

SCHEDULES OF HILTI THROUGH PENETRATION FIRESTOP SYSTEMS

CONCRETE FLOORS			CONCRETE OR BLOCK WALLS			WOOD FLOORS			GYPSUM WALLBOARD ASSEMBLIES			
TYPE OF PENETRANT	F-RATING (HR)	UL-CLASSIFIED SYSTEM	TYPE OF PENETRANT	F-RATING (HR)	UL-CLASSIFIED SYSTEM	TYPE OF PENETRANT	F-RATING (HR)	UL-CLASSIFIED SYSTEM	TYPE OF PENETRANT	F-RATING (HR)	UL-CLASSIFIED SYSTEM	
CIRCULAR BLANK OPENINGS	1	F-A-0006, C-AJ-0055, C-AJ-0070	CIRCULAR BLANK OPENINGS	1	C-AJ-0055, C-AJ-0070	METAL PIPES OR CONDUIT	1	F-C-1009, F-C-1059	METAL PIPES OR CONDUIT	1	W-L-1054, W-L-1058, W-L-1164	
	2	F-A-0006, C-AJ-0055, C-AJ-0070		2	C-AJ-0055, C-AJ-0070					2	W-L-1054, W-L-1058, W-L-1164	
	3	F-A-0006, C-AJ-0055		3	C-AJ-0055					4	W-L-1110, W-L-1111	
SINGLE METAL PIPES OR CONDUIT	1	C-AJ-1226, F-A-1017	SINGLE METAL PIPES OR CONDUIT	1	C-AJ-1226, W-J-1021	NON-METALLIC PIPE OR CONDUIT	1	F-C-2025, F-C-2030, F-C-2160	NON-METALLIC PIPE OR CONDUIT	1	W-L-2078, W-L-2075, W-L-2128	
	2	C-AJ-1226, F-A-1017		2	C-AJ-1226, W-J-1021					2	W-L-2078, W-L-2075, W-L-2128	
	3	C-AJ-1226, F-A-1017		3	C-AJ-1226, C-AJ-1041, W-J-1042					4	W-L-1110, W-L-1111	
	4	C-BJ-1037, C-BJ-1034		4	C-BJ-1034, C-BJ-1037, W-J-1041, W-J-1042							
SINGLE NON-METALLIC PIPE OR CONDUIT (I.E. PVC, CPVC, ABS, FRP, ENT)	1	F-A-2053, F-A-2025, C-AJ-2109, C-AJ-2098, C-AJ-2141, C-AJ-2167, C-BJ-2021	SINGLE NON-METALLIC PIPE OR CONDUIT (I.E. PVC, CPVC, ABS, FRP, ENT)	1	C-AJ-2109, C-AJ-2098, C-AJ-2167	SINGLE OR BUNDLED CABLES	1	F-C-3012, F-C-3044	SINGLE OR BUNDLED CABLES	1	W-L-3111, W-L-3112	
		F-A-2053, F-A-2025, C-AJ-2109, C-AJ-2098, C-AJ-2141, C-AJ-2167, C-BJ-2021			2					C-AJ-2109, C-AJ-2098, C-AJ-2167	2	W-L-3095, W-L-3111, W-L-3112
	2	C-AJ-2109, C-AJ-2098		3	C-AJ-2109, C-AJ-2098							
				4	W-J-2057							
SINGLE OR BUNDLED CABLES	1	F-A-3007, C-AJ-3095, C-AJ-3096	SINGLE OR BUNDLED CABLES	1	C-AJ-3036, C-AJ-3095, C-AJ-3096	INSULATED PIPES	1	F-C-5004, F-C-3036, F-C-3037	CABLE TRAY	1	W-L-4011, W-L-4019	
		F-A-3007, C-AJ-3095, C-AJ-3096			2					C-AJ-3036, C-AJ-3095, C-AJ-3096	2	W-L-4011, W-L-4019
	2	F-A-3007, C-AJ-3095, C-AJ-3096		3	C-AJ-3095, C-AJ-3096					3	W-L-8014	
				4	W-J-3050							
CABLE TRAY	1	C-AJ-4034, C-AJ-4035	CABLE TRAY	1	W-J-4016, C-AJ-4034, C-AJ-4035	INSULATED PIPES	2	F-C-5004, F-C-3036, F-C-3037	NON-INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	W-L-5028, W-L-5029, W-L-5047	
		C-AJ-4034, C-AJ-4035			2					W-J-4016, C-AJ-4034, C-AJ-4035	2	W-L-5028, W-L-5029, W-L-5047
	2	C-AJ-4034, C-AJ-4035		3	C-AJ-4034, C-AJ-4035					3	W-L-5073	
				4	W-J-8007							
SINGLE INSULATED PIPES	1	F-A-5015, F-A-5016, C-AJ-5090, C-AJ-5091, C-AJ-5098	SINGLE INSULATED PIPES	1	C-AJ-5090, C-AJ-5091, C-AJ-5061	NON-INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	F-C-8009, F-C-8014	MIXED PENETRANTS	1	W-L-7017, W-L-7040, W-L-7042	
		F-A-5015, F-A-5016, C-AJ-5090, C-AJ-5091, C-AJ-5098			2					C-AJ-5090, C-AJ-5091, C-AJ-5061	2	W-L-7040, W-L-7042
	2	F-A-5016, C-AJ-5090		3	C-AJ-5090, C-AJ-5061							
				4	C-BJ-5006, W-J-5028							
ELECTRICAL BUSWAY	1	C-AJ-6006, C-AJ-6017	ELECTRICAL BUSWAY	1	C-AJ-6006, C-AJ-6017	NON-INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	F-C-8009, F-C-8014	MIXED PENETRANTS	1	W-L-1095, W-L-8013	
	2	C-AJ-6006, C-AJ-6017		2	C-AJ-6006, C-AJ-6017					2	W-L-1095, W-L-8013	
	3	C-AJ-6006, C-AJ-6017		3	C-AJ-6006, C-AJ-6017					4	W-L-8014	
NON-INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	C-AJ-7046, C-AJ-7051	NON-INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	C-AJ-7046, C-AJ-7051, W-J-7022	MIXED PENETRANTS	1	F-C-8009, F-C-8014	MIXED PENETRANTS	1	W-L-7017, W-L-7040, W-L-7042	
		C-AJ-7046, C-AJ-7051			2					C-AJ-7046, C-AJ-7051, W-J-7021, W-J-7022		
		C-AJ-7046, C-AJ-7051			3					C-AJ-7046, C-AJ-7051		
MIXED PENETRANTS	1	C-AJ-8041, C-AJ-8056	MIXED PENETRANTS	1	C-AJ-8041, C-AJ-8056, W-J-8007	MIXED PENETRANTS	1	F-C-8009, F-C-8014	MIXED PENETRANTS	1	W-L-1095, W-L-8013	
	2	C-AJ-8041, C-AJ-8056		2	C-AJ-8041, C-AJ-8056, W-J-8007					2	W-L-1095, W-L-8013	
	3	C-AJ-8041, C-AJ-8056		3	C-AJ-8041, C-AJ-8056, W-J-8007							
	4	C-BJ-8010		4	C-BJ-8010, W-J-8007							

- NOTE:**
1. JOBSITE CONDITIONS OF EACH THROUGH-PENETRATION FIRESTOP SYSTEM MUST MEET ALL DETAILS OF THE UL-CLASSIFIED SYSTEM SELECTED.
 2. IF JOBSITE CONDITIONS DO NOT MATCH ANY UL-CLASSIFIED SYSTEMS IN THE SCHEDULES ABOVE, CONTACT HILTI FOR ALTERNATIVE SYSTEMS OR ENGINEER JUDGEMENT DRAWINGS - 800-879-8000.
 3. WHERE MORE THAN ONE APPLICABLE UL-CLASSIFIED SYSTEM IS LISTED IN THE SCHEDULES, CHOOSE THE UL SYSTEM WHICH IS MOST ECONOMICAL FOR EACH THROUGH-PENETRATION FIRESTOP SYSTEM.
 4. COORDINATE WORK WITH OTHER TRADES TO ASSURE THE PENETRATION OPENING SIZES ARE APPROPRIATE FOR PENETRANT LOCATIONS, AND VICE VERSA.
 5. FOR 3-HOUR RATED GYPSUM WALLS, CONTACT HILTI FOR A UL-CLASSIFIED SYSTEM OR ENGINEER JUDGEMENT DRAWING - 800-879-8000.



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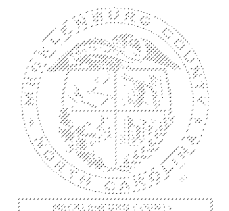
REVISION	DATE	DESCRIPTION
3	10/29/2018	ADDENDUM 3
ADDENDA OR MODIFICATION		
CD	08/17/2016	CONTRACT DOCUMENTS
ISSUE		
FULL SET ISSUES		

PROJECT NO: 4068-001
P.I.C. JM SYNDER
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DESIGN BY
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SHEET TITLE

PLUMBING DETAILS

SHEET IDENTIFIER
P401



The design on these documents was prepared by the undersigned professional engineer on 10/29/2018. The design was prepared in accordance with the provisions of the South Carolina Code of Laws, Title 45, Chapter 35, which governs the practice of engineering in this state. The design was prepared in accordance with the provisions of the South Carolina Code of Laws, Title 45, Chapter 35, which governs the practice of engineering in this state.

Order Plans

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