

THROUGH PENETRATION FIRESTOP SCHEDULE

- A. THIS SCHEDULE IDENTIFIES REQUIREMENTS FOR ACCEPTABLE THROUGH PENETRATION FIRESTOPS FOR THIS PROJECT BASED ON BARRIER TYPE, BASIS OF BARRIER CONSTRUCTION, AND PENETRANT TYPE.
- B. THROUGH PENETRATION FIRESTOPS ARE NOT REQUIRED FOR FLOOR PENETRATIONS CONTAINED TOTALLY WITHIN A RATED SHAFT ENCLOSURE.
- C. FOR EACH PENETRATION, SELECT A THROUGH PENETRATION FIRESTOP BASED ON ACTUAL FIELD CONDITIONS, WHICH INCLUDE BUT ARE NOT LIMITED TO PENETRATION SIZE, PENETRATION SHAPE, PENETRANT MATERIAL(S), QUANTITY OF PENETRANTS PER PENETRATION, AND LOCATION(S) OF PENETRANT(S) WITHIN PENETRATION.
- D. NOMENCLATURE OF UL CLASSIFIED FIRESTOP ASSEMBLIES USED IN THIS SCHEDULE IS IDENTICAL TO THAT USED IN CATALOGS OF APPROVED FIRESTOP MANUFACTURERS (SEE DIVISION 15) AND IN UNDERWRITERS LABORATORIES "FIRE RESISTANCE DIRECTORY."

RATED BARRIER		PENETRANT TYPE						
TYPE	BASIS OF CONSTRUCTION	FIRESTOP ASSEMBLY REQUIREMENTS	NO PENETRANTS	METALLIC, UNINSULATED PIPE OR TUBING (EX. COPPER, IRON, STEEL)	NONMETALLIC, UNINSULATED PIPE OR TUBING (EX. PVC, PP, FRPP)	INSULATED PIPES (EX. COPPER, IRON, PLASTIC, STEEL) IN SYSTEMS OPERATING BETWEEN 32°F AND 122°F	INSULATED PIPES (EX. COPPER, IRON, PLASTIC, STEEL) IN SYSTEMS OPERATING BELOW 32°F OR ABOVE 122°F	METAL DUCT (NOTE 1)
WALL	METAL STUDS & GYPSUM WALLBOARD (U400 SERIES)	UL CLASSIFIED SERIES	SINGLE PENETRANT	W-L-0000 SERIES OR NOTE 2	W-L-1000 SERIES	W-L-2000 SERIES	W-L-5000 SERIES	W-L-5000 SERIES
			MULTIPLE PENETRANTS		W-L-8000 SERIES (NOTE 3)		W-L-8000 SERIES (NOTE 3)	W-L-8000 SERIES (NOTE 3)
			F RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING
			T RATING	NOTE 5	NOTE 5	NOTE 5	NOTE 5	NOTE 5
		EXCEPTIONS/ ADDED REQUIREMENTS	NONE	NOTE 8	NOTE 8	NOTE 4	NOTE 4	
WALL	POURED CONCRETE, CONCRETE BLOCK OR MASONRY (BLOCK & U900 SERIES) (ANY THICKNESS)	UL CLASSIFIED SERIES	SINGLE PENETRANT	W-J-0000 SERIES OR NOTE 2	C-AJ-1000 OR W-J-1000 SERIES	C-AJ-2000 OR W-J-2000 SERIES	C-AJ-5000 OR W-J-5000 SERIES	C-AJ-5000 OR W-J-5000 SERIES
			MULTIPLE PENETRANTS		C-AJ-8000 OR W-J-8000 SERIES (NOTE 3)		C-AJ-8000 OR W-J-8000 (NOTE 3)	C-AJ-8000 OR W-J-8000 (NOTE 3)
			F RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING	EQUAL TO WALL RATING
			T RATING	NOTE 5	NOTE 5	NOTE 5	NOTE 5	NOTE 5
		EXCEPTIONS/ ADDED REQUIREMENTS	NONE	NOTES 7 & 8	NOTE 8	NONE	NOTE 4	
FLOOR	POURED CONCRETE (ANY THICKNESS)	UL CLASSIFIED SERIES	SINGLE PENETRANT	C-AJ-0000 SERIES F-A-0000 SERIES OR NOTE 2	C-AJ-1000 OR F-A-1000 SERIES	C-AJ-2000 OR F-A-2000 SERIES	C-AJ-5000 OR F-A-5000 SERIES	C-AJ-5000 OR F-A-5000 SERIES
			MULTIPLE PENETRANTS		C-AJ-8000 OR F-A-8000 SERIES (NOTE 3)		C-AJ-8000 OR F-A-8000 (NOTE 3)	C-AJ-8000 OR F-A-8000 (NOTE 3)
			F RATING	EQUAL TO FLOOR RATING, BUT NOT LESS THAN 1 HR	EQUAL TO FLOOR RATING, BUT NOT LESS THAN 1 HR	EQUAL TO FLOOR RATING, BUT NOT LESS THAN 1 HR	EQUAL TO FLOOR RATING, BUT NOT LESS THAN 1 HR	EQUAL TO FLOOR RATING, BUT NOT LESS THAN 1 HR
			T RATING	NOTE 6	NOTE 6	NOTE 6	NOTE 6	NOTE 6
		EXCEPTIONS/ ADDED REQUIREMENTS	NONE	NOTE 7	NONE	NONE	NOTE 4	

NOTES:

- THIS SCHEDULE'S DATA APPLY ONLY TO PENETRATIONS WITHOUT DAMPERS. FOR DAMPERED PENETRATIONS, REFER TO SPECIFICATIONS. AT DAMPERS, DO NOT APPLY MATERIAL THAT IS NOT INCLUDED IN THE DAMPER'S CLASSIFICATION.
- SEAL OPENING USING BARRIER'S ORIGINAL CONSTRUCTION.
- WHERE A SERIES 8000 CLASSIFIED SYSTEM IS NOT AVAILABLE, INSTALL PENETRANTS SINGLY, AND PROVIDE SINGLE-PENETRANT SYSTEMS.
- FOR SYSTEMS THAT OPERATE BELOW 32°F OR ABOVE 122°F, COMPLY WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:
  - PROVIDE TPFS SYSTEM USING INTUMESCENT ELASTOMERIC WRAP STRIP AS ITS FILL, VOID, OR CAVITY MATERIAL.
  - DO NOT USE SERIES 8000 PENETRATIONS. PROVIDE ONLY SINGLE PENETRATIONS.
- TEMPERATURE (T) RATINGS OF ASSEMBLIES IN WALLS MAY EQUAL ZERO.
- TEMPERATURE (T) RATINGS OF ASSEMBLIES IN FLOORS SHALL EQUAL THE GREATER OF EITHER THE BARRIER RATING OR ONE HOUR EXCEPT AS FOLLOWS:
  - AN ASSEMBLY'S T RATING MAY EQUAL ZERO WHEN THE PENETRANT ABOVE THE FLOOR PENETRATION IS CONTAINED AND LOCATED WITHIN THE CAVITY OF A WALL.
- CLASSIFIED TPFS ASSEMBLY IS NOT REQUIRED WHEN ALL THE FOLLOWING CONDITIONS ARE MET:
  - PENETRANT HAS A MAXIMUM NOMINAL DIAMETER OF 6-INCHES.
  - PENETRATION HAS A MAXIMUM AREA OF 144 SQUARE INCHES.
  - ANNULAR SPACE IS COMPLETELY FILLED WITH CONCRETE, GROUT, OR MORTAR THE FULL THICKNESS OF THE BARRIER.

SUPPLY VAV UNIT SCHEDULE

SCHED. NO.	SCHED. TYPE	SERVICE	AIRFLOW (CFM)			INLET SIZE (IN)	OUTLET SIZE (IN)	MAXIMUM NO.	MAXIMUM AIR PRESSURE DROP (IN WG)	EAT (°F)	MIN LAT (°F)	HEATING COIL PERFORMANCE				MAX WATER PD (FT WG)	BASIS OF DESIGN	REMARKS
			MAXIMUM	MINIMUM	HEATING							CAPACITY (BTUHR)	EWT (°F)	COIL DELTA T (°F)	WATER FLOW (GPM)			
VAV-1	A	OFFICE #1 & OFFICE #2	240	100	140	5	12x8	25	0.15	55	95	5292	200	20	0.6	5	TITUS / DESV	

AIR DEVICE SCHEDULE

NUMBER	DUTY	TYPE	CFM		FACE/ MODULE SIZE	NOMINAL DUCT SIZE	BLOW	MAX TOTAL AIR PD (IN H2O)	MAX NOISE CRITERIA VALUE	BASIS OF DESIGN		REMARKS
			MIN	MAX						MANUFACTURER	MODEL	
A1	SUPPLY	A	0	150	24"x24"	6"ø	4-WAY	0.10	20	TITUS	TDC-AA	
A2	SUPPLY	A	151	400	24"x24"	12"ø	4-WAY	0.10	20	TITUS	TDC-AA	
B1	RETURN	B	0	150	24"x24"	8"x8"	PERFORATED	0.10	20	TITUS	PAR-AA	
B2	RETURN	B	151	400	24"x24"	12"x12"	PERFORATED	0.10	20	TITUS	PAR-AA	

DUCT CONSTRUCTION AND LEAK TEST SCHEDULE

DUCT SYSTEM	MAXIMUM OPERATING PRESSURE (IN WG)	DUCT CONSTRUCTION				DUCT PRESSURE TEST				REMARKS
		PRESSURE CLASS (IN WG)	POSITIVE OR NEGATIVE	SMACNA DUCT SEAL CLASS	TEST REQUIRED (YES/NO)	TEST PRESSURE (IN WG)	DUCT LEAK CLASS	RECT / ROUND		
SUPPLY AIR	4"	4"	POSITIVE	A	NO	4"	4	2	1	
SUPPLY AIR	2"	2"	POSITIVE	A	NO	2"	4	2	2	
RETURN AIR	-2"	2"	NEGATIVE	B	NO	2"	8	4		

- UPSTREAM OF SUPPLY TERMINAL UNIT (FROM AIR HANDLING UNIT TO TERMINAL UNIT).
- DOWNSTREAM OF SUPPLY TERMINAL UNIT (FROM TERMINAL UNIT TO AIR DEVICE).



SEALS  
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NOTES:

**MUSC**  
 MEDICAL UNIVERSITY  
 of SOUTH CAROLINA  
 PROJECT NUMBER: H51-50068  
 DHEC PROJECT NUMBER: 580145  
**CONSTRUCTION DOCUMENTS**

**STORM EYE INSTITUTE**  
 OPTICAL SHOP  
 H51-50068  
 167 ASHLEY AVE  
 CHARLESTON, SC 29425

**ROSENBLUM COE ARCHITECTS, INC.**  
 1643 MEANS STREET  
 CHARLESTON, SC 29412  
 843.577.6073

MECHANICAL SCHEDULES

SHEET NAME	
PROJECT NUMBER	17016
DRAWN BY	TSN
CHECKED BY	CRB
DATE	05/09/2018
SCALE	12" = 1'-0"

M301

Order Plans @