QuietZone®
Acoustic Wall Framing

Design and Installation Guide - USA

DIMENSIONS

<table>
<thead>
<tr>
<th>2x4 Wall</th>
<th>2x6 Wall</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 1/16”</td>
<td>5 1/16”</td>
</tr>
<tr>
<td>2 3/8”</td>
<td>3 3/8”</td>
</tr>
<tr>
<td>1 1/4”</td>
<td>1 3/8”</td>
</tr>
</tbody>
</table>

SUPPORT COLUMNS

- Acoustic framing member
- Structural column
- Resilient member
- Resilient metal clip
- Structural member

ALLOWABLE DESIGN VALUES (100% LOAD DURATION) - STRUCTURAL MEMBER

QuietZone® Acoustic Wall Framing featuring Tembec Select Engineered Lumber (Structural Member) and Selectem™ LVL (Resilient Member)

- Modulus of elasticity: $E = 1.4 \times 10^6$ psi
- Bending at extreme fibre: $F_b = 875$ psi
- Compression parallel to grain: $F_c = 1150$ psi
- Compression perpendicular to grain: $F_{cp} = 425$ psi
- Shear parallel to grain: $F_v = 135$ psi

Nail Design Values, Structural Member, Lateral and Withdrawal: Design as per National Design Specification for Wood Construction for Spruce Pine Fir species $SG = 0.42$

Nail Design Values, Resilient Member, Lateral and Withdrawal: Design as per National Design Specification for Wood Construction for Hem-Fir species $SG = 0.43$

Code Evaluation for Resilient Member: ESR-1898 (see www.ics-es.org)

Values may be increased by a repetitive member factor ($C_r$) if applicable
Values may be increased by a load duration factor ($C_d$) if applicable
Values may be increased by a size factor ($C_f$)

QuietZone® Acoustic Wall Framing is to be used in “dry” service conditions only
QuietZone® Acoustic Wall Framing has no Preservative or Fire Retardant Treatment
QuietZone® Acoustic Wall Framing is to be used as a vertical end-loaded member in compression
**IN Inside Corner**

- **Attach fasteners through structural member only into 2x stud.**
- QuietZone® Acoustic Sealant
- Type X gypsum wallboard (typical both sides)
- 4 1/2” for 2x4 wall
- 6 1/2” for 2x6 wall
- Acoustic framing member

**OUTSIDE CORNER**

- **QuietZone® Acoustic Sealant**
- 2x stud
- Acoustic framing member
- Type X gypsum wallboard (typical both sides)
- **Attach fasteners through structural member only into 2x stud.**

**QUIETZONE® TO STANDARD WALL CONNECTION**

- Acoustic framing member
- Attach fasteners through structural members only
- QuietZone® Acoustic Batts
- 2x studs
- Type X gypsum wallboard (typical both sides)
- QuietZone® Acoustic Sealant

**QUIETZONE® WALL TO QUIETZONE® WALL CONNECTION**

- Attach fasteners through structural member only into 2x stud
- 2x stud
- Optional
- QuietZone® Acoustic Sealant
- Type X gypsum wallboard (typical both sides)
- QuietZone® Acoustic Batts

**STANDARD WALL TO 2X4 QUIETZONE® WALL CONNECTION**

- QuietZone® Acoustic Batts
- Acoustic framing member
- Attach fasteners through structural member only into 2x stud
- Type X gypsum wallboard (typical both sides)
- QuietZone® Acoustic Sealant

**STANDARD WALL TO QUIETZONE® WALL CONNECTION**

- QuietZone® Acoustic Batts
- Acoustic framing member
- Attach fasteners through structural member only into 2x stud
- Type X gypsum wallboard (typical both sides)
- QuietZone® Acoustic Sealant

**LOW HEADER**

- Install header flush to structural side of wall only
- Double top plate
- Acoustic cripple
- Header
- Acoustic framing member
- Do not fasten gypsum wallboard to header

**HIGH HEADER**

- Install header flush to structural side of wall only
- Double top plate
- Acoustic framing member
- Do not fasten gypsum wallboard to header
- Acoustic framing member
- Acoustic trimmer and king stud*

**DOOR ATTACHMENT**

- Acoustic framing
- Fasten door frame to structural member only
- Type X gypsum wallboard (typical both sides)
- QuietZone® Acoustic Sealant

*Additional trimmers and/or king studs may be required to support header reaction.
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**ELECTRICAL BOXES**

- Resilient Side of Wall:
  - Electrical box should not touch structural member or be fastened to it.
  - Fasten electrical boxes to resilient member only.
  - Use standard fastening to structural member.
  - Use any code approved electrical box.

- Structural Side of Wall:
  - Acoustic framing member.

Electrical boxes should not be installed back to back on opposite sides of the wall. Plugs and switches should be spaced a minimum of 36" between each other and wall fixtures a minimum of 24" between each other.

**ALLOWABLE HOLES AND NOTCHES**

<table>
<thead>
<tr>
<th>2x4 Walls</th>
<th>2x6 Walls</th>
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<tbody>
<tr>
<td>5/8&quot; minimum edge distance</td>
<td>2&quot; minimum edge distance</td>
</tr>
<tr>
<td>3/4&quot; maximum diameter hole</td>
<td>1 3/8&quot; maximum diameter hole</td>
</tr>
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Holes shown may be cut anywhere, along the length of the member, but no closer than 9/16" from the edge.

- **NO NOTCHES in the 2x4 wall assembly!**
- **NO run electrical wires or pipes through the gap between members for either 2x4 or 2x6 wall framing!**

**CUTTING NON-STANDARD LENGTHS**

- Maximum extension beyond last clip:
  - 2x4 wall - 8"
  - 2x6 wall - 16"

- 24" maximum distance between pairs of clips

- Install extra clips as required with 2 - #6 x 1" self-tapping screws into each member

- Field cut acoustic framing member as required

**SHELVES AND FIXTURES**

- Maximum shelf dimension 12"
- Fasten bracket to resilient member with screws*
- Wall mounted shelf or fixture

Maximum weight of fixture attached to resilient member shall not exceed 40 lbs. per member for shelf dimensions shown above.

* Fasteners should not extend to the structural member. Maximum fastener length:
- 2x4 wall: 5/16" + drywall thickness + thickness of bracket
- 2x6 wall: 1 1/8" + drywall thickness + thickness of bracket

**MULTIPLE LAYERS OF GYPSUM**

- Apply QuietZone® Acoustic Sealant along corner of first layer of Type X gypsum wallboard before applying second layer of Type X gypsum wallboard.
Walls supporting one floor only

Walls supporting attic framing only

*Trubutary width is calculated as a percentage of the sum of the joist spans on either side of the wall: simple span: 0.5 ft x (left span + right span) continuous span: 0.625 ft x (left span + right span)

**GENERAL NOTES**

- QuietZone® Acoustic Wall Framing is intended for interior walls only. Call toll free 1-866-864-5710 for information on other applications.
- 2x4 QuietZone® Acoustic Wall Framing has load-bearing capabilities similar to 2x3 wood framing; see design tables for details.
- 2x6 QuietZone® Acoustic Wall Framing has load-bearing capabilities similar to 2x4 wood framing; see design tables for details.
- Screws are recommended for fastening drywall, shelves, and fixtures to QuietZone® Acoustic Wall Framing. Use caution if fastening drywall to resilient member using a nailgun.
- QuietZone® Acoustic Batts (15” or 23” width) will be required in the cavity space between wall framing sections spaced either 16” or 24” o.c. when using 2 x 4 & 2 x 6 QuietZone® Acoustic Wall Framing.
- QuietZone® Acoustic Batts fit between wood framing members with the flanges stapled to the sides of the QuietZone® Acoustic Wall Framing structural members.

**WARNING:** LACK OF PROPER BRACING, INSUFFICIENT WALL SYSTEM DESIGN OR FAILURE TO FOLLOW THE INSTRUCTIONS SET FORTH HEREIN COULD LEAD TO PROPERTY DAMAGE AND/OR SERIOUS BODILY INJURY. NEITHER ONEW CORNING NOR TEMBEC SHALL BE RESPONSIBLE FOR ANY DAMAGE, LOSS, COSTS OR EXPENSES RELATING TO ANY MISUSE OF THE PRODUCTS DESCRIBED ABOVE, OR ANY FAILURE TO ADHERE TO THESE INSTRUCTIONS.

For more information on the QuietZone® Acoustic Wall Framing, call 1-866-864-5710. For more information on other QuietZone® Products (QuietZone® Acoustic Batt & QuietZone® acoustic sealant) call 1-800-GET-PINK™, or visit www.owenscorning.com.