOKE DAMPERS SHALL BE PROVIDED WITH AN APPROVED MEANS OF ACCESS. LARGE ENOUGH TO PERMIT INSPECTION AND MAINTENANCE OF THE DAMPER AND ITS OPERATING PARTS. PROVIDE DUCT MOUNTED ACCESS DOORS AT ALL FIRE DAMPER LOCATIONS. ACCESS DOORS (AS MANUFACTURED BY RUSKIN, NAILOR OR SAFE-AIR). FABRICATE IN ACCORDANCE WITH SMACNA STANDARDS. DOORS TO BE FABRICATED OF GALVANIZED STEEL WITH SEALING GASKET AND QUICK LOCKING DEVICE. FOR INSULATED DUCTWORK, DOORS SHALL HAVE MINIMUM ONE (1) INCH INSULATION WITH SHEET METAL COVER.
26. FRESH AIR INTAKES SHALL NOT BE LOCATED CLOSER THAN 10 FT. FROM ANY CHIMNEY, EXHAUST OR VENT OUTLET, OR SANITARY SEWER VENT OUTLET.
27. ALL EXHAUST DUCTS SHALL BE PROTECTED BY GALV. METAL PER 2010 CHAPTER 607.3, SEC. 301.4
28. ALL EXHAUSTED BATHROOMS, CLOSETS & STORAGE ROOMS SHALL HAVE UNDER CUT DOORS OR A METHOD FOR MAKE UP AIR TO BE TRANSFERRED EQUAL TO THE AMOUNT OF CFM'S EXHAUSTED. F.B.C.M. 2014 SEC. 601.4
29. CONDENSATE FROM ALL COOLING COILS AND EVAPORATORS SHALL BE CONVEYED FROM THE DRAIN PAN OUTLET TO AN APPROVED PLACE OF DISPOSAL. CONDENSATE SHALL NOT DISCHARGE INTO A STREET, ALLEY OR OTHER AREA AS TO CAUSE A NUISANCE. MUST TERMINATE A MIN. OF 18" FROM EXT. WALL. PER AUTHORITY OVER JURISDICTION CONDENSATE DRAIN MAY DRAIN TO A STORM SYSTEM, UTILITY SINK, OR SEWER BY APPROVED MEANS. CONDENSATE DRAIN LINE SHALL NOT BE LESS THAN 3/4 INCH DIAMETER AND SHALL NOT DECREASE IN SIZE. 2014 F.B.C.M. SEC. 307.2.1 AND 307.2.2.

HVAC UNIT SCHEDULE

Table with columns: EQUIPMENT TAG, AREA SERVED, FAN (AIRFLOW, CONTROL, DRIVE TYPE, ESP), COOLING (MIXED AIR, UNIT LAT, TOTAL, SENSIBLE, EER/SEER), HEATING (INPUT, MAT, LAT), ELECTRICAL (SUPPLY FAN MOTOR, VOLT, PHASE, MCA, MCO), DIMENSIONS HxWxL (IN), WEIGHT (LB), MODEL NO., REMARKS.

NOTES: 1. MODEL NUMBERS ARE BASED ON LENNOX (LENNOX NATIONAL ACCOUNTS: 1-972-497-6249; dollargeneral@lennoxind.com). 2. SCHEDULED CAPACITIES ARE REQUIRED VALUES. 3. UNIT SHALL COMPLY WITH UL, NEC, NFPA 70 AND ASHRAE 90.1. 4. FACTORY INSTALLED COATED COILS, UNIT DISCONNECT AND STARTER. FACTORY FURNISHED/FIELD INSTALLED ELECTRIC HEAT, ECONOMIZER WITH BAROMETRIC RELIEF, DUAL ENTHALPY SENSOR. FIELD FURNISHED AND INSTALLED RETURN DUCT MOUNTED SMOKE DETECTORS, CO-ELECTRIC DIFFUSER KIT, TWO (2) ADDITIONAL SETS OF FILTERS, MINIMUM 8" ROOF CURB. 5. ELECTRICAL DATA, DIMENSIONS AND WEIGHTS ARE BASED ON THE BASE BID "LENNOX" UNIT. IF ALTERNATE MANUFACTURERS ARE USED, COORDINATE CHANGES WITH ELECTRICAL, STRUCTURAL AND ARCHITECTURAL TRADES. ANY ADDITIONAL COSTS DUE TO CHANGES RESULTING FROM USE OF ALTERNATE MANUFACTURERS SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. 6. MANUFACTURER TO SPECIFY CONCENTRIC DIFFUSER AS PART OF A PACKAGED KIT.

MINIMUM OUTDOOR AIR SCHEDULE

Table with columns: ROOM NAME, SERVED BY, AREA (SQ. FT.), OA REQ'D PER AREA (CFM/SF), OCCUPANCY PEOPLE (1000 SQ.FT.), OCCUPANCY (NUMBER OF PEOPLE), OA REQ'D PER PERSON (CFM), UNCORRECTED OA REQ'D, ADJUSTED OA (CFM), REMARKS.

NOTE: BASED ON 2014 FLORIDA MECHANICAL CODE

FAN SCHEDULE

Table with columns: EQUIPMENT TAG, LOCATION, TYPE, AIRFLOW (CFM), ESP, DRIVE, ELECTRICAL (VOLT, PHASE, HERTZ), MODEL NUMBER, REMARKS.

NOTE: 1. ALL MODEL NUMBERS ARE PRICE UNLESS OTHERWISE NOTED. 2. PROVIDE GREENHECK MODULAR WALL CURB WITH 6"x6" INLET, STEEL FINISH, BACKDRAFT DAMPER AND BIRDSCREEN.

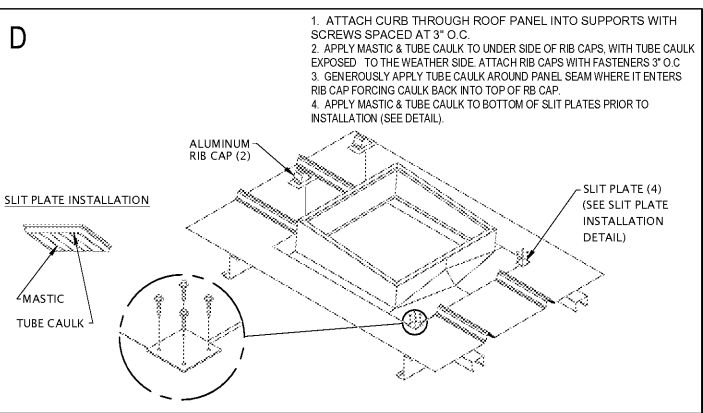
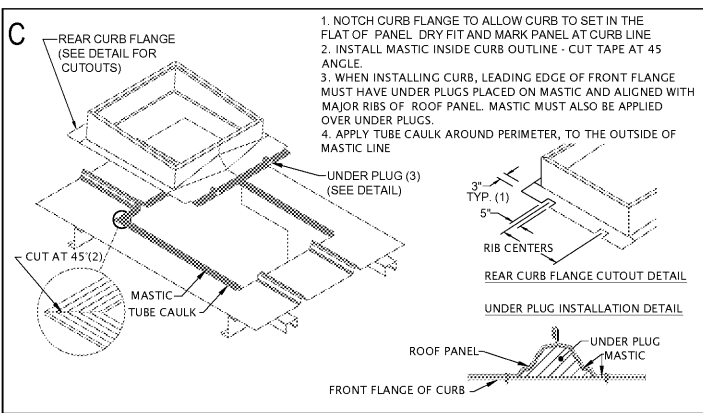
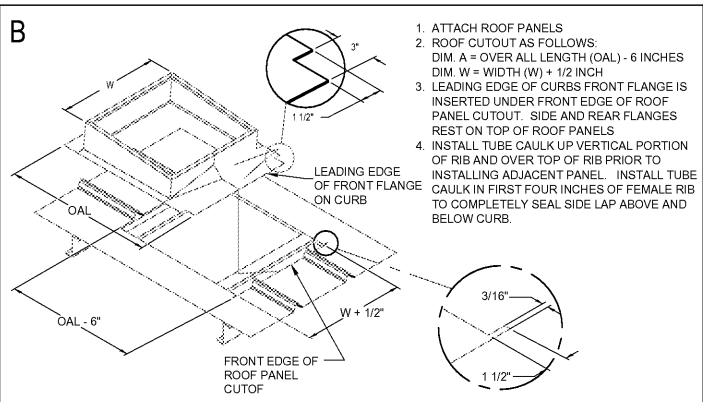
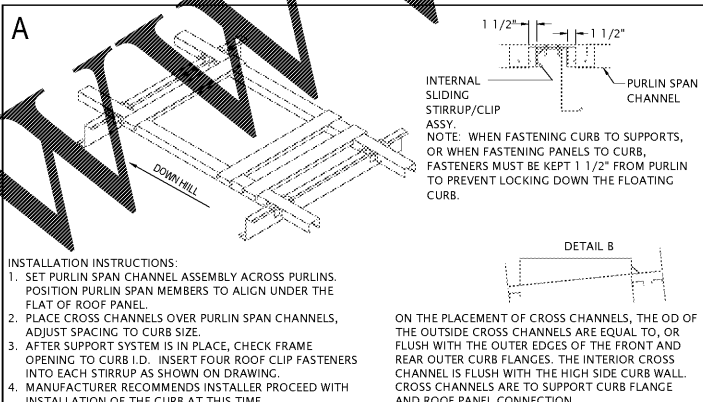
GRILLE, REGISTER, DIFFUSER SCHEDULE

Table with columns: TAG, SERVICE, NEW/REPLACE, FRAME SIZE, FRAME TYPE, ACCESSORIES, MATERIAL, FINISH, MODEL NUMBER, REMARKS.

NOTE: 1. MODEL NUMBERS ARE PRICE UNLESS OTHERWISE NOTED.

DESIGN CONDITIONS

Table with columns: CONDITION, SUMMER (ASHRAE 0.4%), WINTER (ASHRAE 99.6%), WEATHER STATION: TAMPA, FL

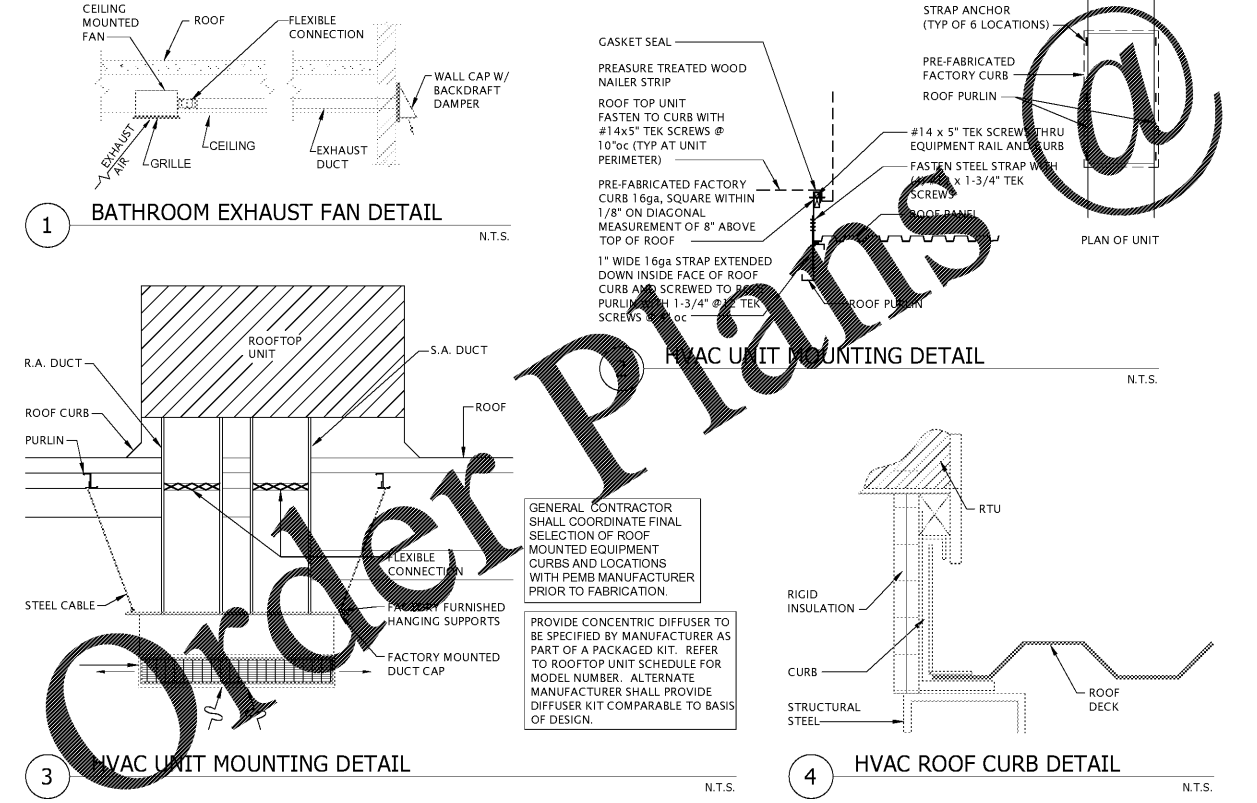


CURB INSTALLATION INSTRUCTIONS

TRAPEZOIDAL STANDING SEAM PANEL - UNDER / OVER FOLLOW MANUFACTURER'S SPECIFICATIONS

Table with columns: REQUIRED NATIONAL ACCOUNT ROOF CURB VENDOR, ROOF CURB SYSTEMS, CURBS PLUS INC., KCC INTERNATIONAL INC., GREG SMYTH, ALAN THRAILKILL, GREG CONRAD, 800-683-5848, 888-639-2872, 800-382-2872, GMSMYTH@ROOFCURB.COM, ALAN.THRAILKILL@CURBS-PLUS.COM, CONRADR@KCCURBS.COM

5 TYPICAL ROOF CURB UNIT



SEAL: HENRY D. MONTAGUE, PE 78172

THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION PURPOSES UNTIL THE SEAL AND SIGNATURE OF THE RESPONSIBLE REGISTRANT APPEARS ON THE DRAWING, AND PROPER PERMIT FORMS AND RELATED FEES ARE TRANSMITTED BY THE OWNER, OWNER'S AGENT OR CONTRACTOR TO THE AUTHORITY HAVING JURISDICTION.

Table with columns: DATE, ISSUED FOR, REV. Includes dates 12/01/2017 and 01/17/2018, and descriptions like 'PEMB COORDINATION' and 'PERMIT SUBMITTAL'.

Table with columns: Project Manager (B. COLBURN), Drawn (T. PATTERSON), Project Leader (B. COLBURN), Checked (H. MONTAGUE), Date (11/20/2017), Dept Mgr Approval (H. MONTAGUE).

Client: Palmetto - Spring Hill Forest Rd., LLC. P.O. BOX 1615 THOMASVILLE, GA 31792 Office: (229) 226-1177 Contact: Jeff Lazenby

Project: DOLLAR GENERAL US 19 & Pine Forest Dr. Spring Hill (Hernando County), FL

Drawing Title: HVAC SCHEDULES, NOTES AND DETAILS

Table with columns: Project No. (JCDT17.0325.00), Drawing No. (M2), DO NOT SCALE DRAWING.