

Acoustical Assembly Guide



National Gypsum®

The Sound Book™

These gypsum wallboard system details are intended solely as technical support incident to the sale and use of National Gypsum Company products. They may be used as a reference by architects, engineers, other design professionals, contractors, building code officials, or other competent construction industry trade personnel considering the selection, specification and use of National Gypsum Company products in these systems.

Architects, engineers, designers or contractors involved should review these details with the governing code or inspection official at the time of the job submittal to determine if there are any discrepancies with local code or regulatory requirements. In any event, they must NOT be used without a complete evaluation by the owner's design professional to verify the suitability of the system for a given application.

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These system performance details are the result of tests conducted in accordance with ASTM E90 under controlled laboratory conditions. Actual sound transmission loss of systems constructed in the field may vary from these performance details based upon many factors such as the actual field conditions, specific components used, and installation methods.

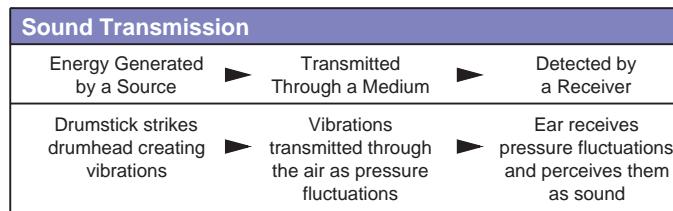
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Acoustical Terms and Concepts

Transmission of Airborne Sound

Airborne sound is acoustical energy generated by a source and transmitted by vibration through the air. The vibrations create sound pressure fluctuations that are detected by a receiver. Sound is characterized by its frequency, which determines the pitch of the sound, and by the intensity of the pressure fluctuations, which determines how loud the sound is perceived to be.



The frequency of sound refers to the number of sound pressure fluctuations or cycles that occur at a fixed point in one second. The unit of measure for frequency is the hertz (Hz), which is one cycle per second. The human auditory system is capable of detecting sound frequencies between 20 Hz and 20,000 Hz, but humans are typically most sensitive to sounds within the range of 125 Hz and 4,000 Hz. Sound frequency is perceived by humans as pitch. The lowest note on a piano has a frequency of 27.5 Hz, while the highest note on the piano is 4,186 Hz.

The intensity of sound, or loudness, is measured in decibels (dB). A quiet whisper might register at 20 dB, compared to about 60 dB for normal conversation, and 75 dB for loud singing. The decibel scale is logarithmic, not linear. A sound level change of 1 to 2 dB will be difficult to perceive while a change of 5 dB will be clearly noticeable. Sound is perceived to double in intensity for every 10 dB increase and quadruple for every 20 dB increase.

Human Sensitivity to Changes in Sound Intensity Levels	
1 dB	Generally not perceptible
3 dB	Just perceptible
5 dB	Clearly noticeable
10 dB	Twice as loud
20 dB	Four times as loud

Rating	Activity	Sound Level (dB)
Painful	Jet Engine	120+
Very Loud	Industrial Machinery	100
Loud	Stock Trading Floor	80
Moderate	Normal Speech	65
Quiet	Suburban Home	45
Very Quiet	Barely Audible	25

Sound Transmission Class

The Sound Transmission Class (STC) is a single number rating of the effectiveness of a material or construction assembly to attenuate the transmission of airborne sound. The STC provides an indication of how loud transmitted sound is perceived to be by the listener. Partitions with higher STC values are more effective at reducing sound transmission.

STC values are derived by conducting a test in accordance with ASTM E90, *Standard Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions*. The test data collected is analyzed using ASTM E413, *Classification for Rating Sound Insulation*, and results in a single-number acoustical rating. The rating assesses the airborne sound transmission performance at a range of frequencies from 125 Hz to 4000 Hz, which is consistent with the frequency range of the human ear. An STC rating of 50 has been designated as the minimum allowable design rating for unit-to-unit multifamily construction in the International Building Code.

Design Considerations for Acoustical Partitions

The goal of a high STC rated partition is to decrease the amount of sound transmission through the partition. The following five variables can have an impact on the ability of the partition to attenuate the sound transmission.

Mass

Increasing the mass of a partition increases the amount of material airborne sound waves must penetrate to reach the adjoining room and can be accomplished by installing multiple layers of gypsum board.

Stiffness

Decreasing the stiffness of a partition will increase the amount of sound transmission loss. For this reason metal studs outperform wood studs, and framing that is 24" o.c. outperforms framing that is 16" o.c.

Damping

Damping, or the ability to dissipate the vibrational energy produced by sound waves, reduces the amount of energy to pass through the partition.

Cavity Depth

Increasing the depth of the cavity of the partition can increase the amount of sound transmission loss, especially when the cavity is filled with acoustical insulation.

Cavity Absorption

Increasing the thickness of sound-absorbing material such as fiberglass or mineral fiber insulation in the cavity of a partition will increase the amount of sound transmission loss. The thickness of the insulation has a greater effect on sound transmission loss than the density.

Acoustical Terms and Concepts

Constrained Layer Damping

A new approach in noise reduction is the concept of constrained layer damping, where a viscoelastic material is sandwiched between two stiffer materials. As a result, vibrations on either side of the constraining materials is dissipated by the polymer.

SoundBreak XP Family

The Gold Bond BRAND SoundBreak XP family of products incorporates this technology by inserting a viscoelastic polymer between two sheets of high-density gypsum board. The polymer absorbs and dissipates noise-producing vibrational energy by converting it into negligible heat.

SoundBreak XP products can be used alone or in conjunction with other sound reduction strategies for higher STC ratings. Because they can be installed and finished just like traditional gypsum board, requiring no additional labor or materials, it can be a cost-effective solution for reducing sound transmission.

SoundBreak XP products resist the growth of mold when tested in accordance with ASTM D3273 with a score of 10, the best possible score. Heavy abrasion resistant paper and a denser core provide greater resistance to surface abuse and indentation when tested in accordance with ASTM C1629.



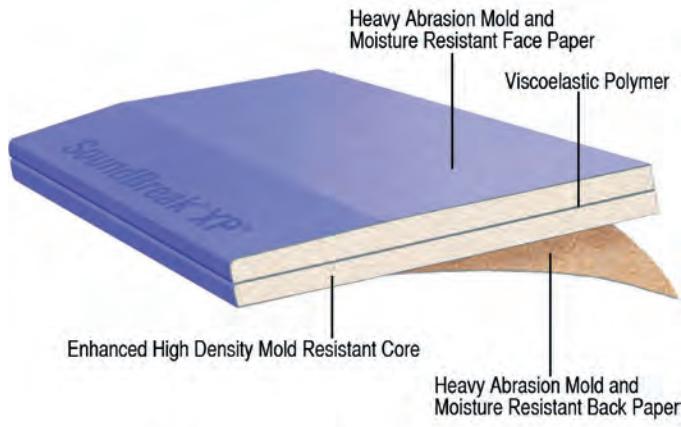
SoundBreak XP Wall Board is available in thicknesses of 1/2" or 5/8". 5/8" SoundBreak XP Wall Board features a fire-resistant Type X core and is UL classified. SoundBreak XP Wall board can be installed as the base layer or the face layer in multi-layer systems without affecting the STC. Use SoundBreak XP Wall board on wood or steel studs spaced 16 in. or 24 in. on center or on ceiling assemblies that do not require a fire rating or as an additional layer in a fire-rated, floor-ceiling assembly.



SoundBreak XP Ceiling Board is a 3/4" fire-resistant gypsum panel that is UL classified for use in specific floor-ceiling assemblies to provide a 1-hour fire rating.



SoundBreak XP Retrofit Board is a 5/16" high-density gypsum panel with a viscoelastic polymer adhered to the back paper for use over existing gypsum board partitions.



Guidelines for Optimum Performance and Sound Reduction

- Stagger gypsum board joints from one side of the partition to the other.
- Allow a 1/4" gap along all wall perimeter edges and completely seal 1/4" gap with acoustical sealant.
- Refrain from wall penetrations when possible.
- Limit necessary wall penetrations to one per stud cavity.
- Seal all penetrations with acoustical sealant or putty pads.

Ceiling Attenuation Class

Ceiling Attenuation Class (CAC) is a single number rating of the effectiveness of a ceiling system to reduce airborne sound transmission over a partition through a common plenum. Similar to Sound Transmission Class (STC), CAC is measured in decibels and provides an indication of how loud transmitted sound is perceived to be by the listener. A CAC value equal to the STC value of a partition helps mitigate the sound transmission over the partition when the partition terminates at a ceiling.

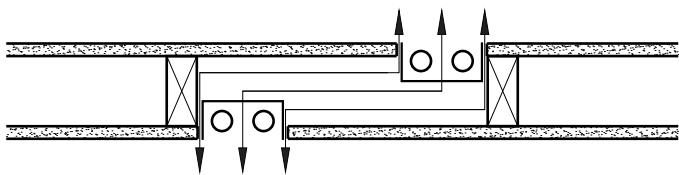
CAC sound tests are conducted in accordance with ASTM E1414, *Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum*. The test data collected is analyzed using ASTM E413, *Classification for Rating Sound Insulation*, and results in a single-number acoustical rating.

Impact Insulation Class

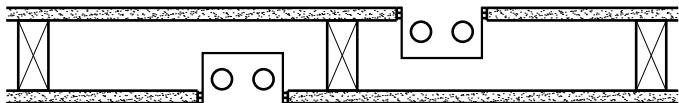
Impact Insulation Class (IIC) is a single-number rating system of the effectiveness of a floor system at reducing impact sounds such as foot traffic. Floor systems are tested with a tapping machine in accordance with ASTM E492, *Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine*. Data derived from the test is analyzed using ASTM E989, *Standard Classification for Determination of Single-Number Metrics for Impact Noise*, and results in a single number rating for the purpose of comparing the sound attenuation of various flooring systems.

Acoustical Terms and Concepts

Sound Isolation Construction



Arrows denote flanking paths for sound.



Electrical boxes offset one stud cavity and annular spaces sealed.



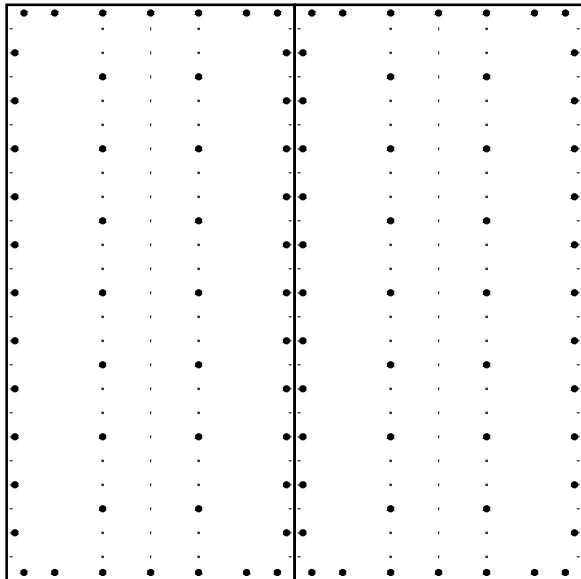
Perimeter of partition sealed.



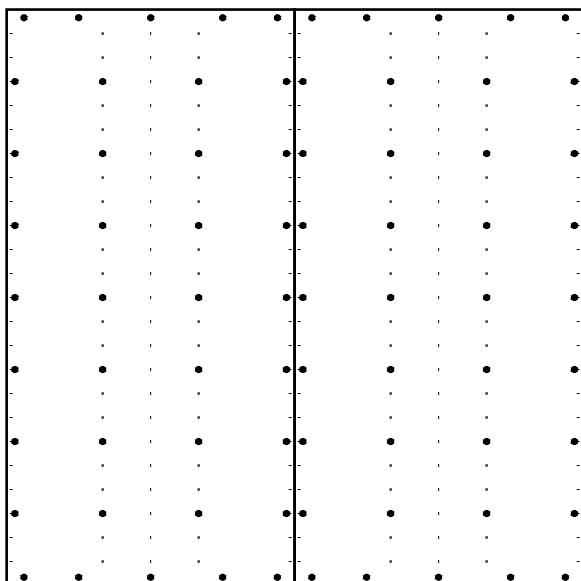
Arrows denote flanking paths for sound.

Flutes of metal deck insulated and sealed.

Increase the STC value of partitions by installing fewer fasteners using National Gypsum's MaX12 fastener pattern for 1-hour, single-layer, steel stud partitions. UL design V438 allows fasteners to be spaced 12" o.c. in the perimeter and field as opposed to 8" o.c. at the perimeter and 12" o.c. in the field for traditional 1-hour, steel stud partitions.



A traditional 8 ft. by 8 ft. 1-hour, steel stud partition requires 100 screws.



An 8 ft. by 8 ft. 1-hour, steel stud partition constructed with the MaX12 fastener pattern featured in UL design V438 only requires 76 screws.

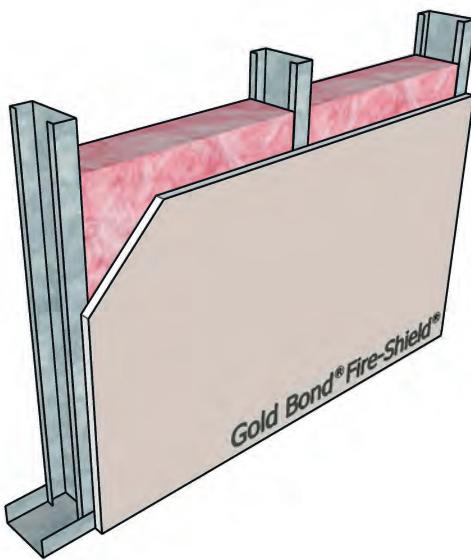
The SoundBookTM



Steel Stud Partitions
with Framing 16" o.c.

Steel Stud Partitions with Framing 16" o.c.

Figure 1



STC-34

Framing: 3-5/8" steel studs, 20 gauge (20 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: None
 Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: Not Rated

Figure 2

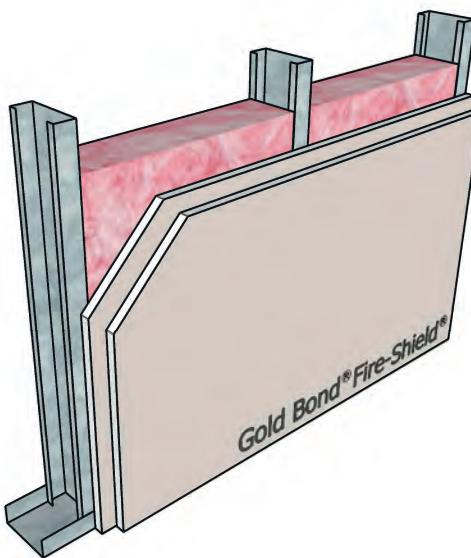


STC-37

Framing: 6" steel studs, 20 gauge (20 mil), 16" o.c.
 Insulation: 6" glass fiber
 Side 1: None
 Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: Not Rated

Figure 3



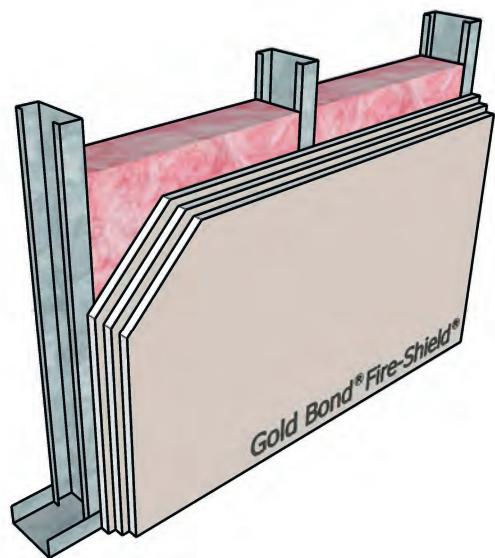
STC-38

Framing: 3-5/8" steel studs, 20 gauge (20 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: None
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V497 - 1 hour

Note: 25 gauge (15 mil) and 20 gauge (18 mil, 19 mil, and 20 mil) studs are equivalent gauge (EQ) studs.

Figure 4



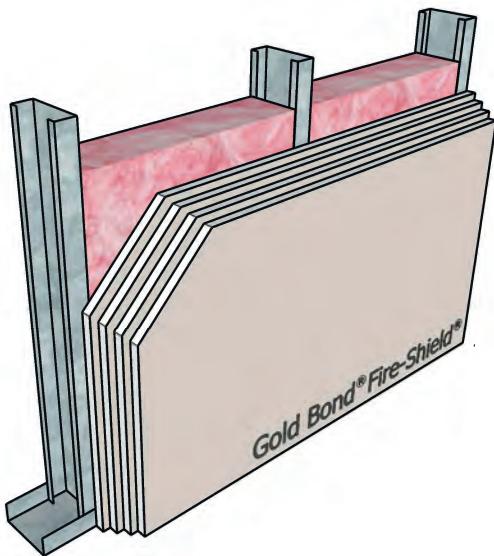
STC-42

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: None
 Side 2: 3 layers 5/8" Fire-Shield Gypsum Board

UL Design: V497 - 1 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 5



STC-44

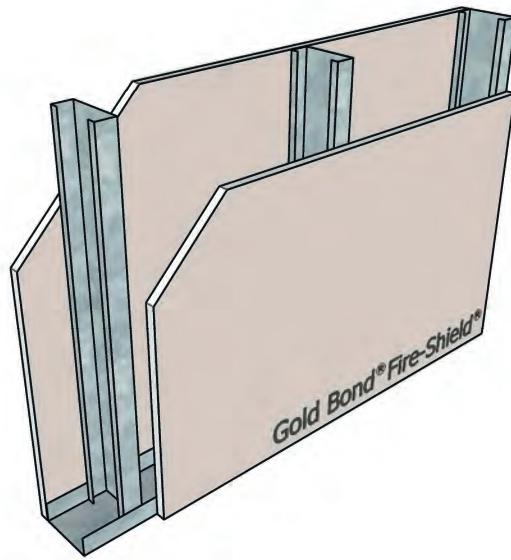
NGC 2018059

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: None
 Side 2: 4 layers 5/8" Fire-Shield Gypsum Board

UL Design: V497 - 2 hour

Figure 7

Figure 6



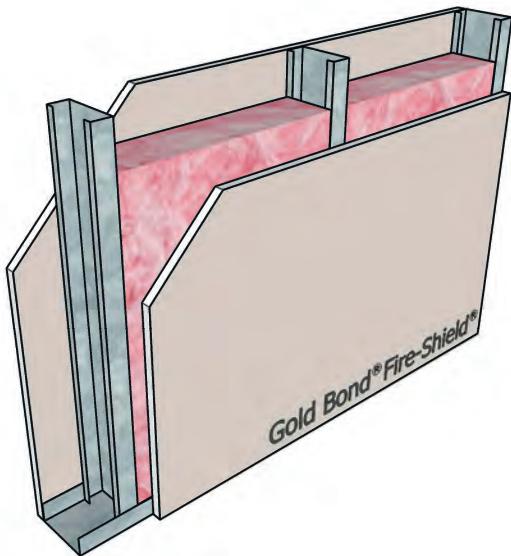
STC-40

NGC 2518

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 16" o.c.
 Insulation: None
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: V438, U465 - 1 hour

Figure 8

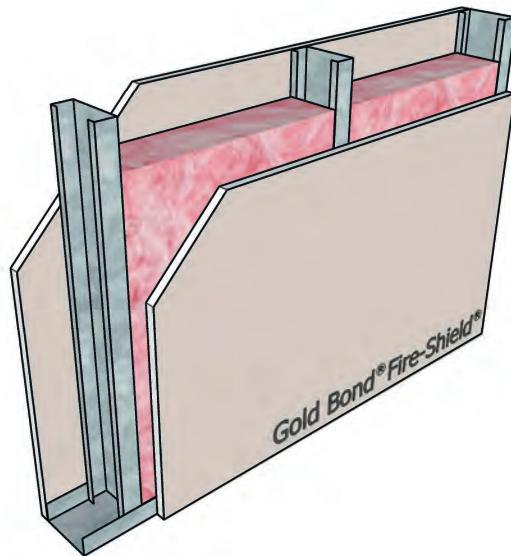


STC-48

NGC 2018107

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 16" o.c.
 Insulation: 2-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: V438, U465 - 1 hour



STC-46

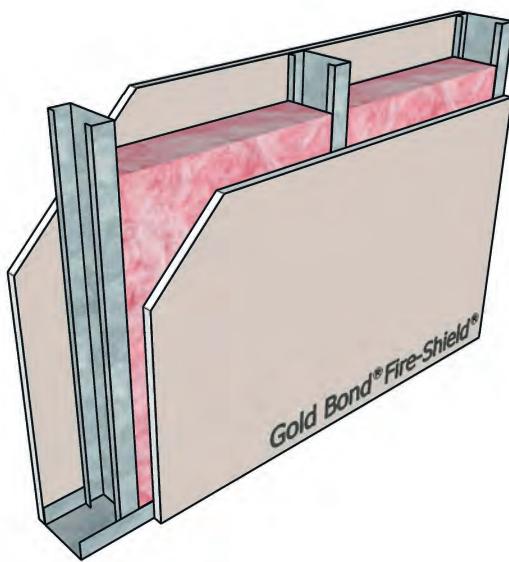
NGC 2018106

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: V438, U465 - 1 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 9

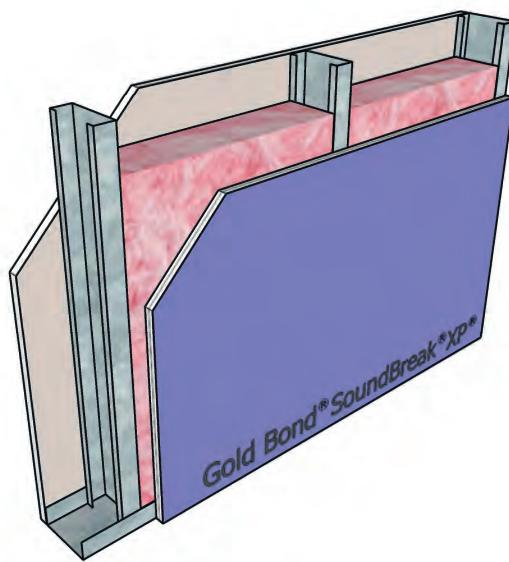


STC-40

Framing: 3-5/8" steel studs, 20 gauge (30 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: V438, U465 - 1 hour

Figure 10

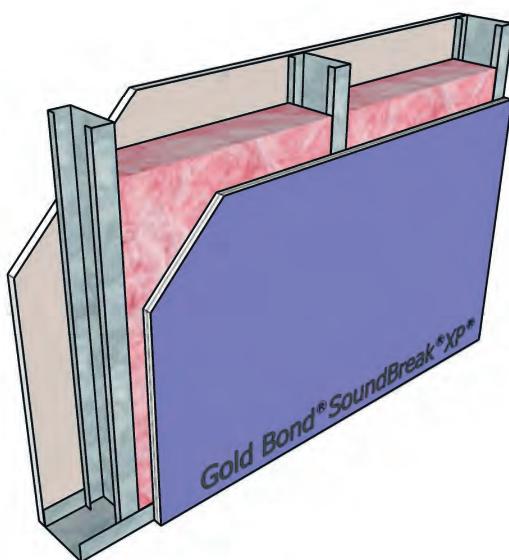


STC-49

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board

UL Design: V438, U465 - 1 hour

Figure 11

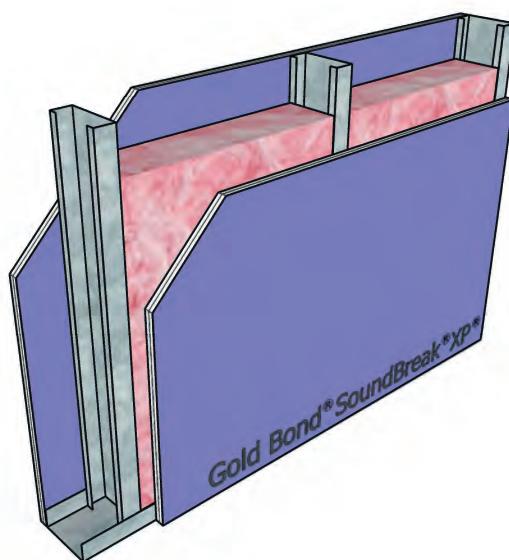


STC-48

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board

UL Design: V438, U465 - 1 hour

Figure 12



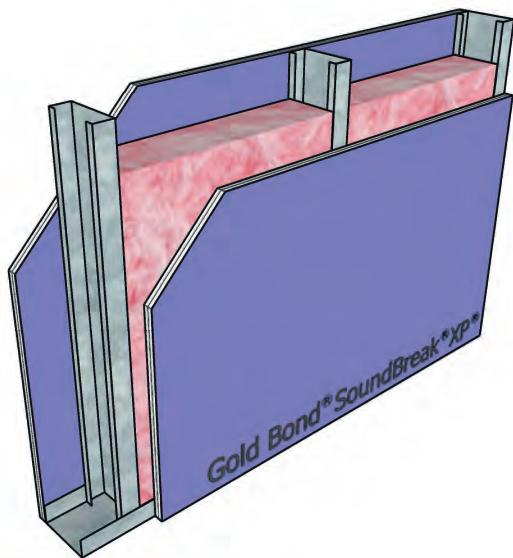
STC-50

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" SoundBreak XP Wall Board
 Side 2: 5/8" SoundBreak XP Wall Board

UL Design: V438, U465 - 1 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 13



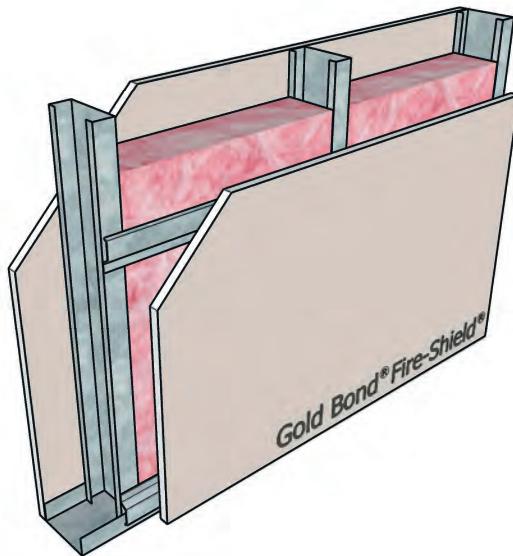
STC-45

NGC 2016055

Framing: 3-5/8" steel studs, 20 gauge (30 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" SoundBreak XP Wall Board
 Side 2: 5/8" SoundBreak XP Wall Board

UL Design: V438, U465 - 1 hour

Figure 15



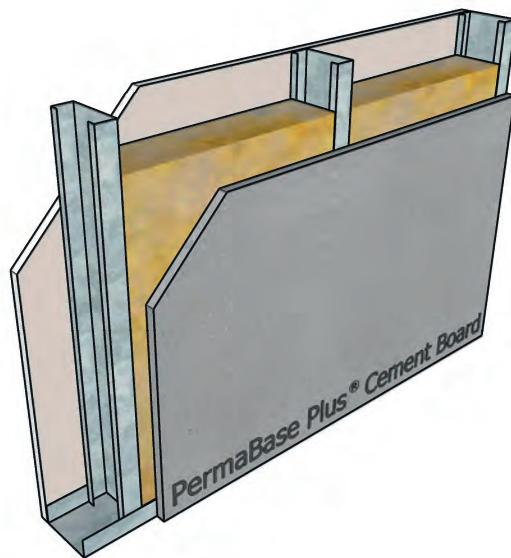
STC-48

NGC 2009059

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Figure 14



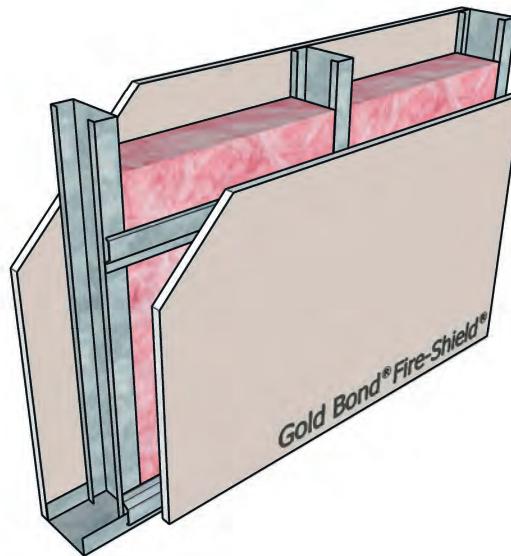
STC-40

NGC 2018037

Framing: 3-5/8" steel studs, 20 gauge (30 mil), 16" o.c.
 Insulation: 3" mineral wool
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 7/16" PermaBase Plus Cement Board

UL Design: W472 - 1 hour

Figure 16



STC-51

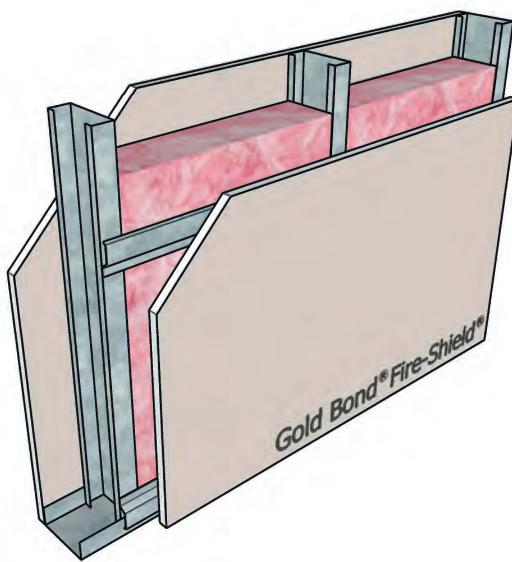
NGC 2017217

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 17

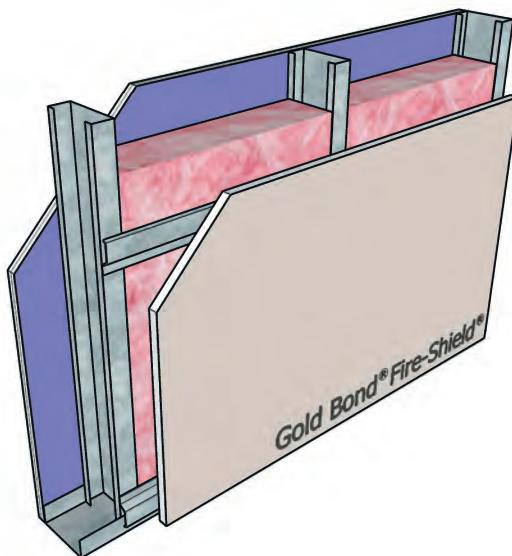


STC-47

Framing: 3-5/8" steel studs, 16 gauge (54 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465, W469 - 1 hour

Figure 19

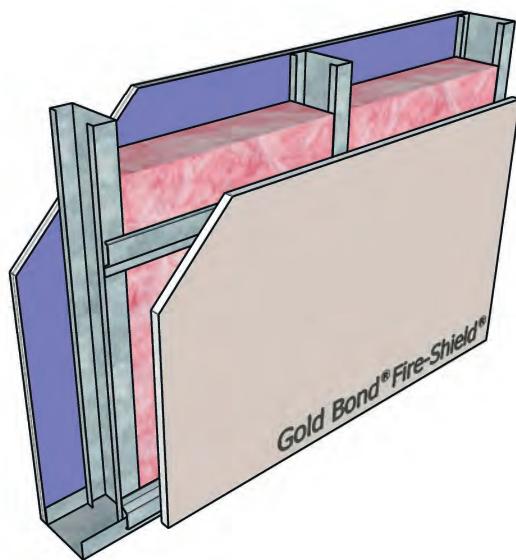


STC-51

Framing: 3-5/8" steel studs, 16 gauge (54 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" SoundBreak XP Wall Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465, W469 - 1 hour

Figure 18

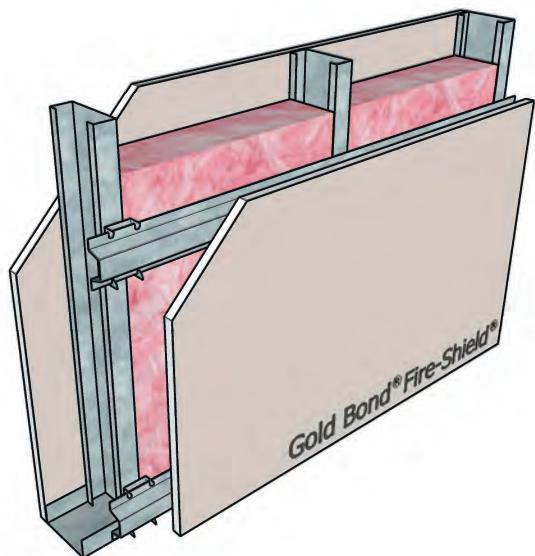


STC-54

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" SoundBreak XP Wall Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Figure 20



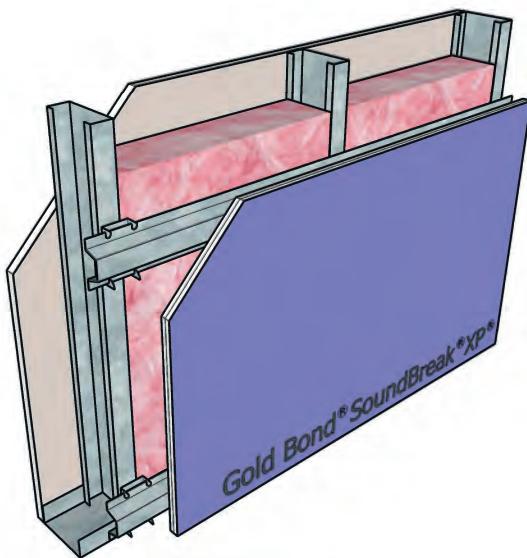
STC-57

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 16" o.c.
 Insulation: 5-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on 7/8" furring channel and resilient isolation clips

UL Design: V438, U465 - 1 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 21

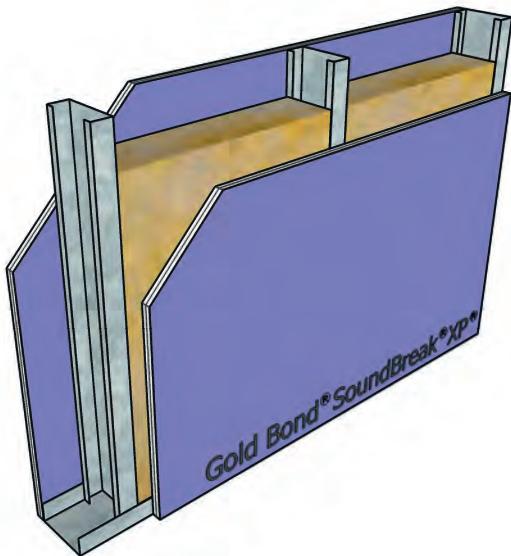


STC-59

NGC 2018197

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 16" o.c.
 Insulation: 5-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board on 7/8" furring channel and resilient isolation clips
 UL Design: V438, U465 - 1 hour

Figure 23



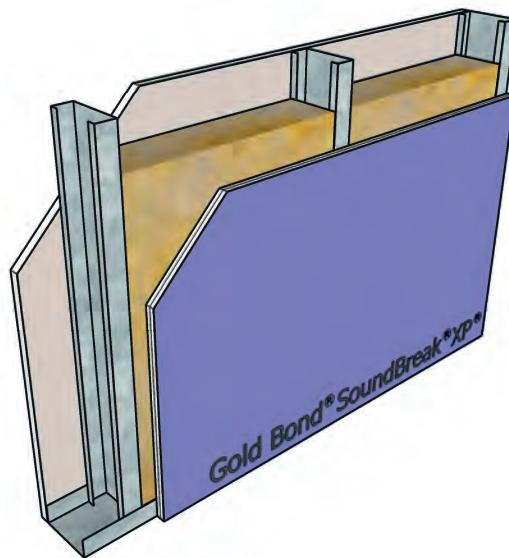
STC-43

NGC 2016041

Framing: 4" steel studs, 16 gauge (54 mil), 16" o.c.
 Insulation: 3" mineral wool
 Side 1: 5/8" SoundBreak XP Wall Board
 Side 2: 5/8" SoundBreak XP Wall Board

UL Design: V438, U465, W469 - 1 hour

Figure 22



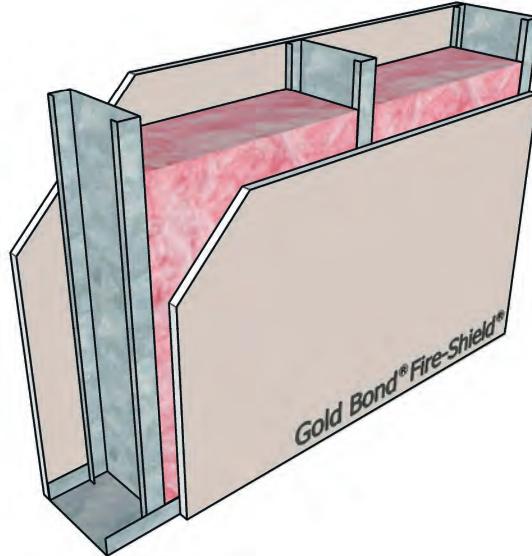
STC-41

NGC 2016042

Framing: 4" steel studs, 16 gauge (54 mil), 16" o.c.
 Insulation: 3" mineral wool
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board

UL Design: V438, U465, W469 - 1 hour

Figure 24



STC-44

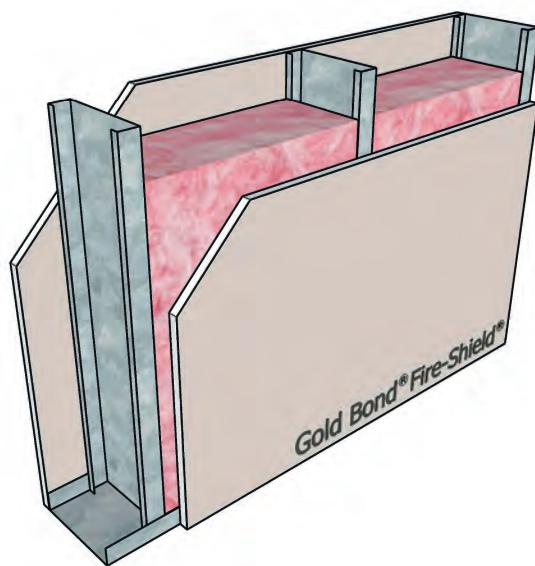
NGC 2018130

Framing: 6" steel studs, 20 gauge (19 mil), 16" o.c.
 Insulation: 6" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: V438, U465 - 1 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 25



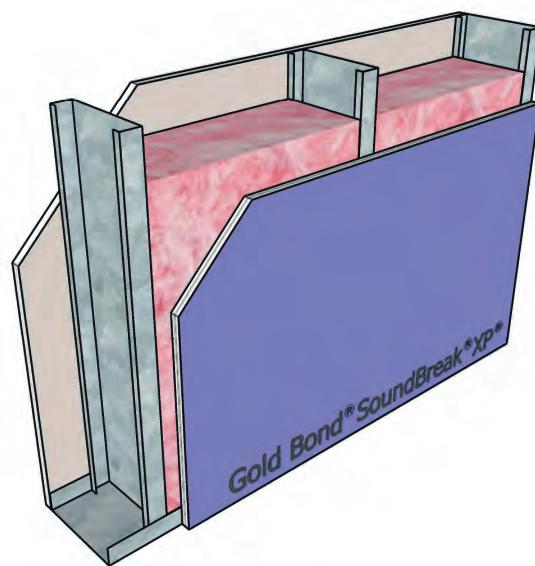
STC-44

NGC 2018133

Framing: 6" steel studs, 20 gauge (30 mil), 16" o.c.
Insulation: 6" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: V438, U465 - 1 hour

Figure 26



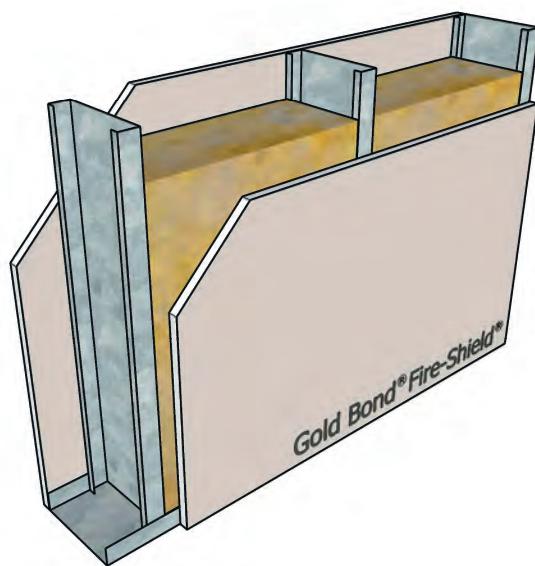
STC-47

NGC 2018129

Framing: 6" steel studs, 20 gauge (19 mil), 16" o.c.
Insulation: 6" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" SoundBreak XP Wall Board

UL Design: V438, U465 - 1 hour

Figure 27



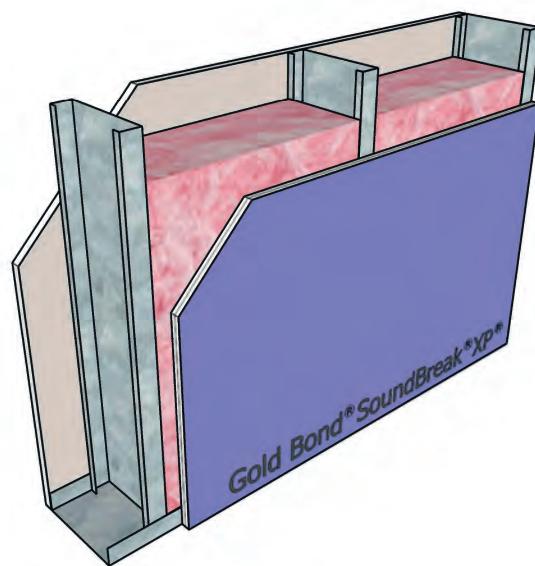
STC-44

NGC 2017169

Framing: 6" steel studs, 16 gauge (54 mil), 16" o.c.
Insulation: 5-1/2" mineral wool
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: V438, U465, W469 - 1 hour

Figure 28



STC-49

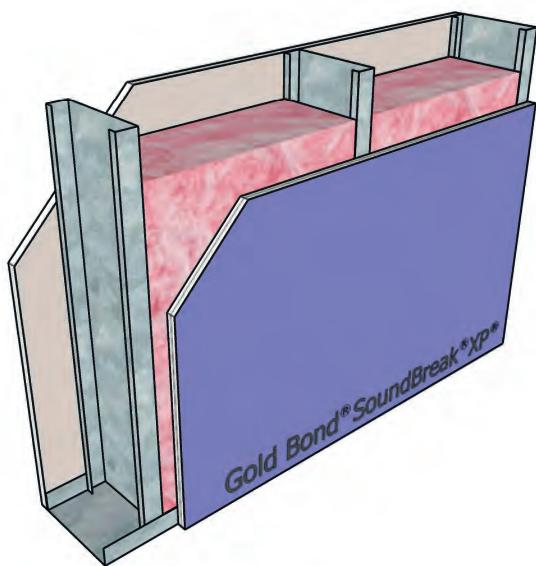
NGC 2015007

Framing: 6" steel studs, 16 gauge (54 mil), 16" o.c.
Insulation: 6" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" SoundBreak XP Wall Board

UL Design: V438, U465, W469 - 1 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 29



STC-50

NGC 2017031

Framing: 6" steel studs, 16 gauge (54 mil), 16" o.c.

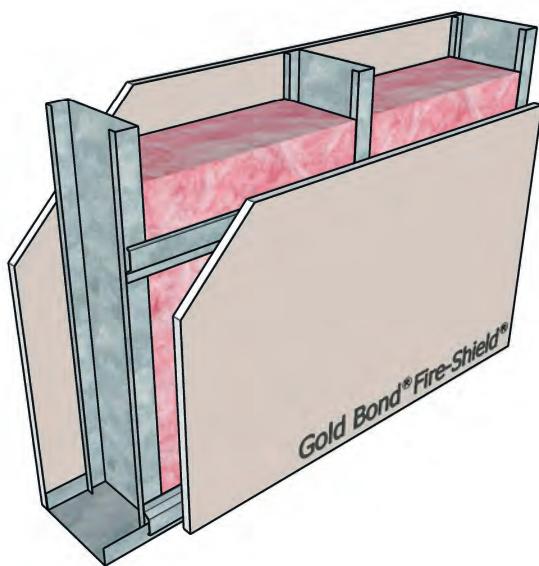
Insulation: 6" glass fiber

Side 1: 5/8" Hi-Impact XP Gypsum Board

Side 2: 5/8" SoundBreak XP Wall Board

UL Design: V438, U465, W469 - 1 hour

Figure 30



STC-53

NGC 2013026

Framing: 6" steel studs, 20 gauge (20 mil), 16" o.c.

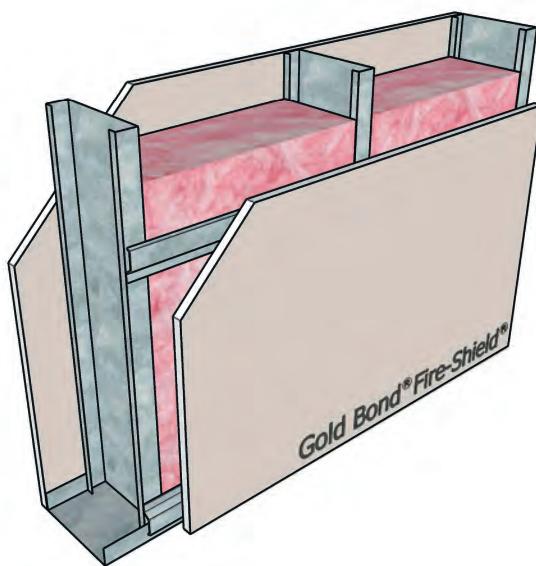
Insulation: 6" glass fiber

Side 1: 5/8" Fire-Shield Gypsum Board

Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Figure 31



STC-50

NGC 2015001

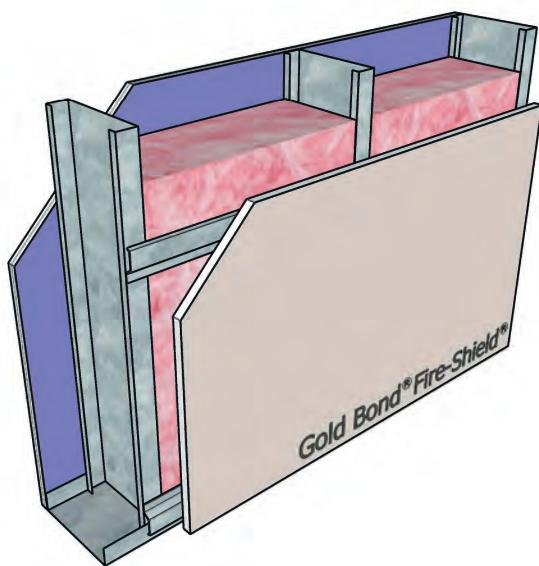
Framing: 6" steel studs, 16 gauge (54 mil), 16" o.c.

Insulation: 6" glass fiber

Side 1: 5/8" Fire-Shield Gypsum Board

Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465, W469 - 1 hour



STC-57

NGC 2013027

Framing: 6" steel studs, 20 gauge (20 mil), 16" o.c.

Insulation: 6" glass fiber

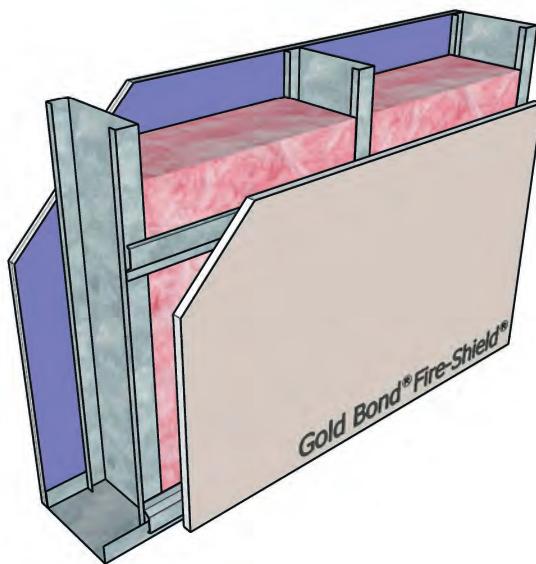
Side 1: 5/8" SoundBreak XP Wall Board

Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 33

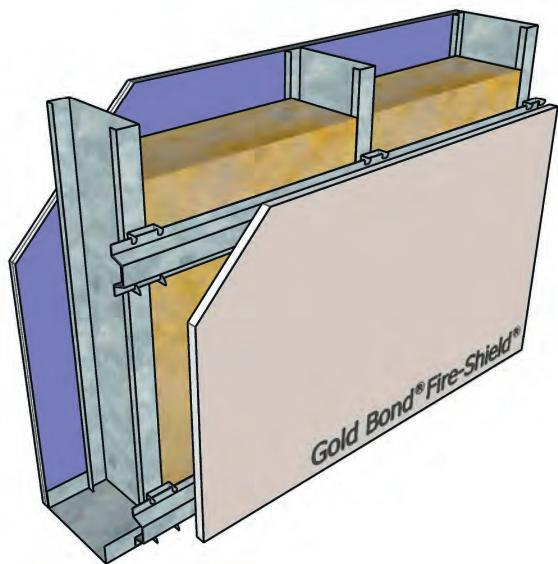


STC-55

Framing: 6" steel studs, 16 gauge (54 mil), 16" o.c.
 Insulation: 6" glass fiber
 Side 1: 5/8" SoundBreak XP Wall Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465, W469 - 1 hour

Figure 34

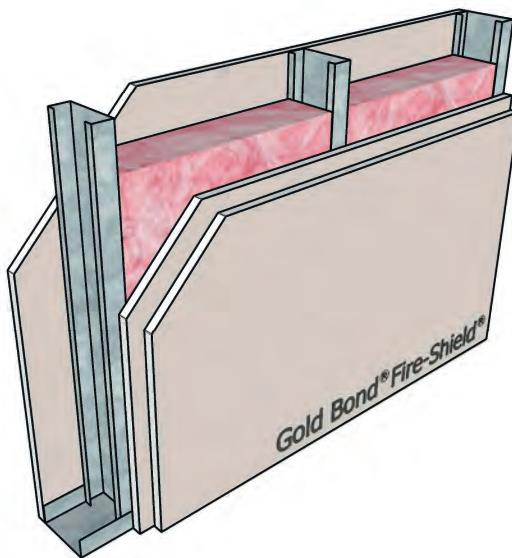


STC-62

Framing: 6" steel studs, 20 gauge (18 mil), 16" o.c.
 Insulation: 6" mineral wool
 Side 1: 5/8" SoundBreak XP Wall Board
 Side 2: 5/8" Fire-Shield Gypsum Board on 7/8" furring channel and resilient isolation clips

UL Design: V438, U465 - 1 hour

Figure 35

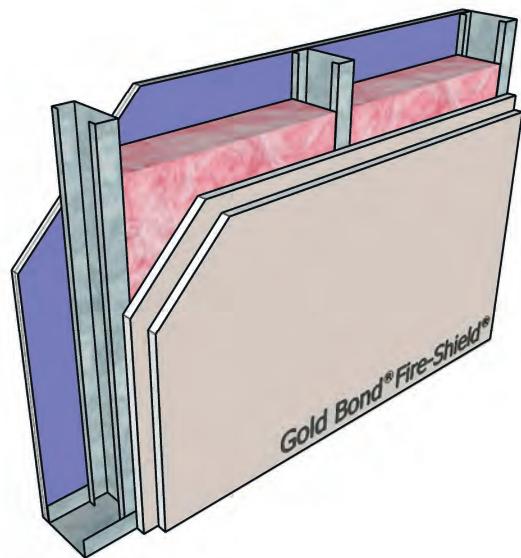


STC-52

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 16" o.c.
 Insulation: 2-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438, U465 - 1 hour

Figure 36



STC-52

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" SoundBreak XP Wall Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

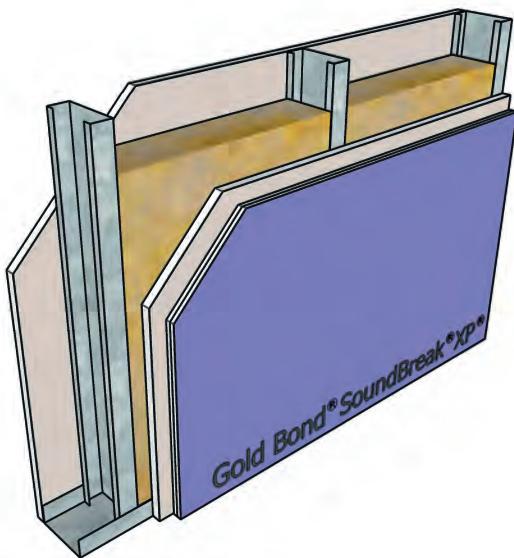
UL Design: V438, U465 - 1 hour

NGC 2018108

NGC 2019059

Steel Stud Partitions with Framing 16" o.c.

Figure 37

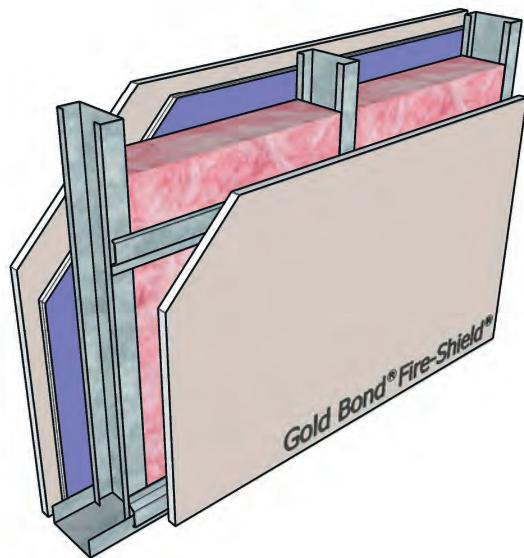


STC-45

NGC 2016047

Framing: 4" steel studs, 16 gauge (54 mil), 16" o.c.
 Insulation: 3" mineral wool
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board on 5/8" Fire-Shield Gypsum Board
 UL Design: V438, U465, W469 - 1 hour

Figure 39

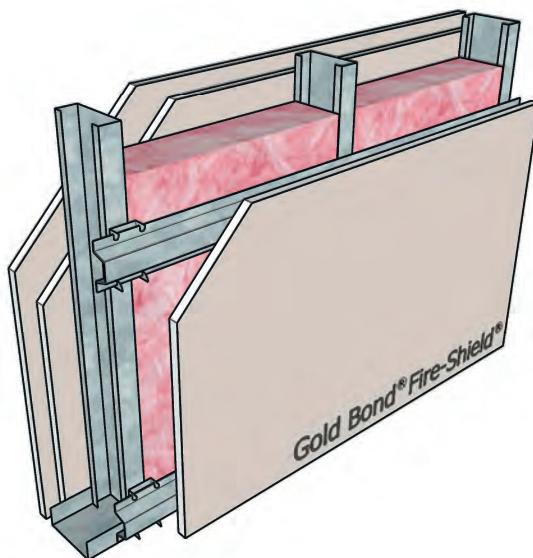


STC-58

NGC 2017216

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1
 UL Design: V438, U465 - 1 hour

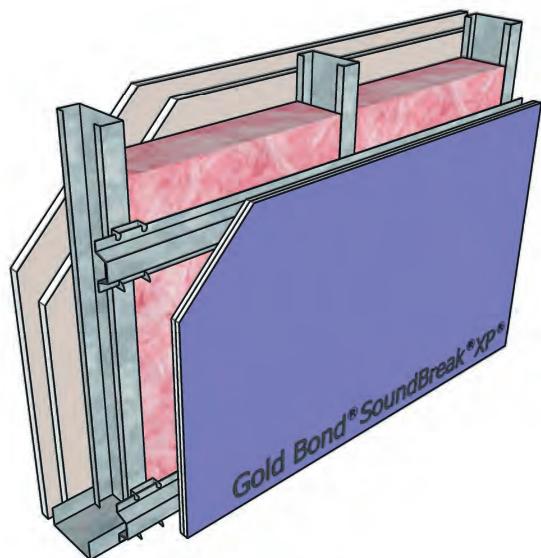
Figure 40



STC-61

NGC 2018192

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 16" o.c.
 Insulation: 5-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on 7/8" furring channel and resilient isolation clips
 UL Design: V438, U465 - 1 hour



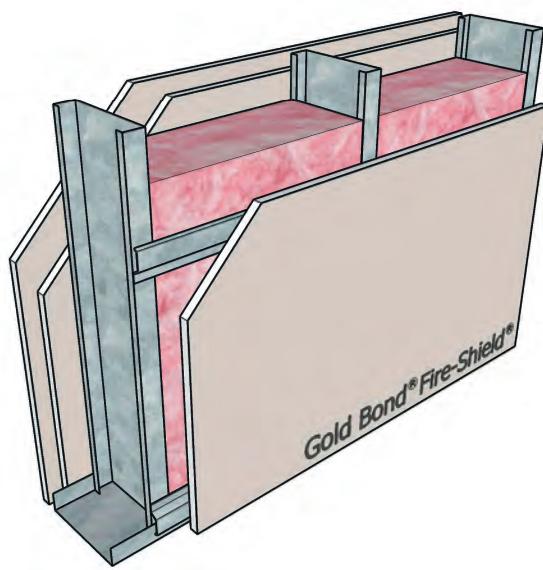
STC-63

NGC 2018194

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 16" o.c.
 Insulation: 5-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board on 7/8" furring channel and resilient isolation clips
 UL Design: V438, U465 - 1 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 41



STC-54

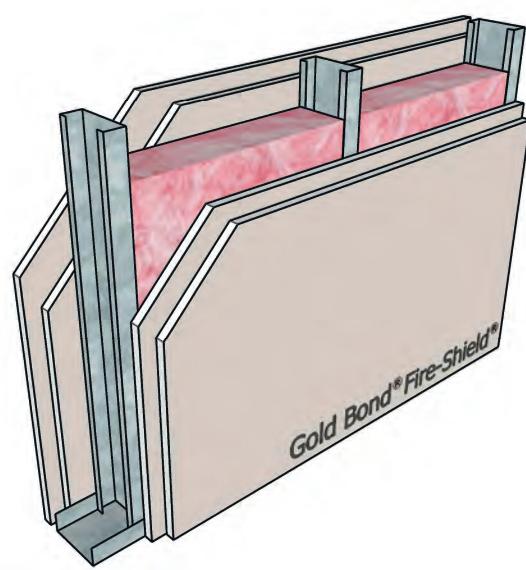
NGC 2017173

Framing: 6" steel studs, 16 gauge (54 mil), 16" o.c.
 Insulation: 6" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465, W469 - 1 hour

Figure 43

Figure 42



STC-56

NGC 2018109

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 16" o.c.
 Insulation: 2-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438, U411 - 2 hour

Figure 44

STC-52

NGC 2018113

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 16" o.c.
 Insulation: 2-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438, U411 - 2 hour

STC-49

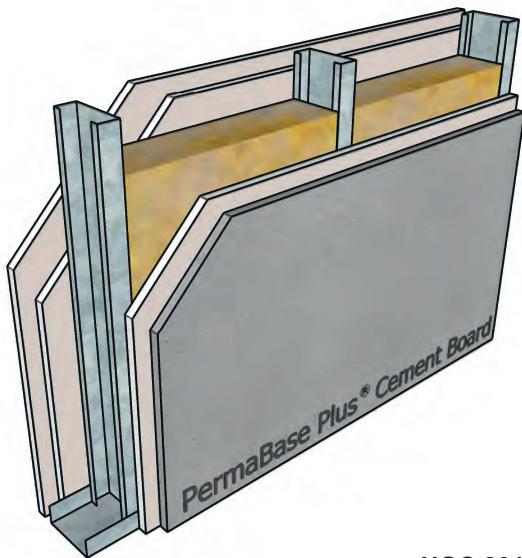
NGC 2016082

Framing: 3-5/8" steel studs, 20 gauge (30 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438, U411 - 2 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 45



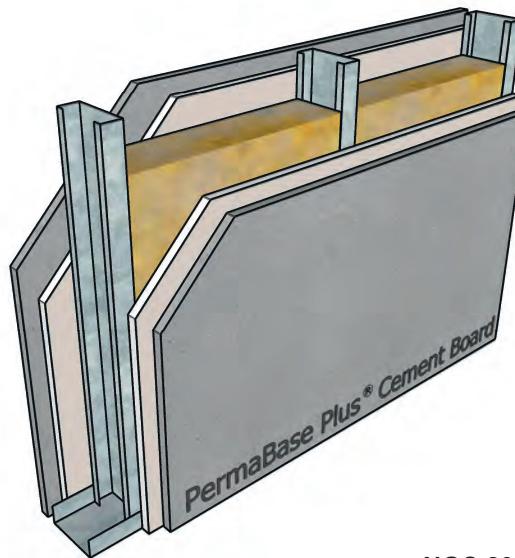
STC-43

NGC 2018036

Framing: 3-5/8" steel studs, 20 gauge (30 mil), 16" o.c.
 Insulation: 3" mineral wool
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 7/16" PermaBase Plus Cement Board on 5/8" Fire-Shield Gypsum Board

UL Design: W472 - 2 hour

Figure 46



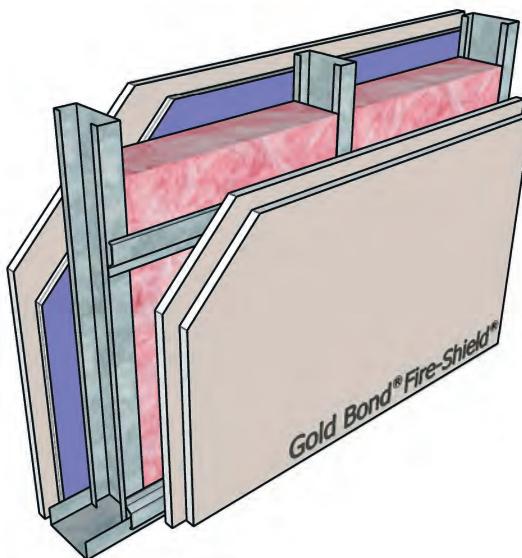
STC-42

NGC 2018035

Framing: 3-5/8" steel studs, 20 gauge (30 mil), 16" o.c.
 Insulation: 3" mineral wool
 Side 1: 7/16" PermaBase Plus Cement Board on 5/8" Fire-Shield Gypsum Board
 Side 2: 7/16" PermaBase Plus Cement Board on 5/8" Fire-Shield Gypsum Board

UL Design: W472 - 2 hour

Figure 47

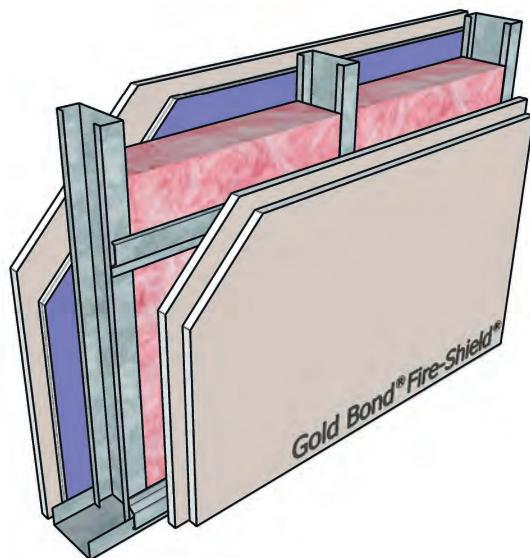


STC-61

NGC 2017215

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on RC-1
 UL Design: V438, U411 - 2 hour

Figure 48



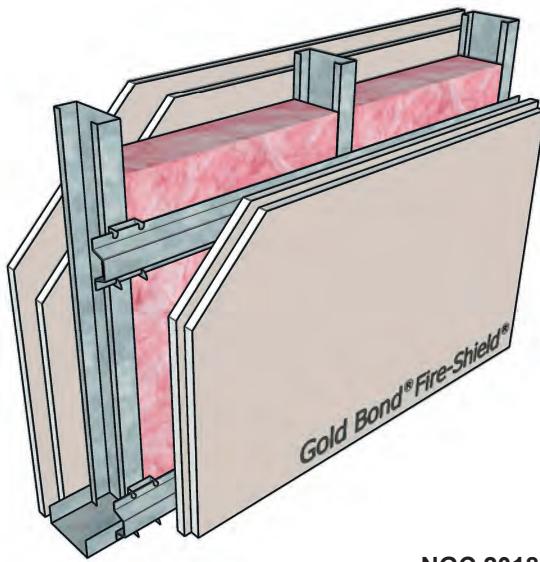
STC-59

NGC 2014084

Framing: 3-5/8" steel studs, 16 gauge (54 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on RC-1
 UL Design: V438, U411, W469 - 2 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 49



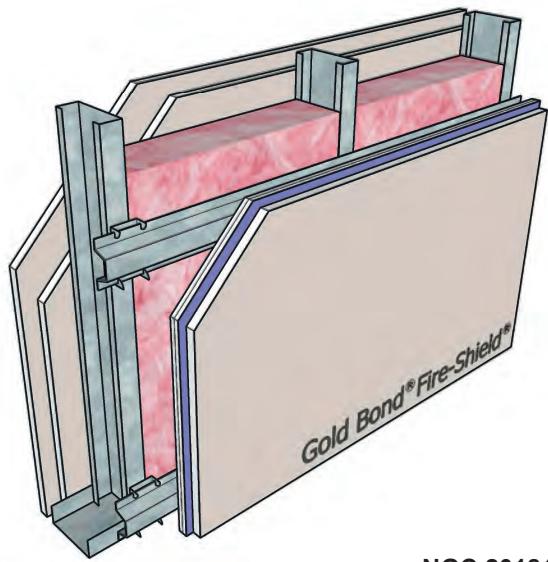
STC-63

NGC 2018193

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 16" o.c.
 Insulation: 5-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on 7/8" furring channel and resilient isolation clips

UL Design: V438, U411 - 2 hour

Figure 50



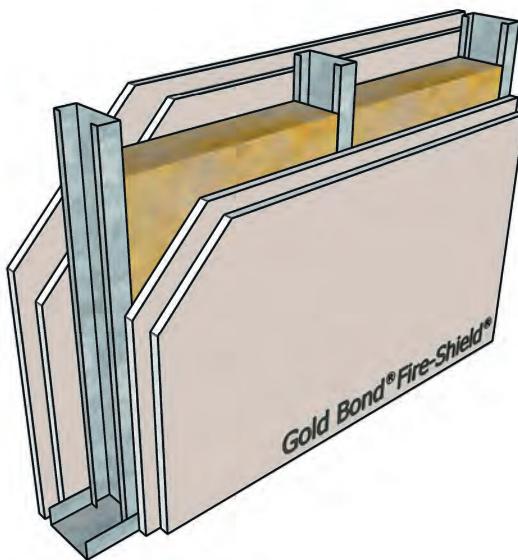
STC-65

NGC 2018195

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 16" o.c.
 Insulation: 5-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board on 7/8" furring channel and resilient isolation clips

UL Design: V438, U411 - 2 hour

Figure 51



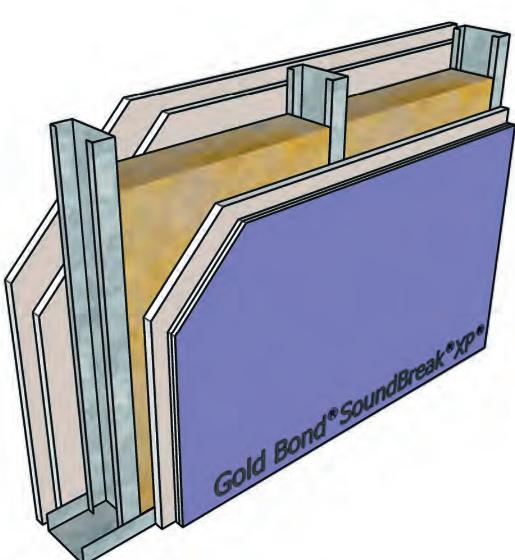
STC-45

NGC 2016049

Framing: 4" steel studs, 16 gauge (54 mil), 16" o.c.
 Insulation: 3" mineral wool
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438, U411, W469 - 2 hour

Figure 52



STC-50

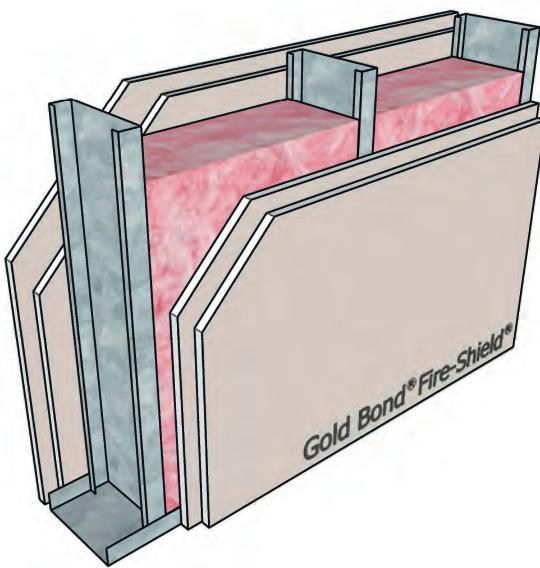
NGC 2016048

Framing: 4" steel studs, 16 gauge (54 mil), 16" o.c.
 Insulation: 3" mineral wool
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board on 5/8" Fire-Shield Gypsum Board

UL Design: V438, U411, W469 - 2 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 53



STC-54

NGC 2018132

Framing: 6" steel studs, 20 gauge (30 mil), 16" o.c.

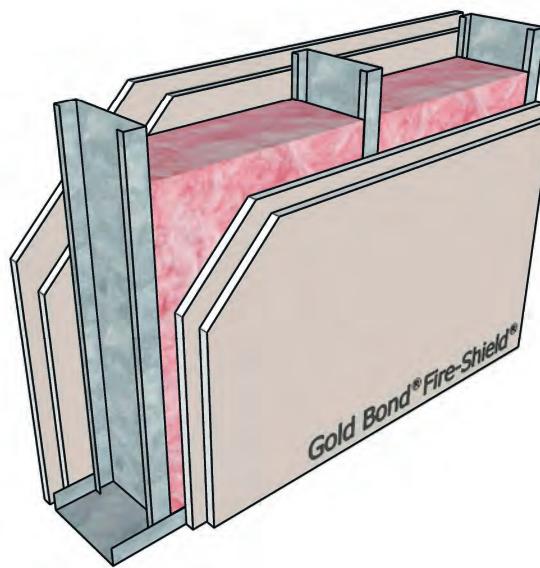
Insulation: 6" glass fiber

Side 1: 2 layers 5/8" Fire-Shield Gypsum Board

Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438, U411 - 2 hour

Figure 54



STC-52

NGC 2017174

Framing: 6" steel studs, 16 gauge (54 mil), 16" o.c.

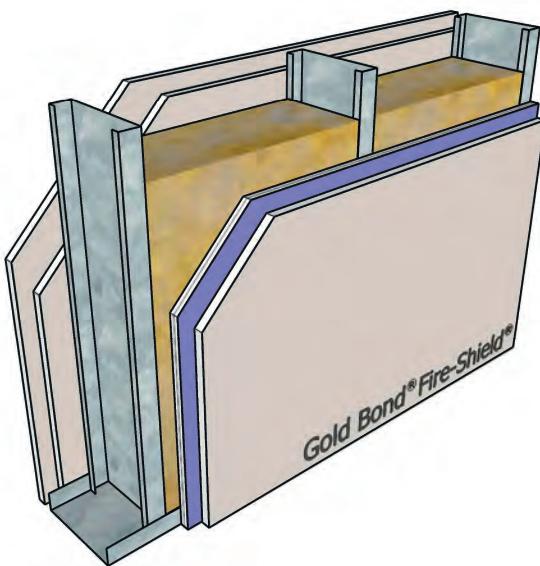
Insulation: 6" glass fiber

Side 1: 2 layers 5/8" Fire-Shield Gypsum Board

Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438, U411, W469 - 2 hour

Figure 55



STC-62

NGC 2019062

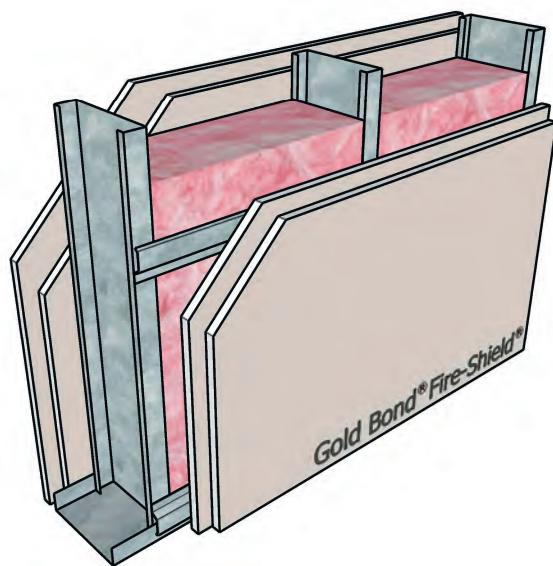
Framing: 6" steel studs, 20 gauge (18 mil), 16" o.c.

Insulation: 6" mineral wool

Side 1: 2 layers 5/8" Fire-Shield Gypsum Board

Side 2: 5/8" Fire-Shield Gypsum Board on
5/8" SoundBreak XP Wall Board

UL Design: V438, U411 - 2 hour



STC-60

NGC 2017172

Framing: 6" steel studs, 16 gauge (54 mil), 16" o.c.

Insulation: 6" glass fiber

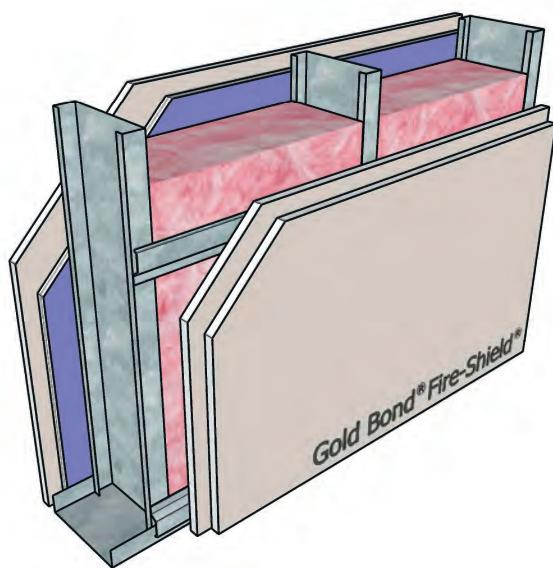
Side 1: 2 layers 5/8" Fire-Shield Gypsum Board

Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U411, W469 - 2 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 57

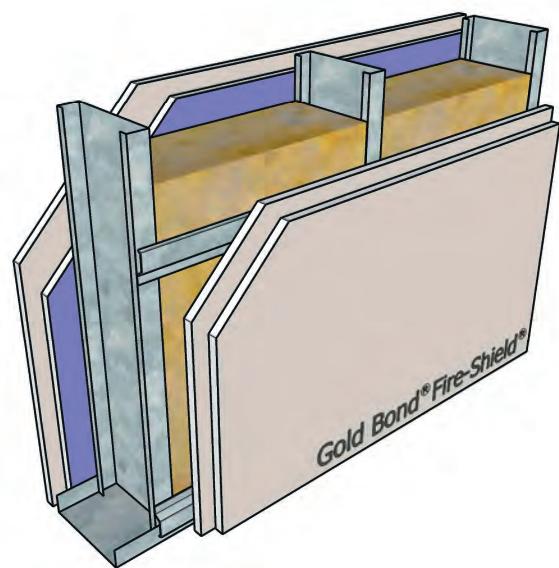


STC-61

NGC 2015003

Framing: 6" steel studs, 16 gauge (54 mil), 16" o.c.
 Insulation: 6" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on RC-1
 UL Design: V438, U411, W469 - 2 hour

Figure 58

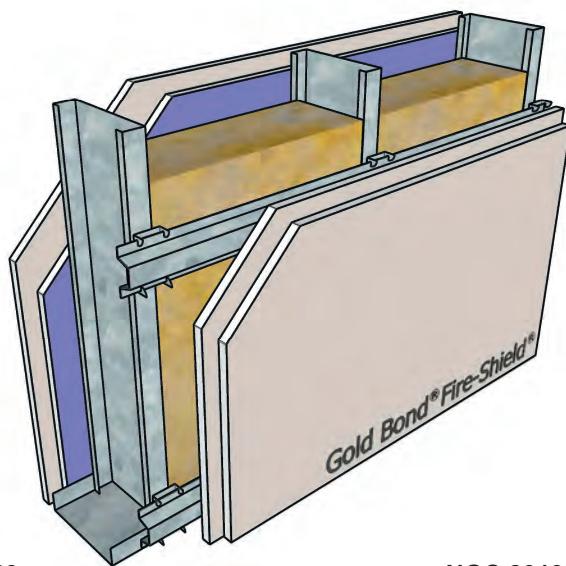


STC-64

NGC 2019061

Framing: 6" steel studs, 20 gauge (18 mil), 16" o.c.
 Insulation: 6" mineral wool
 Side 1: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on RC-1
 UL Design: V438, U411, W469 - 2 hour

Figure 59

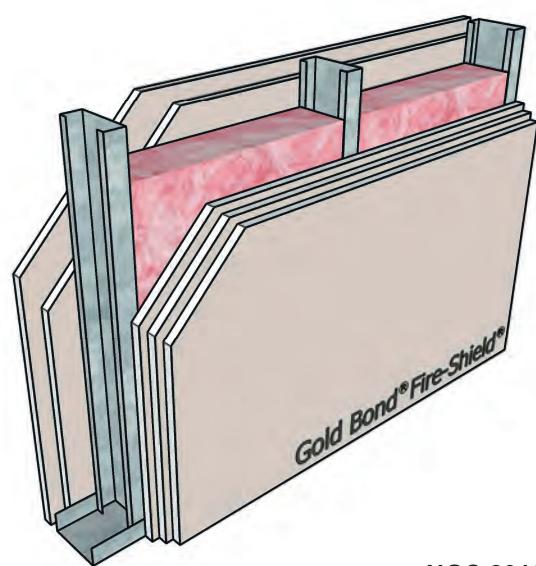


STC-69

NGC 2019032

Framing: 6" steel studs, 20 gauge (18 mil), 16" o.c.
 Insulation: 6" mineral wool
 Side 1: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on 7/8" furring channel and resilient isolation clips
 UL Design: V438, U411, W469 - 2 hour

Figure 60



STC-49

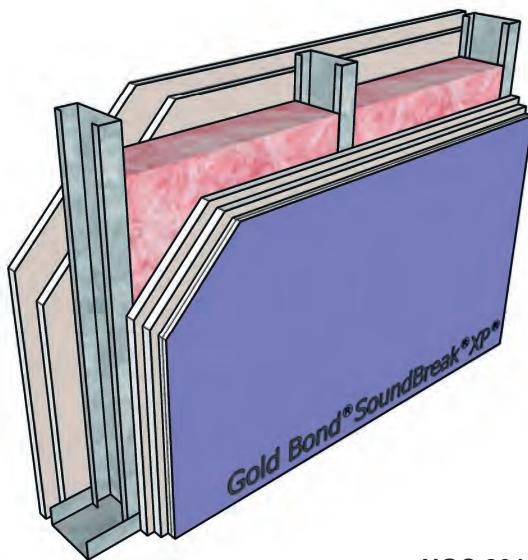
NGC 2016085

Framing: 3-5/8" steel studs, 20 gauge (30 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 3 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438, U411 - 2 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 61



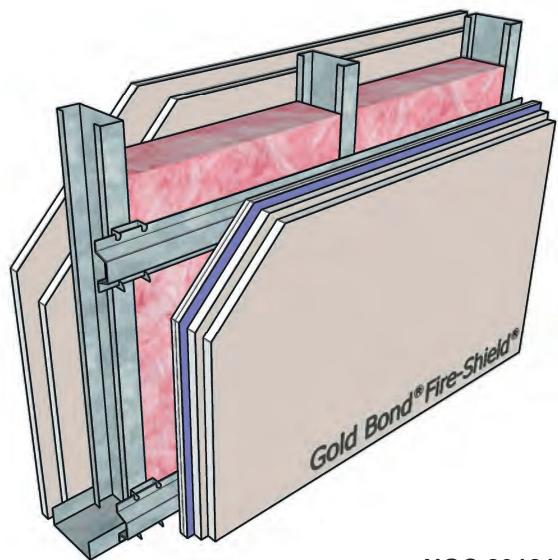
STC-51

NGC 2016086

Framing: 3-5/8" steel studs, 20 gauge (30 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board on 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438, U411 - 2 hour

Figure 62



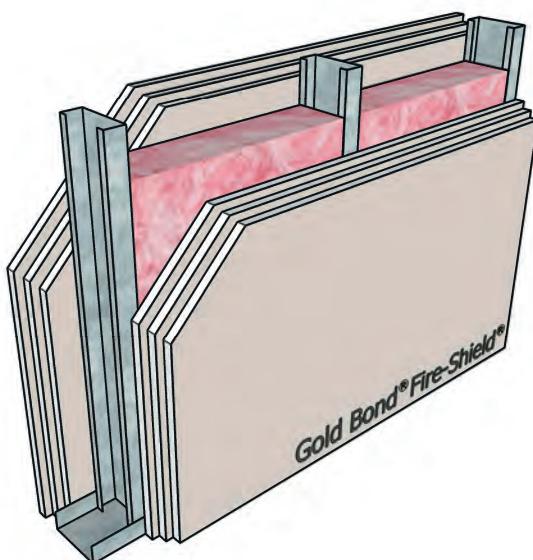
STC-67

NGC 2018196

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 16" o.c.
 Insulation: 5-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board on 7/8" furring channel and resilient isolation clips

UL Design: V438, U411 - 2 hour

Figure 63



STC-51

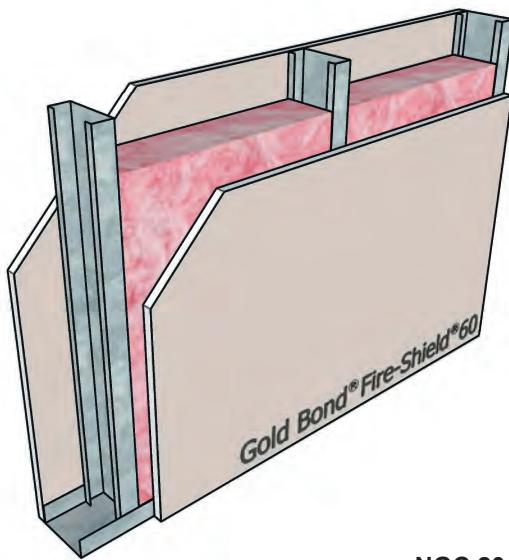
NGC 2016088

Framing: 3-5/8" steel studs, 20 gauge (30 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 3 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 3 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438 - 3 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 64



STC-44

NGC 2018159

Framing: 3-5/8" steel studs, 25 gauge (15 mil), 16" o.c.

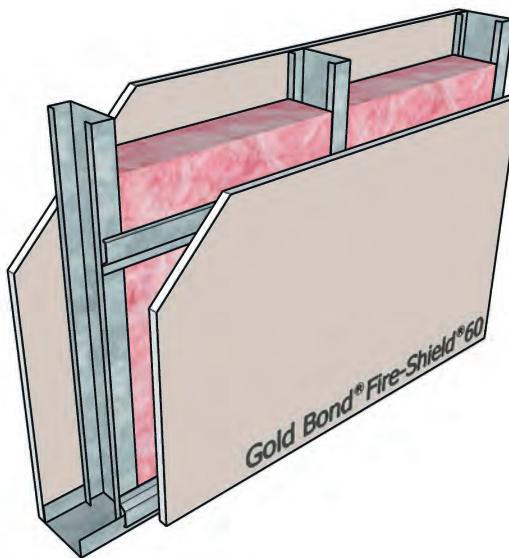
Insulation: 3-1/2" glass fiber

Side 1: 5/8" High Strength Fire-Shield 60 Gypsum Board

Side 2: 5/8" High Strength Fire-Shield 60 Gypsum Board

UL Design: V438, U465 - 1 hour

Figure 66



STC-50

NGC 2018158

Framing: 3-5/8" steel studs, 25 gauge (15 mil), 16" o.c.

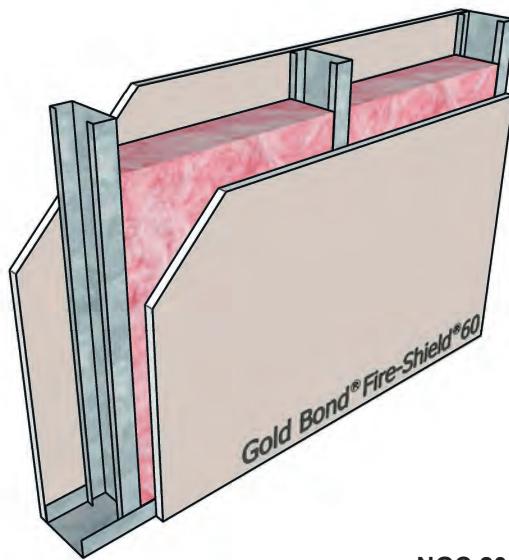
Insulation: 3-1/2" glass fiber

Side 1: 5/8" High Strength Fire-Shield 60 Gypsum Board

Side 2: 5/8" High Strength Fire-Shield 60 Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Figure 65



STC-41

NGC 2018168

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 16" o.c.

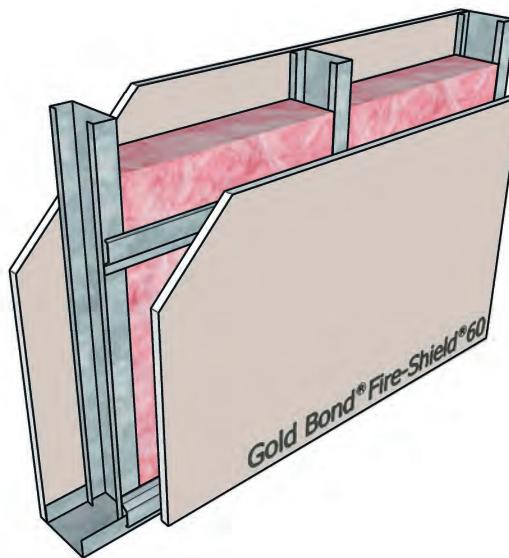
Insulation: 3-1/2" glass fiber

Side 1: 5/8" High Strength Fire-Shield 60 Gypsum Board

Side 2: 5/8" High Strength Fire-Shield 60 Gypsum Board

UL Design: V438, U465 - 1 hour

Figure 67



STC-48

NGC 2018167

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 16" o.c.

Insulation: 3-1/2" glass fiber

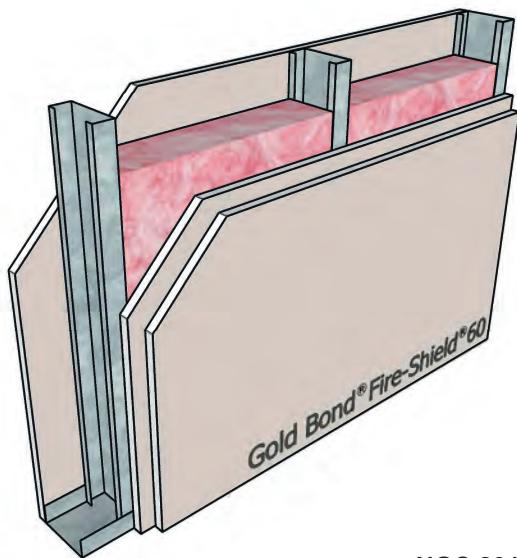
Side 1: 5/8" High Strength Fire-Shield 60 Gypsum Board

Side 2: 5/8" High Strength Fire-Shield 60 Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 68



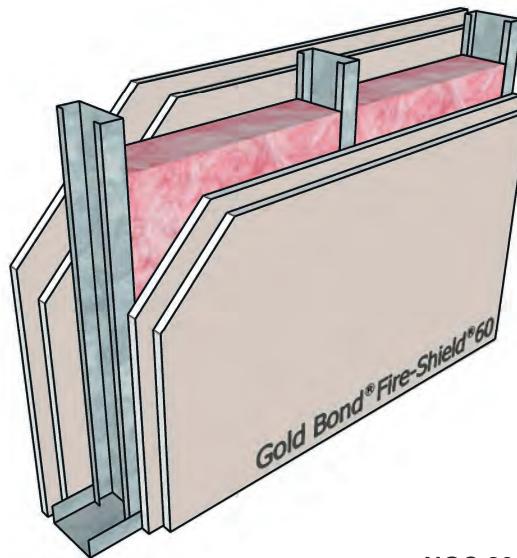
STC-43

NGC 2018169

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" High Strength Fire-Shield 60 Gypsum Board
 Side 2: 2 layers 5/8" High Strength Fire-Shield 60 Gypsum Board

UL Design: V438, U465 - 1 hour

Figure 69



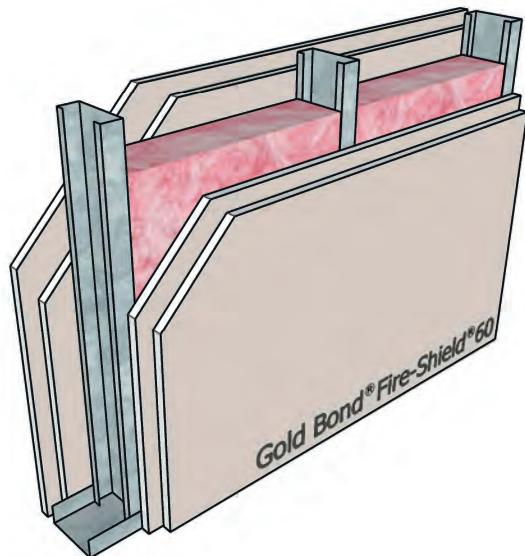
STC-50

NGC 2018160

Framing: 3-5/8" steel studs, 25 gauge (15 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 2 layers 5/8" High Strength Fire-Shield 60 Gypsum Board
 Side 2: 2 layers 5/8" High Strength Fire-Shield 60 Gypsum Board

UL Design: V438, U411 - 2 hour

Figure 70



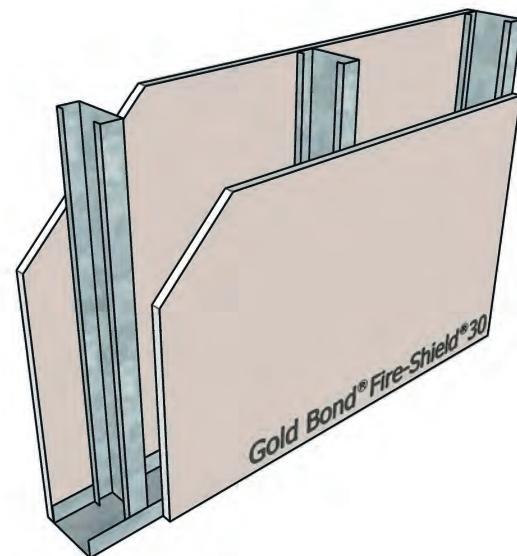
STC-48

NGC 2018170

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 2 layers High Strength 5/8" Fire-Shield 60 Gypsum Board
 Side 2: 2 layers High Strength 5/8" Fire-Shield 60 Gypsum Board

UL Design: V438, U411 - 2 hour

Figure 71



STC-35

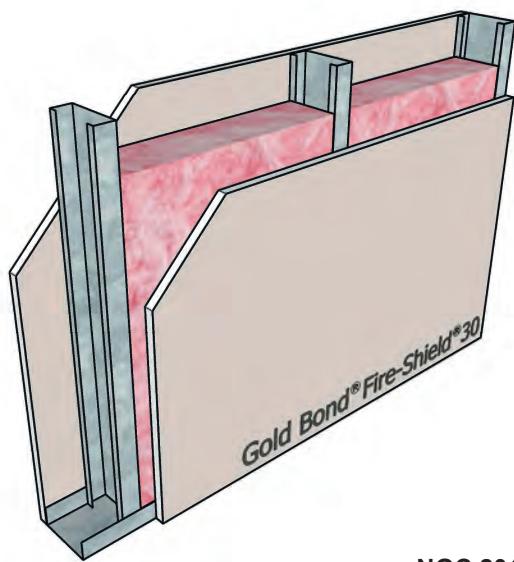
NGC 2014011

Framing: 3-5/8" steel studs, 20 gauge (20 mil), 16" o.c.
 Insulation: None
 Side 1: 5/8" High Strength Fire-Shield 30 Gypsum Board
 Side 2: 5/8" High Strength Fire-Shield 30 Gypsum Board

UL Design: W411 - 1/2 hour

Steel Stud Partitions with Framing 16" o.c.

Figure 72



STC-38

NGC 2014009

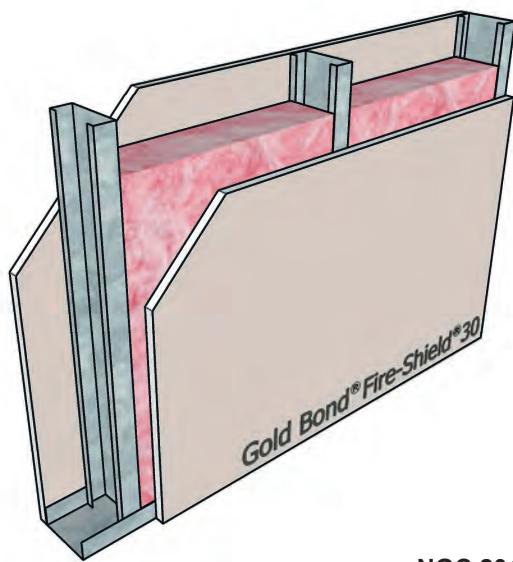
Framing: 3-5/8" steel studs, 25 gauge (18 mil), 16" o.c.

Insulation: 3-1/2" glass fiber

Side 1: 5/8" High Strength Fire-Shield 30 Gypsum Board

Side 2: 5/8" High Strength Fire-Shield 30 Gypsum Board

Figure 73



STC-39

NGC 2014010

Framing: 3-5/8" steel studs, 20 gauge (20 mil), 16" o.c.

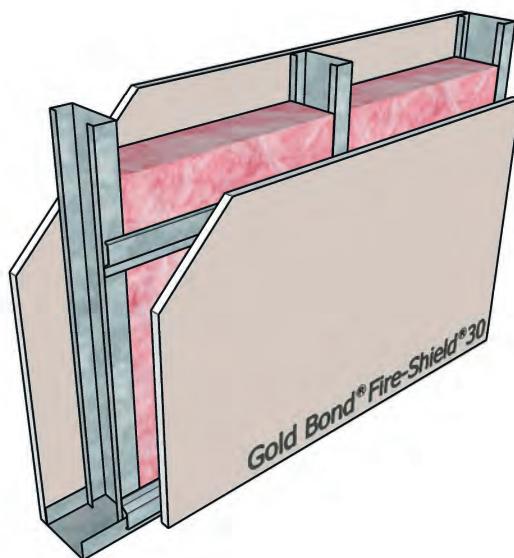
Insulation: 3-1/2" glass fiber

Side 1: 5/8" High Strength Fire-Shield 30 Gypsum Board

Side 2: 5/8" High Strength Fire-Shield 30 Gypsum Board

UL Design: W411 - 1/2 hour

Figure 74



STC-45

NGC 2014012

Framing: 3-5/8" steel studs, 20 gauge (20 mil), 16" o.c.

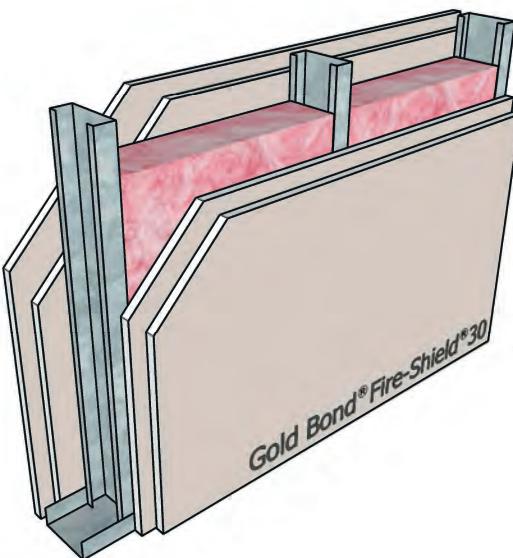
Insulation: 3-1/2" glass fiber

Side 1: 5/8" High Strength Fire-Shield 30 Gypsum Board

Side 2: 5/8" High Strength Fire-Shield 30 Gypsum Board
on RC-1

UL Design: W411 - 1/2 hour

Figure 75



STC-44

NGC 2014013

Framing: 3-5/8" steel studs, 20 gauge (20 mil), 16" o.c.

Insulation: 3-1/2" glass fiber

Side 1: 2 layers 5/8" High Strength Fire-Shield 30
Gypsum Board

Side 2: 2 layers 5/8" High Strength Fire-Shield 30
Gypsum Board

UL Design: W411 - 1 hour

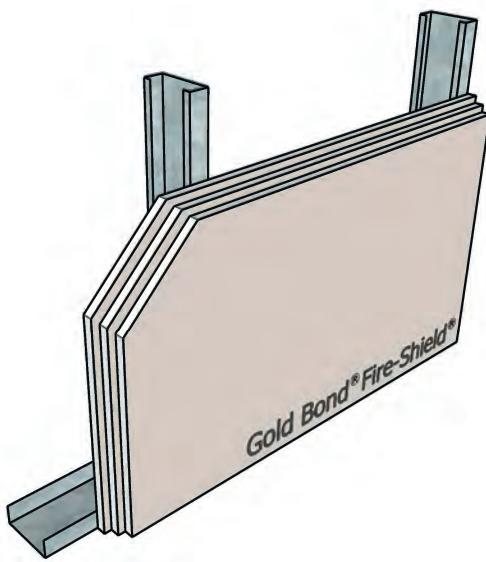
The SoundBookTM



Steel Stud Partitions
with Framing 24" o.c.

Steel Stud Partitions with Framing 24" o.c.

Figure 76

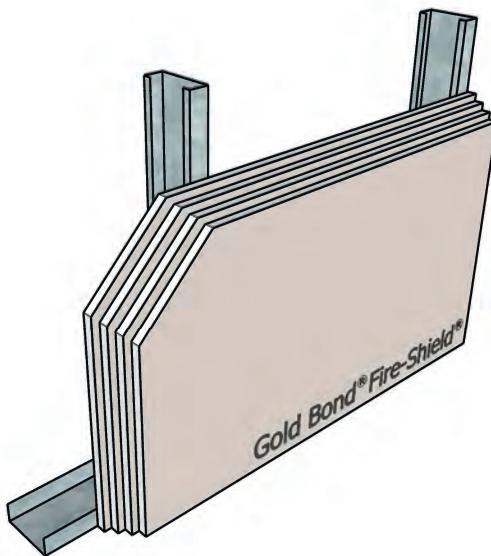


STC-34

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 24" o.c.
Insulation: None
Side 1: None
Side 2: 3 layers 5/8" Fire-Shield Gypsum Board

UL Design: V497 - 1 hour

Figure 78



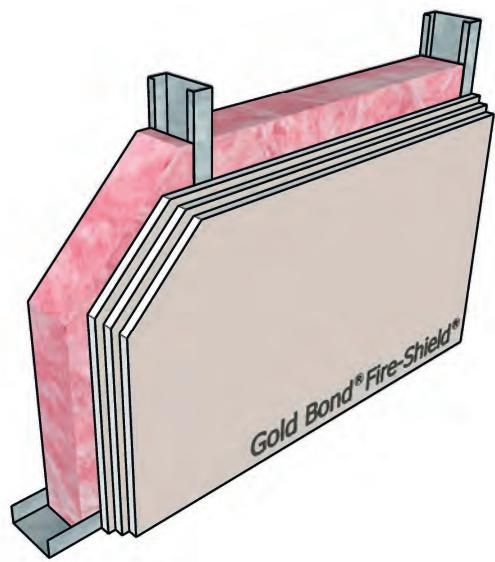
STC-36

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 24" o.c.
Insulation: None
Side 1: None
Side 2: 4 layers 5/8" Fire-Shield Gypsum Board

UL Design: V497 - 2 hour

Note: 25 gauge (15 mil) and 20 gauge (18 mil, 19 mil, and 20 mil) studs are equivalent gauge (EQ) studs.

Figure 77

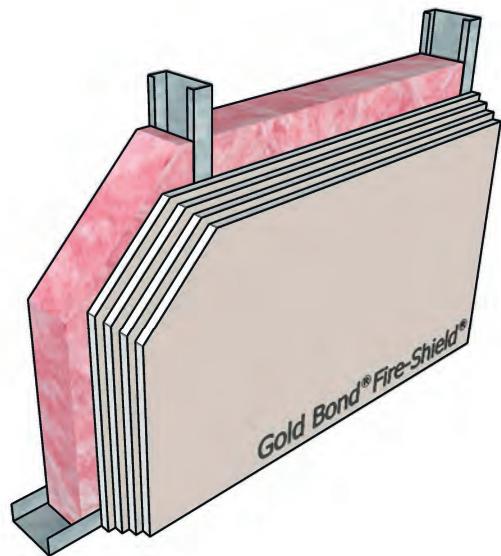


STC-42

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: None
Side 2: 3 layers 5/8" Fire-Shield Gypsum Board

UL Design: V497 - 1 hour

Figure 79



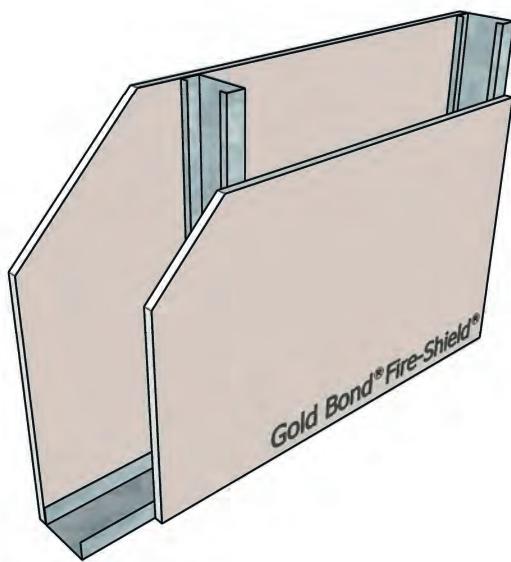
STC-44

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: None
Side 2: 4 layers 5/8" Fire-Shield Gypsum Board

UL Design: V497 - 2 hour

Steel Stud Partitions with Framing 24" o.c.

Figure 80

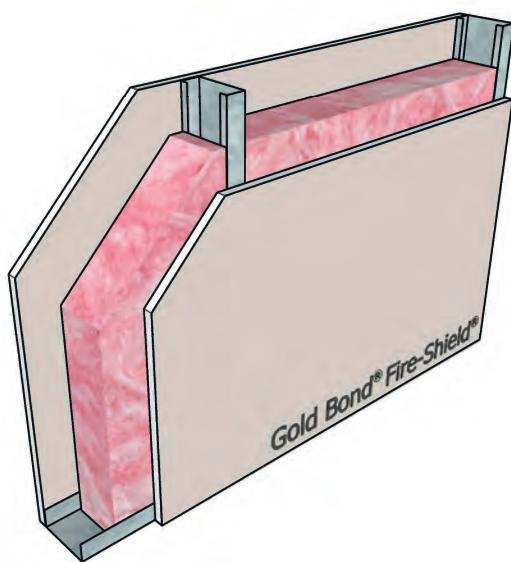


STC-42

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
Insulation: None
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: V438, U465 - 1 hour

Figure 82

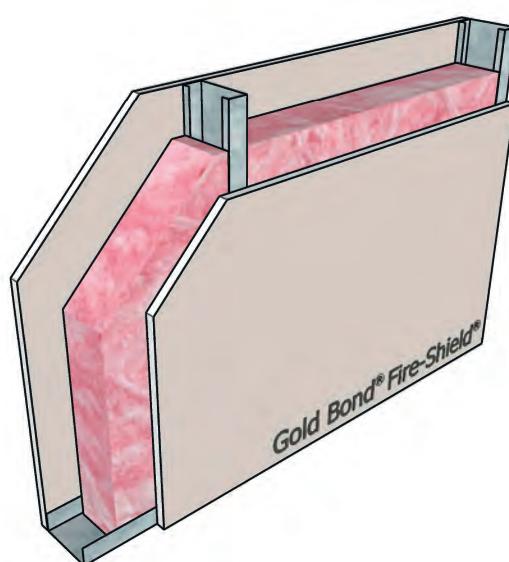


STC-47

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: V438, U465 - 1 hour

Figure 81

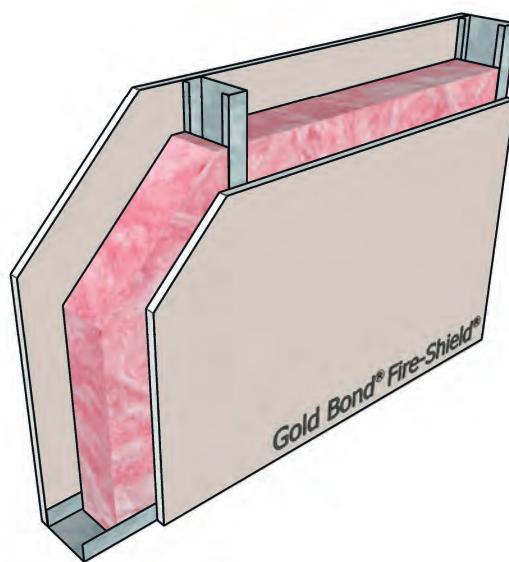


STC-44

Framing: 3-5/8" steel studs, 20 gauge (20 mil), 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: V438, U465 - 1 hour

Figure 83



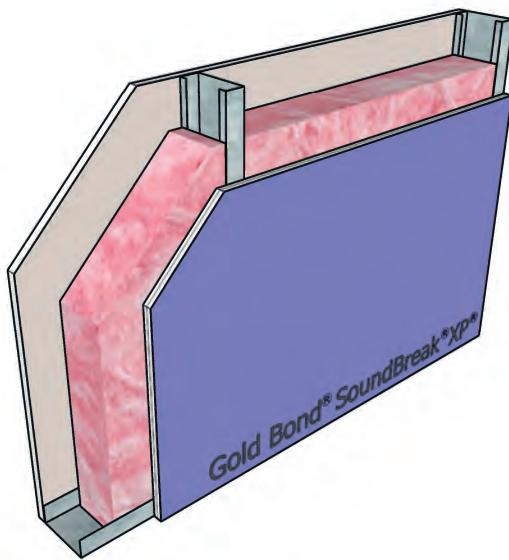
STC-39

Framing: 3-1/2" steel studs, 20 gauge (33 mil), 24" o.c.
Insulation: 3" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: V438, U465, W469 - 1 hour

Steel Stud Partitions with Framing 24" o.c.

Figure 84



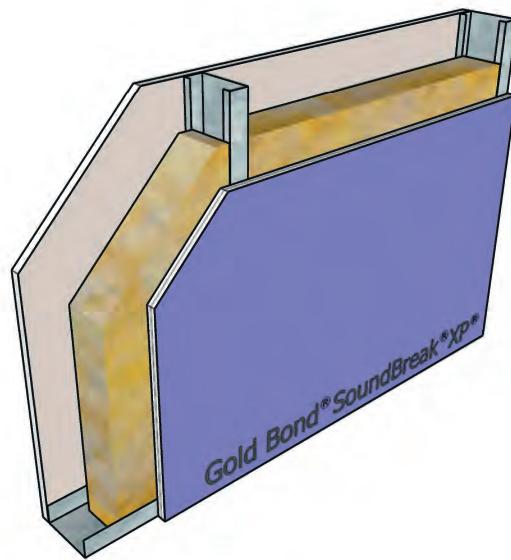
STC-55

Framing: 3-5/8" steel studs, 20 gauge (20 mil), 24" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board

UL Design: V438, U465 - 1 hour

OL14-0404

Figure 85



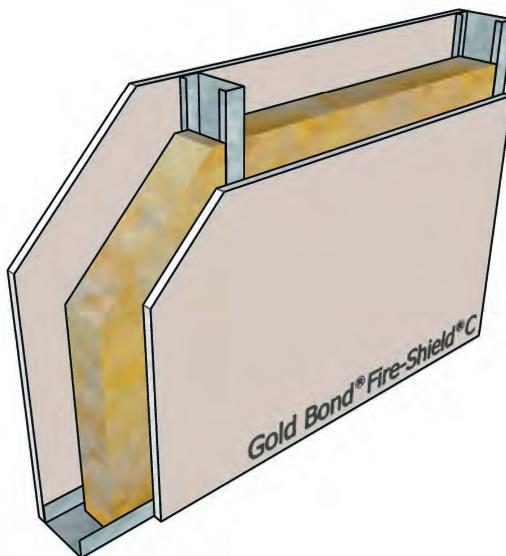
STC-54

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 3" mineral wool
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board

UL Design: V438, U465 - 1 hour

RAL-TL07-389

Figure 86



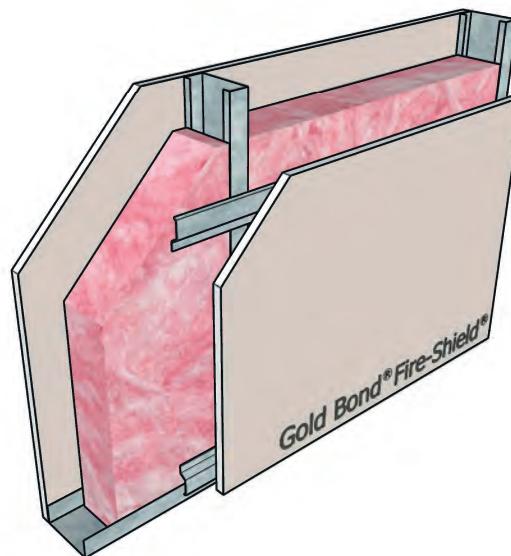
STC-47

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 3" mineral wool
 Side 1: 1/2" Fire-Shield C Gypsum Board
 Side 2: 1/2" Fire-Shield C Gypsum Board

UL Design: V438, V401 - 1 hour

NGC 2017009

Figure 87



STC-53

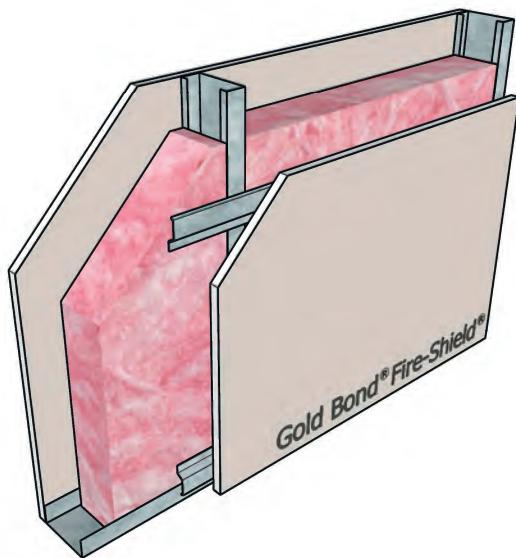
Framing: 3-5/8" steel studs, 25 gauge (15 mil), 24" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

NGC 2017102

Steel Stud Partitions with Framing 24" o.c.

Figure 88



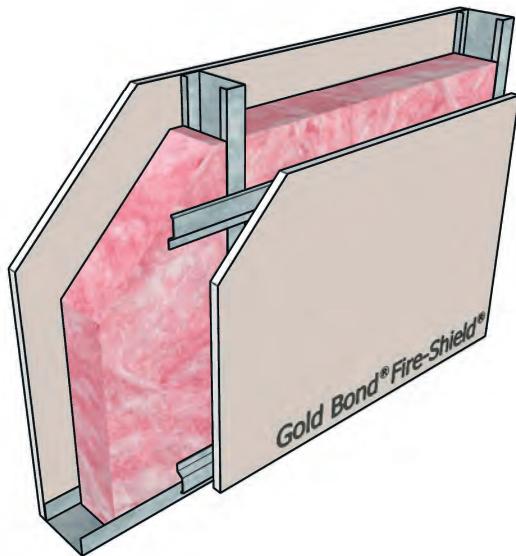
STC-51

NGC 2016017

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Figure 90



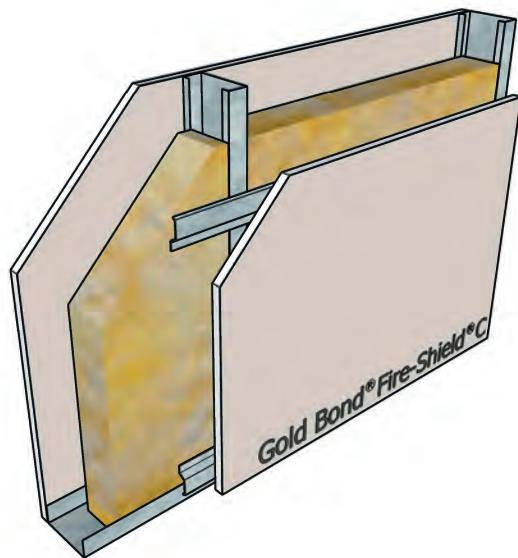
STC-50

NGC 2013019

Framing: 3-5/8" steel studs, 20 gauge (20 mil), 24" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Figure 89



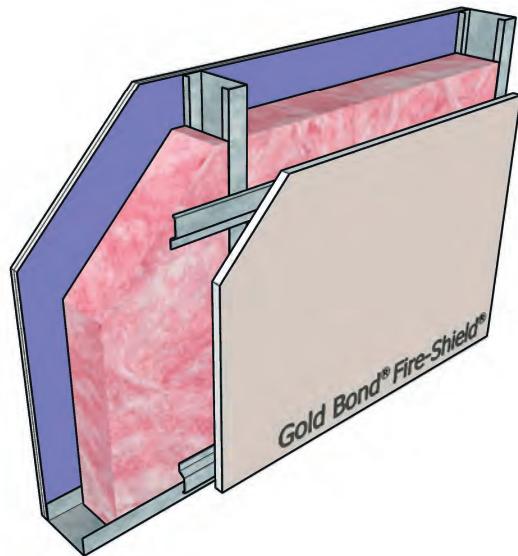
STC-54

NGC 2016016

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 3" mineral wool
 Side 1: 5/8" Fire-Shield C Gypsum Board
 Side 2: 5/8" Fire-Shield C Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Figure 91



STC-56

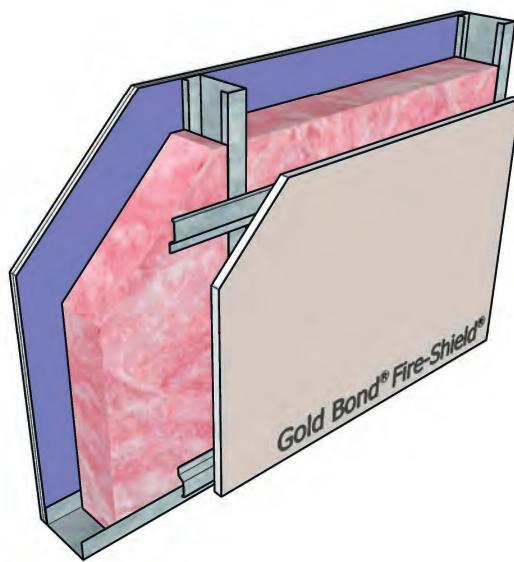
NGC 2016018

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" SoundBreak XP Wall Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Steel Stud Partitions with Framing 24" o.c.

Figure 92

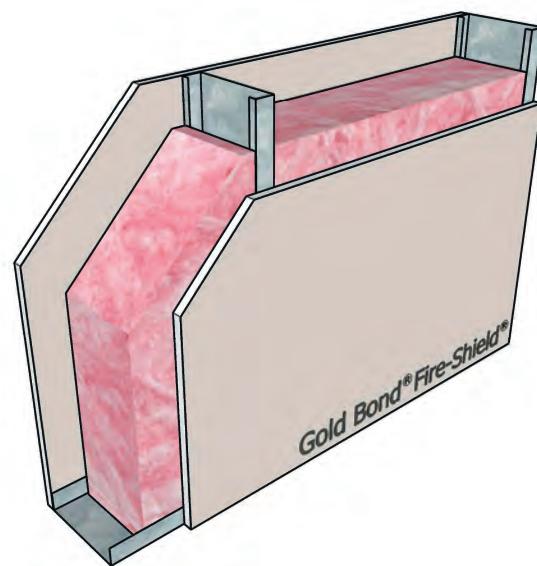


STC-54

Framing: 3-5/8" steel studs, 20 gauge (20 mil), 24" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" SoundBreak XP Wall Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Figure 93

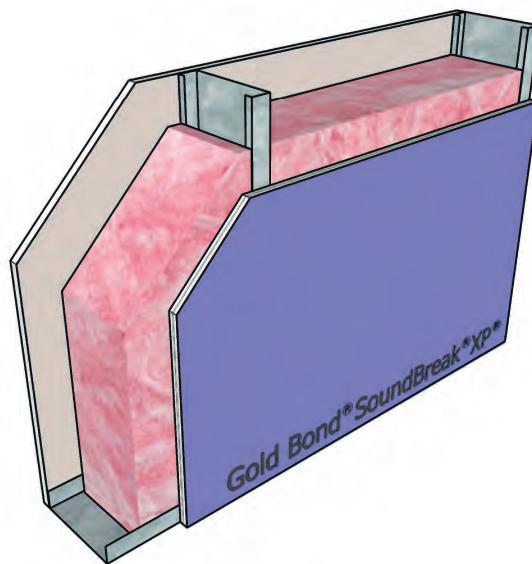


STC-49

Framing: 6" steel studs, 25 gauge (15 mil), 24" o.c.
 Insulation: 6" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: V438, U465 - 1 hour

Figure 94

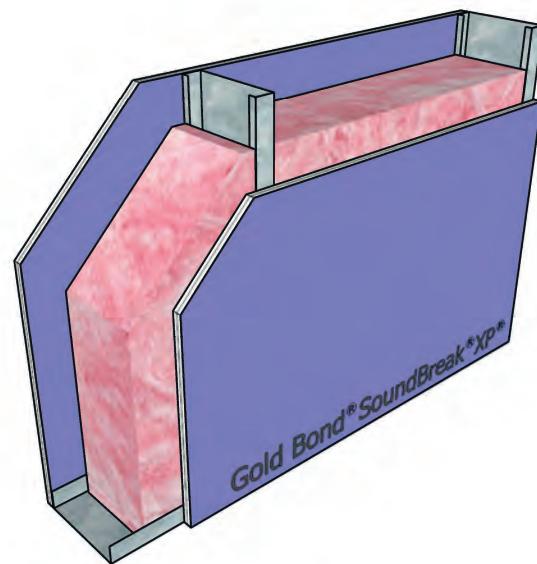


STC-57

Framing: 6" steel studs, 25 gauge (15 mil), 24" o.c.
 Insulation: 6" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board

UL Design: V438, U465 - 1 hour

Figure 95



STC-58

Framing: 6" steel studs, 25 gauge (15 mil), 24" o.c.
 Insulation: 6" glass fiber
 Side 1: 5/8" SoundBreak XP Wall Board
 Side 2: 5/8" SoundBreak XP Wall Board

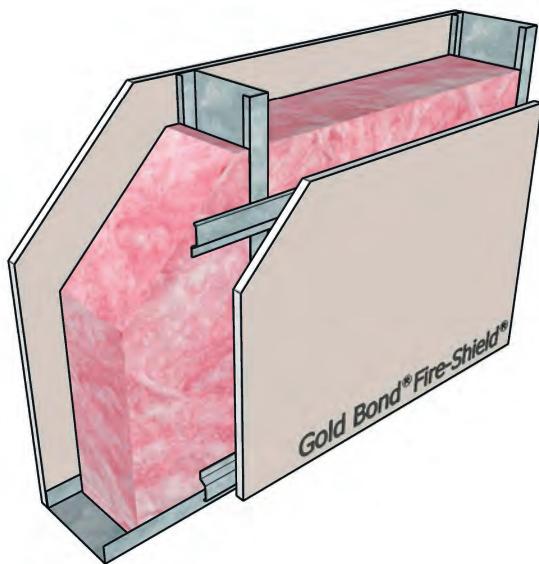
UL Design: V438, U465 - 1 hour

NGC 2017116

NGC 2017114

Steel Stud Partitions with Framing 24" o.c.

Figure 96



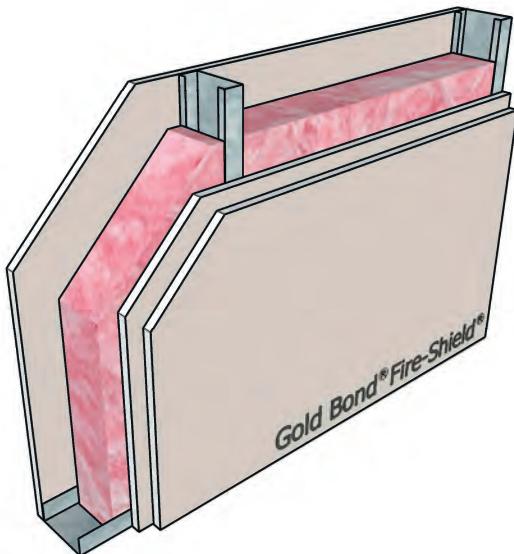
STC-52

NGC 2002039

Framing: 6" steel studs, 25 gauge (18 mil), 24" o.c.
Insulation: 6" glass fiber
Side 1: 5/8" Fire-Shield C Gypsum Board
Side 2: 5/8" Fire-Shield C Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Figure 98



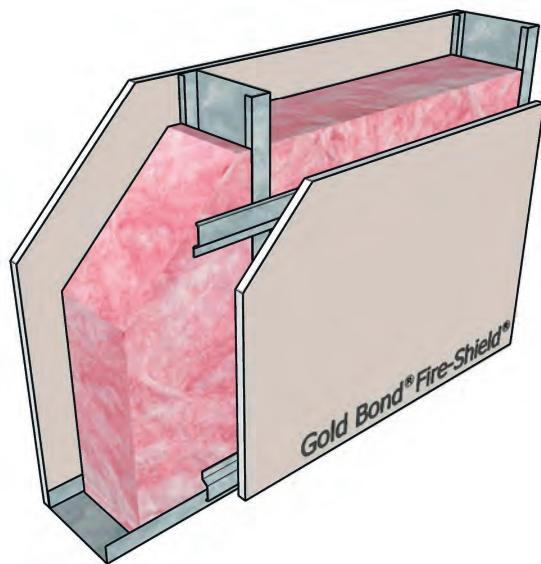
STC-52

NGC 2018111

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
Insulation: 2-1/2" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438, U465 - 1 hour

Figure 97



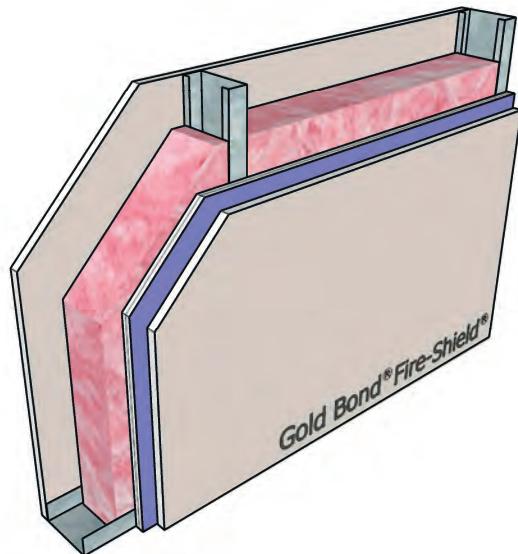
STC-53

NGC 2017117

Framing: 6" steel studs, 25 gauge (15 mil), 24" o.c.
Insulation: 6" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Figure 99



STC-57

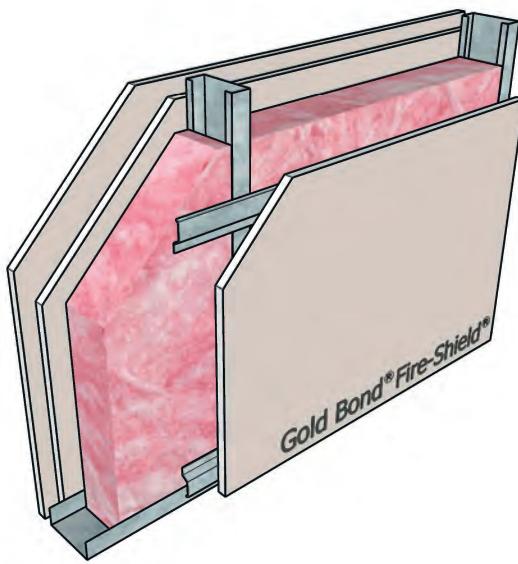
RAL-TL06-334

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board on
1/2" SoundBreak XP Wall Board

UL Design: V438, U465 - 1 hour

Steel Stud Partitions with Framing 24" o.c.

Figure 100

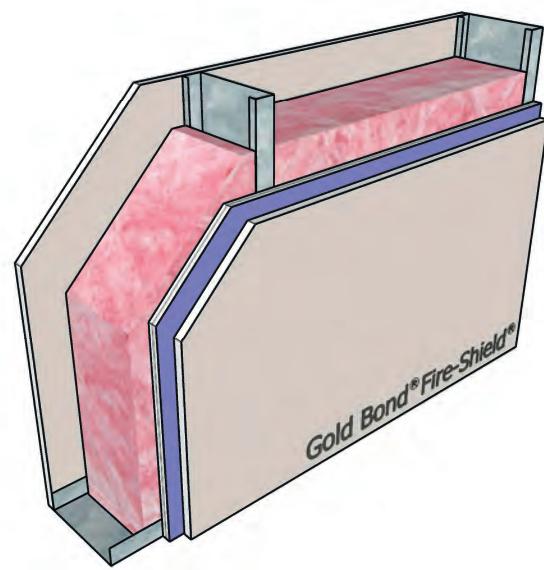


STC-57

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 24" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

Figure 101



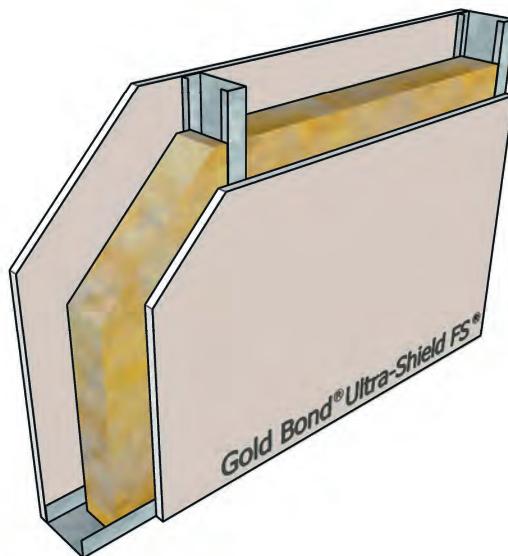
STC-57

Framing: 6" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 6" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board

UL Design: V438, U465 - 1 hour

NRCC B-3456.1

Figure 102

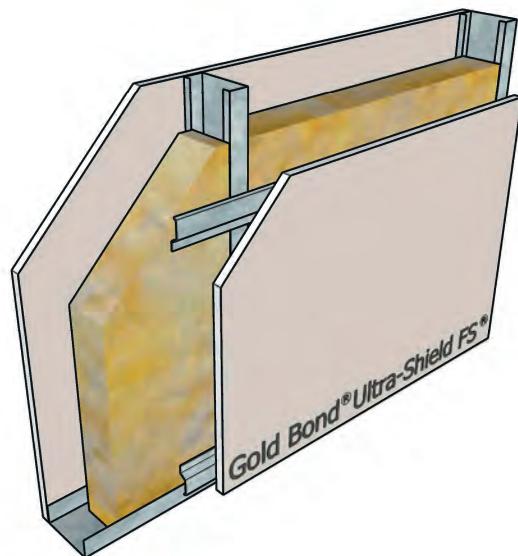


STC-50

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 3" mineral wool
 Side 1: 3/4" Ultra-Shield FS Gypsum Board
 Side 2: 3/4" Ultra-Shield FS Gypsum Board

UL Design: W432 - 2 hour

Figure 103



STC-56

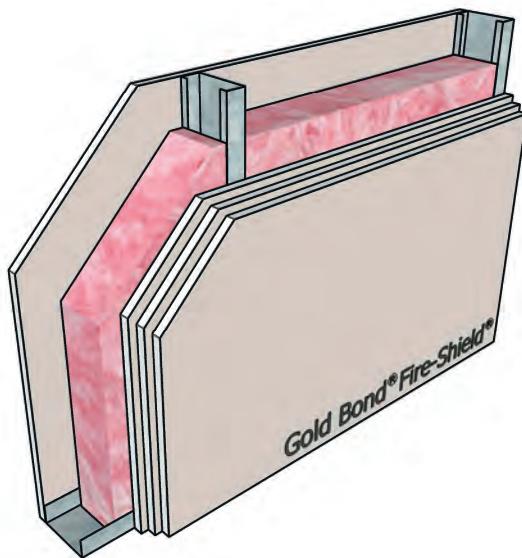
Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 3" mineral wool
 Side 1: 3/4" Ultra-Shield FS Gypsum Board
 Side 2: 3/4" Ultra-Shield FS Gypsum Board on RC-1

UL Design: W432 - 2 hour

NGC 2015062

Steel Stud Partitions with Framing 24" o.c.

Figure 104



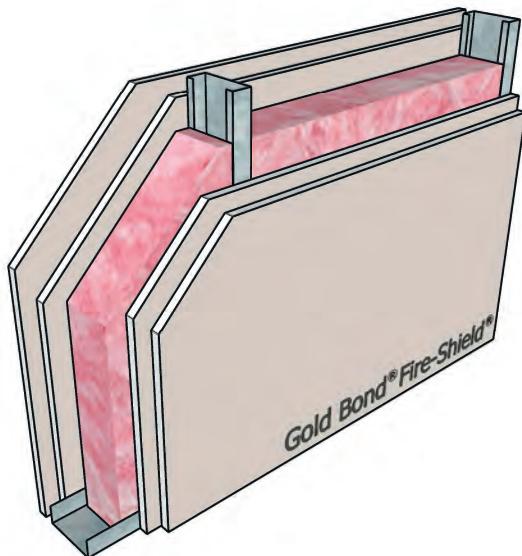
STC-52

NGC 2016024

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 3" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 3 layers 5/8" Fire-Shield Gypsum Board

UL Design: V449 - 2 hour

Figure 106



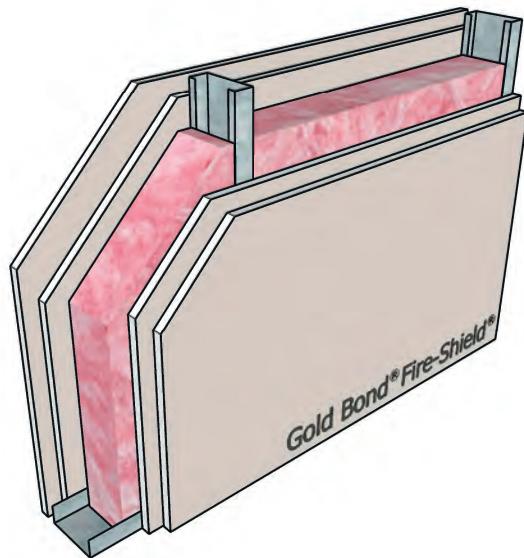
STC-56

NGC 2018058

Framing: 3-5/8" steel studs, 20 gauge (19 mil), 24" o.c.
 Insulation: 3 1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438, U411 - 2 hour

Figure 105



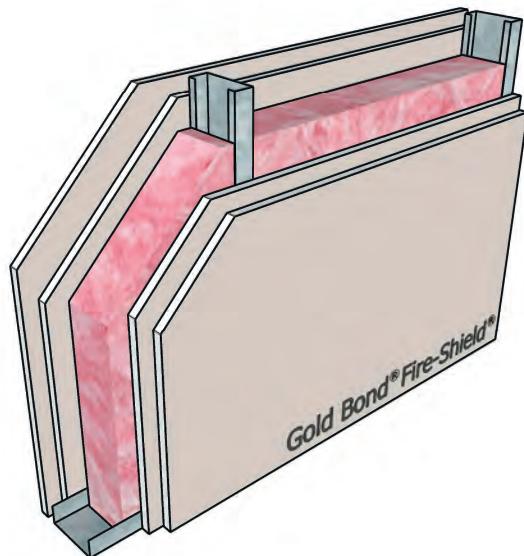
STC-56

NGC 2018112

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 3 1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438, U411 - 2 hour

Figure 107



STC-50

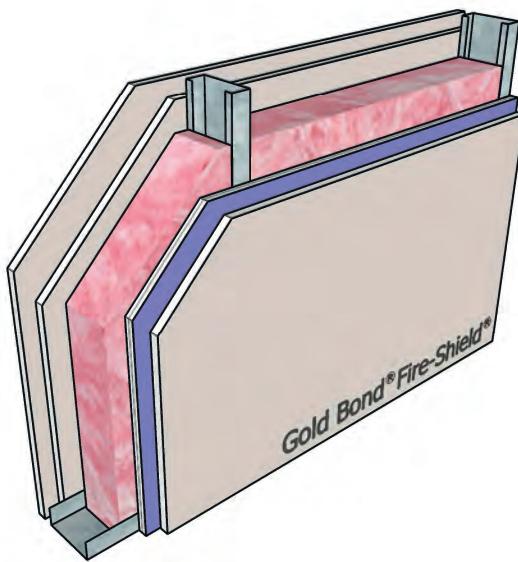
NGC 2017041

Framing: 3-1/2" steel studs, 20 gauge (33 mil), 24" o.c.
 Insulation: 3" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438, U411, W469 - 2 hour

Steel Stud Partitions with Framing 24" o.c.

Figure 108

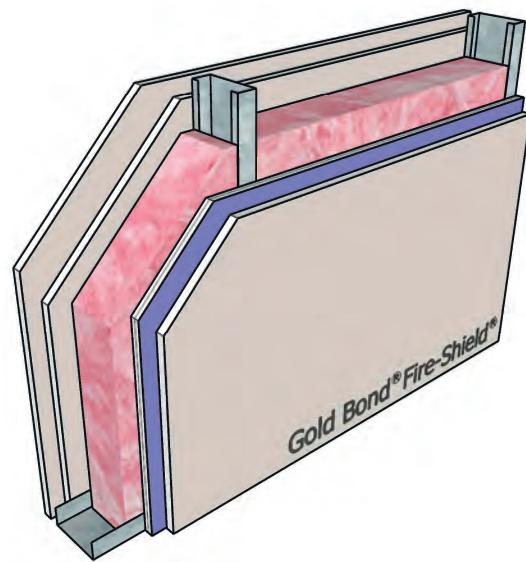


STC-60

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board
 UL Design: V438, U411 - 2 hour

RAL-TL07-168

Figure 109

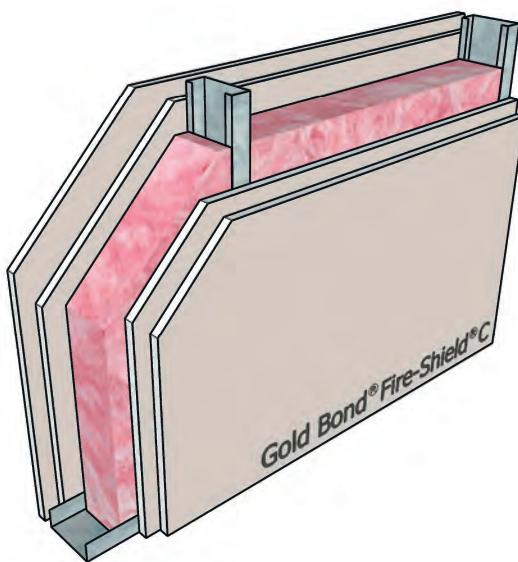


STC-56

Framing: 3-5/8" steel studs, 20 gauge (20 mil), 24" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board
 UL Design: V438, U411 - 2 hour

NGC 2013018

Figure 110

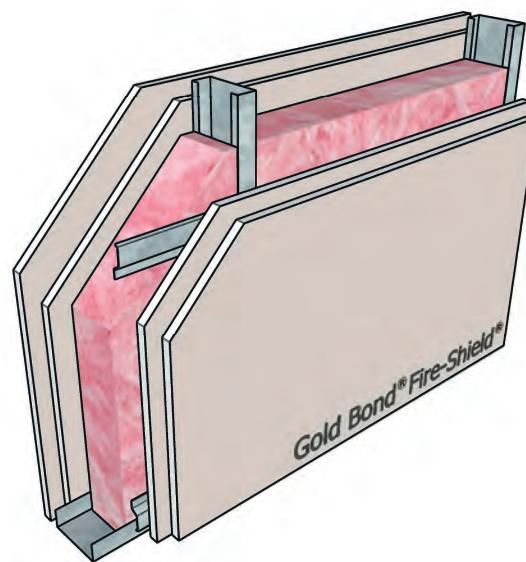


STC-51

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 3 1/2" glass fiber
 Side 1: 2 layers 1/2" Fire-Shield C Gypsum Board
 Side 2: 2 layers 1/2" Fire-Shield C Gypsum Board
 UL Design: V438, U412 - 2 hour

NGC 2017011

Figure 111



STC-61

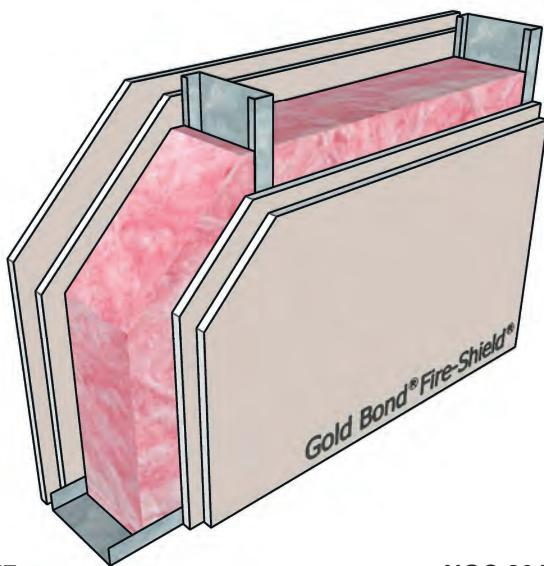
Framing: 3-5/8" steel studs, 25 gauge (15 mil), 24" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on RC-1

NGC 2017103

UL Design: V438, U411 - 2 hour

Steel Stud Partitions with Framing 24" o.c.

Figure 112



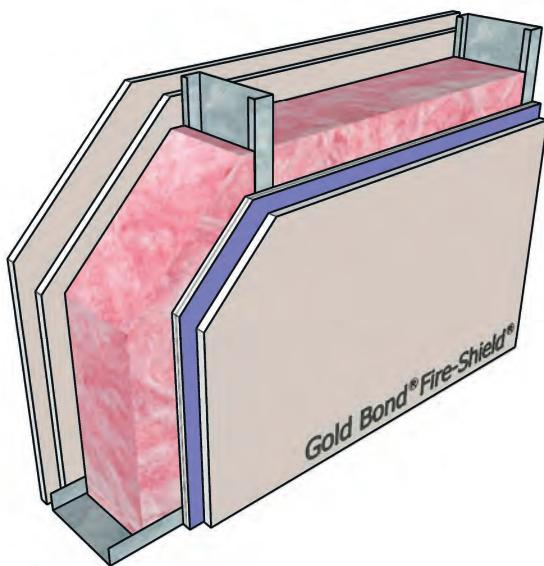
STC-57

NGC 2017119

Framing: 6" steel studs, 25 gauge (15 mil), 24" o.c.
 Insulation: 6" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438, U411 - 2 hour

Figure 114



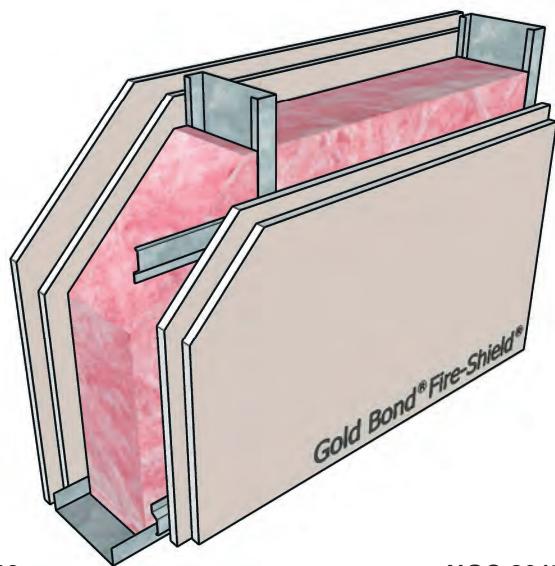
STC-61

NRCC B-3456.2

Framing: 6" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 6" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board

UL Design: V438, U411 - 2 hour

Figure 113



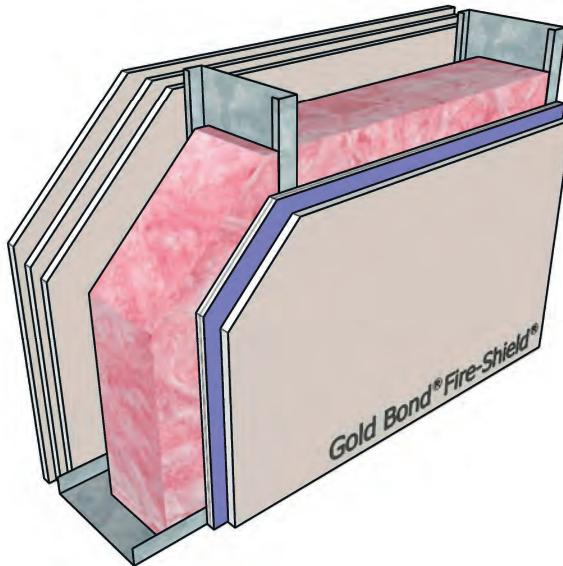
STC-63

NGC 2017118

Framing: 6" steel studs, 25 gauge (15 mil), 24" o.c.
 Insulation: 6" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: V438, U411 - 2 hour

Figure 115



STC-57

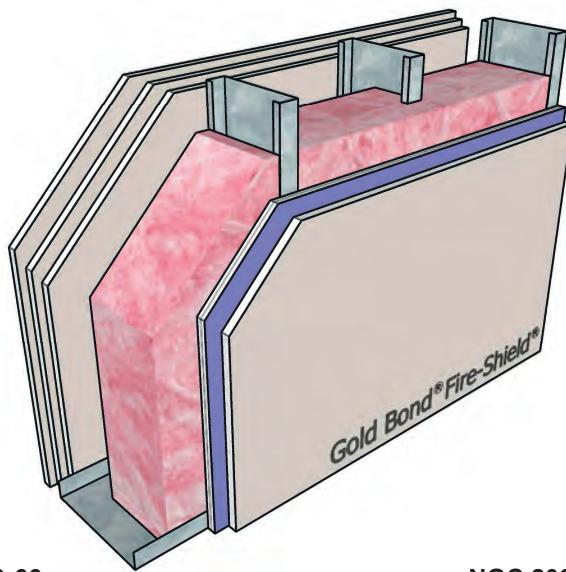
NGC 2009035

Framing: 8" steel studs, 18 gauge (54 mil), 24" o.c.
 Insulation: 6-1/4" glass fiber
 Side 1: 3 layers Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board

UL Design: V438, U411, W469 - 2 hour

Steel Stud Partitions with Framing 24" o.c.

Figure 116

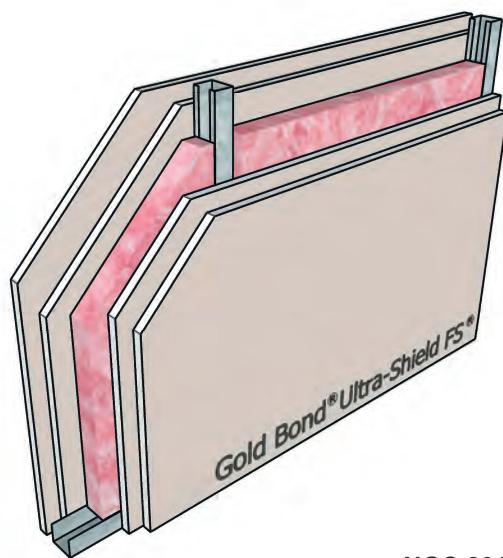


STC-66

NGC 2009036

Framing: 6" steel studs, 18 gauge (43 mil), 24" o.c., staggered in 8" track
 Insulation: 6-1/4" glass fiber
 Side 1: 3 layers Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board
 UL Design: V438, U411, W469 - 2 hour

Figure 117



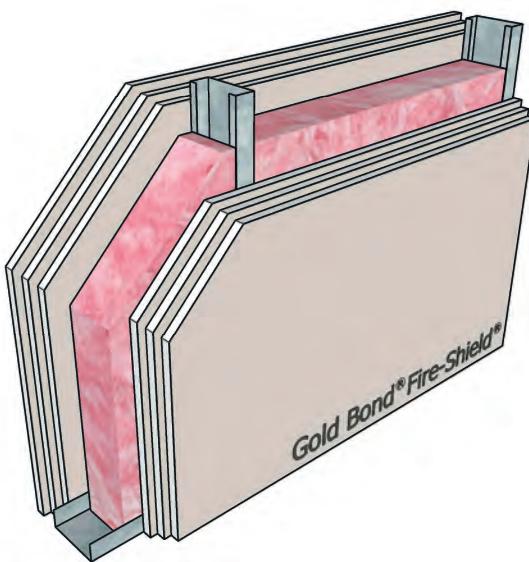
STC-55

NGC 2017037

Framing: 1-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 2 layers 3/4" Ultra-Shield FS Gypsum Board
 Side 2: 2 layers 3/4" Ultra-Shield FS Gypsum Board

UL Design: W455 - 3 hour

Figure 118

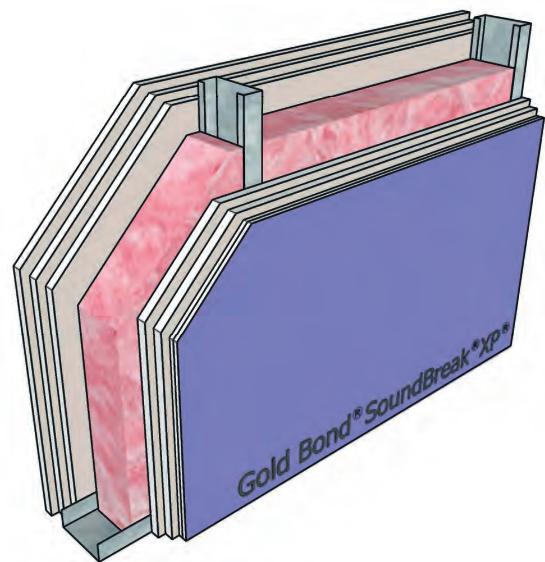


STC-59

NGC 2016101

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 3 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 3 layers 5/8" Fire-Shield Gypsum Board
 UL Design: V438 - 3 hour

Figure 119



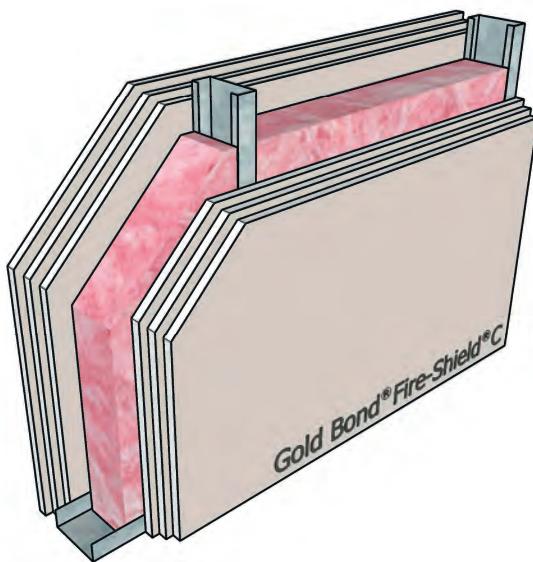
STC-62

NGC 2016102

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 3 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board on 2 layers 5/8" Fire-Shield Gypsum Board
 UL Design: V438 - 3 hour

Steel Stud Partitions with Framing 24" o.c.

Figure 120



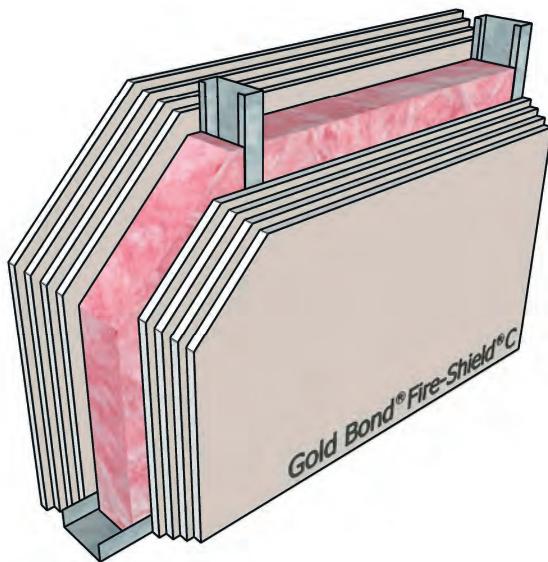
STC-59

NGC 2017012

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 3 layers 1/2" Fire-Shield C Gypsum Board
Side 2: 3 layers 1/2" Fire-Shield C Gypsum Board

UL Design: U435, V438 - 3 hour

Figure 122



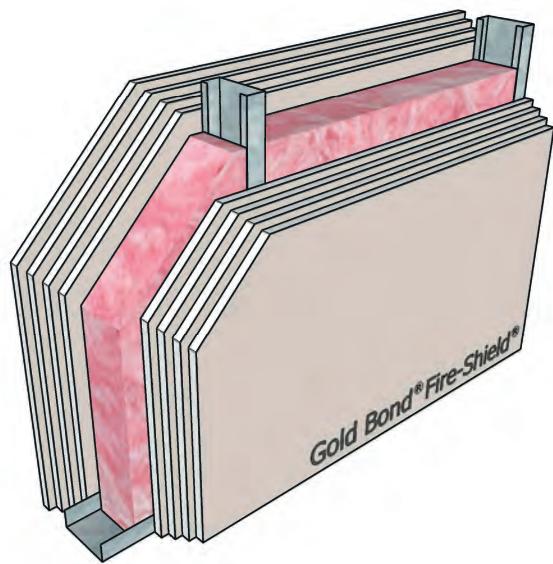
STC-62

NGC 2017013

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 4 layers 1/2" Fire-Shield C Gypsum Board
Side 2: 4 layers 1/2" Fire-Shield C Gypsum Board

UL Design: U435, V438 - 4 hour

Figure 121



STC-61

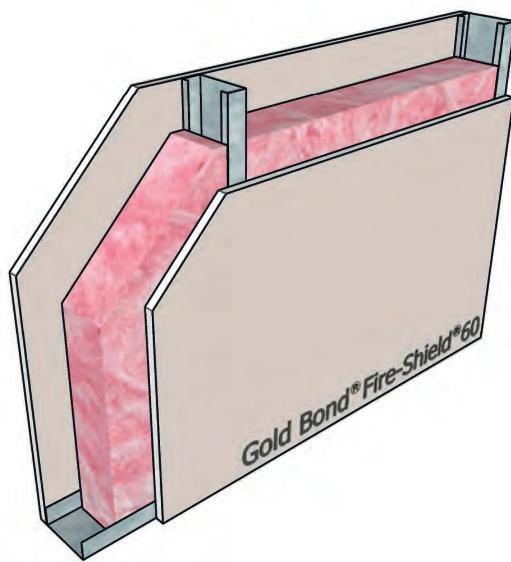
NGC 2016100

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 4 layers 5/8" Fire-Shield Gypsum Board
Side 2: 4 layers 5/8" Fire-Shield Gypsum Board

UL Design: V438 - 4 hour

Steel Stud Partitions with Framing 24" o.c.

Figure 123



STC-45

Framing: 3-5/8" steel studs, 25 gauge (15 mil), 24" o.c.

Insulation: 3-1/2" glass fiber

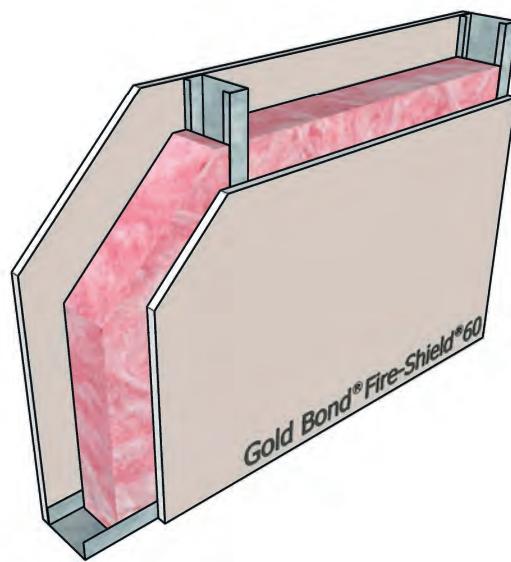
Side 1: 5/8" High Strength Fire-Shield 60 Gypsum Board

Side 2: 5/8" High Strength Fire-Shield 60 Gypsum Board

UL Design: V438, U465 - 1 hour

NGC 2018155

Figure 124



STC-45

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 24" o.c.

Insulation: 3-1/2" glass fiber

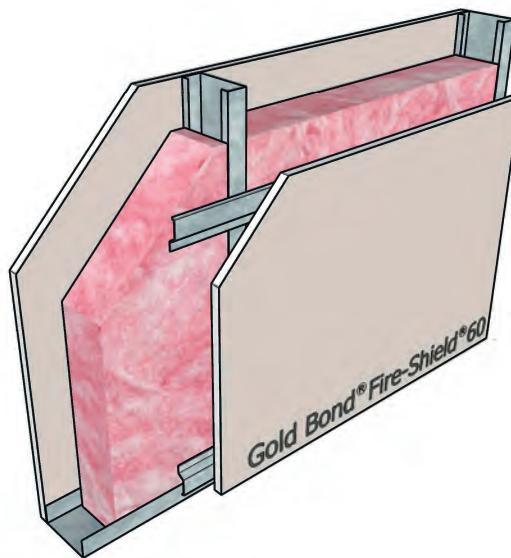
Side 1: 5/8" High Strength Fire-Shield 60 Gypsum Board

Side 2: 5/8" High Strength Fire-Shield 60 Gypsum Board

UL Design: V438, U465 - 1 hour

NGC 2018165

Figure 125



STC-50

Framing: 3-5/8" steel studs, 25 gauge (15 mil), 24" o.c.

Insulation: 3-1/2" glass fiber

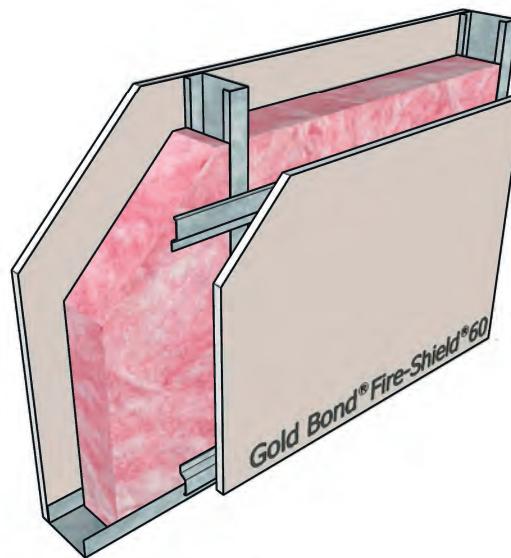
Side 1: 5/8" High Strength Fire-Shield 60 Gypsum Board

Side 2: 5/8" High Strength Fire-Shield 60 Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

NGC 2018157

Figure 126



STC-49

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 24" o.c.

Insulation: 3-1/2" glass fiber

Side 1: 5/8" High Strength Fire-Shield 60 Gypsum Board

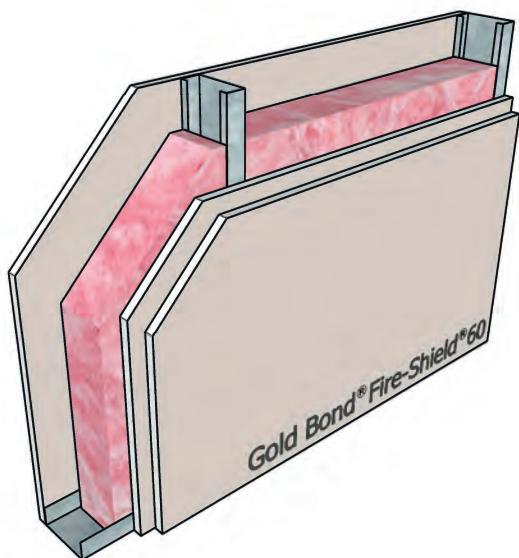
Side 2: 5/8" High Strength Fire-Shield 60 Gypsum Board on RC-1

UL Design: V438, U465 - 1 hour

NGC 2018166

Steel Stud Partitions with Framing 24" o.c.

Figure 127



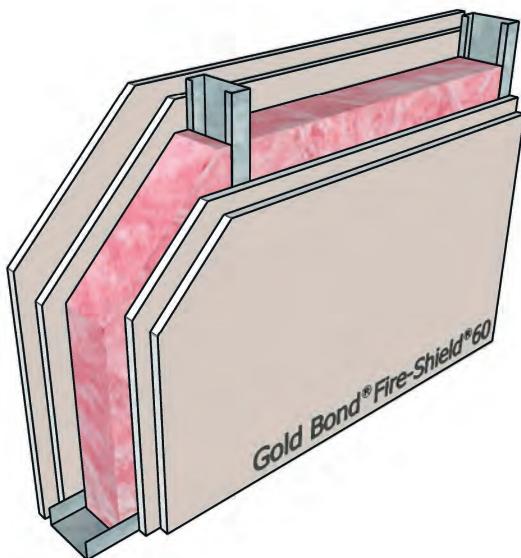
STC-49

NGC 2018164

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" High Strength Fire-Shield 60 Gypsum Board
Side 2: 2 layers 5/8" High Strength Fire-Shield 60 Gypsum Board

UL Design: V438, U465 - 1 hour

Figure 128



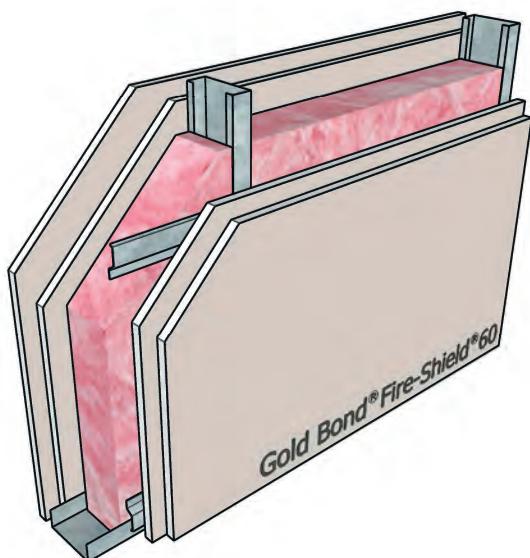
STC-51

NGC 2018163

Framing: 3-5/8" steel studs, 20 gauge (18 mil), 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 2 layers High Strength 5/8" Fire-Shield 60 Gypsum Board
Side 2: 2 layers High Strength 5/8" Fire-Shield 60 Gypsum Board

UL Design: V438, U411 - 2 hour

Figure 129



STC-52

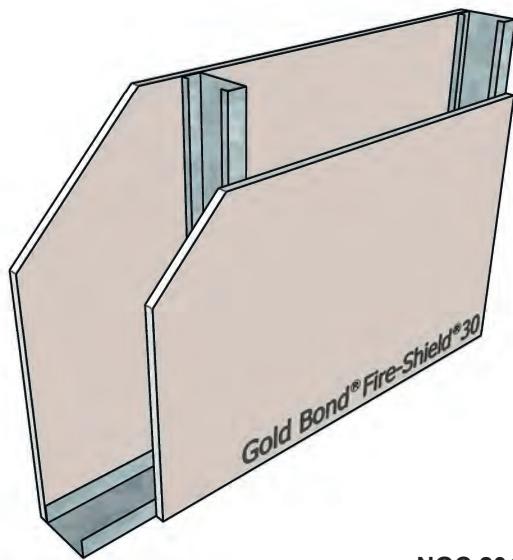
NGC 2018156

Framing: 3-5/8" steel studs, 25 gauge (15 mil), 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 2 layers High Strength 5/8" Fire-Shield 60 Gypsum Board
Side 2: 2 layers High Strength 5/8" Fire-Shield 60 Gypsum Board on RC-1

UL Design: V438, U411 - 2 hour

Steel Stud Partitions with Framing 24" o.c.

Figure 130



STC-36

NGC 2014006

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.

Insulation: None

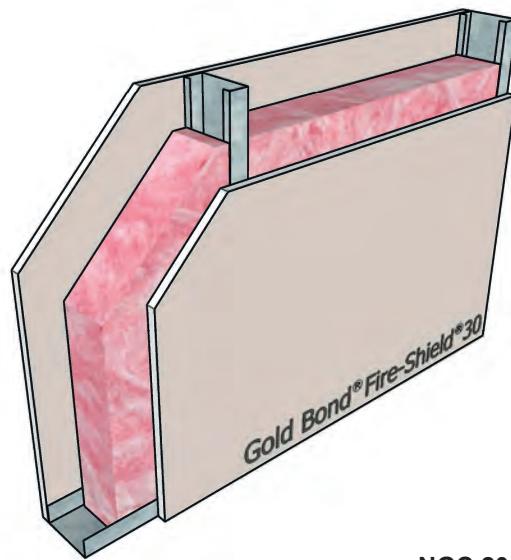
Side 1: 5/8" High Strength Fire-Shield 30 Gypsum Board

Side 2: 5/8" High Strength Fire-Shield 30 Gypsum Board

UL Design: W411 - 1/2 hour

Figure 132

Figure 131



STC-46

NGC 2014005

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.

Insulation: 3-1/2" glass fiber

Side 1: 5/8" High Strength Fire-Shield 30 Gypsum Board

Side 2: 5/8" High Strength Fire-Shield 30 Gypsum Board

UL Design: W411 - 1/2 hour

Figure 133

STC-49

NGC 2014007

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.

Insulation: 3-1/2" glass fiber

Side 1: 5/8" High Strength Fire-Shield 30 Gypsum Board

Side 2: 5/8" High Strength Fire-Shield 30 Gypsum Board
on RC-1

UL Design: W411 - 1/2 hour

STC-54

NGC 2014008

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.

Insulation: 3-1/2" glass fiber

Side 1: 2 layers 5/8" High Strength Fire-Shield 30
Gypsum Board

Side 2: 2 layers 5/8" High Strength Fire-Shield 30
Gypsum Board

UL Design: W411 - 1 hour

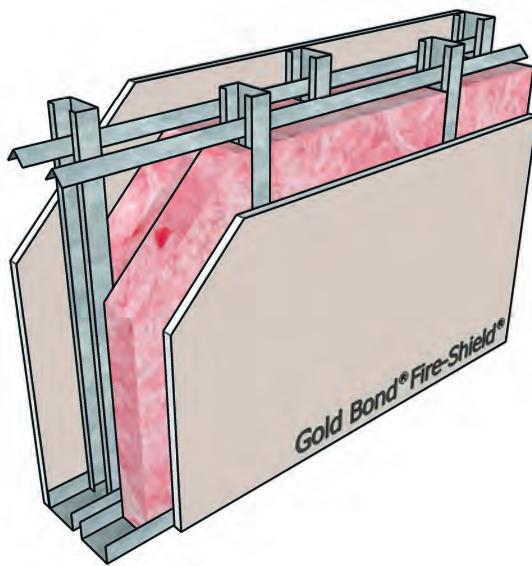
The SoundBookTM

The logo for SoundBook features the word "Sound" in a bold, sans-serif font, with "Book" in a larger, bolder font directly above it. Both words are partially cut off on the right side. A circular graphic consisting of three concentric arcs is positioned behind the text, with its center aligned vertically with the letter "B".

Steel Stud Chase Walls

Steel Stud Chase Walls

Figure 134

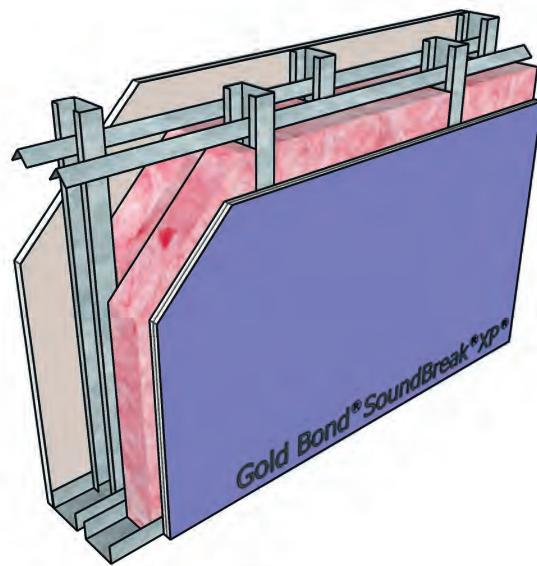


STC-57

Framing: Double row 2-1/2" steel studs, 25 gauge (15 mil), 16" o.c., braced with spacer bar
Insulation: 3-1/2" glass fiber both sides
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board
UL Design: V488 - 1 hour

NGC 2015101

Figure 135



STC-60

Framing: Double row 2-1/2" steel studs, 25 gauge (15 mil), 16" o.c., braced with spacer bar
Insulation: 3-1/2" glass fiber both sides
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" SoundBreak XP Wall Board
UL Design: V488 - 1 hour

NGC 2015103

Figure 136

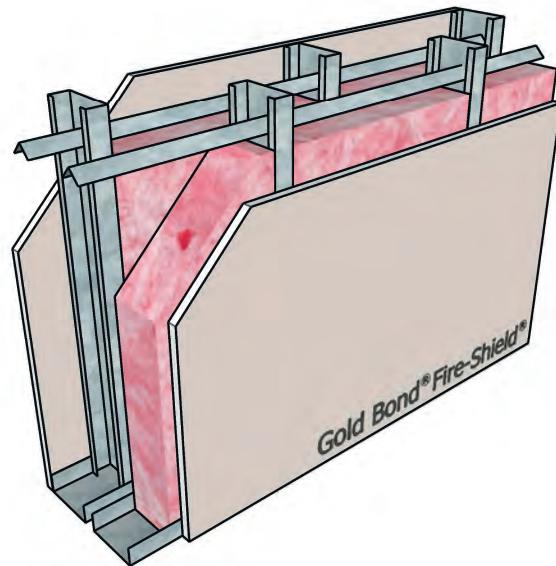


STC-57

Framing: Double row 2-1/2" steel studs, 25 gauge (18 mil), 16" o.c. staggered
Insulation: 3" mineral wool
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" SoundBreak XP Wall Board
UL Design: V488 - 1 hour

NGC 2008035

Figure 137



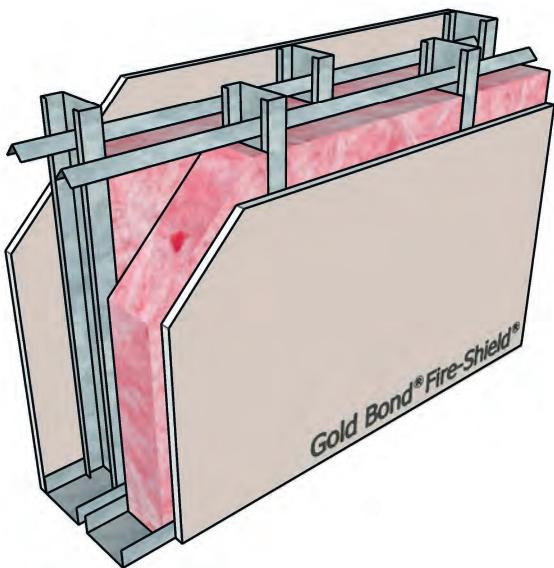
STC-60

Framing: Double row 3-5/8" steel studs, 20 gauge (19 mil), 16" o.c., braced with spacer bar
Insulation: 3-1/2" glass fiber both sides
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board
UL Design: V488 - 1 hour

NGC 2018083

Steel Stud Chase Walls

Figure 138

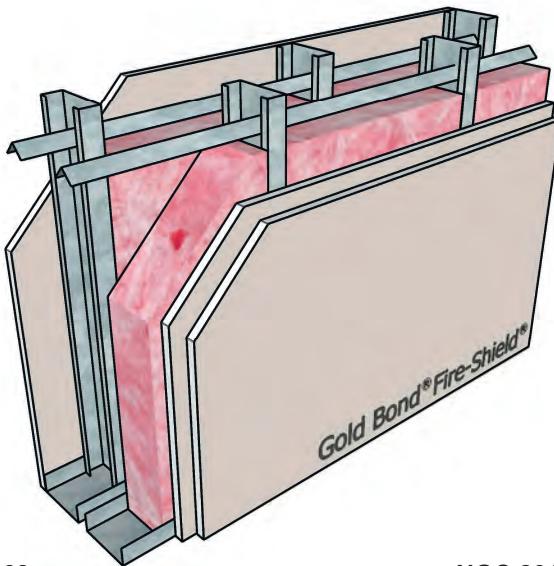


STC-55

NGC 2019036

Framing: Double row 3-5/8" steel studs, 16 gauge (54 mil), 16" o.c., braced with spacer bar
Insulation: 3-1/2" glass fiber both sides
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board
UL Design: V488 - 1 hour

Figure 140



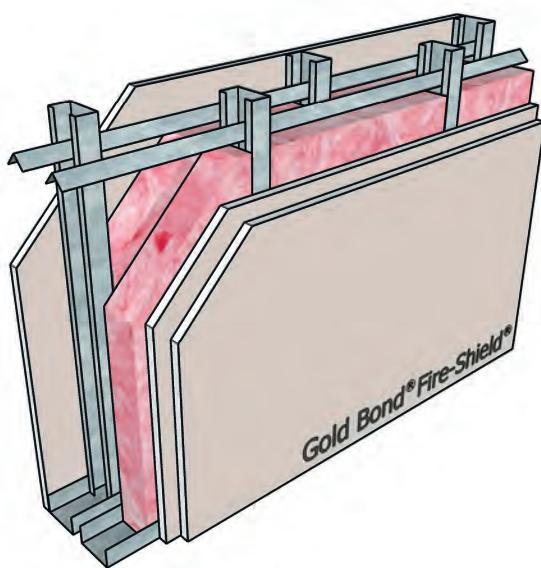
STC-63

NGC 2018084

Framing: Double row 3-5/8" steel studs, 20 gauge (19 mil), 16" o.c., braced with spacer bar
Insulation: 3-1/2" glass fiber both sides
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V488 - 1 hour

Figure 139

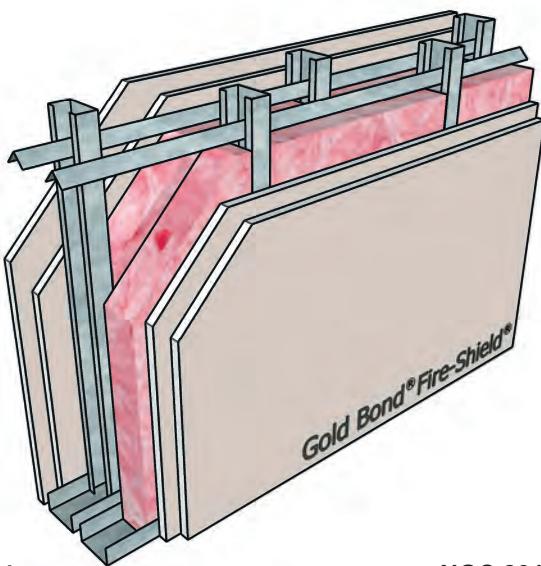


STC-61

NGC 2015102

Framing: Double row 2-1/2" steel studs, 25 gauge (15 mil), 16" o.c., braced with spacer bar
Insulation: 3-1/2" glass fiber both sides
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 2 layers 5/8" Fire-Shield Gypsum Board
UL Design: V488 - 1 hour

Figure 141



STC-64

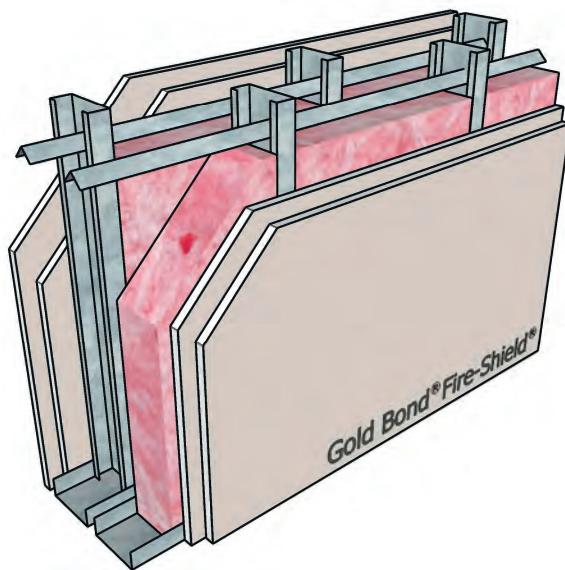
NGC 2015104

Framing: Double row 2-1/2" steel studs, 25 gauge (15 mil), 16" o.c., braced with spacer bar
Insulation: 3-1/2" glass fiber both sides
Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: V488 - 2 hour

Steel Stud Chase Walls

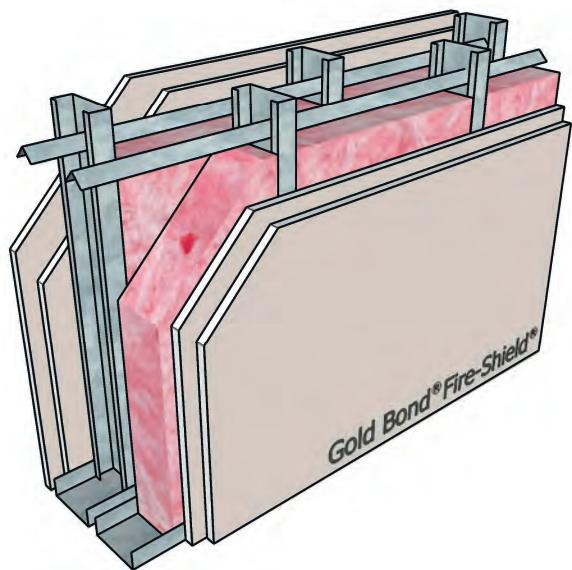
Figure 142



STC-67

Framing: Double row 3-5/8" steel studs, 20 gauge (19 mil), 16" o.c., braced with spacer bar
 Insulation: 3-1/2" glass fiber both sides
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board
 UL Design: V488 - 2 hour

Figure 143



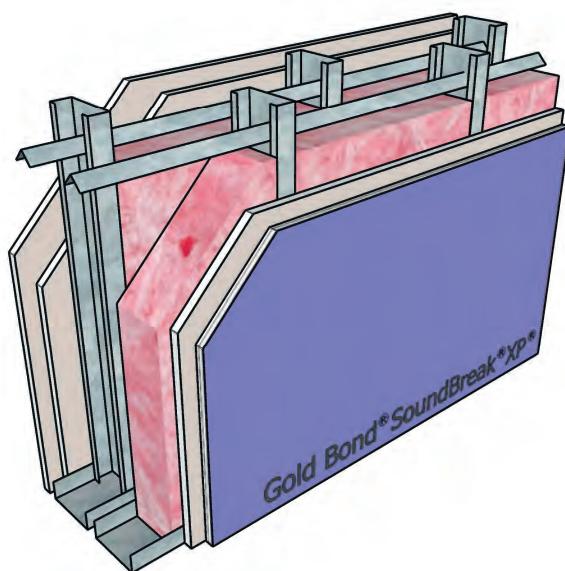
NGC 2018085

STC-63

Framing: Double row 3-5/8" steel studs, 16 gauge (54 mil), 16" o.c., braced with spacer bar
 Insulation: 3-1/2" glass fiber both sides
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board
 UL Design: V488 - 2 hour

NGC 2019038

Figure 144



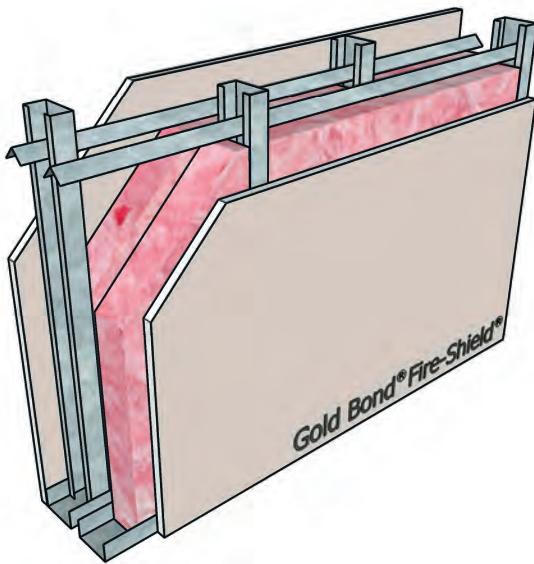
STC-66

Framing: Double row 3-5/8" steel studs, 16 gauge (54 mil), 16" o.c., braced with spacer bar
 Insulation: 3-1/2" glass fiber both sides
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board on 5/8" Fire-Shield Gypsum Board
 UL Design: V488 - 2 hour

NGC 2019037

Steel Stud Chase Walls

Figure 145

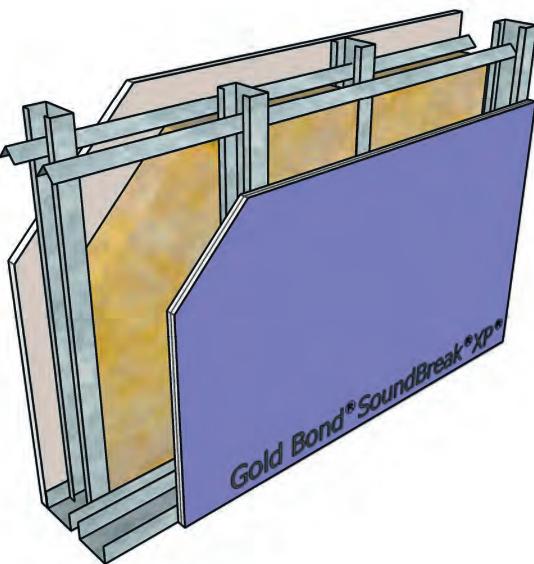


STC-56

NGC 2015108

Framing: Double row 2-1/2" steel studs, 25 gauge (15 mil), 24" o.c., braced with spacer bar
 Insulation: 3-1/2" glass fiber both sides
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board
 UL Design: V488 - 1 hour

Figure 147

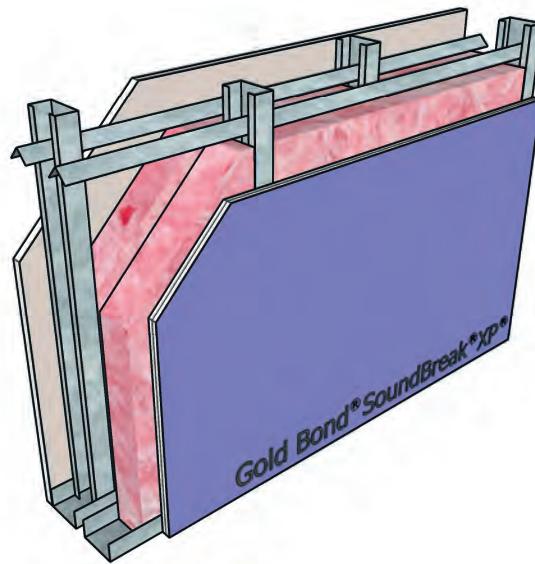


STC-59

NGC 2008036

Framing: Double row 2-1/2" steel studs, 25 gauge (18 mil), 24" o.c. staggered
 Insulation: 3" mineral wool
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board
 UL Design: V488 - 1 hour

Figure 146

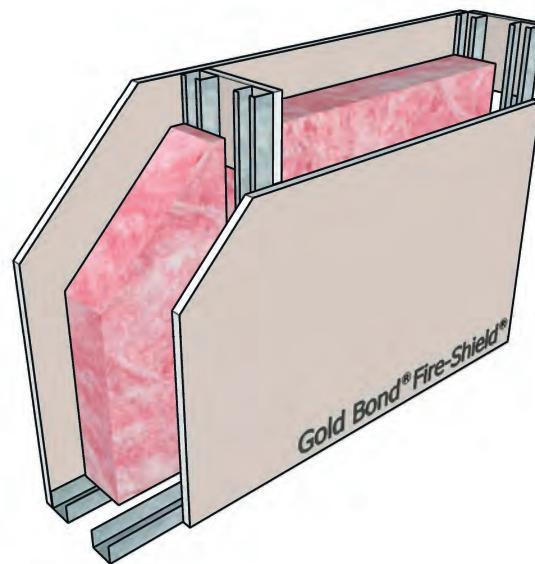


STC-60

NGC 2015107

Framing: Double row 2-1/2" steel studs, 25 gauge (15 mil), 24" o.c., braced with spacer bar
 Insulation: 3-1/2" glass fiber both sides
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board
 UL Design: V488 - 1 hour

Figure 148



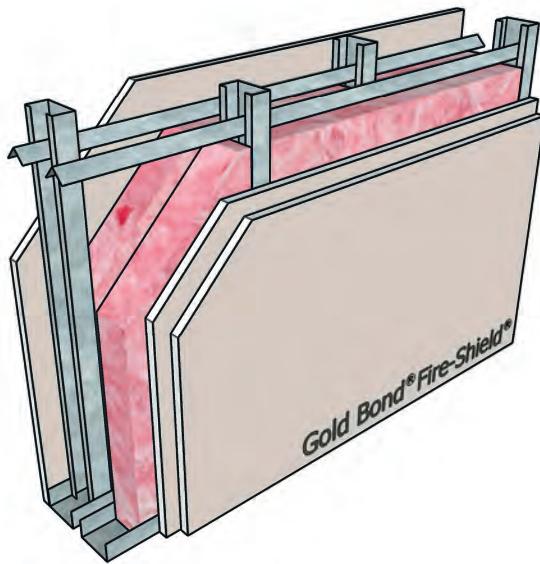
STC-52

RAL-TL76-155

Framing: Double row 1-5/8" steel studs, 25 gauge (18 mil)
 24" o.c., braced with gypsum board gussets
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board
 UL Design: U420 - 1 hour

Steel Stud Chase Walls

Figure 149

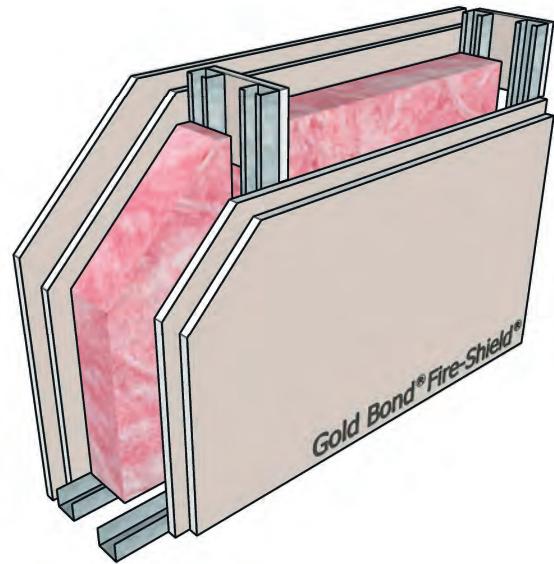


STC-60

Framing: Double row 2-1/2" steel studs, 25 gauge (15 mil), 24" o.c., braced with spacer bar
 Insulation: 3-1/2" glass fiber both sides
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board
 UL Design: V488 - 1 hour

NGC 2015109

Figure 150

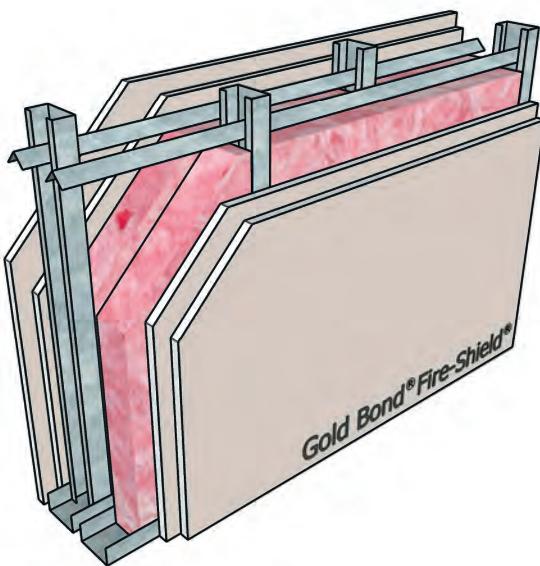


STC-57

Framing: Double row 1-5/8" steel studs, 25 gauge (18 mil)
 24" o.c., braced with gypsum board gussets
 Insulation: 3-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board
 UL Design: U420 - 2 hour

RAL-TL76-156

Figure 151



STC-64

Framing: Double row 2-1/2" steel studs, 25 gauge (15 mil), 24" o.c., braced with spacer bar
 Insulation: 3-1/2" glass fiber both sides
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board
 UL Design: V488 - 2 hour

NGC 2015112

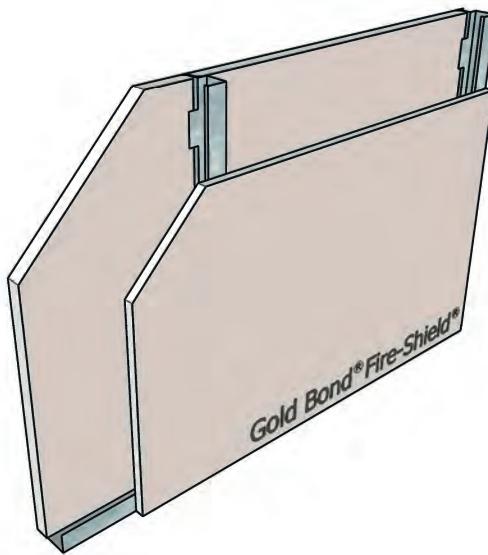
The Sound BookTM



Shaftwall Partitions

Shaftwall Partitions

Figure 152



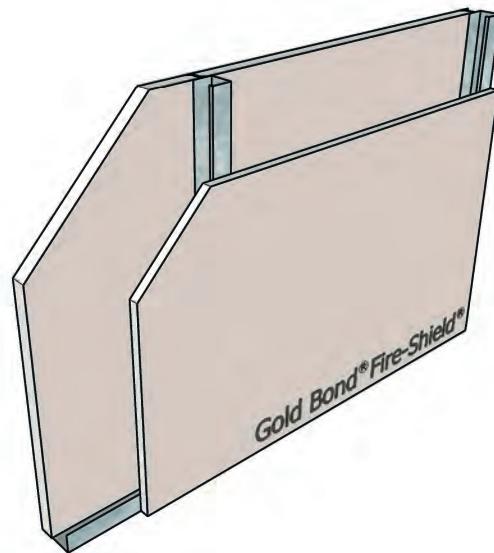
STC-34

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
Insulation: None
Side 1: 1" Fire-Shield Shaftliner
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: U499, W419 - 1 hour

Figure 154

Figure 153

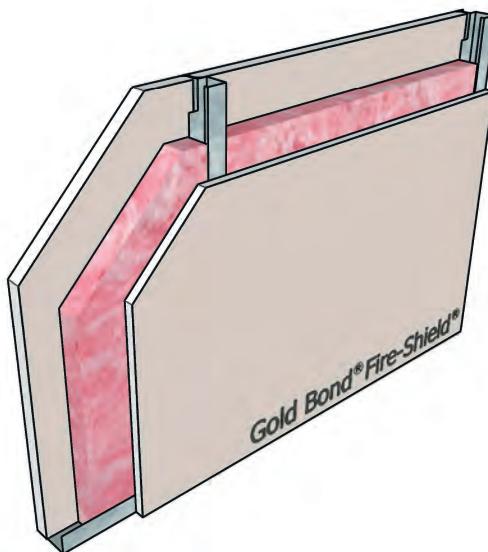


STC-37

Framing: 2-1/2" steel CH studs, 25 gauge (22 mil), 24" o.c.
Insulation: None
Side 1: 1" Fire-Shield Shaftliner
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: U499, W419 - 1 hour

NGC 2001003

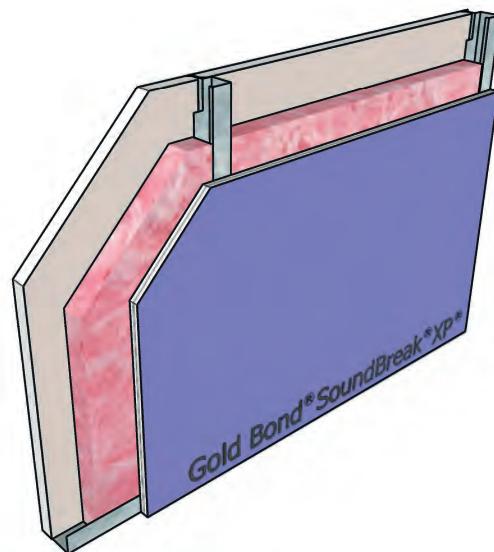


STC-42

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
Insulation: 1-1/2" glass fiber
Side 1: 1" Fire-Shield Shaftliner
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: U499, W419 - 1 hour

Figure 155



STC-44

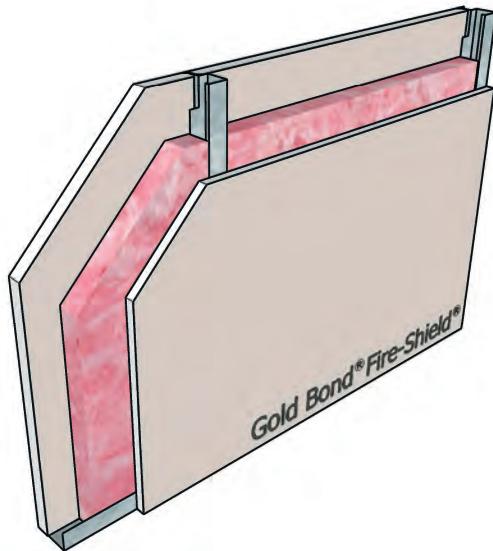
Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
Insulation: 1-1/2" glass fiber
Side 1: 1" Fire-Shield Shaftliner
Side 2: 5/8" SoundBreak XP Wall Board

UL Design: U499, W419 - 1 hour

NGC 2015035

Shaftwall Partitions

Figure 156



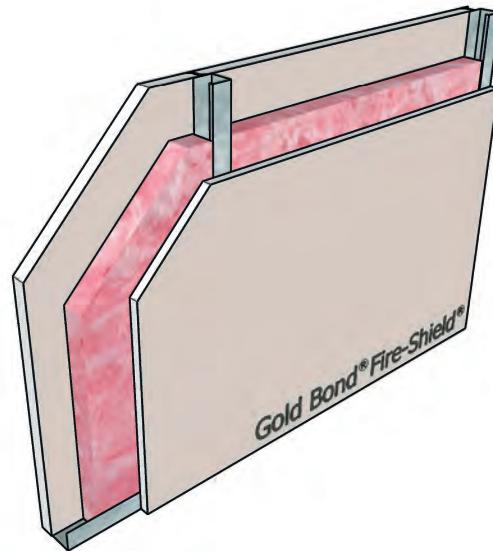
STC-43

Framing: 2-1/2" steel CT studs, 18 gauge (43 mil), 24" o.c.
Insulation: 1-1/2" glass fiber
Side 1: 1" Fire-Shield Shaftliner
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: U499, W419 - 1 hour

Figure 158

Figure 157

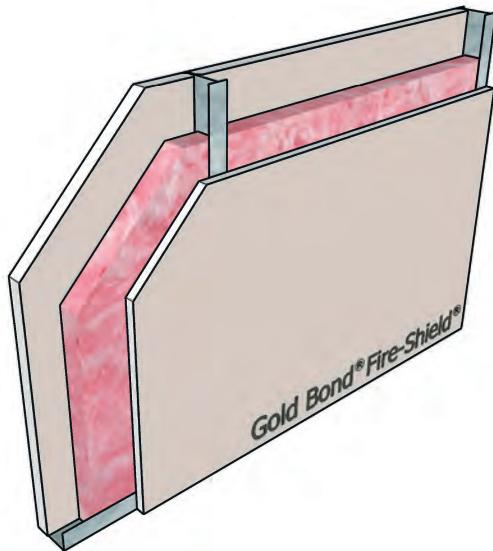


STC-40

Framing: 2-1/2" steel CH studs, 25 gauge (22 mil), 24" o.c.
Insulation: 1-1/2" glass fiber
Side 1: 1" Fire-Shield Shaftliner
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: U499, W419 - 1 hour

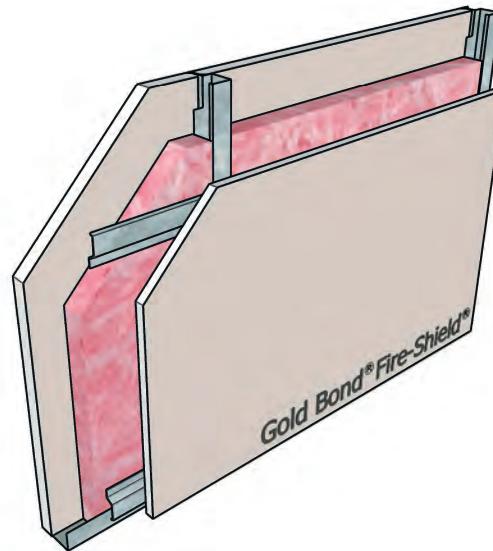
Figure 159



STC-42

Framing: 2-1/2" steel I-studs, 25 gauge (22 mil), 24" o.c.
Insulation: 1-1/2" glass fiber
Side 1: 1" Fire-Shield Shaftliner
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: U499, W419 - 1 hour



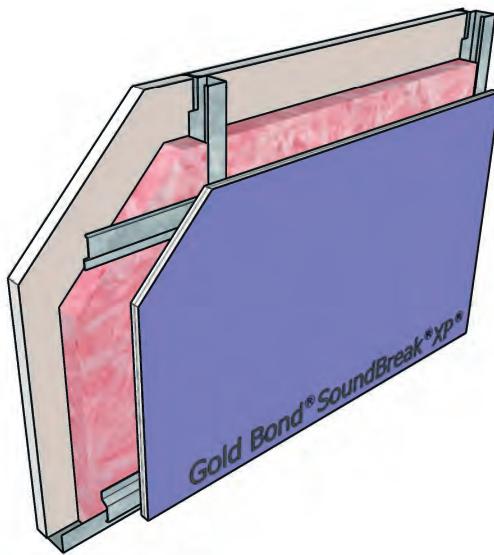
STC-44

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
Insulation: 1-1/2" glass fiber
Side 1: 1" Fire-Shield Shaftliner
Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: U499, W419 - 1 hour

Shaftwall Partitions

Figure 160



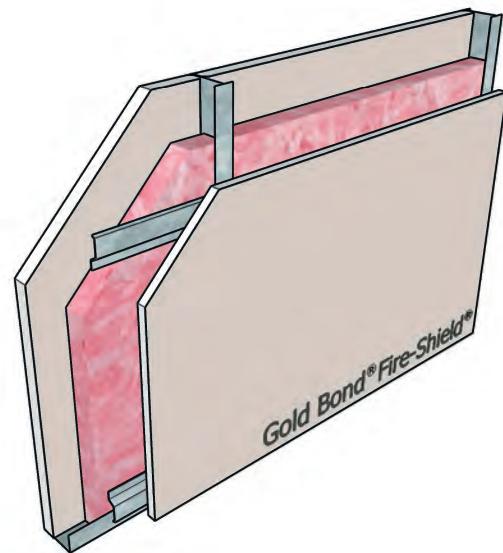
STC-47

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 5/8" SoundBreak XP Wall Board on RC-1

UL Design: U499, W419 - 1 hour

Figure 162

Figure 161



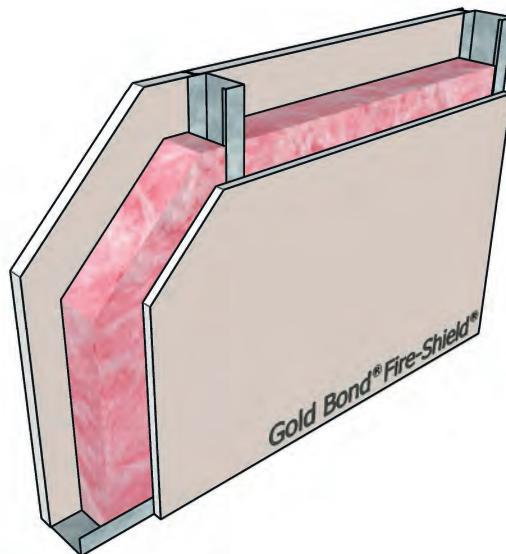
STC-48

Framing: 2-1/2" steel I-studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: U499, W419 - 1 hour

Figure 163

NGC 2541



STC-47

Framing: 4" steel CH studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 3" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 5/8" Fire-Shield Gypsum Board

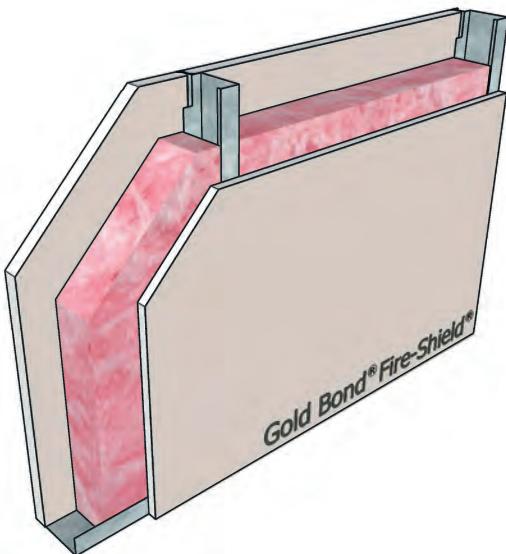
UL Design: U499, W419 - 1 hour

STC-47

Framing: 4" steel CT studs, 18 gauge (43 mil), 24" o.c.
 Insulation: 3" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 5/8" Fire-Shield Gypsum Board

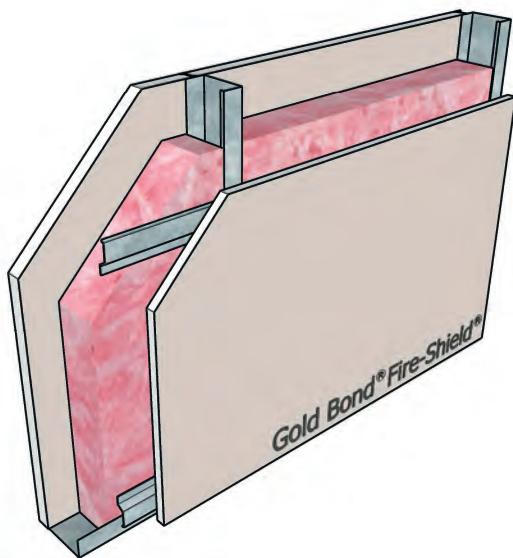
UL Design: U499, W419 - 1 hour

NGC 2019011



Shaftwall Partitions

Figure 164



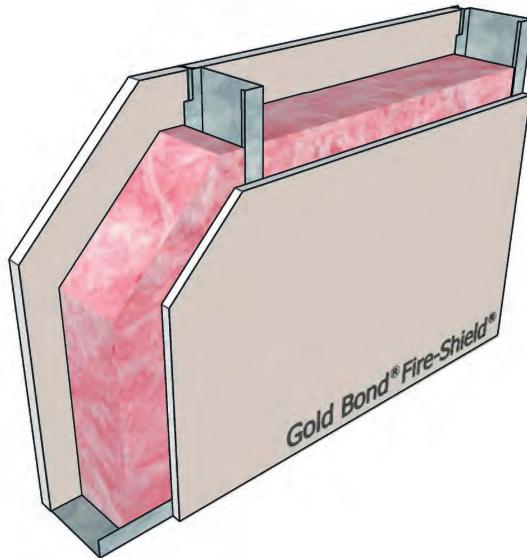
STC-51

Framing: 4" steel CH studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 3" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: U499, W419 - 1 hour

Figure 166

Figure 165

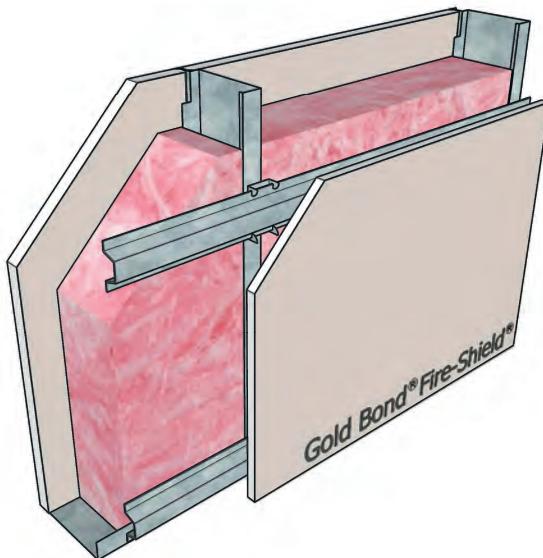


STC-53

Framing: 6" steel CT studs, 20 gauge (33 mil), 24" o.c.
 Insulation: 5" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: U499, W419 - 1 hour

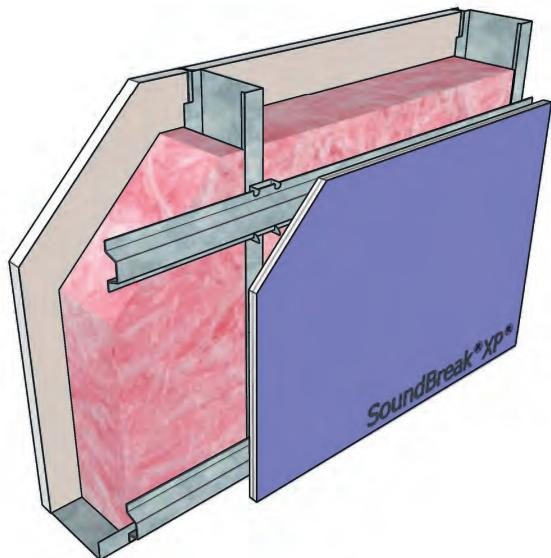
Figure 167



STC-59

Framing: 6" steel CT studs, 20 gauge (33 mil), 24" o.c.
 Insulation: 5" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 5/8" Fire-Shield Gypsum Board on 7/8" furring channel and resilient isolation clips

UL Design: U499, W419 - 1 hour



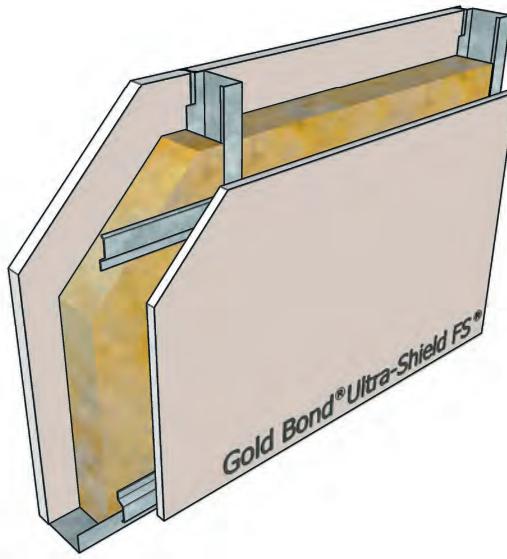
STC-61

Framing: 6" steel CT studs, 20 gauge (33 mil), 24" o.c.
 Insulation: 5" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 5/8" SoundBreak XP Wall Board on 7/8" furring channel and resilient isolation clips

UL Design: U499, W419 - 1 hour

Shaftwall Partitions

Figure 168



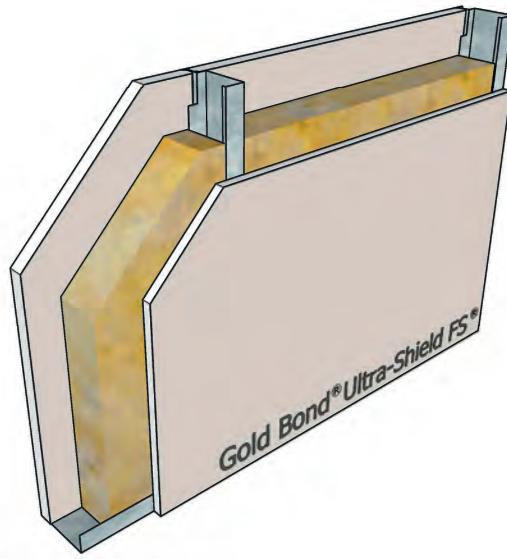
STC-54

Framing: 4" steel CT studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 3" mineral wool
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 3/4" Ultra-Shield Gypsum Board on RC-1

UL Design: W441, W419 - 2 hour

Figure 170

Figure 169



STC-51

Framing: 4" steel CT studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 3" mineral wool
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 3/4" Ultra-Shield Gypsum Board

UL Design: W441, W419 - 2 hour

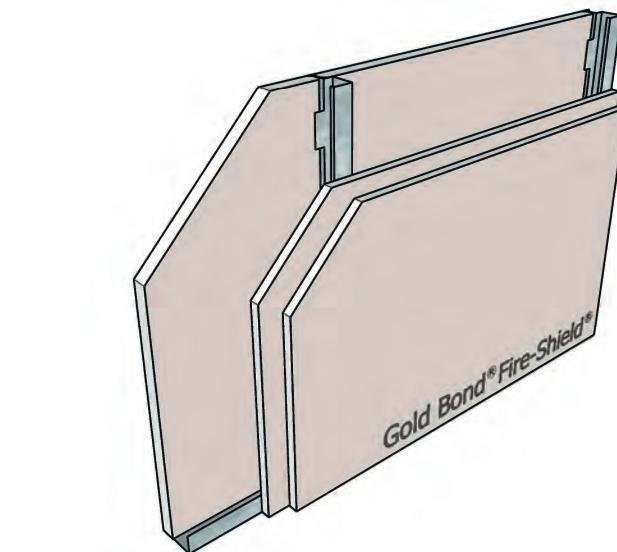
Figure 171

STC-40

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
 Insulation: None
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: U497, W419 - 2 hour

NGC 2001004

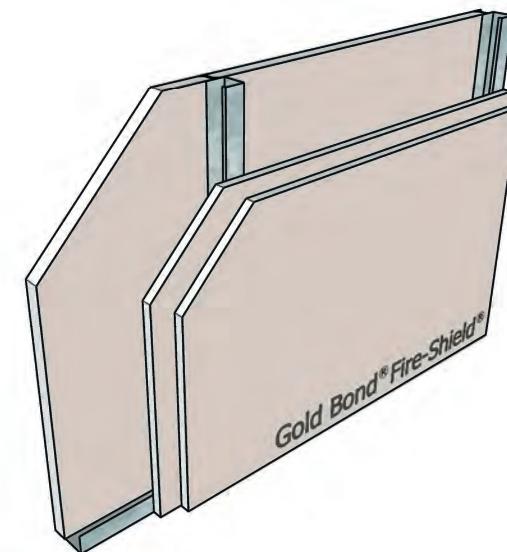


STC-39

Framing: 2-1/2" steel CH studs, 25 gauge (22 mil), 24" o.c.
 Insulation: None
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

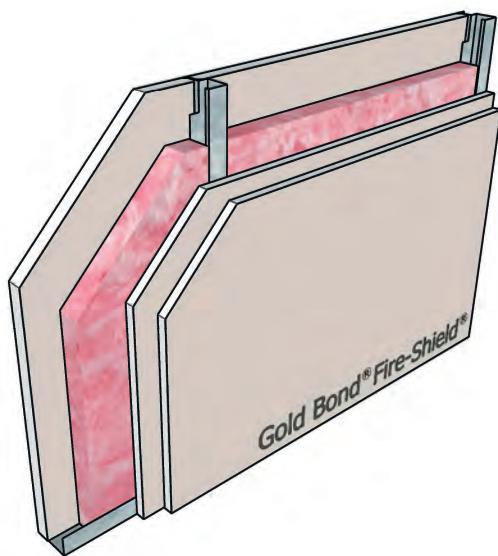
UL Design: U497, W419 - 2 hour

NGC 2001002



Shaftwall Partitions

Figure 172



STC-47

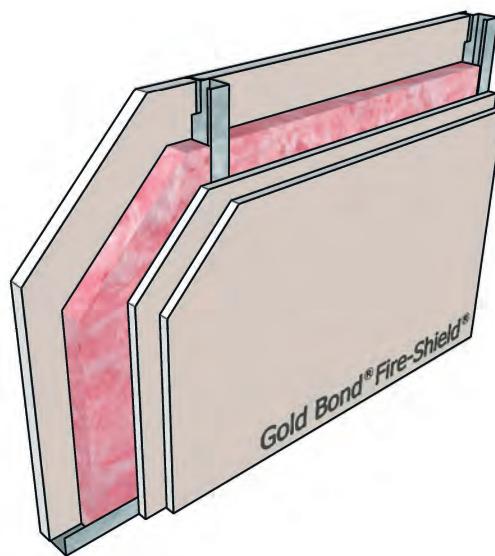
NGC 2016035

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
Insulation: 1-1/2" glass fiber
Side 1: 1" Fire-Shield Shaftliner
Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: U497, W419 - 2 hour

Figure 174

Figure 173



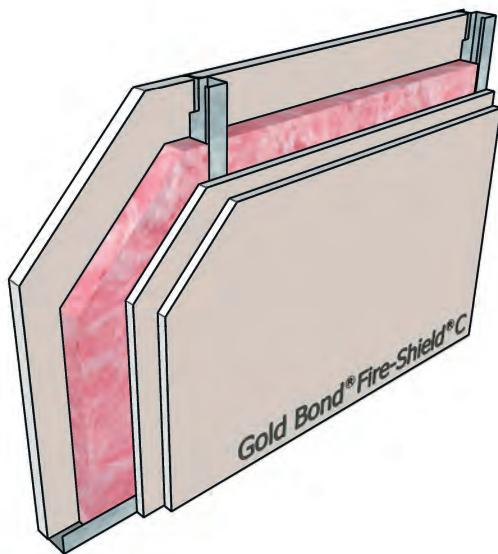
STC-46

NGC 2019007

Framing: 2-1/2" steel CT studs, 18 gauge (43 mil), 24" o.c.
Insulation: 1-1/2" glass fiber
Side 1: 1" Fire-Shield Shaftliner
Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: U497, W419 - 2 hour

Figure 175

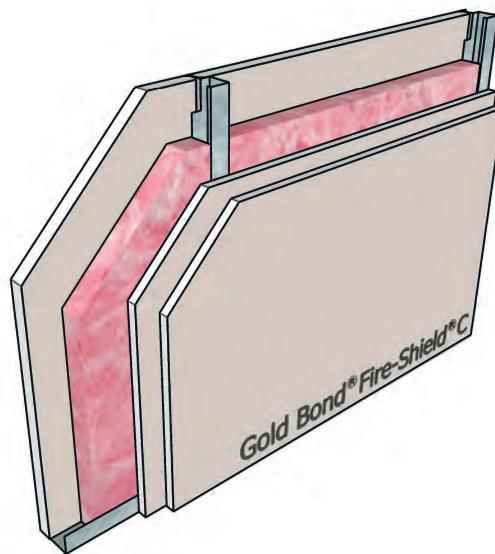


STC-47

NGC 2019009

Framing: 2-1/2" steel CT studs, 18 gauge (43 mil), 24" o.c.
Insulation: 1-1/2" glass fiber
Side 1: 1" Fire-Shield Shaftliner
Side 2: 2 layers 1/2" Fire-Shield C Gypsum Board

UL Design: U497, W419 - 2 hour



STC-49

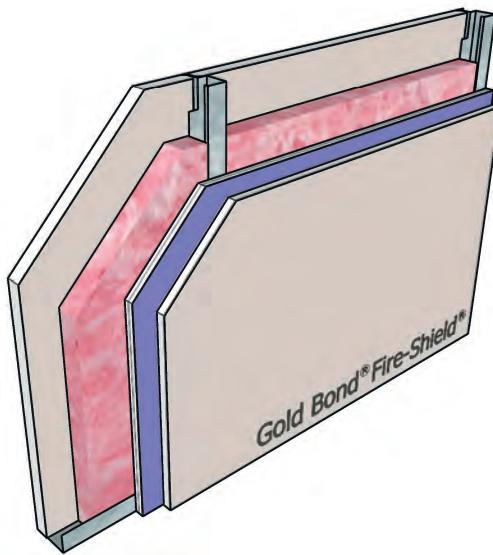
NGC 2017006

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
Insulation: 1-1/2" glass fiber
Side 1: 1" Fire-Shield Shaftliner
Side 2: 2 layers 1/2" Fire-Shield C Gypsum Board

UL Design: U497, W419 - 2 hour

Shaftwall Partitions

Figure 176

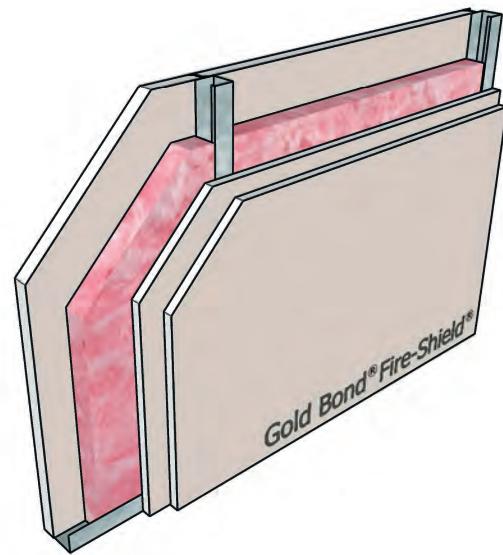


STC-51

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 5/8" Fire-Shield Gypsum Board on
 5/8" SoundBreak XP Wall Board
 UL Design: U497, W419 - 2 hour

Figure 178

Figure 177

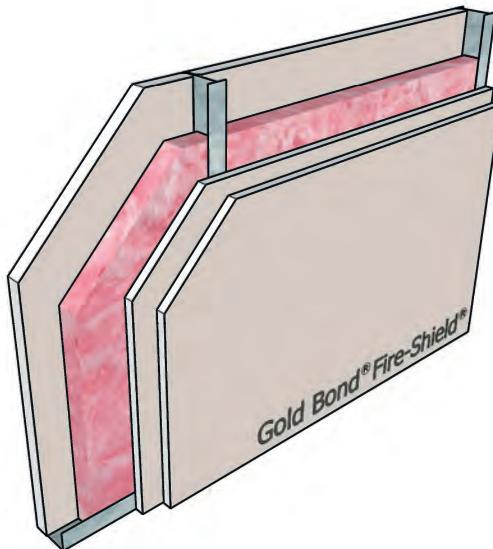


STC-46

Framing: 2-1/2" steel CH studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: U497, W419 - 2 hour

NGC 2001006



STC-48

Framing: 2-1/2" steel I-studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: U497, W419 - 2 hour

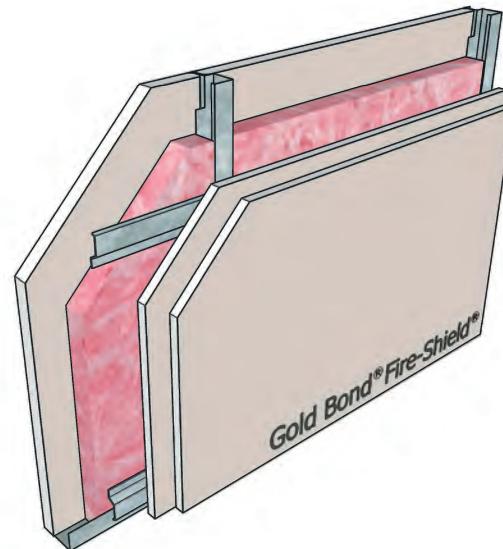
NGC 2507

STC-51

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on RC-1

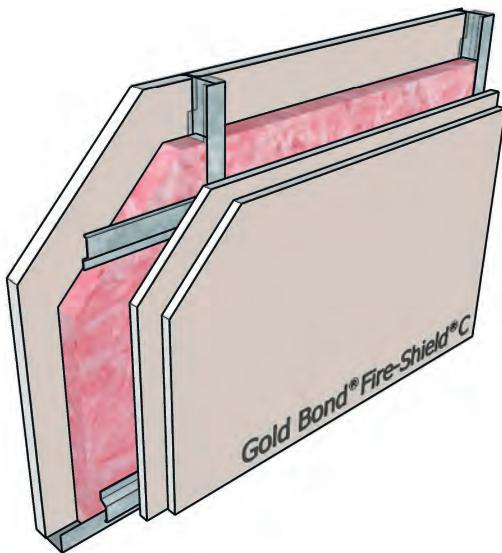
UL Design: U497, W419 - 2 hour

NGC 2016038



Shaftwall Partitions

Figure 180

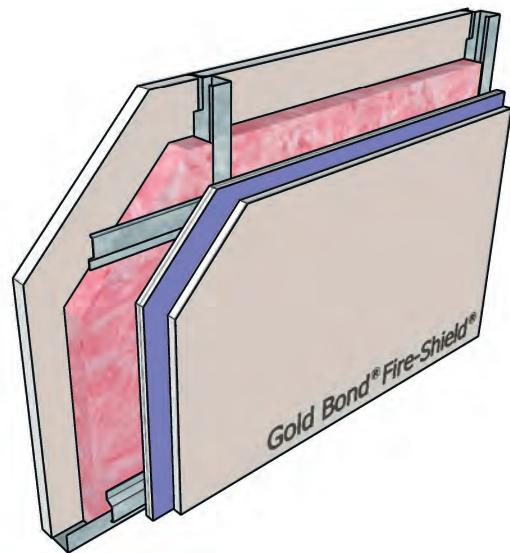


STC-52

NGC 2017007

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 2 layers 1/2" Fire-Shield C Gypsum Board on RC-1
 UL Design: U497, W419 - 2 hour

Figure 182

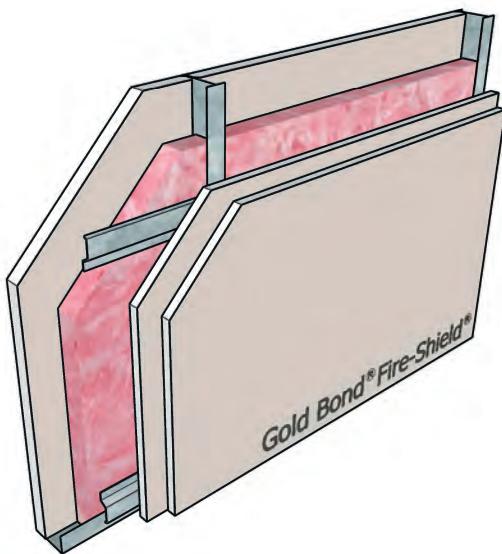


STC-53

NGC 2015039

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board on RC-1
 UL Design: U497, W419 - 2 hour

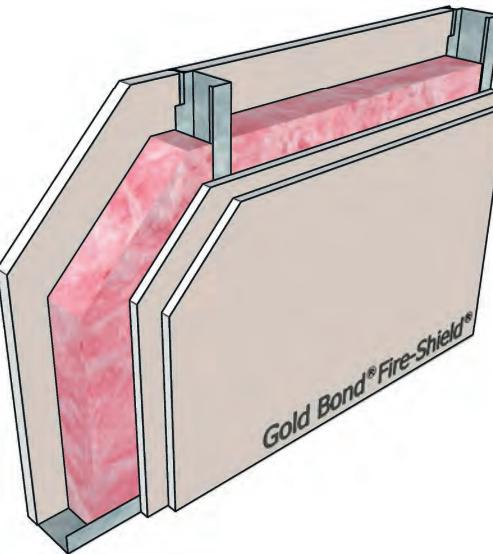
Figure 183



STC-51

NGC 2540

Framing: 2-1/2" steel I-studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on RC-1
 UL Design: U497, W419 - 2 hour



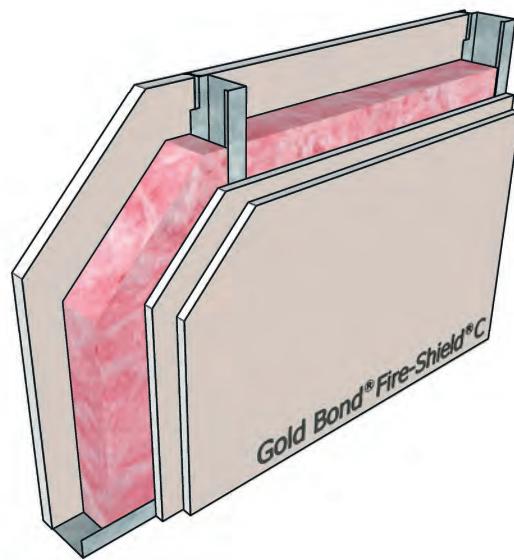
STC-51

NGC 2019012

Framing: 4" steel CT studs, 18 gauge (43 mil), 24" o.c.
 Insulation: 3" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board
 UL Design: U497, W419 - 2 hour

Shaftwall Partitions

Figure 184



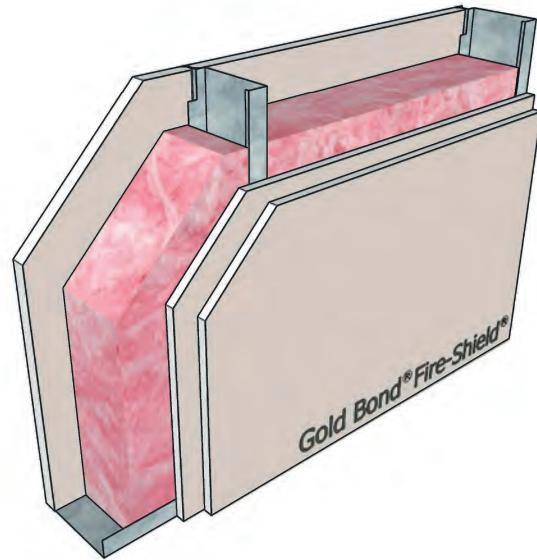
STC-50

Framing: 4" steel CT studs, 18 gauge (43 mil), 24" o.c.
 Insulation: 3" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 2 layers 1/2" Fire-Shield C Gypsum Board

UL Design: U497, W419 - 2 hour

Figure 186

Figure 185

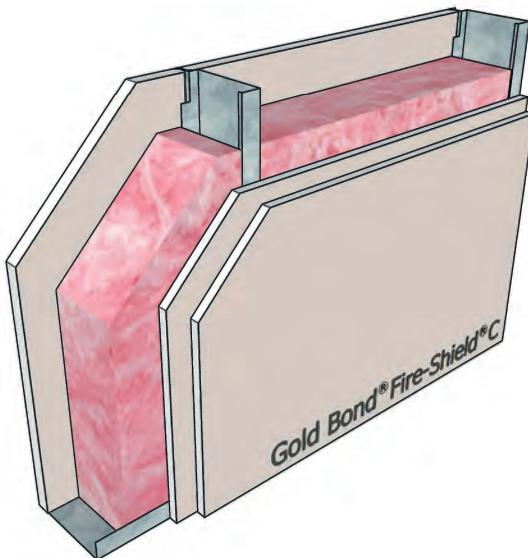


STC-51

Framing: 6" steel CT studs, 20 gauge (33 mil), 24" o.c.
 Insulation: 5" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: U497, W419 - 2 hour

Figure 187



STC-53

Framing: 6" steel CT studs, 20 gauge (33 mil), 24" o.c.
 Insulation: 5" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 2 layers 1/2" Fire-Shield C Gypsum Board

UL Design: U497, W419 - 2 hour

STC-61

Framing: 6" steel CT studs, 20 gauge (33 mil), 24" o.c.
 Insulation: 5" glass fiber
 Side 1: 1" Fire-Shield Shaftliner
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on 7/8" furring channel and resilient isolation clips

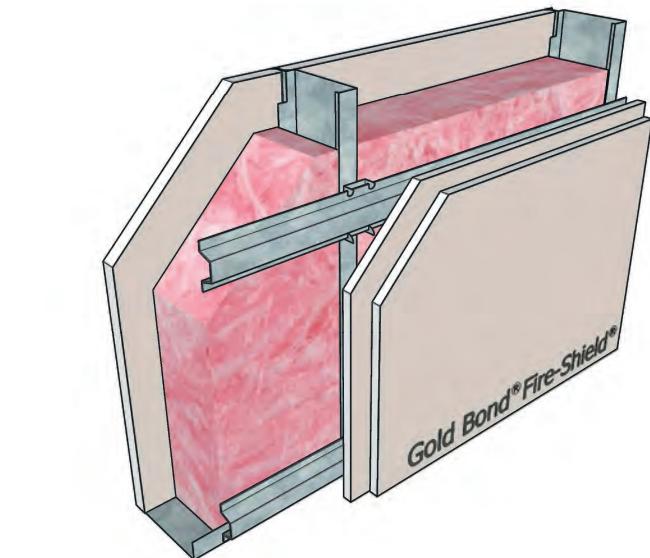
UL Design: U497, W419 - 2 hour

NGC 2019010

Gold Bond® Fire-Shield® C

NGC 2019013

Gold Bond® Fire-Shield®



NGC 2019015

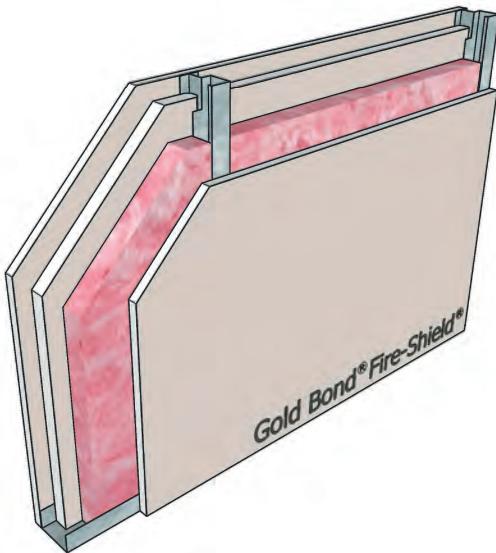
Gold Bond® Fire-Shield® C

NGC 2019016

Gold Bond® Fire-Shield®

Shaftwall Partitions

Figure 188

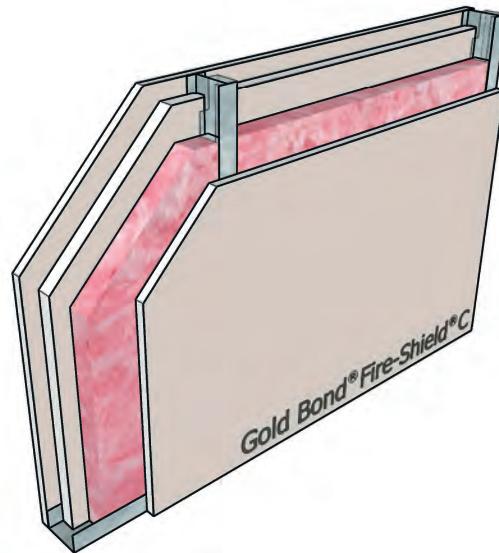


STC-48

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board on
 1" Fire-Shield Shaftliner
 Side 2: 5/8" Fire-Shield Gypsum Board
 UL Design: U498, W419 - 2 hour

NGC 2016034

Figure 189

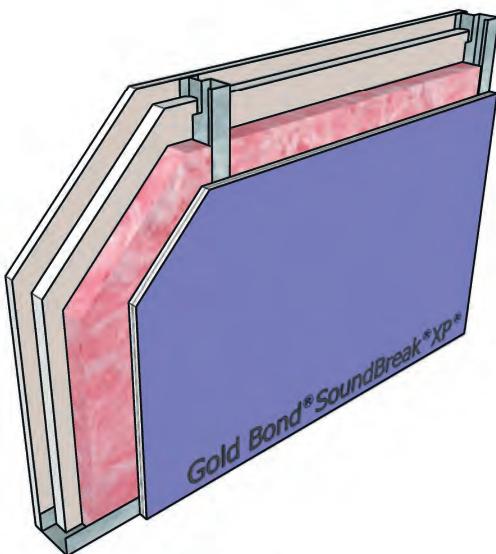


STC-48

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 1/2" Fire-Shield C Gypsum Board on
 1" Fire-Shield Shaftliner
 Side 2: 1/2" Fire-Shield C Gypsum Board
 UL Design: U498, W419 - 2 hour

NGC 2017005

Figure 190



STC-53

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board on
 1" Fire-Shield Shaftliner
 Side 2: 5/8" SoundBreak XP Wall Board
 UL Design: U498, W419 - 2 hour

NGC 2015036

Figure 191



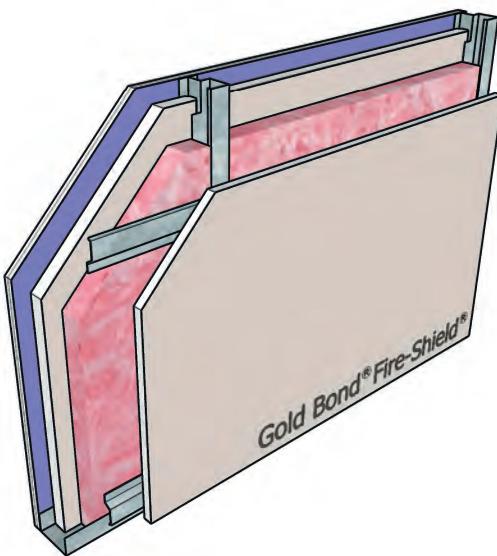
STC-48

Framing: 2-1/2" steel I-studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board on
 1" Fire-Shield Shaftliner
 Side 2: 5/8" Fire-Shield Gypsum Board
 UL Design: U498, W419 - 2 hour

NGC 2534

Shaftwall Partitions

Figure 192

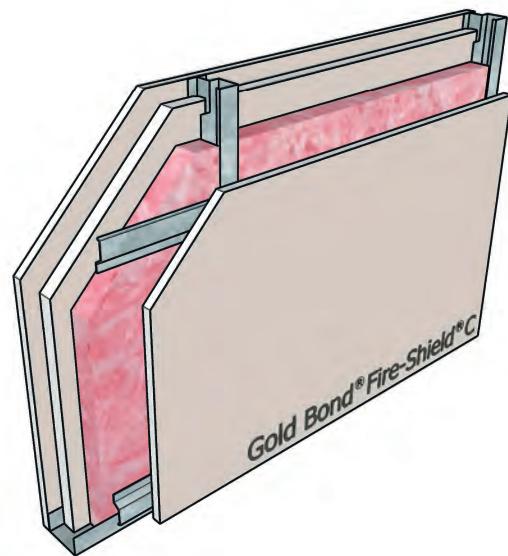


STC-55

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 5/8" SoundBreak XP Wall Board on
 1" Fire-Shield Shaftliner
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1
 UL Design: U498, W419 - 2 hour

Figure 194

Figure 193

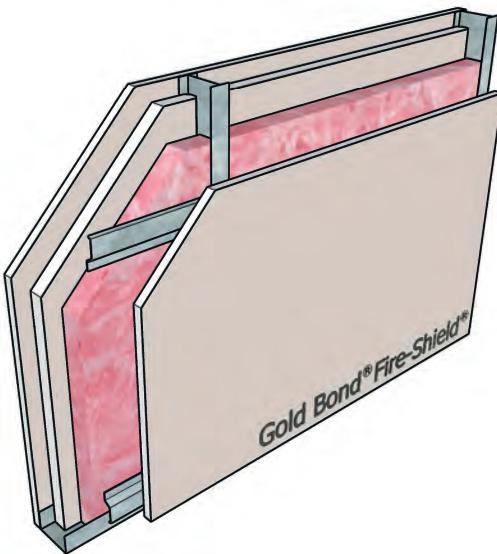


STC-53

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 1/2" Fire-Shield C Gypsum Board on
 1" Fire-Shield Shaftliner
 Side 2: 1/2" Fire-Shield C Gypsum Board on RC-1
 UL Design: U498, W419 - 2 hour

NGC 2017008

Figure 195



STC-52

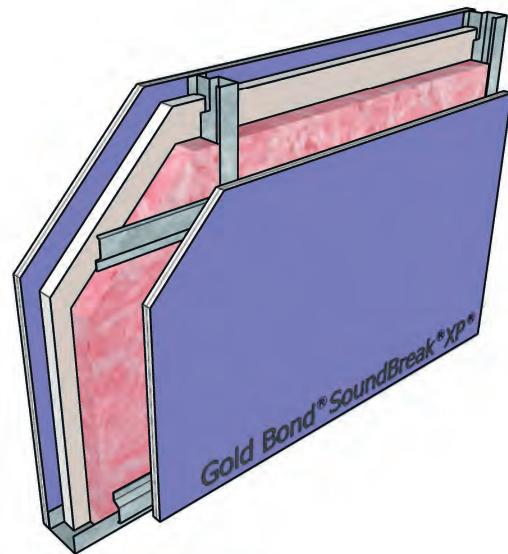
Framing: 2-1/2" steel I-studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board on
 1" Fire-Shield Shaftliner
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1
 UL Design: U498, W419 - 2 hour

NGC 2538

STC-56

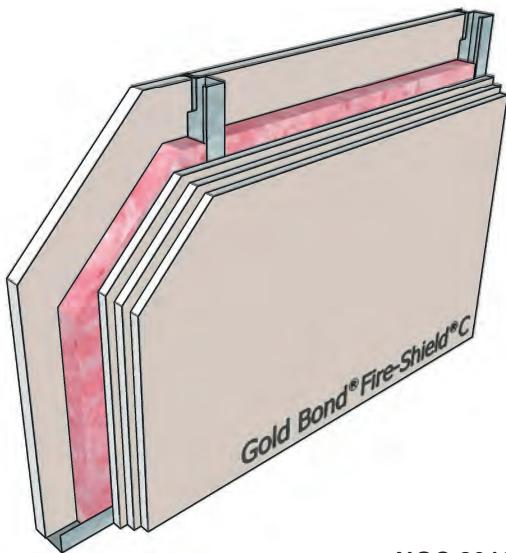
Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
 Insulation: 1-1/2" glass fiber
 Side 1: 5/8" SoundBreak XP Wall Board on
 1" Fire-Shield Shaftliner
 Side 2: 5/8" SoundBreak XP Wall Board on RC-1
 UL Design: U498, W419 - 2 hour

NGC 2015040



Shaftwall Partitions

Figure 196



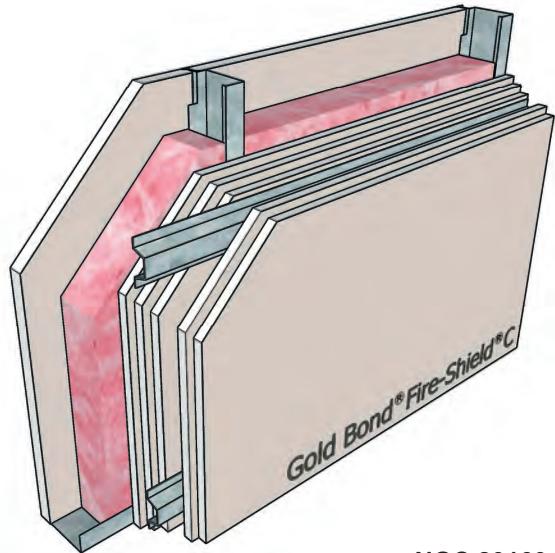
STC-50

NGC 2016039

Framing: 2-1/2" steel CT studs, 25 gauge (22 mil), 24" o.c.
Insulation: 1-1/2" glass fiber
Side 1: 1" Fire-Shield Shaftliner
Side 2: 3 layers 5/8" Fire-Shield C Gypsum Board

UL Design: W414, W419 - 3 hour

Figure 197



STC-58

NGC 2016040

Framing: 4" steel CT studs, 25 gauge (22 mil), 24" o.c.
Insulation: 3" glass fiber
Side 1: 1" Fire-Shield Shaftliner
Side 2: 2 layers 5/8" Fire-Shield C Gypsum Board on
7/8" rigid furring channels 16" o.c. on
3 layers 5/8" Fire-Shield C Gypsum Board

UL Design: V451, W419 - 4 hour

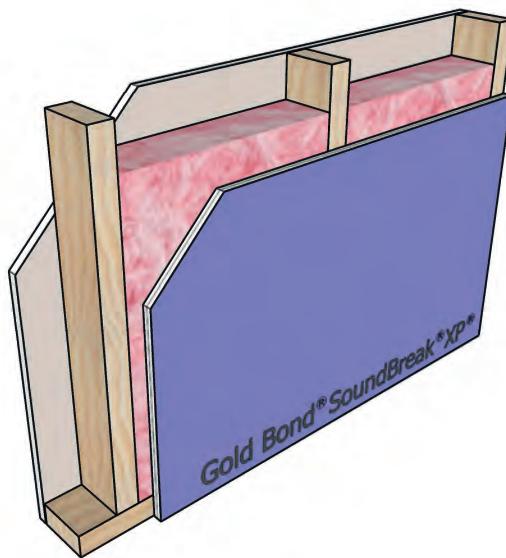
The SoundBookTM



Wood Stud Partitions
with Framing 16" o.c.

Wood Stud Partitions with Framing 16" o.c.

Figure 198



STC-39

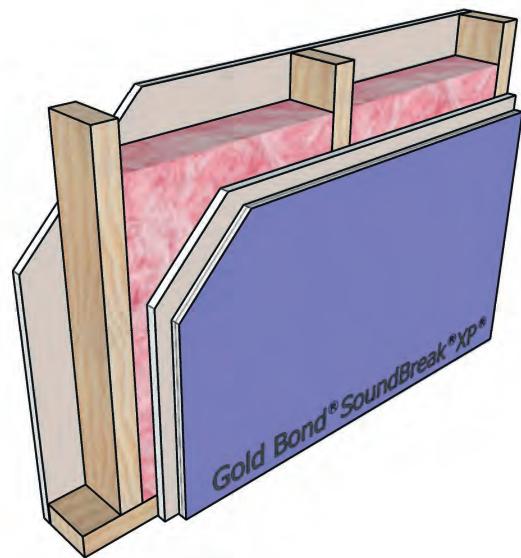
NGC 2009047

Framing: 2x4 wood studs, 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 1/2" Gold Bond Gypsum Board
 Side 2: 1/2" SoundBreak XP Wall Board

UL Design: Not Rated

Figure 200

Figure 199



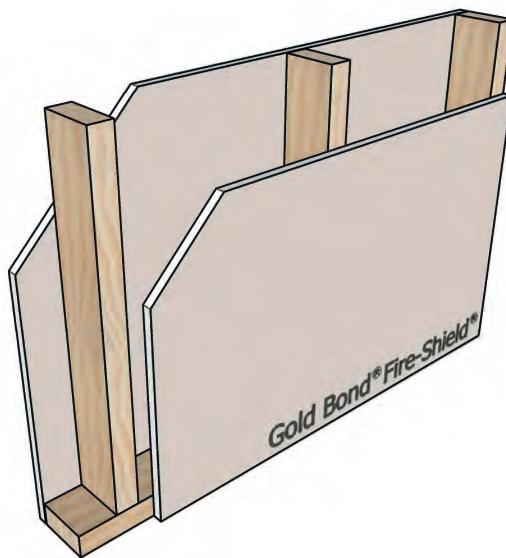
STC-43

NGC 2009040

Framing: 2x4 wood studs, 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 1/2" Gold Bond Gypsum Board
 Side 2: 1/2" SoundBreak XP Wall Board on
 1/2" Gold Bond Gypsum Board

UL Design: Not Rated

Figure 201

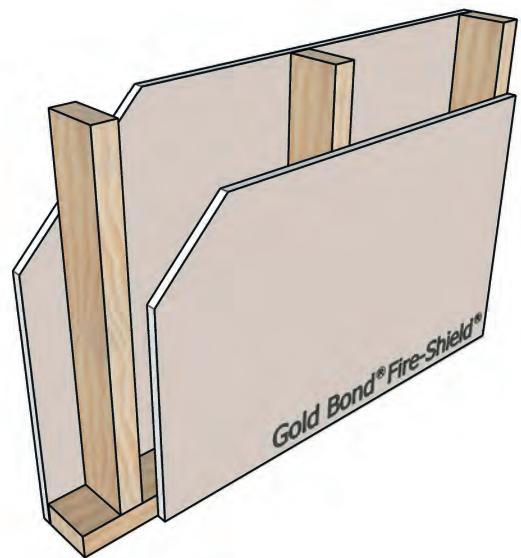


STC-34

NGC 2161

Framing: 2x4 wood studs, 16" o.c.
 Insulation: None
 Side 1: 1/2" Fire-Shield C Gypsum Board
 Side 2: 1/2" Fire-Shield C Gypsum Board

UL Design: U317 - 45 minutes



STC-35

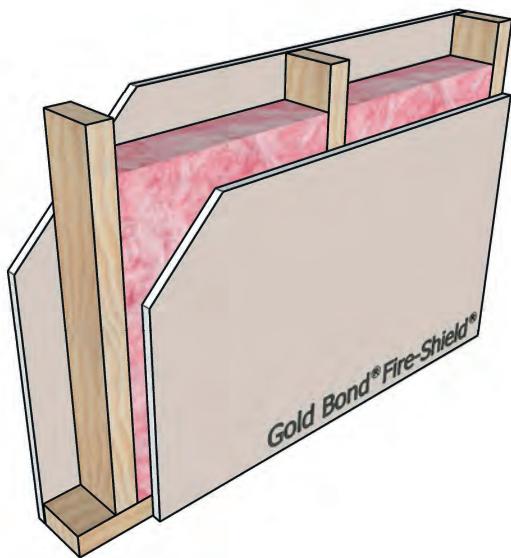
NGC 2403

Framing: 2x4 wood studs, 16" o.c.
 Insulation: None
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: U305 - 1 hour

Wood Stud Partitions with Framing 16" o.c.

Figure 202



STC-36

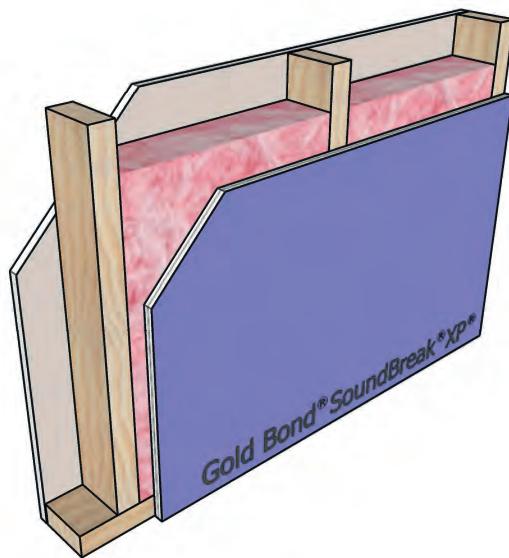
NGC 2008029

Framing: 2x4 wood studs, 16" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: U305 - 1 hour

Figure 204

Figure 203



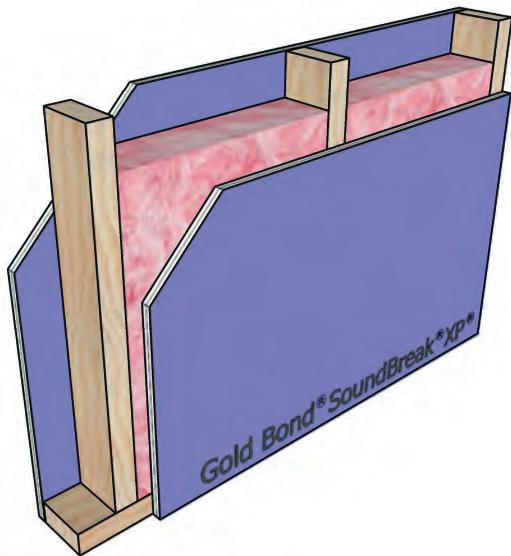
STC-42

NGC 2009020

Framing: 2x4 wood studs, 16" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" SoundBreak XP Wall Board

UL Design: U305 - 1 hour

Figure 205

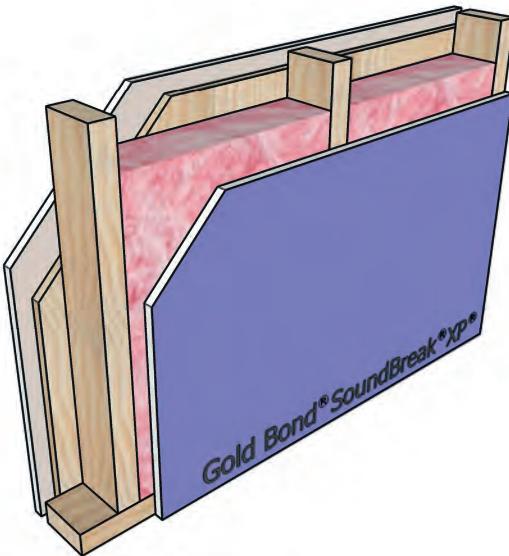


STC-45

NGC 2009019

Framing: 2x4 wood studs, 16" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" SoundBreak XP Wall Board
Side 2: 5/8" SoundBreak XP Wall Board

UL Design: U305 - 1 hour



STC-42

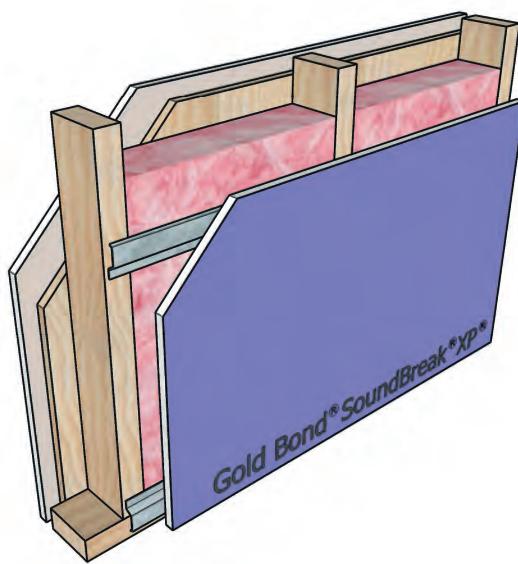
NGC 2015085

Framing: 2x4 wood studs, 16" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" SoundBreak XP Wall Board
Side 2: 5/8" Fire-Shield Gypsum Board on 15/32" plywood

UL Design: U344, U305 - 1 hour

Wood Stud Partitions with Framing 16" o.c.

Figure 206



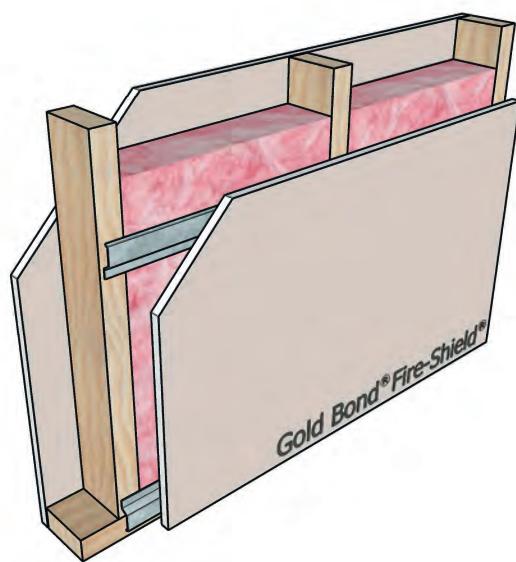
STC-46

NGC 2015084

Framing: 2x4 wood studs, 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" SoundBreak XP Wall Board on RC-1
 Side 2: 5/8" Fire-Shield Gypsum Board on
 15/32" plywood
 UL Design: U344, U305 - 1 hour

Figure 208

Figure 207

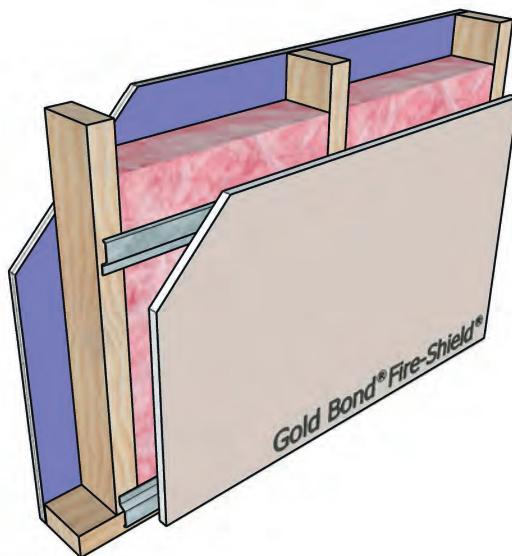


STC-51

NGC 2011071

Framing: 2x4 wood studs, 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1
 UL Design: U305 - 1 hour

Figure 209



STC-54

NGC 2011066

Framing: 2x4 wood studs, 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" SoundBreak XP Wall Board
 Side 2: 5/8" Fire-Shield Gypsum Board on RC-1
 UL Design: U305 - 1 hour

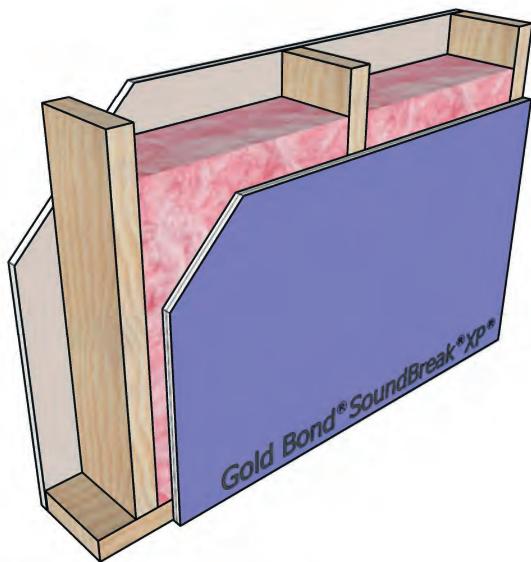
STC-38

NGC 2008032

Framing: 2x6 wood studs, 16" o.c.
 Insulation: 5-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board
 UL Design: U305 - 1 hour

Wood Stud Partitions with Framing 16" o.c.

Figure 210



STC-42

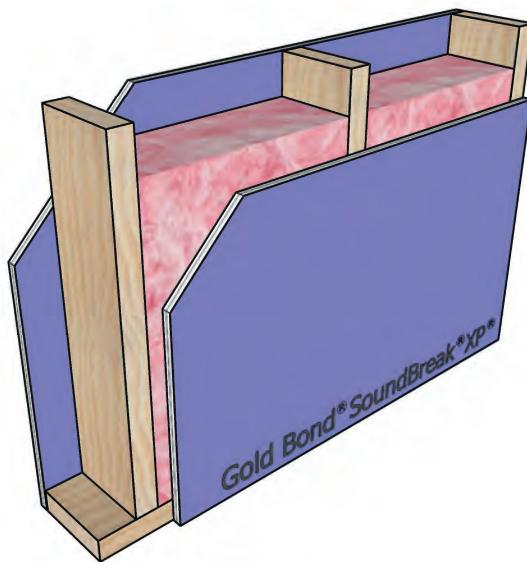
NGC 2009008

Framing: 2x6 wood studs, 16" o.c.
Insulation: 5-1/2" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" SoundBreak XP Wall Board

UL Design: U305 - 1 hour

Figure 212

Figure 211



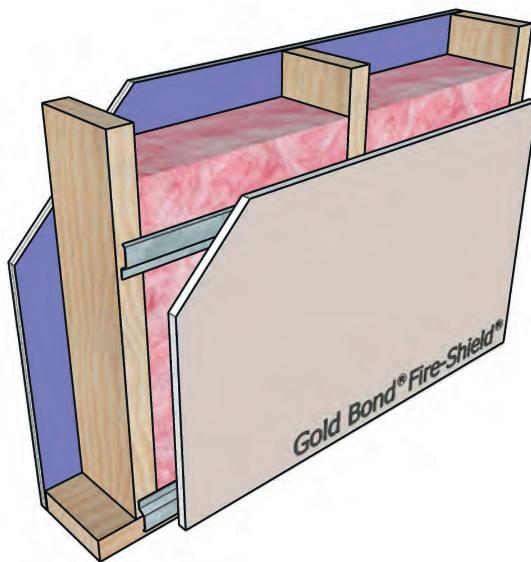
STC-44

NGC 2009012

Framing: 2x6 wood studs, 16" o.c.
Insulation: 5-1/2" glass fiber
Side 1: 5/8" SoundBreak XP Wall Board
Side 2: 5/8" SoundBreak XP Wall Board

UL Design: U305 - 1 hour

Figure 213

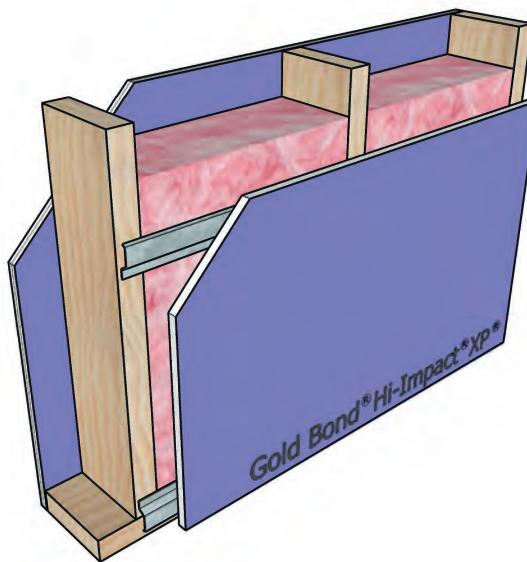


STC-57

NGC 2010081

Framing: 2x6 wood studs, 16" o.c.
Insulation: 5-1/2" glass fiber
Side 1: 5/8" SoundBreak XP Wall Board
Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: U305 - 1 hour



STC-58

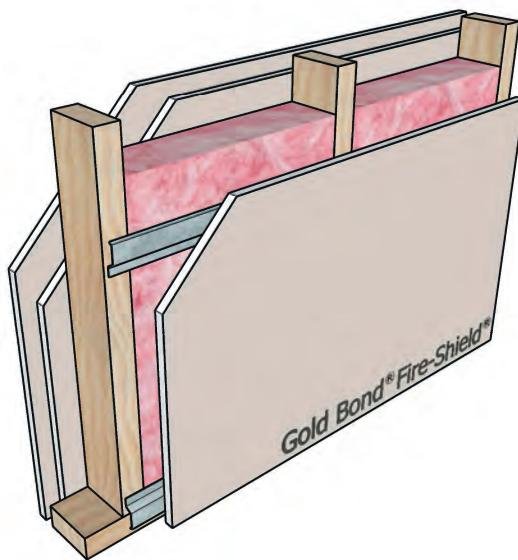
NGC 2010080

Framing: 2x6 wood studs, 16" o.c.
Insulation: 5-1/2" glass fiber
Side 1: 5/8" SoundBreak XP Wall Board
Side 2: 5/8" Hi-Impact XP Gypsum Board on RC-1

UL Design: U305 - 1 hour

Wood Stud Partitions with Framing 16" o.c.

Figure 214

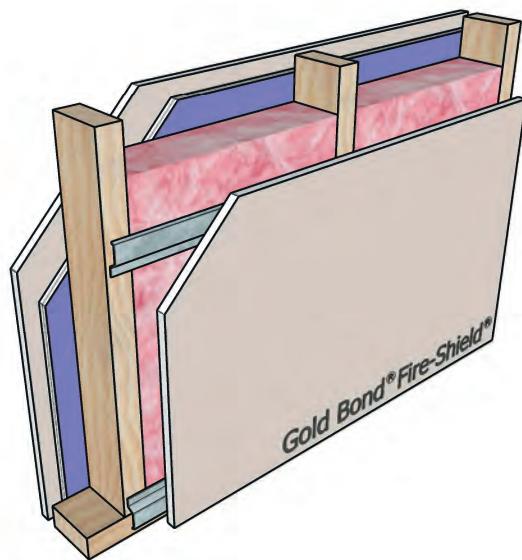


STC-55

Framing: 2x4 wood studs, 16" o.c.
Insulation: 3-1/2" fiber glass
Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: U305 - 1 hour

Figure 215

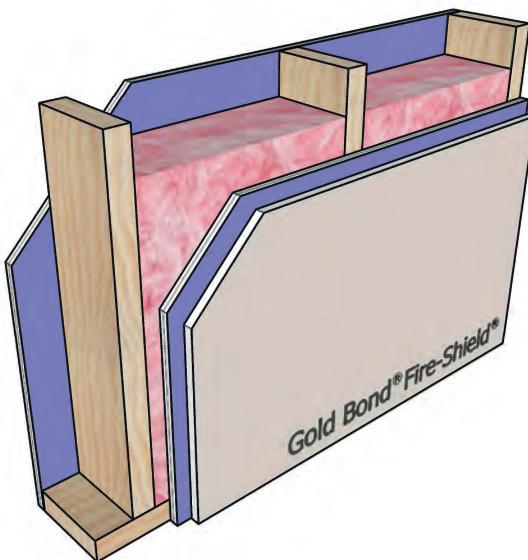


STC-58

Framing: 2x4 wood studs, 16" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board
Side 2: 5/8" Fire-Shield Gypsum Board on RC-1
UL Design: U305 - 1 hour

NGC 2011067

Figure 216

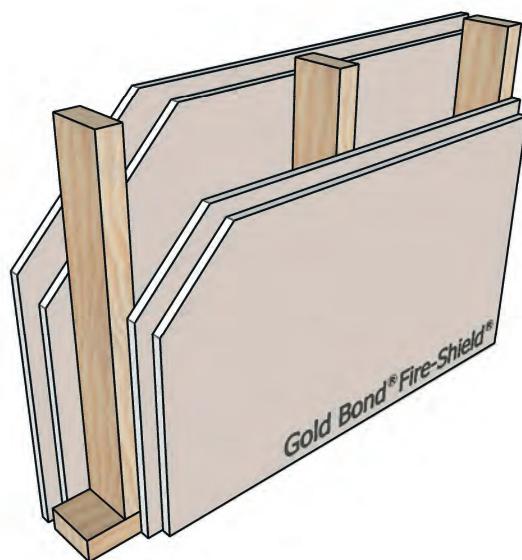


STC-46

Framing: 2x6 wood studs, 16" o.c.
Insulation: 5-1/2" glass fiber
Side 1: 5/8" SoundBreak XP Wall Board
Side 2: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board
UL Design: U305 - 1 hour

NGC 2009010

Figure 217



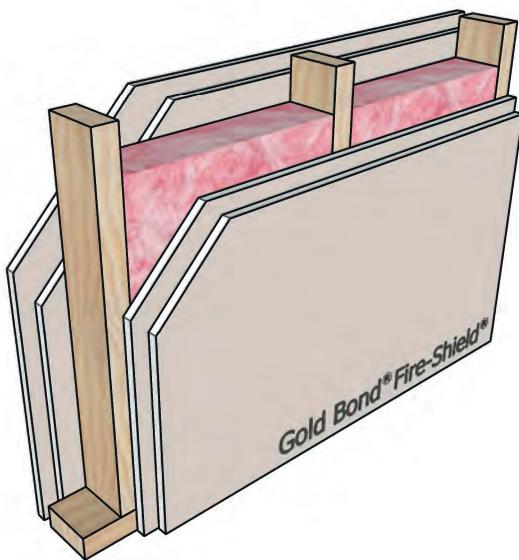
STC-40

Framing: 2x4 wood studs, 16" o.c.
Insulation: None
Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
Side 2: 2 layers 5/8" Fire-Shield Gypsum Board
UL Design: U301 - 2 hour

NGC 2363

Wood Stud Partitions with Framing 16" o.c.

Figure 218



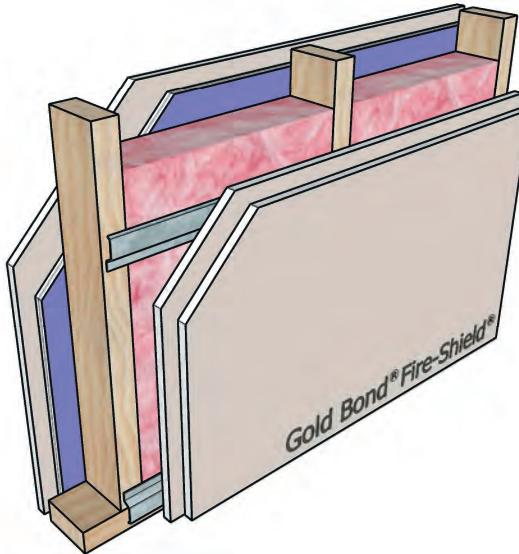
STC-41

Framing: 2x4 wood studs, 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

UL Design: U301 - 2 hour

NGC 2364

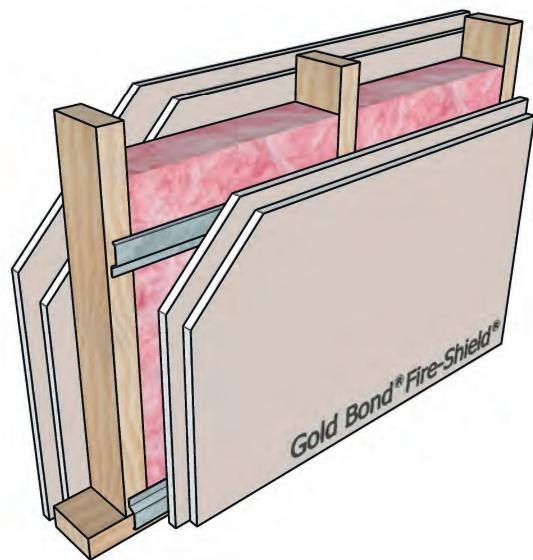
Figure 220



STC-61

Framing: 2x4 wood studs, 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board on 5/8" SoundBreak XP Wall Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on RC-1
 UL Design: U301 - 2 hours

Figure 219



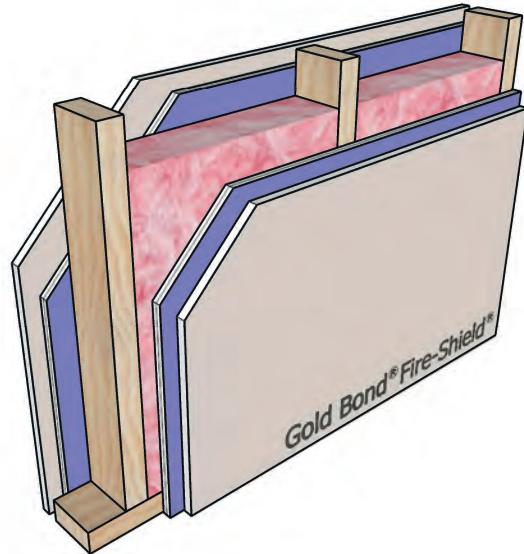
STC-58

Framing: 2x4 wood studs, 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 2 layers 5/8" Fire-Shield Gypsum Board on RC-1

UL Design: U301 - 2 hours

NGC 2011069

Figure 221



STC-45

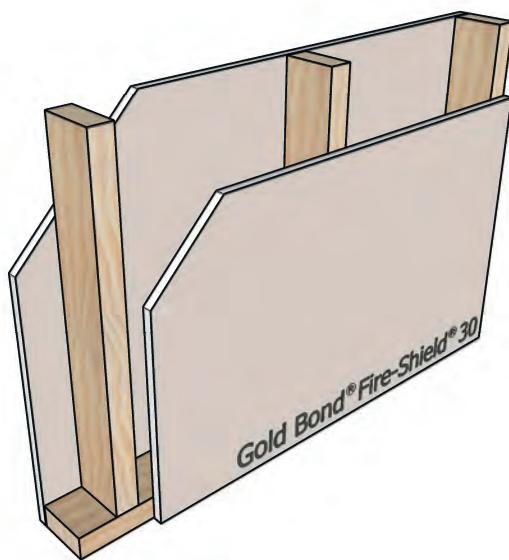
Framing: 2x4 wood studs, 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 5/8" Fire-Shield on 5/8" SoundBreak XP
 Side 2: 5/8" Fire-Shield on 5/8" SoundBreak XP

UL Design: U301 - 2 hour

NGC 2009017

Wood Stud Partitions with Framing 16" o.c.

Figure 222



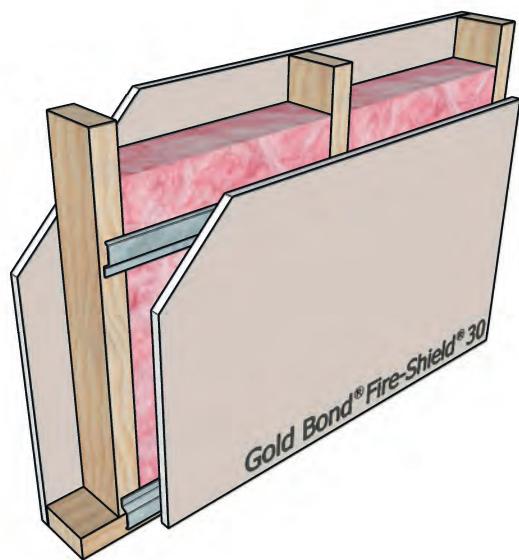
STC-33

NGC 2014046

Framing: 2x4 wood studs, 16" o.c.
Insulation: None
Side 1: 5/8" High Strength Fire-Shield 30 Gypsum Board
Side 2: 5/8" High Strength Fire-Shield 30 Gypsum Board

UL Design: W411 - 1/2 hour

Figure 223



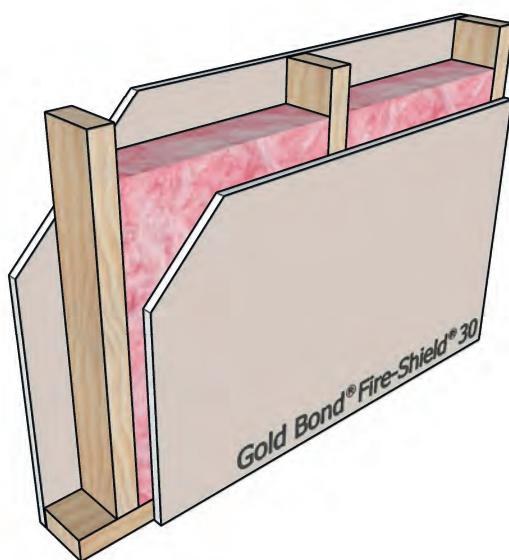
STC-45

NGC 2014044

Framing: 2x4 wood studs, 16" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" High Strength Fire-Shield 30 Gypsum Board
Side 2: 5/8" High Strength Fire-Shield 30 Gypsum Board
on RC-1

UL Design: W411 - 1/2 hour

Figure 224



STC-34

NGC 2014045

Framing: 2x4 wood studs, 16" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" High Strength Fire-Shield 30 Gypsum Board
Side 2: 5/8" High Strength Fire-Shield 30 Gypsum Board

UL Design: W411 - 1/2 hour

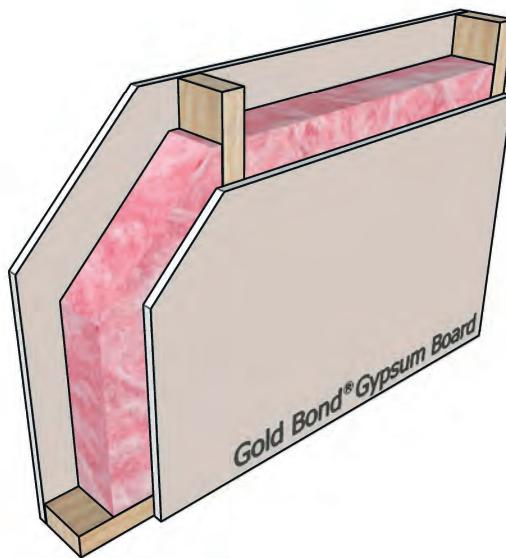
The SoundBookTM



Wood Stud Partitions
with Framing 24" o.c.

Wood Stud Partitions with Framing 24" o.c.

Figure 225



STC-42

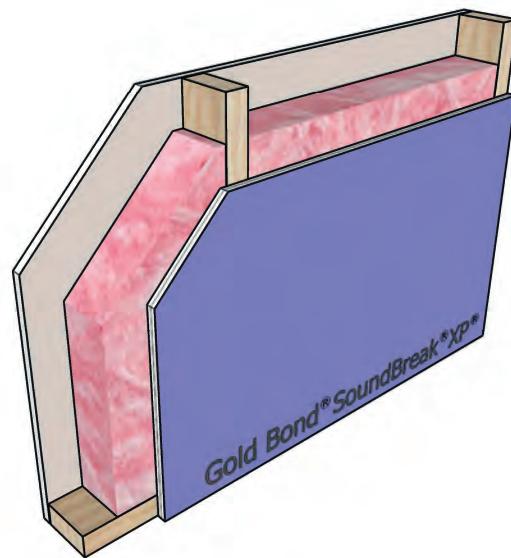
NGC 2012065

Framing: 2x4 wood studs, 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 1/2" Gold Bond Gypsum Board
Side 2: 1/2" Gold Bond Gypsum Board

UL Design: Not Rated

Figure 227

Figure 226



STC-49

NGC 2009027

Framing: 2x4 wood studs, 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 1/2" Gold Bond Gypsum Board
Side 2: 1/2" SoundBreak XP Wall Board

UL Design: Not Rated

Figure 228

STC-51

NGC 2009029

Framing: 2x4 wood studs, 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 1/2" SoundBreak XP Wall Board
Side 2: 1/2" SoundBreak XP Wall Board

UL Design: Not Rated

STC-51

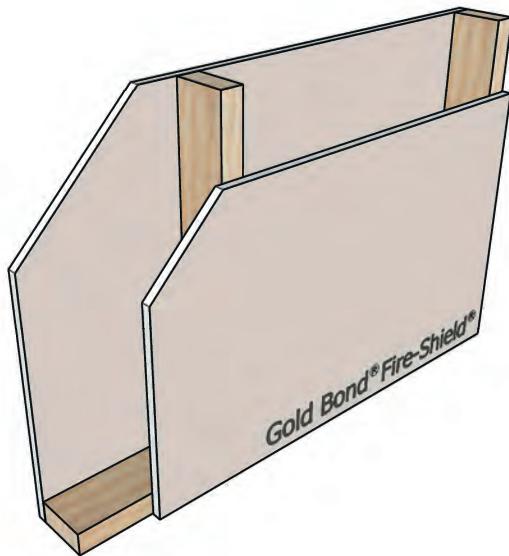
NGC 2009028

Framing: 2x4 wood studs, 24" o.c.
Insulation: 3-1/2" fiber glass
Side 1: 1/2" Gold Bond Gypsum Board
Side 2: 1/2" SoundBreak XP Wall Board on
1/2" Gold Bond Gypsum Board

UL Design: Not Rated

Wood Stud Partitions with Framing 24" o.c.

Figure 229



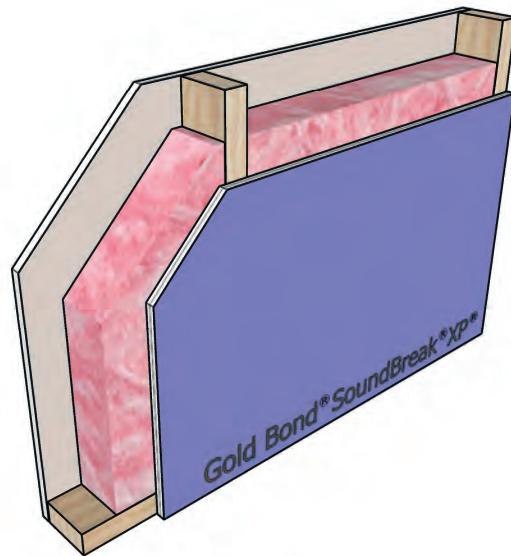
STC-38

Framing: 2x4 wood studs, 24" o.c.
Insulation: None
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: U309 - 1 hour

Figure 231

Figure 230



NGC 2404

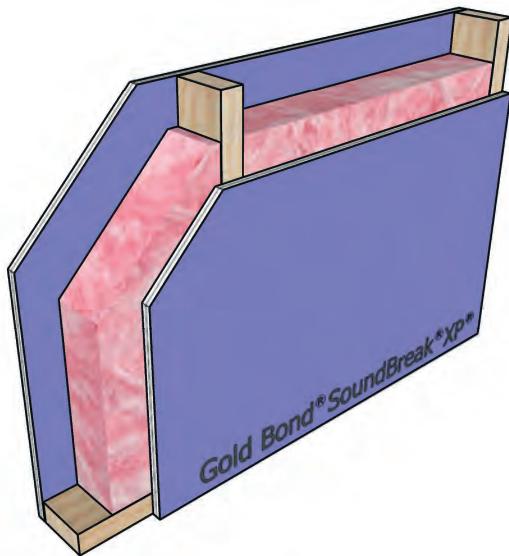
STC-50

Framing: 2x4 wood studs, 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" SoundBreak XP Wall Board

UL Design: U309 - 1 hour

NGC 2009015

Figure 232

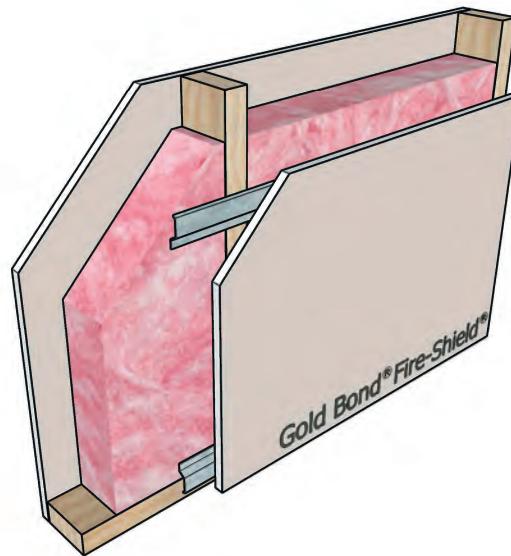


STC-53

RAL-TL07-145

Framing: 2x4 wood studs, 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" SoundBreak XP Wall Board
Side 2: 5/8" SoundBreak XP Wall Board

UL Design: U309 - 1 hour



STC-50

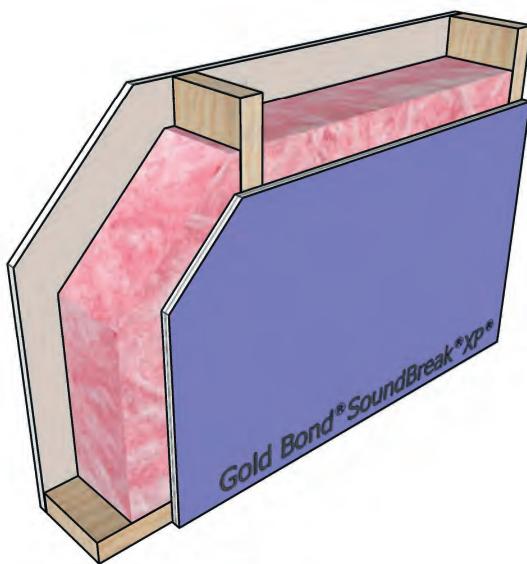
NRCC TL-93-196

Framing: 2x4 wood studs, 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" Fire-Shield C Gypsum Board
Side 2: 5/8" Fire-Shield C Gypsum Board on RC-1

UL Design: U309 - 1 hour

Wood Stud Partitions with Framing 24" o.c.

Figure 233

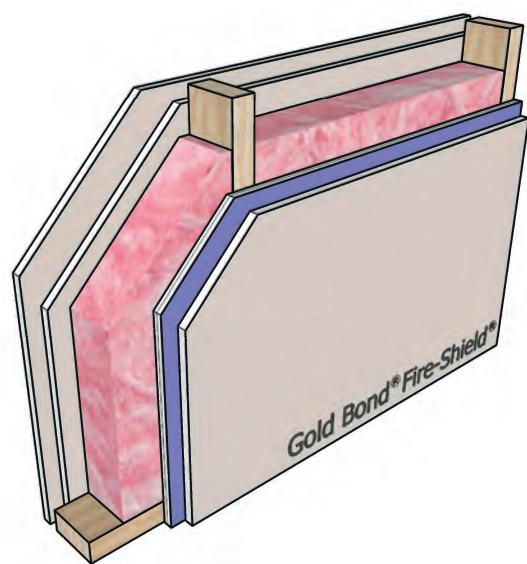


STC-50

Framing: 2x6 wood studs, 24" o.c.
 Insulation: 5-1/2" glass fiber
 Side 1: 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" SoundBreak XP Wall Board

UL Design: U309 - 1 hour

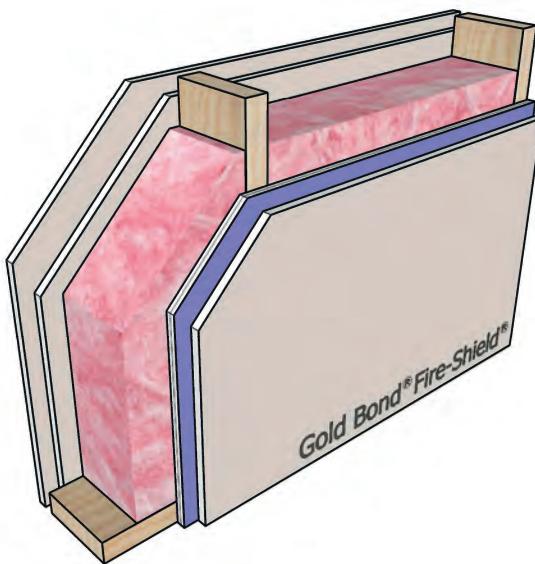
Figure 234



NGC 2009013

STC-54 **NGC 2009016**
 Framing: 2x4 wood studs, 24" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on
 5/8" SoundBreak XP Wall Board
 GA File: WP 4135 - 2 hour

Figure 235



STC-53

Framing: 2x6 wood studs, 24" o.c.
 Insulation: 5-1/2" glass fiber
 Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
 Side 2: 5/8" Fire-Shield Gypsum Board on
 5/8" SoundBreak XP Wall Board
 GA File: WP 4135 - 2 hour

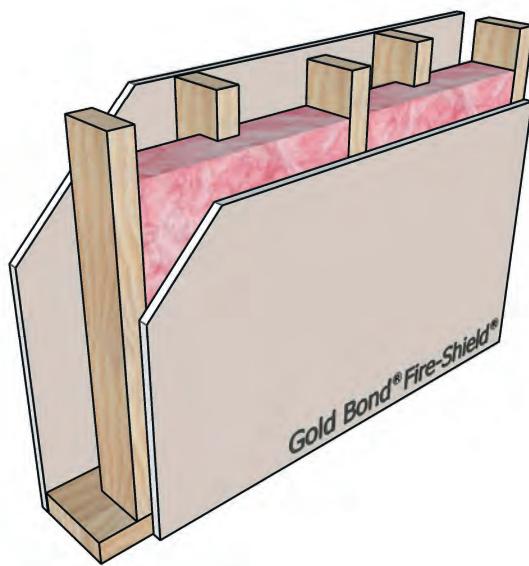
NGC 2009014

The SoundBookTM

Wood Stud Chase Walls

Wood Stud Chase Walls

Figure 236

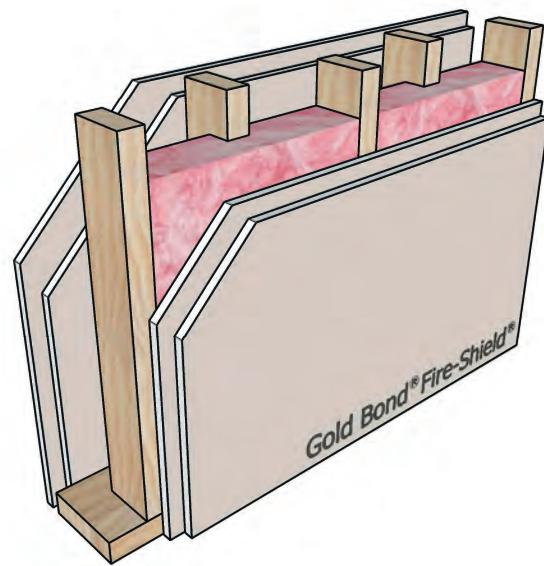


STC-45

Framing: 2x4 wood studs, 16" o.c., staggered on 2x6
wood plate
Insulation: 3-1/2" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board
UL Design: U340 - 1 hour

NGC 2375

Figure 237

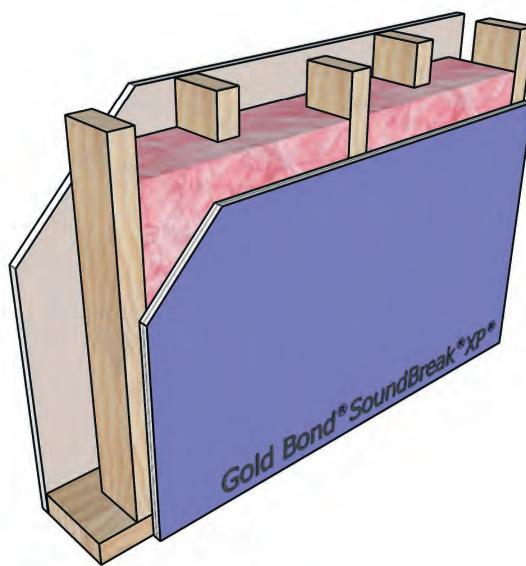


STC-53

Framing: 2x4 wood studs, 16" o.c., staggered on 2x6
wood plate
Insulation: 3-1/2" glass fiber
Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
Side 2: 2 layers 5/8" Fire-Shield Gypsum Board
GA File: WP 5530 - 2 hour

NGC 2376

Figure 238



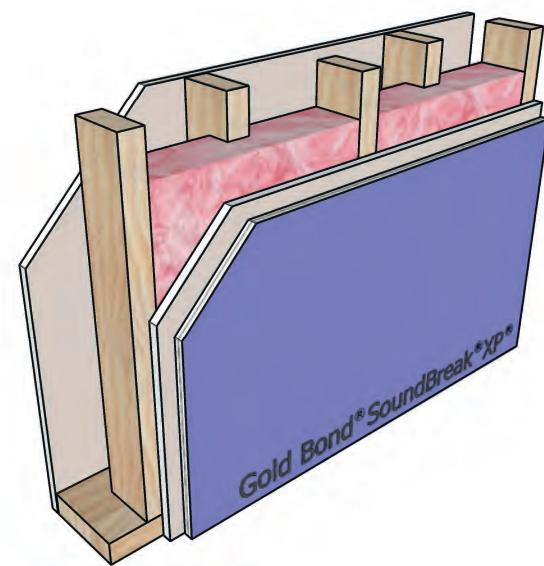
STC-53

Framing: 2x4 wood studs, 16" o.c., staggered on 2x6
wood plate
Insulation: 5-1/2" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" SoundBreak XP Wall Board

UL Design: U340 - 1 hour

NGC 2011003

Figure 239

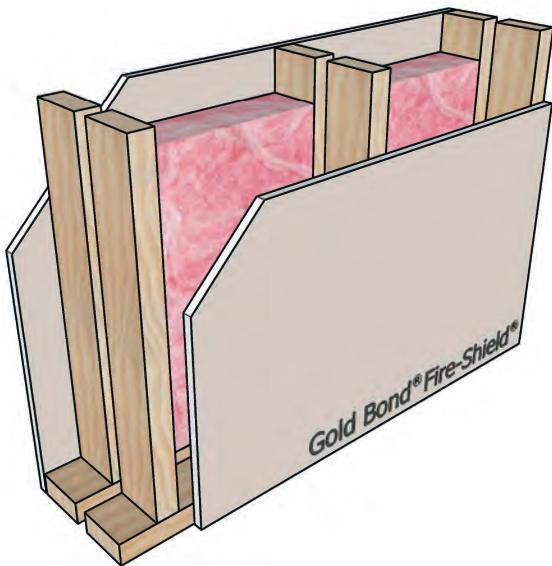


STC-53

Framing: 2x4 wood studs, 16" o.c., staggered on 2x6
wood plate
Insulation: 3-1/2" glass fiber
Side 1: 1/2" Gold Bond Gypsum Board
Side 2: 1/2" SoundBreak XP Wall Board on
1/2" Gold Bond Gypsum Board
UL Design: Not Rated

Wood Stud Chase Walls

Figure 240



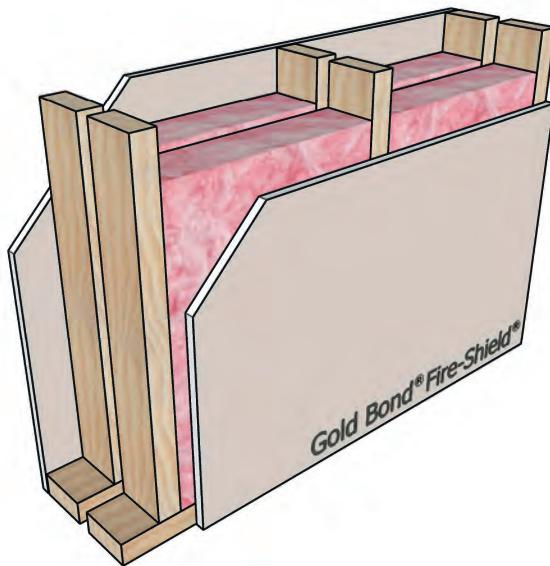
STC-51

Framing: Double row 2x4 wood studs, 16" o.c.
Insulation: 3-1/2" glass fiber one side
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: U341 - 1 hour

Figure 242

Figure 241



NGC 2191

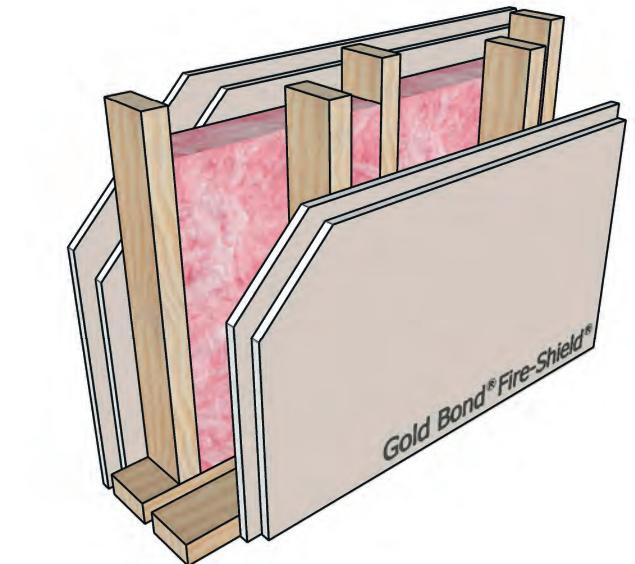
STC-54

Framing: Double row 2x4 wood studs, 16" o.c.
Insulation: 3-1/2" glass fiber both sides
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" Fire-Shield Gypsum Board

UL Design: U341 - 1 hour

Figure 243

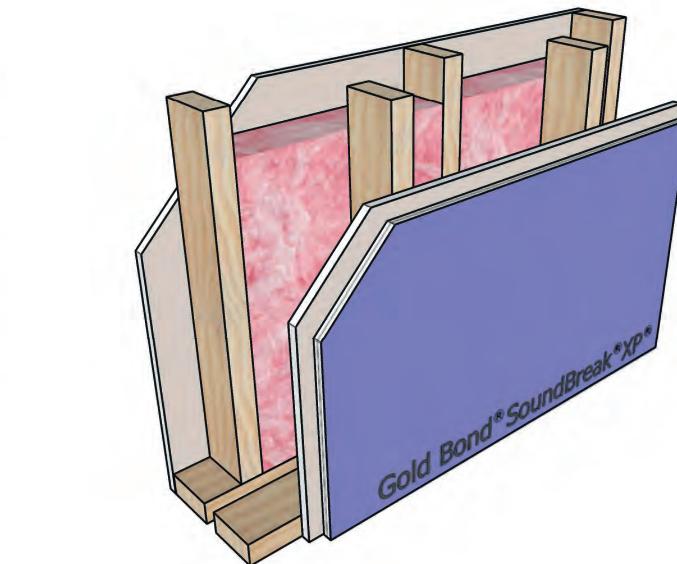
NGC 2198



STC-58

Framing: Double row 2x4 wood studs, 16" o.c. staggered
Insulation: 3-1/2" glass fiber
Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
Side 2: 2 layers 5/8" Fire-Shield Gypsum Board

GA File: WP 3725 - 2 hour



NGC 3056

STC-64

Framing: Double row 2x4 wood studs, 16" o.c. staggered
Insulation: 3-1/2" glass fiber one side
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/8" SoundBreak XP Wall Board on 5/8" Fire-Shield Gypsum Board

UL Design: U341 - 1 hour

RAL TL07-147

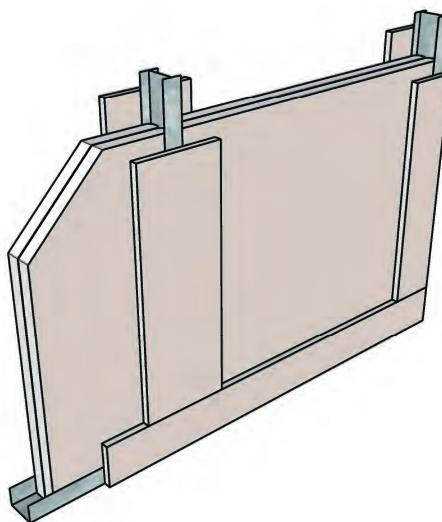
The Sound BookTM



Area Separation Fire Walls

Area Separation Fire Walls

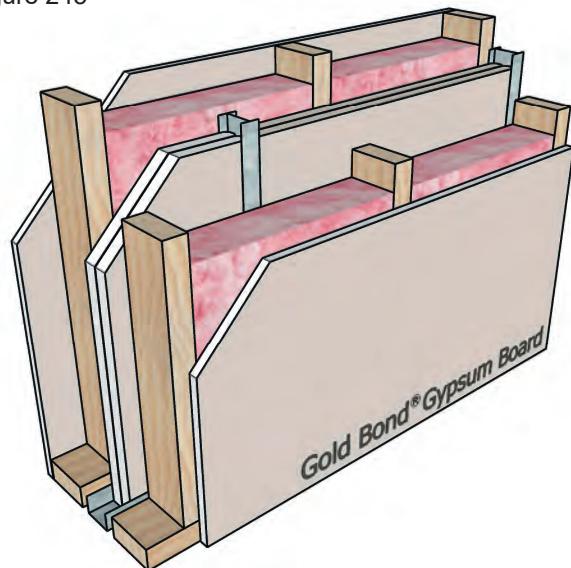
Figure 244



STC-35

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield
Shaftliner between studs
Framing: None
Insulation: None
Side 1: 6" wide 1/2" Fire-Shield C gypsum board battens
Side 2: 6" wide 1/2" Fire-Shield C gypsum board battens
UL Design: U347 - 2 hour

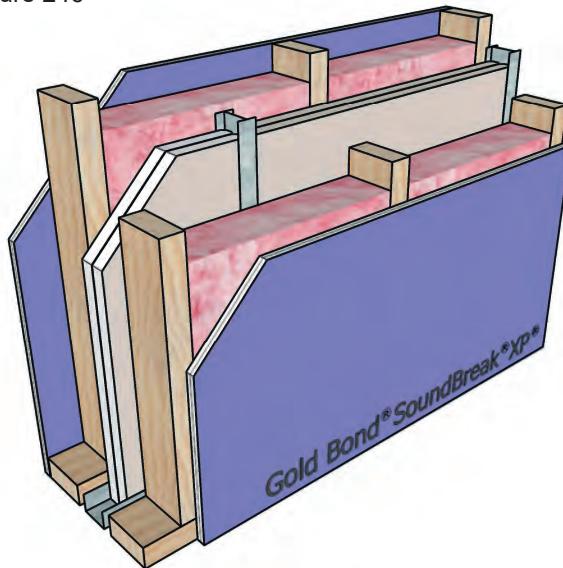
Figure 245



NGC 2827

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield
Shaftliner between studs; 3/4" air space
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber each side
Side 1: 1/2" Gold Bond Gypsum Board
Side 2: 1/2" Gold Bond Gypsum Board
UL Design: U347 - 2 hour

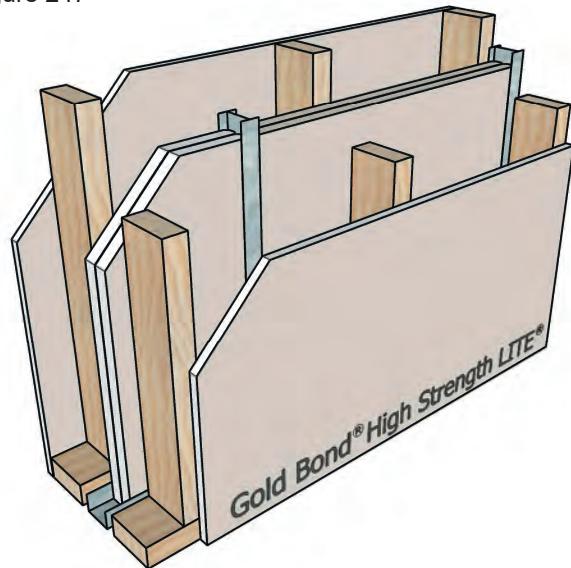
Figure 246



STC-65

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield
Shaftliner between studs; 3/4" air space
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber each side
Side 1: 1/2" SoundBreak XP Wall Board
Side 2: 1/2" SoundBreak XP Wall Board
UL Design: U347 - 2 hour

Figure 247

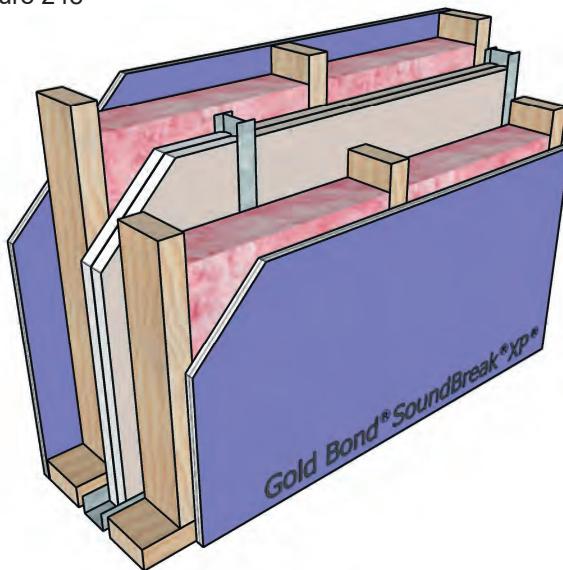


NGC 2012081

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield
Shaftliner between studs; 3/4" air space
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: None
Side 1: 1/2" High Strength LITE Gypsum Board
Side 2: 1/2" High Strength LITE Gypsum Board
UL Design: U347 - 2 hour

Area Separation Fire Walls

Figure 248

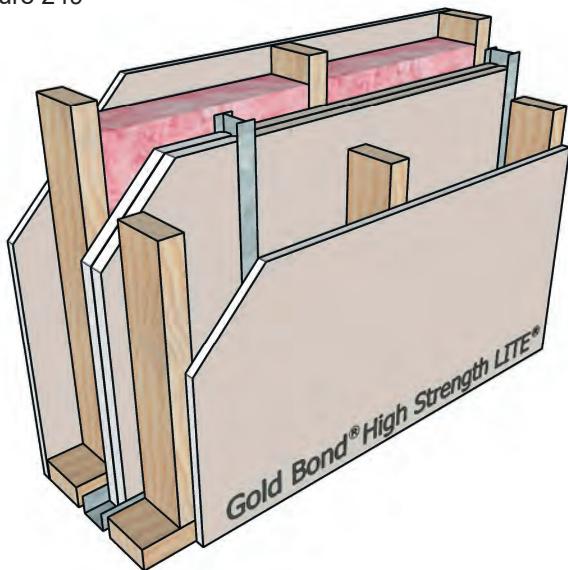


STC-67

NRCC B-3451.1

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield
Shaftliner between studs; 3/4" air space
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber each side
Side 1: 5/8" SoundBreak XP Wall Board
Side 2: 5/8" SoundBreak XP Wall Board
UL Design: U347 - 2 hour

Figure 249

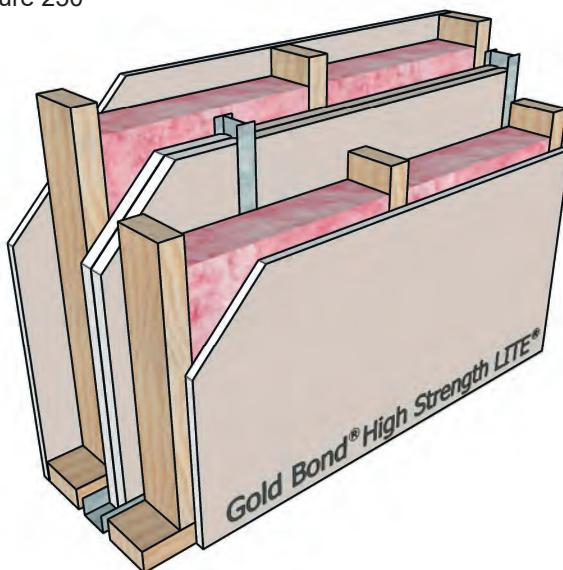


STC-54

NGC 2012087

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield
Shaftliner between studs; 3/4" air space
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber one side
Side 1: 1/2" High Strength LITE Gypsum Board
Side 2: 1/2" High Strength LITE Gypsum Board
UL Design: U347 - 2 hour

Figure 250

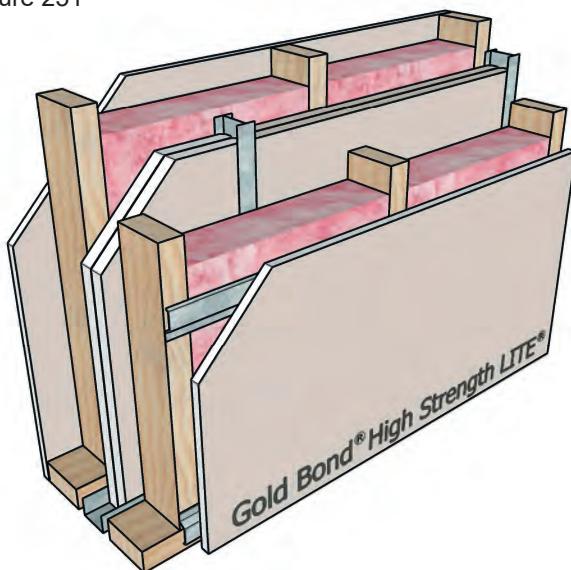


STC-59

NGC 2012078

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield
Shaftliner between studs; 3/4" air space
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber each side
Side 1: 1/2" High Strength LITE Gypsum Board
Side 2: 1/2" High Strength LITE Gypsum Board
UL Design: U347 - 2 hour

Figure 251



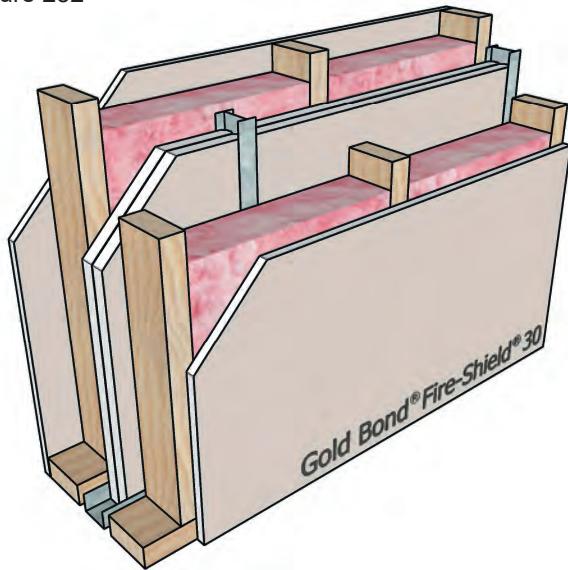
STC-62

NGC 2012079

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield
Shaftliner between studs; 3/4" air space
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber each side
Side 1: 1/2" High Strength LITE Gypsum Board
Side 2: 1/2" High Strength LITE Gypsum Board on RC-1
UL Design: U347 - 2 hour

Area Separation Fire Walls

Figure 252

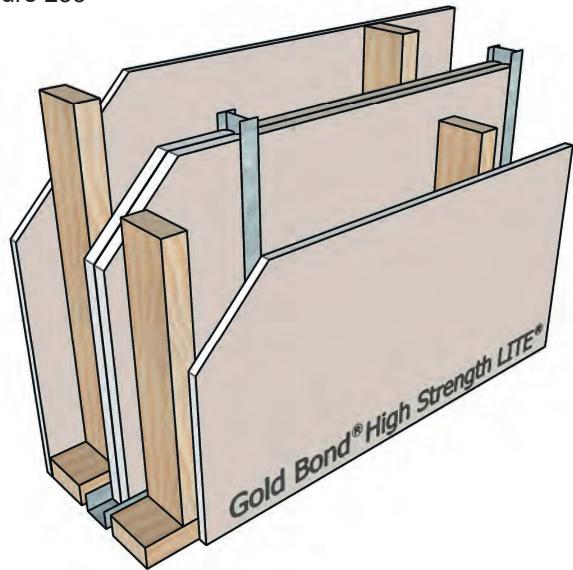


NGC 2012083

STC-57

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield
Shaftliner between studs; 3/4" air space
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber each side
Side 1: 5/8" High Strength Fire-Shield 30 Gypsum Board
Side 2: 5/8" High Strength Fire-Shield 30 Gypsum Board
UL Design: U347 - 2 hour

Figure 253

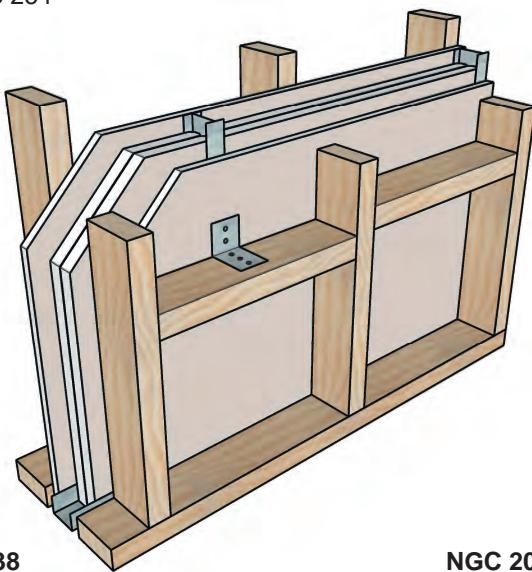


NGC 2012088

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield
Shaftliner between studs; 3/4" air space
Framing: 2x4 wood studs, 24" o.c. each side
Insulation: None
Side 1: 1/2" High Strength LITE Gypsum Board
Side 2: 1/2" High Strength LITE Gypsum Board
UL Design: U347 - 2 hour

Area Separation Fire Walls

Figure 254

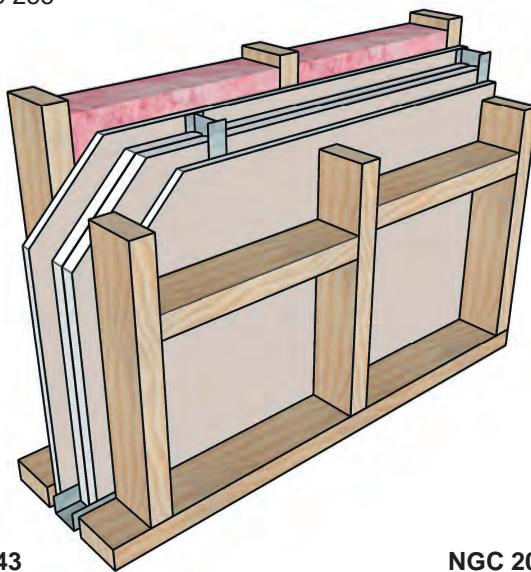


STC-38

NGC 2017015

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield Shaftliner between studs; 1 layer 5/8" Fire-Shield C Gypsum Board each side
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: None
Side 1: None
Side 2: None
UL Design: W454 - 3 hour

Figure 255

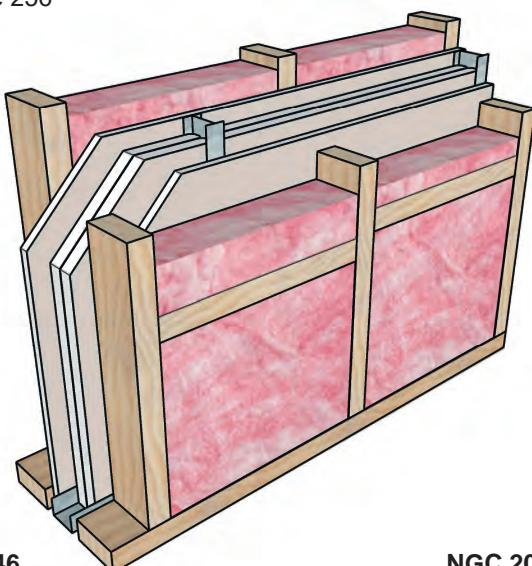


STC-43

NGC 2017016

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield Shaftliner between studs; 1 layer 5/8" Fire-Shield C Gypsum Board each side
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber one side
Side 1: None
Side 2: None
UL Design: W454 - 3 hour

Figure 256

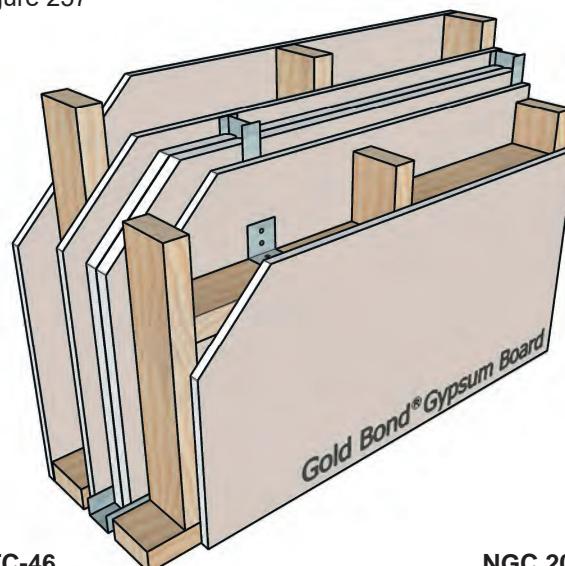


STC-46

NGC 2017017

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield Shaftliner between studs; 1 layer 5/8" Fire-Shield C Gypsum Board each side
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber each side
Side 1: None
Side 2: None
UL Design: W454 - 3 hour

Figure 257



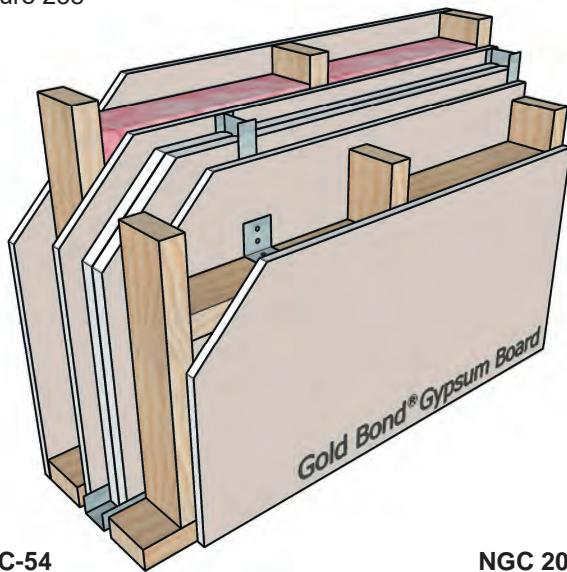
STC-46

NGC 2017027

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield Shaftliner between studs; 1 layer 5/8" Fire-Shield C Gypsum Board each side
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: None
Side 1: 1/2" Gold Bond Gypsum Board
Side 2: 1/2" Gold Bond Gypsum Board
UL Design: W454 - 3 hour

Area Separation Fire Walls

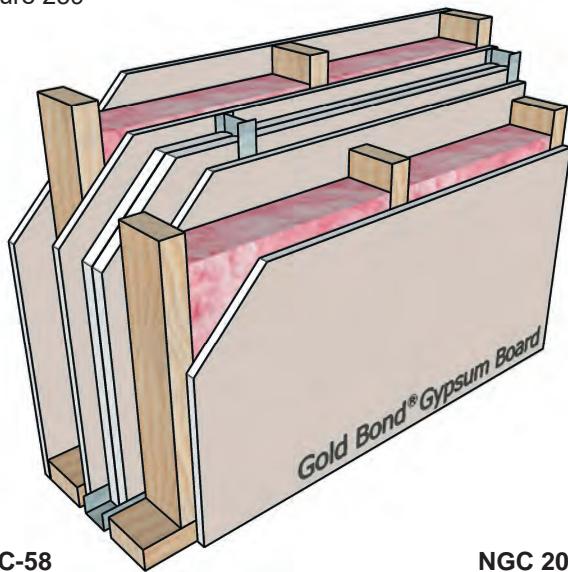
Figure 258



STC-54

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield Shaftliner between studs; 1 layer 5/8" Fire-Shield C Gypsum Board each side
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber one side
Side 1: 1/2" Gold Bond Gypsum Board
Side 2: 1/2" Gold Bond Gypsum Board
UL Design: W454 - 3 hour

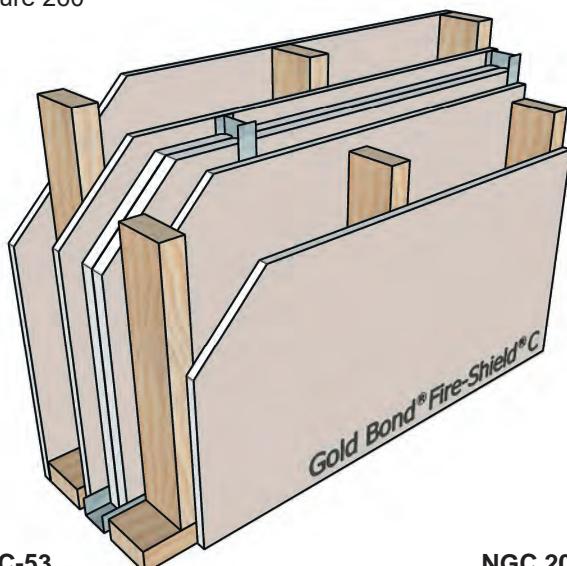
Figure 259



STC-58

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield Shaftliner between studs; 1 layer 5/8" Fire-Shield C Gypsum Board each side
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber each side
Side 1: 1/2" Gold Bond Gypsum Board
Side 2: 1/2" Gold Bond Gypsum Board
UL Design: W454 - 3 hour

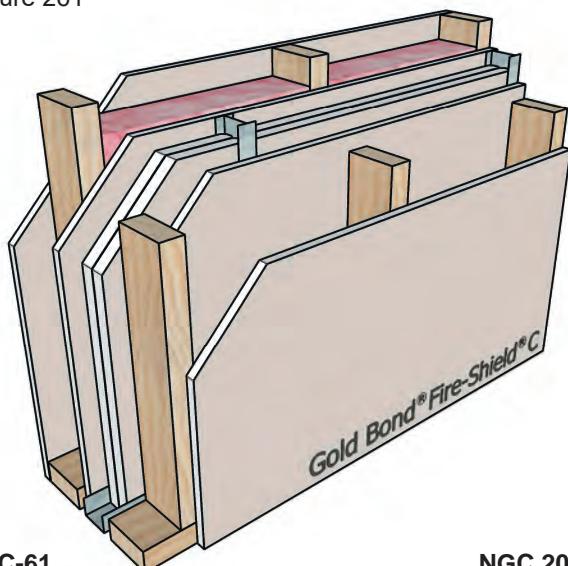
Figure 260



STC-53

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield Shaftliner between studs; 1 layer 5/8" Fire-Shield C Gypsum Board each side
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: None
Side 1: 1/2" Fire-Shield C Gypsum Board
Side 2: 1/2" Fire-Shield C Gypsum Board
UL Design: W454 - 3 hour

Figure 261

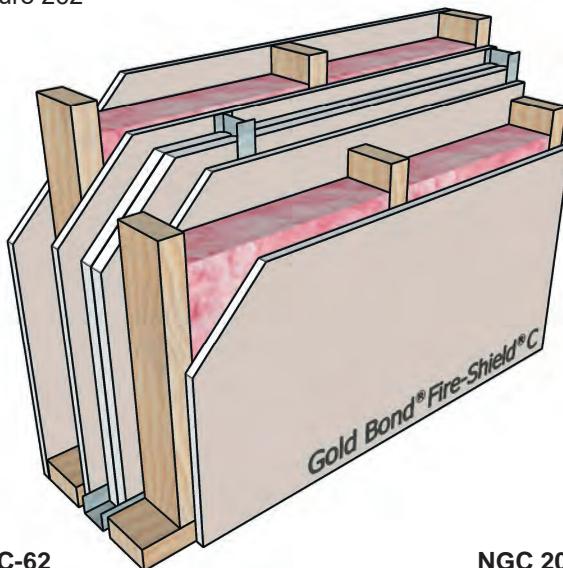


STC-61

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield Shaftliner between studs; 1 layer 5/8" Fire-Shield C Gypsum Board each side
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber one side
Side 1: 1/2" Fire-Shield C Gypsum Board
Side 2: 1/2" Fire-Shield C Gypsum Board
UL Design: W454 - 3 hour

Area Separation Fire Walls

Figure 262

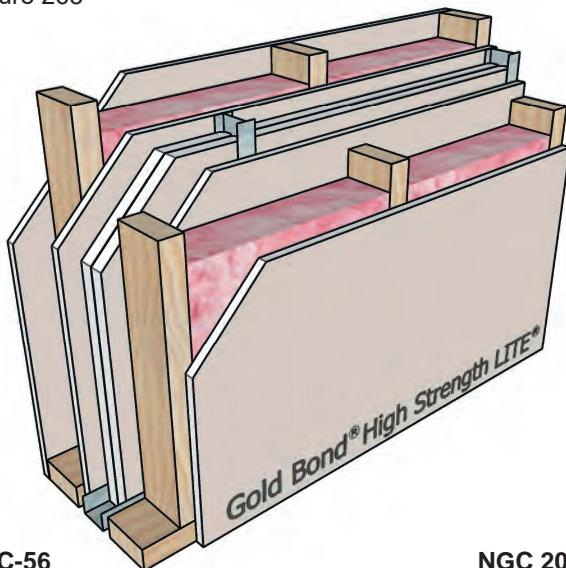


STC-62

NGC 2017019

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield Shaftliner between studs; 1 layer 5/8" Fire-Shield C Gypsum Board each side
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber each side
Side 1: 1/2" Fire-Shield C Gypsum Board
Side 2: 1/2" Fire-Shield C Gypsum Board
UL Design: W454 - 3 hour

Figure 263

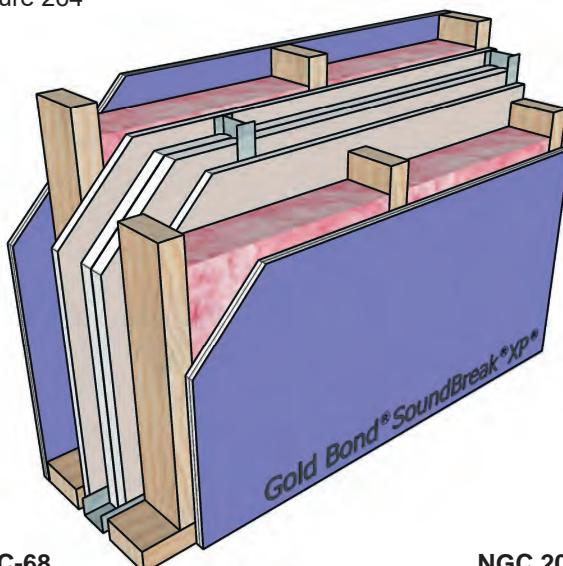


STC-56

NGC 2017022

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield Shaftliner between studs; 1 layer 5/8" Fire-Shield C Gypsum Board each side
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber each side
Side 1: 1/2" High Strength LITE Gypsum Board
Side 2: 1/2" High Strength LITE Gypsum Board
UL Design: W454 - 3 hour

Figure 264

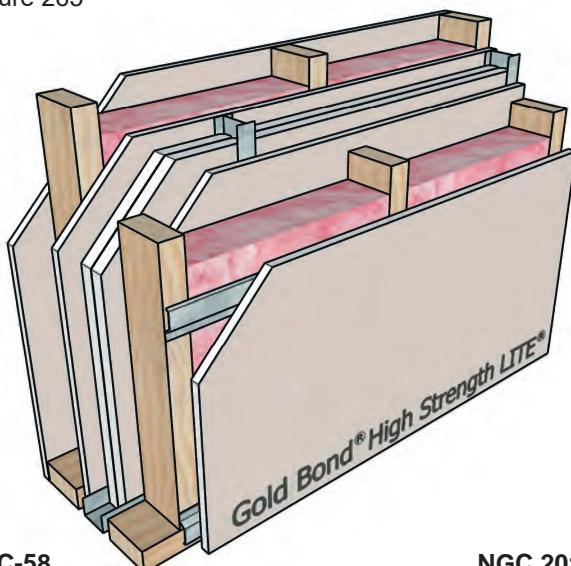


STC-68

NGC 2017018

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield Shaftliner between studs; 1 layer 5/8" Fire-Shield C Gypsum Board each side
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber each side
Side 1: 5/8" SoundBreak XP Wall Board
Side 2: 5/8" SoundBreak XP Wall Board
UL Design: W454 - 3 hour

Figure 265



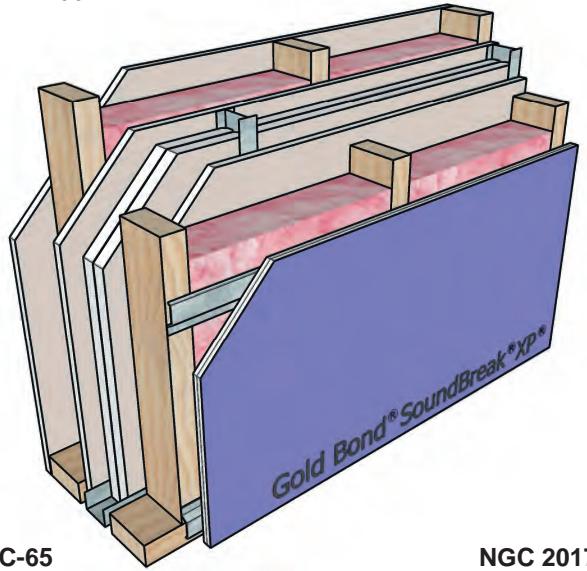
STC-58

NGC 2017023

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield Shaftliner between studs; 1 layer 5/8" Fire-Shield C Gypsum Board each side
Framing: 2x4 wood studs, 16" o.c. each side
Insulation: 3-1/2" glass fiber each side
Side 1: 1/2" High Strength LITE Gypsum Board
Side 2: 1/2" High Strength LITE Gypsum Board on RC-1
UL Design: W454 - 3 hour

Area Separation Fire Walls

Figure 266



STC-65 **NGC 2017024**

Fire Wall: 2" H-studs, 24" o.c. with 2 layers 1" Fire-Shield
Shaftliner between studs; 1 layer 5/8"
Fire-Shield C Gypsum Board each side

Framing: 2x4 wood studs, 16" o.c. each side

Insulation: 3-1/2" glass fiber each side

Side 1: 1/2" High Strength LITE Gypsum Board

Side 2: 5/8" SoundBreak XP Wall Board on RC-1

UL Design: W454 - 3 hour

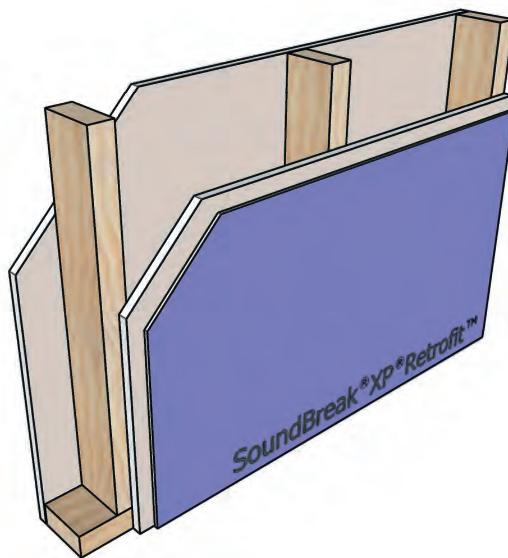
The SoundBookTM

The logo for SoundBook features the word "SoundBook" in a bold, sans-serif font. The letter "B" is stylized with three concentric arcs above it, suggesting sound waves or a speaker. A small "TM" symbol is positioned at the top right of the "k".

SoundBreak XP RetroFit Partitions

SoundBreak XP Retrofit Partitions

Figure 267



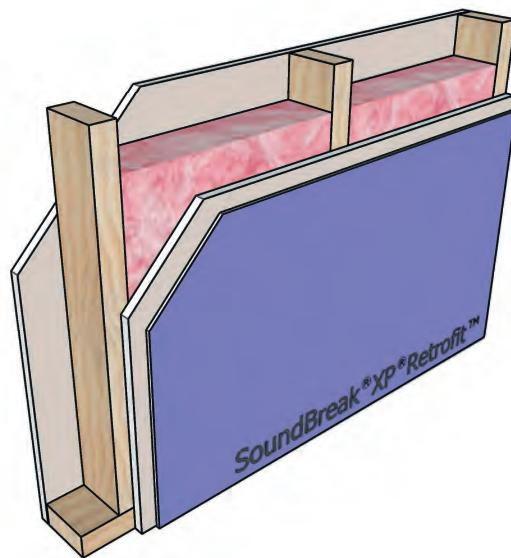
STC-36

NGC 2012049

Framing: 2x4 wood studs, 16" o.c.
 Insulation: None
 Side 1: 1/2" Gold Bond Gypsum Board
 Side 2: 5/16" Gold Bond SoundBreak XP Retrofit on
 1/2" Gold Bond Gypsum Board
 UL Design: Not Rated

Figure 269

Figure 268



STC-40

NGC 2012050

Framing: 2x4 wood studs, 16" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 1/2" Gold Bond Gypsum Board
 Side 2: 5/16" Gold Bond SoundBreak XP Retrofit on
 1/2" Gold Bond Gypsum Board
 UL Design: Not Rated

Figure 270

STC-39

NGC 2012067

Framing: 2x4 wood studs, 24" o.c.
 Insulation: None
 Side 1: 1/2" Gold Bond Gypsum Board
 Side 2: 5/16" Gold Bond SoundBreak XP Retrofit on
 1/2" Gold Bond Gypsum Board
 UL Design: Not Rated

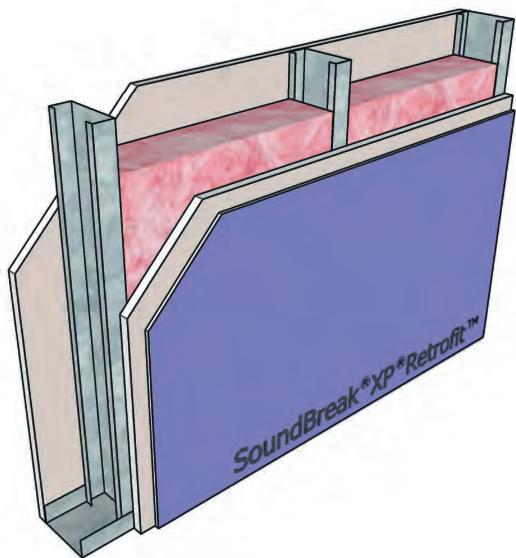
STC-45

NGC 2012066

Framing: 2x4 wood studs, 24" o.c.
 Insulation: 3-1/2" glass fiber
 Side 1: 1/2" Gold Bond Gypsum Board
 Side 2: 5/16" Gold Bond SoundBreak XP Retrofit on
 1/2" Gold Bond Gypsum Board
 UL Design: Not Rated

SoundBreak XP Retrofit Partitions

Figure 271

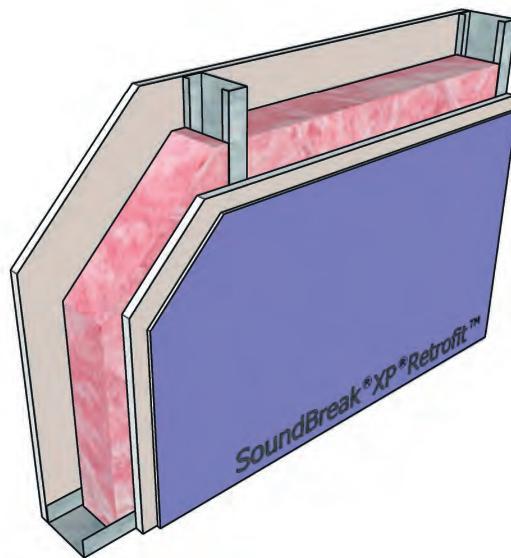


STC-52

NGC 2013031

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 16" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/16" Gold Bond SoundBreak XP Retrofit on
5/8" Fire-Shield Gypsum Board
UL Design: V438, U465

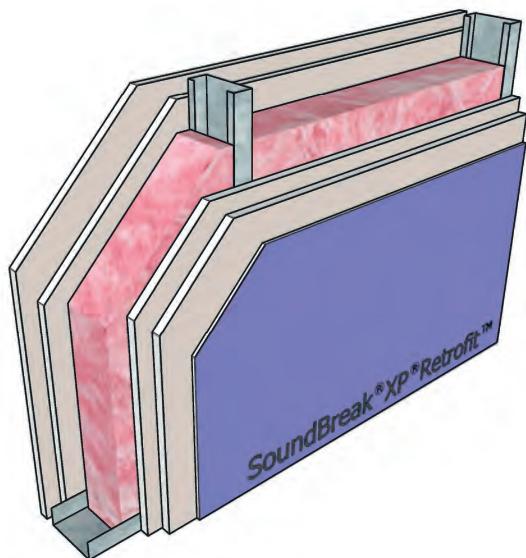
Figure 272



STC-53

NGC 2013041

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 5/8" Fire-Shield Gypsum Board
Side 2: 5/16" Gold Bond SoundBreak XP Retrofit on
5/8" Fire-Shield Gypsum Board
UL Design: V438, U465



STC-58

NGC 2016026

Framing: 3-5/8" steel studs, 25 gauge (18 mil), 24" o.c.
Insulation: 3-1/2" glass fiber
Side 1: 2 layers 5/8" Fire-Shield Gypsum Board
Side 2: 5/16" Gold Bond SoundBreak XP Retrofit on
2 layers 5/8" Fire-Shield Gypsum Board
UL Design: V438, U411 - 2 hour

The Sound Book

A graphic of three concentric circles with horizontal lines extending from the right side, resembling sound waves or a speaker icon.

Floor-Ceiling Assemblies

Floor-Ceiling Assemblies

Figure 274



STC-37
IIC-66 (carpet and pad)

Framing: 2x10 wood joists, 16" o.c.
Insulation: None
Floor: 3/8" plywood on 1/2" plywood subfloor

Ceiling: 1/2" Fire-Shield C Gypsum Board

UL Design: L522 - 1 hour

Figure 276

Figure 275



NGC 4024
NGC 5033

STC-45
IIC-63 (carpet and pad)

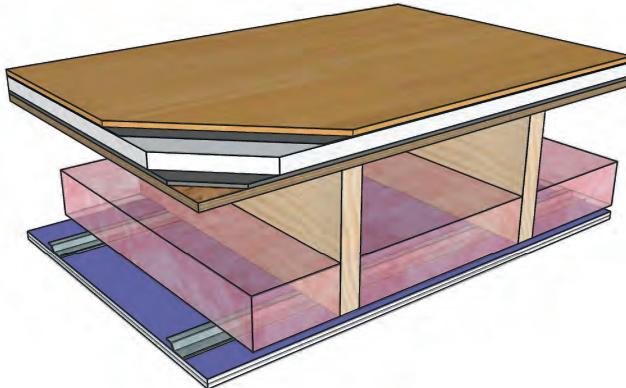
NGC 4107
NGC 5165

Framing: 2x10 wood joists, 16" o.c.
Insulation: None
Floor: 3/8" plywood on 1/2" plywood subfloor

Ceiling: 1/2" Fire-Shield C Gypsum Board on RC-1

UL Design: L502 - 1 hour

Figure 277

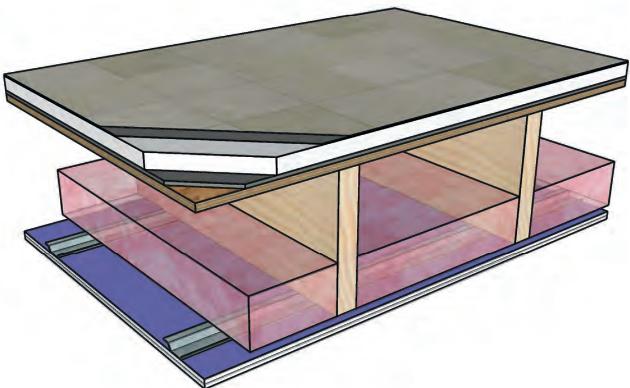


STC-58
IIC-59

NGC 5018017
NGC 7018007

Framing: 2x10 wood joists, 16" o.c.
Insulation: 3-1/2" glass fiber
Floor: Engineered wood on foam mat on 1" gypsum underlayment on 1/4" random filament sound control mat on 5/8" plywood
Ceiling: 3/4" SoundBreak XP Ceiling Board on RC-1

UL Design: M514 - 1 hour



STC-58
IIC-60

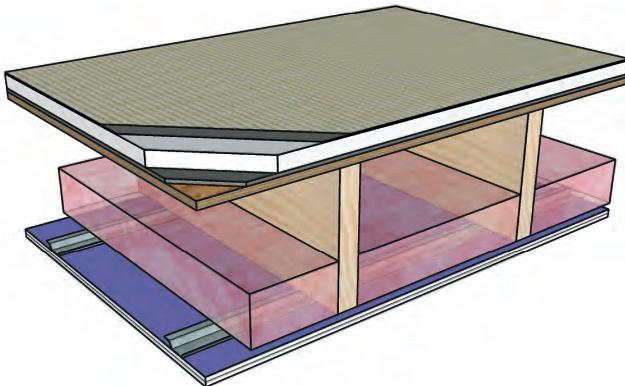
NGC 5018018
NGC 7018008

Framing: 2x10 wood joists, 16" o.c.
Insulation: 3-1/2" glass fiber
Floor: Vinyl tile on foam mat on 1" gypsum underlayment on 1/4" random filament sound control mat on 5/8" plywood
Ceiling: 3/4" SoundBreak XP Ceiling Board on RC-1

UL Design: M514 - 1 hour

Floor-Ceiling Assemblies

Figure 278

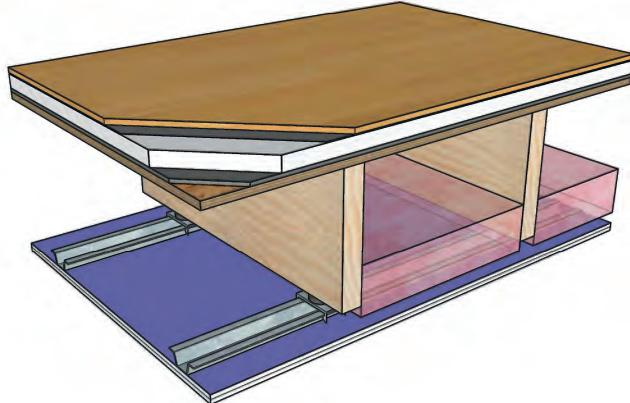


**STC-58
IIC-78**

Framing: 2x10 wood joists, 16" o.c.
Insulation: 3-1/2" glass fiber
Floor: Carpet on foam mat on 1" gypsum underlayment on 1/4" random filament sound control mat on 5/8" plywood
Ceiling: 3/4" SoundBreak XP Ceiling Board on RC-1

UL Design: M514 - 1 hour

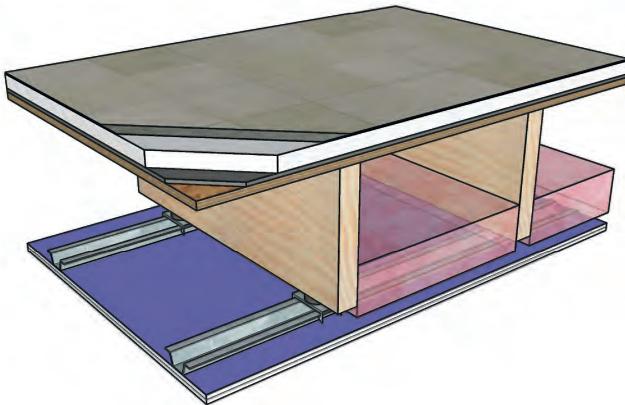
Figure 279



**STC-59
IIC-61**

Framing: 2x10 wood joists, 16" o.c.
Insulation: 3-1/2" glass fiber
Floor: Engineered wood on foam mat on 1" gypsum underlayment on 1/4" random filament sound control mat on 15/32" plywood
Ceiling: 3/4" SoundBreak XP Ceiling Board on 7/8" furring channel and resilient isolation clips
UL Design: M514 - 1 hour

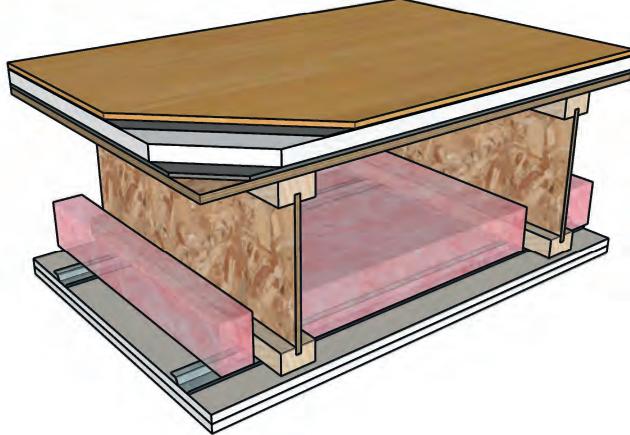
Figure 280



**STC-58
IIC-65**

Framing: 2x10 wood joists, 16" o.c.
Insulation: 3-1/2" glass fiber
Floor: Vinyl tile on foam mat on 1" gypsum underlayment on 1/4" random filament sound control mat on 15/32" plywood
Ceiling: 3/4" SoundBreak XP Ceiling Board on 7/8" furring channel and resilient isolation clips
UL Design: M514 - 1 hour

Figure 281

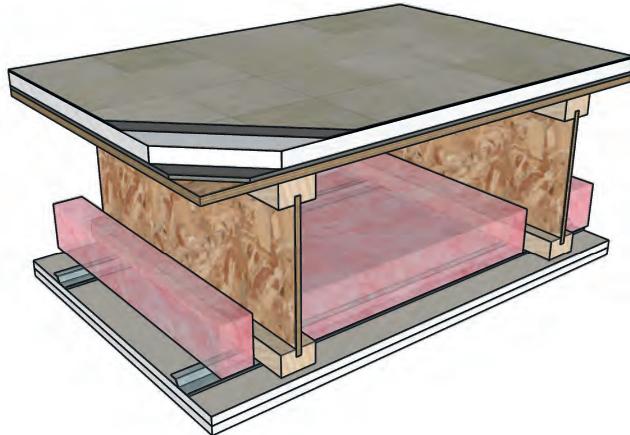


**STC-58
IIC-61**

Framing: 12" wood I-joists, 24" o.c.
Insulation: 3-1/2" glass fiber
Floor: Engineered wood on foam mat on 3/4" gypsum underlayment on 1/8" random filament sound control mat on 3/4" OSB
Ceiling: 2 layers 1/2" Fire-Shield C Gypsum Board on RC-1
UL Design: M546 - 1 hour

Floor-Ceiling Assemblies

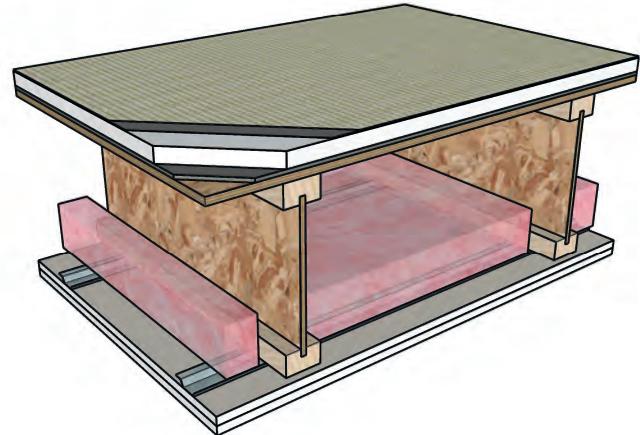
Figure 282



STC-58
IIC-62

Framing: 12" wood I-joists, 24" o.c.
Insulation: 3-1/2" glass fiber
Floor: Vinyl tile on foam mat on 3/4" gypsum underlayment on 1/8" random filament sound control mat on 3/4" OSB
Ceiling: 2 layers 1/2" Fire-Shield C Gypsum Board on RC-1
UL Design: M546 - 1 hour

NGC 5019075
NGC 7019099



STC-57
IIC-78

Framing: 12" wood I-joists, 24" o.c.
Insulation: 3-1/2" glass fiber
Floor: Carpet on foam mat on 3/4" gypsum underlayment on 1/8" random filament sound control mat on 3/4" OSB
Ceiling: 2 layers 1/2" Fire-Shield C Gypsum Board on RC-1
UL Design: M546 - 1 hour

NGC 5019074
NGC 7019098

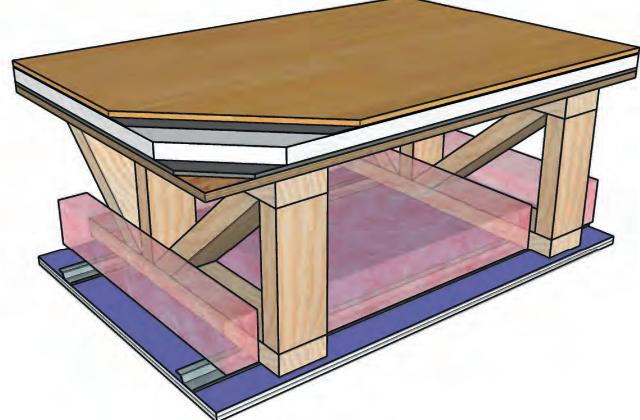
Figure 284



STC-55
IIC-49

Framing: 18" wood trusses, 24" o.c.
Insulation: 3-1/2" glass fiber
Floor: Engineered wood on foam mat on 3/4" gypsum underlayment on 5/8" plywood
Ceiling: 5/8" Fire-Shield C Gypsum Board on RC-1
UL Design: L563, L558 - 1 hour

NGC 5011031
NGC 7011056



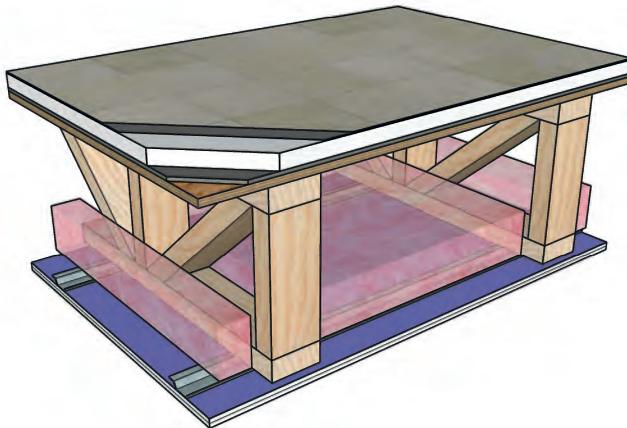
STC-59
IIC-57

Framing: 18" wood trusses, 24" o.c.
Insulation: 3-1/2" glass fiber
Floor: Engineered wood on foam mat on 1" gypsum underlayment on 1/4" random filament sound control mat on 23/32" OSB
Ceiling: 3/4" SoundBreak XP Ceiling Board on RC-1
UL Design: M545 - 1 hour

NGC 5018077
NGC 7018105

Floor-Ceiling Assemblies

Figure 286



STC-59
IIC-57

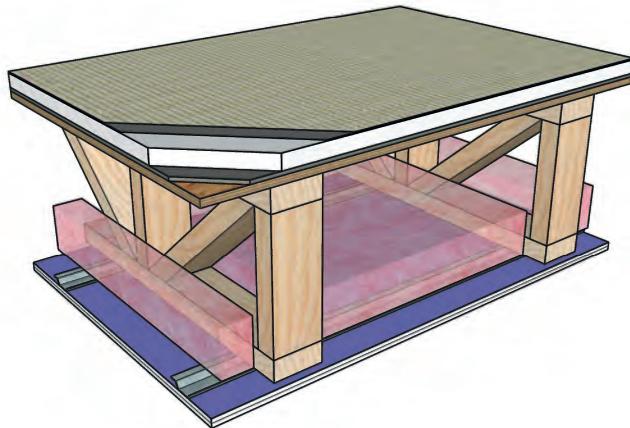
NGC 5018078
NGC 7018106

Framing: 18" wood trusses, 24" o.c.
Insulation: 3-1/2" glass fiber
Floor: Vinyl tile on foam mat on 1" gypsum underlayment on 1/4" random filament sound control mat on 23/32" OSB
Ceiling: 3/4" SoundBreak XP Ceiling Board on RC-1

UL Design: M545 - 1 hour

Figure 288

Figure 287



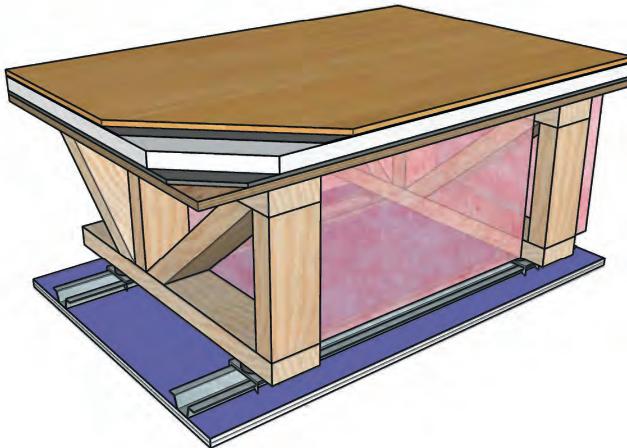
STC-58
IIC-79

NGC 5018080
NGC 7018108

Framing: 18" wood trusses, 24" o.c.
Insulation: 3-1/2" glass fiber
Floor: Carpet on foam mat on 1" gypsum underlayment on 1/4" random filament sound control mat on 23/32" OSB
Ceiling: 3/4" SoundBreak XP Ceiling Board on RC-1

UL Design: M545 - 1 hour

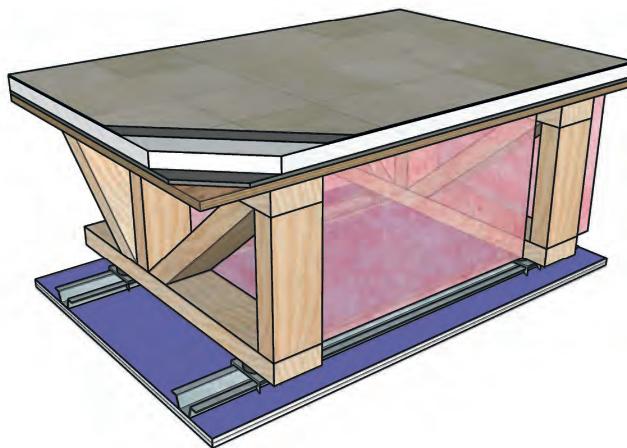
Figure 289



STC-60
IIC-61

NGC 5018118
NGC 7018160

Framing: 18" wood trusses, 24" o.c.
Insulation: 18" glass fiber
Floor: Engineered wood on foam mat on 1" gypsum underlayment on 1/4" random filament sound control mat on 23/32" OSB
Ceiling: 3/4" SoundBreak XP Ceiling Board on 7/8" furring channel and resilient isolation clips
UL Design: M545 - 1 hour



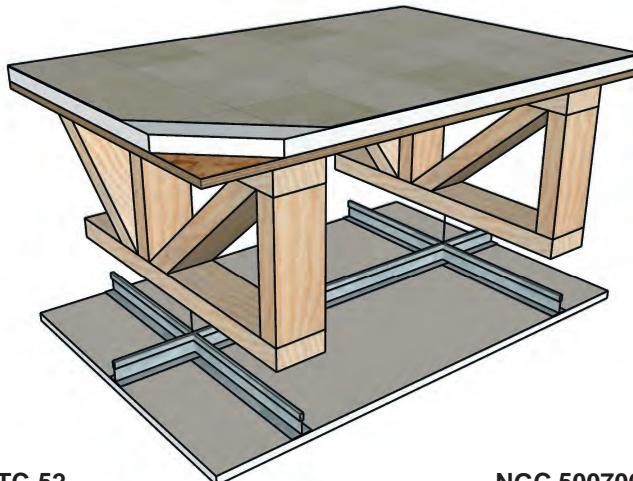
STC-60
IIC-61

NGC 5018119
NGC 7018161

Framing: 18" wood trusses, 24" o.c.
Insulation: 18" glass fiber
Floor: Vinyl tile on foam mat on 1" gypsum underlayment on 1/4" random filament sound control mat on 23/32" OSB
Ceiling: 3/4" SoundBreak XP Ceiling Board on 7/8" furring channel and resilient isolation clips
UL Design: M545 - 1 hour

Floor-Ceiling Assemblies

Figure 290



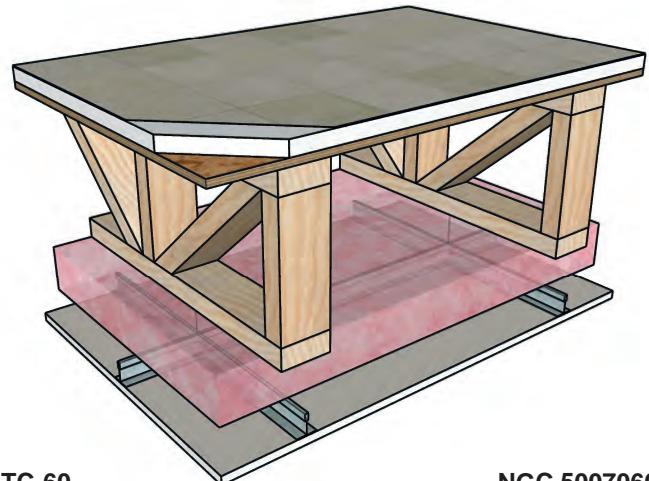
STC-52
IIC-51

Framing: 18" wood trusses, 24" o.c.
Insulation: None
Floor: Vinyl flooring on 1" gypsum underlayment on 3/4" OSB
Ceiling: 5/8" Fire-Shield C Gypsum Board on suspended ceiling grid system

UL Design: L558, L563 - 1 hour

Figure 292

Figure 291

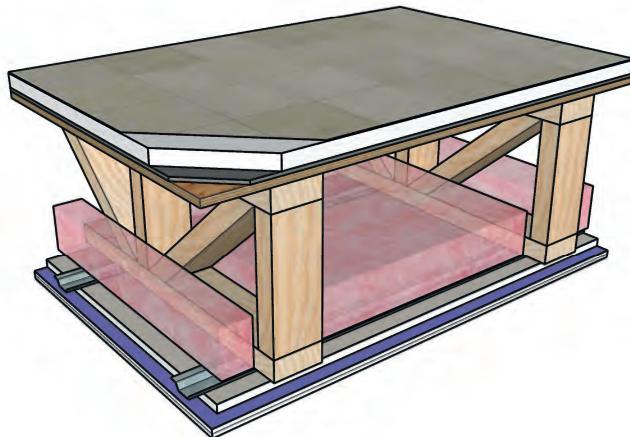


STC-60
IIC-60

Framing: 18" wood trusses, 24" o.c.
Insulation: 3-1/2" glass fiber
Floor: Vinyl flooring on 1" gypsum underlayment on 3/4" OSB
Ceiling: 5/8" Fire-Shield C Gypsum Board on suspended ceiling grid system

UL Design: L558, L563 - 1 hour

Figure 293



STC-58
IIC-51

Framing: 18" wood trusses, 24" o.c.
Insulation: 3-1/2" glass fiber
Floor: Vinyl flooring on 3/4" gypsum underlayment on 0.18" rubber underlayment on 3/4" OSB
Ceiling: 5/8" SoundBreak XP Wall Board on 5/8" Fire-Shield C Gypsum Board on RC-1

UL Design: L558, L563 - 1 hour



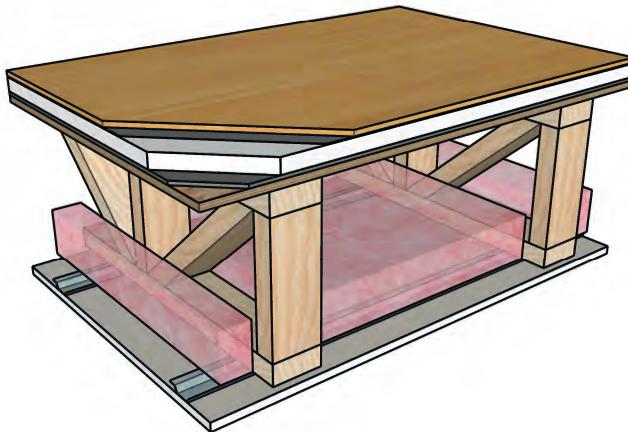
STC-53
IIC-67 (carpet and pad)

Framing: 10J2 bar joists, 24" o.c.
Insulation: None
Floor: 2-1/2" concrete on 3/8" rib lath or steel deck
Ceiling: 1/2" Fire-Shield C Gypsum Board on 7/8" steel furring channel

UL Design: G514 - 2 hour

Floor-Ceiling Assemblies

Figure 294



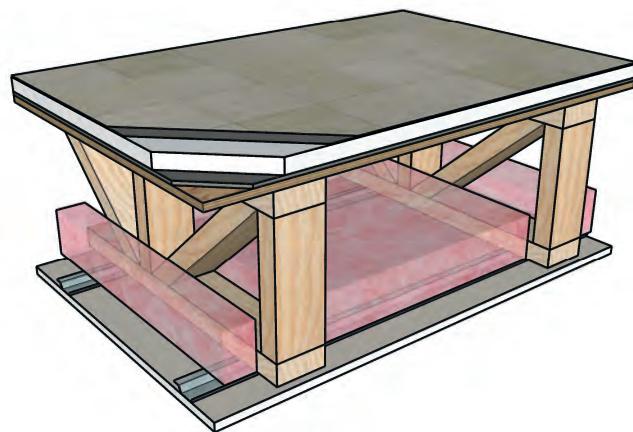
STC-57
IIC-55

Framing: 18" wood trusses, 24" o.c.
Insulation: 3-1/2" glass fiber
Floor: Engineered wood on foam mat on 1" gypsum underlayment on 1/4" random filament sound control mat on 23/32" OSB
Ceiling: 5/8" High Strength Fire-Shield 60 Gypsum Board

UL Design: M550 - 1 hour

Figure 296

Figure 295

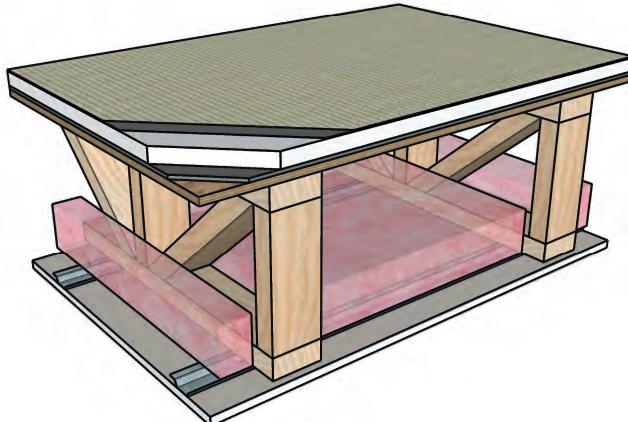


STC-57
IIC-58

Framing: 18" wood trusses, 24" o.c.
Insulation: 3-1/2" glass fiber
Floor: Vinyl Tile on foam mat on 1" gypsum underlayment on 1/4" random filament sound control mat on 23/32" OSB
Ceiling: 5/8" High Strength Fire-Shield 60 Gypsum Board

UL Design: M550 - 1 hour

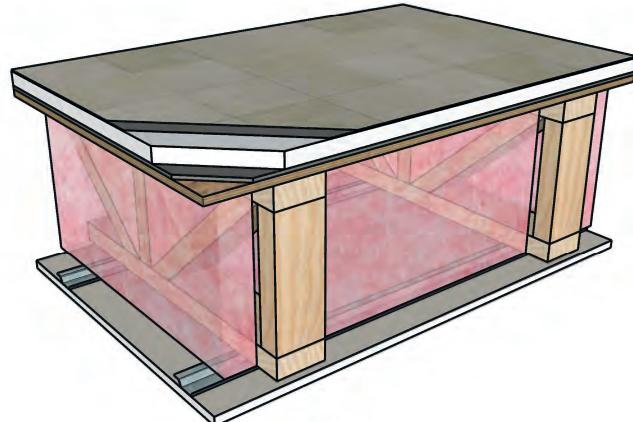
Figure 297



STC-56
IIC-76

Framing: 18" wood trusses, 24" o.c.
Insulation: 3-1/2" glass fiber
Floor: Carpet on foam mat on 1" gypsum underlayment on 1/4" random filament sound control mat on 23/32" OSB
Ceiling: 5/8" High Strength Fire-Shield 60 Gypsum Board

UL Design: M550 - 1 hour



STC-58
IIC-60

Framing: 18" wood trusses, 24" o.c.
Insulation: 18" glass fiber
Floor: Vinyl Tile on foam mat on 1" gypsum underlayment on 1/4" random filament sound control mat on 23/32" OSB
Ceiling: 5/8" High Strength Fire-Shield 60 Gypsum Board

UL Design: M550 - 1 hour

The Sound BookTM



Roof-Ceiling Assemblies

Roof-Ceiling Assemblies

Figure 298



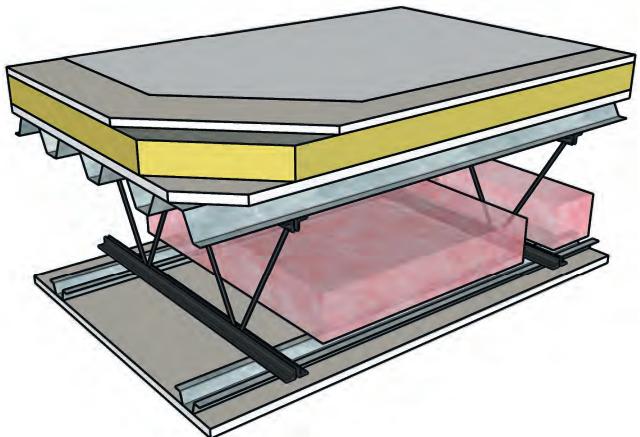
STC-36
OITC-27

NGC 5018008

Framing: 12K3 bar joists 48" o.c.
Roof: Membrane roof on 1/2" DEXcell FA Glass-Mat
Roof Board on 3" Insulation on 5/8" DEXcell
FA Glass-Mat Roof Board on steel deck
Ceiling: None
Insulation: None

Figure 300

Figure 299

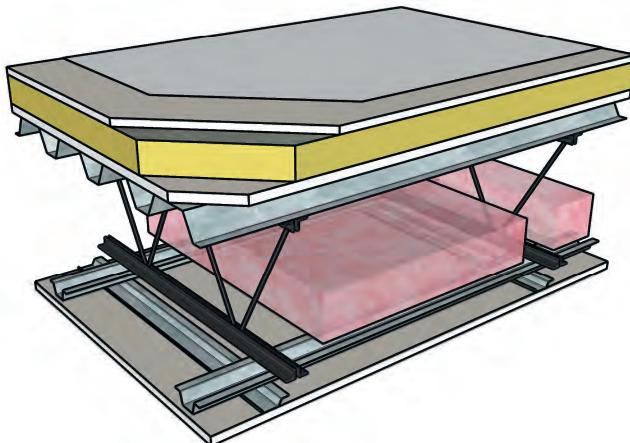


STC-56
OITC-44

NGC 5018003

Framing: 12K3 bar joists 48" o.c.
Roof: Membrane roof on 1/2" DEXcell FA Glass-Mat
Roof Board on 3" Insulation on 5/8" DEXcell
FA Glass-Mat Roof Board on steel deck
Ceiling: 1/2" Fire-Shield C Gypsum Board on 1-1/2"
rigid furring channels
Insulation: 3-1/2" glass fiber

Figure 301



STC-57
OITC-46

NGC 5018006

Framing: 12K3 bar joists 48" o.c.
Roof: Membrane roof on 1/2" DEXcell FA Glass-Mat
Roof Board on 3" Insulation on 5/8" DEXcell
FA Glass-Mat Roof Board on steel deck
Ceiling: 1/2" Fire-Shield C Gypsum Board on RC-1 on
1-1/2" rigid furring
Insulation: 3-1/2" glass fiber



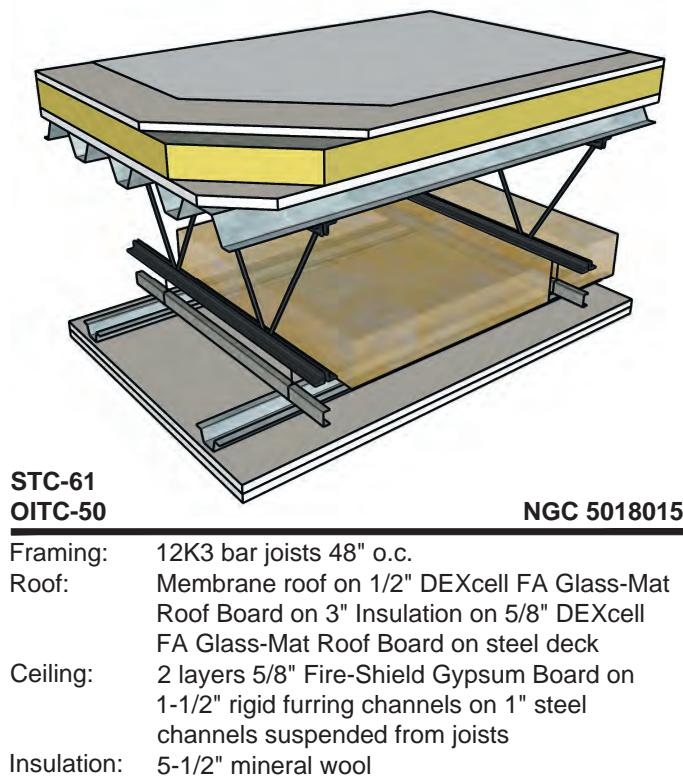
STC-57
OITC-46

NGC 5018009

Framing: 12K3 bar joists 48" o.c.
Roof: Membrane roof on 1/2" DEXcell FA Glass-Mat
Roof Board on 3" Insulation on 5/8" DEXcell
FA Glass-Mat Roof Board on steel deck
Ceiling: 1/2" Fire-Shield C Gypsum Board on 1-1/2"
rigid furring channels on 1" steel channels
suspended from joists
Insulation: 3-1/2" glass fiber

Roof-Ceiling Assemblies

Figure 302



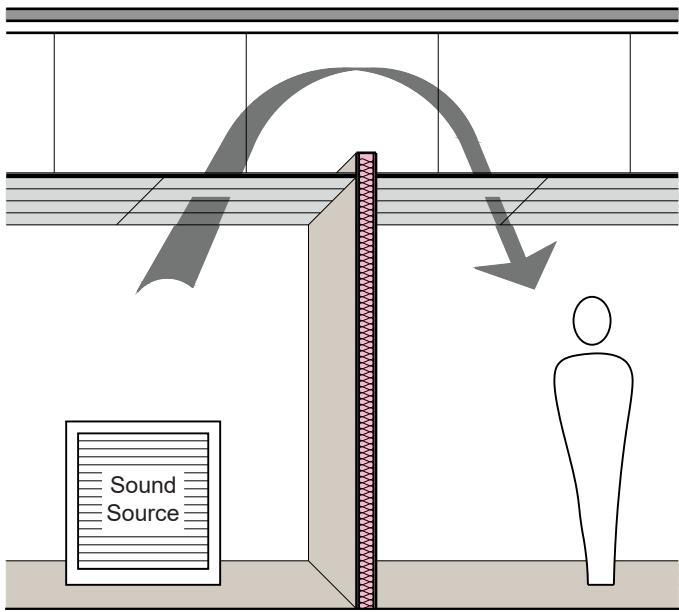
The Sound Book

A large, stylized graphic of a sound wave or frequency curve, composed of concentric arcs, is positioned behind the title text.

Ceiling Attenuation
Class Assemblies

Ceiling Attenuation Class Assemblies

Figure 303



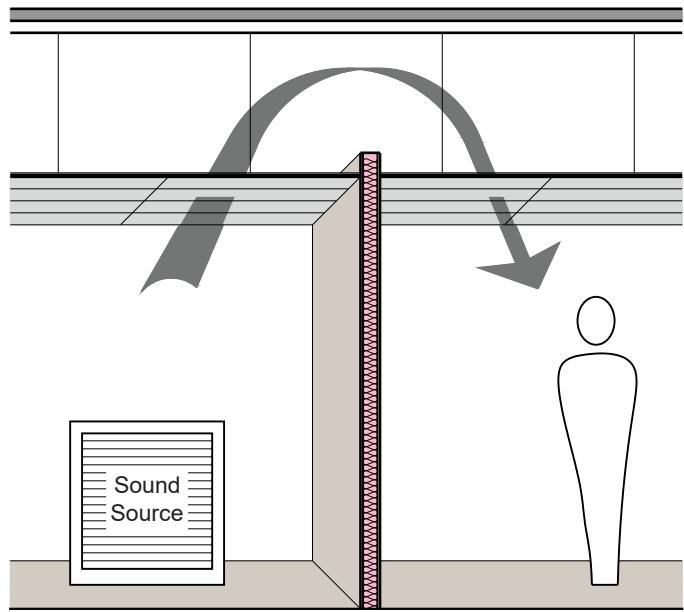
CAC-41

NGC 6000001

Ceiling: Suspended ceiling grid with 2' x 4' x 5/16"
Gridstone Hi-Strength Ceiling Panels

Insulation: None

Figure 304



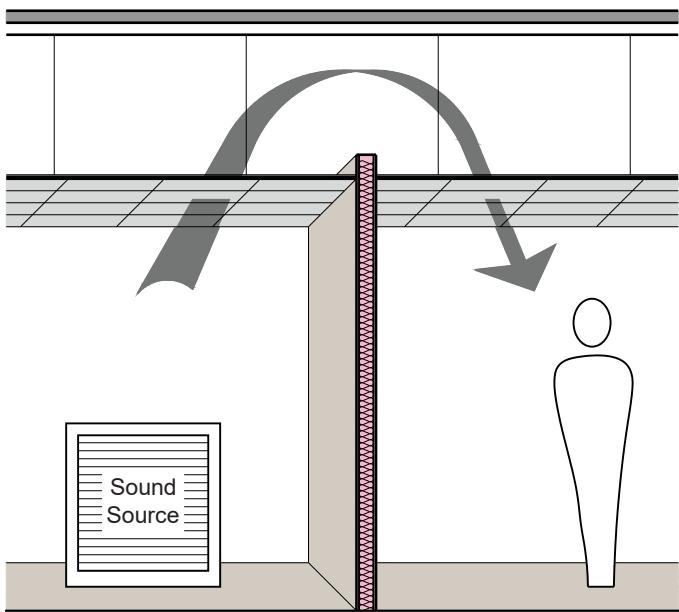
CAC-46

NGC 6098001

Ceiling: Suspended ceiling grid with 2' x 4' x 1/2"
Gridstone Ceiling Panels

Insulation: None

Figure 305



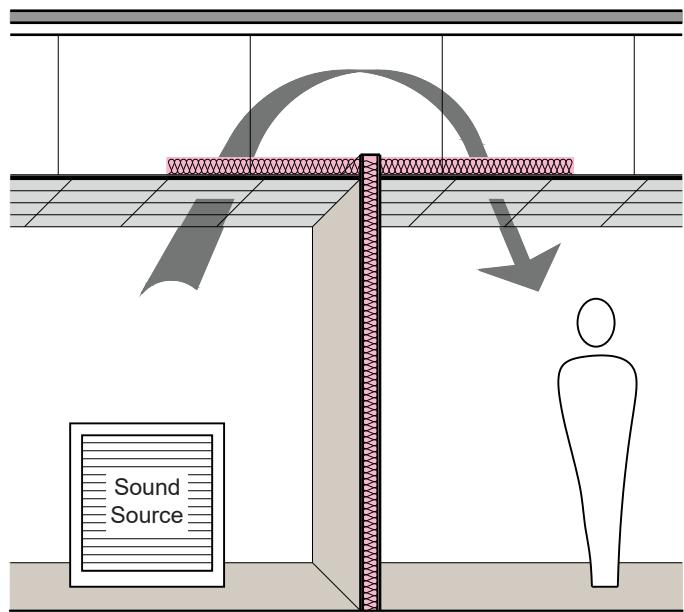
CAC-44

NGC 6013012

Ceiling: Suspended ceiling grid with 2' x 2' x 1/2"
Gridstone Ceiling Panels

Insulation: None

Figure 306



CAC-51

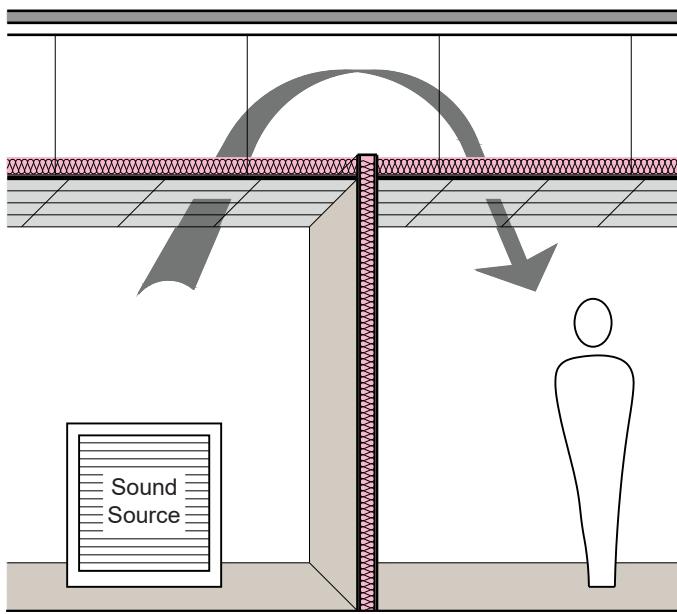
NGC 6013013

Ceiling: Suspended ceiling grid with 2' x 2' x 1/2"
Gridstone Ceiling Panels

Insulation: 3 1/2" glass fiber 48" on each side of partition

Ceiling Attenuation Class Assemblies

Figure 307



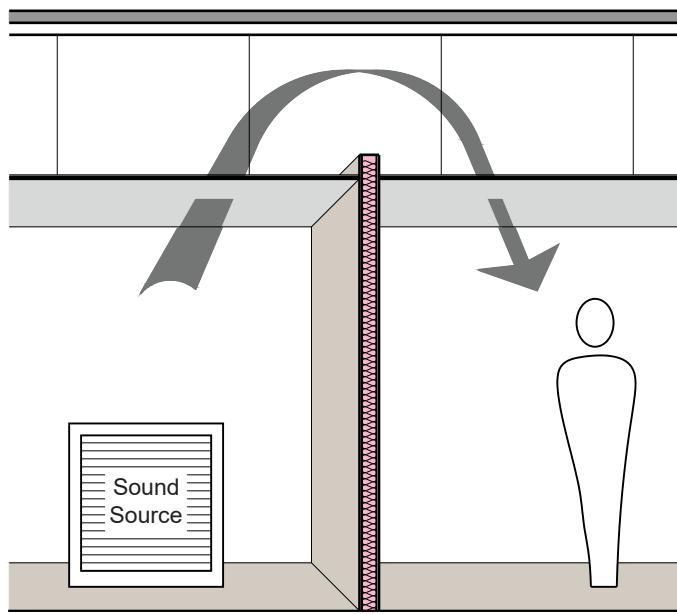
CAC-53

NGC 6013014

Ceiling: Suspended ceiling grid with 2' x 2' x 1/2"
Gridstone Ceiling Panels

Insulation: 3-1/2" glass fiber full coverage over ceiling

Figure 308



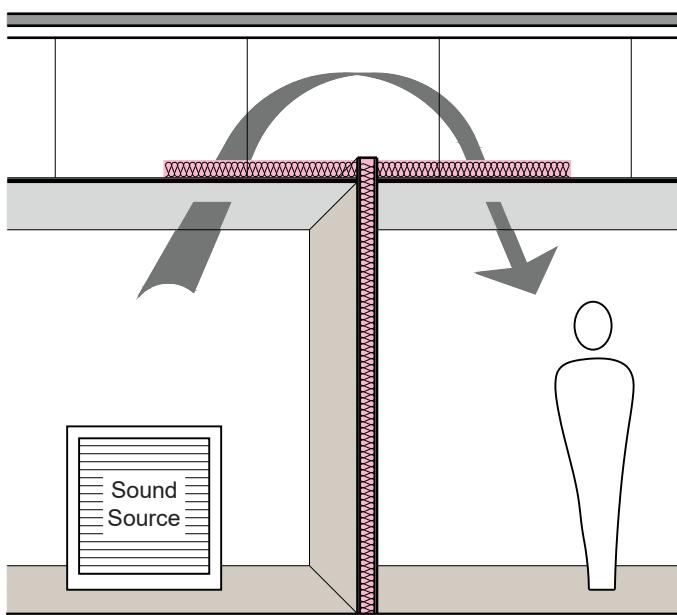
CAC-53

NGC 6017015

Ceiling: Suspended drywall grid with 5/8" Fire-Shield
Gypsum Board

Insulation: None

Figure 309



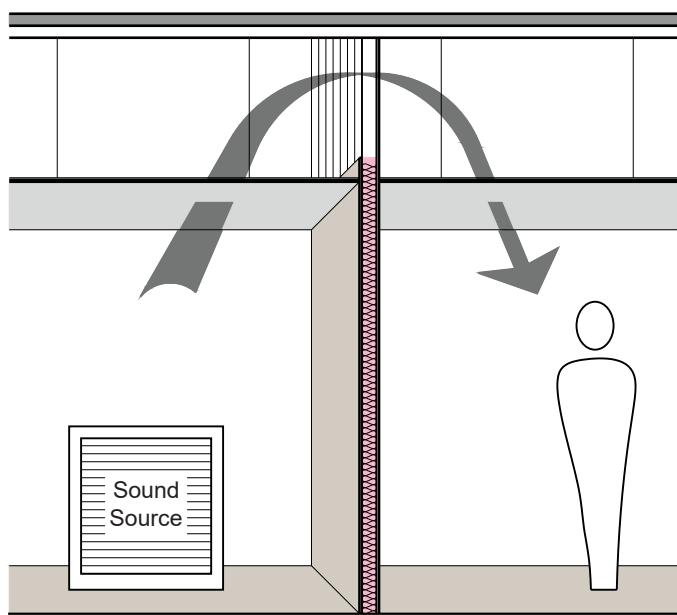
CAC-56

NGC 6017014

Ceiling: Suspended drywall grid with 5/8" Fire-Shield
Gypsum Board

Insulation: 3 1/2" glass fiber 48" on each side of partition

Figure 310



CAC-57

NGC 6017016

Ceiling: Suspended drywall grid with 5/8" Fire-Shield
Gypsum Board

Insulation: None

Plenum Barrier: 5/8" Fire-Shield Gypsum Board on 3-5/8"

steel studs

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You've got the questions ... we've got the answers.

From left, the technical service team: Mark Chapman, Sam Halverson and Jim Farrell.



SoundBreak XP

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