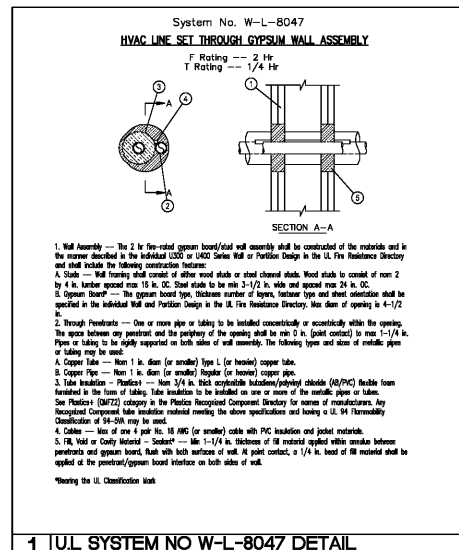
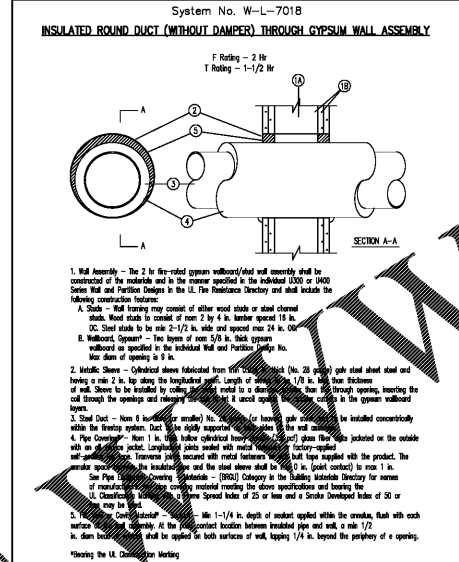


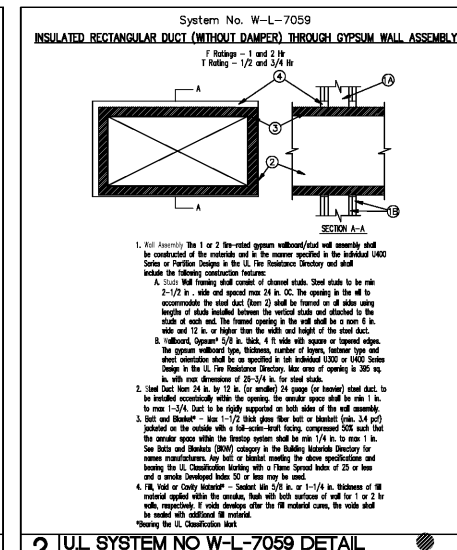
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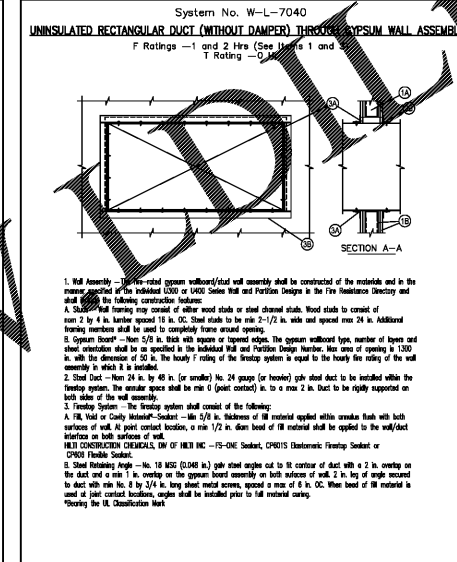
1 UL SYSTEM NO W-L-8047 DETAIL
NO SCALE



3 UL SYSTEM NO W-L-7018 DETAIL
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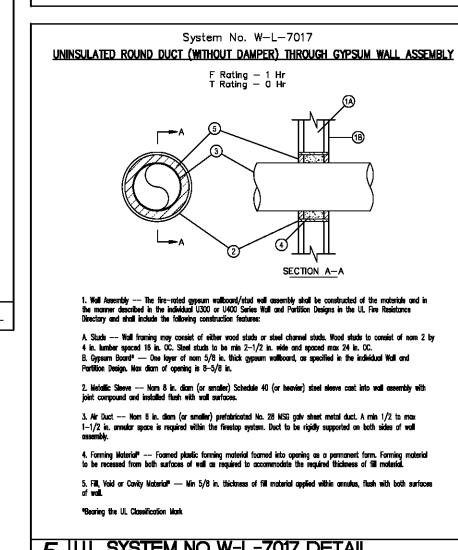
2 UL SYSTEM NO W-L-7059 DETAIL
NO SCALE



4 UL SYSTEM NO W-L-7040 DETAIL
NO SCALE

PIPE AND DUCTWORK WALL PENETRATION NOTES (MECHANICAL)

1. ALL INSULATED METAL PIPING PENETRATING A ONE HOUR OR MORE RATED ASSEMBLY SHALL BE SEALED AROUND INSULATION ON BOTH SIDES OF WALL WITH AN APPROVED FIRE STOP WRAP/STRIP MATERIAL. NUMBER OF WRAPS AROUND INSULATION WITHIN WALL OPENING SHALL BE AS REQUIRED FOR THICKNESS OF INSULATION AND WFS. RECOMMENDATIONS, COVER EXPOSED SURFACE AND SEAMS WITH AN APPROVED FIRE STOP CAULK ON BOTH SIDES OF WALL.
2. ALL NON-INSULATED METAL PIPING PENETRATING A ONE HOUR WALL OR MORE RATED WALL OR FLOOR SHALL BE SEALED AROUND PIPE ON BOTH SIDES OF WALL WITH AN APPROVED FIRE STOP CAULK. THICKNESS SHALL BE AS RECOMMENDED BY MANUFACTURER FOR WALL RATING REQUIRED TO MAINTAIN U.L. CLASSIFICATION.
3. ALL METAL DUCTWORK LESS THAN 100 SQUARE INCHES PENETRATING A ONE HOUR FIRE PARTITION SHALL BE CONSTRUCTED OF STEEL A MINIMUM OF 0.0217 IN THICKNESS, NOT HAVE OPENINGS THAT COMMUNICATE THE CORRIDOR WITH ADJACENT SPACES OR ROOMS, BE INSTALLED ABOVE A CEILING, NOT TERMINATE AT A WALL REGISTER IN THE RATED WALL, AND HAVE A MINIMUM 1/2" LONG BY 0.060" THICK STEEL SLEEVE CENTERED IN EACH DUCT OPENING. THE SLEEVE SHALL BE SECURED TO BOTH SIDERS OF THE WALL AND ALL FOUR SIDERS OF THE SLEEVE WITH MINIMUM 1.75x1.0x0.060" STEEL RETAINING ANGLE. ANGLES SHALL BE SECURED TO THE SLEEVE AND THE WALL WITH NO SCREWS, ANNULAR SPACE BETWEEN THE STEEL SLEEVE AND THE WALL OPENING SHALL BE FILLED WITH ROCK (MINERAL) WOOL BATT ON ALL SIDERS. DUCT PENETRATIONS EXCEEDING 100 SQUARE INCHES SHALL HAVE A FIRE DAMPER INSTALLED IN THE WALL AS DETAILLED.
4. ALL DUCTWORK PENETRATING A FIRE BARRIER (REGARDLESS OF RATING), RATED FLOOR, OR TWO HOUR (OR MORE) RATED FIRE PARTITION SHALL BE PROVIDED WITH A FIRE DAMPER. FIRE DAMPERS SHALL BE CLOSED-OFF TO STRUCTURE. FIRE DAMPER DUCTWORK SHALL EXTEND A MINIMUM OF 3'-0" FROM WALL BEFORE FIRST AIR DISTRIBUTION DEVICE IS INSTALLED OR BEFORE FLEXIBLE DUCTWORK IN A SINGLE DUCT RUN IS ALLOWED ON ONE SIDE OF A RATED WALL OR FLOOR.
5. ACCEPTABLE MANUFACTURERS OF FIRE STOP MATERIALS ARE AS FOLLOWS:
 NELSON FLAMESEAL PUTTY
 CROUSCHINS CABLE BARRIER SYSTEM
 MINY CORKING FIRE STOP SEALANT/FOAM
 FIRE SEALANT
 THE FLAMER
 THE FIBER BRAND SAFING
 ALL MATERIALS AND METHODS OF INSTALLATION SHALL BE U.L. APPROVED FOR THAT INSTALLATION. SHOP DRAWING SUBMITTALS OF MATERIALS AND METHOD OF INSTALLATION, INCLUDING DRAWINGS, SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW.
6. WHEN A PIPE, WIRE, OR DUCT PENETRATES A NON-RATED SMOKE/TIGHT PARTITION, THE MECHANICAL CONTRACTOR SHALL SEAL AROUND ALL PIPES, WIRES AND DUCTS WITH SEALANT MATERIAL TO MAKE IT SMOKE/TIGHT. SEE ARCHITECTURAL PLANS FOR LOCATION OF THESE PARTITIONS.
7. SEE ARCHITECTURAL PLANS FOR WALL TYPES.
8. ALL RATED WALL PENETRATIONS SHALL BE IN ACCORDANCE WITH UNDERWRITERS LABORATORIES PENETRATION FIRESTOP SYSTEM REQUIREMENTS. ALL MATERIALS USED IN PENETRATION FIRESTOP SYSTEMS SHALL BE APPROVED BY UNDERWRITERS LABORATORIES AND SHALL BE U.L. LABELED.
9. PENETRATIONS OF NONRATED WALLS, PARTITIONS AND FLOORS OF NON-COMBUSTIBLE CONSTRUCTION SHALL BE FIRESTOPPED WITH NONCOMBUSTIBLE MATERIALS. PENETRATIONS OF NONRATED WALLS, PARTITIONS AND FLOOR OF COMBUSTIBLE CONSTRUCTION SHALL BE FIRESTOPPED WITH MATERIALS EQUIVALENT TO TWO INCHES OF WOOD. FIRESTOPPING SHALL COMPLY WITH ASTM E-814.



5 UL SYSTEM NO W-L-7017 DETAIL
NO SCALE

adwarchitects
 environmentsforlife
 architecture planning interiors
 8 colliseum centre,
 2815 colliseum drive, suite 500
 charlotte, north carolina 28217
 t) 704 379 1919
 f) 704 379 1920
 www.adwarchitects.com

optima
 engineering
 1927 South Tryon St., Suite 300, Charlotte, NC 28203
 150 Fayetteville St., Suite 500, Raleigh, NC 27601
 Phone: 704-359-1552 • www.optimaengineering.com

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BID DOCUMENTS

MECHANICAL UL DETAILS

DATE	4-5-2019	
REVISION NO	16063	
REVISIONS		
NO	DATE	DESCRIPTION:
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PROFESSIONAL ENGINEER
 RICHMOND V. ALMOND
 17228
 SEAL 04/20/19

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