

**MECHANICAL GENERAL NOTES:**

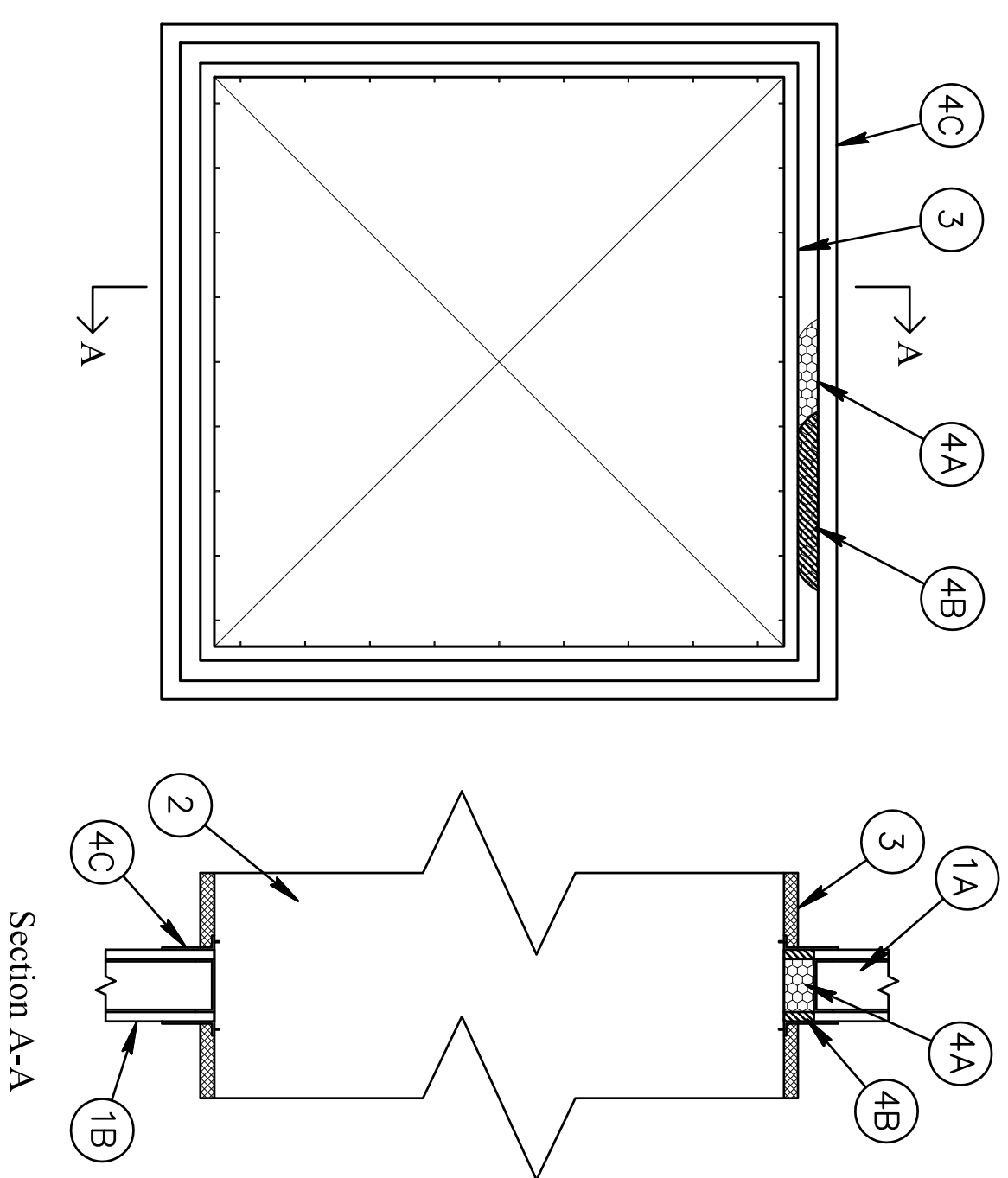
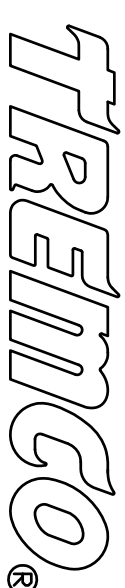
- THESE DRAWINGS ARE DIAGRAMMATIC. ALL OFFSETS, FITTINGS, TRANSITIONS AND ACCESSORIES ARE NOT SHOWN. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL ITEMS REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM. DO NOT SCALE DRAWINGS FOR INSTALLATION.
- ALL WORK SHALL BE PERFORMED IN A FIRST CLASS WORKMANLIKE MANNER BY LICENSED CONTRACTORS.
- THE CONTRACTOR SHALL OBTAIN AT HIS EXPENSE ALL NECESSARY FEES PERMITS, AND TESTS.
- ALL WORK SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES. NO CONTRACTOR SHALL BID UNLESS FAMILIAR WITH THESE CODES. CORRECTION OF DEFECTS TO THIS WORK SHALL BE MADE PROMPTLY WITHOUT CHARGE TO THE OWNER. REPAIR AND REPLACEMENT FOR DAMAGE CAUSED BY THIS CONTRACTOR SHALL BE MADE PROMPTLY WITHOUT CHARGE TO THE OWNER. ALL WORK OF THIS TRADE SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID ANY INTERFERENCES THAT MAY DELAY PROGRESS OF CONSTRUCTION.
- THE CONTRACTOR SHALL INCLUDE THE WORK OF ALL REQUIRED SUB-CONTRACTORS, SUCH AS ELECTRICAL, INSULATING, TEST & BALANCE, ETC., AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
- EQUIPMENT SHALL BEAR A U.L. OR OTHER RECOGNIZED LABEL. NAMEPLATES, WIRING DIAGRAMS, AND ENERGY RATINGS AS APPLICABLE.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND ACCESSORIES TO BE FULLY ACCESSIBLE FOR SERVICE, TESTING, ADJUSTING, AND REPLACEMENT. THE CONTRACTOR SHALL PROVIDE A WRITTEN GUARANTEE AGAINST DEFECTS IN ALL MATERIALS AND WORKMANSHIP FOR ONE YEAR FROM ACCEPTANCE, WITH FOUR ADDITIONAL YEARS OF WARRANTY ON COMPRESSORS.
- THE CONTRACTOR SHALL PROVIDE THREE COPIES OF SUBMITTAL DATA, SHOP DRAWINGS, AND AT COMPLETION OF THE PROJECT TWO SETS OF OPERATION AND MAINTENANCE MANUALS FOR ALL PROJECT ITEMS.
- PROVIDE ALL CONTROLS, STARTERS, CONTROL WIRING, DISCONNECTS, AND OTHER ELECTRICAL EQUIPMENT AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
- THE HVAC CONTRACTOR IS RESPONSIBLE FOR MAINTAINING, ON SITE A DETAILED AS-BUILT PLAN SHOWING ACTUAL INSTALLATIONS. THE CONTRACTOR IS TO PROVIDE A NEATLY DRAWN COMPREHENSIVE AS-BUILT SET OF PLANS UPON COMPLETION, WHICH ARE SUITABLE FOR SUBMISSION TO THE BUILDING DEPARTMENT AND TO THE OWNER.
- PRIOR TO ACCEPTANCE BY THE OWNER THE SYSTEMS SHALL BE TESTED AND BALANCED BY THE CONTRACTOR. PROVIDE A WRITTEN REPORT.
- SUPPLY AND INSTALL DUCT MOUNTED SMOKE DETECTORS AS REQUIRED.
- COORDINATE LOCATION OF CEILING DIFFUSERS, GRILLES AND REGISTERS IN THE FIELD WITH LIGHTS AND ARCHITECTURAL ELEMENTS.
- ALL GRILLES TO BE TITUS OR METALURE UNLESS OTHERWISE NOTED. SIZES AS SHOWN ON PLANS. ALUMINUM CONSTRUCTION.
- ALL DUCT WORK SHALL BE BUILT AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS AND LOCAL BUILDING CODES.
- ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.
- ALL OUTSIDE AIR DUCTWORK SHALL BE SHEETMETAL WITH EXTERIOR R-6 INSULATION. PROVIDE BLANKET TYPE INSULATION IN CONCEALED SPACES, AND BOARD TYPE IN EXPOSED AREAS.
- ALL EXHAUST AIR DUCT SHALL BE GALVANIZED SHEET METAL CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.
- FLEXIBLE DUCT, WHERE SHOWN, SHALL BE U.L. CLASS 1, R-6 INSULATION.
- LOW PRESSURE SUPPLY AND RETURN RECTANGULAR DUCTS IS RIGID DUCTBOARD, 1 IN. THICK, R-4.2 INSULATION.
- PROVIDE ELBOW TURNING VANES IN ALL RECTANGULAR DUCTS WHERE TURNS ARE GREATER THAN 45 DEGREES.
- PROVIDE BACKDRIFT DAMPERS FOR ALL EXHAUST FANS.
- VERIFY ALL THERMOSTAT LOCATIONS WITH THE LANDLORD.
- CONDENSATE DRAIN PIPING SHALL BE ABOVE GRADE COPPER DRAIN, WASTE AND VENT FINISH INSULATE ALL CONDENSATE PIPING W/3/4" IMCOA PROLOK FIBRE INSULATION.
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**GENERAL DEMOLITION NOTES**

- UNLESS OTHERWISE NOTED, ALL EQUIPMENT AND DUCTWORK IN THE PROJECT AREA WHICH IS NOT INDICATED TO REMAIN, IS TO BE REMOVED. THE CONTRACTOR SHALL INVESTIGATE THE PROJECT AREA PRIOR TO BID TO DETERMINE ALL REQUIRED DEMOLITION.
- EXISTING CONDITIONS SHOWN ON THIS DRAWING ARE TAKEN FROM ORIGINAL DRAWINGS AND FIELD INVESTIGATION. ALL EXISTING CONDITIONS MUST BE VERIFIED PRIOR TO BID. FIELD CONDITIONS SHALL GOVERN.
- DEMOLITION WORK IS NOT SPECIFICALLY IDENTIFIED ON THESE PLANS, AND MAY BE DESCRIBED ON THE ARCHITECT'S PLANS. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED DEMOLITION WHETHER SHOWN ON THE PLANS OR NOT.
- ALL MECHANICAL SYSTEMS SERVING OTHER SPACES OR FLOORS, THAT RUN THROUGH THE PROJECT AREA SHALL REMAIN ACTIVE DURING CONSTRUCTION, SO AS NOT TO CAUSE ANY DISRUPTION TO THESE OTHER SPACES.
- ALL ITEMS REMOVED UNDER THIS PROJECT SHALL BE DISPOSED OF OR TURNED OVER TO THE OWNER AT THE OWNER'S DISCRETION.
- PROPERLY REMOVE AND DISPOSE OF ALL HVAC DUCTWORK AND AIR DISTRIBUTION DEVICES WHICH ARE TO BE REMOVED. CONSULT WITH OWNER AND OBTAIN THE OWNER'S APPROVAL PRIOR TO DISPOSAL OF REMOVED MATERIAL.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL PIPING AND DUCTS, NEW OR EXISTING, WITHIN THE PROJECT AREA, ARE PROPERLY SUPPORTED.
- ALL OCCUPIED SPACES ARE TO REMAIN OPERATIONAL DURING BUSINESS HOURS THROUGHOUT THE DEMOLITION AND CONSTRUCTION PERIOD. COORDINATE ALL WORK AS DESCRIBED IN THE ARCHITECT'S DOCUMENTS.

**System No. W-1-7173**

August 2008  
F Rating - 1 and 2 Hr (See Item 1)  
T Rating - 0 Hr  
(UL/CUL)



- Wall Assembly** - The 1 or 2 hr fire-rated gypsum board stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400 or V400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:  
A. **Studs** - Wall framing shall consist of min 3-1/2 in. wide steel channel studs spaced max 24 in. OC. Additional steel studs shall be used to completely frame the opening.  
B. **Gypsum Board** - 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U400 or V400 Series Design in the UL Fire Resistance Directory. Max area of opening is 73.7 sq ft with max dimension of 104 in.

The hourly F Rating of the freestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

- Steel Duct** - Max 100 in. by 100 in. galy steel duct to be installed either concentrically or eccentrically within the freestop system. The duct shall be constructed and reinforced in accordance with SMACNA construction standards. Steel ducts to be rigidly supported on both sides of the wall assembly.
- Batts and Blankets** - Nom 1-1/2 in. thick glass fiber batt or blanket (nom 3/4pcf) jacketed on the outside with a foil-scrim-stuff facing. Longitudinal and transverse joints sealed with aluminum foil tape. During the installation of the fill material, the batt or blanket shall be compressed 50% such that the annular space within the freestop system shall be min 1/2 in to max 2 in.

See Batts and Blankets (BKNV) category in the Building Materials Directory for names of manufacturers. Any batt or blanket meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index 50 or less may be used.

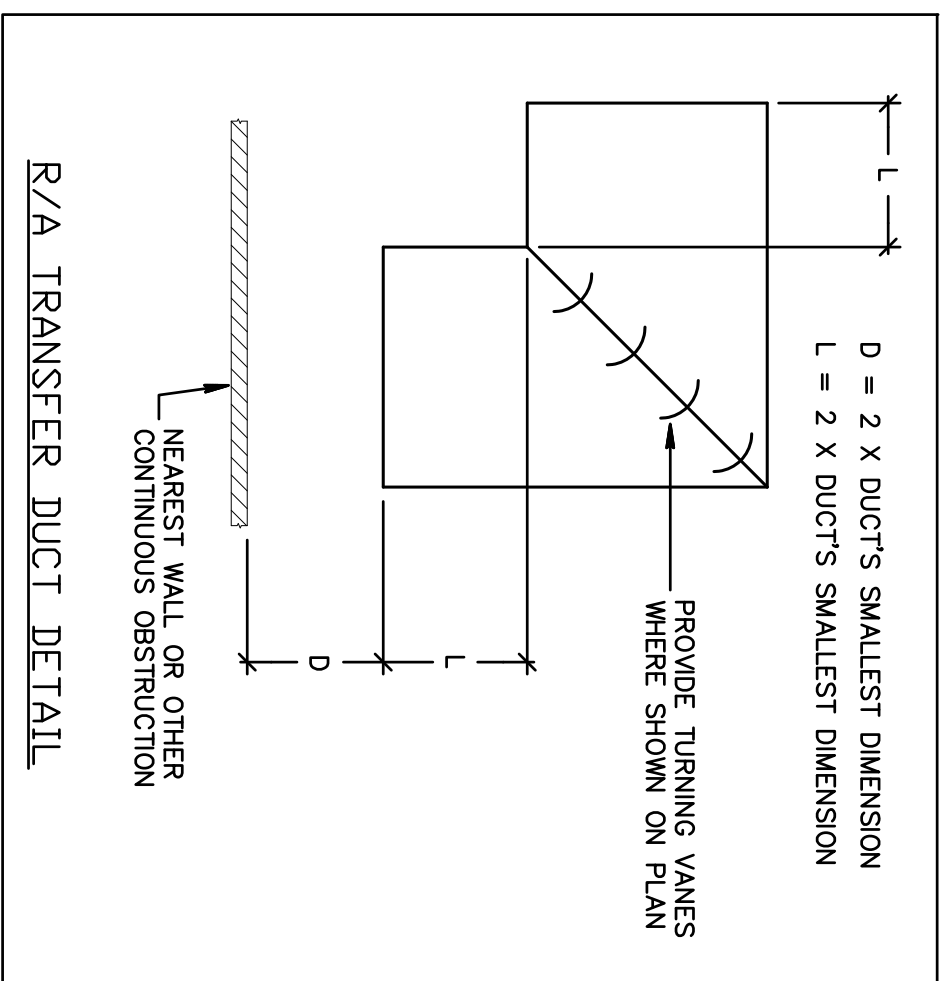
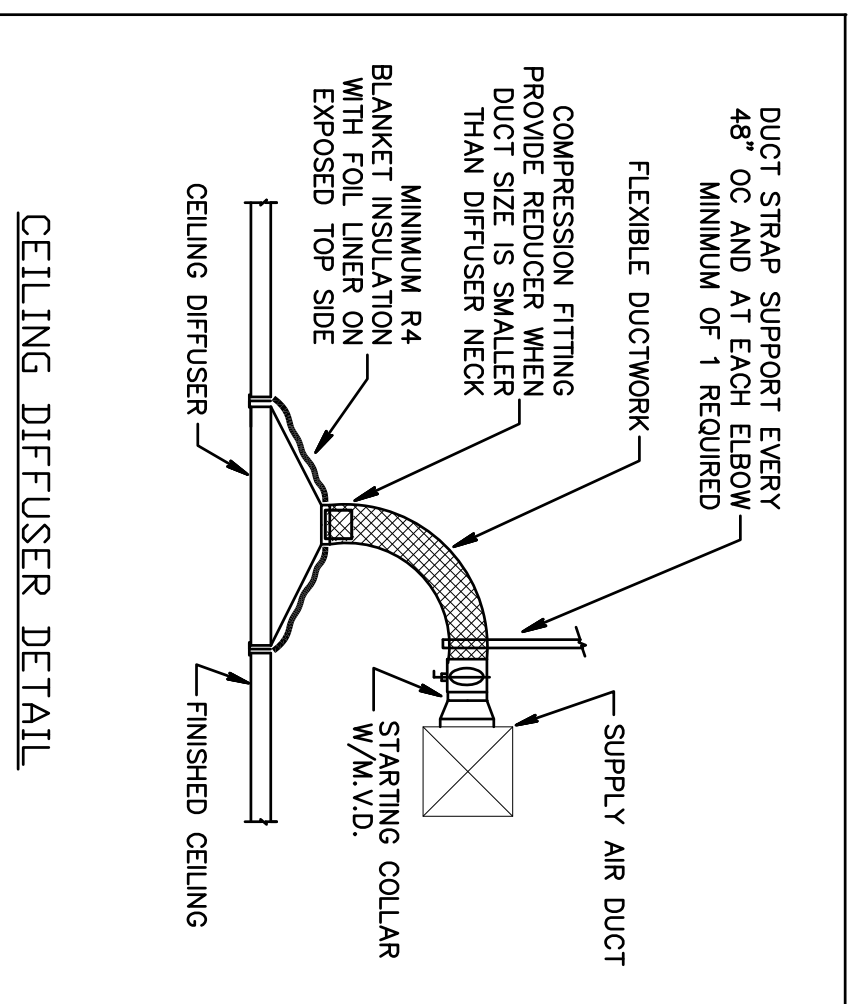
- Freestop System** - The freestop system shall consist of the following:  
A. **Packing Material** - Min 3.5/8 or 4-7/8 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into the opening as a permanent form for 1 hr or 2 hr fire-rated walls, respectively. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.

- Fill Void or Cavity Material** - Sealant - Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall.  
TREMCO INC. - TREMSTOP Intumescent Acrylic or TREMSTOP 1A+  
C. **Steel Retaining Angles** - Min No. 16 gauge (0.059 in.) galy steel angles sized to lap steel duct a min of 1 in. and lap wall surfaces and min of 2 in. Angles attached to steel duct on both sides of wall with min No. 10 steel sheet metal screws spaced a max of 1 in. from each end of steel duct and spaced a max of 6 in. OC.

\*Bearing the UL Classification Mark

Reproduced courtesy of Underwriters Laboratories, Inc.  
See UL Fire Resistance Directory for additional information.

(UL/CUL)



**HVAC DETAILS**

**AIR DISTRIBUTION SCHEDULE**

MARK	MAKE	MODEL	SIZE	NECK	MATERIAL	BORDER TYPE	MOUNTING TYPE	DAMPER	THROW
A	TTUS	PAS-AA	24x24	6"	ALUMINUM		LA-N	AG-100	4 WAY
A1	TTUS	PAS-AA	24x24	6"	ALUMINUM		SURFACE	AG-100	1 WAY
B	TTUS	PAS-AA	24x24	8"	ALUMINUM		LA-N	AG-100	4 WAY
C	TTUS	PAS-AA	24x24	10"	ALUMINUM		LA-N	AG-100	4 WAY
PA	TTUS	PAR-AA	24x24	22x22	ALUMINUM		LA-N		

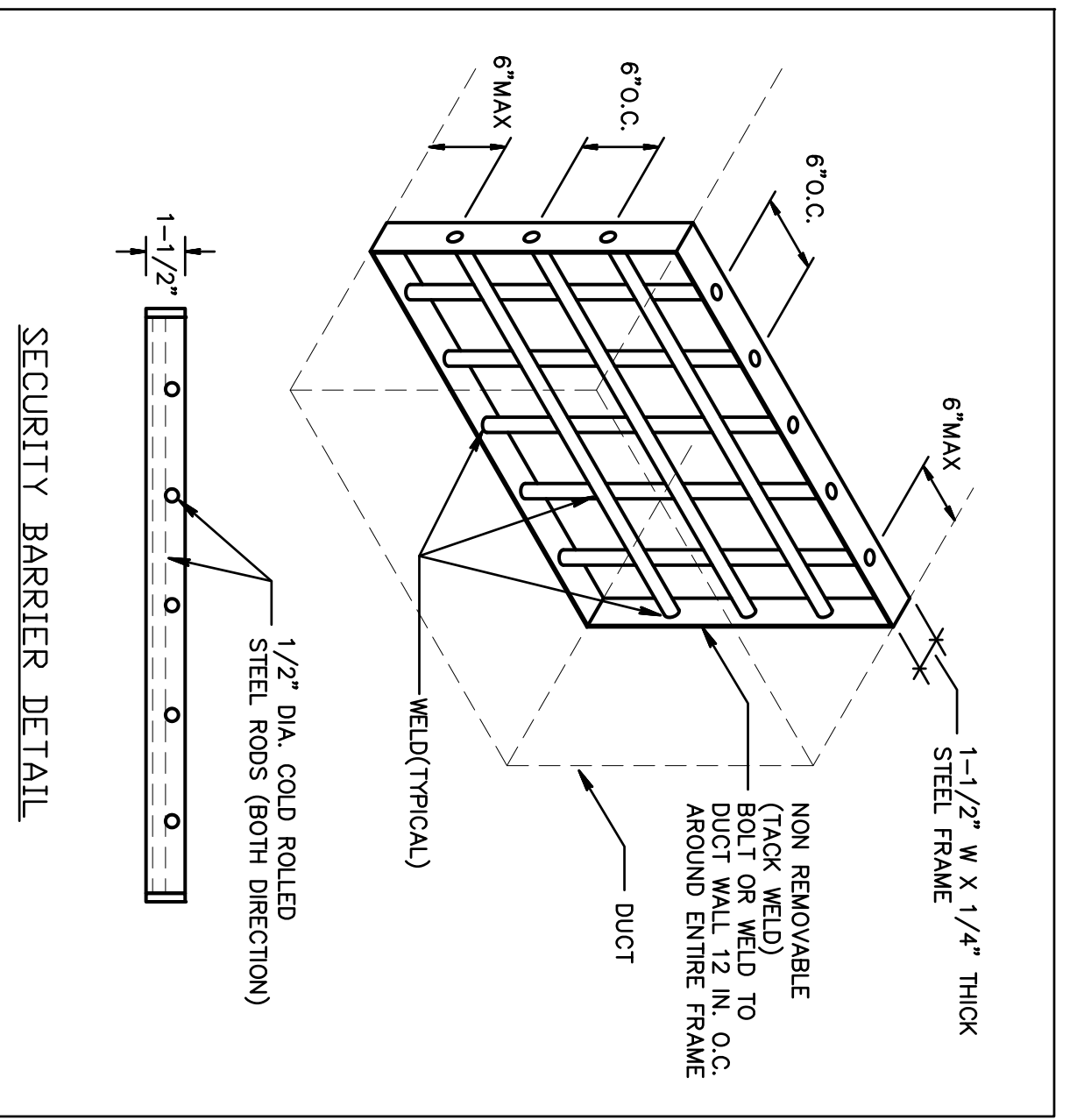
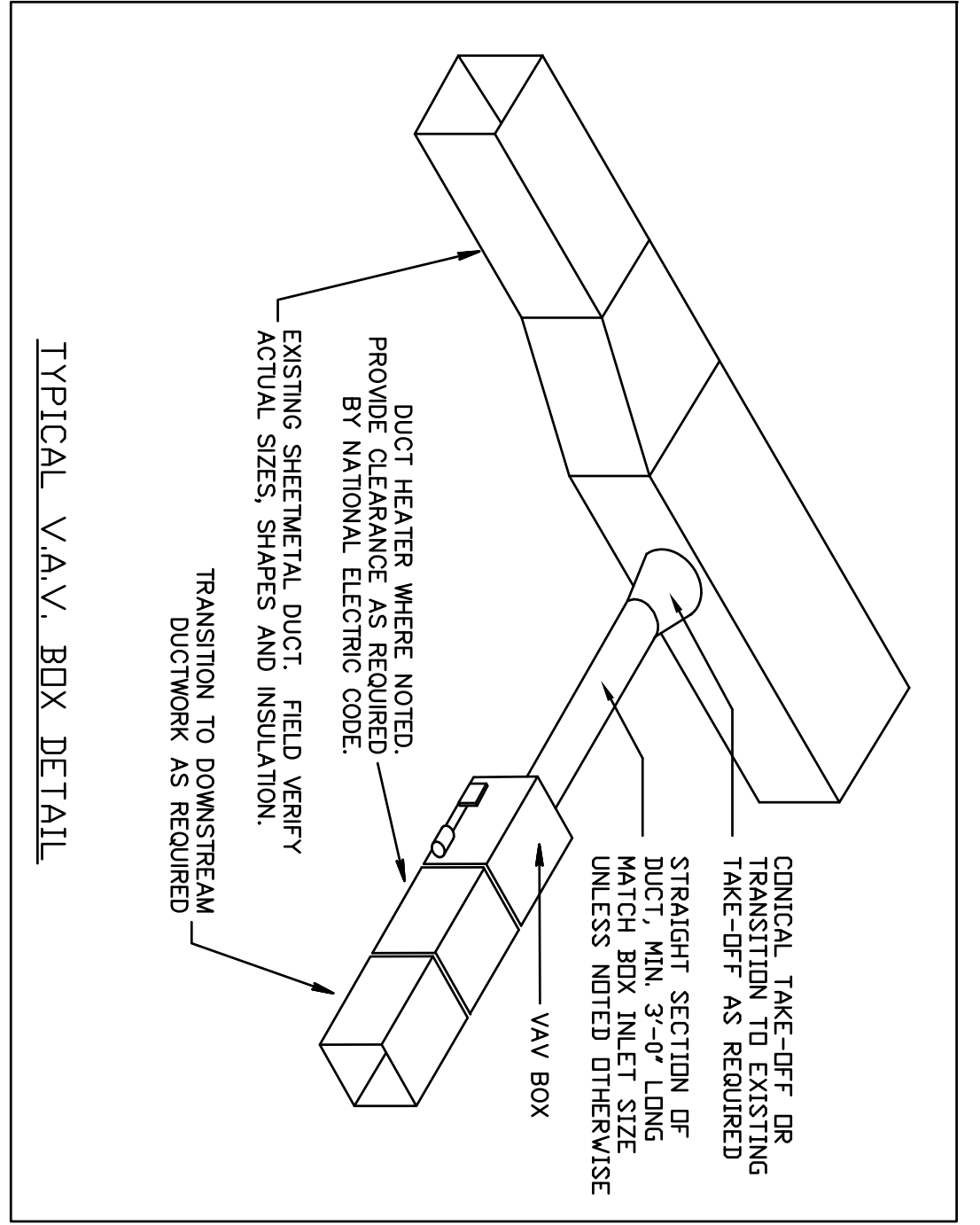
PROVIDE OFF-WHITE FINISH AND SUBMITTALS TO ARCHITECT FOR APPROVAL.  
PROVIDE ROUND FLEXIBLE DUCT RUN-OUT SIZED TO MATCH 5/4 DIFFUSER NECK UNLESS NOTED OTHERWISE.  
PROVIDE PLENUM BOX ABOVE SUPPLY AND RETURN AIR GRILLES AS REQUIRED FOR DUCT CONNECTIONS.  
PROVIDE DAMPERS ONLY WHERE DAMPER IS NOT ACCESSIBLE AT DUCT TAKE-OFF ABOVE CEILING.

**VAV SCHEDULE**

MARK	MANUF.	MODEL NO.	INLET SIZE	GRH	GRH	HEAT	REMARKS
				MAX	MIN	STEP	
V1	CARRIER	35E	8"	550	150	-	NOTES 1 THRU 5
V2	CARRIER	35E	8"	700	250	2.5	NOTES 1 THRU 6
V3	CARRIER	35E	8"	550	150	-	NOTES 1 THRU 5
V4	CARRIER	35E	8"	700	250	2.5	NOTES 1 THRU 6

- PROVIDE ROOM TEMPERATURE SENSOR WITH EXTERNAL SET POINT ADJUSTMENT.
- PROVIDE FACTORY MOUNTED DDC CONTROLLER AND CONTROL POWER TRANSFORMER AS REQUIRED.
- VITH OUTLET CONFIGURATION AS REQUIRED, COORDINATED BY CONTRACTOR.
- TRANSITION FROM INLET & OUTLET SIZE TO DUCT SIZES AS SHOWN ON FLOOR PLANS. IF NOT OTHERWISE INDICATED, INLET DUCT SIZE IS TO MATCH BOX INLET.
- VITH OPTIONAL 1/2" THICK FOIL FACED INSULATION.
- FACTORY HEATER WITH COMPLETE CONTROLS, MERCURY CONTACTORS, INTERLOCKING DDDR SWITCH, UL LISTED AND LABELED.

SEE HVAC CONTROLS NOTE FOR ADDITIONAL INFORMATION



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PROJ. # 12-011

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**BoD**

**2ND FLOOR SPEC SUITES**  
FOUNTAIN SQUARE  
2600 N MILITARY TRAIL  
BOCA RATON, FL  
PROJECT NUMBER 26008

**REVISIONS**

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4	
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DRAWN BY DR  
**CD**  
4-11-12

**M-2**