

SUSPENDED CEILING SYSTEMS SHALL BE DESIGNED TO RESIST A LATERAL FORCE OF 20% OF THE WEIGHT OF THE CEILING SYSTEMS. THE LATERAL FORCE SHALL BE APPLIED TO THE CEILING SYSTEMS OF DETERMINING THE LATERAL FORCE, A MINIMUM CEILING WEIGHT OF 5 POUNDS PER SQUARE FOOT SHALL BE USED.

WHEN THE CEILING LOADS DO NOT EXCEED 5 POUNDS PER SQUARE FOOT AND WHERE PARTITIONS ARE NOT CONNECTED TO THE CEILING SYSTEM, THE FOLLOWING BRACING SYSTEM MAY BE EMPLOYED:

- A. LATERAL SUPPORT MAY BE PROVIDED BY FOUR WIRES OF MAX. NO.12 GAUGE SPLAYED IN FOUR DIRECTIONS 90 DEGREES APART AND CONNECTED TO THE MAIN RUNNER WITHIN 2" OF THE CROSS RUNNER AND TO THE STRUCTURE ABOVE AT AN ANGLE NOT EXCEEDING 45 DEGREES FROM THE PLANE OF THE CEILING. THESE LATERAL SUPPORT POINTS SHALL BE PLACED 12'-0" ON CENTER IN EACH DIRECTION, WITH THE FIRST POINT WITHIN 6'-0" FROM EACH WALL.

- B. ALLOWANCE SHALL BE MADE FOR LATERAL MOVEMENT OF THE SYSTEM. MAIN RUNNERS AND CROSS RUNNERS MAY BE ATTACHED AT TWO ADJACENT WALLS WITH CLEARANCE BETWEEN THE WALL AND THE RUNNERS MAINTAINED AT THE OTHER TWO WALLS.

- C. VERTICAL SUPPORT SHALL BE PROVIDED AS REQUIRED IN UBC STANDARD WITH THE ADDED REQUIREMENT THAT THE MAIN RUNNERS SHALL BE VERTICALLY SUPPORTED WITHIN 6" OF SUCH DISCONTINUITIES AS MAY OCCUR WHEN THE CEILING IS DISRUPTED BY A WALL.

- D. LIGHTING FIXTURES AND AIR DIFFUSERS SHALL BE SUPPORTED DIRECTLY BY WIRES TO THE STRUCTURE ABOVE.

EXCEPTION: SECTION 25.21.3--LIGHTING FIXTURES

1. INTERMEDIATE OR HEAVY DUTY CEILING SYSTEMS AS DEFINED IN SECTION 47.1802 SHALL BE USED FOR THE SUPPORT OF LIGHT FIXTURES.

2. ALL LIGHTING FIXTURES SHALL BE POSITIVELY ATTACHED TO THE SUSPENDED CEILING SYSTEMS. THE ATTACHMENT DEVICE SHALL HAVE A CAPACITY OF 100% OF THE LIGHTING FIXTURE WEIGHT ACTING IN ANY DIRECTION.

3. WHEN INTERMEDIATE SYSTEMS ARE USED, NO. 12 GAUGE (2.7MM) HANGERS SHALL BE ATTACHED TO THE GRID MEMBERS WITHIN 3" (76MM) OF EACH CORNER OF EACH FIXTURE. TANDEN FIXTURES MAY USE COMMON WIRES.

4. WHEN HEAVY DUTY SYSTEMS ARE USED, SUPPLEMENTAL HANGERS ARE NOT REQUIRED IS A US NO. 12 (3.0MM) MODULAR HANGER PATTERN FOLLOWING. WHEN CROSS RUNNERS ARE USED, THE HANGERS SHALL BE ATTACHED TO THE CROSS RUNNERS. THE HANGERS SHALL PROVIDE THE SAME CARRYING CAPACITY AS THE MAIN RUNNERS.

5. LIGHTING FIXTURES WEIGHING LESS THAN 56 POUNDS (25.4KG) SHALL HAVE, IN ADDITION TO THE REQUIREMENTS ABOVE, TWO NO. 12 GAUGE (2.7MM) HANGERS CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE. THESE WIRES MAY BE SLACK.

6. LIGHTING FIXTURES WEIGHING 56 POUNDS (25.4KG) OR MORE SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE BY APPROVED HANGERS.

7. PENDANT HUNG LIGHTING FIXTURES SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE WITH NO. 9 GAUGE (3.8MM) WIRE OR APPROVED ALTERNATE SUPPORT WITHOUT USING THE CEILING SYSTEM FOR DIRECT SUPPORT.

8. AIR DIFFUSERS WHICH WEIGH NOT MORE THAN 20 POUNDS AND WHICH RECEIVE NO AIR FROM THE DUCTWORK MAY BE POSITIVELY ATTACHED TO AND SUPPORTED BY THE CEILING.

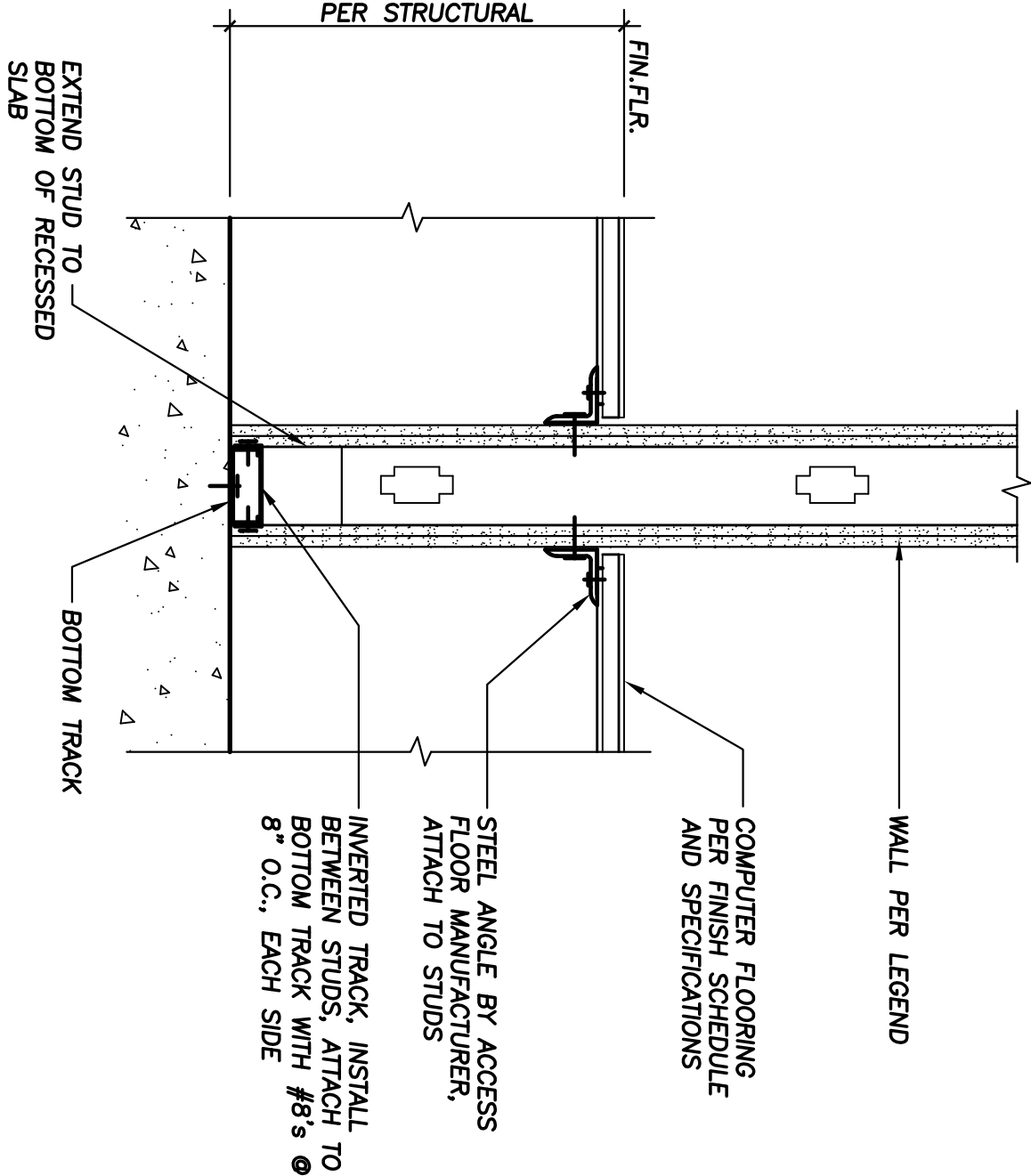
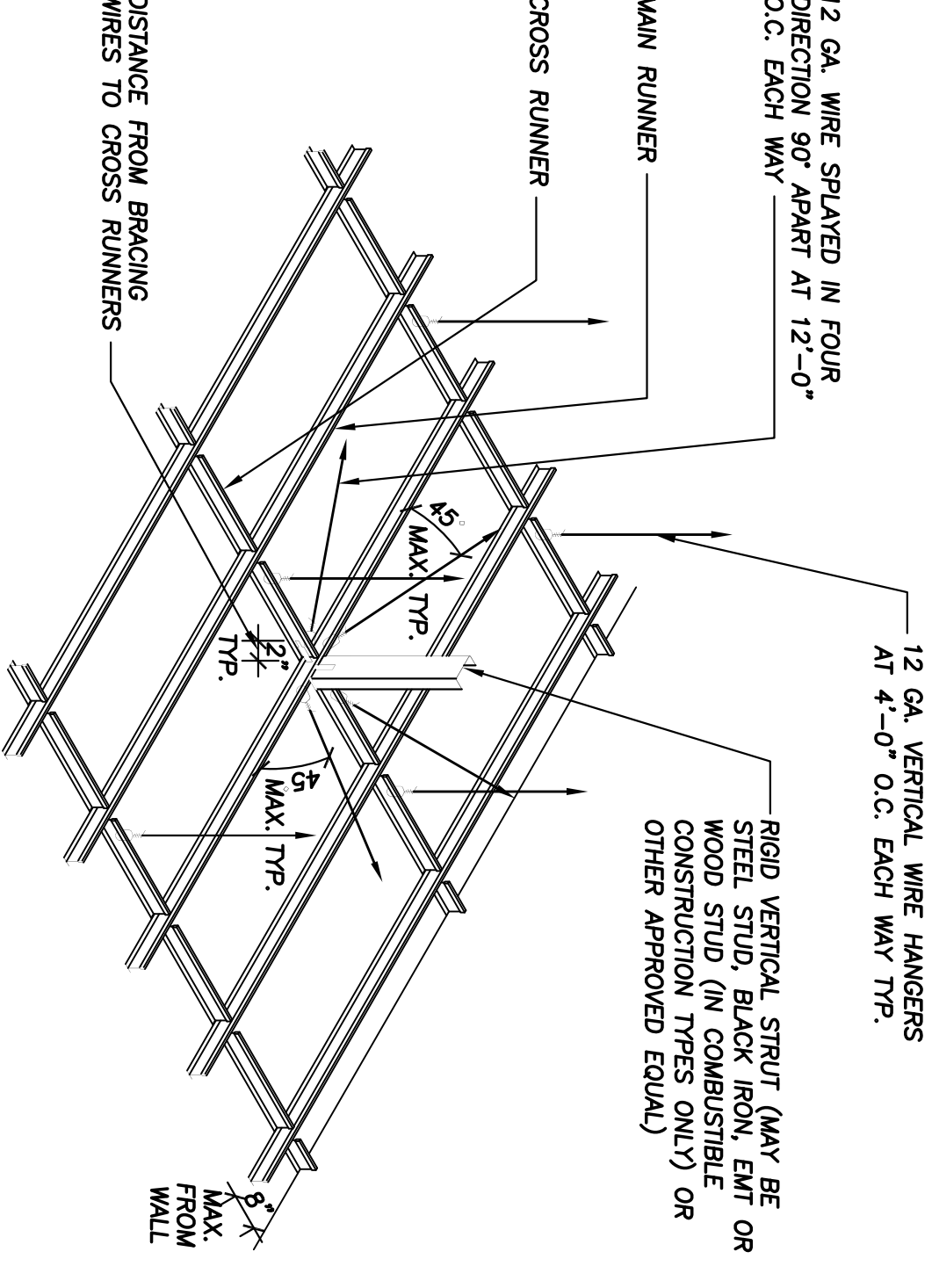
9. WHERE THE CEILING SYSTEM PROVIDES LATERAL SUPPORT FOR NON-BEARING PARTITIONS, IT SHALL BE DESIGNED FOR THE SPECIFIED LATERAL FORCES IN ACCORDANCE WITH THE UBC STANDARDS.

10. OTHER METHODS MAY BE USED PROVIDED THEY ARE SUBSTANTIATED BY DESIGN CALCULATION. THE APPROVED BUILDING PLANS SHALL IDENTIFY ALL ELEMENTS AND SHOW ALL DETAILS OF THE PROPOSED ASSEMBLY.

11. RIGID VERTICAL SUPPORT, AS SHOWN IN THE SECTION, SHALL BE FASTENED TO THE MAIN FLOOR AND SHALL EXTEND TO THE STRUCTURAL HANGERS SUPPORTING THE FLOOR OR INDICED BY THE BRACING WIRES AND SHALL HAVE AN L/R RATIO OF LESS THAN 200. THESE RESTRAINT POINTS SHALL BE PLACED AT 12'-0" ON CENTER IN BOTH DIRECTIONS WITH THE FIRST POINT WITHIN 6'-0" FROM EACH WALL.

COMPRESSION PIPE STRUT		
SIZE SCHEDULE (BASED ON L/R<200)		
SIZE	MAX. HEIGHT	NOTE
1/2" x 22 GA.	3'-0"	ALL 2 1/2" x 48" CEILING LIGHT AIR
3/4" x 22 GA.	4'-0"	REGISTER SHALL BE SUPPORTED BY A MIN OF (2) TWO HANGERS AT OPPOSITE CORNERS. CEILING SYSTEM SHALL NOT SUPPORT OTHER ITEMS.
1" x 20 GA.	6'-0"	
1-1/4" x 20 GA.	7'-0"	
1-1/2" x 20 GA.	8'-6"	
2" x 20 GA.	11'-6"	
2 1/2" x 18 GA.	14'-6"	
3" x 18 GA.	17'-3"	
3 1/2" x 16 GA.	23'-3"	

NOTE: ALL 2 1/2" x 48" CEILING LIGHT AIR REGISTER SHALL BE SUPPORTED BY A MIN OF (2) TWO HANGERS AT OPPOSITE CORNERS. CEILING SYSTEM SHALL NOT SUPPORT OTHER ITEMS.

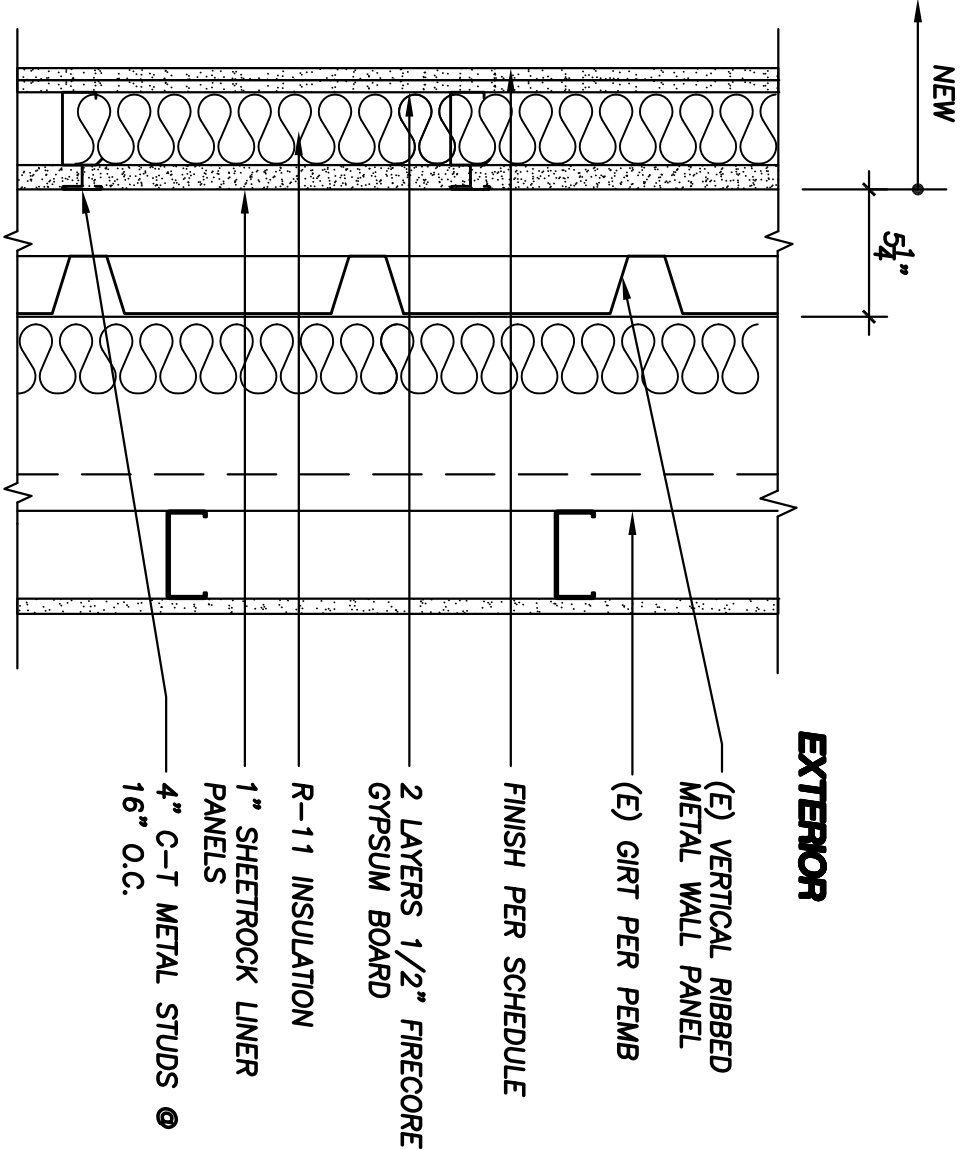


WALL AT ACCESS FLOOR

SCALE: 1/2"=1'-0"

N.T.S.

6



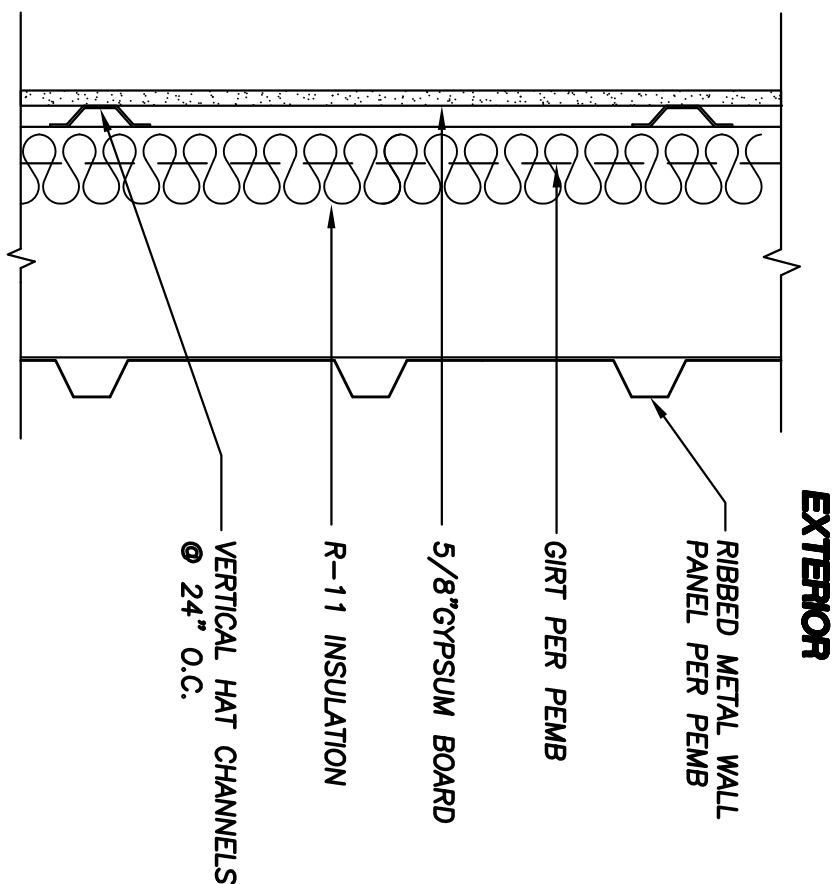
SHAFT WALL

RATING-- 2 HOUR
UL DESIGN NO.-- U415

SCALE: 1/2"=1'-0"

004

3



PEMB WALL

SCALE: 1/2"=1'-0"

001

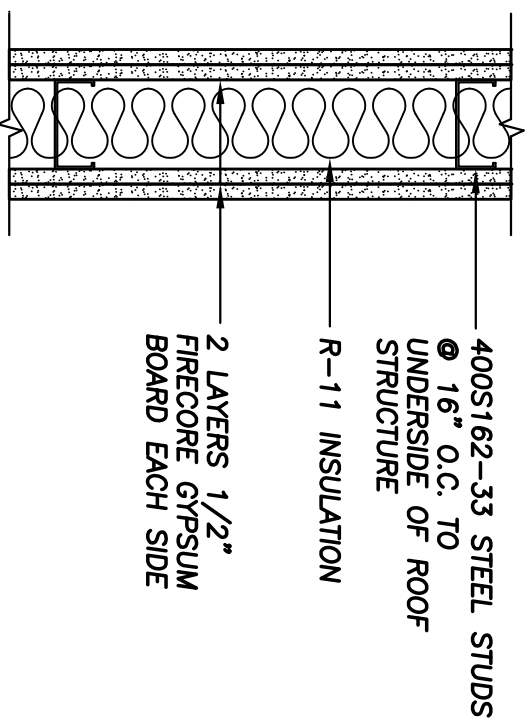
1

WALL TYPES

SCALE: 1/2"=1'-0"

003

2



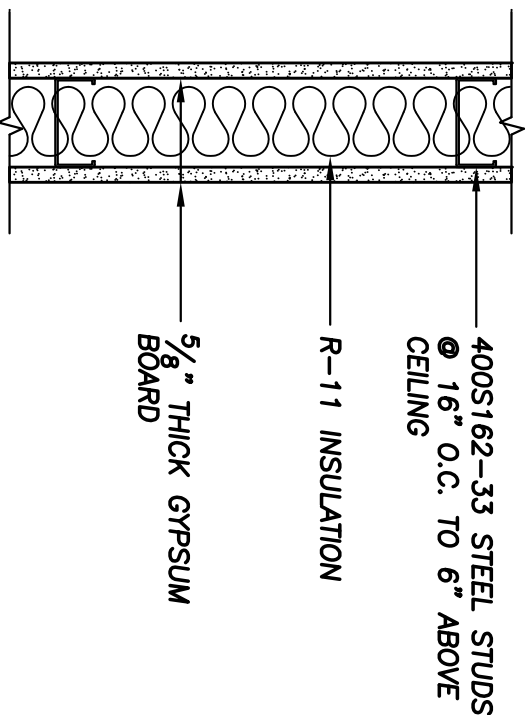
RATING-- 2 HR
UL DESIGN NO.-- U411

2 HOUR WALL

SCALE: 1/2"=1'-0"

002

1



PARTITION WALL

SCALE: 1/2"=1'-0"

002

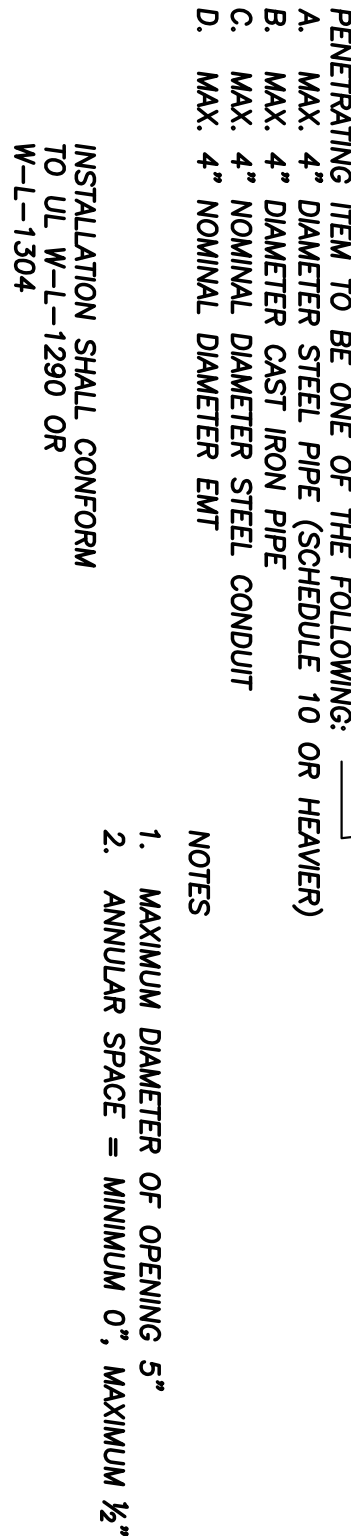
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WALL TYPES

SCALE: 1/2"=1'-0"

003

2

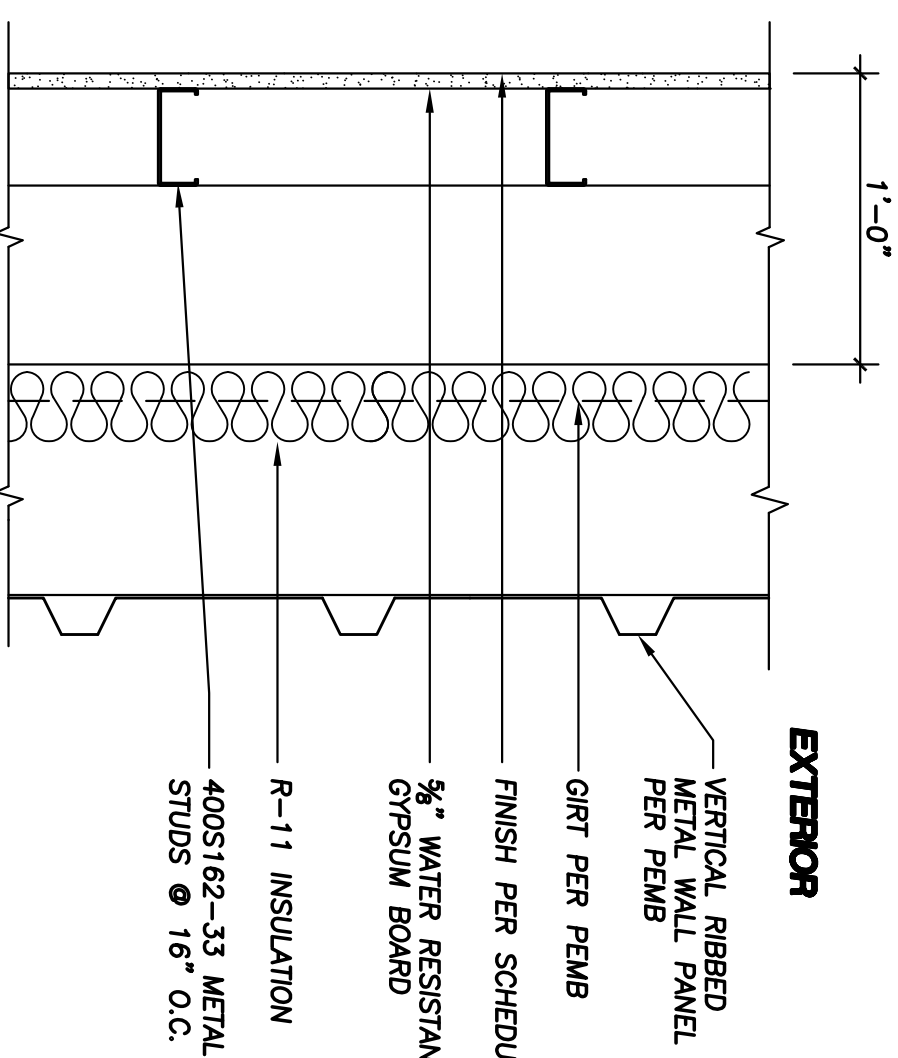


- NOTES
1. MAXIMUM DIAMETER OF OPENING 5"
 2. ANNUAL SPACE = MINIMUM 0", MAXIMUM 1/2"

PIPE PENETRATION

SCALE: 1/2"=1'-0"

7



PEMB PLUMBING WALL

SCALE: 1/2"=1'-0"

005

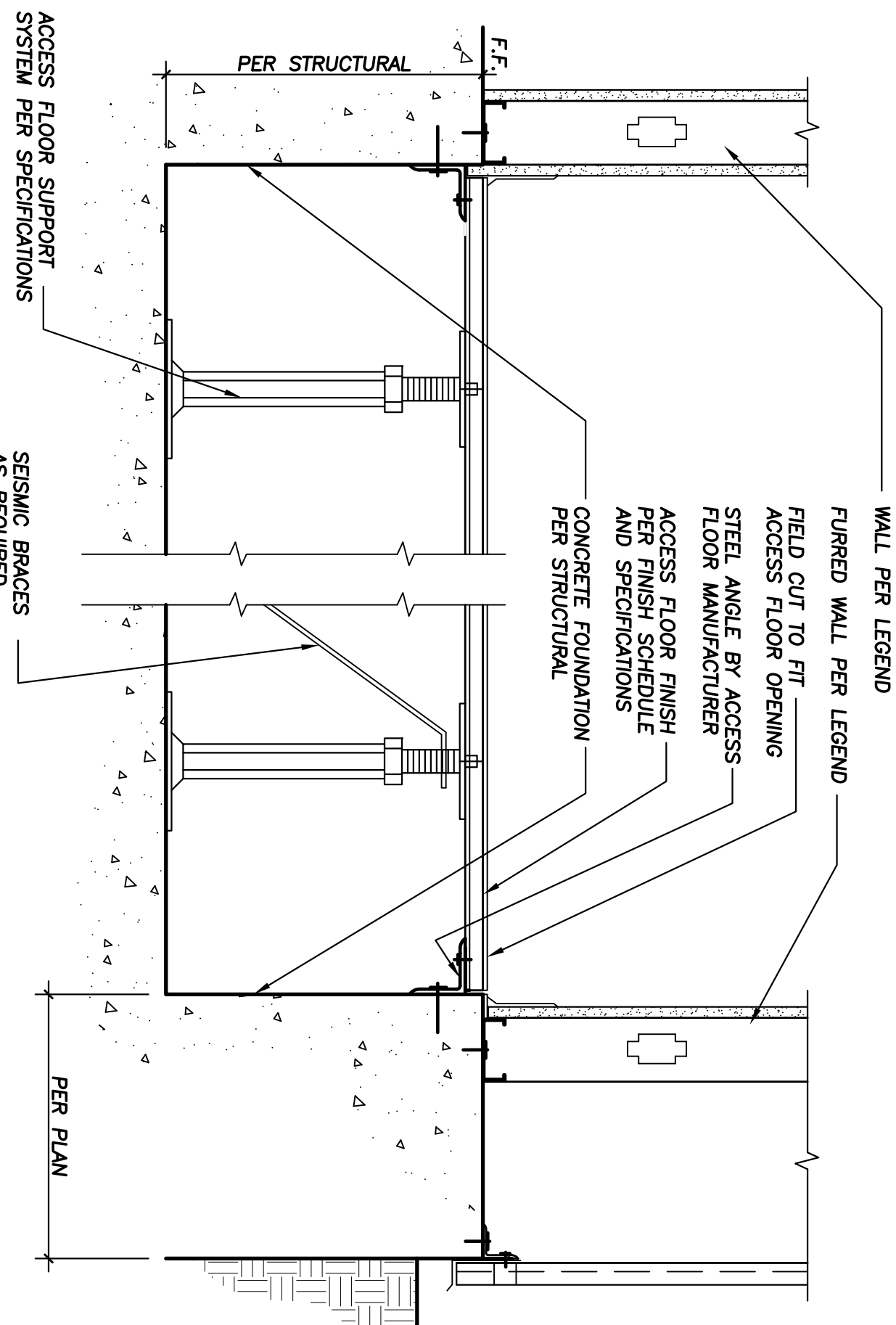
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WALL TYPES

SCALE: 1/2"=1'-0"

005

4



SUSPENDED CEILING DETAIL

SCALE: 1/2"=1'-0"

8

ACCESS FLOOR DETAIL

SCALE: N.T.S.

5



DWP DRAWING NUMBER



Scott Porter, President
BREX, CA 92823
(714) 335-4289
(714) 484-8012 FAX

STRUCTURAL ENGINEERS:

J. MILCZEWSKY
and ASSOCIATES

LOS ANGELES
DEPARTMENT OF WATER AND POWER
HAYNES GENERATING STATION
UNITS 11-16

CONTROL BUILDING
DETAILS

DRAWING NUMBER

AD1.2