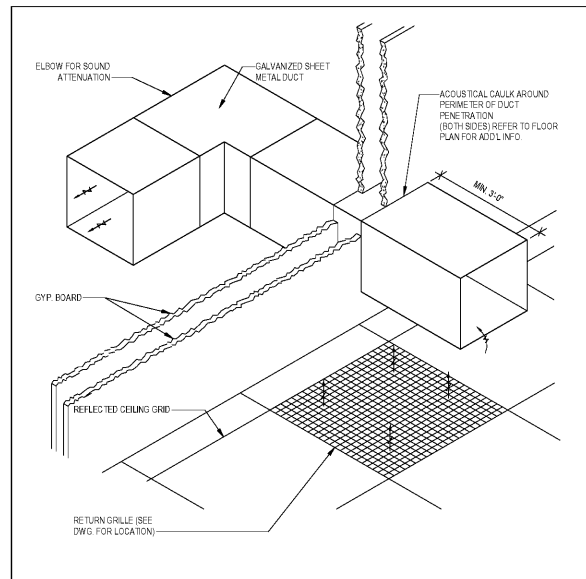
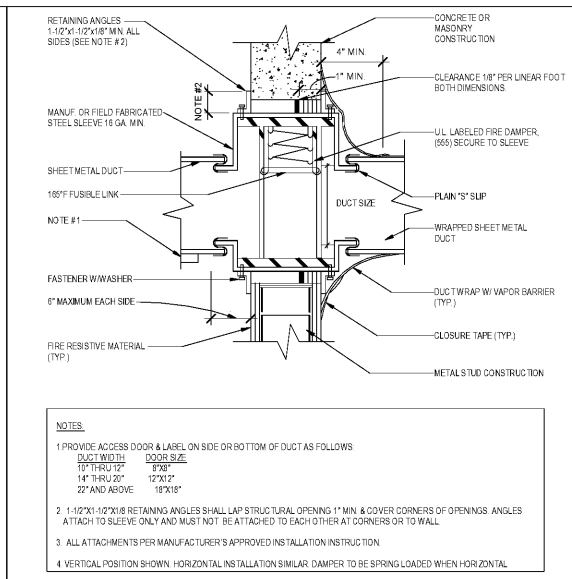


**NOT FOR
CONSTRUCTION**

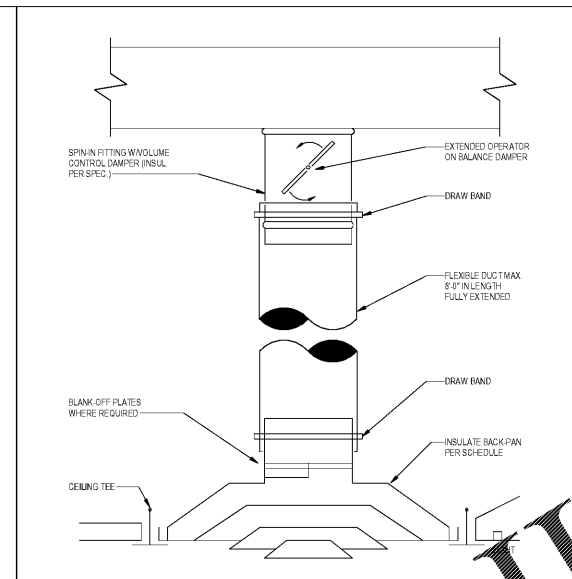
No.	Description	Date
1	DD - GMP	2/19/2015



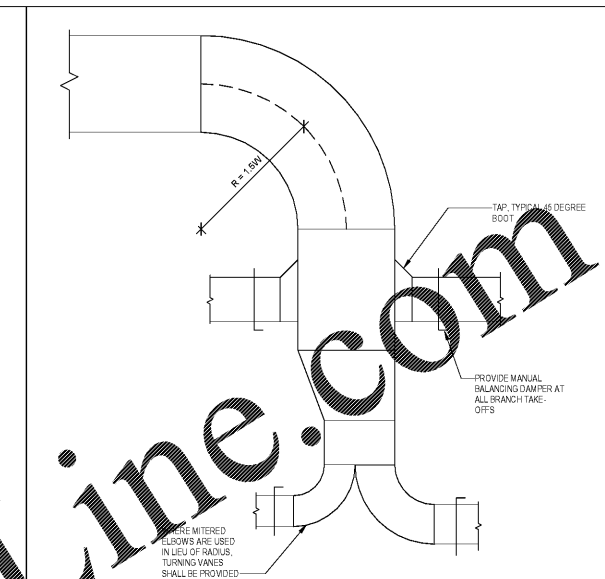
PLENUM RETURN TRANSFER BOOT
No Scale



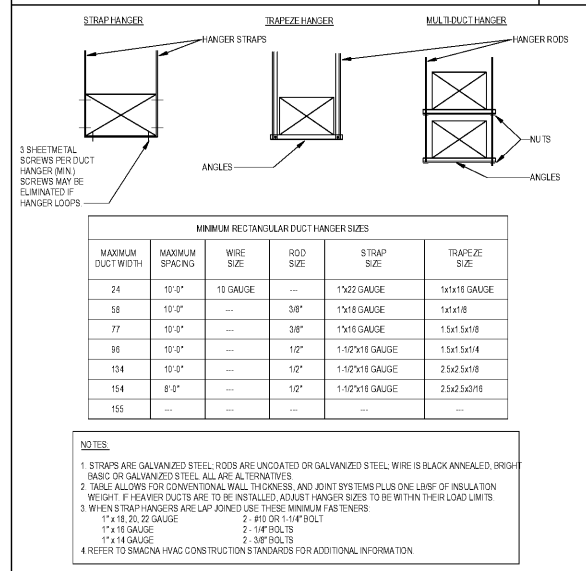
FIRE DAMPER INSTALLATION
No Scale



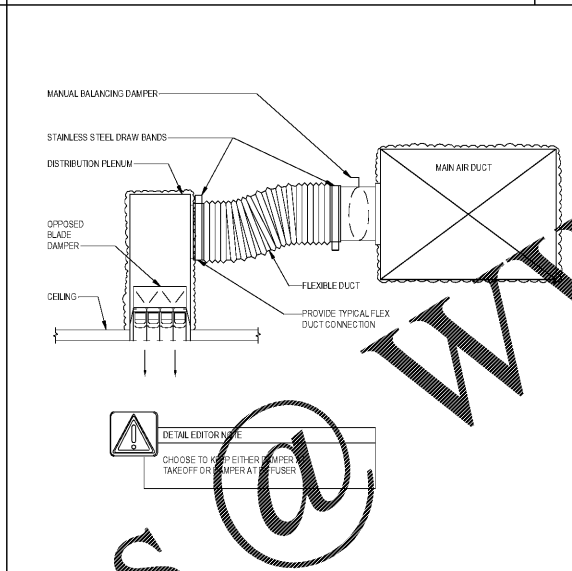
DIFFUSER MOUNTING
No Scale



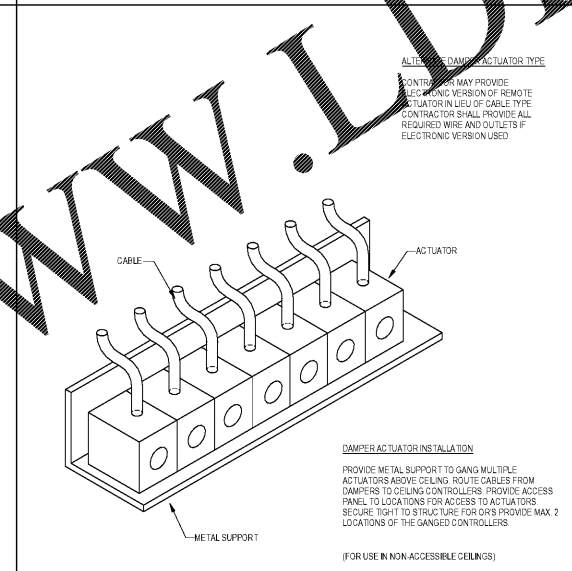
TYPICAL LOW PRESSURE DUCTWORK
No Scale



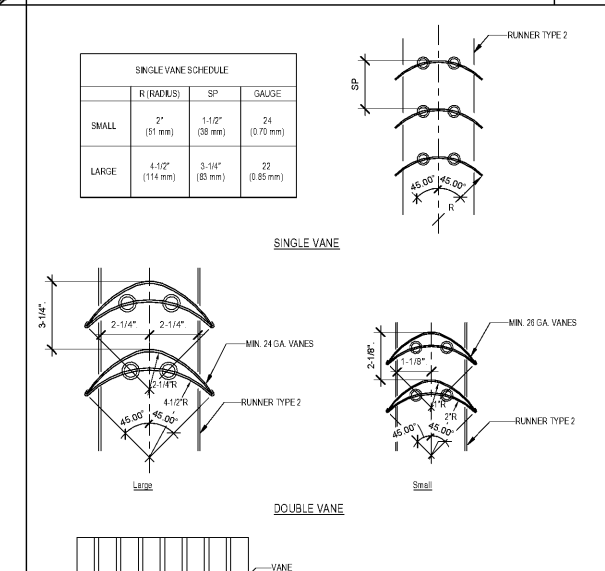
RECTANGULAR DUCT SUPPORT DETAIL
No Scale



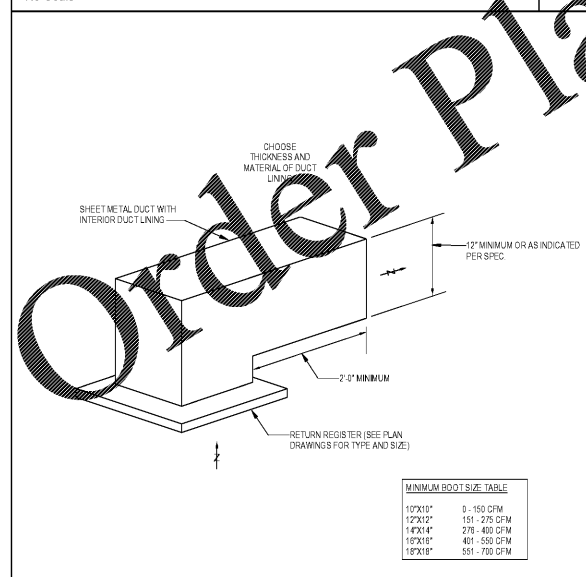
LINEAR DIFFUSER - VERTICAL CONFIGURATION
No Scale



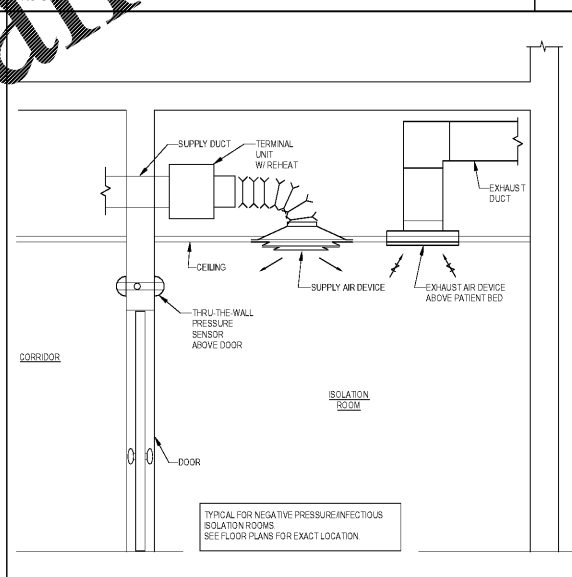
CABLE CONTROL DAMPER GANG
No Scale



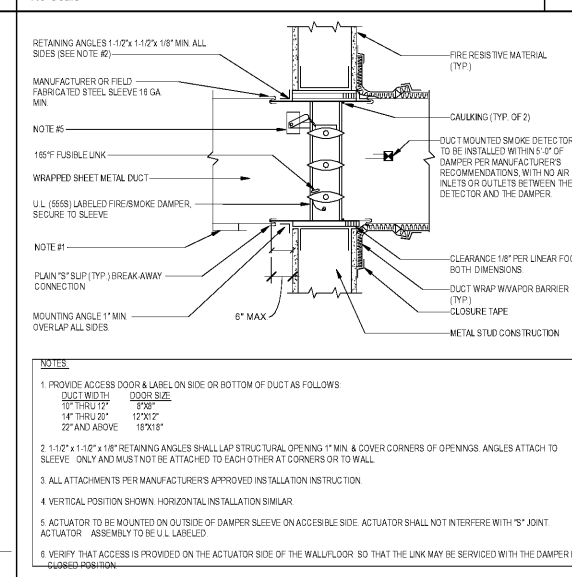
TURNING VANES
No Scale



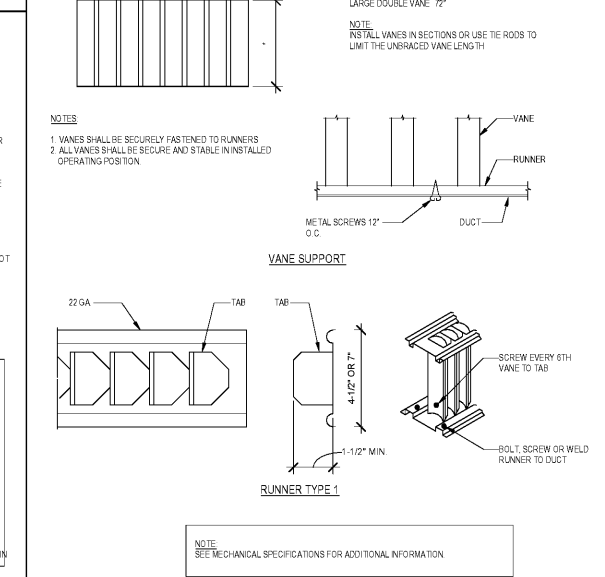
TYPICAL RETURN AIR BOOT
No Scale



INFECTIOUS ISOLATION ROOM PRESSURE CONTROL
No Scale



FIRE & SMOKE DAMPER INSTALLATION
No Scale



TURNING VANES
No Scale

MINIMUM BOOT SIZE TABLE

DUCT WIDTH	DUCT SIZE	CFM
10"x10"	0 - 150 CFM	
12"x12"	151 - 275 CFM	
14"x14"	276 - 400 CFM	
16"x16"	401 - 550 CFM	
18"x18"	551 - 700 CFM	

MINIMUM RECTANGULAR DUCT HANGER SIZES

MAXIMUM DUCT WIDTH	MAXIMUM SPACING	WIRE SIZE	ROD SIZE	STRAP SIZE	TRAPEZE SIZE
24	10'-0"	10 GAUGE	---	1-1/2" GAUGE	1x1x18 GAUGE
36	10'-0"	---	3/8"	1-1/8" GAUGE	1x1x18
48	10'-0"	---	3/8"	1-1/8" GAUGE	1-1/2x18 GAUGE
60	10'-0"	---	1/2"	1-1/2x18 GAUGE	1-1/2x18 GAUGE
72	10'-0"	---	1/2"	1-1/2x18 GAUGE	2-1/2x18 GAUGE
84	10'-0"	---	1/2"	1-1/2x18 GAUGE	2-1/2x18 GAUGE
96	10'-0"	---	1/2"	1-1/2x18 GAUGE	2-1/2x18 GAUGE
108	10'-0"	---	1/2"	1-1/2x18 GAUGE	2-1/2x18 GAUGE
120	10'-0"	---	1/2"	1-1/2x18 GAUGE	2-1/2x18 GAUGE
132	10'-0"	---	1/2"	1-1/2x18 GAUGE	2-1/2x18 GAUGE
144	10'-0"	---	1/2"	1-1/2x18 GAUGE	2-1/2x18 GAUGE
156	10'-0"	---	1/2"	1-1/2x18 GAUGE	2-1/2x18 GAUGE
168	10'-0"	---	1/2"	1-1/2x18 GAUGE	2-1/2x18 GAUGE

NOTES:
1 STRAPS ARE GALVANIZED STEEL; RODS ARE UNCOATED OR GALVANIZED STEEL; WIRE IS BLACK ANNEALED, BRIGHT BASIC OR GALVANIZED STEEL. ALL ARE ALTERNATIVES.
2 TABLE ALLOWS FOR CONVENTIONAL WALL THICKNESS AND JOINT SYSTEMS PLUS ONE LB/SF OF INSULATION WEIGHT. IF HEAVIER DUCTS ARE TO BE INSTALLED, ADJUST HANGER SIZES TO BE WITHIN THEIR LOAD LIMITS.
3 WHEN STRAP HANGERS ARE LAP JOINED USE THESE MINIMUM FASTENERS:
1" x 1/8" BOLTS 2- #10 OR 1-1/4" BOLT
1" x 1/8" GAUGE 2- #10 BOLTS
1" x 1/8" GAUGE 2- #10 BOLTS
4 REFER TO SMACNA HVAC CONSTRUCTION STANDARDS FOR ADDITIONAL INFORMATION.

NOTES:
1 PROVIDE ACCESS DOOR & LABEL ON SIDE OR BOTTOM OF DUCT AS FOLLOWS:
DUCT WIDTH DOOR SIZE
10" THRU 12" 6"x6"
14" THRU 20" 12"x12"
22" AND ABOVE 18"x18"
2 1-1/2"x1-1/2"x1/8" RETAINING ANGLES SHALL LAP STRUCTURAL OPENING 1" MIN & COVER CORNERS OF OPENINGS. ANGLES ATTACH TO SLEEVE ONLY AND MUST NOT BE ATTACHED TO EACH OTHER AT CORNERS OR TO WALL.
3 ALL ATTACHMENTS PER MANUFACTURER'S APPROVED INSTALLATION INSTRUCTION.
4 VERTICAL POSITION SHOWN. HORIZONTAL INSTALLATION SIMILAR. DAMPER TO BE SPRING LOADED WHEN HORIZONTAL.
5 ACTUATOR TO BE MOUNTED ON OUTSIDE OF DAMPER SLEEVE ON ACCESSIBLE SIDE. ACTUATOR SHALL NOT INTERFERE WITH "S" JOINT ACTUATOR ASSEMBLY TO BE U.L. LABELED.
6 VERIFY THAT ACCESS IS PROVIDED ON THE ACTUATOR SIDE OF THE WALL/FLOOR SO THAT THE LINK MAY BE SERVICED WITH THE DAMPER CLOSED POSITION.

NOTES:
1 PROVIDE ACCESS DOOR & LABEL ON SIDE OR BOTTOM OF DUCT AS FOLLOWS:
DUCT WIDTH DOOR SIZE
10" THRU 12" 6"x6"
14" THRU 20" 12"x12"
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6 VERIFY THAT ACCESS IS PROVIDED ON THE ACTUATOR SIDE OF THE WALL/FLOOR SO THAT THE LINK MAY BE SERVICED WITH THE DAMPER CLOSED POSITION.

NOTES:
1 VANES SHALL BE SECURELY FASTENED TO RUNNERS
2 ALL VANES SHALL BE SECURE AND STABLE IN INSTALLED OPERATING POSITION
3 MAXIMUM UNSUPPORTED VANE LENGTH:
SMALL SINGLE VANE 36"
LARGE SINGLE VANE 36"
SMALL DOUBLE VANE 48"
LARGE DOUBLE VANE 72"
NOTE: INSTALL VANES IN SECTIONS OR USE TIE RODS TO LIMIT THE UNBRACED VANE LENGTH.
4 VANE SUPPORT:
5 VANE SHALL BE SECURELY FASTENED TO RUNNERS
6 ALL VANES SHALL BE SECURE AND STABLE IN INSTALLED OPERATING POSITION
7 METAL SCREWS 12" O.C.
8 VANE SUPPORT:
9 22 GA. TAB
10 TAB
11 4-1/2" OR 7"
12 1-1/2" MIN
13 BOLT, SCREW OR WELD RUNNER TO DUCT
14 NOTE: SEE MECHANICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.

TYPICAL RETURN AIR BOOT
No Scale

INFECTIOUS ISOLATION ROOM PRESSURE CONTROL
No Scale

FIRE & SMOKE DAMPER INSTALLATION
No Scale

TURNING VANES
No Scale

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