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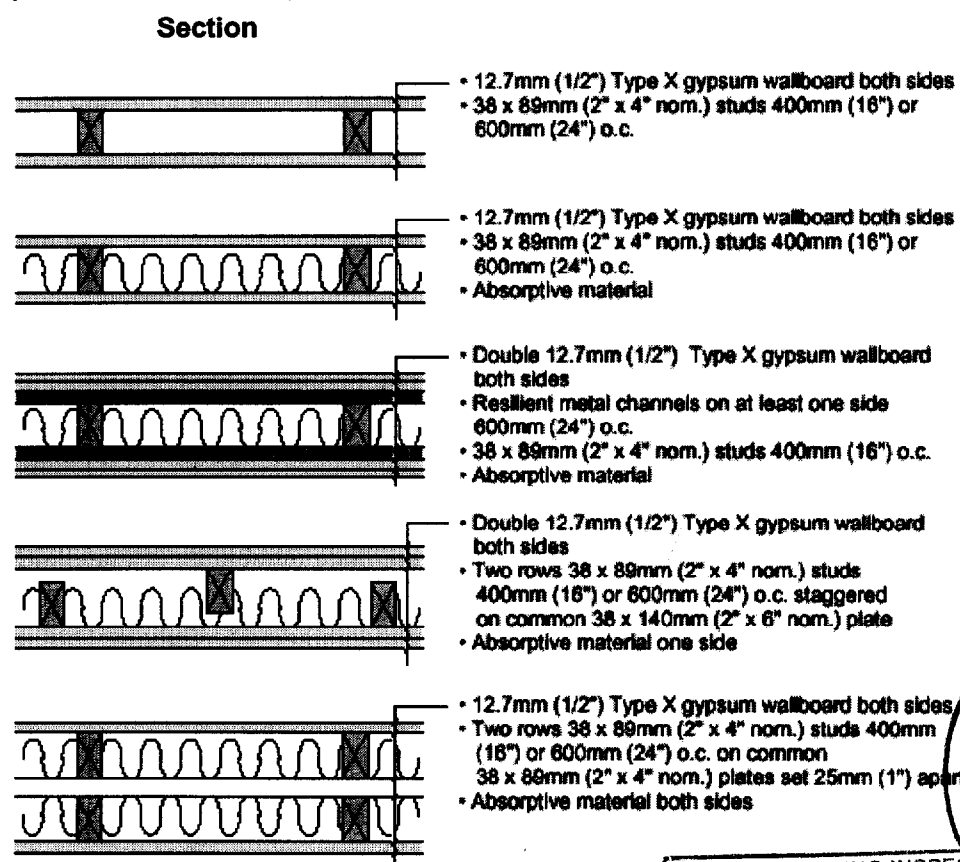
Sound Ratings of Wood Assemblies

Sound Control

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Wood frame assemblies can be designed to provide good STC ratings (Figures and 8.3). In the 1995 NBCC, revisions to the Table on Fire and Sound Resistant Walls increased the number of listings for wood stud wall assemblies from 15 in to 165 in the 1995 version. To achieve these specified ratings, the gypsum wallb layers must be taped and filled. The absorptive material used between framing members to improve STC ratings includes fibre processed from rock, slag, glass cellulose fibre, and it must fill at least 90% of the wall cavity.

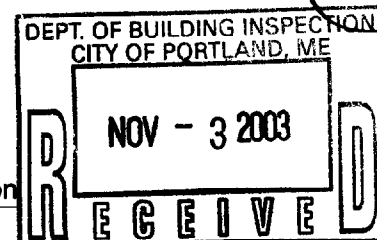
Figure 8.2 - Sound Transmission Classes (STC) for typical wall assemblies (Source - 1995 NBCC)

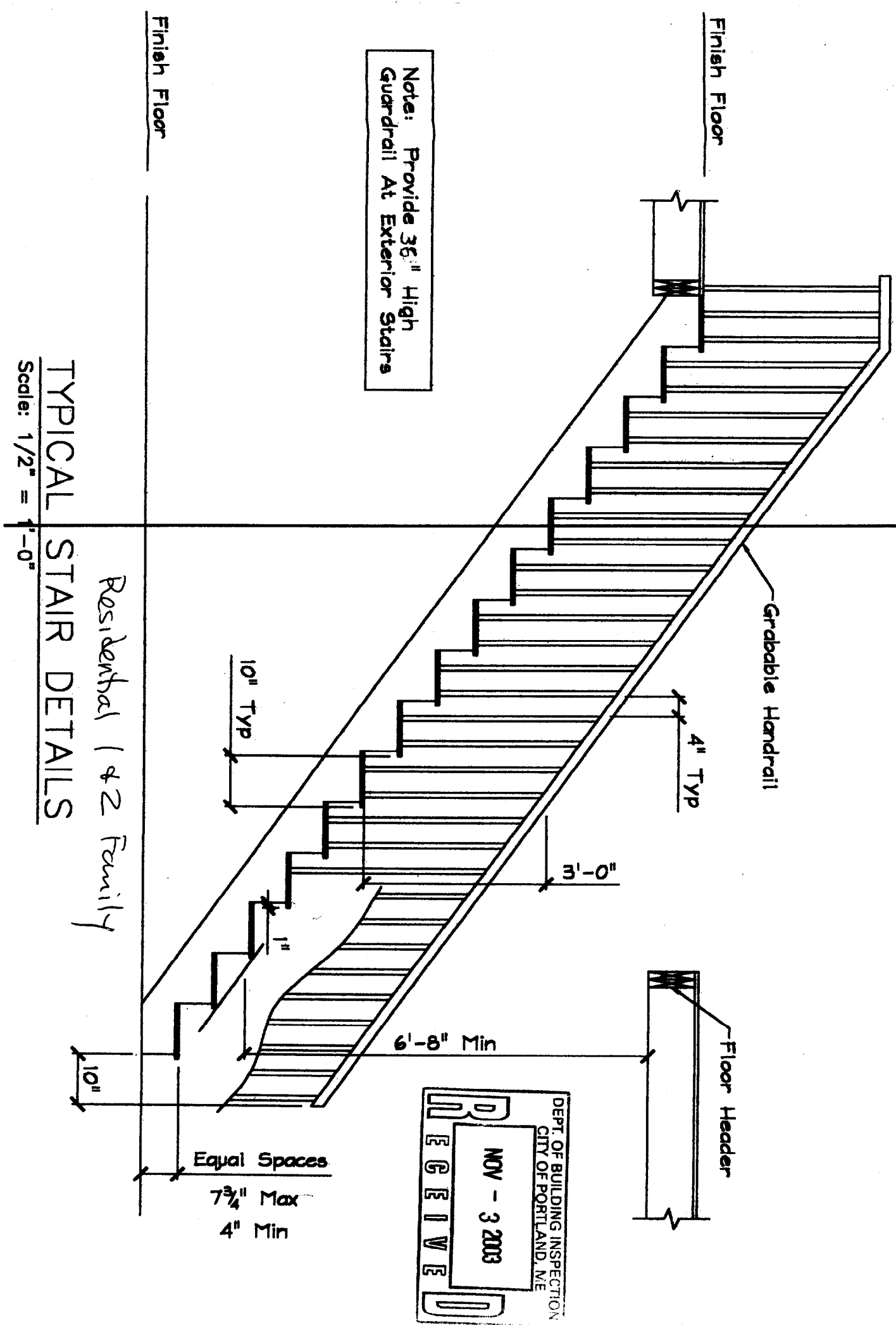


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STC

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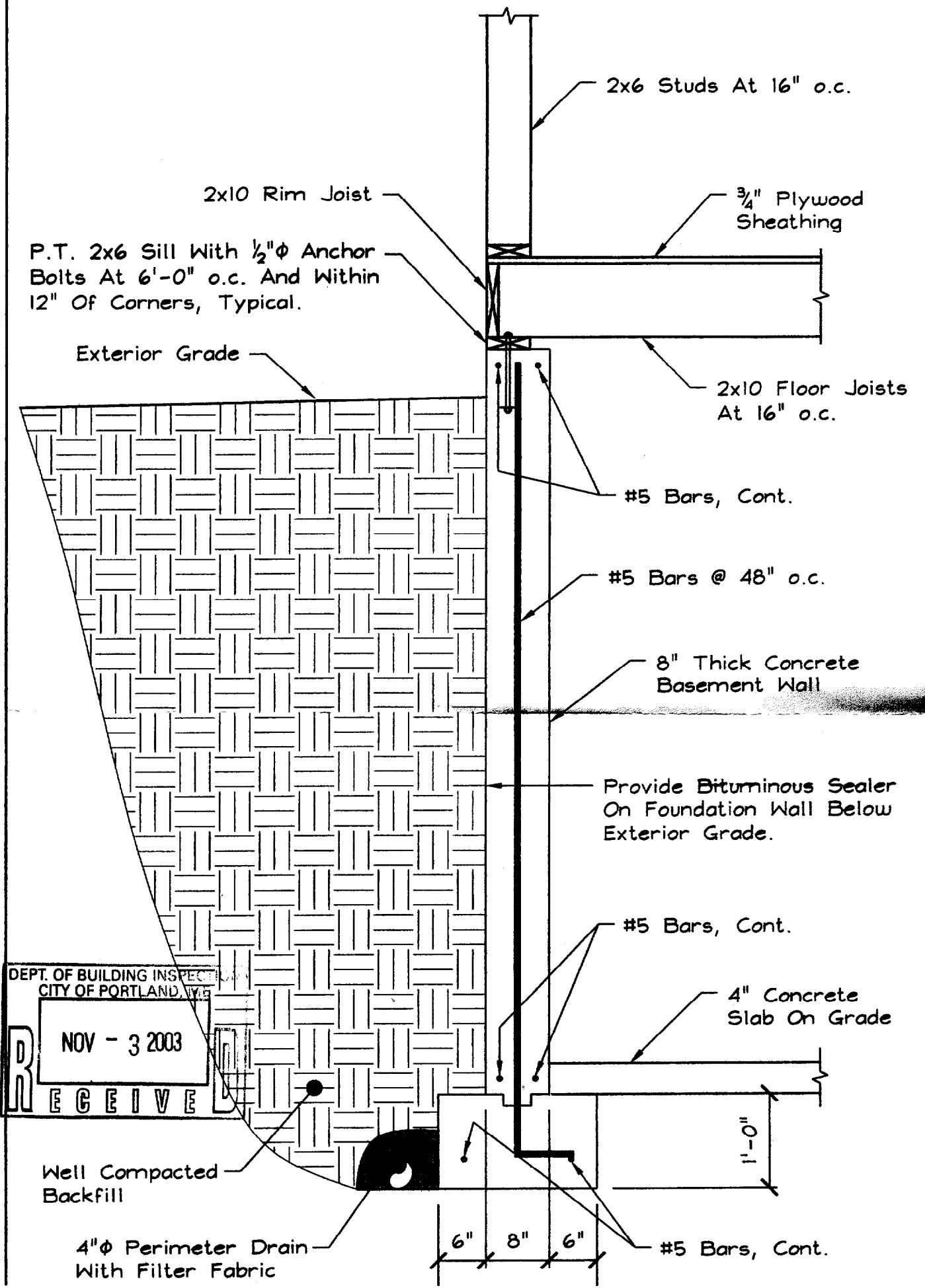
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Residential 1 & 2 Family
TYPICAL STAIR DETAILS
 Scale: 1/2" = 1'-0"

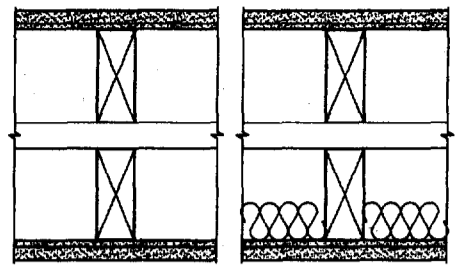
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GYPSUM WALLBOARD, WOOD STUDS

Base layer 1/4" gypsum wallboard applied parallel to each side of double row of 2 x 4 wood studs 16" o.c. on separate plates spaced 1 1/2" apart with 4d coated nails, 1 1/2" long, 0.099" shank, 1/4" heads, 12" o.c. Joints staggered 16" on opposite sides. Face layer 1/2" type X plain or predecorated gypsum wallboard or gypsum veneer base applied parallel to each side with 3/8" beads of adhesive 16" o.c. and 5d coated nails, 1 1/4" long, 0.099" shank, 1/4" heads, 16" o.c. at top and bottom plates. 4d finish nails, 1 1/2" long, 0.072" shank, 0.1055" heads, driven at a 45° angle 16" o.c. horizontally and 24" o.c. vertically. Joints offset 24" from base layer joints.

Sound tested with 1 1/2" mineral fiber insulation in stud space. Horizontal bracing required at mid height. (LOAD-BEARING)

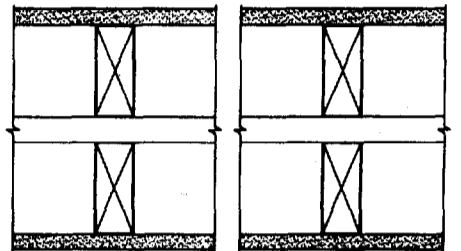


Thickness: 10"
 Approx. Weight: 9 psf
 Fire Test: See WP 3341
 (FM WP-147, 1-2-69)
 Sound Test: G&H BW-32ST, 4-22-68

GYPSUM WALLBOARD, WOOD STUDS

One layer 5/8" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to each side of double row of 2 x 4 wood studs 16" o.c. on separate plates 1" apart with 6d coated nails, 1 7/8" long, 0.0915" shank, 1/4" heads, 7" o.c.

Joints staggered 16" on opposite sides. Horizontal bracing required at mid height. (LOAD-BEARING)

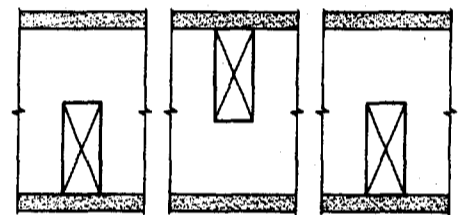


Thickness: 10 1/2"
 Approx. Weight: 8 psf
 Fire Test: See WP 3605
 (UL R1319-4, -6, 6-17-52;
 UL R2717-39, 1-20-66;
 UL R3501-52, 3-15-66,
 UL Design U305;
 ULC Design W301)
 Sound Test: Estimated

GYPSUM WALLBOARD, WOOD STUDS

One layer 5/8" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to each side of 2 x 4 wood studs 16" o.c. staggered 8" o.c. on 2 x 6 wood plates with 6d coated nails, 1 7/8" long, 0.0915" shank, 1/4" heads, 7" o.c.

Joints staggered 24" on opposite sides. Horizontal bracing required at mid height. (LOAD-BEARING)



Thickness: 7 3/4"
 Approx. Weight: 8 psf
 Fire Test: See WP 3605
 (UL R1319-4, -6, 6-17-52;
 UL R2717-39, 1-20-66;
 UL R3501-52, 3-15-66,
 UL Design U305;
 ULC Design W301)
 Sound Test: Estimated