

SOUND SOLUTIONS



# SOUND SOLUTIONS GUIDE





*\*Image above showcases SoundGuard® by MarinoWARE*

## **TECHNICAL SERVICES + SUPPORT** | **DesignGroup™**

Our commitment to quality products extends to best-in-class design support. The MarinoWARE® DesignGroup™ offers a full range of technical support and engineering services, including professionally engineered stamped shop drawings, design and installation assistance on all MarinoWARE manufactured products, and expert advice on structural, nonstructural, fire and acoustic assemblies.

If you have questions or need more information on any of the products listed in this catalog, contact our Technical Services department at [technicalservices@marinoware.com](mailto:technicalservices@marinoware.com), or at 866.545.1545. In most cases Technical Services representatives can provide an immediate response.

### **Warranty & Limitations**

All products presented herein are warranted to the buyer to be free from defects in material and workmanship. The foregoing warranty is non-assignable and in lieu of and excludes all other warranties not expressly set forth herein, whether express or implied by operation of law or otherwise, including but not limited to any implied warranties of merchantability or fitness for a particular purpose. All details and specifications presented herein are intended as a general guide for the use of MarinoWARE® framing systems. These products should not be used without evaluation by a qualified engineer or architect to determine their suitability for a specific use.

MarinoWARE® assumes no responsibility for failure resulting from use of its details or specifications, or for failure resulting from improper application or installation of these products.

### **Governing Law**

All issues arising in connection with your order and all transactions associated with it shall be interpreted according to the laws of the State of New Jersey, and all actions or other proceedings arising out of such issues shall be brought only in Superior Court, State of New Jersey, County of Essex, or United States District Court for the District of New Jersey. No action may be brought more than one year after accrual of the cause of action therefore.

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*\*This guide represents a compilation of MarinoWARE sound tested assemblies, always verify UL or other Listed fire-rated designs for additional requirements.\**

## The Basics of Sound Isolation in Construction

Sound isolation in construction involves the use of various materials and techniques to minimize the transmission of sound from one space to another. Some common strategies for achieving sound isolation include using resilient channels, sound-absorbing materials, and sound-blocking materials.

Resilient channels are thin metal channels that are installed between the framing and drywall of a wall or ceiling. They create a separation between the two layers of drywall, which helps to reduce the transmission of sound vibrations between rooms. The channels work by allowing the outer layer of drywall to vibrate independently of the framing, which helps to dissipate sound energy.

Sound-absorbing materials such as fiberglass insulation and acoustic panels can also be used to help reduce the transmission of sound. These materials work by absorbing sound energy rather than reflecting it back into the room. When placed within walls or ceilings, they can help to reduce the amount of sound that passes through the structure.

Sound-blocking materials such as gypsum board can also be used to reduce sound transmission. Gypsum board is dense, which helps to block the transmission of sound waves. When used in combination with other sound isolation techniques, they can help to create a more acoustically isolated space.

There are also several construction techniques that can be used to help achieve sound isolation, such as staggered stud walls and double-layered walls. Staggered stud walls involve alternating the placement of studs on opposite sides of a wall, which helps to reduce the direct transmission of sound between rooms. Double-layered walls involve the use of two layers of drywall separated by a layer of sound-absorbing insulation, which helps to reduce both airborne and impact noise transmission.

### Primary Methods for Reducing Sound Transfer

There are three primary methods of reducing sound transfer in buildings: increasing mass, decoupling, and using sound-dampening products.

**Increasing Mass:** Adding mass to walls, ceilings, and floors is a highly effective way to reduce sound transfer. This is because heavier materials are better able to absorb and block sound waves. Common materials used for this purpose include concrete, brick, and heavy-duty drywall. According to the National Institute of Standards and Technology (NIST), “the effectiveness of mass in blocking sound is proportional to the square of its thickness” (NIST, 2010).

**Decoupling:** Decoupling involves separating two surfaces to prevent sound waves from traveling through them. This is typically achieved by creating a “floating” structure, in which walls or ceilings are not directly connected to the building’s structure. This can be accomplished through the use of resilient channels, spring isolators or decoupled steel framing. Resilient channels, for example, are thin metal channels that are installed between the framing and drywall of a wall or ceiling. They create a separation between the two layers of drywall, which helps to reduce the transmission of sound vibrations between rooms. An example of decoupled steel framing is the SoundGuard Steel Framing System.

**Sound-Dampening Products:** Sound-dampening products are materials that are designed to absorb sound waves and prevent them from bouncing around a room. These products are typically made from materials like fiberglass, foam, or cork, and are often used in conjunction with other sound-reducing methods like mass and decoupling. Sound-dampening products can be applied to walls, ceilings, and floors to help reduce the amount of sound that enters or exits a room.

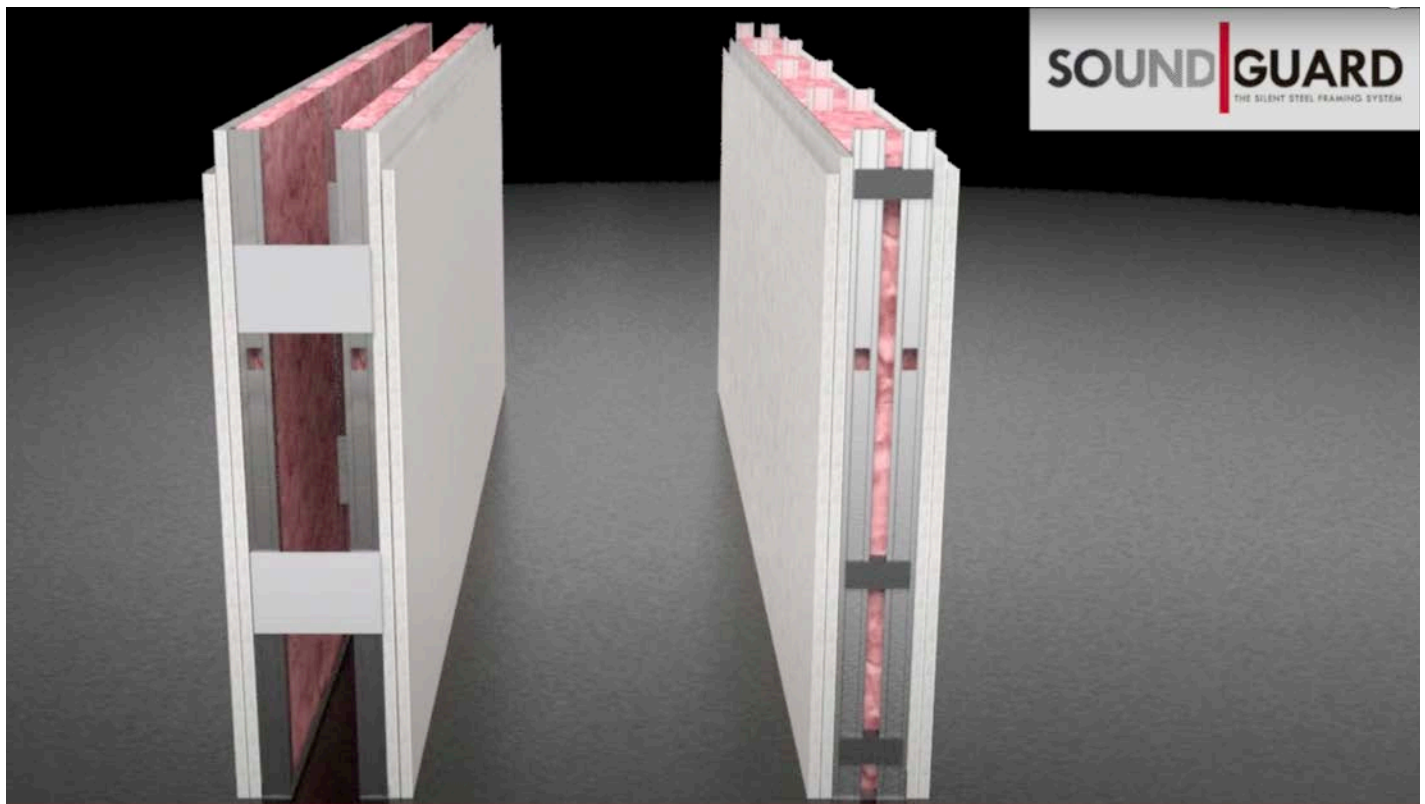


## The importance of ASTM E90 for sound solutions

ASTM E90 is a standard test method used to measure airborne sound transmission loss through building partitions. The test involves measuring the sound intensity levels on either side of a partition and determining the difference between the two. The results are then used to calculate the sound transmission class (STC) rating of the partition.

The ASTM E90 standard has been widely adopted by the construction industry as a means of quantifying the acoustic performance of building partitions. It is frequently used in the design and construction of buildings where acoustic privacy and sound isolation are important considerations, such as hospitals, schools, and office buildings.

One example of the use of ASTM E90 in the construction industry can be seen in the LEED (Leadership in Energy and Environmental Design) certification process. LEED certification is a globally recognized rating system that measures the environmental sustainability of buildings. One of the requirements for LEED certification is that buildings must meet certain acoustic performance standards, including a minimum STC rating for building partitions. ASTM E90 is one of the approved test methods for measuring STC ratings and is commonly used to demonstrate compliance with LEED requirements.



*\*Image above, illustration on the right showcases SoundGuard® by MarinoWARE*

### Sources:

American Society of Interior Designers. (2014). Sound isolation in construction. <https://www.asid.org/resources/sound-isolation-construction> Building Science Corporation. (2010). Acoustical isolation. <https://www.buildingscience.com/documents/information-sheets/info-sheet-acoustical-isolation> National Institute of Building Sciences. (2015). Sound isolation. <https://www.wbdg.org/design-objectives/sound-isolation>

National Institute of Standards and Technology (NIST). (2010). How to soundproof a room. [https://www.nist.gov/system/files/documents/el/building\\_materials\\_soundproofing.pdf](https://www.nist.gov/system/files/documents/el/building_materials_soundproofing.pdf) American Society of Interior Designers. (2014). Sound isolation in construction. <https://www.asid.org/resources/sound-isolation-construction> Building Science Corporation. (2010). Acoustical isolation. <https://www.buildingscience.com/documents/information-sheets/info-sheet-acoustical-isolation>

**JoistRite®**

JoistRite is a steel framing stud that utilizes continuous lip reinforced triangular knockouts. The large knockouts help reduce noise transmission and make for an effective sound solution.

**Summary for 1 Hour Fire & Sound Test**

**STC/IIC**

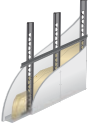
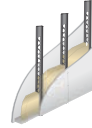
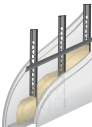
<p>A cross-sectional diagram of a floor assembly. From top to bottom, it shows: a top layer of plywood, a 10-inch deep JoistRite steel joist with triangular knockouts, 4 inches of mineral wool insulation, an RC-1 resilient channel, and two layers of 1/2-inch thick Type C gypsum wallboard.</p>	<ul style="list-style-type: none"> <li>• 3/4" thick T &amp; G Plywood</li> <li>• 10" deep JoistRite steel joist @ 16" o.c. (16 GA)</li> <li>• 4", 4.5pcf mineral wool insulation (friction fitted between joists just under plywood)</li> <li>• RC-1 resilient channel spaced 16" o.c. below joists</li> <li>• Two layers of 1/2" thick Type C gypsum wallboard</li> </ul> <p>For IIC 68 add:</p> <ul style="list-style-type: none"> <li>• *44oz/ 7/16" thick carpet &amp;</li> <li>• 3/8" foam rubber underlayment</li> </ul>	<p><b>52/45</b> <b>68*</b></p> <p>5004025 / 7004075</p>
<p>A cross-sectional diagram of a floor assembly. From top to bottom, it shows: a 1-1/2 inch thick Gypsum-concrete floor underlayment, a top layer of plywood, a 10-inch deep JoistRite steel joist with triangular knockouts, 4 inches of mineral wool insulation, an RC-1 resilient channel, and two layers of 1/2-inch thick Type C gypsum wallboard.</p>	<ul style="list-style-type: none"> <li>• 1-1/2" thick Gypsum-concrete floor underlayment</li> <li>• 3/4" thick T &amp; G Plywood</li> <li>• 10" deep JoistRite steel joist @ 16" o.c. (16 GA)</li> <li>• 4", mineral wool insulation (friction fitted between joists just under plywood)</li> <li>• RC-1 resilient channel spaced 16" o.c. below joists</li> <li>• Two layers of 1/2" thick Type C gypsum wallboard</li> </ul> <p>For IIC 74 add:</p> <ul style="list-style-type: none"> <li>• 44oz/ 7/16" thick carpet</li> <li>• 3/8" foam rubber underlayment</li> </ul>	<p><b>59/74</b></p> <p>5005013 / 7005028</p>

**StudRite®**

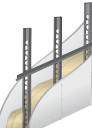
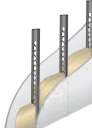
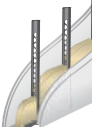
StudRite is a steel framing stud that utilizes continuous lip reinforced triangular knockouts. The large knockouts help reduce noise transmission and make for an effecting sound solution.

**3-5/8" StudRite® (18mil) 24" O.C.**

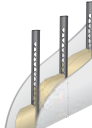
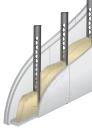
**STC Rating**

 <p>Wall Type A</p>	<ul style="list-style-type: none"> <li>• Fiberglass insulation</li> <li>• RC-Max resilient channel 1 side</li> <li>• 1 layer of 5/8" type X GWB, each side</li> </ul>	<p><b>52</b></p> <p>TR: 2015113</p>
 <p>Wall Type B</p>	<ul style="list-style-type: none"> <li>• Fiberglass insulation</li> <li>• 1 layer of 5/8" type X GWB, each side</li> </ul>	<p><b>44</b></p> <p>TR: 2016028</p>
 <p>Wall Type C</p>	<ul style="list-style-type: none"> <li>• Fiberglass insulation</li> <li>• RC-Max resilient channel 1 side</li> <li>• 2 layers of 5/8" type X GWB, each side</li> </ul>	<p><b>61</b></p> <p>TR: 2015114</p>

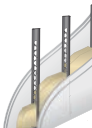
**3-5/8" StudRite® (18mil) 16" O.C.**

 <p>Wall Type A</p>	<ul style="list-style-type: none"> <li>• Fiberglass insulation</li> <li>• RC-Max resilient channel, 1 side</li> <li>• 1 layer 5/8" type X GWB, each side</li> </ul>	<p><b>52</b></p> <p>TR: 2015115</p>
 <p>Wall Type B</p>	<ul style="list-style-type: none"> <li>• Fiberglass insulation</li> <li>• 1 layer of 5/8" type X GWB, each side</li> </ul>	<p><b>47</b></p> <p>TR: 2016029</p>
 <p>Wall Type E</p>	<ul style="list-style-type: none"> <li>• Fiberglass insulation</li> <li>• 2 layers of 5/8" type X GWB, each side</li> </ul>	<p><b>54</b></p> <p>TR: 2016030</p>

**3-5/8" StudRite® (30mil) 16" O.C.**

 <p>Wall Type B</p>	<ul style="list-style-type: none"> <li>• Fiberglass insulation</li> <li>• 1 layer of 5/8" type X GWB, each side</li> </ul>	<p><b>40</b></p> <p>TR: 2015118</p>
 <p>Wall Type D</p>	<ul style="list-style-type: none"> <li>• Fiberglass insulation</li> <li>• 1 layer of 5/8" type X GWB, one side</li> <li>• 2 layers of 5/8" type X GWB, other side</li> </ul>	<p><b>44</b></p> <p>TR: 2015119</p>

**6" StudRite® (54mil) 16" O.C.**

 <p>Wall Type E</p>	<ul style="list-style-type: none"> <li>• Fiberglass insulation</li> <li>• 2 layers of 5/8" type X GWB, each side</li> </ul>	<p><b>43</b></p> <p>TR: NOAL19-0110</p>
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**SoundGuard®**

SoundGuard is an acoustically decoupled steel stud. The stud is assembled in the factory using a closed cell foam isolator to create an air gap. This gap contributes to reducing sound transmission.

**Single Layer 5/8" Type X GWB 1x1 Application**

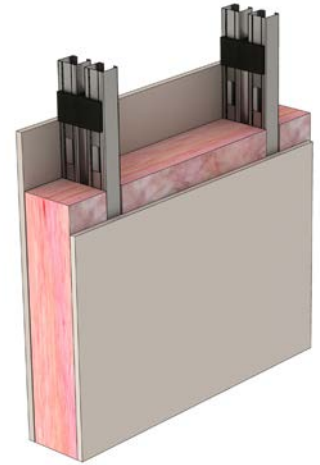
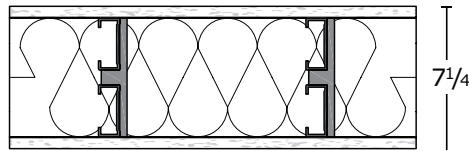
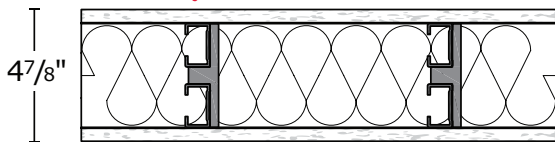
Wall Size	Application	STC Rating		Conventional Partition Range
		16" o.c. <sup>2</sup>	24" o.c. <sup>1</sup>	
3 5/8" Wall	2-1 5/8" Studs, Single GWB each side, 3-1/2" Fiberglass Batts	51	52	50-54
4" Wall	2-1 5/8" Studs, Single GWB each side, 3-1/2" Fiberglass Batts	51	52	
6" Wall	2-2 1/2" Studs, Single GWB each side, 6-1/2" Fiberglass Batts	53	52	

1. Based on 4" Wall Testing

2. Based on 19mil Design Thickness

3 5/8" Wall with 1x1 Application

6" Wall with 1x1 Application



**Unbalanced 5/8" Type X GWB 2x1 Application**

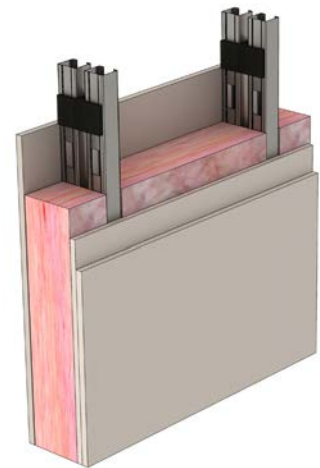
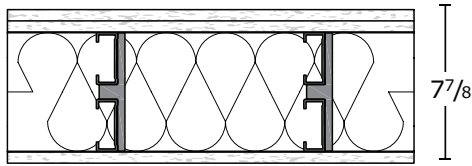
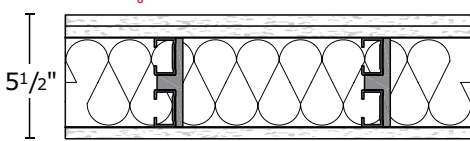
Wall Size	Application	STC Rating		Conventional Partition Range
		16" o.c. <sup>2</sup>	24" o.c. <sup>1</sup>	
3 5/8" Wall	2-1 5/8" Studs, Single GWB one side, Double GWB other side, 3-1/2" Batts Fiberglass	54	57	55-59
4" Wall	2-1 5/8" Studs, Single GWB one side, Double GWB other side, 3-1/2" Batts Fiberglass	54	57	
6" Wall	2-2 1/2" Studs, Single GWB one side, Double GWB other side, 6-1/2" Fiberglass Batts	56	57	

1. Based on 4" Wall Testing

2. Based on 19mil Design Thickness

3 5/8" Wall with 2x1 Application

6" Wall with 2x1 Application



**Double Layer 5/8" Type X GWB 2x2 Application**

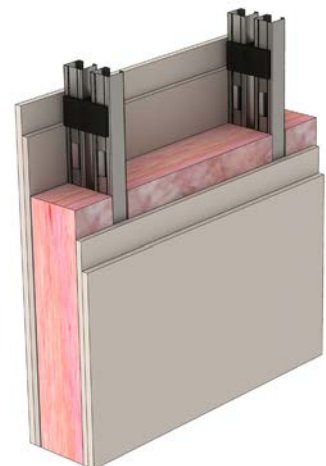
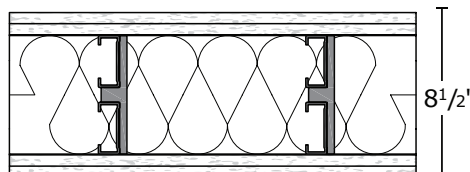
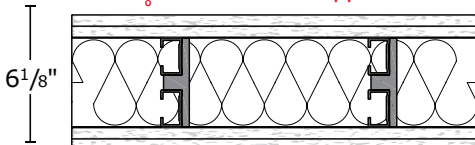
Wall Size	Application	STC Rating		Conventional Partition Range
		16" o.c. <sup>2</sup>	24" o.c. <sup>1</sup>	
3 5/8" Wall	2-1 5/8" Studs, Double GWB each side, 3-1/2" Fiberglass Batts	57	60	60-64
4" Wall	2-1 5/8" Studs, Double GWB each side, 3-1/2" Fiberglass Batts	57	60	
6" Wall	2-2 1/2" Studs, Double GWB each side, 6-1/2" Fiberglass Batts	60	60	

1. Based on 4" Wall Testing

2. Based on 19mil Design Thickness

3 5/8" Wall with 2x2 Application

6" Wall with 2x2 Application



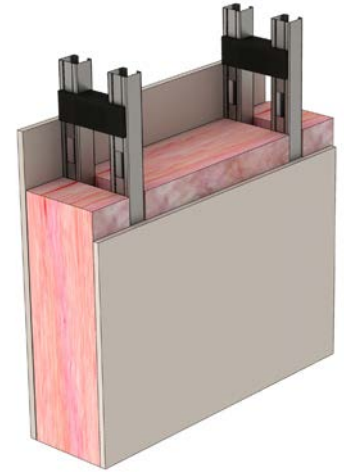
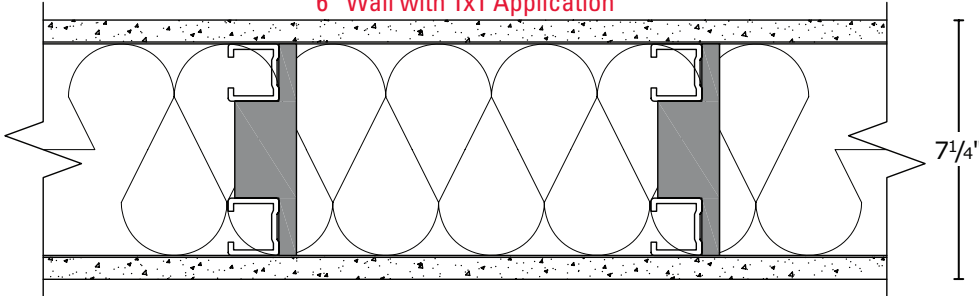
## SoundGuard® Plumbing Wall

SoundGuard Plumbing Wall is an acoustically decoupled steel stud. The stud is assembled in the factory using a closed cell foam isolator to create a large air gap. This gap contributes to reducing sound transmission and is large enough to accommodate a 2-3/4" pipe.

### Single Layer 5/8" Type X GWB 1x1 Application

Wall Size	Application	STC Rating 16" o.c. <sup>2</sup>	Conventional Partition Range
6" Plumbing	2 - 1 5/8" Studs, Single GWB each side, R-13 Insulation, 2 3/4" cavity	<b>53</b>	50-54

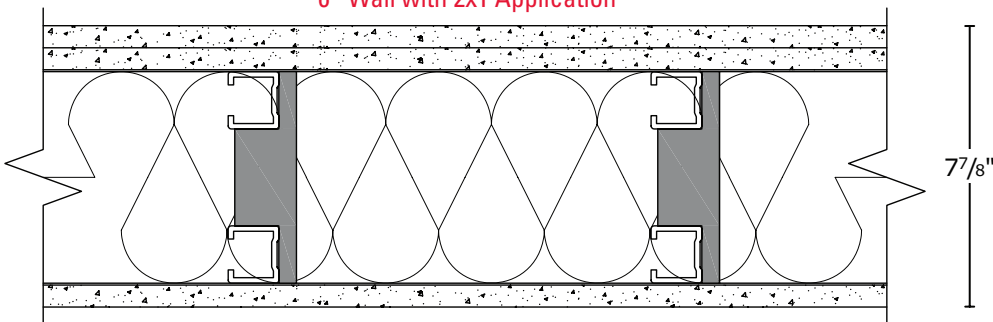
6" Wall with 1x1 Application



### Unbalanced 5/8" Type X GWB 2x1 Application

Wall Size	Application	STC Rating 16" o.c. <sup>2</sup>	Conventional Partition Range
6" Plumbing	2 - 1 5/8" Studs, Single GWB one side, Double GWB other side, R-13 Insulation, 2 3/4" cavity	<b>56</b>	55-59

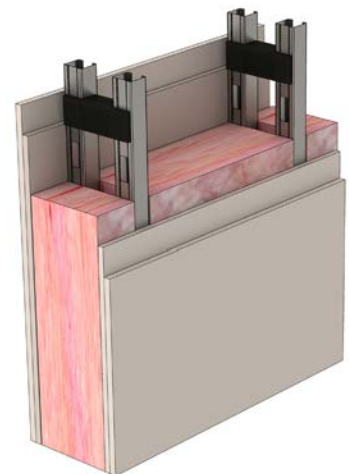
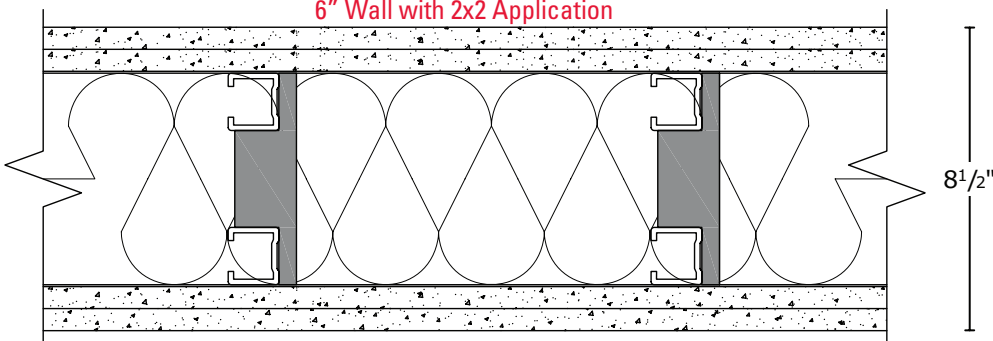
6" Wall with 2x1 Application



### Double Layer 5/8" Type X GWB 2x2 Application

Wall Size	Application	STC Rating 16" o.c. <sup>2</sup>	Conventional Partition Range
6" Plumbing	2 - 1 5/8" Studs, Double GWB each side, R-13 Insulation, 2 3/4" cavity	<b>60</b>	60-64

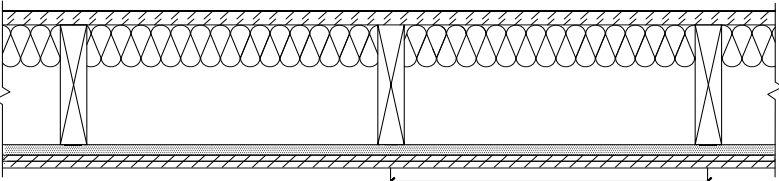
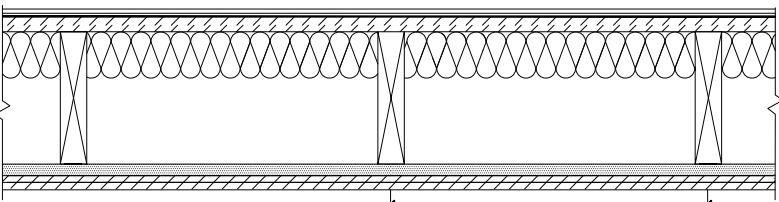
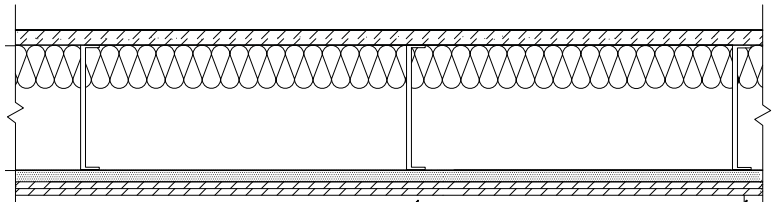
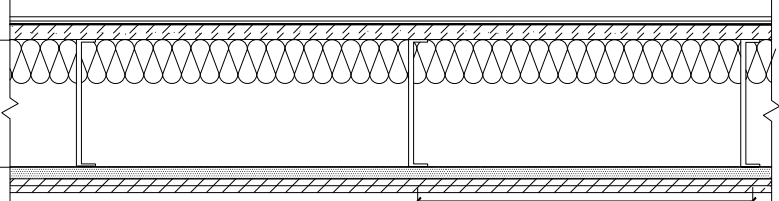
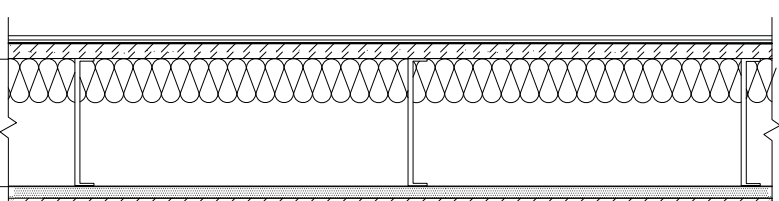
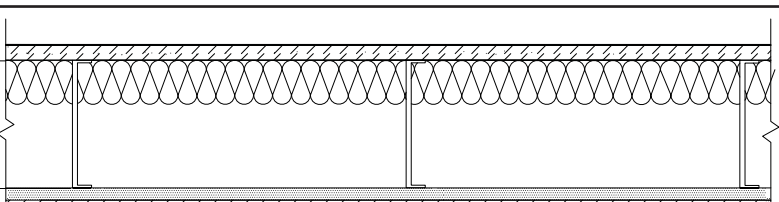
6" Wall with 2x2 Application





**Sure-Board® Floor**

Sure-Board Floor is a composite underlayment floor sheathing utilizing a structural 3/4" substrate laminated to 33 mil steel sheet. The floor sheathing offers high load values and is tested in multiple configurations for sound transmission.

Floor/Ceiling Assemblies	Descriptions	STC/IIC Rating
 <p style="text-align: center;">16" OC</p>	<ul style="list-style-type: none"> <li>• 3/4" Sureboard 200S</li> <li>• 1 5/8" Self-piercing screws at 6'-0" o.c.</li> <li>• 6 1/4" R19 Fiberglass Insulation</li> <li>• 2x10" WOOD JOIST</li> <li>• RC1 at 24" o.c.</li> <li>• 2 layers 5/8" Type C Gypsum Wallboard</li> </ul>	<p><b>60/47</b></p> <p style="text-align: right;">OL15-1018</p>
 <p style="text-align: center;">16" OC</p>	<ul style="list-style-type: none"> <li>• 3/4" Carpet</li> <li>• 1/2" Carpet Pad</li> <li>• 3/4" Sureboard 200S</li> <li>• 1 5/8" Self-piercing screws at 6'-0" o.c.</li> <li>• 6 1/4" R19 Fiberglass Insulation</li> <li>• 2x10" WOOD JOIST</li> <li>• RC1 at 24" o.c.</li> <li>• 2 layers 5/8" Type C Gypsum Wallboard</li> </ul>	<p><b>61/74</b></p> <p style="text-align: right;">OL15-1019</p>
 <p style="text-align: center;">24" OC</p>	<ul style="list-style-type: none"> <li>• 3/4" Sureboard 200S</li> <li>• 1 5/8" Self-piercing screws at 6'-0" o.c.</li> <li>• 6 1/4" R19 Fiberglass Insulation</li> <li>• 10" 16ga. Steel Joist</li> <li>• RC1 at 24" o.c.</li> <li>• 2 layers 5/8" Type C Gypsum Wallboard</li> </ul>	<p><b>61/41</b></p> <p style="text-align: right;">OL16-0201</p>
 <p style="text-align: center;">24" OC</p>	<ul style="list-style-type: none"> <li>• 3/4" Carpet</li> <li>• 1/2" Carpet Pad</li> <li>• 3/4" Sureboard 200S</li> <li>• 1 5/8" Self-piercing screws at 6'-0" o.c.</li> <li>• 6 1/4" R19 Fiberglass Insulation</li> <li>• 10" 16ga. Steel Joist</li> <li>• RC1 at 24" o.c.</li> <li>• 2 layers 5/8" Type C Gypsum Wallboard</li> </ul>	<p><b>61/78</b></p> <p style="text-align: right;">OL16-0202</p>
 <p style="text-align: center;">24" OC</p>	<ul style="list-style-type: none"> <li>• 3/4" Carpet</li> <li>• 1/2" Carpet Pad</li> <li>• 3/4" Sureboard 200S</li> <li>• 1 5/8" Self-piercing screws at 6'-0" o.c.</li> <li>• 6 1/4" R19 Fiberglass Insulation</li> <li>• 10" 16ga. Steel Joist</li> <li>• RC1 at 24" o.c.</li> <li>• 1 layer 5/8" Type C Gypsum Wallboard</li> </ul>	<p><b>59/74</b></p> <p style="text-align: right;">OL16-0203</p>
 <p style="text-align: center;">24" OC</p>	<ul style="list-style-type: none"> <li>• 3/4" Sureboard 200S</li> <li>• 1 5/8" Self-piercing screws at 6'-0" o.c.</li> <li>• 6 1/4" R19 Fiberglass Insulation</li> <li>• 10" 16ga. Steel joist</li> <li>• RC1 at 24" o.c.</li> <li>• 1 layer 5/8" Type C Gypsum Wallboard</li> </ul>	<p><b>58/35</b></p> <p style="text-align: right;">OL16-0204</p>

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Floor/Ceiling Assemblies	Descriptions	STC/IIC Rating
	<ul style="list-style-type: none"> <li>• 3/4" Sureboard 200S</li> <li>• 1 5/8" Self-piercing screws at 6'-0" o.c.</li> <li>• 6 1/4" R19 Fiberglass Insulation</li> <li>• 10" 16ga. Steel Joist</li> <li>• RC1 at 24" o.c.</li> <li>• 5/8" Type C Gypsum Wallboard</li> </ul>	<p><b>57/31</b></p> <p>OL16-0205</p>
	<ul style="list-style-type: none"> <li>• 3/4" Carpet</li> <li>• 1/2" Carpet Pad</li> <li>• 3/4" Sureboard 200S</li> <li>• 1 5/8" Self-piercing screws at 6'-0" o.c.</li> <li>• 6 1/4" R19 Fiberglass Insulation</li> <li>• 10" 16ga. Steel Joist</li> <li>• RC1 at 24" o.c.</li> <li>• 5/8" Type C Gypsum Wallboard</li> </ul>	<p><b>58/74</b></p> <p>OL16-0206</p>
	<ul style="list-style-type: none"> <li>• 3/4" Carpet</li> <li>• 1/2" Carpet Pad</li> <li>• 3/4" Sureboard 200S</li> <li>• 1 5/8" Self-piercing screws at 6'-0" o.c.</li> <li>• 6 1/4" R19 Fiberglass Insulation</li> <li>• 10" 16ga. Steel Joist</li> <li>• RC1 at 24" o.c.</li> <li>• 2 layers 5/8" Type C Gypsum Wallboard</li> </ul>	<p><b>61/79</b></p> <p>OL16-0207</p>
	<ul style="list-style-type: none"> <li>• 3/4" Sureboard 200S</li> <li>• 1 5/8" Self-piercing screws at 6'-0" o.c.</li> <li>• 6 1/4" R19 Fiberglass Insulation</li> <li>• 10" 16ga. Steel Joist</li> <li>• RC1 at 24" o.c.</li> <li>• 2 layers 5/8" Type C Gypsum Wallboard</li> </ul>	<p><b>60/38</b></p> <p>OL16-0208</p>
	<ul style="list-style-type: none"> <li>• 1" Maxxon Gyp-Crete on</li> <li>• 1/4" Maxxon Axoustic-Mat II</li> <li>• 3/4" Sureboard 200S</li> <li>• 1 5/8" Self-piercing screws at 6'-0" o.c.</li> <li>• 6 1/4" R19 Fiberglass Insulation</li> <li>• 10" 16ga. Steel Joist</li> <li>• RC1 at 24" o.c.</li> <li>• 2 layers 5/8" Type C Gypsum Wallboard</li> </ul>	<p><b>63/51</b></p> <p>OL16-0301</p>
	<ul style="list-style-type: none"> <li>• 3/4" Carpet</li> <li>• 1/2" Carpet Pad</li> <li>• 1" Maxxon Gyp-Crete on</li> <li>• 1/4" Maxxon Axoustic-Mat II</li> <li>• 3/4" Sureboard 200S</li> <li>• 1 5/8" Self-piercing screws at 6'-0" o.c.</li> <li>• 6 1/4" R19 Fiberglass Insulation</li> <li>• 10" 16ga. Steel joist</li> <li>• RC1 at 24" o.c.</li> <li>• 2 layers 5/8" Type C Gypsum Wallboard</li> </ul>	<p><b>64/83</b></p> <p>OL16-0302</p>

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**Sure-Board® Wall**

Sure-Board Wall is a shearwall sheathing used to resist lateral loads in a structure. Many shearwalls are not tested for sound, but Sure-Board has both shear values and sound ratings, providing a complete design solution.

**Assemblies**

**Descriptions**

**STC Rating**

	<ul style="list-style-type: none"> <li>• 2x4 wood studs @ 16" o.c.</li> <li>• Single 2x4 sill &amp; double 2x4 head</li> <li>• 5/8" SureBoard Series 200 vertically one side only</li> <li>• 2 1/2" #8 drywall screws @ 8" o.c. On perimeter and 12" o.c. in the field</li> </ul>	<p style="text-align: center;"><b>32</b></p> <p style="text-align: right;">TL05-387</p>
	<ul style="list-style-type: none"> <li>• 1 layer SureBoard Series 200 vertically oriented one side only</li> <li>• 1 5/8" x 3 1/2" 20 gauge steel studs @ 24" o.c.</li> </ul>	<p style="text-align: center;"><b>33</b></p> <p style="text-align: right;">TL05-391</p>
	<ul style="list-style-type: none"> <li>• 1 layer SureBoard Series 200 one side</li> <li>• R19 fiberglass insulation</li> <li>• 6" metal studs 16 gauge by 1 1/4", 16" o.c.</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p style="text-align: center;"><b>47</b></p> <p style="text-align: right;">TL06-402</p>
	<ul style="list-style-type: none"> <li>• 1 layer SureBoard Series 200 one side</li> <li>• 1 5/8" x 3 1/2" 20 gauge steel studs @ 24" o.c.</li> <li>• R19 fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p style="text-align: center;"><b>48</b></p> <p style="text-align: right;">TL05-392</p>
	<ul style="list-style-type: none"> <li>• 1 layer SureBoard Series 200 one side</li> <li>• R19 fiberglass insulation</li> <li>• 6" metal studs 16 gauge by 1 1/4" @ 16" o.c.</li> <li>• RC1 Resilient channel other side</li> <li>• 5/8" Type X</li> </ul>	<p style="text-align: center;"><b>54</b></p> <p style="text-align: right;">TL06-403</p>

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**Assemblies**

**Descriptions**

**STC Rating**

	<ul style="list-style-type: none"> <li>• 1 layer SureBoard 200W</li> <li>• 1 layer 5/8" Type X same side</li> <li>• 2x4 wood studs 16" o.c.</li> <li>• Single 2x4 sill, double 2x4 head</li> </ul>	<p style="text-align: center;"><b>34</b></p> <p style="text-align: right;">TL05-388</p>
	<ul style="list-style-type: none"> <li>• 1 layer SureBoard 200W</li> <li>• 1 layer 5/8" Type X same side</li> <li>• 2x4 wood studs spaced horizontally @ 16" o.c.</li> <li>• Single 2x4 sill and double 2x4 head</li> <li>• R13 fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p style="text-align: center;"><b>41</b></p> <p style="text-align: right;">TL05-389</p>
	<ul style="list-style-type: none"> <li>• 1 layer SureBoard 200W</li> <li>• 5/8" thick Type X drywall one side</li> <li>• 2x4 wood studs @ 16" o.c.</li> <li>• Single 2x4 sill &amp; double 2x4 head</li> <li>• 2" #8 drywall screws @ 8" o.c. On perimeter and 12" o.c. in the field</li> <li>• R13 fiberglass insulation</li> <li>• 2 layers of 5/8" Type X other side</li> </ul>	<p style="text-align: center;"><b>44</b></p> <p style="text-align: right;">TL05-390</p>
	<ul style="list-style-type: none"> <li>• 1 layer SureBoard 200W</li> <li>• 1 layer 5/8 Type X same side</li> <li>• 1 5/8" x 3 1/2" 20 gauge steel studs @ 24" o.c.</li> <li>• R19 fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p style="text-align: center;"><b>49</b></p> <p style="text-align: right;">TL05-393</p>

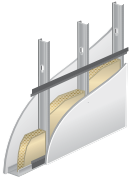
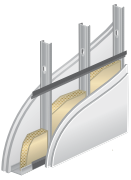
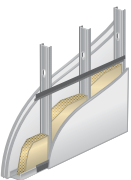
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**ViperStud®**

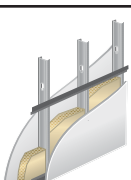
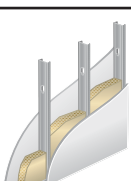
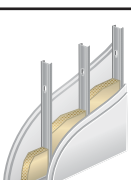
The ViperStud is a high performance engineered drywall framing stud. Made from high-strength thinner steel, ViperStud provides a lighter, more efficient system. Using less steel helps reduce noise transmission.

**3-5/8" VIPER25 @ 24" O.C.**

**STC Ratings**

 <p>Wall Type A</p>	<ul style="list-style-type: none"> <li>• Fiberglass Insulation</li> <li>• RC-Max resilient channel</li> <li>• 1 layer of 5/8" type X GWB, each side</li> </ul>	<p><b>52</b></p> <p>NOAL 18-0821</p>
 <p>Wall Type B</p>	<ul style="list-style-type: none"> <li>• Fiberglass Insulation</li> <li>• 1 layer of 5/8" type x GWB, each side</li> </ul>	<p><b>46</b></p> <p>TL08-175</p>
 <p>Wall Type C</p>	<ul style="list-style-type: none"> <li>• Fiberglass Insulation</li> <li>• RC-Max resilient channel</li> <li>• 2 layers of 5/8" type X GWB, each side</li> </ul>	<p><b>61</b></p> <p>NOAL 18-0823</p>
 <p>Wall Type F</p>	<ul style="list-style-type: none"> <li>• 1 layer of 5/8" type X GWB, each side</li> </ul>	<p><b>41</b></p> <p>TL08-119</p>
 <p>Wall Type G</p>	<ul style="list-style-type: none"> <li>• Fiberglass Insulation</li> <li>• RC-Max resilient channel</li> <li>• 1 layer 5/8" type X GWB, one side</li> <li>• 2 layers of 5/8" type X GWB, other side</li> </ul>	<p><b>57</b></p> <p>NOAL 18-0822</p>

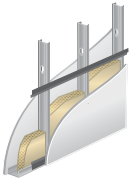
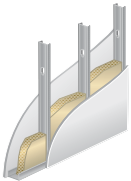
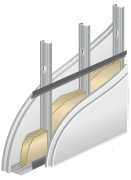
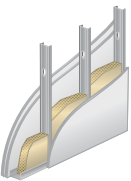
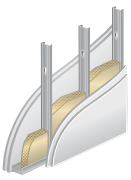
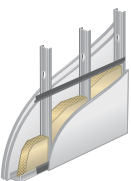
**3-5/8" VIPER25 @ 16" O.C.**

 <p>Wall Type A</p>	<ul style="list-style-type: none"> <li>• Fiberglass Insulation</li> <li>• RC-Max resilient channel</li> <li>• 1 layer 5/8" type X GWB, each side</li> </ul>	<p><b>51</b></p> <p>96748.01A</p>
 <p>Wall Type B</p>	<ul style="list-style-type: none"> <li>• Fiberglass Insulation</li> <li>• 1 layer 5/8" type X GWB, each side</li> </ul>	<p><b>47</b></p> <p>96748.01B</p>
 <p>Wall Type E</p>	<ul style="list-style-type: none"> <li>• Fiberglass Insulation</li> <li>• 2 layers of 5/8" type X GWB, each side</li> </ul>	<p><b>55</b></p> <p>NOAL 18-0825</p>



**3-5/8" VIPER20 @ 16" O.C.**

**STC Ratings**

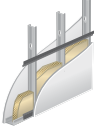

 <p>Wall Type A</p>	<ul style="list-style-type: none"> <li>• Fiberglass Insulation</li> <li>• RC-Max resilient channel</li> <li>• 1 layer of 5/8" type X GWB, each side</li> </ul>	<p><b>51</b></p> <p>NOAL 18-0826</p>
 <p>Wall Type B</p>	<ul style="list-style-type: none"> <li>• Fiberglass Insulation</li> <li>• 1 layer of 5/8" type x GWB, each side</li> </ul>	<p><b>44</b></p> <p>96749.01A</p>
 <p>Wall Type C</p>	<ul style="list-style-type: none"> <li>• Fiberglass Insulation</li> <li>• RC-Max resilient channel</li> <li>• 2 layers of 5/8" type X GWB, each side</li> </ul>	<p><b>59</b></p> <p>NOAL 18-0828</p>
 <p>Wall Type D</p>	<ul style="list-style-type: none"> <li>• Fiberglass Insulation</li> <li>• 1 layer of 5/8" type X GWB, one side</li> <li>• 2 layers of type X GWB, other side</li> </ul>	<p><b>49</b></p> <p>96749.01B</p>
 <p>Wall Type E</p>	<ul style="list-style-type: none"> <li>• Fiberglass Insulation</li> <li>• 2 layers of 5/8" type X GWB, each side</li> </ul>	<p><b>50</b></p> <p>NOAL 18-0830</p>
 <p>Wall Type G</p>	<ul style="list-style-type: none"> <li>• Fiberglass Insulation</li> <li>• RC-Max resilient channel</li> <li>• 1 layer 5/8" type X GWB, one side</li> <li>• 2 layers of 5/8" type X GWB, other side</li> </ul>	<p><b>55</b></p> <p>NOAL 18-0827</p>

**RC-MAX**

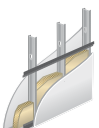
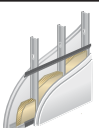
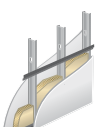
RC-MAX is used as a furring over wood or steel framed walls and ceilings. The reduced contact RC-MAX affords with the supporting member offers economical means for controlling sound transmission. For walls, resilient furring channels should be installed with the mounting flange down, except at the starter row where the mounting flange may be installed with the flange up.

**RC-MAX with 3-5/8" ViperStud®**

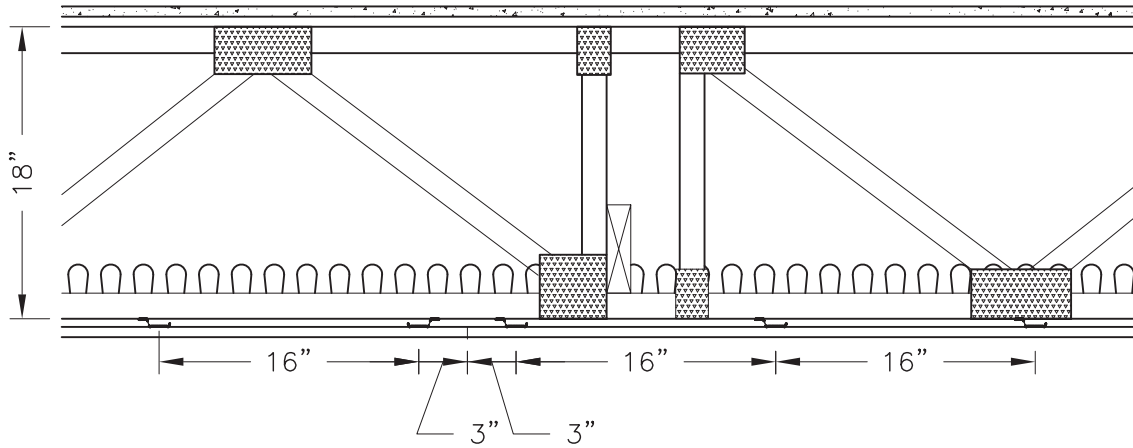
**STC Rating**

	Wall Type A	<ul style="list-style-type: none"> <li>• Viper25 24" O.C.</li> <li>• Fiberglass insulation</li> <li>• RC-Max resilient channel</li> <li>• 1 Layer of 5/8" type X GWB, each side</li> </ul>	<b>52</b>	TR:18-0821
	Wall Type C	<ul style="list-style-type: none"> <li>• Viper25 24" O.C.</li> <li>• Fiberglass insulation</li> <li>• RC-Max resilient channel</li> <li>• 2 layers of 5/8" type X GWB, each side</li> </ul>	<b>61</b>	TR:18-0823
	Wall Type G	<ul style="list-style-type: none"> <li>• Viper25 24" O.C.</li> <li>• Fiberglass insulation</li> <li>• RC-Max resilient channel</li> <li>• 1 Layer 5/8" type X GWB, one side</li> <li>• 2 Layers of 5/8" type X GWB, other side</li> </ul>	<b>57</b>	TR:18-0822
	Wall Type A	<ul style="list-style-type: none"> <li>• Viper25 16" O.C.</li> <li>• Fiberglass insulation</li> <li>• RC-Max resilient channel</li> <li>• 1 Layer 5/8" type X GWB, each side</li> </ul>	<b>51</b>	TR:96748.01A
	Wall Type A	<ul style="list-style-type: none"> <li>• Viper20 16" O.C.</li> <li>• Fiberglass insulation</li> <li>• RC-Max resilient channel</li> <li>• 1 Layer 5/8" type X GWB, each side</li> </ul>	<b>51</b>	TR18-0826
	Wall Type C	<ul style="list-style-type: none"> <li>• Viper20 16" O.C.</li> <li>• Fiberglass insulation</li> <li>• RC-Max resilient channel</li> <li>• 2 layers of 5/8" type X GWB, each side</li> </ul>	<b>59</b>	TR:18-0828
	Wall Type G	<ul style="list-style-type: none"> <li>• Viper20 16" O.C.</li> <li>• Fiberglass insulation</li> <li>• RC-Max resilient channel</li> <li>• 1 Layer 5/8" type X GWB, one side</li> <li>• 2 Layers of 5/8" type X GWB, other side</li> </ul>	<b>55</b>	TR:18-0827

**RC-MAX with 3-5/8" StudRite®**

	Wall Type A	<ul style="list-style-type: none"> <li>• StudRite (18 mil) 16" O.C.</li> <li>• Fiberglass insulation</li> <li>• RC-Max resilient channel</li> <li>• 1 Layer of 5/8" type X GWB, each side</li> </ul>	<b>52</b>	TR:2015115
	Wall Type C	<ul style="list-style-type: none"> <li>• StudRite (18 mil) 24" O.C.</li> <li>• Fiberglass insulation</li> <li>• RC-Max resilient channel</li> <li>• 2 layers of 5/8" type X GWB, each side</li> </ul>	<b>61</b>	TR:2015114
	Wall Type A	<ul style="list-style-type: none"> <li>• StudRite (18 mil) 24" O.C.</li> <li>• Fiberglass insulation</li> <li>• RC-Max resilient channel</li> <li>• 1 Layer 5/8" type X GWB, each side</li> </ul>	<b>52</b>	TR:2015113

### 18" Open Web Wood Truss



#### 1 HR Assembly

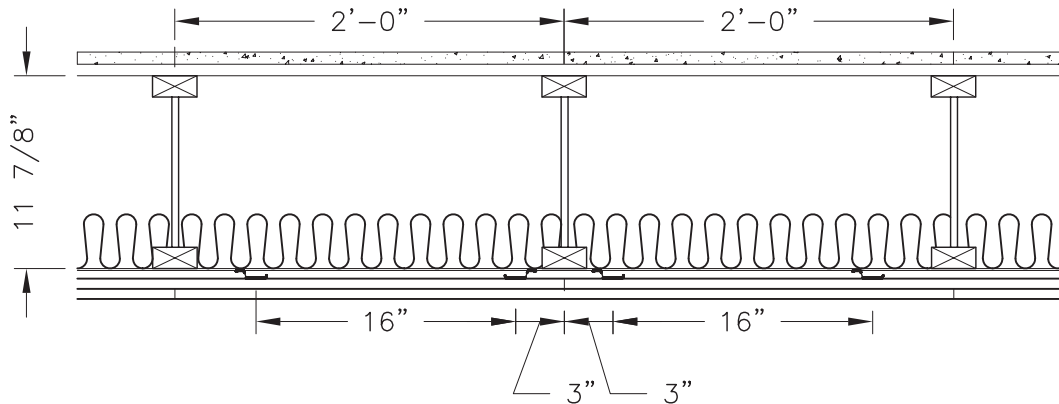
- 3/4" gypsum concrete
- 1/8" sound attenuation mat
- 23/32" wood structural panel
- 18" OWT 24" o.c.
- Insulation (see chart)
- RC-Max spaced 16" o.c.
- 1 layer 5/8" type X

\*check UL designs for specific assembly information

WITH FIBERGLASS	STC	IIC	TEST REPORTS
Bare Floor	57	48	L4816.05
Luxury Vinyl Tile	56	48	L4817.06
Engineered Wood	56	50	L4816.07

18" BLOWN-IN INSULATION	STC	IIC	TEST REPORTS
Bare Floor	59	50	L4816.09

### 11 7/8 Wood I-Joist



#### 1 HR Assembly

- 3/4" gypsum concrete
- 1/8" sound attenuation mat
- 23/32" wood structural panel
- 11-7/8" wood i-joist 24" o.c.
- 3-1/2" fiberglass insulation
- RC-Max spaced 16" o.c.
- 2 layer 5/8" type X

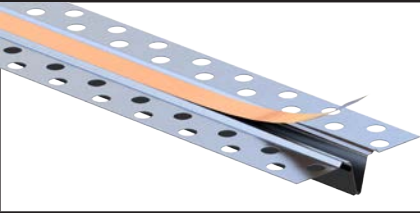

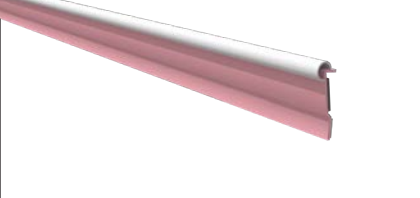
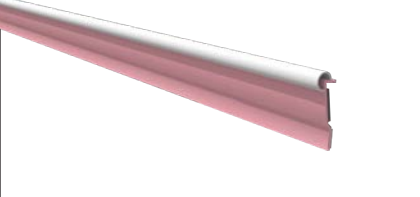
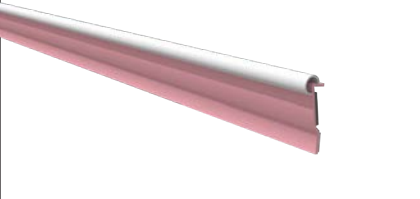
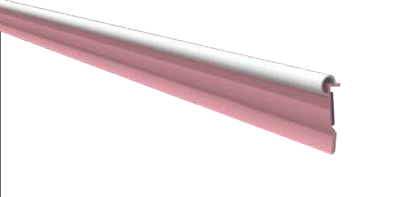
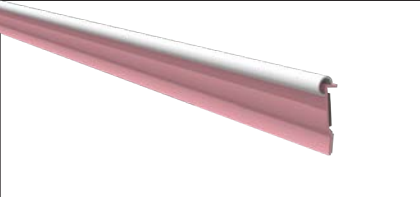
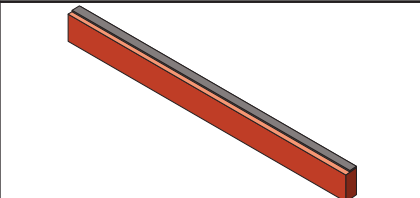
\*check UL designs for specific assembly information

WITH FIBERGLASS	STC	IIC	TEST REPORTS
Bare Floor	58	43	L4816.01
Luxury Vinyl Tile	58	51	L4816.02
Engineered Wood	58	55	L4816.03

**Sound Rated Firestopping for Building Joints**

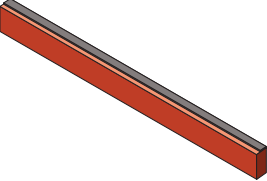
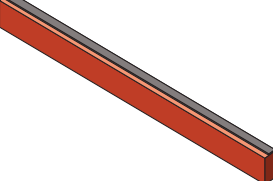
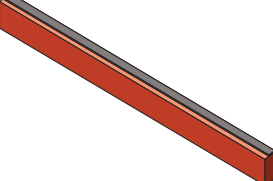
MarinoWARE offers fire rated accessories that are effective at reducing sound transmission, in addition to their fire resistive properties. These accessories offer faster, easier installation and great acoustic benefits.

**STC Ratings**

 <p>FAS093X</p>	<ul style="list-style-type: none"> <li>• 1 layer 5/8" Type X</li> <li>• 3-5/8" Viper (20EQ) Studs, 24" o.c.</li> <li>• Back to back studs @ center joint</li> <li>• FAS093X vertically at center joint</li> <li>• R13 fiberglass insulation</li> <li>• RC 1 resilient channel other side</li> <li>• 2 layers 5/8" Type X other side</li> </ul>	<p><b>57</b></p> <p>TL14-215</p>
 <p>Fire Bead</p>	<ul style="list-style-type: none"> <li>• Fire Bead at head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• 3-5/8" Viper (20EQ) Stud, 24" o.c.</li> <li>• R13 fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>50</b></p> <p>NOAL19-0116</p>
 <p>Fire Gasket</p>	<ul style="list-style-type: none"> <li>• Fire Gasket at head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• 3-5/8" Viper (20EQ) Studs, 24" o.c.</li> <li>• R13 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>51</b></p> <p>NOAL18-0762</p>
 <p>Fire Gasket</p>	<ul style="list-style-type: none"> <li>• Fire Gasket at head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• 3-5/8" Viper (20EQ) Studs, 24" o.c.</li> <li>• R13 Fiberglass insulation</li> <li>• 2 layers 5/8" Type X other side</li> </ul>	<p><b>55</b></p> <p>NOAL18-0763</p>
 <p>Fire Gasket</p>	<ul style="list-style-type: none"> <li>• Fire Gasket at head-of-wall, both sides</li> <li>• 1 layer 5/8" Type X</li> <li>• Double row 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R13 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>58</b></p> <p>NOAL18-0764</p>
 <p>Fire Gasket</p>	<ul style="list-style-type: none"> <li>• Fire Gasket at head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• Double row 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R13 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>63</b></p> <p>NOAL18-0765</p>
 <p>Fire Gasket</p>	<ul style="list-style-type: none"> <li>• Fire Gasket at head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• Double row 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R13 Fiberglass insulation</li> <li>• 2 layers 5/8" Type X other side</li> </ul>	<p><b>67</b></p> <p>NOAL18-0766</p>
 <p>HotRod Type X</p>	<ul style="list-style-type: none"> <li>• HotRod Type X at head-of-wall one side only</li> <li>• 2 layers 5/8" Type X</li> <li>• 3-5/8" Viper (20EQ) studs, 24" o.c.</li> <li>• R13 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>51</b></p> <p>OL15-1012</p>

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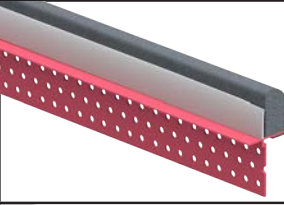
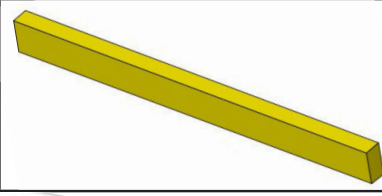
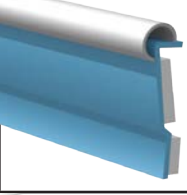
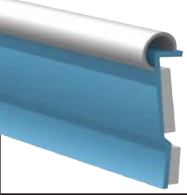
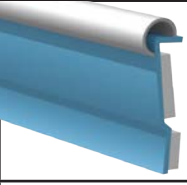
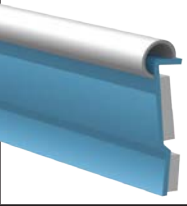
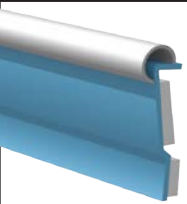
**STC Ratings**

 <p>HotRod Type X</p>	<ul style="list-style-type: none"> <li>• HotRod Type X, at head-of-wall one side</li> <li>• Backer rod at head-of-wall other side</li> <li>• 1 layer 5/8" Type X</li> <li>• 3-5/8" Viper (20EQ) studs, 24" o.c.</li> <li>• R13 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>54</b></p> <p>OL15-1017</p>
 <p>HotRod Type X</p>	<ul style="list-style-type: none"> <li>• HotRod Type X at head-of-wall, both sides</li> <li>• 1 layer 5/8" Type X</li> <li>• Double row 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R11 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>60</b></p> <p>TL17-430</p>
 <p>HotRod Type X</p>	<ul style="list-style-type: none"> <li>• HotRod Type X at head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• 3-5/8" Viper (20EQ) Studs, 16" o.c.</li> <li>• R11 Fiberglass insulation</li> <li>• 2 layers 5/8" Type X other side</li> </ul>	<p><b>51</b></p> <p>TL17-418</p>
 <p>HotRod Type X</p>	<ul style="list-style-type: none"> <li>• HotRod Type X at head-of-wall, both sides</li> <li>• 1 layer 5/8" Type X</li> <li>• Double row 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R11 Fiberglass insulation</li> <li>• 2 layers 5/8" Type X other side</li> </ul>	<p><b>63</b></p> <p>TL17-433</p>
 <p>HotRod Type X</p>	<ul style="list-style-type: none"> <li>• HotRod Type X at head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• Double row 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R13 Fiberglass insulation</li> <li>• 2 layers 5/8" Type X other side</li> </ul>	<p><b>68</b></p> <p>TL14-285</p>
 <p>HotRod XL</p>	<ul style="list-style-type: none"> <li>• HotRod XL at head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• 3-5/8" Viper (20EQ) Studs, 24" o.c.</li> <li>• R13 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>50</b></p> <p>NOAL19-0117</p>
 <p>HotRod XL</p>	<ul style="list-style-type: none"> <li>• HotRod XL at head-of-wall, both sides</li> <li>• 1 layer 5/8" Type X</li> <li>• 3-5/8" Viper (20EQ) Studs, 24" o.c.</li> <li>• R13 Fiberglass insulation</li> <li>• RC1 resilient channel other side</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>52</b></p> <p>NOAL19-1039</p>
 <p>HotRod XL</p>	<ul style="list-style-type: none"> <li>• HotRod XL at head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• 3-5/8" Viper (20EQ) Studs, 24" o.c.</li> <li>• R13 Fiberglass insulation</li> <li>• RC1 resilient channel other side</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>55</b></p> <p>NOAL19-1040</p>

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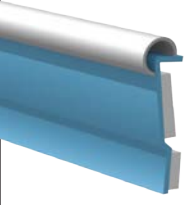
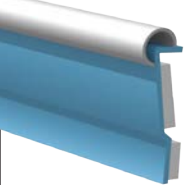
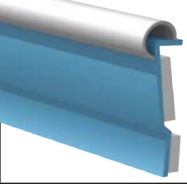
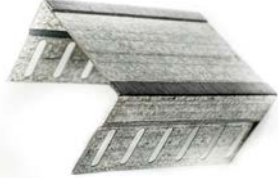





**STC Ratings**

 <p>HotRod XL</p>	<ul style="list-style-type: none"> <li>• HotRod XL at head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• Double row 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R13 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>63</b></p> <p>NOAL19-1048</p>
 <p>HotRod XL</p>	<ul style="list-style-type: none"> <li>• HotRod XL at head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• Double row 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R13 Fiberglass insulation</li> <li>• 2 layers 5/8" Type X other side</li> </ul>	<p><b>68</b></p> <p>NOAL19-1049</p>
 <p>Smoke &amp; Sound Stop</p>	<ul style="list-style-type: none"> <li>• Smoke &amp; Sound Stop, both sides</li> <li>• 1 layer 5/8" Type X</li> <li>• Double row- 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R13 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>60</b></p> <p>TL17-431</p>
 <p>Sound Gasket</p>	<ul style="list-style-type: none"> <li>• Sound Gasket around perimeter both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• 3-5/8" Viper (20EQ) Studs, 24" o.c.</li> <li>• R13 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>50</b></p> <p>NOAL19-1043</p>
 <p>Sound Gasket</p>	<ul style="list-style-type: none"> <li>• Sound Gasket Head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• 3-5/8" Viper (20EQ) Studs, 24" o.c.</li> <li>• R13 Fiberglass insulation</li> <li>• Type X other side 1 layer 5/8"</li> </ul>	<p><b>51</b></p> <p>NOAL18-0762S</p>
 <p>Sound Gasket</p>	<ul style="list-style-type: none"> <li>• Sound Gasket at head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• 3-5/8" Viper (20EQ) Studs, 24" o.c.</li> <li>• R13 Fiberglass insulation</li> <li>• 2 layers 5/8" Type X other side</li> </ul>	<p><b>55</b></p> <p>NOAL18-0763S</p>
 <p>Sound Gasket</p>	<ul style="list-style-type: none"> <li>• Sound Gasket at head-of-wall, both sides</li> <li>• 1 layer 5/8" Type X</li> <li>• Double row 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R13 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>58</b></p> <p>NOAL18-0764S</p>
 <p>Sound Gasket</p>	<ul style="list-style-type: none"> <li>• Sound Gasket around perimeter, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• Double row 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R13 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>62</b></p> <p>NOAL19-1045</p>

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**STC Ratings**

 <p>Sound Gasket</p>	<ul style="list-style-type: none"> <li>• Sound Gasket at head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• Double row- 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R13 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>63</b></p> <p>NOAL18-0765S</p>
 <p>Sound Gasket</p>	<ul style="list-style-type: none"> <li>• Sound Gasket around perimeter, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• Double row 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R13 Fiberglass insulation</li> <li>• 2 layers 5/8" Type X other side</li> </ul>	<p><b>66</b></p> <p>NOAL19-1046</p>
 <p>Sound Gasket</p>	<ul style="list-style-type: none"> <li>• Sound Gasket at head-of-wall, both sides</li> <li>• 2 layers 5/8" Type X</li> <li>• Double row 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R13 Fiberglass insulation</li> <li>• 2 layers 5/8" Type X other side</li> </ul>	<p><b>67</b></p> <p>NOAL19-0766S</p>
 <p>FAS Track 1000</p>	<ul style="list-style-type: none"> <li>• FAS Track 1000 at head-of-wall</li> <li>• 2 layers 5/8" Type X</li> <li>• 3-5/8" Viper (20EQ) Studs, 24" o.c.</li> <li>• R13 Fiberglass Insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>50</b></p> <p>OL15-1013</p>
 <p>FAS Track 1000</p>	<ul style="list-style-type: none"> <li>• FAS Track 1000 at head-of-wall</li> <li>• 1 layer 5/8" Type X</li> <li>• RC1 resilient channel</li> <li>• 3-5/8" 20 GA Studs, 24" o.c.</li> <li>• R13 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>52</b></p> <p>TL08-696</p>
 <p>FAS Track 1000</p>	<ul style="list-style-type: none"> <li>• FAS Track 1000 at head-of-wall</li> <li>• 1 layer 5/8" Type X</li> <li>• Double row 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R13 Fiberglass insulation</li> <li>• 1 layer 5/8" Type X other side</li> </ul>	<p><b>60</b></p> <p>TL12-475</p>
 <p>FAS Track 1000</p>	<ul style="list-style-type: none"> <li>• FAS Track 1000 at head-of-wall</li> <li>• 1 layer 5/8" Type X</li> <li>• Double row 2-1/2" Viper (20EQ) studs (1" air space) 24" o.c.</li> <li>• Double layer R13 Fiberglass insulation</li> <li>• 2 layers 5/8" Type X other side</li> </ul>	<p><b>63</b></p> <p>TL12-476</p>

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**GenieClip®**

GenieClip is an engineered sound clip designed for superior acoustical performance in walls and ceilings. It is attached to 25 gauge furring channel, which is used to attach gypsum panel products.

**Floor-Ceiling Assemblies**

Test Report Number	Ceiling Type	Structure	Finish Floor	Underlayment	Subfloor	STC Rating (ASTM E90)	IIC Rating (ASTM E492)
G0535.09	GenieClip® RST, 5/8" GWB Type C	Open Web Truss	Vinyl Plank	GenieMat RST02PS	3/4" Gypsum, 3/4" OSB	<b>63</b>	<b>59</b>
G1707.07	GenieClip® RST, 5/8" GWB Type C	Open Web Truss	Porcelain Tile	GenieMat RST02PS	3/4" Gypsum, 3/4" OSB	<b>62</b>	<b>54</b>
G1707.08	GenieClip® RST, 5/8" GWB Type C	Open Web Truss	Wood	GenieMat FF06	3/4" Gypsum, 3/4" OSB	<b>62</b>	<b>60</b>
E5958.16	GenieClip® RST, 5/8" GWB Type C	Open Web Truss	Vinyl Plank	GenieMat RST05	3/4" OSB	<b>60</b>	<b>55</b>
E5958.17	GenieClip® RST, 5/8" GWB Type C	Open Web Truss	Vinyl Plank	None	3/4" OSB	<b>60</b>	<b>51</b>
F4832.12	GenieClip RST, 2x 1/2" GWB Type C	Engineered Joist	None	None	3/4" Gypsum, GenieMat FF25, 3/4" OSB	<b>61</b>	<b>59</b>
F4832.14	GenieClip RST, 2x 1/2" GWB Type C	Engineered Joist	Wood	GenieMat RST02	1/2" Plywood, 3/4" OSB	<b>58</b>	<b>61</b>
F4832.18	GenieClip RST, 2x 1/2" GWB Type C	Engineered Joist	Porcelain Tile	GenieMat RST02	1/2" Plywood, 3/4" OSB	<b>59</b>	<b>55</b>
F5500.03	GenieClip RST, 2x 1/2" GWB Type C	Engineered Joist	Vinyl Plank	GenieMat RST02	1/2" Plywood, 3/4" OSB	<b>61</b>	<b>60</b>
F5500.05	GenieClip RST, 2x 1/2" GWB Type C	Engineered Joist	Carpet	None	1/2" Plywood, 3/4" OSB	<b>61</b>	<b>82</b>
5013136 7013208	GenieClip RST, 1/2" GWB Type C	2x10 Solid Wood Joist	Ceramic Tile	GenieMat RST02	5/8" Plywood, 1/2" Plywood	<b>58</b>	<b>52</b>
5013143 7013216	GenieClip RST, 1/2" GWB Type C	2x10 Solid Wood Joist	Vinyl Plank	GenieMat RST02	5/8" Plywood, 1/2" Plywood	<b>55</b>	<b>50</b>
5013119 7013183	GenieClip RST Retrofit	2x10 Solid Wood Joist	Ceramic Tile	GenieMat RST02	5/8" Plywood, 1/2" Plywood	<b>60</b>	<b>50</b>
5014139 7014190	GenieClip RST, 1/2" GWB Type C	2x10 Solid Wood Joist	None	GenieMat RST02	3/4" Gypsum, GenieMat FF06, 5/8" Plywood	<b>59</b>	<b>52</b>

\* GenieClip® data re-published with permission from Pliteq®

## Floor-Ceiling Assemblies

Test Report Number	Ceiling Type	Structure	Finish Floor	Underlayment	Subfloor	STC Rating (ASTM E90)	IIC Rating (ASTM E492)
E5958.05	6" Drop Ceiling, GenieClip® LB, 5/8" GWB Type X	7" CLT	None	None	2x 11/16" AdvanTech Wood Subfloor, GenieMat® FF25	<b>61</b>	<b>55</b>
E5958.07	12" Drop Ceiling, GenieClip LB, 5/8" GWB Type X	7" CLT	Vinyl Plank	GenieMat RST05	None	<b>58</b>	<b>58</b>
F2761.08	GenieClip RST, 5/8" GWB Type C	7" CLT	Wood	GenieMat RST02	None	<b>54</b>	<b>50</b>
F2761.09	GenieClip RST, 5/8" GWB Type C	7" CLT	Porcelain Tile	GenieMat RST12	None	<b>55</b>	<b>51</b>
F3052.11	1/2" Gypsum, GenieClip RST, 5/8" GWB Type X	16" Insulated Concrete Form	None	None	None	<b>64</b>	<b>55</b>
F3052.12	1/2" Gypsum, GenieClip RST, 5/8" GWB Type X	16" Insulated Concrete Form	Wood	GenieMat RST05	1 1/4" Gypsum, 9/16" Steel Deck	<b>63</b>	<b>65</b>
F2761.04	GenieClip RST, 5/8" GWB Type C	10" Steel Joist	None	3/8" Sound Mat	3/4" Concrete Panel	<b>59</b>	<b>52</b>
F5689.18	GenieClip RST, 2x 5/8" GWB Type C	10" Steel Joist	Porcelain Tile	GenieMat RST12	None	<b>62</b>	<b>50</b>
F5689.20	GenieClip RST, 2x 5/8" GWB Type C	10" Steel Joist	Vinyl Plank	GenieMat RST02	None	<b>60</b>	<b>52</b>
F5689.05	GenieClip RST, 5/8" GWB Type C	4" Composite Deck	Vinyl Plank	GenieMat RST02	None	<b>54</b>	<b>55</b>
F5689.06	GenieClip RST, 5/8" GWB Type C	4" Composite Deck	Wood	GenieMat RST05	None	<b>55</b>	<b>54</b>
F0223.05	GenieClip RST, 5/8" GWB Type C	8" Hollow Core Plank	Vinyl Plank	GenieMat RST05	None	<b>60</b>	<b>58</b>
F0223.06	GenieClip RST, 5/8" GWB Type C	8" Hollow Core Plank	None	None	None	<b>60</b>	<b>55</b>
F0223.08	GenieClip RST, 5/8" GWB Type C	8" Hollow Core Plank	Porcelain Tile	GenieMat RST05	None	<b>58</b>	<b>59</b>
F1751.01	12" Drop Ceiling, 5/8" GWB Type C	6" Concrete Slab	None	None	None	<b>63</b>	<b>42</b>
F1751.02	12" Drop Ceiling, GenieClip C3, 5/8" GWB Type C	6" Concrete Slab	None	None	None	<b>63</b>	<b>52</b>
F1751.05	12" Drop Ceiling, GenieClip LB, 5/8" GWB Type C	6" Concrete Slab	None	None	None	<b>64</b>	<b>53</b>
F1751.03	12" Drop Ceiling, GenieClip C3, 5/8" GWB Type C	6" Concrete Slab	Wood	GenieMat RST05	None	<b>62</b>	<b>68</b>
F1751.04	12" Drop Ceiling, GenieClip LB, 5/8" GWB Type C	6" Concrete Slab	Wood	GenieMat RST05	None	<b>63</b>	<b>69</b>
F9365.07	6" Drop Ceiling, GenieClip LB, 5/8" GWB Type C	6" Concrete Slab	Vinyl Plank	GenieMat RST02PS	None	<b>62</b>	<b>60</b>

\* GenieClip® data re-published with permission from Pliteq®

## Steel Stud Wall Assemblies

Test Report Number	Product	Steel Stud Wall Structure	GWB Layers (5/8" Type X)	TL @80 Hz (dB)	TL @100 Hz (dB)	STC Rating (ASTM E413)
TL07-620	GenieClip® RST	20 Ga., 3 5/8" wide spaced 24" O.C.	1x1	17	25	<b>56</b>
TL07-617	GenieClip RST	20 Ga., 3 5/8" wide spaced 24" O.C.	2x1	24	31	<b>60</b>
TL07-618	GenieClip RST	20 Ga., 3 5/8" wide spaced 24" O.C.	2x2	32	37	<b>64</b>
TL09-600	2x GenieClip RST	20 Ga., 3 5/8" wide spaced 24" O.C.	1x1	22	28	<b>59</b>
TL09-601	2x GenieClip RST	20 Ga., 3 5/8" wide spaced 24" O.C.	2x1	28	36	<b>63</b>
TL09-602	2x GenieClip RST	20 Ga., 3 5/8" wide spaced 24" O.C.	2x2	53	42	<b>66</b>

\* GenieClip® data re-published with permission from Pliteq®

## Wood Stud Assemblies

TL07-673	GenieClip RST	2x4 spaced 16" O.C.	1X1	20	27	<b>57</b>
TL07-672	GenieClip RST	2x4 spaced 16" O.C.	2x1	27	22	<b>61</b>
TL07-670	GenieClip RST	2x4 spaced 16" O.C.	2x2	31	39	<b>64</b>
TL07-644	GenieClip RST	2x4 spaced 16" O.C.	1x1 +1 layer	16	18	<b>48</b>
TL07-697	GenieClip RST	2x4 spaced 16" O.C.	2x1 +1 layer	17	24	<b>54</b>

\* GenieClip® data re-published with permission from Pliteq®

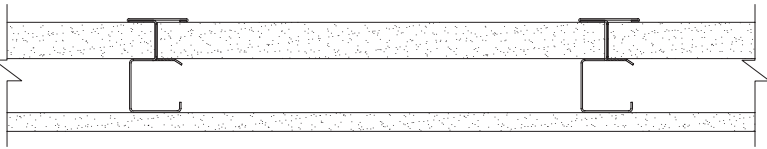


**Shaftwall**

CT studs are non-load bearing and provide fire protection for shafts, stairwells, and areas where a one-sided application is necessary.

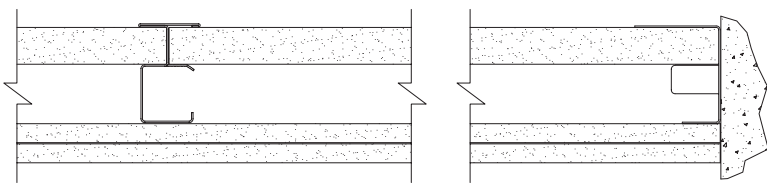
**1 Hour Shaftwall Assembly**

**STC Rating**

	<ul style="list-style-type: none"> <li>Any UL Classified 1" thick Liner Board Type X</li> <li>MarinoWARE CT Stud and Tabbed Track</li> <li>Any UL Classified of one layer of 5/8" Type X or 1/2" Type C gypsum wallboard, oriented vertically</li> </ul>	2 1/2"	<b>38/41*</b>
		4"	<b>41/47*</b>
		6"	<b>44/48*</b>

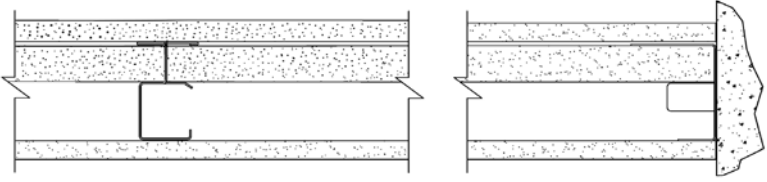
**2 Hour Shaftwall Assembly**

**STC Rating**

	<ul style="list-style-type: none"> <li>Any UL Classified 1" thick Liner Board Type X</li> <li>MarinoWARE CT Stud and Tabbed Track</li> <li>Any UL Classified of two layers of 5/8" Type X or 1/2" Type C gypsum wallboard, oriented vertically</li> </ul>	2 1/2"	<b>41/46*</b>
		4"	<b>44/49*</b>
		6"	<b>46/49*</b>

**2 Hour Stairwall Assembly**

**STC Rating**

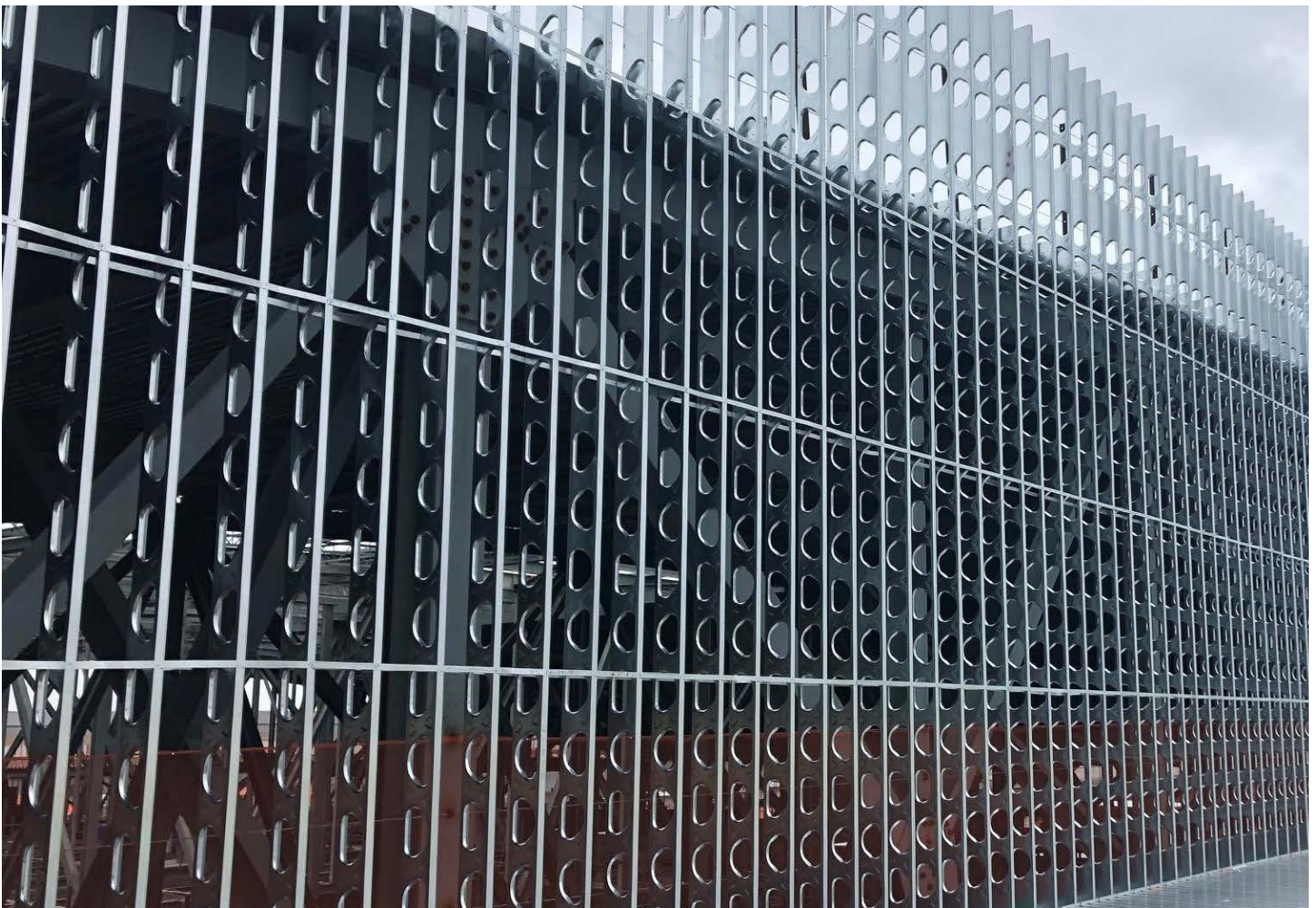
	<ul style="list-style-type: none"> <li>Any UL Classified 1" thick Liner Board Type X</li> <li>MarinoWARE CT Stud and Tabbed Track</li> <li>Any UL Classified of two layers of 5/8" Type X or 1/2" Type C gypsum wallboard, oriented vertically.</li> </ul>	2 1/2"	<b>40/45*</b>
		4"	<b>45/49*</b>
		6"	<b>45/50*</b>

\* Represents the same assembly with the addition of 1-1/2" of blanket insulation installed in the cavity.

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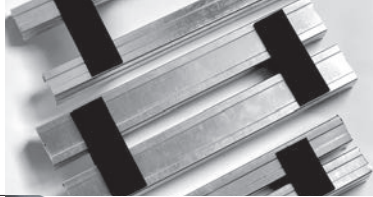


*\*Image above showcases StudRite® by MainoWARE*

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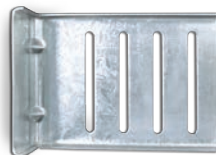
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- Offers economical means for controlling sound transmission



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- Designed to facilitate quicker, more cost-effective installation, while making proper attachment of cold formed steel members easier



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