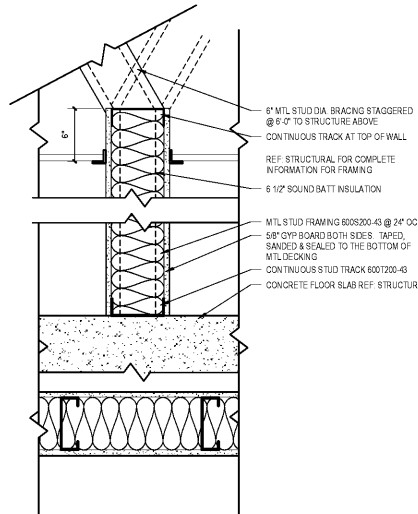
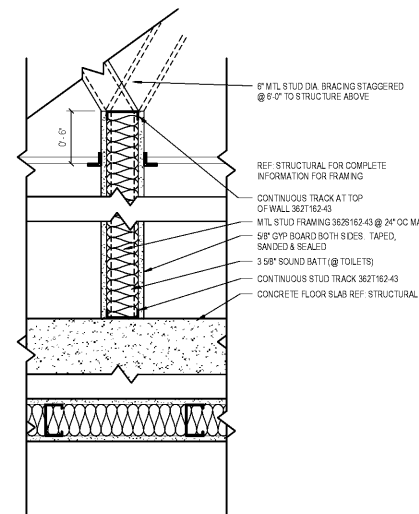


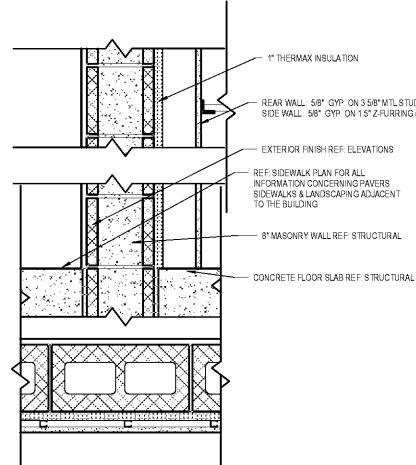
**1 6" MTL Stud Wall - 1HR Rated**  
SCALE: 1 1/2" = 1'-0"



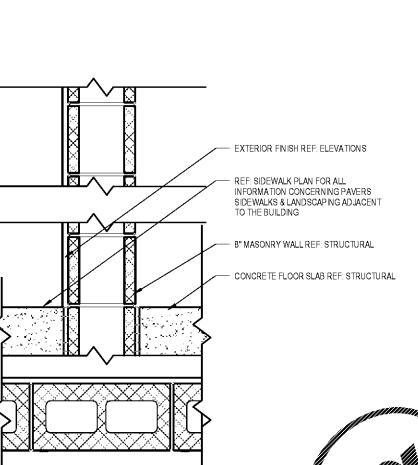
**2 6" MTL Stud Wall - Non-Rated**  
SCALE: 1 1/2" = 1'-0"



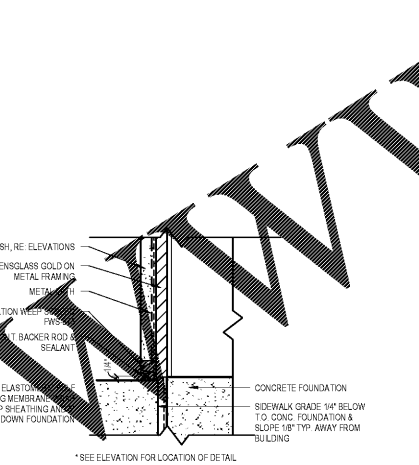
**3 3 5/8" MTL Stud Wall - Non-Rated**  
SCALE: 1 1/2" = 1'-0"



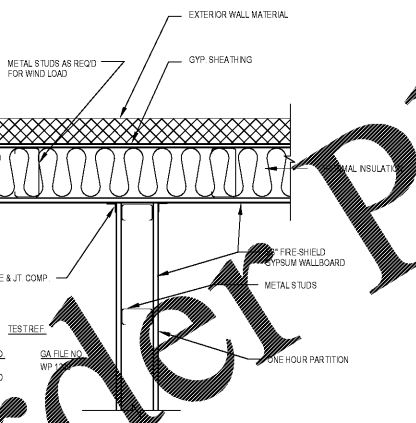
**4 Masonry Wall Insulated w/ Furred GWB**  
SCALE: 1 1/2" = 1'-0"



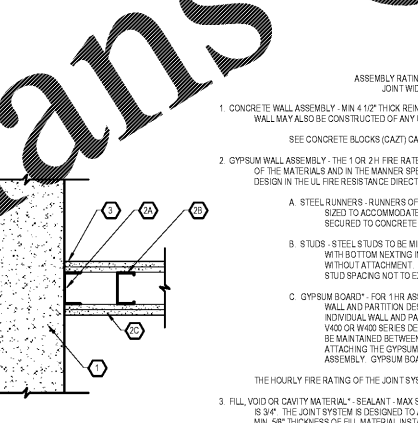
**5 Masonry Wall Non-Insulated**  
SCALE: 1 1/2" = 1'-0"



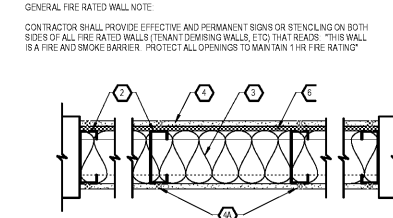
**6 Foundation Flashing Detail**  
SCALE: 3" = 1'-0"



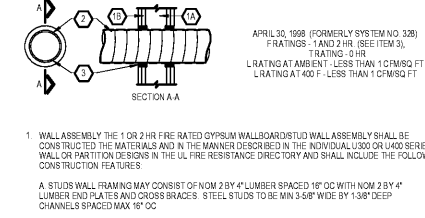
**8 Fire Rating Detail @ Front Wall**  
SCALE: 1 1/2" = 1'-0"



**9 Fire Rating Detail @ Rear Wall**  
SCALE: 1 1/2" = 1'-0"



**7 UL Details**  
SCALE: 1 1/2" = 1'-0"



**Through Penetration Firestop System - NOT TO SCALE**

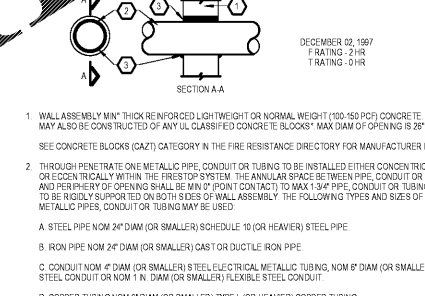
- FLOOR AND CEILING RUNNERS - CHANNEL SHAPED RUNNERS, 3/8" WIDE (MIN), 1 1/4" LEGS, FORMED FROM MIN NO. 25 MSG (MIN NO. 20 MSG WHEN ITEM 4C IS USED); GALV STEEL, ATTACHED TO FLOOR AND CEILING WITH FASTENERS SPACED 24" O.C. MAX.
- STEEL STUDS - CHANNEL SHAPED, 3/8" WIDE (MIN), 1 1/4" LEGS, 3/8" FOLDED BACK RETURNS, FORMED FROM MIN. NO. 25 MSG (MIN NO. 20 MSG WHEN ITEM 4C IS USED); GALV STEEL SPACED 24" O.C. MAX.
- BATT AND BLANKETS - MINERAL WOOL OR GLASS FIBER BATTS PARTIALLY OR COMPLETELY FILLING STUD CAVITY. SEE BATTS AND BLANKETS (BZ) CATEGORY FOR NAMES OF CLASSIFIED COMPANIES.
- WALLBOARD, GYPSUM - 5/8" THICK, 4' WIDE, ATTACHED TO STEEL STUDS, FLOOR, & CEILING TRACK WITH 1" LONG, TYPE S SELF-TAPPING STEEL SCREWS SPACED 12" O.C. ALONG SIDES OF BOARD AND 12" O.C. IN THE FIELD OF THE BOARD. JOINTS ARE ORIENTED VERTICALLY AND STAGGERED ON OPPOSITE SIDES OF THE ASSEMBLY. PERMITTED GYPSUM CO. TYPES ARE: CANADIAN GYPSUM CO. LTD. - TYPE AR, C, CV, CX, SX, SXH, WRC, WRX; UNITED STATES GYPSUM CO. - TYPE WX; U.S. GYPSUM CO. - TYPE C, CV, CX, SX, SXH, WRC, WRX.
- WALLBOARD, GYPSUM - (AS AN ALTERNATE TO ITEM 4) - NOM. 3/4" THICK 4' WIDE, INSTALLED AS DESCRIBED IN ITEM 4. JOINT COVERING ITEM IS NOT REQUIRED. PERMITTED GYPSUM CO. TYPES ARE: CANADIAN GYPSUM CO. LTD. - TYPE WX; UNITED STATES GYPSUM CO. - TYPE WX; YESO PENAMERICANO SA DE CV - TYPE WSX.
- WALLBOARD, GYPSUM - (AS AN ALTERNATE TO ITEM 4 AND 4A) - 5/8" THICK INSTALLED AS DESCRIBED IN ITEM 4. JOINT COVERING ITEM IS NOT REQUIRED. PERMITTED GYPSUM CO. TYPES ARE: CANADIAN GYPSUM CO. LTD. - TYPE WX; UNITED STATES GYPSUM CO. - TYPE WX; YESO PENAMERICANO SA DE CV - TYPE WSX.
- FLOORING - 1/2" THICK 4' WIDE, 12" LONG TYPE S-12 PANELS. SEE FLOORING FOR MORE DETAILS. PERMITTED GYPSUM CO. TYPES ARE: CANADIAN GYPSUM CO. LTD. - TYPE WX; UNITED STATES GYPSUM CO. - TYPE WX; YESO PENAMERICANO SA DE CV - TYPE WSX.

- WALL ASSEMBLY - THE 1 OR 2 HR FIRE RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:  
A. STUD WALL FRAMING MAY CONSIST OF NOM. 2 BY 4" LUMBER SPACED 16" OC WITH NOM. 2 BY 4" LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN. 3/8" DEEP CHANNELS SPACED MAX. 16" OC.  
B. GYPSUM BOARD - NOM. 5/8" THICK, 4' WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, NUMBER OF LAYERS AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGN. DIM OF OPENING THROUGH OPENING CUT THROUGH GYPSUM WALLBOARD ON ONE SIDE OF WALL ASSEMBLY TO BE MIN. 1/2" LARGER THAN OUTSIDE DIAM OF RIGIDLY SUPPORTED THROUGH PENETRATING PIPE, CONDUIT OR TUBING. SIDE EDGE OF CIRCULAR OR FLEXIBLE METAL CONDUIT TO BE INSTALLED IN THROUGH OPENING. SIDE EDGE OF CIRCULAR OR FLEXIBLE METAL CONDUIT TO BE MIN. 1/2" FROM NEAREST STUD IN WALL CAVITY.
- THROUGH PENETRATING PRODUCT - FLEXIBLE METAL CONDUIT - NOM. 4" IN (OR SMALLER) ALUMINUM OR STEEL FLEXIBLE METAL CONDUIT - MAX ONE FLEXIBLE METAL CONDUIT TO BE INSTALLED NEAR CENTER OF CIRCULAR OPENING IN GYPSUM WALLBOARD. FLEXIBLE METAL CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.  
AFC CABLE - MIN. 1/2" IN DIA.  
MIN. 1/2" IN DIA. (OR SMALLER) REGULAR (OR HEAVIER) COPPER TUBING.
- FILL VOID OR CAVITY MATERIAL - CALK - MIN. 5/8" THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT CONTACT LOCATION BETWEEN THROUGH PENETRATING PRODUCT AND CONCRETE, MIN. 5/8" DIA. (OR SMALLER) FLEXIBLE METAL CONDUIT SHALL BE INSTALLED THROUGH PENETRATION. MIN. 1/2" THICKNESS OF CALK IS REQUIRED FOR THE FIRE RATING. SEE CALKING FOR MORE DETAILS.  
MINNESTAMA MINING & MFG CO. - CP 2000 - BEARING THE UL CLASSIFICATION MARKING.



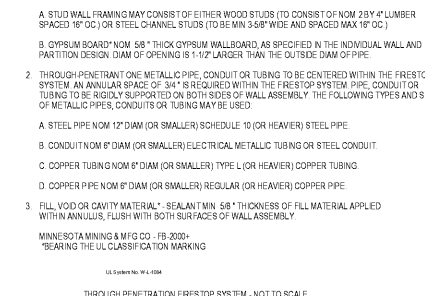
**Through Penetration Firestop System - NOT TO SCALE**

- WALL ASSEMBLY - MIN. THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS. MAX. DIA. OF OPENING IS 26". SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR MANUFACTURER NAMES.
- THROUGH PENETRATING PRODUCT - METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF OPENING SHALL BE MIN. 1/4" POINT CONTACT TO MAX. 1/4" PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUIT OR TUBING MAY BE USED:  
A. STEEL PIPE NOM. 2 1/2" DIA. (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.  
B. IRON PIPE NOM. 2 1/2" DIA. (OR SMALLER) CAST OR DUCTILE IRON PIPE.  
C. CONDUIT NOM. 4" DIA. (OR SMALLER) ELECTRICAL METALLIC TUBING, NOM. 6" DIA. (OR SMALLER) STEEL CONDUIT OR NOM. 1" DIA. (OR SMALLER) FLEXIBLE STEEL CONDUIT.  
D. COPPER TUBING NOM. 6" DIA. (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.  
E. COPPER PIPE NOM. 6" DIA. (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
- FILL VOID OR CAVITY MATERIAL - SEALANT - MIN. 5/8" THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT CONTACT LOCATION BETWEEN THROUGH PENETRATING PRODUCT AND CONCRETE, MIN. 5/8" DIA. (OR SMALLER) FLEXIBLE METAL CONDUIT SHALL BE INSTALLED THROUGH PENETRATION. MIN. 1/2" THICKNESS OF CALK IS REQUIRED FOR THE FIRE RATING. SEE CALKING FOR MORE DETAILS.  
MINNESTAMA MINING & MFG CO. - CP 2000 - BEARING THE UL CLASSIFICATION MARKING.

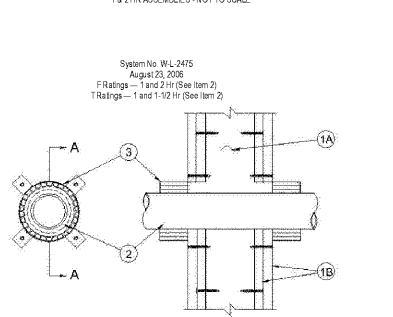


**Through Penetration Firestop System - NOT TO SCALE**

- FLOOR ASSEMBLY - THE FIRE RATED FLUDED STEEL DECK/CONCRETE FLOOR ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:  
A. STEEL FLOOR AND FORM UNITS - MAX. 3" DEEP GALV. STEEL FLUDED UNITS.  
B. CONCRETE - MIN. 2 1/2" THICK REINFORCED CONCRETE, AS MEASURED FROM THE TOP PLANE OF THE FLOOR UNITS.
- WALL ASSEMBLY - THE 1 OR 2 HR FIRE RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:  
A. STEEL FLOOR AND CEILING RUNNERS - FLOOR AND CEILING RUNNERS OF WALL ASSEMBLY SHALL CONSIST OF GALV. STEEL CHANNELS SIZED TO ACCOMMODATE STEEL STUDS (SEE CEILING RUNNERS TO BE SECURED TO WALLS OR TO ATTACHMENT. STUD SPACING @ 24" O.C. MAX. FASTENERS OR BY WELDS @ MAX. 24" O.C.  
B. STUDS - STEEL STUDS TO BE MIN. 3/8" WIDE. STUDS CUT 1/2" TO 3/4" LESS IN LENGTH THAN ASSEMBLY HEIGHT WITH BOTTOM NESTING IN AND RESTING ON FLOOR RUNNER AND WITH TOP NESTING IN CEILING RUNNER WITH OR WITHOUT ATTACHMENT. STUD SPACING @ 24" O.C. MAX.  
C. WALLBOARD, GYPSUM - WALLBOARD SHEETS INSTALLED TO A MIN. THICKNESS OF 5/8" AND 1 1/4" ON EACH SIDE OF WALL FOR 1 AND 2 HR RATED ASSEMBLIES, RESPECTIVELY. WALL TO BE CONSTRUCTED AS SPECIFIED IN THE INDIVIDUAL U300 WALL AND PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY EXCEPT THAT WALLBOARD IS CUT TO THE CORNER OF THE STEEL FLOOR UNITS WITH A MAX. 3/4" GAP BETWEEN THE TOP OF THE WALLBOARD AND THE BOTTOM OF THE FLOOR UNITS.
- FILL VOID OR CAVITY MATERIAL - SEALANT - MIN. 5/8" THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT CONTACT LOCATION BETWEEN THROUGH PENETRATING PRODUCT AND CONCRETE, MIN. 5/8" DIA. (OR SMALLER) FLEXIBLE METAL CONDUIT SHALL BE INSTALLED THROUGH PENETRATION. MIN. 1/2" THICKNESS OF CALK IS REQUIRED FOR THE FIRE RATING. SEE CALKING FOR MORE DETAILS.  
MINNESTAMA MINING & MFG CO. - CP 2000 - BEARING THE UL CLASSIFICATION MARKING.



**Through Penetration Firestop System - NOT TO SCALE**



**7 UL Details**  
SCALE: 1 1/2" = 1'-0"

- Wall Assembly - The 1 or 2 hr fire-rated gypsum wallboard wall assembly shall be constructed of the materials and in the manner specified in the individual U300, 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 may consist of either wood studs or steel channel studs. Wood studs to consist of nominal 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min. 1/2 in. wide and spaced max. 24 in. OC.  
B. Gypsum Board - 5/8 in. thick, 4 in. wide with square or tapered edges. The gypsum board type, thickness, number of layers, batten type and sheet orientation shall be as specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory. The hourly F and T ratings of the freestop system are equal dependent upon the hourly rating of the wall assembly in which it is installed and the type of through penetrant within the opening as shown in item 2.  
C. Through Penetrant - One nonmetallic pipe is to be installed either concentrically or eccentrically within the freestop system. The annular space between pipe or conduit and periphery of opening shall be min. 1/4 in. (point contact) to max. 1/4 in. Pipe or conduit to be rigidly supported on both sides of wall assembly. The following types and sizes of nonmetallic pipes or conduit may be used:  
A. Polyvinyl Chloride (PVC) Pipe - Nom. 4 in. diam (or smaller) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented drain, waste or vent piping systems.  
B. Chlorinated Polyvinyl Chloride (CPVC) Pipe - Nom. 4 in. diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.  
C. Acrylonitrile Butadiene Styrene (ABS) Pipe - Nom. 4 in. diam (or smaller) Schedule 40 solid or cellular core ABS pipe for use in closed (process or supply) or vented drain, waste or vent piping systems.  
D. Rigid Nonmetallic Conduit - Nom. 4 in. diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70).  
E. Flame-Retardant Polypropylene (FRPP) Pipe - Nom. 4 in. diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented drain, waste or vent piping systems.  
The F and T ratings of the freestop system are dependent upon the hourly rating of the wall assembly and the type of penetrant installed within the freestop system as shown in the following table:  

Rating of Wall, hr.	Type of Through Penetrant	F Rating, hr.	T Rating, hr.
1	PVC Conduit, ABS Pipe, CPVC Pipe, FRPP Pipe	1	1
2	PVC Conduit, ABS Pipe, CPVC Pipe, FRPP Pipe	2	2
2	PVC Pipe	2	1
- Firestop Device - Steel collar lined with an intumescent material sized to fit specific diam of the through penetrant. Device to be installed around through penetrant in accordance with accompanying installation instructions. Device incorporates anchor tabs for securement to both surfaces of wall by means of No. 10 by 1/2 in. long tamper-resistant screws and 1/4 in. by 1/2 in. diam steel flange washers at each anchor tab.  
GRABBER CONSTRUCTION PRODUCTS INC. - GFC

**7 UL Details**  
SCALE: 1 1/2" = 1'-0"

1925 Prospect Ave  
Orlando, FL 32814  
P (407) 661-9100  
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www.cpb.com

White Development Company  
1801 South Keene Rd.  
Clearwater, FL 33766

Retail @ Tattersall Park  
US Highway 280 & Highway 19  
Hoover, AL

Wall Types & UL Details

PROJECT NAME: RETAIL @ TATTERSALL PARK  
PROJECT NO.: 7868  
DATE: 07-18-19  
DRAWN BY: J. P. HARRIS  
CHECKED BY: J. P. HARRIS

DATE: 07-18-19  
SCALE: 1 1/2" = 1'-0"  
NATIONAL GYPSUM COMPANY 0820\_06

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