

NOTE: PRIOR TO THE START OF THE PROJECT, THE MECHANICAL CONTRACTOR SHALL PROVIDE THE SERVICES OF A STRUCTURAL ENGINEER, LICENSED IN THE STATE OF FLORIDA, WHO SHALL VERIFY THE CORRECT INSTALLATION AND ATTACHMENT OF EACH ITEM OF ROOF MOUNTED EQUIPMENT TO THE STRUCTURE IN ORDER TO WITHSTAND CODE REQUIRED WIND LOADS.	NOTES: 1. 90 DEGREE ELBOWS IN FLEX DUCT TO HAVE NOT LESS THAN ONE DUCT DIAMETER CENTERLINE RADIUS.	NOTES 1. BOXES 1,400 CFM OR LESS TO BE SUPPORTED WITH 1/2"x1/2"x1" GALANIVED BAND. IRON ON FOUR CORNERS BOXES GREATER THAN 1,400 CFM SHALL HAVE TRAPEZE SUPPORT OF REINFORCING ANGLE WITH 3/8" GALVANIZED ALL THREAD ROD HANGERS. 2. PROVIDE A MINIMUM LENGTH OF 2 INLET DIAMETER OF STRAIGHT RIGID SHEETMETAL FROM THE DUCT TRANSITION PIECE TO THE VAV BOX INLET. 3. BOXES WITH ELECTRICAL REHEAT COILS TO HAVE 3'-6" MINIMUM WORKING CLEARANCE ON TERMINAL BOX SIDE.	BASIS OF DESIGN: EDWARDS SIGA-SD; UL 268A LISTING APPROVED EQUIVALENT VERSIONS ARE ALSO ACCEPTABLE. - INSTALL DUCT MOUNTED SMOKE DETECTOR IN ACCESSIBLE LOCATION. - SAMPLING TUBE SHALL EXTEND AT LEAST TWO-THIRDS ACROSS THE WIDTH OF THE DUCT. FOR DUCT WIDTHS GREATER THAN 36", USE A SAMPLING TUBE THAT IS LONGER THAN THE WIDTH OF THE DUCT. - IF USING AN AIR SAMPLING TUBE THAT IS LONGER THAN THE WIDTH OF THE DUCT, DRILL A 3/4" HOLE ON THE OPPOSITE SIDE OF THE DUCT FOR TUBE TO PASS THROUGH. SEAL THE OPENING AROUND THE TUBE WITH AN APPROVED DUCT SEALANT. - MOUNT THE DUCT SMOKE DETECTOR ON THE HVAC DUCT AND SECURE IT USING TWO #10 SHEET METAL SCREWS. - DUCT MOUNTED SMOKE DETECTORS SHALL BE WIRED IN ACCORDANCE WITH NFPA 72 AND SUPERVISED BY THE FIRE ALARM SYSTEM. VERIFY THAT ALL FIELD WIRING IS FREE OF OPENS, SHORTS, AND GROUND FAULTS. - INSTALL DUCT ACCESS PANEL IN ACCESSIBLE LOCATION TO ALLOW FOR INSPECTION AND CLEANING OF SAMPLING TUBE. - VERIFY THE AIR PRESSURE DIFFERENTIAL VALUE FALLS WITHIN THE SPECIFIED OPERATING RANGE OF THE DETECTOR. - TEST THE DETECTOR TO ENSURE IT IS OPERATING CORRECTLY. - PROVIDE REMOTE INDICATOR FOR DETECTORS LOCATED MORE THAN 10FT ABOVE FINISHED FLOOR OR ABOVE HARD CEILING.	MD-2036
ROOFTOP CURB MOUNTING DETAIL No Scale NOTES: 1. CONTRACTOR TO PROVIDE FULL RADIUS ELBOW WHERE CLEARANCE WILL ALLOW.	BOX SERVING ONE DIFFUSER DETAIL No Scale NOTES: 1. PROVIDE RUBBER VIBRATION ISOLATORS TO PREVENT MOTOR AND BEARING NOISE FROM TRANSMITTING TO THE FAN HOUSING. 2. ROUTE POWER LEADS TO FAN INSIDE CORNER OF CURB. 3. BELT DRIVEN CENTRIFUGAL EXHAUST FAN SHOWN. DETAIL IS SIMILAR FOR DIRECT DRIVE CENTRIFUGAL EXHAUST FAN. 4. SUPPORT CURB TO BE PERMANENTLY ATTACHED TO BUILDING STRUCTURE BY BOLTING OR WELDING.	VARIABLE VOLUME BOX CONNECTION DETAIL No Scale	DUCT MOUNTED SMOKE DETECTOR DETAIL No Scale TYPICAL INSTALLATION DETAILS (A) RETAINING ANGLES: MINIMUM 11/2"x11/2"x0.054 (16 GA.) RETAINING ANGLES MUST LAP STRUCTURAL OPENING 1" MINIMUM AND COVER CORNERS OF OPENINGS. SINGLE SIDED RETAINING ANGLES ARE ACCEPTABLE. (B) CLEARANCE 1/8" PER LINEAR FOOT BOTH DIMENSIONS (SEE NOTE #1 BELOW.) (C) STEEL SLEEVE: GAUGE AS REQUIRED BY MANUFACTURER'S INSTRUCTIONS. (D) APPROVED FIRE DAMPER (CURTAIN OR BLADE TYPE) (E) SECURE RETAINING ANGLES TO SLEEVE ONLY, ON 8" CENTERS WITH: 1. 1/2" LONG WELDS, OR 2. 1/4" BOLTS AND NUTS, OR 3. NO. 10 STEEL SCREWS, OR 4. MINIMUM 3/16" STEEL RIVETS (F) SECURE DAMPER TO SLEEVE ON 8" CENTERS WITH: 1. 1/2" LONG WELDS, OR 2. 1/4" BOLTS AND NUTS, OR 3. NO. 10 STEEL SCREWS, OR 4. MINIMUM 3/16" STEEL RIVETS (G) CONNECT DUCT TO SLEEVE AS REQUIRED BY THE MANUFACTURER. (H) INSTALL ACCESS DOOR OR PANEL FOR SERVICE AND INSPECTION. DOOR MUST BE LARGE ENOUGH TO CHANGE LINK. NOTES: 1. FIRE DAMPER SLEEVE CLEARANCE WITHIN WALL OPENING. 2. CLEARANCE REQUIREMENTS FOR DAMPER SLEEVES WITHIN A WALL OPENING IS BASED ON 1/8" INCH PER FOOT OF WIDTH (OR HEIGHT) UNLESS OTHERWISE STATED IN THE LISTING OF THE ASSEMBLY. THE SLEEVE MAY REST ON THE BOTTOM OF THE OPENING, AND NEED NOT BE CENTERED. (FRACTIONAL DIMENSIONS SHALL BE TAKEN AS THE NEXT LARGEST WHOLE FOOT.) EXAMPLE: A 30 INCH X 24 INCH FIRE DAMPER SLEEVE IS INSTALLED IN A WALL OPENING. THE OPENING SHALL BE 30 3/8 INCHES WIDE (1/8 INCH X3 FEET) BY 24 1/4 INCHES HIGH (1/8 INCH X2 FEET.) 3. THE SLEEVE IS RETAINED IN THE WALL OPENING BY THE USE OF STEEL RETAINING ANGLES (A). THESE MUST OVER-LAP THE EDGE OF THE FRAMING BY A MINIMUM OF ONE (1) INCH OVER AND BEYOND ALL MATERIAL IN THE OPENING. THIS MEANS THAT THE MINIMUM WIDTH OF THE RETAINING ANGLE WOULD BE 1 3/8 INCHES (GOOD PRACTICE CALLS FOR AN ADDITIONAL SAFETY FACTOR BY MAKING THE ANGLE IN THIS CASE 1 1/2 INCHES WIDE.) THE DIMENSIONS REQUIRED FOR THE OPENING SHALL BE THOSE REMAINING AFTER THE OPENING HAS BEEN FRAMED AND FIRE RESISTIVE MATERIALS PROVIDED WHERE REQUIRED. THE FIRE RESISTIVE MATERIALS SHALL BE EQUAL TO THE REQUIREMENTS FOR FIRE RESISTIVE MATERIALS USED IN THE CONSTRUCTED WALL SO THAT A CONTINUOUS RATING EXISTS AT THE WALL PENETRATION. PROVIDE A COPY OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AT THE AHCA INSPECTION. BASIS OF DESIGN FIRE DAMPER BASIS OF DESIGN: RUSKIN 1BD2; UL555 LISTING R5531 FIRE/SMOKE DAMPER BASIS OF DESIGN: RUSKIN FSD60; UL555S LISTING R5531 APPROVED EQUIVALENT VERSIONS ARE ALSO ACCEPTABLE. MANUFACTURERS' INSTALLATION DETAILS THE FIRE DAMPER MANUFACTURERS' INSTALLATION DETAILS AND INSTRUCTIONS AS TESTED AND APPROVED BY U.L. MUST BE USED IN LIEU OF THESE DETAILS WHERE APPLICABLE. NOTE: NO CAULKING IS REQUIRED ON FIRE DAMPERS OR FIRE DAMPER RETAINING ANGLES. VERTICAL POSITION IS SHOWN, HORIZONTAL INSTALLATION IS SIMILAR, FOLLOW INSTALLATION INSTRUCTION FOR FUSIBLE LINKS. LINKS TO BE 165° F.	MD-2036 ICThomson Associates, Inc. CONSULTING ENGINEERS 303 N. ROCKY POINT DR. W., SUITE 750 TAMPA, FL 33607 PHONE: (813) 882-4415 WWW.ICHOMSON.COM I.C.T. PRODUCT NO. 23042706 FIRM CERTIFICATE OF AUTHORIZATION FLORIDA REG. # 4-680129 MECHANICAL ENGINEER RUSKIN, NEWMAN, P.E. FLORIDA #54888 ELECTRICAL ENGINEER PHILIP GARRETT, P.E. FLORIDA #6329 SEAL Digitally signed by Daniel Allen Neuman (DN: E=Dan.Neuman@Sales@icthomson.com, OU=ICThomson Associates, L=Nashville, ST=TN, SERIALNUMBER=MAS20260116744091, C=US, Location: Tampa, FL, Contact info: 8138824415, Date: 2026.08.03 15:08:42-0400) (This item has been digitally signed and sealed by Daniel A. Neuman on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be written on any electronic copies.) DEUK SPINE INSTITUTE Surgery Center at Millenia, LLC Hunton Brady ARCHITECTS
BOTTOM OF RISER DUCT DROP WITH 90° ELBOW No Scale	CENTRIFUGAL EXHAUST FAN No Scale	SMACNA DUCT HANGER AND SUPPORT No Scale	FIRE & FIRE/SMOKE DAMPERS No Scale EXAMPLE: A 30 INCH X 24 INCH FIRE DAMPER SLEEVE IS INSTALLED IN A WALL OPENING. THE OPENING SHALL BE 30 3/8 INCHES WIDE (1/8 INCH X3 FEET) BY 24 1/4 INCHES HIGH (1/8 INCH X2 FEET.) 3. THE SLEEVE IS RETAINED IN THE WALL OPENING BY THE USE OF STEEL RETAINING ANGLES (A). THESE MUST OVER-LAP THE EDGE OF THE FRAMING BY A MINIMUM OF ONE (1) INCH OVER AND BEYOND ALL MATERIAL IN THE OPENING. THIS MEANS THAT THE MINIMUM WIDTH OF THE RETAINING ANGLE WOULD BE 1 3/8 INCHES (GOOD PRACTICE CALLS FOR AN ADDITIONAL SAFETY FACTOR BY MAKING THE ANGLE IN THIS CASE 1 1/2 INCHES WIDE.) THE DIMENSIONS REQUIRED FOR THE OPENING SHALL BE THOSE REMAINING AFTER THE OPENING HAS BEEN FRAMED AND FIRE RESISTIVE MATERIALS PROVIDED WHERE REQUIRED. THE FIRE RESISTIVE MATERIALS SHALL BE EQUAL TO THE REQUIREMENTS FOR FIRE RESISTIVE MATERIALS USED IN THE CONSTRUCTED WALL SO THAT A CONTINUOUS RATING EXISTS AT THE WALL PENETRATION. NOTE: A DUCT MOUNTED SMOKE DETECTOR SHALL BE INSTALLED IN THE DUCTWORK WITHIN FIVE FEET OF A COMBINATION FIRE/SMOKE DAMPER. SMOKE DETECTOR TO BE PROVIDED BY ELECTRICAL CONTRACTOR INSTALLED BY MECHANICAL CONTRACTOR.	MD-2036 DATE 12.12.2023 SUBMISSION CONSTRUCTION DOCUMENTS 08.07.2026 CDD #2R MECHANICAL DETAILS PROJ. NO. H-23016.00 DRAWN OA SHEET M800B
TYPICAL LOW PRESSURE SUPPLY, RETURN AND EXHAUST DUCT DETAIL No Scale MD 2032	LOW PRESSURE ROUND BRANCH DUCT RUNOUT No Scale MD 2001	SMACNA DUCT HANGER AND SUPPORT No Scale MD 2035	FIRE & FIRE/SMOKE DAMPERS No Scale MD 2033	MD 2036