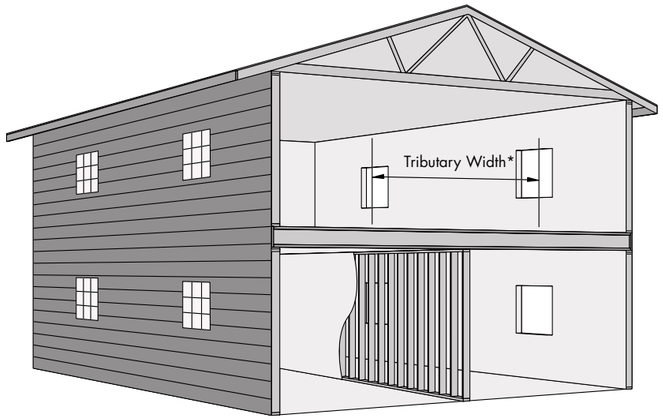
Design and Installation Instructions

QuietZone™ Acoustic Wall Framing

Featuring TimberStrand® LSL

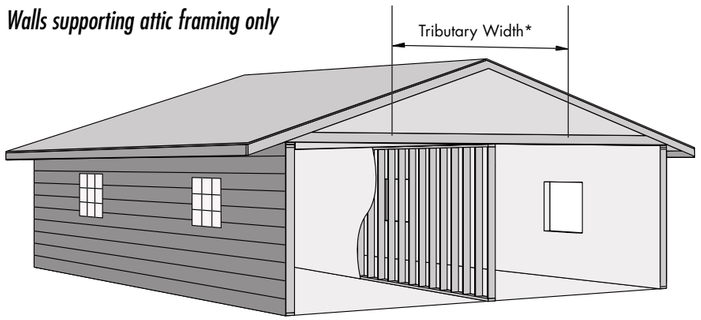
Walls supporting one floor only



Max. Tributary Width* (ft)
One Floor Only

Member Size	Wall Height	Member Spacing	Floor Load 40LL + 12DL
2x4	8′	16″ o.c.	16
		24″ o.c.	9
	9′	16″ o.c	11
		24″ o.c.	---
	10′	16″ o.c.	---
		24″ o.c.	---
2x6	8′	16″ o.c.	25
		24″ o.c.	22
	9′	16″ o.c.	25
		24″ o.c.	22
	10′	16″ o.c.	25
		24″ o.c.	22
	12′	16″ o.c.	23
		24″ o.c.	13
	14′	16″ o.c.	15
		24″ o.c.	---

Walls supporting attic framing only



Max. Tributary Width* (ft)
Attic Framing Only

Member Size	Wall Height	Member Spacing	Attic Load 20LL + 10DL
2x4	8′	16″ o.c.	25
		24″ o.c.	15
	9′	16″ o.c	20
		24″ o.c.	11
	10′	16″ o.c.	14
		24″ o.c.	---
2x6	8′	16″ o.c.	25
		24″ o.c.	25
	9′	16″ o.c.	25
		24″ o.c.	25
	10′	16″ o.c.	25
		24″ o.c.	25
	12′	16″ o.c.	25
		24″ o.c.	22
	14′	16″ o.c.	25
		24″ o.c.	13

**Tributary 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)

For more information on the *QuietZone* Noise Control System call 1-800-GET-PINK or visit our Web site at www.owenscorning.com. For more information on TimberStrand® LSL or other engineered lumber products call Trus Joist at 1-800-628-3997 or visit their Web site at www.trusjoist.com.

OWENS CORNING SYSTEM THINKING™
Makes the Difference

OWENS CORNING WORLD HEADQUARTERS
ONE OWENS CORNING PARKWAY
TOLEDO, OHIO 43659

Pub. No. 15-BL-43827 Printed in U.S.A., March 2000

Maximum Vertical Load (plf)
Interior Walls Only

Wall Height	Member Length	2x4 Wall On-Center Spacing			2x6 Wall On-Center Spacing		
		12″	16″	24″	12″	16″	24″
8′	92 5/8″	1204	837	479	2365	1774	1183
9′	104 5/8″	892	607	331	2365	1774	1183
10′	116 5/8″	671	446	227	2365	1774	1183
12′	144″				1742	1203	680
14′	168″				1179	791	414

Table is based upon:
- Type X gypsum wall board applied to each side of the wall
- Interior lateral wall pressure of 5 psf

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Residential Applications Only

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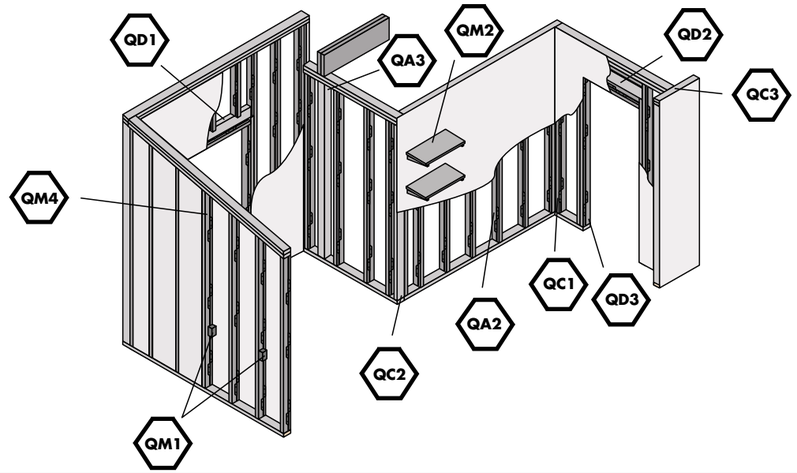
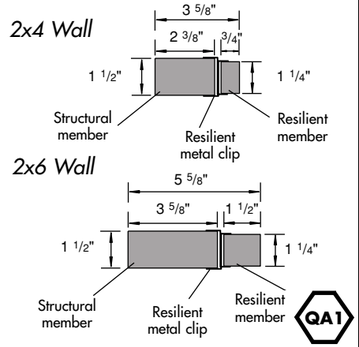
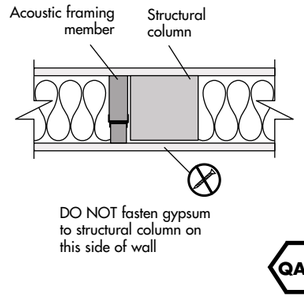


Dimensions



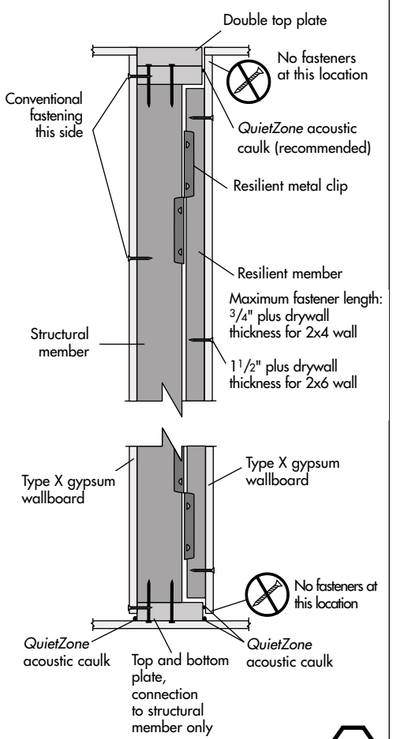
Support Columns



1.3E TimberStrand® LSL
Allowable Design Stresses (100% Load Duration)

Shear modulus of elasticity	G	=	81,250 psi
Modulus of elasticity	E	=	1.3 x10^6 psi
Flexural stress	F_b	=	1,700 psi(1)
Compression parallel to grain	F_{dl}	=	1,400 psi
Compression perpendicular to grain parallel to wide face of strands	$F_{c\perp}$	=	680 psi(2)
Compression perpendicular to grain perpendicular to wide face of strands	$F_{c\perp}$	=	435 psi(2)
Horizontal shear perpendicular to wide face of strands	F_v	=	400 psi

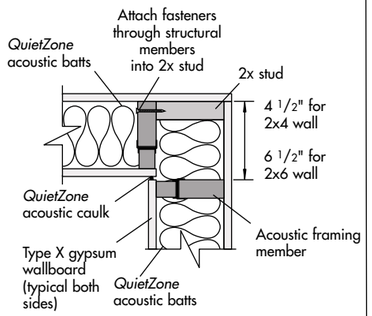
(1) For 12-inch depth. For others, multiply by $(12/d)^{0.092}$ (2) $F_{c\perp}$ shall not be increased for duration of load.
Nail Design Values Lateral and Withdrawal: Design per National Design Specification® for Wood Construction using 0.50 specific gravity.
Code Evaluation: NER-481 approval for TimberStrand® LSL only



QuietZone™ Acoustic Wall Framing

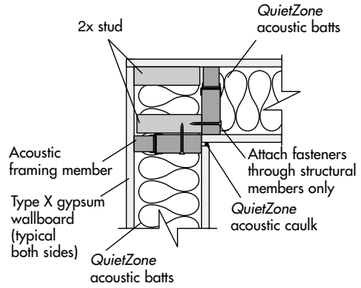
Featuring TimberStrand® LSL

Inside Corner



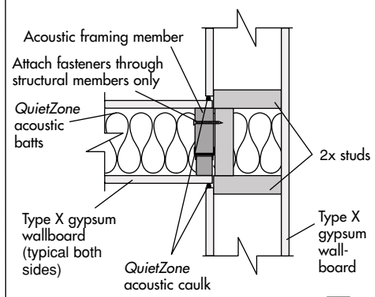
QC1

Outside Corner



QC2

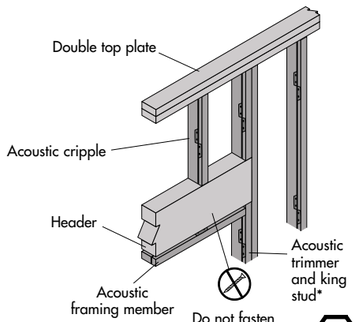
QuietZone to Standard Wall Connection



QC3

Low Header

(Install header flush to structural side of wall only)

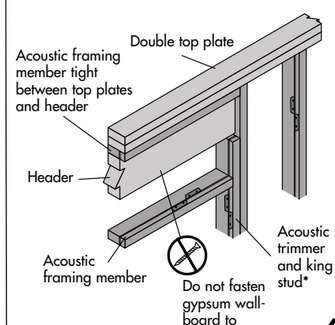


*Additional trimmers and/or king studs may be required to support header reaction.

QD1

High Header

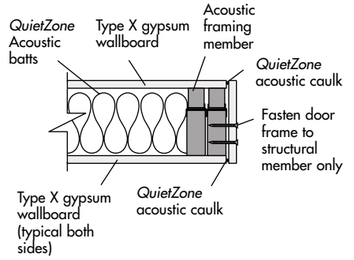
(Install header flush to structural side of wall only)



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

QD2

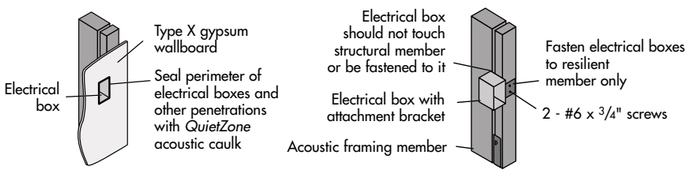
Door Attachment



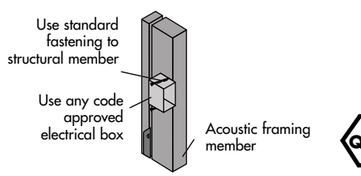
QD3

Electrical Boxes

Resilient Side of Wall



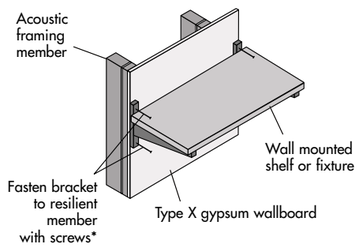
Structural Side of Wall



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.

QM1

Shelves and Fixtures



MAXIMUM WEIGHT OF FIXTURE ATTACHED TO RESILIENT MEMBER SHALL NOT EXCEED 50 LBS PER MEMBER.

* Fasteners should not extend to the structural member.
Maximum fastener length:
2x4 wall - 3/4" + drywall thickness + thickness of bracket
2x6 wall - 1 1/2" + drywall thickness + thickness of bracket

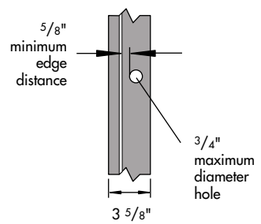
QM2

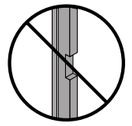
TrusJoist™ A Weyerhaeuser Business

Allowable Holes and Notches

Holes shown may be cut anywhere along the length of the member, but no closer than 5/8" from the edge.

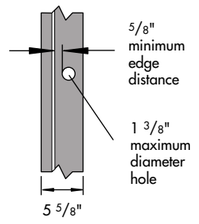
2x4 Walls

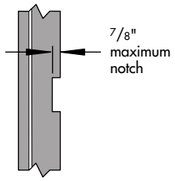




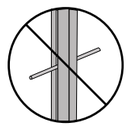
NO NOTCHES in the 2x4 wall assembly!

2x6 Walls

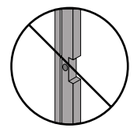




Notches shown may be cut in the 2x6 wall assembly anywhere except the middle 1/3 of the length of the member.



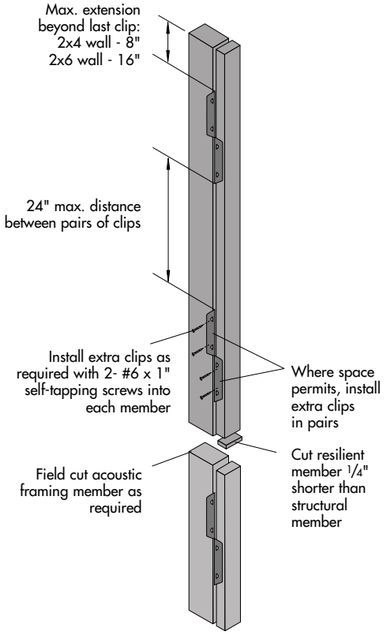
DO NOT run electrical wires or pipes through the gap between members for either 2x4 or 2x6 wall framing!



Notches and holes shall not occur in the same cross section

QM3

Cutting Non-Standard Lengths



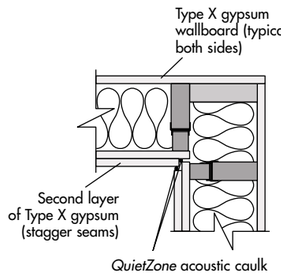
QM4

General Notes

- *QuietZone* acoustic wall framing members are currently limited to constructing walls in traditional single family homes. Contact Owens Corning for information on other applications.
- 2x4 *QuietZone* acoustic wall framing has limited load-bearing capabilities; see design tables for details.
- 2x6 *QuietZone* acoustic wall framing has load-bearing capabilities similar to 2x4 wood framing; see design tables for details.
- Values shown in this brochure are applicable to TimberStrand® LSL used in dry service conditions only.
- 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 *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.
- Owens Corning acoustic batts will be required to fill the cavity space between wall framing sections spaced either 16" or 24" o.c. when using 2 x 6 *QuietZone* acoustic wall framing.

WARNING: LACK OF PROPER BRACING OR INSUFFICIENT WALL SYSTEM DESIGN AND FAILURE TO FOLLOW THE INSTRUCTIONS SET FORTH HEREIN COULD LEAD TO PROPERTY DAMAGE AND/OR SERIOUS BODILY INJURY. OWENS CORNING SHALL NOT 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.

Multiple Layers of Gypsum



Apply *QuietZone* acoustic caulk along corner of first layer of Type X gypsum before applying added sheets

QM5