

The Sound Design Guide

A Transparent Resource for Sound & Fire Information

Contact Information

WE'RE ALWAYS HERE TO HELP

We are here for you. At PABCO® Gypsum, technical support is one of the most important services we provide to the building community. Our technical services team is staffed by some of the most experienced professionals in the field.

QuietRock® and PABCO® Gypsum prides itself on the unsurpassed expertise that we offer our customers: architects, engineers, contractors, distributors and owners. Our team of experts are available to answer your questions and assist in the selection of the right product for your project.

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Introduction

The Sound Design Guide by PABCO® Gypsum, is the industry's most comprehensive and transparent resource for sound and fire information. This manual contains over 225 sound and fire tested assemblies on various steel and wood-framed partitions, using various stud thicknesses, configurations and materials. Our assemblies, using both traditional gypsum wallboard and our QuietRock® sound reducing drywall, have been tested for both fire and sound, so you don't have to guess the STC performance when you build to the fire-rated designs.

New in this Edition

The 2025 edition includes the following enhanced features:

- 51 new designs added
- New 2-1/2" inch steel stud framing section
- Results for braced and unbraced steel stud assemblies
- 13 updated tests on current assemblies
- Expanded Area Separation Wall section

Objectives for the Guide

The construction industry creates several handbooks designed to navigate and execute the correct assembly for specific fire requirements and includes STC ranges, when available. Although many assemblies found in current handbooks are sound tested, finding the sound rated wall that also meets fire ratings is often a confusing, if not a misleading proposition.

The Sound Design Guide provides details on sound rated assemblies which in some cases, are different than how the assembly was built for the fire test. In instances where there is a difference, the variance has been noted, so you can make the choice to build for sound or if a fire rating is required, build for fire and know that if tested for sound, results may vary. The differences that you will find relate only to screw length and screw spacing.

Secondly, sound isolation measurements and testing standards have been continuously revised since their inception decades ago. Yet, old tests using outdated methodologies are still out there in commonly used designs. They linger in design templates that have not been updated because "that is the way they've always done it." The Gypsum Association has determined that acoustic testing more than 30 years old is no longer valid and has been removing these old acoustic tests from the GA-600, Fire Resistance and Sound Control Design Manual. The tested assemblies in The Sound Design Guide are based on the most current testing methodologies, building techniques and materials available today.

In addition to the numerous tested assemblies, The Sound Design Guide also contains general acoustic information that may be helpful to you—from basic sound information to navigating test reports. PABCO® Gypsum is committed to providing you with a complete resource for designing sound and fire-rated assemblies in wall designs.

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About PABCO® Gypsum

For 50 years, PABCO Gypsum has been providing top quality gypsum panel products throughout North America. Family owned and operated from the very beginning, PABCO is committed to building a culture of caring. We do this by treating customers, employees and suppliers like family, developing relationships based on mutual trust and respect, hiring and training the best people for the job.

Its origins date back to 1953 when Fred Anderson opened the doors to Anderson Lumber Company in Sacramento, California. From those humble beginnings, Pacific Coast Building Products, Inc. was born. Through the years that followed Fred, and later, Dave Lucchetti, the company's president, purchased and founded building product-related businesses. In 2021, Ryan Lucchetti was appointed President and CEO of Pacific Coast Building Products, continuing its nearly 70 years of family leadership.

**"We run the company like a family.
Our business is built on relationships.
That is what distinguishes us from
our competition"**

David J. Lucchetti

Former President and Chief Executive Officer,
Pacific Coast Building Products, Inc.

PABCO Gypsum-Open for Business

PABCO Gypsum began operating in 1972 with the acquisition of an idle wallboard plant in Newark, California. Five years later, PABCO expanded its gypsum manufacturing capabilities with the acquisition of a gypsum plant and quarry north of Las Vegas, Nevada. Both plants have been expanded and modernized and now supply over 1.65 billion square feet of gypsum board annually.

The Las Vegas manufacturing and mining operation is the cornerstone of PABCO's dedication to quality, which begins literally from the ground up. Due to the unique placement of our gypsum deposits, PABCO was able to re-engineer the method of extracting the ore from the ground and load it directly into our wallboard manufacturing facility. Our ore is extracted, processed, refined and turned into gypsum panels all within our 4,200-acre footprint under the watchful eyes of some of the most tenured gypsum professionals in the country.

As a family concerned with the future, PABCO Gypsum adopted practices throughout its operations to minimize its impact on our environment. This is achieved by reducing and reusing waste, managing water consumption and using alternative energy in its production facility. To ensure finishing quality and consistency, the face and backing paper is manufactured within the family by PABCO® Paper, located in Vernon, California. Using 100% recycled content paper, PABCO Paper manufactures the gypsum liners for PABCO Gypsum and also produces liner board for corrugated boxes and chip paper grades.

QuietRock Added to PABCO Portfolio

The acquisitions continued with the purchase of QuietRock® in 2013, which brought the industry's first sound reducing drywall panel into the PABCO family. With manufacturing located in Newark, California, adjacent to PABCO's existing wallboard plant, the QuietRock product line is a natural complement to the 50-year history of the PABCO Gypsum product line.

Since QuietRock's origination in 2002, it has earned over 40 U.S. and foreign patents and patent applications. QuietRock achieves high sound attenuation and fire-resistance in one panel using less space, less material and less labor than conventional alternatives. Its advanced development team and a broad network of distributors and contractors throughout the U.S. and Canada contribute to thousands of QuietRock projects across North America.

The PABCO Promise

PABCO Gypsum's experienced sales and technical services teams are ready to assist you in the selection of gypsum products and solutions for you and your customers. Recognized by our customers as being easy to work with, our focus is making one part of the construction process easier for you. When you work with PABCO, you can expect consistently high-quality drywall, personal high-touch service and reliable technical advice from leading experts in the field.

PABCO Gypsum

Expert advice, service and drywall performance you can count on — what the job demands.

Guide Overview & General Notes

ORGANIZATION OF GUIDE

The systems in this Guide are organized by stud type and mil thickness according to the general categories below. A more detailed list can be found in the Table of Contents.

Steel Framing – Single
Steel Framing – Staggered
Steel Framing – Double
Wood Framing – Single
Wood Framing – Staggered
Wood Framing – Double
Area Separation Walls

The systems are arranged in descending order by STC rating within each stud type category. If there are tested assemblies at 16" o.c. and 24" o.c. they will be displayed side-by-side for easy comparison.

The STC listed is the reported value provided by the independent testing lab and report number indicated for the assembly. Any misleading conclusions that can arise from displaying STC values as a range have been eliminated.

PABCO Gypsum Design Number – The PABCO Gypsum Design Number has been revised to offer you the following benefits:

- Provides more insight into the design,
- Enables designs contained in this Guide to be listed in numerical order, making it easier to find the design you need,
- Reflects the new addition to the Guide showing side-by-side comparisons of 16" oc and 24" oc on the same assembly

Explanation of PABCO Gypsum Design Number

1. PGD=PABCO Gypsum Design. This will help identify the source of the design and eliminate confusion with other handbooks and guides.
2. Construction Type if other than a Wall Partition (for example an Area Separation Wall would be ASW)
3. Stud Type
 - a. Wood=W
 - b. Steel=Noted by mil thickness
4. Stud Width
 - a. Wood=If other than standard width of 4"
 - b. Steel=If other than standard width of 3-5/8"
5. Stud Configuration (if other than single)
 - a. S=Staggered
 - b. D=Double
6. Assembly Number within the Category (the lower the number, the higher the STC value).
 - a. B=Bracing
7. Stud Spacing
 - a. 16" o.c.=16
 - b. 24" o.c.=24

Examples:

PGD-336-123-24

PABCO Gypsum Design wall partition, 33 mil steel stud, 6" wide, single configuration, assembly #123, 24" o.c.

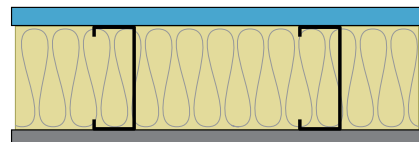
PGD-WS-234-16

PABCO Gypsum Design wall partition, wood, staggered configuration, assembly #234, 16" o.c.

For cross reference purposes, the **PABCO® Sound Designs** include the GA File Number, UL/ULC Design Number or other Fire Test Report information where applicable.

All PABCO Gypsum Designs (PGD) contain a brief yet detailed description of the components used as the assembly was built for sound testing purposes. In instances where the sound assembly configuration differs from the fire test or is outside of the min max ranges of spacing, those differences are noted. Most differences relate to screw length and spacing. You will not find differences related to added materials or alternate configurations that do not conform to the requirements of the fire rated design indicated.

Each detailed description is accompanied by a cross-section detail of the system. The descriptions are listed in the order of material as one looks at the drawings from top to bottom.



Unless indicated otherwise, all load-bearing wood stud systems were tested while being subjected to the maximum load allowed by design under nationally recognized design criteria at the time of the test. Due to an increase in the maximum allowable loading in the National Design Specifications (1982 and later editions), the American Forest and Paper Association issued the following statement: Where a load-bearing fire rated wood stud wall assembly contained in this Guide is specifically designed for structural capacity, the design value in compression parallel to grain adjusted for slenderness ratio (F_c') used in such analysis shall be taken as 78 percent of the maximum F_c' value determined in accordance with normal design practice but shall not exceed 78 percent of the F_c' value for such member having a slenderness ratio (l_e/d) of 33.

Unless otherwise stated in the listing, all wood framed wall systems in this Guide were tested using studs of nominal 2x4 or 2x6 dimension lumber. For information on the use of engineered wood wall framing, consult the supplier of the engineered wood product.



Note: Listing of a system in a specific category in this Guide is not intended to limit its use to that category (see General Explanatory Note 14 on page 9). However, this shall not be interpreted to imply that vertical systems, such as walls and partitions, are permitted to arbitrarily be used in a horizontal orientation. Contact PABCO Gypsum Technical Services for other products which satisfy the fire and sound requirements shown for the systems.

DESCRIPTION OF TERMS AND SYMBOLS USED IN THIS GUIDE

Gypsum Panel Products - defined in ASTM C11 *Standard Terminology Relating to Gypsum and Related Building Materials and Systems*, as "the general name for a family of sheet products consisting essentially of gypsum."

Note: This term includes gypsum board, glass mat gypsum panels, fiber reinforced gypsum panels, and factory laminated gypsum panels.

Gypsum board may be further described as follows:

- **Regular Gypsum Board** - a gypsum board with naturally occurring fire resistance from the gypsum in the core; or
- **Type X Gypsum Board** - a gypsum board with special core additives to increase the natural fire resistance of regular gypsum board.

GENERAL EXPLANATORY NOTES

1. All dimensions, weights, temperatures, and pressures are in U.S. customary units. For commonly used metric (SI) conversions refer to the Appendix and IEEE/ASTM S10-2002, Standard for Use of the International System of Units (SI): The Modernized Metric System.
2. Nails shall comply with ASTM F547 or ASTM C514. Other nails, suitable for the intended use, and having dimensions not less than those specified in this Guide shall be permitted as substitutions.
3. Fasteners installed along the edges of gypsum board shall be placed along the paper bound edges on the long dimension of the board. Fasteners at the end shall be placed along mill or field cut ends on the short dimension. Fasteners on the perimeter of the board shall be placed along both edges and ends. Indicated fastener spacings are maximums. Closer fastener spacing may reduce the STC.
4. Screws meeting ASTM C1002 shall be permitted to be substituted for the prescribed nails, one for one, when the length and head diameter of the screws equal or exceed those of the nails specified in the tested system and the screw spacing does not exceed the spacing specified for the nails in the tested system.
5. Vertically applied gypsum board shall have the edges parallel to framing members. Horizontally applied gypsum board shall have the edges at right angles to the framing members. Intermediate vertical framing members are those between the vertical edges or ends of the board. Board orientation may not affect the STC.
6. Unless otherwise specified, the face layers of all systems, except exterior gypsum sheathing panels, shall have joints taped with either paper tape or glass fiber mesh tape (minimum Level 1 as specified in GA-214, Recommended Levels of Gypsum Board Finish) and fastener heads treated. Base layers in multi-layer systems shall not be required to have joints or fasteners taped or covered with joint compound.
7. Unless otherwise stated in the detailed description of the individual system, joints shall be staggered as follows:
 - a. Horizontal butt joints on opposite sides of a partition in single-layer applications shall be staggered not less than 12 inches.
 - b. Horizontal butt joints in adjacent layers on the same side of a partition in multi-layer applications shall be staggered not less than 12 inches.
 - c. Vertical joints on opposite sides of a partition in single layer applications shall not occur on the same stud.
8. When a fire-resistance rated partition extends above the ceiling, the gypsum board joints occurring above the ceiling need not be taped and fasteners need not be covered when all of the following conditions are met.
 - a. The ceiling is part of a fire-resistance rated floor-ceiling or roof-ceiling system;
 - b. All vertical joints occur over framing members;
 - c. Horizontal joints are either staggered 24 inches o.c. on opposite sides of the partition, or are covered with strips of gypsum board not less than 6 inches wide; or the partition is a two-layer system with joints staggered 16 inches or 24 inches o.c.; and
 - d. The partition is not part of a smoke or sound control system. Where joint treatment is discontinued at or just above the ceiling line, the vertical joint shall be cross taped at this location to reduce the possibility of joint cracking.
9. Metallic outlet boxes shall be permitted to be installed in wood and steel stud walls or partitions having gypsum board facings and classified as two hours or less. The surface area of individual boxes shall not exceed 16 square inches. The aggregate surface area of the boxes shall not exceed 100 square inches in any 100 square feet. Boxes located on opposite sides of walls or partitions shall be in separate stud cavities and shall be separated by a minimum horizontal distance of 24 inches. Approved nonmetallic outlet boxes shall be permitted as allowed by local code. Installing outlet boxes in sound control systems may reduce the STC. Outlet boxes installed in sound controlled systems should be treated with an acoustical putty such as QuietPutty® to mitigate flanking paths.
10. Water-resistant gypsum backing board shall be installed over or as part of the fire-resistance rated system in areas to receive ceramic or plastic wall tile or plastic finished wall panels. When fire or sound ratings are necessary, the gypsum board required for the rating shall extend down to the floor behind fixtures so that the construction will equal that of the tested system.

Note: The use of water-resistant gypsum backing board as a base for tile in wet areas is regulated by local codes. Consult local building codes for requirements.



11. When not specified as a component of a fire tested wall or partition system, either faced or unfaced mineral fiber, glass fiber, or cellulose fiber insulation of a thickness not exceeding that of the cavity depth shall be permitted to be added within the stud cavity. Adding insulation may improve the STC.
12. In each system containing batt or blanket insulation the insulation is specified to be either mineral or glass fiber and, for fire resistance, the system shall be built using the type specified. Insulation shall be permitted to be either faced or unfaced.
13. A vapor retarder shall be permitted to be added to any fire-resistance rated system.
14. Although the systems are arranged in general groupings (i.e. walls and interior partitions, floor- ceilings, roof-ceilings, etc.), this is not intended to limit their use only to the specific category in which they are listed. For example, systems listed as shaft walls shall be permitted to be used as interior partitions. However, systems tested vertically (walls and partitions) shall not be permitted to be arbitrarily used in a horizontal orientation.
15. Unless otherwise specified in the detailed description, the generic steel studs and runners used in nonload-bearing walls and partitions in this Guide were fabricated from flat steel having a bare metal thickness of not less than 0.0179 inch and have a return lip dimension of not less than 3/16 inch.

Note: Consult the steel stud manufacturer for performance data and recommendations before substituting proprietary steel studs that either are fabricated from steel having a bare metal thickness of less than 0.0179 inch or have a return lip dimension less than 3/16 inch.

16. Greater stud sizes (depths) shall be permitted to be used in metal- or wood-stud systems. Metal studs of heavier gage than those tested shall be permitted. The assigned rating of any load-bearing system shall also apply to the same system when used as a nonload-bearing system. Indicated stud spacings are maximums. Heavier gage studs or closer stud spacing may reduce the STC. Greater stud depth may improve the STC.
17. Within design limitations, the distance between parallel rows of studs, such as in a chase wall, shall be permitted to be increased beyond that tested. When stud cavities in walls constructed of parallel rows of steel studs exceed 9-1/2 inches and cross bracing is required the cross bracing shall be fabricated from steel studs. Greater wall depth may improve the STC.
18. Systems tested with metal furring channels attached directly to the bottom chords of steel beams, bar joists, or wood trusses or framing shall be permitted to be suspended. Generally, furring channels are attached to 1-1/2 inch cold rolled carrying channels 48 inches o.c. suspended from joists by 8 ga wire hangers spaced not greater than 48 inches o.c.
19. Where laminating compound is specified, taping, all-purpose, and setting type joint compounds shall be permitted.
20. Additional layers of type X or regular gypsum panels shall be permitted to be added to any system. Additional layers of gypsum board may improve the STC.

21. When not specified as a component of a fire- resistance rated wall or partition system, cementitious backer units and/or wood structural panels shall be permitted to be added to one or both sides. Such panels shall be permitted to be applied either as a base layer directly to the framing (under the gypsum board), as a face layer (over the face layer of gypsum board), or between layers of gypsum board in multi-layer systems. Where such panels are applied under the gypsum board or between layers of gypsum board the length of the fasteners specified for the attachment of the gypsum board applied over the panels shall be increased by not less than the thickness of the panels. Fastener spacing for the gypsum board and the number of layers of gypsum board shall be as specified in the system description.
22. When additional panels, such as those noted in 20 and 21 above, are applied, and joints are staggered from previous layer, joints are not required to be finished.
23. Each system in this Guide lists specific products that are acceptable for use in the specific system in which they are listed. Consult PABCO® Gypsum Technical Services for information on products suitable for use in specific proprietary systems.

TESTING AGENCIES

Each detailed description is accompanied by a cross- section detail of the system. Also included is design information giving total thickness, limiting height where appropriate, and approximate weight of the system in pounds per square foot. Fire and sound test references identifying the agency which certified the test as well as a report number and date are also provided (see Tables I and II).

TABLE I - FIRE TESTING AGENCIES

UL	Underwriters Laboratories Inc.
ULC	Underwriters' Laboratories of Canada
WFCi	Western Fire Center, Inc.

TABLE II - SOUND TESTING AGENCIES

NOAL	North Orbit Acoustical Laboratories
NRCC	National Research Council of Canada
OL	Orfield Laboratories, Inc.
RAL	Riverbank Acoustical Laboratories

PRODUCT IDENTIFICATION

All gypsum products are identified by the PABCO Gypsum product name and trademark, if applicable. The thickness and type of gypsum board are shown on the end bundling tape or on the board. Ready-mixed joint compounds are identified on the container. Bagged products are identified on the bag. ASTM standard product specifications are shown in Table III.



TABLE III - APPLICABLE ASTM PRODUCT STANDARDS

Product	ASTM Standard
Gypsum Board	C1396*
Gypsum Wallboard	C1396, Sec. 5*
Predecorated Gypsum Board	C1396, Sec. 5*
Gypsum Lath	C1396, Sec. 11*
Gypsum Sheathing Board	C1396, Sec. 9*
Gypsum Backing Board	C1396, Sec. 6*
Gypsum Coreboard	C1396, Sec. 6*
Gypsum Shaftliner Board	C1396, Sec. 6*
Water-Resistant Gypsum Backing Board	C1396, Sec. 7*
Gypsum Ceiling Board	C1396, Sec. 12*
Exterior Gypsum Soffit Board	C1396, Sec. 8*
Gypsum Base for Veneer Plasters	C1396, Sec. 10*
Glass Mat Gypsum Panels	C1658
Glass Mat Gypsum Substrate for Use as Sheathing	C1177
Glass Mat Water-Resistant Gypsum Backing Panel	C1178
Fiber Reinforced Gypsum Panels	C1278
Abuse-Resistant Non-decorated Interior Gypsum Panel Products	C1629
Factory-Laminated Gypsum Panel Products	C1766
Joint Compound	C475
Gypsum Plasters	C28
Gypsum Veneer Plaster	C587
Metal Lath	C847
Accessories for Gypsum Wallboard and Gypsum Veneer Base	C1047
Nails for the Application of Gypsum Board	C514
Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases (Types G, W, and S)	C1002
Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness (Type S-12)	C954
Nonstructural Steel Framing Members	C645
Load-Bearing (Transverse and Axial) Steel Studs, Runners (Tracks), and Bracing or Bridging for Screw Application of Gypsum Panel Products and Metal Plaster Bases	C955
* ASTM Specification C1396 is a consolidation of previous ASTM Standards C36, C37, C79, C442, C588, C630, C931, C960, and C1395, which have been withdrawn.	

ABBREVIATIONS

Abbreviations used in this Guide are shown in Table IV (also see Tables I and II on page 11).

TABLE IV - ABBREVIATIONS

C&P	carpet and pad
dB	decibel
dia	diameter
est	estimated
FSTC	Field Sound Transmission Class
FSTL	Field Sound Transmission Loss
ft	foot
ga	gage or gauge
galv	galvanized
Hz	hertz (cycles/second)
hr	hour
IIC	Impact Insulation Classification
in.	inch
lab	laboratory
lb	pound
mfr	manufacturer
mm	millimeter
min	minimum
nom	nominal
NLB	nonload-bearing
o.c.	on center
OSB	Oriented Strand Board
oz	ounce
pcf	pounds per cubic foot
psf	pounds per square foot
rev	revised
RC	Resilient Channel
sq	square
STC	Sound Transmission Class
STL	Sound Transmission Loss
T&G	tongue and groove



METRIC CONVERSIONS

TABLE V - METRIC CONVERSIONS		
	STANDARD	METRIC
Gypsum Panel Thickness	1/4 inch	6.4 mm
	3/8 inch	9.5 mm
	1/2 inch	12.7 mm
	5/8 inch	15.9 mm
	3/4 inch	19.0 mm
	1 inch	25.4 mm
Frame Spacing	8 inch	203 mm
	12 inch	305 mm
	16 inch	406 mm
	24 inch	610 mm
Fastener Spacing	2 inch	51 mm
	2-1/2 inch	64 mm
	7 inch	178 mm
	8 inch	203 mm
	12 inch	305 mm
	16 inch	406 mm
	24 inch	610 mm
Temperature	40°F	5°C
	50°F	10°C
	125°F	52°C

STEEL STUD REFERENCE

All steel studs listed in the PABCO Gypsum Designs are shown by mil thickness. Below is a reference table showing the equivalent gauge and thickness range for each mil thickness.

TABLE VI - STEEL STUD THICKNESS / GAUGE REFERENCE			
MIL THICKNESS	THICKNESS RANGE	GAUGE	DESIGNATION
15 mil	.0147" - .0155"	25	Equivalent
18 mil	.0179"		Drywall
19 mil	.0190" - .0200"	20	Equivalent
30 mil	.0235" - .0312"		Drywall
33 mil	.0223"-.0346"		
43 mil	.0380"-.0428"	18	Structural
54 mil	.5380"	16	
68 mil	.0678"	14	
97 mil	.0960"	12	

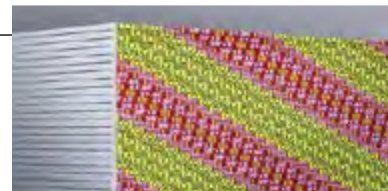


STANDARD INTERIOR

PABCO® REGULAR

PABCO Regular Gypsum Board is an interior panel composed of a naturally noncombustible, dimensionally stable, gypsum core. The core is wrapped in 100% recycled facing and backing paper that will accept most decorative finishes. Regular Gypsum Wallboard is intended for non-fire rated residential construction.

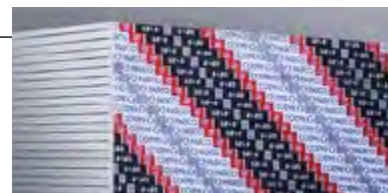
Thickness	Type	UL Core
1/4"	Regular	N/A
3/8"	Regular	N/A
1/2"	Regular	N/A



PABCO FLAME CURB®

PABCO FLAME CURB gypsum panels are composed of a naturally noncombustible, fire-resistant gypsum core reinforced with glass fibers that provide increased strength and enhanced fire-resistant properties. The core is wrapped in 100% recycled facing and backing paper that will accept most decorative finishes. FLAME CURB is intended for fire-rated interior walls and ceilings in residential and commercial construction.

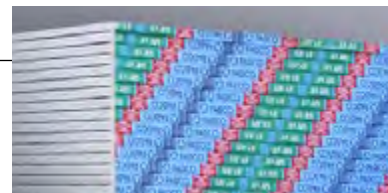
Thickness	Type	UL Core
1/2"	Super C	PC-C
5/8"	Type X	PG-11
5/8"	Type C	Type C
3/4"	Type X	PG-13



PABCO MOLD CURB® Plus

MOLD CURB Plus is a mold and water-resistant gypsum panel that can be used for walls and ceilings where increased resistance to moisture is needed. The core is wrapped in 100% recycled facing and backing paper that is treated with mold and water-resistant agents to inhibit the growth of mold and mildew. Mold Resistance is rated at 10, the highest rating (ASTM D3273).

Thickness	Type	UL Core
1/2"	Regular	N/A
5/8"	Type X	PG-5W



PABCO LITECORE®

PABCO LITECORE is a lightweight, dual purpose drywall product for use on walls and ceilings. It is dimensionally stable and resists sagging, buckling and warping. The panel features a naturally noncombustible gypsum core and 100% recycled facing and backing paper that will accept most decorative finishes. It is intended for use on non-structural, non-fire-rated applications.

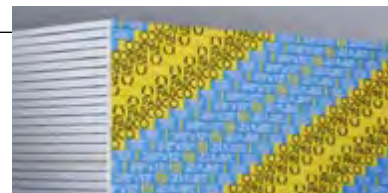
Thickness	Type	UL Core
1/2"	LiteCore	N/A



PABCO® FLEX

PABCO Flex gypsum panels are ideal for concave and convex surfaces in non-structural walls and ceilings. The unique thickness of PABCO Flex allows you to create a curved wall with a single layer application and feather the finish into an adjoining flat wall surface. The product is naturally noncombustible with a gypsum core wrapped in 100% recycled facing and backing paper that will accept most decorative finishes. PABCO Flex is intended for interior, non-fire rated residential construction.

Thickness	Type	UL Core
3/8"	FLEX	N/A



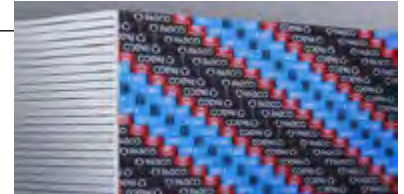


IMPACT AND ABUSE PROTECTION

PABCO ABUSE CURB®

PABCO ABUSE CURB is a Type X gypsum panel comprised of a proprietary high-density, fire-resistant gypsum core that incorporates the MOLD CURB Plus technology. It is designed for use in high traffic areas such as corridors in schools, hospitals and offices where surface abrasion, indentation, mold and water-resistance are needed. The core is encased in 100% recycled heavy mold and water-resistant paper facing and backing.

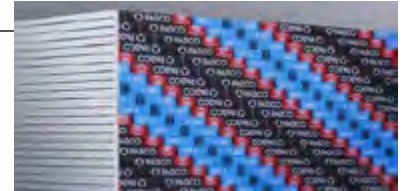
Thickness	Type	UL Core
5/8"	Type X	PG-5W



PABCO® IMPACT RESISTANT

PABCO Impact Resistant drywall is a true super panel: Type X fire resistant, mold and water resistant, abrasion and impact resistant. The product is manufactured with a proprietary high density, fire resistant Type X core that incorporates an embedded fiberglass mesh to further enhance impact resistance.

Thickness	Type	UL Core
5/8"	Type X	PG-5W



CEILING APPLICATIONS

PABCO® INTERIOR CEILING

PABCO Interior Ceiling board is a sag resistant gypsum ceiling panel designed for non-fire rated interior ceiling applications. The ceiling panel is manufactured with a dimensionally stable, noncombustible gypsum core that is formulated to significantly reduce ceiling sag. PABCO Interior Ceiling board shows superior sag resistance when tested to ASTM 473 for humidified deflection. Can be installed perpendicular or parallel to framing at 24" on center per ICC-AC417.

Thickness	Type	UL Core
1/2"	Regular	N/A



PABCO SOUND CURB™

SOUND CURB gypsum panels are ideal for floor/ceiling applications in multifamily residential and commercial projects. The 3/4" panels are comprised of a proprietary high-density Type X gypsum core and are perfect where fire resistance is a primary objective and additional mass is needed for improved Sound Transmission Class (STC) and Impact Insulation Class (IIC) performance. They also work well for lower frequencies where sound control has proven difficult.

Thickness	Type	UL Core
3/4"	Type X	PG-13



EXTERIOR APPLICATIONS

PABCO® GYPSUM SHEATHING

PABCO GYPSUM Sheathing is an economical moisture-resistant product and is designed for use as an exterior board providing a stable base for veneer finishing systems on residential and commercial buildings. The board is comprised of a water-resistant core and water-repellent paper.

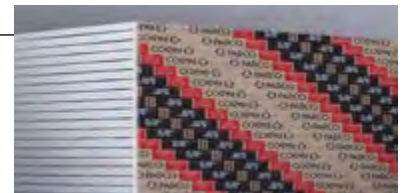
Thickness	Type	UL Core
5/8"	Type X	PG-5WS



PABCO® EXTERIOR SOFFIT

PABCO Exterior Soffit is designed for application on the underside of exterior soffits, open porches, walkways, carport ceilings and similar installations that are completely protected from contact with water. The gypsum core contains additives that enhance its ability to resist sagging and is wrapped in a moisture resistant paper to increase its resistance to moisture.

Thickness	Type	UL Core
1/2"	Regular	N/A
1/2"	Super C	PG-C
5/8"	Type X	PG-11
5/8"	Type C	Type C





SHAFTLINERS

PABCO GLASS® SHAFTLINER

PABCO GLASS Shaftliner panels protect your buildings from fire, mold and water. They are ideal for lining elevator shafts, stairwells and constructing light weight fire barriers for cavity shaft walls and area separation walls in commercial and multi-family residential applications. The proprietary gypsum core is reinforced with glass fibers to increase stability. The product is encased in our distinctive orange, mold resistant coated fiberglass mat facing that resists warping, rippling, buckling and sagging.

Thickness	Type	UL Core
1"	Type X	PG-10



PABCORE® SHAFTLINER

PABCORE Shaftliner Type X panels are manufactured with a proprietary fire-resistant Type X core which has been reinforced with glass fibers and other additives to increase its fire resistance. The core is encased in 100% recycled paper that is treated with mold and water-resistant agents to inhibit the growth of mold and mildew.

Thickness	Type	UL Core
1"	Type X	PG-10

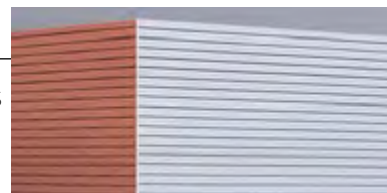


GLASS MAT

PABCO GLASS® SHEATHING

Easily identified by its orange colored mat face, PABCO GLASS Sheathing is ideal for exterior commercial and residential applications subject to extended exposure during construction. The product can withstand extended exposure to normal weather conditions up to 1 year. It is comprised of a proprietary formula that provides a fire-resistant, mold- and water-resistant gypsum core that has been reinforced with glass fibers to increase stability.

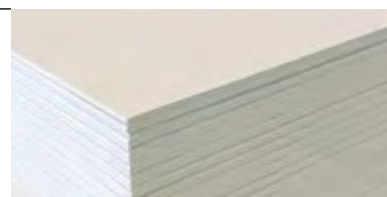
Thickness	Type	UL Core
1/2"	Regular	N/A
5/8"	Type X	PGS-WRS



PABCO GLASS® INTERIOR

PABCO GLASS Interior, with its mold and water-resistant gypsum core encased in a glass fiber mat, offers greater moisture resistance and improved dimensional stability compared to standard gypsum board. The product scores 10 for mold resistance, the highest rating when tested in accordance to ASTM D3273 *Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber. The product is specially formulated to withstand extended exposure under normal weather conditions up to one year, making it ideal for pre-rock construction. The interior glass-faced panel is noncombustible, dimensionally stable and resists warping, sagging and buckling.

Thickness	Type	UL Core
1/2"	Regular	N/A
5/8"	Type X	PGI





SOUND REDUCING DRYWALL

QuietRock® ES

QuietRock ES is the first sound reducing drywall that easily scores and snaps using breakthrough EZ-SNAP® technology. The patented QuietRock ES has no paper or metal on the inside of the panel making installation a snap. QuietRock ES cuts and installs like standard drywall while delivering acoustical ratings of up to STC 55 on single stud construction. It is ideal for residential and commercial construction with a lower total installed cost than other noise control methods, such as resilient channel and multi-layer drywall.

Thickness	Type	UL Core
5/8"	Type X	QRES



QuietRock® ES MR

QuietRock ES Mold Resistant is the first and only easy score and snap, mold resistant sound damping drywall available. QuietRock ES Mold Resistant delivers reliable acoustic performance at a low installed cost - saving time, labor, materials, and valuable floor space. The mold resistant treatment to the paper and core can contribute to a healthier indoor environment. QuietRock ES Mold Resistant achieves the maximum score of 10 on the ASTM 3273 mold test, making it ideal for hospitals, schools, government projects and other mold sensitive applications.

Thickness	Type	UL Core
5/8"	Type X	QRES



QuietRock® 510

QuietRock 510 is designed to improve Sound Transmission Class (STC) performance at an entry level price. QuietRock 510 is an excellent choice for boosting STC ratings for residential remodeling and new construction projects where a 1/2" panel thickness is desired. QuietRock 510 installs and finishes like standard drywall, requiring no special tools or training to use.

Thickness	Type	UL Core
1/2"	N/A	QR510



QuietRock® 530

QuietRock 530 is a versatile, high performance gypsum panel that delivers superb noise reduction. This 'super panel' is UL classified, STC-rated, shear-rated, and impact-resistant.

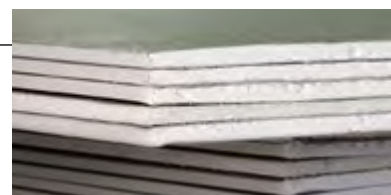
Thickness	Type	UL Core
5/8"	N/A	QR530



QuietRock® 545

QuietRock 545 is the only sound damping panel that is designed for maximum sound isolation across a broad frequency range. QuietRock 545 is ideal for high-end home theaters, commercial theaters, professional studios, music rooms, and other projects where low-frequency mitigation is critical.

Thickness	Type	UL Core
1-3/8"	N/A	QR545



QUIET® SYSTEM ACCESSORIES AND COATINGS

QuietSeal® Pro

QuietSeal Pro is a high performing, non-hardening acoustical sealant used to maintain optimum acoustic performance of your wall assembly. Apply it around perimeters of the walls to prevent noise leaks. QuietSeal Pro stays soft over time to prevent cracking while continuing to reduce sound transmission. It is easy to use and offers a hassle free clean up – just use soap and water.

Applied Thickness	Coverage	VOC
Approx. 1/4" bead	88 Linear feet using a 1/4" bead	Low VOC <0.1 g/L



QuietPutty®

QuietPutty is Class-A fire-resistant acoustical putty designed to preserve the performance of STC rated assemblies. Use QuietPutty on electrical outlet boxes, rocker switches, HVAC ducts, water hookups, cable systems or any other penetration that requires an acoustic seal. QuietPutty is clean, easy to use and requires no tools to apply. QuietPutty will not shrink and remains soft over time, ensuring a long-term seal that maximizes STC performance.

Size	Coverage
1/8" thick 7-1/4"x 7-1/4"	1 pad per 2"x4" junction box



QuietGlue® Pro

QuietGlue Pro is a high performance, low cost acoustical compound designed to be cost effective for commercial projects and small do-it-yourself projects. QuietGlue Pro can be applied to drywall or wood (plywood, OBS, MDF) to create a constrained layer damped lamination in the field. Ideal applications include subfloor laminations, curved walls, coffered ceilings or in situations where sourcing QuietRock may not be practical. QuietGlue Pro is not a construction adhesive. Laminated layers must be mechanically attached in accordance with local building requirements.

Applied Thickness	Coverage	VOC
1/8" bead random pattern	One 28 oz Tube per 4x8 sheet (32 ft²)	Low VOC <0.1 g/L



QuietCoat®

QuietCoat is a sprayable, viscoelastic polymer coating that reduces noise and vibration with minimum weight, bulk and cost. QuietCoat® is engineered specifically for coating nonporous materials including stainless steel, galvanized iron, aluminum and composite (reinforced plastic) materials.

Fully ROHS Compliant
Meets the highest industry flammability standards
Anti-fungal and anti-rust capability

Common uses include: plumbing and sewer pipes, consumer electronics, appliances, factory process and material handling equipment, HVAC, air handling units, ducts, elevators, escalators, vehicles, and rail cars.

Applied Thickness	Coverage	VOC
1 to 3 mm total	40-80 ft² per gallon	Low VOC <0.1 g/L





QUIET® RF SYSTEM

QuietRock® 530 RF

QuietRock 530RF is a versatile, high performance sound damping gypsum panel that delivers superb noise reduction, radio frequency shielding along with fire and impact resistance. This specialty panel is typically used in the construction of high security environments such as SCIF rooms, government offices and data centers where radio frequency disturbances can affect sensitive data and equipment.

Thickness	Type	UL Core
5/8"	N/A	QR530



QuietSeam® RF

QuietSeam RF is a conductive sealing and bedding compound used to maintain metal to metal and grounded connectivity on field-modified QuietRock® 530RF panels. Available in 1 gallon pails.

Applied Thickness	Coverage
3/8" bead	500 linear feet per gallon



Quiet® RF Shielding Tape

Quiet RF Shielding Tape is an electrically conductive tape used to maintain metal to metal connectivity at the joints and when QuietRock 530 RF panels are cut to size in the field. Available in 3/4" and 1-3/4" widths.

Width	Coverage
3/4" 1-3/4"	54 linear feet per roll



Sound 101

The fundamentals of sound

HEARING

The human ear is magnificent. Hearing is one of the first senses that we develop—long before birth—and one of the last to leave us before we expire. Hearing and sound affect virtually every facet of our lives.

WHAT IS SOUND

Sound is best defined as an auditory form of energy. Unlike light (electromagnetic energy), the propagation of sound requires the existence of a medium such as air or water.

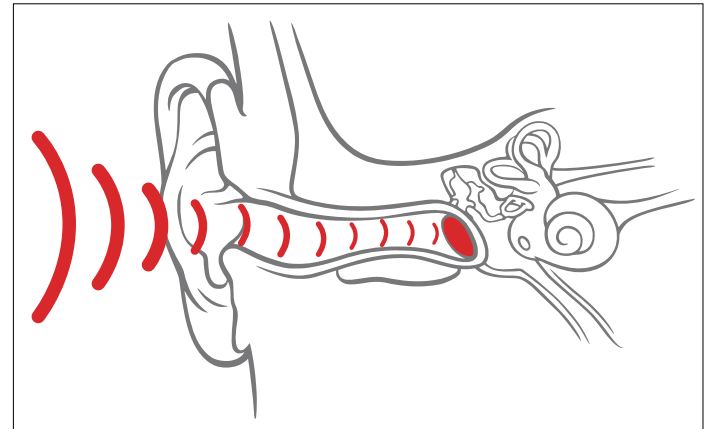
SOUND IS A WAVE

Small periodic changes in pressure reach our ears, resulting in audible sound. These sound waves radiate from all kinds of sound sources.

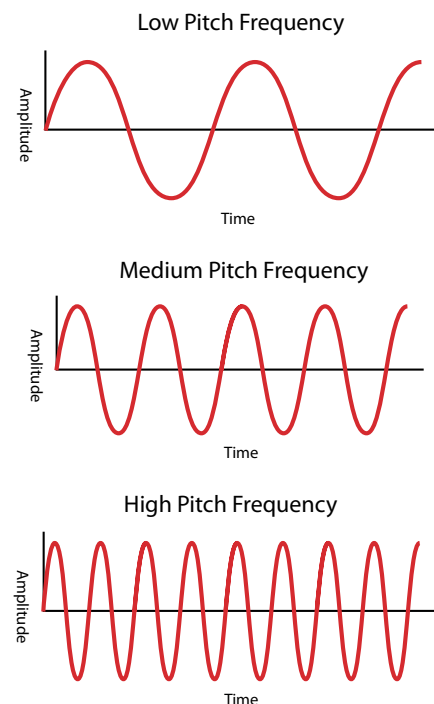
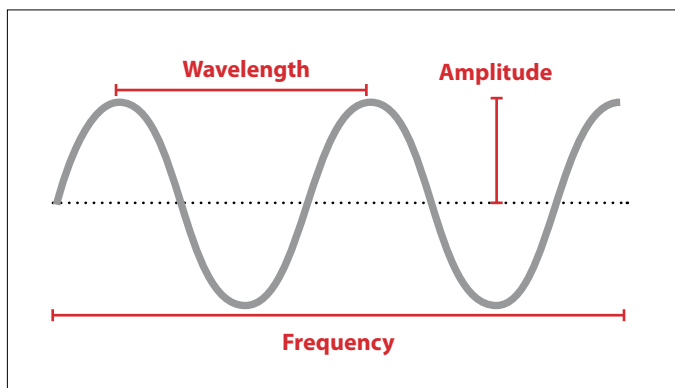
Sound waves have some essential characteristics that determine how they sound to us when they reach our ears. Storage boxes can come in different shapes, sizes, and colors that make them useful for organizing and storing. In a similar way, sound waves come in different frequencies (pitch), wavelengths (speed), and amplitudes (volume). Each characteristic changes how we perceive the sound we hear.

FREQUENCY & WAVELENGTH

If you are swimming in the ocean there is a big difference between the peaks of the waves when you are out in the open ocean versus when you are near the shore. Near the shore the wavelengths get smaller, causing you to float up and down faster. Sound waves behave similarly. When the wavelength of sound is shorter, the number of oscillations that occurs every second increases.

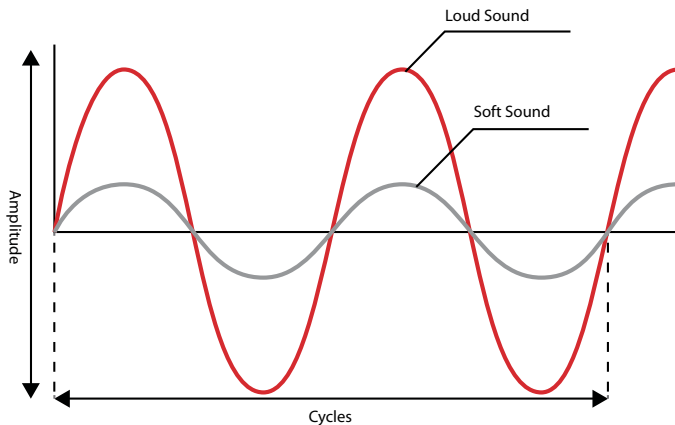


Frequency, measured in **Hertz (Hz)**, is the number of complete waves or oscillations at a point in time. Frequency is more commonly referred to as pitch. A high-speed dental drill has a higher frequency (shorter wavelength) than the passing of a dump truck down the street (longer wavelength). The audible range of frequencies for an average human is 20 Hz to 20,000 Hz.



AMPLITUDE

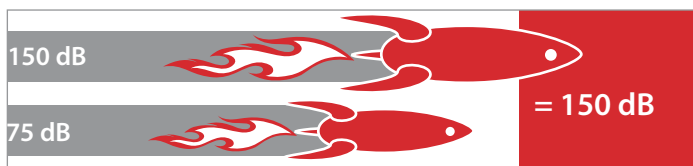
The amplitude of a sound wave is closely related to how loud we perceive the sound to be. What makes loudness both complicated and amazing is that we perceive sound waves at different loudness levels for each frequency in the audible range. What's even more amazing is that most humans' ears are capable of hearing such an incredible dynamic range of loudness levels that both the faint movement of a mouse and the screaming rockets of a jet engine are well within our ability to hear.



Although not directly related to loudness, sound is typically measured as a **sound pressure level (SPL)** in **decibels (dB)**. The general range of human hearing is from 0 to 120 dB. The sound of a quiet library is roughly 30 dB, while 120 dB is the threshold where the ears begin to feel pain because the sound is so loud.

THE DECIBEL IS NOT A LINEAR UNIT

Something important to remember about the decibel is that it is a non-linear (where $2 \text{ dB} + 2 \text{ dB}$ is NOT equal to 4 dB) unit of measurement.



Building materials such as **QuietRock® ES** can drastically affect the decibel level of sound that we hear through building partitions. The proper application of QuietRock®, for example, can help you lower the volume of your neighbors' loud argument to a faint muffle.

Noise Control in Buildings

Best practices

BUILDING NOISE CONTROL

Noise is a reality in every type of building, from classrooms to hospitals to hotels. The exact definition of noise will be different for everyone. Simply put, noise is sound that you don't want to hear. Although one person's noise is another person's music, we can agree that there are several sources of noise in buildings that most of us wish to avoid.

Within buildings, noise can come from a variety of radiating sound sources:

- footsteps across a hallway
- appliances
- loudspeaker systems
- human speech
- doors and cabinets opening/ closing
- sinks, bathtubs and toilets

Throughout an entire building structure, the number of noise sources can be enormous:

- HVAC equipment
- appliances
- chutes
- stairwells
- elevators
- people
- speakers
- plumbing and piping

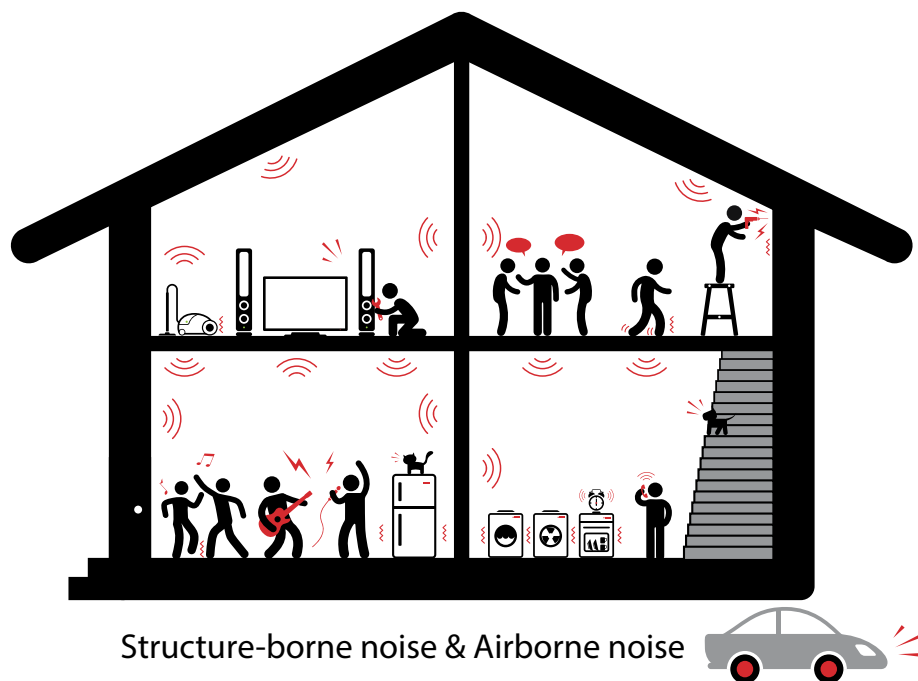
Noise is measured and characterized in buildings to ensure proper application, building design, and tenant comfort. Two different types of measurements are made in buildings:

- airborne noise
- structure-borne noise

Nearly all building noise metrics rely on a microphone measurement of two different sound sources: a loudspeaker (airborne) or a floor tapping machine (structure-borne).

Airborne-related metrics are used for airborne noise sources (speech, home theater systems, etc.). The following metrics are only the most basic ones used in the building industry today (definitions available in the Glossary): **Noise Criteria (NC)**, **Noise Reduction Coefficient (NRC)**, **Reverberation Time (T60)**, **Sound Transmission Class (STC)**, and **Speech Privacy Class (SPC)**.

Structure-borne noise is defined as any noise source whose primary radiation comes from impact (footsteps on an upstairs floor, for example) or vibration of solid structures. The **Impact Insulation Class (IIC)** is the main metric used in the building industry to characterize the structural noise in buildings.





CURRENT BUILDING NOISE CONTROL TECHNIQUES

MASS: Adding mass, or layers of mass, is probably the most commonly used noise control technique.

Advantages:

1. The low frequency performance can improve with each additional layer or with increasing concrete slab thickness.
2. It is the most commonly tested building noise control treatment, which makes predictions more accurate and design recommendations easier to validate.
3. It is commonly used and familiar to the building trades.
4. It is simple. Just add another layer or install a thicker slab.

Disadvantages:

1. Both the labor and material costs keep escalating with each additional layer.
2. Construction delays are more common when more materials and labor are required.
3. As the stiffness of the assembly increases (heavier gauge studs are used or the spacing between studs is decreased), which commonly occurs, the effect of additional weight decreases. Light-gauge (thin) steel studs show differences with each additional layer, but not so with heavy-gauge steel studs.
4. The weight of the assembly increases drastically, which becomes a problem for buildings with stringent structural requirements.
5. Thick assemblies utilize expensive floorspace that can never be recovered without enlarging the footprint of the building.

AIR SPACE & FRAMING ISOLATION: Where possible, studs and stud frames can be separated (staggered or double studs) resulting in a wider air cavity between panels. Resilient channels can also be used that add air volume and attempt to mechanically separate or isolate the panels from the assembly framing.

Advantages:

1. Again, there is a increase in low frequency transmission loss (more noise control at those difficult low frequencies).
2. It is a commonly tested building noise control treatment.
3. The combination of decoupling the assembly elements and adding more air space can result in better noise control, versus many layers of mass.
4. There is more room for piping and other in-the-wall elements so they are easier to isolate from the rest of the structure

Disadvantages:

1. Building these assemblies is much more complicated and involved: more materials are needed and labor costs increase dramatically.

2. There is much greater risk of failure, especially for the decoupling and isolating treatments such as resilient channels (RC) due to short-circuiting (see glossary term) or improper installation.
3. There is a reduction of usable floor space for these assemblies.

DAMPING: Internally damped panels can provide increased sound isolation to building partitions without increasing the weight and overall thickness.

Advantages:

1. It is a simple solution: just replace the standard panel on one or both sides with a damped panel of the same thickness/fire resistance/structural properties.
2. You can increase the floor space from that required by other methods.
3. Cost to install **QuietRock® ES** is equal to the installation of a standard sheet of drywall.
4. It is a better treatment for speech noise (privacy) than multiple layers of drywall.
5. With fewer materials required to achieve equivalent results, less time is needed and building construction remains on schedule.

Disadvantages:

1. The material cost for these premium panels is higher than less-expensive standard materials even if the less-expensive panels cannot achieve the same performance.
2. Standard damped panels perform similar to standard gypsum panels at low frequencies. Higher-performance damped panels, such as QuietRock 545, are required to provide better sound isolation for low frequency noise sources such as sub-woofers and turbines.

Rules of Thumb for Applying Acoustic Treatment in Buildings

Sound waves, like water, will find any leakage point through a partition. Since air offers less resistance to sound than a piece of metal or wood, much of the sound energy will exit a structure through air openings. There are other reasons why an acoustical design might fail, including acoustic "short-circuiting" (see glossary) failures and layout failures.

Here are some general recommendations for reducing the risk of failure for acoustic treatments:

1. Properly and adequately address penetrations (outlet boxes and recessed lights, for example) with **QuietSeal® Pro**, **QuietPutty®**, or other recommended treatments.
2. Avoid partial-height partitions (build partitions from floor to structural ceiling).
3. Take time to read and follow manufacturer recommendations for installation procedures (failures with RC are common when the RC is installed upside down or when partition surfaces rigidly touch adjacent surfaces).
4. Consult with an acoustician (acoustical consultant) for efficient floor plan layout (doors and noisy mechanical rooms) and air handling design

Flanking

The indirect path to annoy your next door neighbor

TYPICAL FLANKING PATHS

Although you may have carefully thought out and specified the correct wall, unwanted sounds may still travel through undetected flanking paths such as framing, ductwork, concrete slabs, open plenums or wall penetrations.

HOW TO ADDRESS FLANKING

There are a few ways to address flanking. Here are some layout suggestions that can reduce some of the flanking issues:

1. Eliminate direct ducting by running a main line down a corridor or attic and auxiliary lines to each room. The more turns in the ducting, the more difficult it is for sound to find its way through it.
2. Avoid back-to-back penetrations by installing or relocating electrical and plumbing penetrations in separate stud cavities.
3. Continue the demising wall assembly up to the floor deck to prevent sound moving through the plenum space.
4. Decoupling the cement slab adjacent to the bottom wall plate may be necessary in sensitive situations.

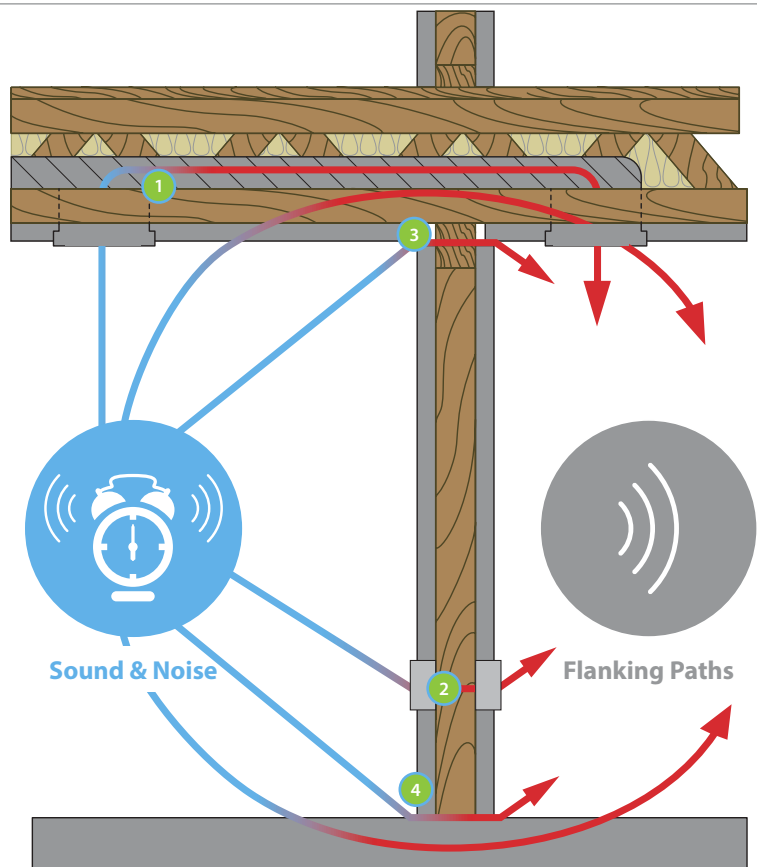
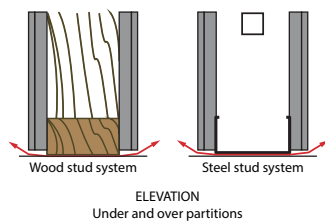


Figure 1: application of acoustic sealants prevent sound leaks and minimize the effects of flanking.

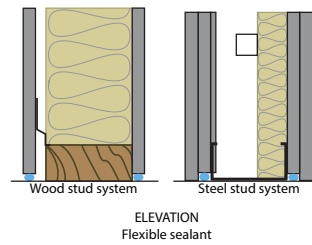
Flanking

SOUND ISOLATION CONSTRUCTION

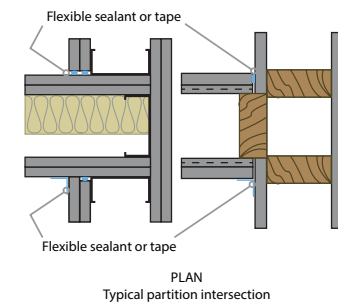
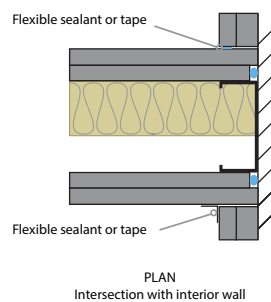
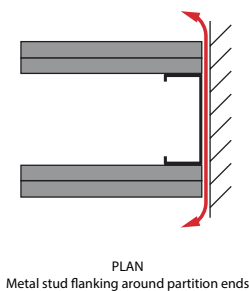
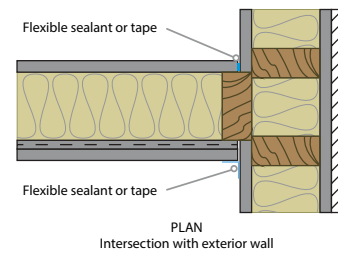
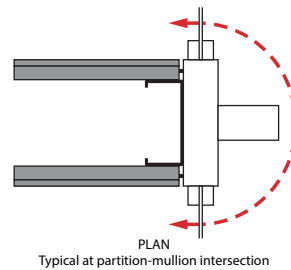
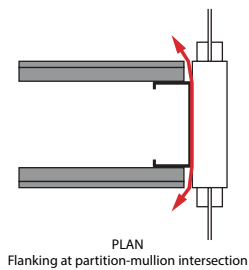
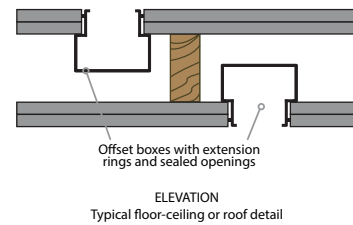
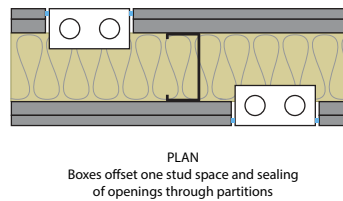
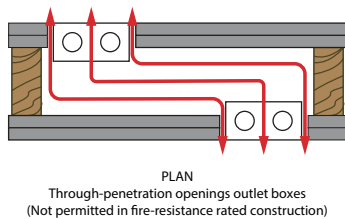
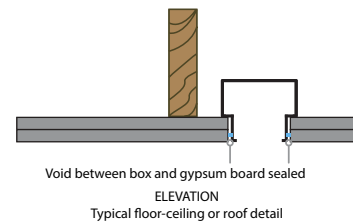
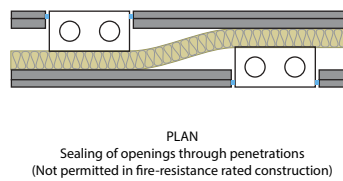
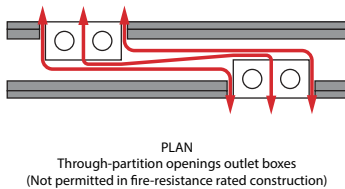
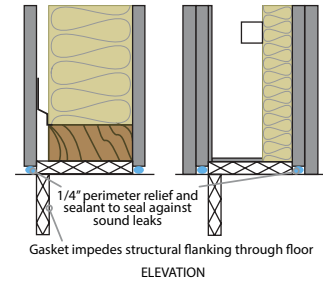
"NORMAL" CONSTRUCTION
ARROWS SHOW
FLANKING PATHS



"SELECT" CONSTRUCTION
SEALING OF RELIEF DETAIL AT
PERIMETER OF PARTITION AND AROUND
CUT-OUTS TO PREVENT SOUND LEAKAGE



"PRE-DESIGN" CONSTRUCTION
SIMULATED LABORATORY
CONDITIONS



Flanking

PREVENTING SOUND LEAKS

Many flanking issues can be easily addressed by **properly sealing the wall and ceiling assemblies**. In any sound rated assembly it is good building practice to seal the gap at the base of the wall as well as expansion (control) and drywall-to-non-drywall (e.g. window mullion) joints with an acoustical sealant such as **QuietSeal® Pro**. QuietSeal® Pro will remain soft and pliable, a key factor in choosing a good **acoustic sealant**. QuietSeal® Pro contains very **low VOCs** (<0.1 g/L VOC).

Another tool in the fight against flanking is **QuietPutty®**, an **acoustical putty** typically molded around outlet boxes and plumbing fixtures to prevent sound from penetrating through the fixtures. QuietPutty® is **also fire rated** (ASTM E84 Flame Spread Index Class B) and out performs leading fire putties.

Untreated gaps can reduce the effectiveness of your well designed wall and ceiling systems. The use of QuietSeal® Pro and QuietPutty® will enable you to prevent leaks and achieve the best performance of your wall and ceiling systems.

WALL PENETRATIONS AND RECESSED LIGHTS

In terms of flow and resistance, **sound behaves similar to water**. It follows the path of least resistance, "searching" for any leaks in a given building assembly partition. Any untreated penetration can potentially decrease a partition's sound isolation.

The ASTM C919 Standard Practice for Use of Sealants in Acoustical Applications specifies that a non-hardening sealant, such as QuietSeal® Pro, must be applied to the partition to prevent sound leakage.

Larger penetrations such as outlet boxes and plumbing fixtures must be effectively plugged to prevent sound leakage. Acoustic putty, such as QuietPutty®, can be applied to create such a plug.

Recessed Lights create large open holes in the ceiling and are very difficult to treat. Effective treatment for recessed light penetrations involves building a sound isolation box with QuietRock® around the light opening inside the joist cavity.

Alternatively, a track lighting system could be used to avoid numerous penetrations that are more difficult to address.

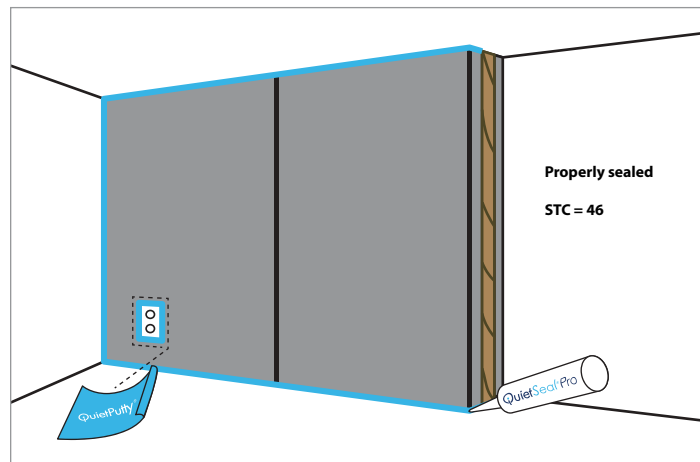


Figure 2: application of acoustic sealants prevent sound leaks and minimize the effects of flanking.

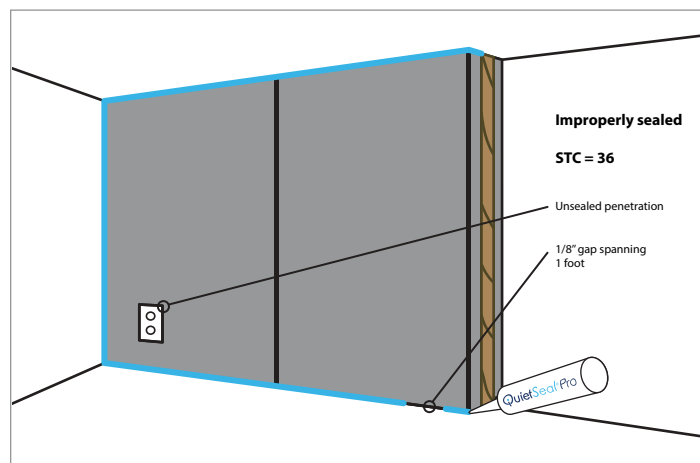


Figure 3: unsealed or improper application of acoustic sealant can open the path for sound to travel (flanking). The effects of sound leaks can reduce STC performance in any acoustically rated assembly.

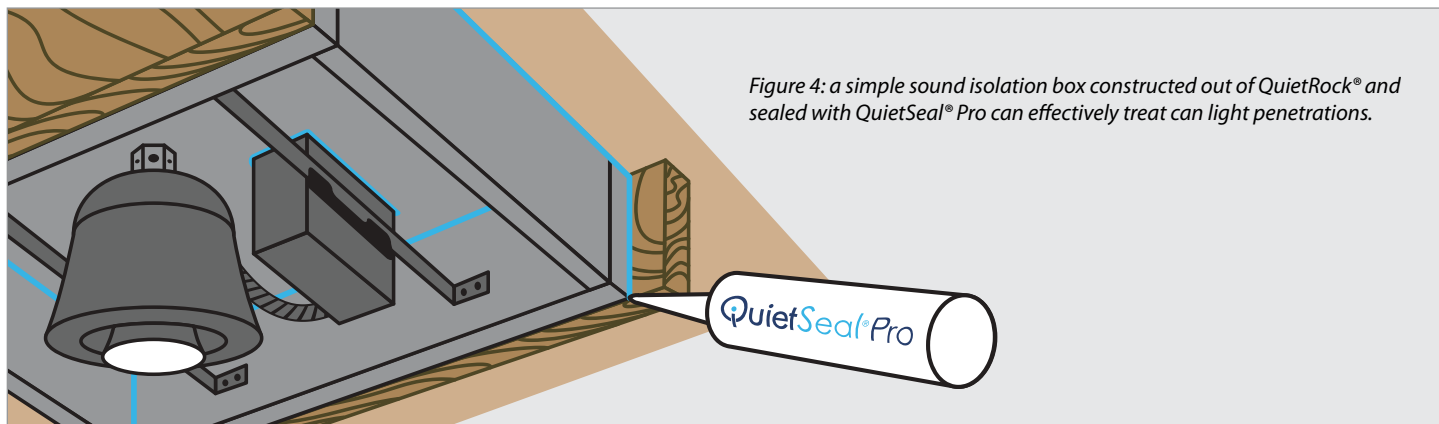
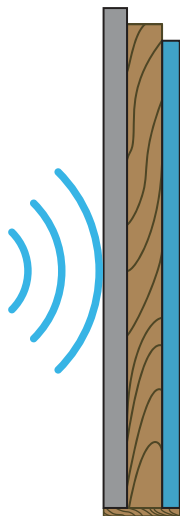


Figure 4: a simple sound isolation box constructed out of QuietRock® and sealed with QuietSeal® Pro can effectively treat can light penetrations.

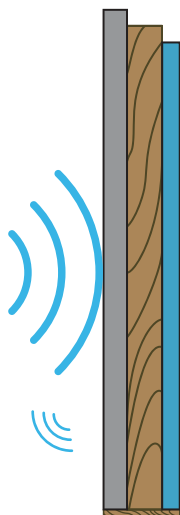
Absorption, Reflection, Transmission

What is the difference?

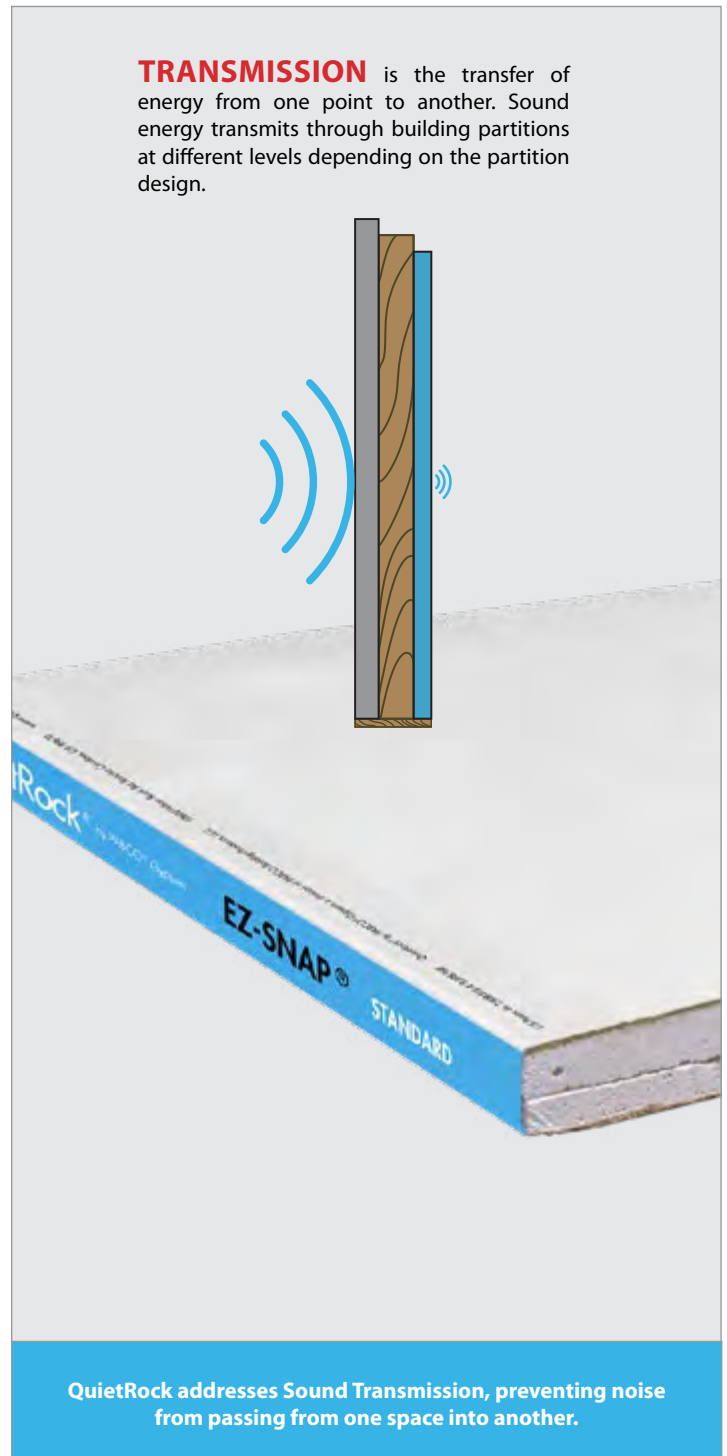
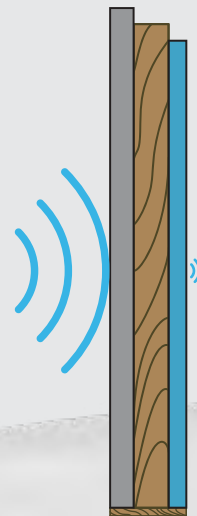
ABSORPTION occurs when energy is converted into another form in a material. For sound, absorption converts the sound energy into very tiny amounts of heat.



REFLECTION happens when waves encounter rigid surfaces and bounce (reflect) back towards the incoming wave. Sound waves reflecting off of hard surfaces create echoes.



TRANSMISSION is the transfer of energy from one point to another. Sound energy transmits through building partitions at different levels depending on the partition design.



QuietRock addresses Sound Transmission, preventing noise from passing from one space into another.

Sound Transmission Class (STC)

How it is Measured?

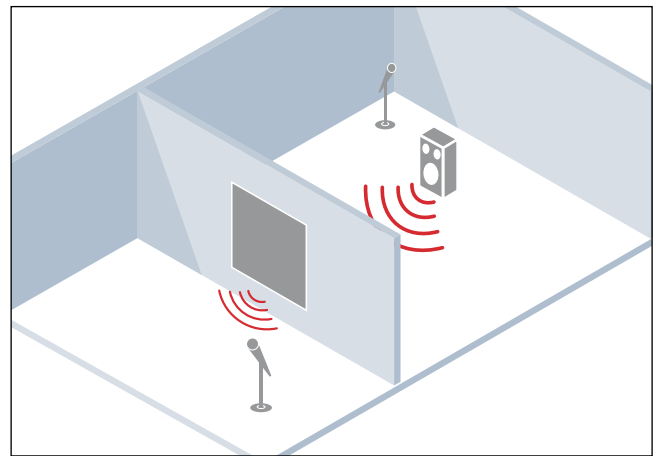
Sound Transmission Class (STC) is a metric of how well a wall, partition or floor/ceiling system attenuates airborne sound over a range of frequencies, though it is ultimately the result at 500 Hz. STC is calculated from Sound Transmission Loss (STL) measurements using ASTM International Classification E413 (Classification for Rating Sound Insulation). The STC rating very roughly reflects the decibel reduction in noise that a partition can provide.

In order to calculate a single STC value, a series **Sound Transmission Loss (STL)** data points must first be collected in a lab between 125 Hz to 4,000 Hz.

The data collection process is done by producing sound in one room, let's call it the source room, and with a microphone in the adjacent room, measuring the amount of sound it allowed to penetrate through the demising wall. The demising wall is usually a very dense partition that if solid, would be just about as "soundproof" (see glossary) as you can get. This wall however has a large opening in the middle so that the test wall can be placed or built in the cavity.

The STL measurements are plotted on a graph to graphically display the Sound **Transmission Loss Curve (TL Curve)**. Once plotted the STC Contour is superimposed over the TL Curve and adjusted up or down until 2 rules are satisfied:

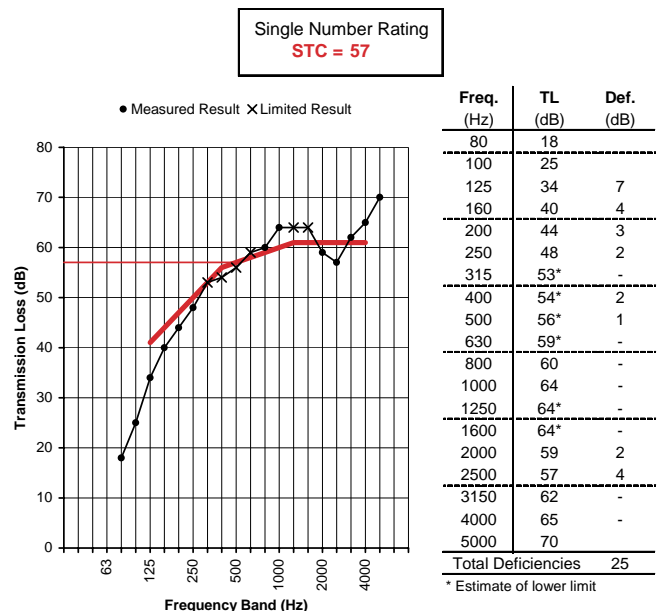
1. There cannot be a deficiency greater than 8 dB at any measurement point.
2. The total of all deficiencies cannot exceed 32 dB.



Once those rules are satisfied and the STC Contour is set. The single number STC rating is determined by the dB reduction at the intersection of 500 Hz and the STC Contour. The higher the STC rating, the better the sound isolation of the wall partition.

Low Frequency Limitations

The de-emphasis of the STC Contour at the lower frequencies makes its application to modern noise issues limited. In a day when media rooms, theaters, and nightclubs are a part of or adjacent to living spaces, limiting the lowest frequency to 125 Hz makes the STC metric a much less applicable metric for noise control in buildings. Recent guidelines published by building code organizations have also indicated that old STC assembly reports are not viable as a source of information. Current test reports should, therefore, be given precedence.



Contemporary Testing

The importance of using current data

THE IMPORTANCE OF CURRENT DATA

The construction industry, as a whole, creates many “handbooks” designed to navigate and execute the correct assembly for specific fire requirements and include STC ranges, when available. Although many assemblies found in current handbooks are sound tested and are often easy to specify and build, the bulk of acoustic testing performed dates back to the 1960’s - a commonly overlooked detail that can impact the actual acoustic performance of the wall.

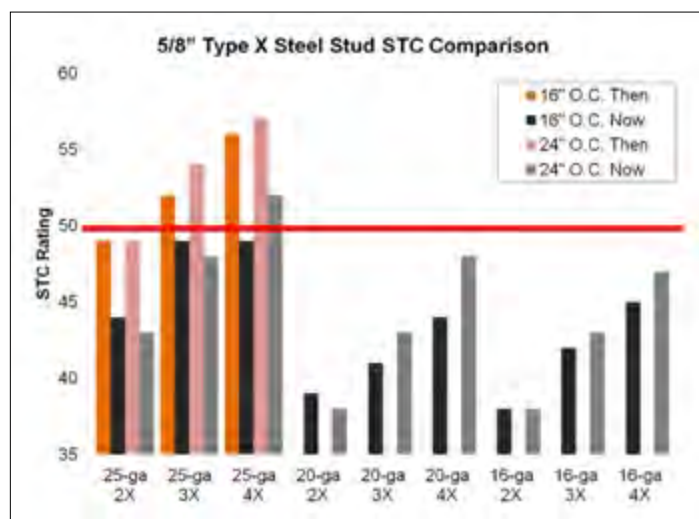
Sound isolation measurements and testing standards have been continuously revised since their inception decades ago. Yet old tests using these outdated methodologies are considered “useable”. The way the Sound Transmission Loss (STL) of a partition was measured and the resulting Sound Transmission Class (STC) calculated, say from the 1960s will likely be different if tested using today’s standards. The ASTM standard for measuring laboratory STL changed the type of frequency range over the years. Another cause of a result difference can be attributed to the evolution of building materials over the past 40 years; for example, a type X drywall panel today is lighter than one produced when some of these tests were conducted. Any assembly tested before any of these changes were implemented could result in relying on inflated expectations and could be misleading.

Simply put, if a standard wall assembly achieved an STC 51 rating in 1968 and were sent back to laboratories for testing today, it would not achieve an STC rating above 46. So what may have been acceptable by the building code in the 1960s may not meet code today even though these assemblies are still presented in current industry handbooks.

What adds to the confusion is the fact that building partition materials such as studs, insulation, and gypsum wallboard have undergone changes in form and formula over the last 50 years. Steel studs, for example, have undergone major changes over time. Studs with “equivalent” stud gauge are now available as well as studs with varying hole shapes, lengths, and sizes over the length of the stud. All of these changes can affect the STL of building partitions to some degree or another. Choosing a specific resilient channel from the selection available today can result in drastically different STL results as well depending on the application.

How is a test report from 1963 going to account for all these factors? Due to a rising need for relevant and accurate data, organizations such as the International Code Council (ICC), have published guidelines for sound isolation in buildings that address the need for current data. According to the ICC G2-2010 Guideline for Acoustics, for example, a test report older than 20 years does not provide adequate validation for a design.

Further evidence of the need for current data is clear when comparing older traditionally-referenced STL test reports to current test reports of same assemblies, such as in the graph below.



Understanding Acoustic Test Reports

A brief walk-through

Testing for Sound Transmission Loss (STL) is important both for the validation of assembly designs for use in building projects but also for the comparison of different building materials in a laboratory environment that is designed to minimize variability and bias. It is important, then, to understand the different pieces of an STL test report so that an appropriate analysis and conclusion can be reached regarding the efficacy of any particular building material for use as an acoustic treatment.

Lab Name and Date/Report information: identifies the name of the laboratory, the date of the test measurement and the report number

Test Method section: for sound transmission loss testing look here to ensure that the ASTM International Standards E90 and E413 were adhered to during testing.

Description of test Specimen: it is important to look thoroughly through the test specimen details to ensure that the assembly in question was built with the framing type, gauge, spacing, insulation type, panel configuration, and screw spacing were installed according to the desired partition type. The weights of assembly components is also provided for reference and comparison between tested materials.

Accreditation footnote: there are several laboratory accreditation organizations, such as NVLAP and IEC, available for accreditation. Accreditation ensures that the laboratory adheres to current and thorough measurement and test reporting guidelines and standards and that quality control is in place for test procedures.

REPORT NUMBER: 10001-00001

TEST METHOD: AS 1010-2010 Laboratory Measurement of Acoustic Insulation of Building Partitions and Ceilings

TEST SPECIMEN: 10001-00001

TEST DATE: 10/01/2010

TEST RESULTS: 10001-00001

Components:

- Specimen 1: 10001-00001
- Specimen 2: 10001-00001
- Specimen 3: 10001-00001
- Specimen 4: 10001-00001
- Specimen 5: 10001-00001
- Specimen 6: 10001-00001
- Specimen 7: 10001-00001
- Specimen 8: 10001-00001
- Specimen 9: 10001-00001
- Specimen 10: 10001-00001

Deficiencies:

- Deficiency 1: 10001-00001
- Deficiency 2: 10001-00001
- Deficiency 3: 10001-00001
- Deficiency 4: 10001-00001
- Deficiency 5: 10001-00001
- Deficiency 6: 10001-00001
- Deficiency 7: 10001-00001
- Deficiency 8: 10001-00001
- Deficiency 9: 10001-00001
- Deficiency 10: 10001-00001

Table of Test Results:

FREQUENCY (Hz)	TL (dB)	DEFICIENCIES (dB)
50	15	0
63	16	0
80	17	0
100	18	0
125	20	0
160	22	0
200	25	0
250	28	0
315	32	0
400	35	0
500	38	0
630	40	0
800	42	0
1000	45	0
1250	48	0
1600	50	0
2000	52	0
2500	55	0
3150	58	0
4000	60	0
5000	62	0
TOTAL DEFICIENCIES		0

Test results: The graph of test results, along with the STC contour are provided. At times a drawing or photograph of the test assembly is also attached as part of the report.

Frequency is the part of the table or column where the tested and reported frequencies (see glossary) are listed.

TL is the sound transmission loss (see glossary) data measured and calculated over the report frequency range.

Deficiencies are the dB values of the TL curve that lies below the STC contour curve (see section on STC) at each measurement frequency.



Sound Intensity

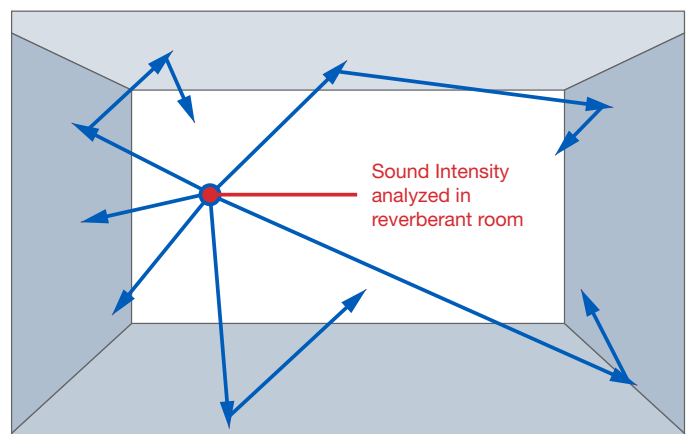
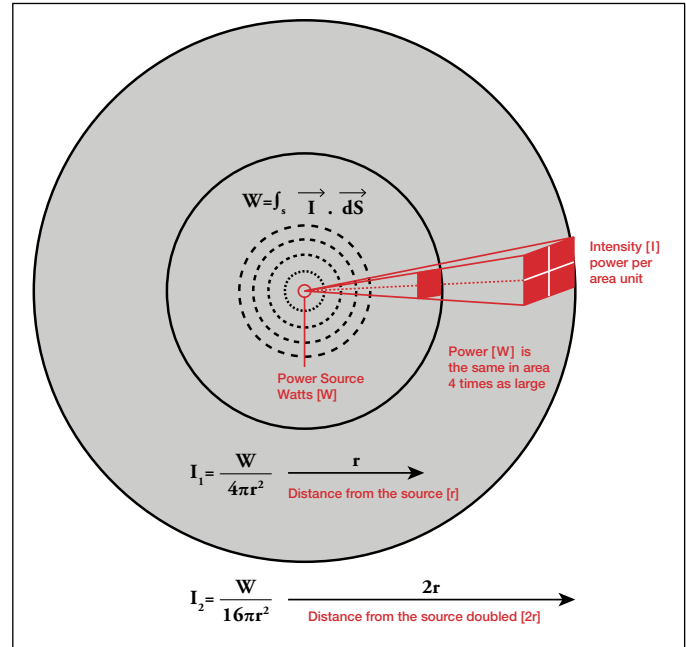
Determines post-construction flanking paths

Acoustical engineers and consultants routinely conduct sound intensity measurements to determine post-construction flanking paths. The **International Building Code (IBC)** requires a field-tested **noise isolation class (NIC)** or **normalized noise isolation class (NNIC)** performance rating of 45 for various types of demising partitions. These metrics are calculated from measurements made according to the ASTM International standard E336 Standard Test Method for Measurement of Airborne Sound Attenuation Between Rooms in Buildings. Other building codes such as the **International Green Construction Code (IgCC)** reference the ASHRAE 189.1 Standard for the Design of High Performance Green Buildings, with even more stringent and robust requirements for field testing sound isolation in buildings. It is important to understand the limitations of the ASTM E336 standard and explore standard test methodologies that more completely characterize the transmission of sound (including flanking sound) through partitions.

In ASTM E336 a microphone is used to measure the **sound pressure level (SPL)** in a source and receiving room. Microphones measure the sound pressure inside of any given space, but a microphone provides no significant information about which direction the sound radiation is coming from. For example, a microphone could be placed near a potential source of sound leakage in a room, but the output of the microphone (SPL) does not provide any information about where the actual sound is coming from nor how badly the sound is radiating from the flanking source. This makes microphones ineffective for determining sound flanking and leakage.

Fortunately, a measurement method was developed in the 1930s for measuring **sound intensity**. Microphones measure the sound pressure of a sound field in a room at a single location within the room. Sound intensity probes measure the radiated sound power from sound sources within the room. If sound is radiating from a source of sound flanking in a room, a sound intensity probe will provide information about how much greater the sound energy is near sources of sound flanking than it is over the rest of the partition. Because sound intensity (I) is the product of the sound pressure (p) and the velocity (v), sound intensity probes are made from either two phase-matched microphones facing each other or from the combination of a microphone and a particle velocity probe. Most modern sound intensity probes are the two-microphone type (p-p). A sound intensity probe can be used to scan the surface of a wall, floor, or ceiling to determine the location of sound leaks or flanking paths.

Some sound intensity probes come equipped with camera technology that allows you to create a color map of sound radiation over the building surface simultaneously while scanning the building surface with the probe. It is important to utilize the technology at our disposal to fully characterize field sound isolation in buildings.

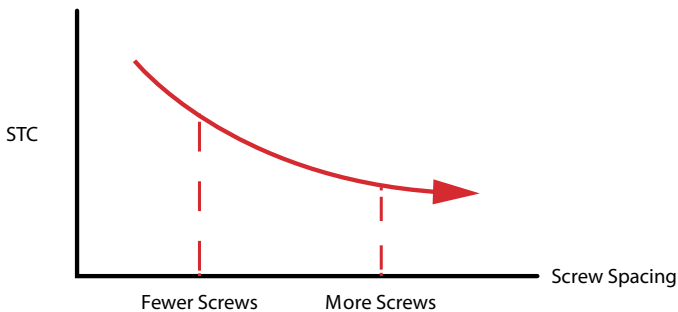


Key Factors that Contribute to STC

The effects of materials & design

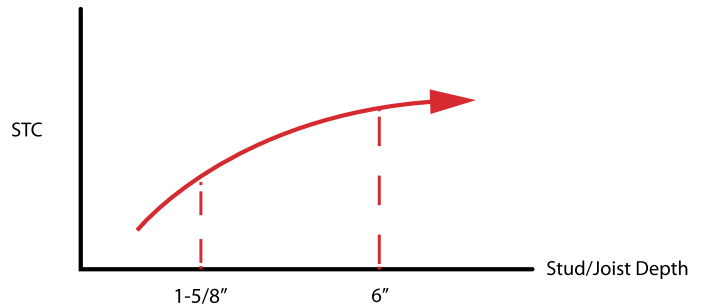
SCREW SPACING

Screws spaced closer together will decrease STC & sound isolation.



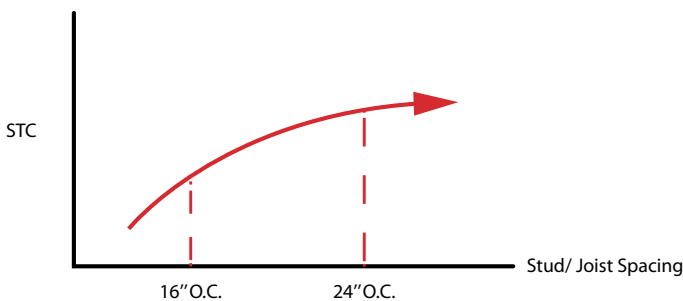
STUD/ JOIST DEPTH

Greater stud depth allows for more airspace and increased performance.



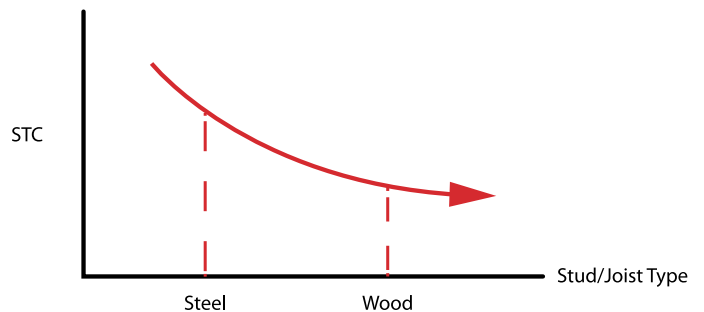
STUD/ JOIST SPACING

Wider stud spacing creates larger air cavities and decreased stiffness for better sound isolation.



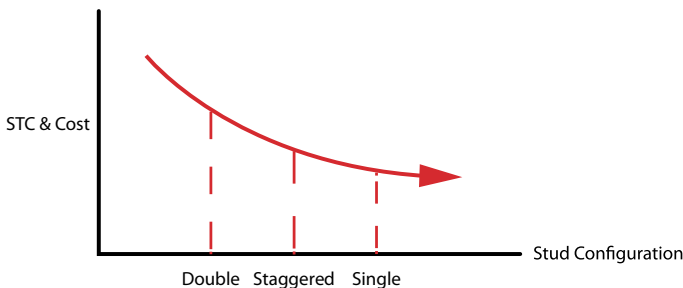
STUD/ JOIST TYPE

Steel studs allow greater flexibility and sound isolation without reducing structural integrity.



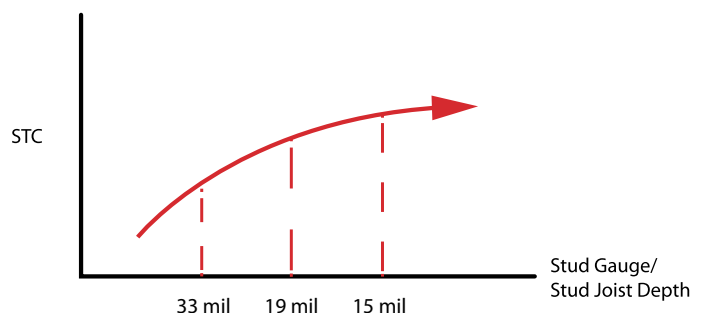
STUD CONFIGURATION

Separating stud frames adds decoupling and increased air space, increasing sound transmission loss.



STUD GAUGE

Light gauge studs provide better sound isolation than heavy gauge studs.



The higher the STC rating, the better the sound isolation of the partition.

The Impact of Steel Stud Selection

Sound transmission loss performance

Steel studs are designed and manufactured to be specified in a wide range of building projects. Information contained in the steel stud specification is crucial for architects and acoustical consultants as they collaborate with structural engineers to specify the appropriate steel framing members for buildings. This collaboration ensures that all partitions are fire-safety compliant and meet local codes and regulations – including Sound Transmission Class (STC) ratings. The selection and specification of steel framing components can have a direct impact on Sound Transmission Loss (STL) performance. Four key topics are addressed regarding the effect of steel-framed designs on sound transmission loss:

1. The effect of mil thickness on STL performance,
2. How mil thickness varies across steel manufacturers and what effect this has on STL performance,
3. The effect of steel spacing and width on STL performance, and
4. Laboratory testing concerns for the repeated use of the same steel frame over time.

The table below shows the difference between a drywall stud (non-structural, 15 mil to 23 mil) and structural stud (thicknesses greater than 23 mil). Use ASTM standard C645 for more restrictions on tolerances and variability with the structural steel studs.

Steel Stud Thickness	Drywall Gauge	Structural Gauge
15 mil	25 ga. EQ	-
18 mil	25 ga.	-
18 mil	20 ga. EQ	-
19 mil	20 ga. EQ	-
30 mil	-	20 ga. EQ
33 mil	-	20 ga.
43 mil	-	18 ga.
54 mil	-	16 ga.
68 mil	-	14 ga
97 mil	-	12 ga.

The subject of steel thickness and gauge has only recently been introduced in building partition design. Many architectural drawings still list steel stud framing as “metal studs” or similar without any mention of steel mil thickness or gauge. PABCO® has conducted hundreds of ASTM E90 laboratory tests on varying steel mil thicknesses (even for the same specified stud gauge).

We found that even the specification of steel gauge can be problematic for accurate sound isolation design in buildings. For example, steel framing may be listed as “20 ga,” however, many steel manufacturers produce 20-ga steel from 19-mil thick up to 33-mil thick. Our testing has indicated that there is a very large difference in STC rating and STL performance for this large range of steel thicknesses. Steel gauge is, therefore, not an accurate, nor useful specification when it comes to sound isolation design. The steel mil thickness must be reported for greater accuracy and lower risk of field failure. That is why in this edition of The Sound Design Guide we use only mil thickness in our designs.

Another important finding relevant to mil thickness is that once the stud thickness is increased to around 33- to 43-mil thickness, any changes in performance for standard 5/8” Type X Gypsum Wallboard (GWB) partitions are very small, even for multiple panel configurations. A larger amount of variation exists, even across these thicker steel frames, when damped panels are used for higher STL and STC ratings.

Further, the mil thickness of steel framing varies across steel manufacturers for the same gauge specification. One manufacturer’s “20-ga” non-structural steel stud may perform drastically different from another manufacturer’s steel stud with the same gauge specification. It is increasingly important to either specify stud mil-thickness in building design or to specify a range of STC ratings for the same steel gauge specification if multiple steel manufacturers are specified as options for a project.

Beyond mil thickness, the spacing and width of steel studs can have varying influences on the STC rating and STL. For 15-mil non-structural stud framing, there is a smaller difference in STC rating and STL for 16” o.c. versus 24” o.c. stud spacing. However, once the mil thickness increases to 20-mil (and progressively as the mil-thickness increases), there exists much larger differences between the standard 16” o.c. and 24” o.c. stud spacing.

Initial findings also indicate that the repeated use of the same steel frame can influence the STL and STC rating of a partition. Most of our repeated testing has indicated that if you test one partition design, and then repeat this design after 4 or 5 uses of the same frame, the partition design first tested may increase by a significant amount of STC points. It is important to know how many times a particular steel frame had been used in a given test series, in order to assess how the STL or STC performance may have changed over the course of testing.

Speech Privacy Class

Methods and examples

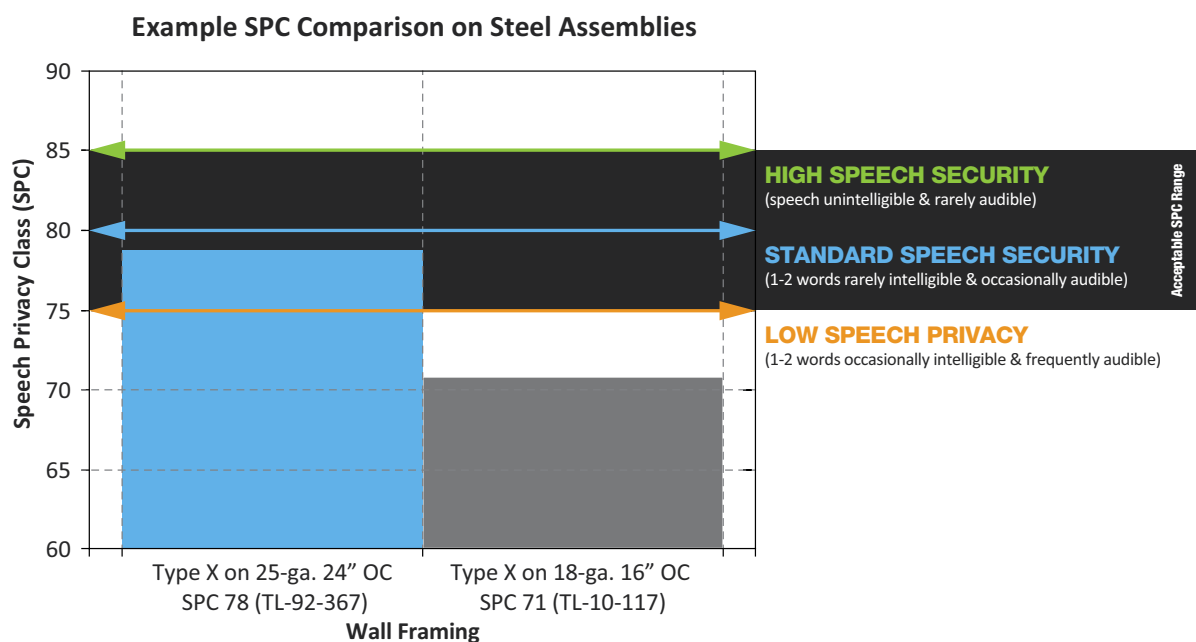
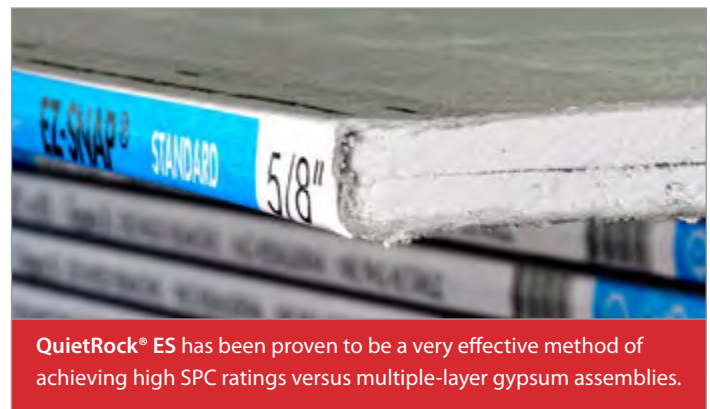
The words “**speech privacy**” often invoke images of top-secret government facilities or open office cubicles. The importance of speech privacy in building construction, however, expands to a great many project types. **Healthcare** building projects are regulated by codes or guidelines, such as the Health Insurance Portability and Accountability Act (HIPAA), that require privacy for sensitive conversations in enclosed rooms. **Office buildings** with conference rooms and human resources departments have need of enclosures that are capable of keeping conversations private. **Classrooms** with poorly designed separation walls contribute to an environment of distraction, inhibiting concentration required to learning. **Hotels** and **multi-family** dwellings become a nearly unbearable source of frustration and stress when conversations and other more disturbing noises can be heard through interior partitions. Frustration and distraction don’t need to interfere with our everyday lives. Adhering to guidelines and validated partition designs using current measurement standards enables building industry professionals to ensure a secure and private environment for their building project needs.

STC was originally designed to characterize speech. Due to recent studies indicating that STC is not appropriate for characterizing speech privacy, a new standard was developed for speech privacy in enclosed spaces and a new rating system was created: the **Speech Privacy Class (SPC)**.

SPC is calculated by:

1. Measuring and averaging the background noise (Ln(ave)) over a range of frequencies, from 160 Hz to 5,000 Hz.
2. Measure and average the sound transmission loss (TL(ave)) over the same range of frequencies.
3. Simply add the two averaged values together and, if comparing laboratory-tested STL results, add one.

The graph below illustrates the different rating scales for the SPC.



Constrained-Layer Damping

How QuietRock works

CONSTRAINED-LAYER DAMPING

Constrained-layer damping (CLD) is a vibration isolation technique that was originally developed for naval vessels and airplane fuselages. CLD requires the application of materials that are viscoelastic—materials that can deform easily when stressed and then return back into their original form. **QuietRock®** products, through the application of viscoelastic materials (**QuietGlue®**) in gypsum panels, use shear-loading and vibration decay to reduce noise by 10 dB or more versus traditional treatments. Simply, QuietRock® makes it easier for the building partition to reduce vibration, which makes sound isolation much more efficient.

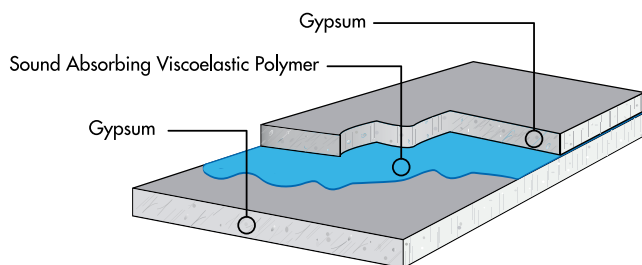


Figure 1: QuietRock uses advanced viscoelastic polymers (damping layer) between two layers of gypsum (constraining layers) to reduce sound vibrations in building partitions.

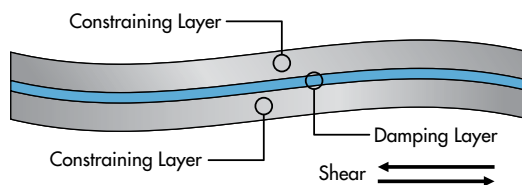


Figure 2: System under vibration (magnified). Note shearing of damping layer as panel flexes.

EXTENSIONAL FREE-LAYER DAMPING

Extensional damping is achieved by applying a damping compound, such as **QuietCoat®** to a non-porous metal or plastic substrate. Similar to CLD, extensional damping reduces vibration energy and sound. Examples of extensional damping in buildings include coating HVAC ducting, escalator & elevator wall panels, in wall pipes, and undercoating stainless steel sinks with QuietCoat. Extensional damping is appropriate in situations where the substrate is thin and non-porous.

Although extensional damping can be effective for some applications (listed above), it is not an effective sound isolation treatment for building partitions. It should, therefore, not be applied to a gypsum panel partitions. The gypsum panel is too thick in relation to the thickness of the coating and the panel surface too porous for the QuietCoat or other extensional damping material to function as a sound isolation treatment.



PABCO Gypsum Sound & Fire Designs

Sorted by fire ratings

DESIGN NUMBER	STC	PAGE #
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2 Hour Assemblies

GA WP4135 - 2 Hour		
PGD-W-824-24	38	167

U301 - 2 Hour		
PGD-W6-824-16	38	175

U347 - 2 Hour		
PGD-ASW-W-200-16	69	187
PGD-ASW-W-280-24	62	188

U411 - 2 Hour		
PGD-15-489-24	55	45
PGD-15-489-16	50	45
PGD-19-552-24	52	61
PGD-19-552-16	52	61
PGD-18-596-24	50	54
PGD-186-605-16	45	56
PGD-18-596-16	45	54

U425 - 2 Hour		
PGD-33-497-24	58	66
PGD-336-468-16	52	74
PGD-336-687-24	52	78
PGD-33-598-24	50	69
PGD-436-598-24	50	86
PGD-43-604-24	49	83
PGD-97-604-24	49	117

DESIGN NUMBER	STC	PAGE #
PGD-68-648-24	47	108
PGD-54-667-24	46	93
PGD-33-598-16	45	69
PGD-19-552-16	45	58
PGD-336-687-16	49	78
PGD-546-735-16	44	102
PGD-68-648-16	43	108
PGD-43-604-16	42	83
PGD-686-685-16	41	112
PGD-54-667-16	40	93
PGD-97-604-16	40	117
V464 - 2 Hour		
PGD-54D-394-16	60	123

W466 - 2 Hour		
PGD-33-358-16	62	64
PGD-54-314-16	59	87
PGD-546-353-16	59	94

PABCO Gypsum Sound & Fire Designs

Sorted by fire ratings - continued



DESIGN NUMBER	STC	PAGE #
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1 Hour Assemblies

U301 - 1 Hour		
PGD-W6-824-16	38	175

U305 - 1 Hour		
PGD-W-445-16	57	157
PGD-W-397-16	55	156
PGD-W6-455-16	55	170
PGD-W-535-16	53	159
PGD-W6-595-16	50	172
PGD-W6-625-16	48	173
PGD-W-545-16	48	162
PGD-W6-672-16	46	174
PGD-W-574-16	45	164
PGD-W6-753-16	42	174
PGD-W-646-16	41	166
PGD-W6-910-16	34	169

V310 - 1 Hour		
PGD-W6-467-16	49	171

U309 - 1 Hour		
PGD-W-463-24	56	158
PGD-W6-467-24	53	171
PGD-W-537-24	52	160
PGD-W6-563-24	52	172
PGD-W6-565-24	52	171
PGD-W-539-24	51	161
PGD-W-574-24	51	164
PGD-W6-573-24	48	174
PGD-W-646-24	47	166
PGD-W-636-24	45	164
PGD-W6-914-24	42	176
PGD-W-910-24	41	169

DESIGN NUMBER	STC	PAGE #
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U340 - 1 Hour		
PGD-WS-467-24	56	178
PGD-WS-485-24	55	179
PGD-WS-485-16	55	179
PGD-WS-467-16	53	178
PGD-WS-537-24	53	180
PGD-WS-537-16	51	180
PGD-WS-647-24	47	180
PGD-WS-647-16	47	180

U341 - 1 Hour		
PGD-WD-354-16	62	182
PGD-WD-468-16	56	184

U420 - 1 Hour		
PGD-18D-512B-16	54	130
PGD-18D-512B-16	51	133
PGD-18D-512B-16	49	135

U425 - 1 Hour		
PGD-546-353-16	62	94
PGD-546-407-16	60	95
PGD-54-314-16	60	87
PGD-33-427-16	58	65
PGD-336-432-16	58	73
PGD-334-442-16	57	73
PGD-43-394-16	57	80
PGD-54-406-16	56	88
PGD-68-396-16	56	104
PGD-97-466-16	56	113
PGD-336-469-24	55	75
PGD-436-485-24	55	84
PGD-546-493-24	55	98
PGD-436-517-24	54	84
PGD-33-516-24	54	67
PGD-546-427-16	54	96
PGD-686-597-16	54	110
PGD-97-516-24	54	114
PGD-68-534-24	53	105
PGD-33-558-16	52	68

PABCO Gypsum Sound & Fire Designs

Sorted by fire ratings - continued



DESIGN NUMBER	STC	PAGE #
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U425 - 1 Hour Continued		
PGD-33-573-24	52	68
PGD-336-469-16	52	75
PGD-336-534-24	52	77
PGD-54-516-16	52	89
PGD-54-552-16	52	90
PGD-54-552-24	52	90
PGD-54-554-24	52	90
PGD-54-556-24	52	91
PGD-334-572-16	51	71
PGD-43-476-16	51	81
PGD-546-576-24	51	100
PGD-334-624-16	50	72
PGD-336-492-16	50	76
PGD-436-592-24	50	85
PGD-546-493-16	50	98
PGD-68-534-16	50	105
PGD-97-516-16	50	114
PGD-97-597-24	50	115
PGD-336-534-16	49	77
PGD-68-607-24	49	106
PGD-546-587-16	48	101
PGD-686-625-16	47	110
PGD-43-584-16	47	82
PGD-54-644-24	47	92
PGD-686-638-16	47	111
PGD-97-597-16	47	115
PGD-336-757-24	46	79
PGD-436-485-16	46	84
PGD-54-554-16	46	90
PGD-54-644-16	46	92
PGD-54-664-24	46	92
PGD-68-607-16	46	106
PGD-33-515-16	45	67
PGD-33-687-24	45	70
PGD-43-595-16	45	82
PGD-54-556-16	45	91
PGD-68-612-16	45	107
PGD-436-716-24	44	86
PGD-546-576-16	44	100

DESIGN NUMBER	STC	PAGE #
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U425 - 1 Hour Continued		
PGD-686-662-16	43	111
PGD-546-738-24	43	103
PGD-97-602-16	43	116
PGD-97-736-24	43	118
PGD-336-757-16	42	79
PGD-54-664-16	41	92
PGD-334-790-16	40	72
PGD-33-573-16	43	68
PGD-54-797-24	40	93
PGD-68-798-24	40	109
PGD-546-738-16	39	103
PGD-43-824-24	38	83
PGD-43-824-16	38	83
PGD-686-733-16	38	112
PGD-68-798-16	38	109
PGD-97-736-16	38	118
PGD-33-687-16	36	70
PGD-54-797-16	35	93

U431 - 1 Hour		
PGD-WD-373-16	61	183

U465 - 1 Hour		
PGD-19-394-24	60	58
PGD-18-402-24	59	48
PGD-18-402-16	58	48
PGD-19-426-16	58	59
PGD-18-466-24	56	49
PGD-18-487-24	55	51
PGD-18-487-16	52	51
PGD-18-554-24	52	52
PGD-18-554-16	49	52
PGD-19-627-24	48	63
PGD-18-664-24	46	54
PGD-19-627-16	41	63
PGD-18-664-16	40	54

PABCO Gypsum Sound & Fire Designs

Sorted by fire ratings - continued



DESIGN NUMBER	STC	PAGE #
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V464 - 1 Hour		
PGD-15D-265-16	66	126
PGD-15S-286-16	65	120
PGD-18D-438-16	65	138
PGD-33D-317-16	64	146
PGD-54D-317-16	64	152
PGD-54D-394-16	63	153
PGD-15S-337-16	63	121
PGD-15D-375-16	61	127
PGD-33D-404-16	59	147
PGD-18D-527-16	58	139
PGD-15D-423-16	58	128
PGD-54D-407-16	58	154
PGD-15-423-24	58	42
PGD-15-427-16	58	43
PGD-19-447-24	57	60
PGD-15S-468-16	56	122
PGD-15-485-24	55	45
PGD-18-484-24	55	51
PGD-15-435-16	54	44
PGD-18-470-24	54	50
PGD-18-484-16	54	51
PGD-546-425-16	54	96
PGD-15-423-16	53	42
PGD-19-558-24	53	62
PGD-33-513-24	53	66
PGD-15-485-16	52	45
PGD-15-552-24	52	46
PGD-186-566-16	51	55
PGD-19-574-24	51	62
PGD-54-526-16	51	82
PGD-19-447-16	50	60
PGD-33-513-16	50	66
PGD-546-447-16	50	97
PGD-15-624-24	48	47
PGD-15-552-16	48	46
PGD-19-558-16	48	62
PGD-546-595-16	47	101
PGD-15-624-16	45	47
PGD-19-574-16	45	62

DESIGN NUMBER	STC	PAGE #
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V464 - 1 Hour Continued		
PGD-546-565-16	45	99
PGD-186-607-16	41	57

Non-Rated Assemblies

PGD-54D-105-16	83	148
PGD-54D-147-16	80	149
PGD-33D-145-16	80	143
PGD-54D-172-16	75	150
PGD-18D-355-16	72	136
PGD-33D-155-16	72	144
PGD-18D-428-16	66	137
PGD-33D-265-16	66	145
PGD-54D-286-16	65	151
PGD-332D-472-24	62	140
PGD-332S-542-24	62	123
PGD-182D-512-16	59	129
PGD-332D-502-24	59	141
PGD-182D-522-16	58	131
PGD-182D-522B-16	56	132
PGD-332S-572-24	55	123
PGD-182D-560-16	54	134
PGD-332D-552-24	54	142
PGD-15-590-24	50	46
PGD-18-590-24	50	53
PGD-W-548-16	46	163
PGD-W-557-16	45	163
PGD-W-642-16	42	165
PGD-W-648-16	41	168
PGD-W-844-16	37	168
PGD-W-914-16	34	169

PABCO Gypsum Sound & Fire Designs

New assemblies added

DESIGN NUMBER	STC	FIRE	PAGE #
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18 MIL 2" STEEL FRAMING			
PGD-182D-512-16	59	Non-Rated	129
PGD-182D-522-16	58	Non-Rated	131
PGD-182D-522B-16	56	Non-Rated	132
PGD-182D-560-16	54	Non-Rated	134
PGD-182D-512B-16	54	1 Hr U420	130
PGD-182D-527B-16	51	1 Hr U420	133
PGD-182D-560B-16	49	1 Hr U420	135

18 MIL 3-5/8" STEEL FRAMING			
PGD-18D-355-16	74	Non-Rated	136
PGD-18D-428-16	66	Non-Rated	137
PGD-18D-438-16	65	1 Hr V464	138
PGD-18D-527-16	58	1 Hr V464	139
PGD-18-470-24	54	1 Hr V464	50
PGD-18-484-16	54	1 Hr V464	51
PGD-18-590-24	50	Non-Rated	53

18 MIL 6" STEEL FRAMING			
PGD-186-566-16	51	1 Hr V464	55
PGD-186-605-16	45	2 Hr U411	56
PGD-186-607-16	41	1 Hr V464	57

33 MIL 2" STEEL FRAMING			
PGD-332D-472-24	62	Non-Rated	140
PGD-332S-542-24	62	Non-Rated	123
PGD-332D-502-24	59	Non-Rated	141
PGD-332S-572-24	55	Non-Rated	123
PGD-332D-552-24	54	Non-Rated	142

33 MIL 4" STEEL FRAMING			
PGD-33-497-24	58	2Hr U425	66
PGD-33-515-16	45	1Hr U425	67

DESIGN NUMBER	STC	FIRE	PAGE #
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33 MIL 6" STEEL FRAMING			
PGD-336-469-24	55	1 Hr U425	75
PGD-336-468-16	52	2 Hr U425	74
PGD-336-687-24	52	2 Hr U425	78
PGD-336-469-16	52	1 Hr U425	75
PGD-336-534-24	52	1 Hr U425	77
PGD-336-534-16	49	1 Hr U425	77
PGD-336-757-24	46	1 Hr U425	79

54 MIL 6" STEEL FRAMING			
PGD-546-447-16	50	1 Hr V464	97
PGD-546-565-16	45	1 Hr V464	99
PGD-546-735-16	44	2 Hr U425	102
PGD-546-738-16	39	1 Hr U425	103

68 MIL 6" STEEL FRAMING			
PGD-686-597-16	54	1 Hr U425	110
PGD-686-625-16	48	1 Hr U425	110
PGD-686-638-16	47	1 Hr U425	111
PGD-686-662-16	43	1 Hr U425	111
PGD-686-685-16	41	2 Hr U425	112
PGD-686-733-16	38	1 Hr U425	112

PABCO Gypsum Sound & Fire Designs

New assemblies added - Continued



DESIGN NUMBER	STC	FIRE	PAGE #
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2X4 WOOD FRAMING				
PGD-W-463-24	56	1 Hr	U309	158
PGD-W-537-24	52	1 Hr	U309	160
PGD-W-539-24	51	1 Hr	U309	161
PGD-W-636-24	48	1 Hr	U309	164
PGD-W-824-24	45	2 Hr	GA-WP4135	167
PGD-W-574-16	45	1 Hr	U305	164
PGD-W-910-24	41	1 Hr	U309	169
PGD-W-910-16	35	1 Hr	U305	169

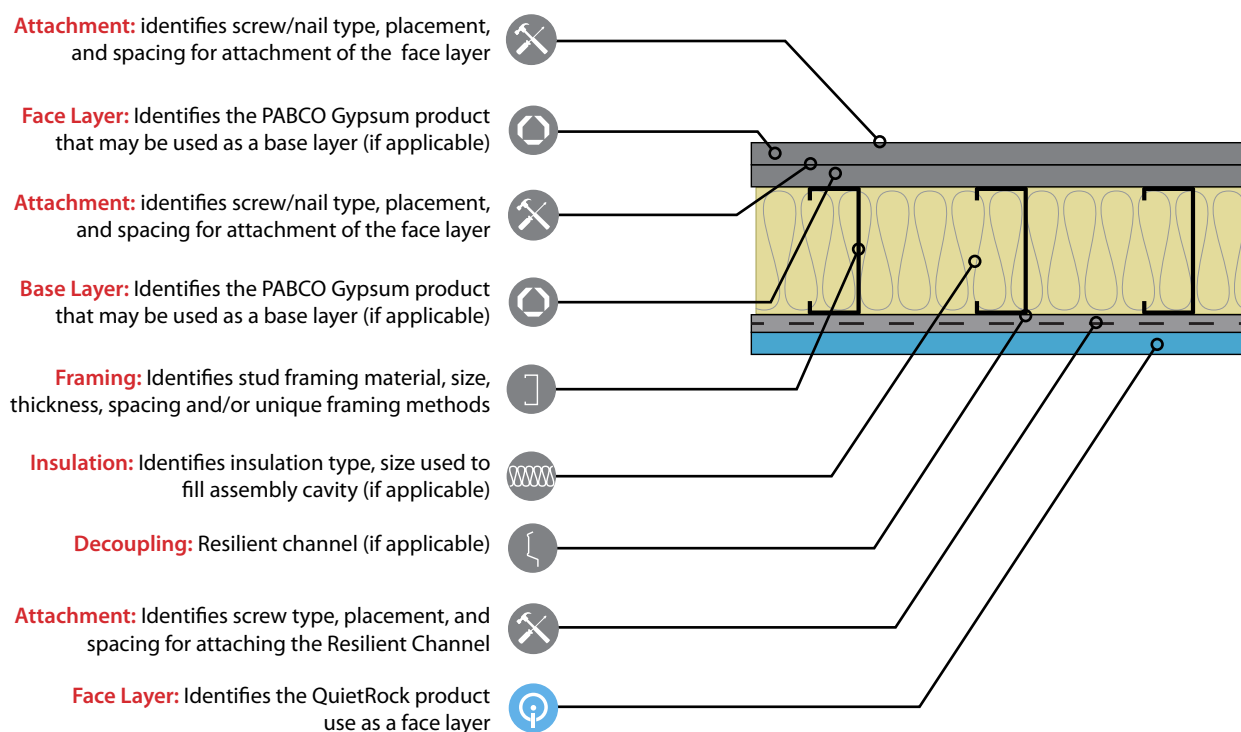
2X6 WOOD FRAMING				
PGD-W6-563-24	52	1 Hr	U309	172
PGD-W6-753-24	48	1 Hr	U309	174

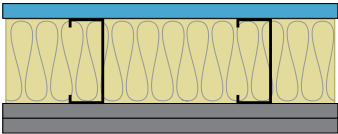
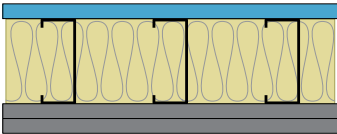
Walls & Interior Partitions

Single Steel Frame

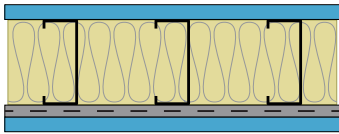
ASSEMBLY COMPONENTS AND PICTOGRAMS

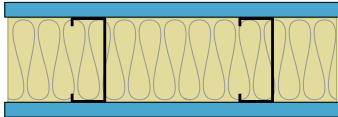
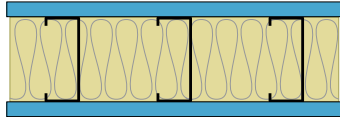






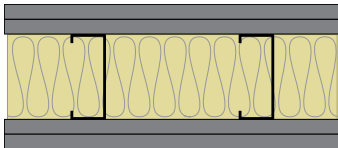
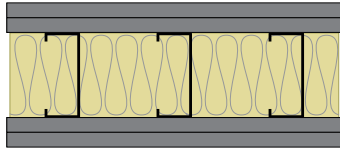










The assemblies in this guide have been divided into sections by framing material type and ordered by design file number. The assembly details are listed in order starting from the outermost layer (attachment); working from top to bottom and ending with the stud or insulation. Pictograms have been added to each assembly detail to provide visual separation of the individual assembly components.

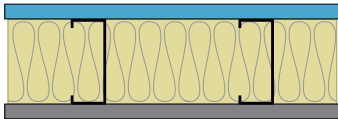
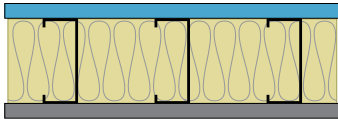






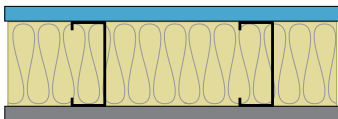














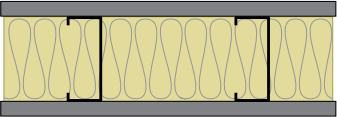
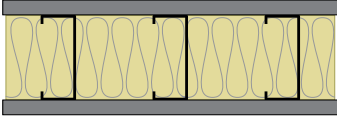
24" o.c.	16" o.c.	Description
PGD-15-423-24	PGD-15-423-16	
<p>STC 58 NOAL 17-0435 - 24" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 5-1/2" Approx weight: 7.5 lb/ft²</p>	<p>STC 53 NOAL 17-0453 - 16" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 5-1/2" Approx weight: 7.4 lb/ft²</p>	<ul style="list-style-type: none"> 1" Type S screws (for fire, minimum 1-1/4" Type S screws) spaced 8" o.c. at edges and 12" o.c. in the field. One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 3-5/8" 15 mil steel studs, 24" o.c. or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S screws (for fire, minimum 1-1/4" Type S screws) spaced 16" o.c. Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-5/8" Type S screws (for fire, minimum 1-7/8" Type S screws) spaced 8" o.c. at edges and 12" o.c. in the field.
Non-Load Bearing Vertical joints staggered on opposite sides		

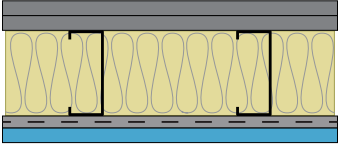
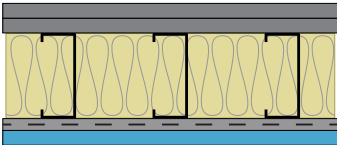
24" o.c.	16" o.c.	Description
	PGD-15-427-16	
	<p>STC 58 NOAL 18-0846 - 16" o.c.</p> <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 6" Approx weight: 7.6 lb/ft²</p>	<p> 1-5/8" Type S screws (for fire, minimum 1-7/8" Type S screws) spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1" Type S screws (for fire, minimum 1-1/4" Type S screws) spaced 16" o.c.</p> <p> Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 3-5/8" 15 mil steel studs, 16" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> Resilient channel applied at right-angle, 24" o.c.</p> <p> 1/2" #8 Type S pan head screw attaching Resilient Channel to stud flange at alternate intersections.</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 1" Type S drywall screws at 12" o.c.</p>
Non-Load Bearing Vertical joints staggered on opposite sides		

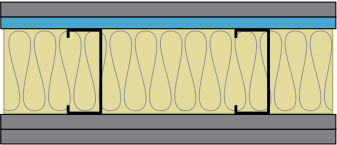










24" o.c.	16" o.c.	Description
	<p>PGD-15-435-16</p> <p>STC 54 NOAL 18-0844 - 16" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 5-3/8" Approx weight: 6.0 lb/ft²</p>	<ul style="list-style-type: none">1" Type S screws (for fire, minimum 1-1/4" Type S screws) spaced 8" o.c. at edges and 12" o.c. in the field.One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.3-5/8" 15 mil steel studs, 16" o.c.33-1/2", R-13 glass fiber insulation friction fit into stud cavity.Resilient channel applied at right-angle, 24" o.c.1/2" Type S screws attaching resilient channel to stud at each intersection.One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.1" Type S drywall screws at 12" o.c.
<p>Non-Load Bearing Vertical joints staggered on opposite sides</p>		

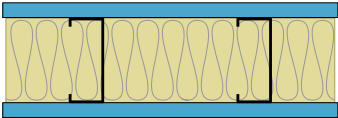






24" o.c.	16" o.c.	Description
<p>PGD-15-485-24</p> <p>STC 55 NOAL 18-0517 - 24" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 4-7/8" Approx weight: 5.7 lb/ft²</p>	<p>PGD-15-485-16</p> <p>STC 52 NOAL 19-0405 - 16" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 4-7/8" Approx weight: 6.0 lb/ft²</p>	<p> 1" Type S drywall screws (for fire, minimum 1-1/4" Type S screws) spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 3-5/8" 15 mil steel studs, 24" o.c. or 16" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 1" Type S drywall screws (for fire, minimum 1-1/4" Type S screws) spaced 8" o.c. at edges and 12" o.c. in the field.</p>
<p>Non-Load Bearing Vertical joints staggered on opposite sides</p>		
<p>PGD-15-489-24</p> <p>STC 55 NOAL 17-0434 - 24" o.c.</p>  <p>Fire: 2 Hour - UL U411</p> <p>Thickness: 6-1/8" Approx weight: 9.0 lb/ft²</p>	<p>PGD-15-489-16</p> <p>STC 50 NOAL 19-0408 - 16" o.c.</p>  <p>Fire: 2 Hour - UL U411</p> <p>Thickness: 6-1/8" Approx weight: 8.9 lb/ft²</p>	<p> 1-5/8" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1-5/8" type S screws spaced 16" o.c. in the field and along the vertical edges and 12" o.c. along top and bottom runners).</p> <p> Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior or PABCO® Glass Sheathing) gypsum panel applied vertically.</p> <p> 1" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" Type S screws spaced 16" o.c.)</p> <p> Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior or PABCO® Glass Sheathing) gypsum panel applied vertically.</p> <p> 3-5/8" 15 mil steel studs, 24" o.c. or 16" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior or PABCO® Glass Sheathing) gypsum panel applied vertically.</p> <p> 1" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" Type S screws spaced 16" o.c.)</p> <p> Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior or PABCO® Glass Sheathing) gypsum panel applied vertically.</p> <p> 1-5/8" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1-5/8" type S screws spaced 16" o.c. in the field and along the vertical edges and 12" o.c. along top and bottom runners).</p>
<p>Non-Load Bearing Vertical joints staggered on opposite sides</p>		

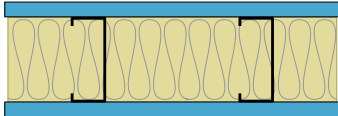
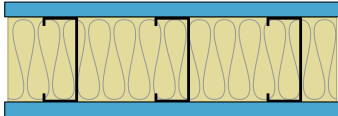






24" o.c.	16" o.c.	Description
<p>PGD-15-552-24</p> <p>STC 52</p> <p>NOAL 18-0519 - 24" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 4-7/8"</p> <p>Approx weight: 5.2 lb/ft²</p>	<p>PGD-15-552-16</p> <p>STC 48</p> <p>NOAL 19-0406 - 16" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 4-7/8"</p> <p>Approx weight: 5.4 lb/ft²</p>	<p> 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 3-5/8" 15 mil steel studs, 24" o.c. or 16" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p>
<p>Non-Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		
<p>PGD-15-590-24</p> <p>STC 50</p> <p>OL-12-0515 - 24" o.c.</p>  <p>Fire: Non-Rated</p> <p>Thickness: 4-5/8"</p> <p>Approx weight: 4.3 lb/ft²</p>		<p> 1-1/4" Type S drywall screws 12" o.c.</p> <p> One layer: 1/2" QuietRock® 510 gypsum panel applied vertically.</p> <p> 3-5/8" 15 mil steel studs, 24" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> One layer: 1/2" PABCO® Regular, FLAME CURB® Super C or PABCO® Glass Interior gypsum panel applied vertically.</p> <p> 1-1/4" Type S drywall screws 12" o.c.</p>
<p>Non-Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		

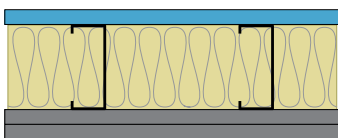
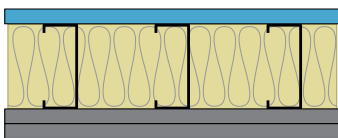








24" o.c.	16" o.c.	Description
PGD-15-624-24	PGD-15-624-16	 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.  One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.  3-5/8" 15 mil steel studs, 24" o.c. or 16" o.c.  3-1/2", R-13 glass fiber insulation friction fit into stud cavity.  One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.  1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.
STC 48 NOAL 18-0520 - 24" o.c.	STC 45 NOAL 19-0407 - 16" o.c.	
		
Fire: 1 Hour - UL V464 Configuration A Thickness: 4-7/8" Approx weight: 4.7 lb/ft ²	Fire: 1 Hour - UL V464 Configuration A Thickness: 4-7/8" Approx weight: 4.8 lb/ft ²	
Non-Load Bearing Vertical joints staggered on opposite sides		


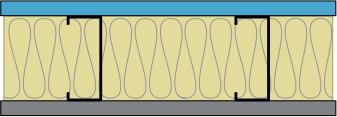
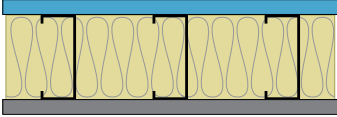





24" o.c.	16" o.c.	Description
PGD-18-402-24 STC 59 NOAL 19-0321 - 24" o.c.  Fire: 1 Hour - UL U465 Thickness: 6" Approx weight: 7.4 lb/ft²	PGD-18-402-16 STC 58 NOAL 18-0855 - 16" o.c.  Fire: 1 Hour - UL U465 Thickness: 6" Approx weight: 7.7 lb/ft²	<ul style="list-style-type: none"> 1-5/8" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field. Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 3-5/8" 18 mil steel studs, 24" o.c. or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Resilient channel applied at right-angle, 24" o.c. 1/2" Type S screws attaching resilient channel to stud at each intersection. One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 1" Type S drywall screws spaced 12" o.c.
Non-Load Bearing Vertical joints staggered on opposite sides		

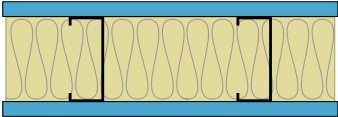






24" o.c.	16" o.c.	Description
PGD-18-466-24 STC 56 RAL TL-07-031 - 24" o.c.  Fire: 1 Hour - UL U465 Thickness: 6" Approx weight: 8.9 lb/ft²		<div>  2-1/2 in. Type S drywall screws 16" o.c. (for fire, minimum 1-1/2" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field). </div> <div>  Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior or PABCO® Glass Sheathing) gypsum panel applied vertically. </div> <div>  1-5/8" Type S drywall screws 16" o.c. (for fire, 1" minimum Type S drywall screws). </div> <div>  Base layer: 1/2" QuietRock® 510 applied vertically. </div> <div>  3-5/8" 18 mil steel studs, 24" o.c. </div> <div>  3-1/2", R-13 glass fiber insulation friction fit into stud cavity. </div> <div>  Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior or PABCO® Glass Sheathing) gypsum panel applied vertically. </div> <div>  1-5/8" Type S drywall screws 16" o.c. (for fire, 1" Type S drywall screws) </div> <div>  Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior or PABCO® Glass Sheathing) gypsum panel applied vertically. </div> <div>  2-1/2 in. Type S drywall screws at 16" o.c. (for fire, minimum 1-5/8" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field). </div>
Non-Load Bearing Vertical joints staggered on opposite sides		

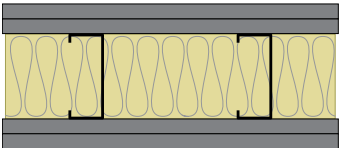
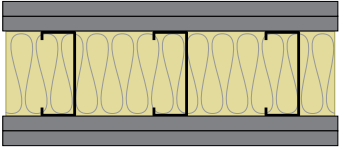
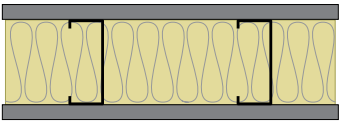
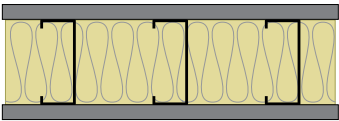
24" o.c.	16" o.c.	Description
<div>PGD-18-470-24</div> <div>STC 54</div> <div>NOAL 23-03070 - 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL V464 Configuration A</div> <div>Thickness: 4-7/8"</div> <div>Approx weight: 5.2 lb/ft²</div>		<div> 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 3-5/8" 18 mil steel studs, 24" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Non-Load Bearing Vertical joints staggered on opposite sides		

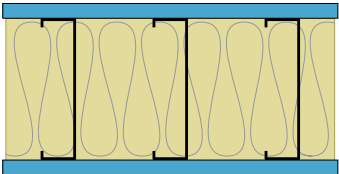






24" o.c.	16" o.c.	Description
<p>PGD-18-484-24</p> <p>STC 55</p> <p>NRC-TLA-05-050 - 24" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 4-7/8"</p> <p>Approx weight: 6.2 lb/ft²</p>	<p>PGD-18-484-16</p> <p>STC 54</p> <p>NOAL 23-02001 - 16" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 4-7/8"</p> <p>Approx weight: 6.2 lb/ft²</p>	<div> Minimum 1-1/4" Type S drywall screws 8" at edges and 12" in the field.</div> <div> One layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically.</div> <div> 3-5/8" 18 mil steel studs, 24" o.c. or 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically.</div> <div> Minimum 1-1/4" Type S drywall screws 8" at edges and 12" in the field.</div>
<p>Non-Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		

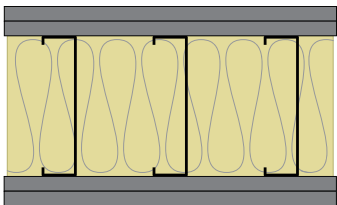
PGD-18-487-24	PGD-18-487-16	
<p>STC 55</p> <p>NOAL 19-0327 - 24" o.c.</p>  <p>Fire: 1 Hour - UL U465</p> <p>Thickness: 5-1/2"</p> <p>Approx weight: 7.4 lb/ft²</p>	<p>STC 52</p> <p>NOAL 18-0860 - 16" o.c.</p>  <p>Fire: 1 Hour - UL U465</p> <p>Thickness: 5-1/2"</p> <p>Approx weight: 7.5 lb/ft²</p>	<div> 1" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 3-5/8" 18 mil steel studs, 24" o.c. or 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically.</div> <div> 1" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically.</div> <div> 1-5/8" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
<p>Non-Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		

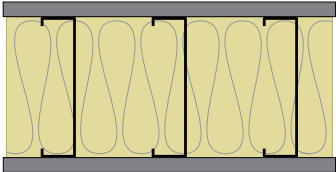






24" o.c.	16" o.c.	Description
PGD-18-554-24	PGD-18-554-16	
STC 52 NOAL 18-0522 - 24" o.c.	STC 49 NOAL 19-0422 - 16" o.c.	 1-1/4" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" Type S screws)
		 One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.
		 3-5/8" 18 mil steel studs, 24" o.c. or 16" o.c.
		 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.
Fire: 1 Hour - UL U465	Fire: 1 Hour - UL U465	 One layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically.
Thickness: 4-7/8" Approx weight: 5.2 lb/ft²	Thickness: 4-7/8" Approx weight: 5.4 lb/ft²	 1-1/4" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" Type S screws)
Non-Load Bearing Vertical joints staggered on opposite sides		

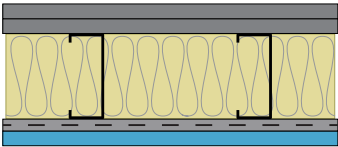
24" o.c.	16" o.c.	Description
<div>PGD-18-590-24</div> <div>STC 50</div> <div>NOAL 22-0343 – 24" o.c.</div> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 4-1/2"</div> <div>Approx weight: 4.9 lb/ft²</div>		<div> 1-1/4" Type S drywall screws spaced 12" o.c.</div> <div> One layer: 1/2 QuietRock® 510 gypsum panel applied vertically.</div> <div> 3-5/8" 18 mil steel studs, 24" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 1/2 QuietRock® 510 gypsum panel applied vertically.</div>
Non-Load Bearing Vertical joints staggered on opposite sides		<div> 1-1/4" Type S drywall screws spaced 12" o.c. at edges and 12" o.c. in the field.</div>

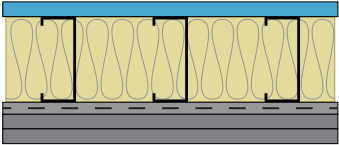










24" o.c.	16" o.c.	Description
PGD-18-596-24 STC 50 NOAL 20-1207 - 24" o.c.  Fire: 2 Hour - UL U411 Thickness: 6-1/8" Approx weight: 9.0 lb/ft²	PGD-18-596-16 STC 45 NOAL 18-0528 - 16" o.c.  Fire: 2 Hour - UL U411 Thickness: 6-1/8" Approx weight: 8.9 lb/ft²	<ul style="list-style-type: none"> 1-5/8" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1-5/8" type S screws spaced 16" o.c. in the field and along the vertical edges and 12" o.c. along top and bottom runners). Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 1-1/4" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" Type S screws spaced 16" o.c.) Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 3-5/8" 18 mil steel studs, 24" o.c. or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 1-1/4" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" Type S screws spaced 16" o.c.) Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 1-5/8" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1-5/8" type S screws spaced 16" o.c. in the field and along the vertical edges and 12" o.c. along top and bottom runners).
Non-Load Bearing Vertical joints staggered on opposite sides		
PGD-18-664-24 STC 46 NOAL 20-1206 - 24" o.c.  Fire: 1 Hour - UL U465 Thickness: 4-7/8" Approx weight: 4.8 lb/ft²	PGD-18-664-16 STC 40 NOAL 19-0411 - 16" o.c.  Fire: 1 Hour - UL U465 Thickness: 4-7/8" Approx weight: 4.8 lb/ft²	<ul style="list-style-type: none"> 1-1/4" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" Type S screws) One layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 3-5/8" 18 mil steel studs, 24" o.c. or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. One layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 1-1/4" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" Type S screws)
Non-Load Bearing Vertical joints staggered on opposite sides		

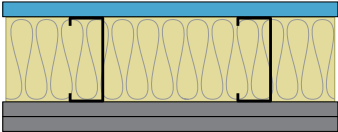
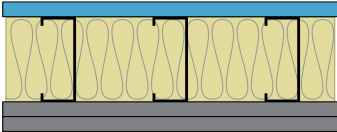
24" o.c.	16" o.c.	Description
	<div>PGD-186-566-16</div> <div>STC 51</div> <div>NOAL 24-06028 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL V464 Configuration A</div> <div>Thickness: 7-7/8"</div> <div>Approx weight: 6.3 lb/ft²</div>	<div> 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 6" 18 mil steel studs, 16" o.c.</div> <div> 6-1/4", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div>
<div>Non-Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		<div> 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>

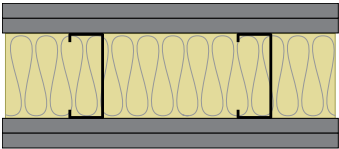
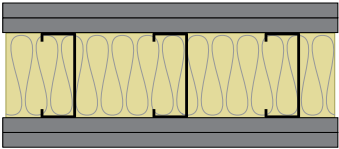
24" o.c.	16" o.c.	Description
	PGD-186-605-16	
	<p>STC 45</p> <p>NOAL 24-06026 – 16" o.c.</p>  <p>Fire: 2 Hour - UL U411</p> <p>Thickness: 7-7/8"</p> <p>Approx weight: 9.3 lb/ft²</p>	<ul style="list-style-type: none"> 1-5/8" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c. at edges and 16" o.c. in the field) Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" Type S screws spaced 16" o.c.) Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 6" 18 mil steel studs, 16" o.c. 6-1/4", R-19 glass fiber insulation friction fit into stud cavity. Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" Type S screws spaced 16" o.c.) Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically.
<p>Non-Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		<ul style="list-style-type: none"> 1-5/8" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c. at edges and 16" o.c. in the field)

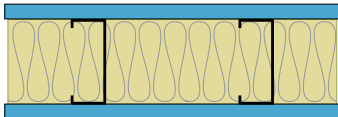
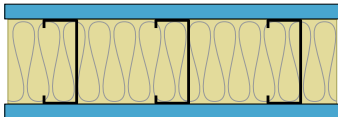






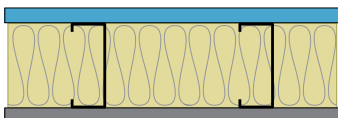
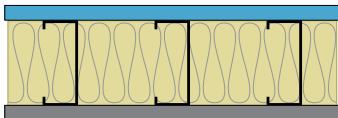






24" o.c.	16" o.c.	Description
	<div>PGD-186-607-16</div> <div>STC 41</div> <div>NOAL 24-06025 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL V464 Configuration A</div> <div>Thickness: 7-7/8"</div> <div>Approx weight: 5.1 lb/ft²</div>	<div> 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically.</div> <div> 6" 18 mil steel studs, 16" o.c.</div> <div> 6-1/4", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically.</div> <div> 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
<div>Non-Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		


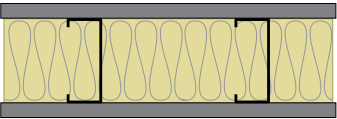
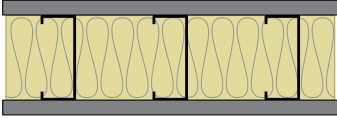





24" o.c.	16" o.c.	Description
<p>PGD-19-394-24</p> <p>STC 60 NOAL 17-0530 - 24" o.c.</p>  <p>Fire: 1 Hour - UL U465</p> <p>Thickness: 6" Approx weight: 7.8 lb/ft²</p>		<ul style="list-style-type: none"> 1-5/8" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field. Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 1" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field. Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 3-5/8" 19 mil steel studs, 24" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Resilient channel applied at right-angle, 24" o.c. 1/2" Type S screws attaching resilient channel to stud at each intersection. One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.
<p>Non-Load Bearing Vertical joints staggered on opposite sides</p>		<ul style="list-style-type: none"> 1" Type S screws spaced 12" o.c.

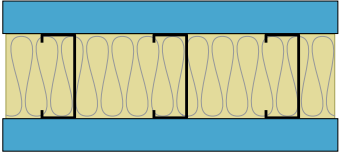






24" o.c.	16" o.c.	Description
	PGD-19-426-16	
	<div>STC 58</div> <div>NOAL 17-0509 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U465</div> <div>Thickness: 6"</div> <div>Approx weight: 7.8 lb/ft²</div>	<div> 1" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 3-5/8" 19 mil steel studs, 16" o.c.</div> <div> 3-1/2", R-11 glass fiber insulation friction fit into stud cavity.</div> <div> Resilient channel applied at right-angle, 24" o.c.</div> <div> 1/2" Type S-12 screw attaching Resilient Channel to stud at each intersection.</div> <div> Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically.</div> <div> 1" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically.</div> <div> 1-5/8" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Non-Load Bearing Vertical joints staggered on opposite sides		

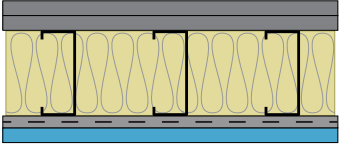
24" o.c.	16" o.c.	Description
<p>PGD-19-447-24</p> <p>STC 57</p> <p>NOAL 17-0539 – 24" o.c.</p>  <p>Fire: 1 Hour - UL V464 Congifuration A</p> <p>Thickness: 5-1/2" Approx weight: 7.6 lb/ft²</p>	<p>PGD-19-447-16</p> <p>STC 50</p> <p>NOAL 17-0459 – 16" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 5-1/2" Approx weight: 7.6 lb/ft²</p>	<ul style="list-style-type: none">1"Type S screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1-1/4" Type S screws).One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.3-5/8" 19 mil steel studs, 24"o.c. or 16" o.c.3-1/2", R-13 glass fiber insulation friction fit into stud cavity.Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior or PABCO® Glass Sheathing) gypsum panel applied vertically1"Type S screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" Type S screws)Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior or PABCO® Glass Sheathing) gypsum panel applied vertically1-5/8" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.
<p>Non-Load Bearing Vertical joints staggered on opposite sides</p>		

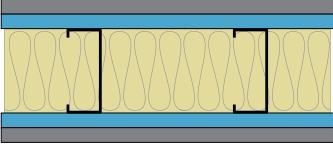
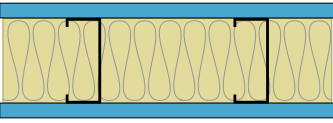
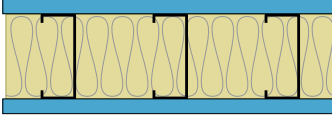
24" o.c.	16" o.c.	Description
PGD-19-552-24	PGD-19-552-16	
<p>STC 52 NOAL 19-0927 – 24" o.c.</p>  <p>Fire: 2 Hour - UL U411</p> <p>Thickness: 6-1/8" Approx weight: 9.1 lb/ft²</p>	<p>STC 45 NOAL 19-0428 – 16" o.c.</p>  <p>Fire: 2 Hour - UL U411</p> <p>Thickness: 6-1/8" Approx weight: 9.0 lb/ft²</p>	<ul style="list-style-type: none"> 1-5/8" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c. at edges and 16" o.c. in the field) Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire screws spaced 16" o.c.) Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 3-5/8" 19 mil steel studs, 24" o.c. or 16" o.c. 3-1/2" R-11 glass fiber insulation friction fit into stud cavity. (24" o.c. studs were tested with 3-1/2" R-13) Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire screws spaced 16" o.c.) Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 1-5/8" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c. at edges and 16" o.c. in the field)
Non-Load Bearing Vertical joints staggered on opposite sides		

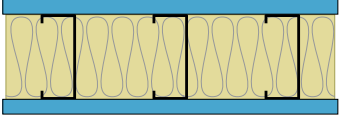






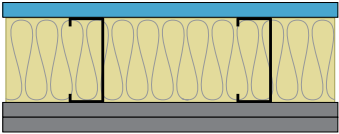








24" o.c.	16" o.c.	Description
<p>PGD-19-558-24</p> <p>STC 53</p> <p>NOAL 19-0922 – 24" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 4-7/8" Approx weight: 6.0 lb/ft²</p>	<p>PGD-19-558-16</p> <p>STC 48</p> <p>NOAL 19-0425 – 16" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 4-7/8" Approx weight: 6.1 lb/ft²</p>	<p> 1-1/4" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 3-5/8" 19 mil steel studs 24" o.c. or 16" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 1-1/4" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field.</p>
<p>Non-Load Bearing Vertical joints staggered on opposite sides</p>		
<p>PGD-19-574-24</p> <p>STC 51</p> <p>NOAL 17-0538 - 24" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 4-7/8" Approx weight: 5.5 lb/ft²</p>	<p>PGD-19-574-16</p> <p>STC 45</p> <p>NOAL 19-0426 - 16" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 4-7/8" Approx weight: 5.5 lb/ft²</p>	<p> 1-1/4" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 3-5/8" 19 mil steel studs, 24" o.c. or 16" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> One layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, or PABCO® Glass Sheathing) gypsum panel applied vertically.</p> <p> 1-1/4" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field.</p>
<p>Non-Load Bearing Vertical joints staggered on opposite sides</p>		

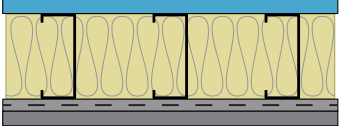
24" o.c.	16" o.c.	Description
PGD-19-627-24	PGD-19-627-16	
STC 48 NOAL 17-0523 - 24" o.c.	STC 41 NOAL 19-0427 - 16" o.c.	 1" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field.
		 One layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically.
Fire: 1 Hour - UL U465	Fire: 1 Hour - UL U465	 3-5/8" 19 mil steel studs, 24" o.c. or 16" o.c.
Thickness: 4-7/8" Approx weight: 4.9 lb/ft²	Thickness: 4-7/8" Approx weight: 4.9 lb/ft²	 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.
Non-Load Bearing Vertical joints staggered on opposite sides		 One layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically.
		 1" Type S screws spaced 8" o.c. at edges and 12" o.c. in the field.

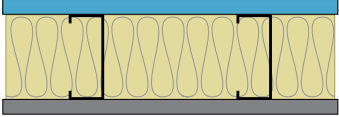
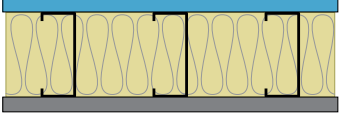
24" o.c.	16" o.c.	Description
	PGD-33-358-16	
	<div>STC 62</div> <div>NOAL 18-0903– 16" o.c.</div> <div>Low Frequency Transmission Loss</div> <div><div>Hz</div><div>80</div><div>100</div><div>TL</div><div>29</div><div>37</div></div> <div></div> <div>Fire: 2 Hour - UL W466</div> <div>Thickness: 6-3/8"</div> <div>Approx weight: 13.3 lb/ft²</div>	<div> 1-7/8" Type S drywall screws (for fire, minimum 2" Type S screws) spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 3-5/8" 33 mil steel studs, 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 1-7/8" Type S drywall screws (for fire, minimum 2" Type S screws) spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Non-Load Bearing Vertical joints staggered on opposite sides		

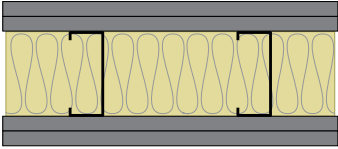
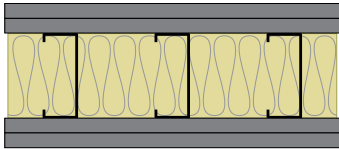
24" o.c.	16" o.c.	Description
	PGD-33-427-16	
	<p>STC 58 NOAL 18-0841 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 6" Approx weight: 8.2 lb/ft²</p>	<p>1-5/8" Type S-12 screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire screws spaced 12" o.c.).</p> <p>Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>1" Type S-12 screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire screws spaced 12" o.c.).</p> <p>Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>3-5/8" 33 mil steel studs, 16" o.c.</p> <p>3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p>Resilient channel applied at right-angle, 24" o.c.</p> <p>1/2" Type S-12 screws attaching resilient channel to stud at each intersection.</p> <p>One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p>
<p>Load Bearing Vertical joints staggered on opposite sides</p>		<p>1" Type S-12 screws spaced 12" o.c.</p>

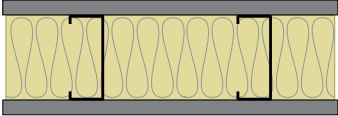
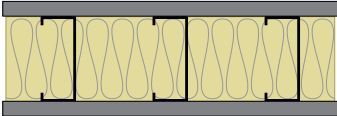






24" o.c.	16" o.c.	Description
PGD-33-497-24 STC 58 NOAL 22-0917 – 24" o.c.  Fire: 2 Hour - UL U425 Thickness: 6-1/8" Approx weight: 10.6 lb/ft²		<ul style="list-style-type: none"> 1-5/8" Type S-12 screws spaced 12" o.c. Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 screws spaced 12" o.c. (for fire, minimum 1" S-12 screws). Base layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 3-5/8" 33 mil steel studs, 24" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Base layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 1-1/4" Type S-12 screws spaced 12" o.c. (for fire, minimum 1" S-12 screws). Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-5/8" Type S screws spaced 12" o.c.
Limited Load Bearing Vertical joints staggered on opposite sides		
PGD-33-513-24 STC 53 NOAL 19-0710 – 24" o.c.  Fire: 1 Hour - UL V464 Configuration A Thickness: 4-7/8" Approx weight: 6.7 lb/ft²	PGD-33-513-16 STC 50 NOAL 23-09019 – 16" o.c.  Fire: 1 Hour - UL V464 Configuration A Thickness: 4-7/8" Approx weight: 6.9 lb/ft²	<ul style="list-style-type: none"> 1-1/4" Type S drywall screws spaced 8" at edges and 12" in the field. One layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically. 3-5/8" 33 mil steel studs, 24" or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. One layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically. 1-1/4" Type S drywall screws spaced 8" at edges and 12" in the field.
Non-Load Bearing Vertical joints staggered on opposite sides		

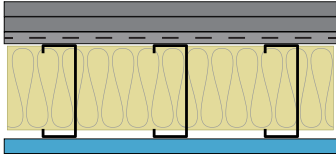
24" o.c.	16" o.c.	Description
	PGD-33-515-16	
	<p>STC 45 NOAL 22-0905 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 4-7/8" Approx weight: 6.6 lb/ft²</p>	<p> 1-1/4" Type S-12 drywall screws spaced 12" o.c. (for fire, minimum 1" S-12 screws).</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 3-5/8" 33 mil steel studs, 16" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 1-1/4" Type S-12 drywall screws spaced 12" o.c. (for fire, minimum 1" S-12 screws).</p>
<p>Load Bearing Vertical joints staggered on opposite sides</p>		
PGD-33-516-24		
<p>STC 54 NOAL 18-0205 – 24" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 5-1/2" Approx weight: 7.8 lb/ft²</p>		<p> 1" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, screws spaced 12" o.c.).</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 3-5/8" 33 mil steel studs, 24" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied horizontally.</p> <p> 1" Type S-12 drywall screws spaced 8" at edges and 12" in the field.</p> <p> Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied horizontally.</p> <p> 2" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, minimum 1-5/8" Type S-12 drywall screws spaced 12" o.c.).</p>
<p>Load Bearing Vertical joints staggered on opposite sides</p>		

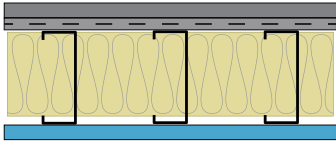
24" o.c.	16" o.c.	Description
	PGD-33-558-16	
	<p>STC 52 NOAL 21-0379 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 5-3/8" Approx weight: 6.1 lb/ft²</p>	<ul style="list-style-type: none"> 1" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, screws spaced 12" o.c.). One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 3-5/8" 33 mil steel studs, 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Resilient channel applied at right-angle, 24" o.c. 1/2" Type S-12 screws attaching resilient channel to stud at each intersection. One 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S screws spaced 12" o.c.
<p>Load Bearing Vertical joints staggered on opposite sides</p>		

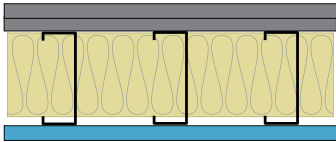
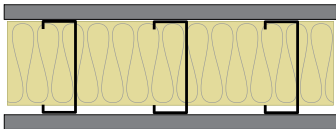
PGD-33-573-24	PGD-33-573-16	
<p>STC 52 NOAL 22-0918 – 24" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 4-7/8" Approx weight: 5.8 lb/ft²</p>	<p>STC 40 NOAL 22-0907 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 4-7/8" Approx weight: 6.0 lb/ft²</p>	<ul style="list-style-type: none"> 1-1/4" Type S-12 drywall screws spaced 12" o.c. (for fire, minimum 1" screws). One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 3-5/8" 33 mil steel studs, 24" o.c. or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. One 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 12" o.c. (for fire, minimum 1" screws).
<p>Load Bearing Vertical joints staggered on opposite sides</p>		

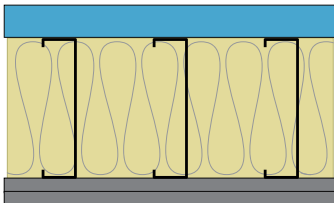








24" o.c.	16" o.c.	Description
PGD-33-598-24 <p>STC 50 NOAL 19-0715 – 24" o.c.</p>  <p>Fire: 2 Hour - UL U425</p> <p>Thickness: 6-1/8" Approx weight: 9.3 lb/ft²</p>	PGD-33-598-16 <p>STC 45 NOAL 21-0375 – 16" o.c.</p>  <p>Fire: 2 Hour - UL U425</p> <p>Thickness: 6-1/8" Approx weight: 9.5 lb/ft²</p>	<ul style="list-style-type: none"> 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c.) Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" S-12 drywall screws spaced 12" o.c.) Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 3-5/8" 33 mil steel studs, 24" o.c. or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" Type S-12 drywall screws spaced 12" o.c.) Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c.)
<p>Limited Load Bearing Vertical joints staggered on opposite sides</p>		

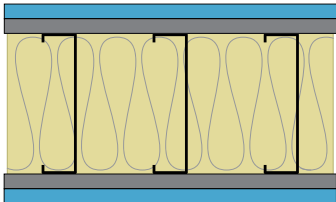
24" o.c.	16" o.c.	Description
PGD-33-687-24 STC 45 NOAL 19-0714 – 24" o.c.  Fire: 1 Hour - UL U425 Thickness: 4-7/8" Approx weight: 5.1 lb/ft²	PGD-33-687-16 STC 36 NOAL 22-0908 – 16" o.c.  Fire: 1 Hour - UL U425 Thickness: 4-7/8" Approx weight: 5.4 lb/ft²	<div>  1-1/4" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, minimum 1" screws spaced 12" o.c.). </div> <div>  One layer: 5/8" type X ((FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. </div> <div>  3-5/8" 33 mil steel studs, 24" o.c. or 16" o.c. </div> <div>  3-1/2", R-13 glass fiber insulation friction fit into stud cavity. </div> <div>  One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. </div> <div>  1-1/4" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, minimum 1" screws spaced 12" o.c.). </div>
Load Bearing Vertical joints staggered on opposite sides		

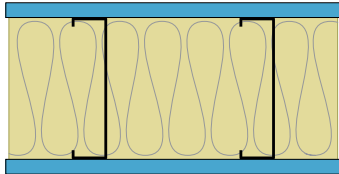
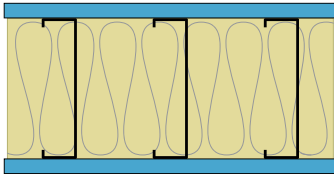






24" o.c.	16" o.c.	Description
	PGD-334-442-16	
	<p>STC 57 NOAL 21-0391 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 6-3/8" Approx weight: 8.2 lb/ft²</p>	<ul style="list-style-type: none"> 1-5/8" Type S drywall screws spaced 12" o.c. Face layer: 5/8" type X ((FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S drywall screws spaced 12" o.c. Base layer: 5/8" type X ((FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. Resilient channel applied at right-angle, 24" o.c. 4" 33 mil steel studs, 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 1" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, screws spaced 12" o.c.)
<p>Load Bearing Vertical joints staggered on opposite sides</p>		

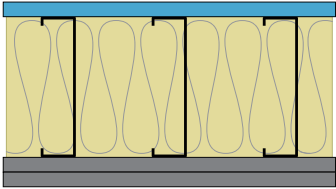








	PGD-334-572-16	
	<p>STC 51 NOAL 21-0390 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 5-3/4" Approx weight: 6.1 lb/ft²</p>	<ul style="list-style-type: none"> 1" Type S drywall screws spaced 12" o.c. One layer: 5/8" type X ((FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. Resilient channel applied at right-angle, 24" o.c. 4" 33 mil steel studs, 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 1" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, screws spaced 12" o.c.)
<p>Load Bearing Vertical joints staggered on opposite sides</p>		

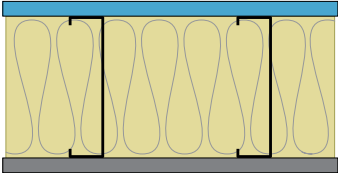
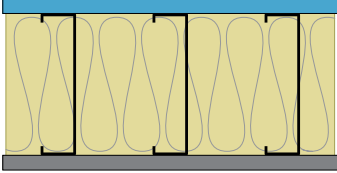






24" o.c.	16" o.c.	Description
	PGD-334-624-16	
	<p>STC 48 NOAL 21-0387 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 5-7/8" Approx weight: 8.1 lb/ft²</p>	<p>1-5/8" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, screws spaced 12" o.c.).</p> <p>Face layer: 5/8" type X ((FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>1" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, screws spaced 12" o.c.).</p> <p>Base layer: 5/8" type X ((FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>4" 33 mil steel studs, 16" o.c.</p> <p>3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p>One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p>1" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, screws spaced 12" o.c.).</p>
Load Bearing Vertical joints staggered on opposite sides		
	PGD-334-790-16	
	<p>STC 40 NOAL 21-0385 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 5-1/4" Approx weight: 5.4 lb/ft²</p>	<p>1" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, screws spaced 12" o.c.).</p> <p>One layer: 5/8" type X ((FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>4" 33 mil steel studs, 16" o.c.</p> <p>3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p>One layer: 5/8" type X ((FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>1" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, screws spaced 12" o.c.).</p>
Load Bearing Vertical joints staggered on opposite sides		

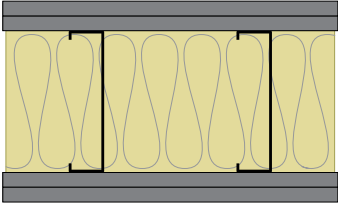
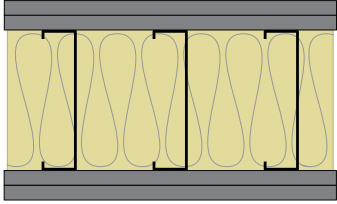
24" o.c.	16" o.c.	Description						
	PGD-336-432-16							
	<div>STC 58</div> <div>NOAL 20-1235 – 16" o.c.</div> <div>Low Frequency Transmission Loss</div> <table><tr><td>Hz</td><td>TL</td></tr><tr><td>80</td><td>26</td></tr><tr><td>100</td><td>32</td></tr></table> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 8-5/8"</div> <div>Approx weight: 11.7 lb/ft²</div>	Hz	TL	80	26	100	32	<div> 2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 6" 33 mil steel studs, 16" o.c.</div> <div> 6-1/2", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.)</div> <div> Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c.)</div>
Hz	TL							
80	26							
100	32							
Load Bearing Vertical joints staggered on opposite sides								

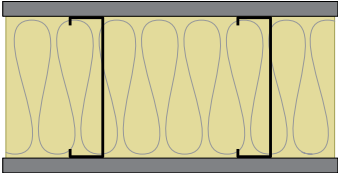
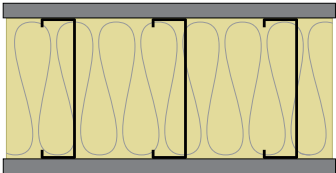






24" o.c.	16" o.c.	Description
	PGD-336-468-16	
	<p>STC 52 NOAL 24-06033 – 16" o.c.</p>  <p>Fire: 2 Hour - UL U425</p> <p>Thickness: 8-1/2" Approx weight: 11.1 lb/ft²</p>	<ul style="list-style-type: none"> 1-5/8" Type S-12 drywall screws spaced 12" o.c. Face layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 12" o.c. (for fire, minimum 1" screws) Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 6" 33 mil steel studs, 16" o.c. 6-1/2", R-19 glass fiber insulation friction fit into stud cavity. Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 12" o.c. (for fire, minimum 1" screws) Face layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.
<p>Limited Load Bearing Vertical joints staggered on opposite sides</p>		<ul style="list-style-type: none"> 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c.)

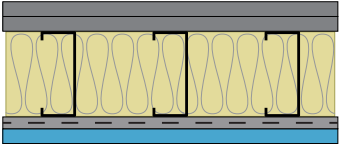










24" o.c.	16" o.c.	Description
<div>PGD-336-469-24</div> <div>STC 55</div> <div>NOAL 22-0930 – 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 6.6 lb/ft²</div>	<div>PGD-336-469-16</div> <div>STC 52</div> <div>NOAL 24-06034 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 6.9 lb/ft²</div>	<div> 1-1/4" Type S-12 drywall screws spaced 12" o.c. (for fire, minimum 1" screws).</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 6" 33 mil steel studs, 16" o.c.</div> <div> 6-1/2", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 1-1/4" Type S-12 drywall screws spaced 12" o.c. (for fire, minimum 1" screws).</div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		

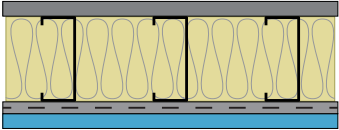








24" o.c.	16" o.c.	Description
	PGD-336-492-16	
	<div>STC 50</div> <div>NOAL 20-1228 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-7/8"</div> <div>Approx weight: 8.3 lb/ft²</div>	<div> 1-1/4" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, minimum 1" screws spaced 12" o.c.).</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 6" 33 mil steel studs, 16" o.c.</div> <div> 6", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-1/4" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, minimum 1" screws spaced 12" o.c.).</div> <div> Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c.)</div>
Load Bearing Vertical joints staggered on opposite sides		

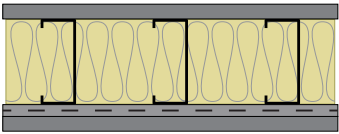
24" o.c.	16" o.c.	Description
<div>PGD-336-534-24</div> <div>STC 52</div> <div>NOAL 22-0929 – 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 6.1 lb/ft²</div>	<div>PGD-336-534-16</div> <div>STC 49</div> <div>NOAL 22-0923 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 6.4 lb/ft²</div>	<div> 1-1/4" Type S-12 drywall screws spaced 12" o.c. (for fire, minimum 1" screws).</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 6" 33 mil steel studs, 16" o.c. or 24" o.c.</div> <div> 6-1/2", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-1/4" Type S-12 drywall screws spaced 12" o.c. (for fire, minimum 1" screws).</div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		

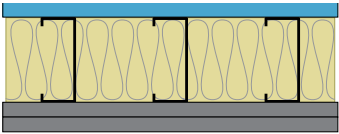
24" o.c.	16" o.c.	Description
PGD-336-687-24 STC 52 NOAL 22-0934 – 24" o.c.  Fire: 2 Hour - UL U425 Thickness: 8-1/2" Approx weight: 9.8 lb/ft²	PGD-336-687-16 STC 49 NOAL 22-0926 – 16" o.c.  Fire: 2 Hour - UL U425 Thickness: 8-1/2" Approx weight: 10.1 lb/ft²	<ul style="list-style-type: none"> 1-5/8" Type S-12 drywall screws spaced 12" o.c. Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 12" o.c. (for fire, minimum 1" screws). Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 6" 33 mil steel studs, 16" o.c. or 24" o.c. 6-1/2", R-19 glass fiber insulation friction fit into stud cavity. Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 12" o.c. (for fire, minimum 1" screws). Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-5/8" Type S-12 drywall screws spaced 12" o.c.
Limited Load Bearing Vertical joints staggered on opposite sides		

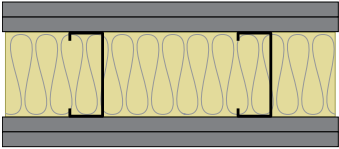
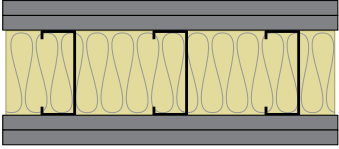
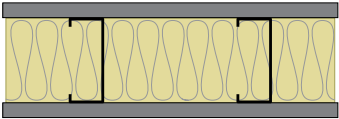
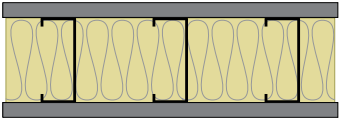
24" o.c.	16" o.c.	Description
<div>PGD-336-757-24</div> <div>STC 46</div> <div>NOAL 22-0928 – 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 5.5 lb/ft²</div>	<div>PGD-336-757-16</div> <div>STC 42</div> <div>NOAL 20-1221 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 5.7 lb/ft²</div>	<div> 1-1/4" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, minimum 1" screws spaced 12" o.c.).</div> <div> One layer: 5/8" type X ((FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 6" 33 mil steel studs, 16" o.c. or 24" o.c.</div> <div> 6-1/2", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-1/4" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, minimum 1" screws spaced 12" o.c.).</div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		

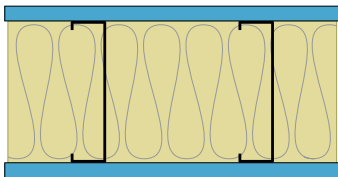
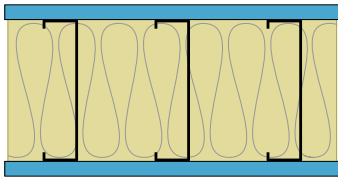






24" o.c.	16" o.c.	Description
	PGD-43-394-16	
	<p>STC 57 NOAL 18-0748 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 6" Approx weight: 8.5 lb/ft²</p>	<p> 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c.)</p> <p> Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1-1/4" Type S-12 drywall screws spaced 8" at edges and 12" in the field (for fire, minimum 1" screws spaced 12" o.c.).</p> <p> Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 3-5/8" 43 mil steel studs, 16" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> Resilient channel applied at right-angle, 24" o.c.</p> <p> 1/2" Type S-12 screws attaching resilient channel to stud at each intersection.</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 1" Type S drywall screws spaced 12" o.c. in the field.</p>
<p>Load Bearing Vertical joints staggered on opposite sides</p>		

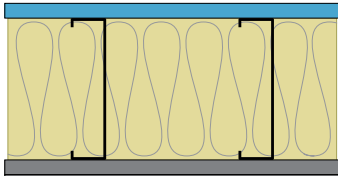








24" o.c.	16" o.c.	Description
	PGD-43-476-16	
	<div>STC 51</div> <div>NOAL 18-0747 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 5-3/8"</div> <div>Approx weight: 6.3 lb/ft²</div>	<div> 1-1/4" Type S-12 drywall screws 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" screws spaced 12" o.c.).</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 3-5/8" 43 mil steel studs, 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> Resilient channel applied at right-angle, 24" o.c.</div> <div> 1/2" Type S-12 screws attaching resilient channel to stud at each intersection.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 1" Type S drywall screws spaced 12" o.c.</div>
Load Bearing Vertical joints staggered on opposite sides		

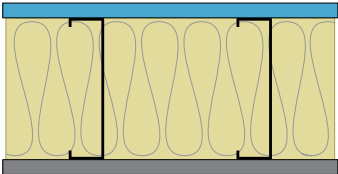






24" o.c.	16" o.c.	Description
	PGD-43-584-16	
	<p>STC 47 NOAL 18-0740 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 5-3/8" Approx weight: 5.8 lb/ft²</p>	<p>1-1/4" Type S-12 drywall screws 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" screws spaced 12" o.c.).</p> <p>One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>3-5/8" 43 mil steel studs, 16" o.c.</p> <p>3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p>Resilient channel applied at right-angle, 24" o.c.</p> <p>1/2" Type S-12 screws attaching resilient channel to stud at each intersection.</p> <p>One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>1" Type S drywall screws spaced 12" o.c.</p>
<p>Load Bearing Vertical joints staggered on opposite sides</p>		

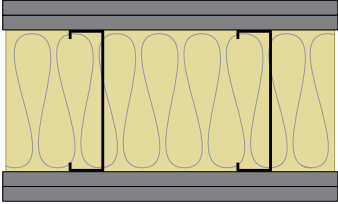
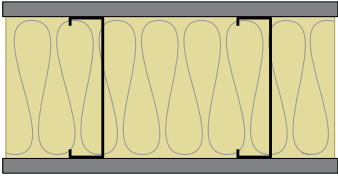
	PGD-43-595-16	
	<p>STC 45 NOAL 18-0735 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 5-1/2" Approx weight: 8.3 lb/ft²</p>	<p>1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" screws spaced 12" o.c.).</p> <p>One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p>3-5/8" 43 mil steel studs, 16" o.c.</p> <p>3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p>Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" screws spaced 12" o.c.).</p> <p>Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire screws spaced 12" o.c.).</p>
<p>Load Bearing Vertical joints staggered on opposite sides</p>		

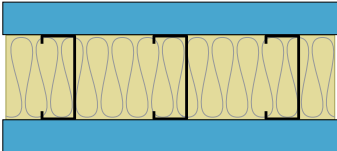






24" o.c.	16" o.c.	Description
PGD-43-604-24 STC 49 NOAL 19-0733 – 24" o.c.  Fire: 2 Hour - UL U425 Thickness: 6-1/8" Approx weight: 9.7 lb/ft²	PGD-43-604-16 STC 42 NOAL 18-0737 – 16" o.c.  Fire: 2 Hour - UL U425 Thickness: 6-1/8" Approx weight: 9.9 lb/ft²	<ul style="list-style-type: none"> 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, screws spaced 12" o.c.). Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" screws spaced 12" o.c.). Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 3-5/8" 43 mil steel studs, 24" o.c. or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" screws spaced 12" o.c.). Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, screws spaced 12" o.c.).
Limited Load Bearing Vertical joints staggered on opposite sides		
PGD-43-824-24 STC 43 NOAL 19-0732 – 24" o.c.  Fire: 1 Hour - UL U425 Thickness: 4-7/8" Approx weight: 5.5 lb/ft²	PGD-43-824-16 STC 38 NOAL 18-0739 – 16" o.c.  Fire: 1 Hour - UL U425 Thickness: 4-7/8" Approx weight: 5.7 lb/ft²	<ul style="list-style-type: none"> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" screws spaced 12" o.c.). One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 3-5/8" 43 mil steel studs, 24" o.c. or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" screws spaced 12" o.c.).
Load Bearing Vertical joints staggered on opposite sides		

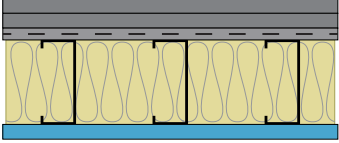
24" o.c.	16" o.c.	Description
<div>PGD-436-485-24</div> <div>STC 55</div> <div>NOAL 18-1024 – 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 6.8 lb/ft²</div>	<div>PGD-436-485-16</div> <div>STC 46</div> <div>NOAL 18-1021 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 7.2 lb/ft²</div>	<div> 1"Type S-12 drywall screws 12" o.c.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 6" 43 mil steel studs, 24" o.c. or 16" o.c.</div> <div> 6-1/2", R-19 glass fiber insulation friction fit into stud cavity</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 1"Type S-12 drywall screws 12" o.c.</div>
Load Bearing Vertical joints staggered on opposite sides		

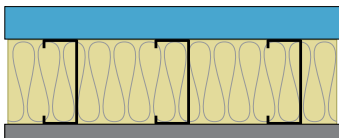






<div>PGD-436-517-24</div> <div>STC 54</div> <div>NOAL 18-1025 – 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-7/8"</div> <div>Approx weight: 8.4 lb/ft²</div>		<div> 1"Type S-12 drywall screws 12" o.c.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 6" 43 mil steel studs, 24" o.c.</div> <div> 6-1/2", R-19 glass fiber insulation friction fit into stud cavity</div> <div> Base layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing)) gypsum panel applied vertically.</div> <div> 1"Type S-12 drywall screws 12" o.c. in the field.</div> <div> Face layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing)) gypsum panel applied vertically.</div> <div> 1-5/8"Type S-12 drywall screws 12" o.c.</div>
Load Bearing Vertical joints staggered on opposite sides		

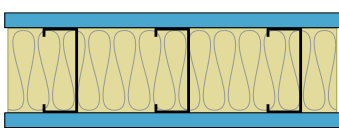






24" o.c.	16" o.c.	Description
<div>PGD-436-592-24</div> <div>STC 50</div> <div>NOAL 18-1023 – 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 6.2 lb/ft²</div>		<div> 1"Type S-12 drywall screws 12" o.c.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 6" 43 mil steel studs, 24" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity</div> <div> One layer: 5/8"Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div>
	<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>	<div> 1"Type S-12 drywall screws 12" o.c.</div>

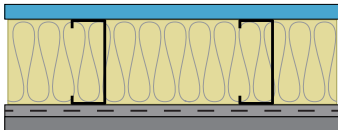
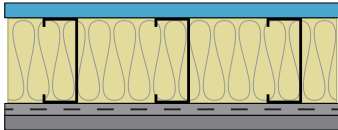








24" o.c.	16" o.c.	Description
PGD-436-598-24 STC 50 NOAL 18-1028 – 24" o.c.  Fire: 2 Hour - UL U425 Thickness: 8-1/2" Approx weight: 9.8 lb/ft²		<ul style="list-style-type: none"> 1-5/8" Type S-12 drywall screws 12" o.c. Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S-12 drywall screws 12" o.c. Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 6" 43 mil steel studs, 24" o.c. 6-1/2", R-19 glass fiber insulation friction fit into stud cavity. Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S-12 drywall screws 12" o.c. Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-5/8" Type S-12 drywall screws 12" o.c.
Limited Load Bearing Vertical joints staggered on opposite sides		
PGD-436-716-24 STC 44 NOAL 18-1031 – 24" o.c.  Fire: 1 Hour - UL U425 Thickness: 7-1/4" Approx weight: 5.6 lb/ft²		<ul style="list-style-type: none"> 1" Type S-12 drywall screws 12" o.c. One layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 6" 43 mil steel studs, 24" o.c. 6-1/2", R-19 glass fiber insulation friction fit into stud cavity One layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S-12 drywall screws 12" o.c.
Load Bearing Vertical joints staggered on opposite sides		

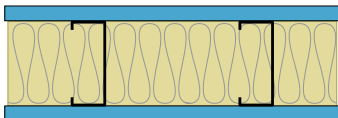
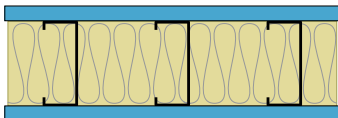






24" o.c.	16" o.c.	Description										
	PGD-54-314-16											
	<div>STC 59</div> <div>NOAL 23-09025 – 16" o.c.</div> <div>Low Frequency Transmission Loss</div> <table><tr><td>Hz</td><td>TL</td></tr><tr><td>50</td><td>21</td></tr><tr><td>63</td><td>19</td></tr><tr><td>80</td><td>17</td></tr><tr><td>100</td><td>27</td></tr></table> <div></div> <div>Fire: 1 Hour - UL U425 Fire: 2 Hour - UL W466</div> <div>Thickness: 6-3/8"</div> <div>Approx weight: 14.0 lb/ft²</div>	Hz	TL	50	21	63	19	80	17	100	27	<div> 2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 3-5/8" 54 mil steel studs, 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Hz	TL											
50	21											
63	19											
80	17											
100	27											
Load Bearing (UL U425) Non-Load Bearing (UL W466) Vertical joints staggered on opposite sides												

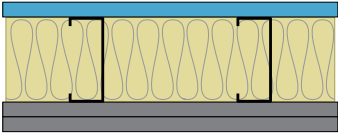
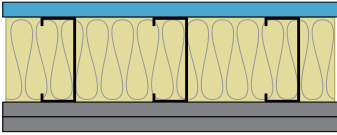
24" o.c.	16" o.c.	Description
	PGD-54-406-16	
	<p>STC 56 NOAL 21-0349 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 6" Approx weight: 8.7 lb/ft²</p>	<p>1-5/8" Type S drywall screws spaced 12" o.c. in the field.</p> <p>Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>1" Type S drywall screws spaced 12" o.c. in the field.</p> <p>Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>Resilient channel applied at right-angle, 24" o.c.</p> <p>1/2" Type S-12 screws attaching resilient channel to stud at each intersection.</p> <p>3-5/8" 54 mil steel studs, 16" o.c.</p> <p>3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p>One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p>
<p>Load Bearing Vertical joints staggered on opposite sides</p>		<p>1" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, screws spaced 12" o.c.)</p>

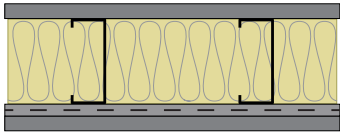
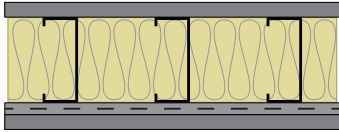








24" o.c.	16" o.c.	Description						
	PGD-54-516-16							
	<div><div>STC 52</div><div>NOAL 18-0909 – 16" o.c.</div><div>Low Frequency Transmission Loss</div><table><tr><td>Hz</td><td>TL</td></tr><tr><td>80</td><td>22</td></tr><tr><td>100</td><td>31</td></tr></table><div></div><div>Fire: 1 Hour - UL U425</div><div>Thickness: 5-5/8"</div><div>Approx weight: 9.6 lb/ft²</div></div>	Hz	TL	80	22	100	31	<div><div></div><div>1-7/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 2" screws).</div></div> <div><div></div><div>One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div></div> <div><div></div><div>3-5/8" 54 mil steel studs, 16" o.c.</div></div> <div><div></div><div>3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div></div> <div><div></div><div>One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div></div> <div><div></div><div>1-1/4" Type S-12 drywall screws 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" screws spaced 12" o.c.).</div></div>
Hz	TL							
80	22							
100	31							
Load Bearing Vertical joints staggered on opposite sides								

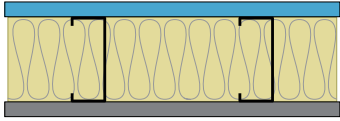
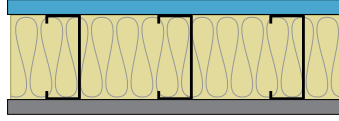






	PGD-54-526-16	
	<div><div>STC 51</div><div>NOAL 18-0911 – 16" o.c.</div><div></div><div></div><div>Fire: 1 Hour - UL V464 Configuration A</div><div>Thickness: 4-7/8"</div><div>Approx weight: 7.2 lb/ft²</div></div>	<div><div></div><div>1" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" screws).</div></div> <div><div></div><div>One layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically.</div></div> <div><div></div><div>3-5/8" 54 mil steel studs, 16" o.c.</div></div> <div><div></div><div>3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div></div> <div><div></div><div>One layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically.</div></div> <div><div></div><div>1" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" screws).</div></div>
Non-Load Bearing Vertical joints staggered on opposite sides		

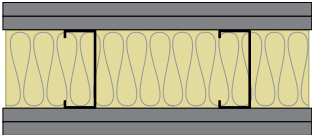
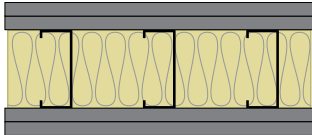
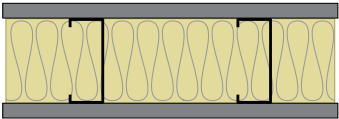
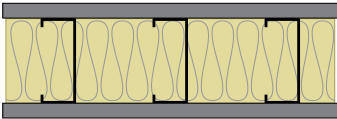
24" o.c.	16" o.c.	Description
<p>PGD-54-552-24</p> <p>STC 52</p> <p>NOAL 19-0724 – 24" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 5-3/8"</p> <p>Approx weight: 6.3 lb/ft²</p>	<p>PGD-54-552-16</p> <p>STC 52</p> <p>NOAL 21-0348 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 5-3/8"</p> <p>Approx weight: 6.6 lb/ft²</p>	<div> 1" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (For fire, screws spaced 12" o.c.)</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 3-5/8" 54 mil steel studs, 24" o.c. or 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> Resilient channel applied at right-angle, 24" o.c.</div> <div> 1/2" Type S-12 screws attaching resilient channel to stud at each intersection.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1" Type S drywall screws spaced and 12" o.c.</div>
<p>Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		



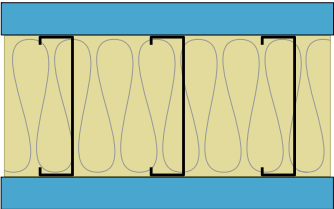




PGD-54-554-24	PGD-54-554-16	
<div>STC 52</div> <div>NOAL 19-0722 – 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 4-7/8"</div> <div>Approx weight: 6.8 lb/ft²</div>	<div>STC 46</div> <div>NOAL 22-0570 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 4-7/8"</div> <div>Approx weight: 7.1 lb/ft²</div>	<div> 1"Type S-12 drywall screws 8" o.c. at edges and 12" o.c. in the field. (For fire, minimum 1" screws spaced 12"o.c.)</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically.</div> <div> 3-5/8" 54 mil steel studs, 24" o.c. or 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 1"Type S-12 drywall screws 8" o.c. at edges and 12" o.c. in the field. (For fire, minimum 1" screws spaced 12"o.c.)</div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		

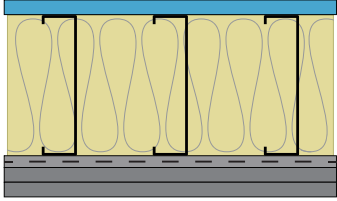










24" o.c.	16" o.c.	Description
PGD-54-556-24 STC 52 NOAL 19-1026 – 24" o.c.  Fire: 1 Hour - UL U425 Thickness: 5-1/2" Approx weight: 8.2 lb/ft²	PGD-54-556-16 STC 45 NOAL 18-0626 – 16" o.c.  Fire: 1 Hour - UL U425 Thickness: 5-1/2" Approx weight: 8.4 lb/ft²	<ul style="list-style-type: none"> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (For fire, minimum 1" screws spaced 12" o.c.) One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 3-5/8" 54 mil steel studs, 24" o.c. or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Base layer: type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (For fire, minimum 1" screws spaced 12" o.c.) Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-5/8" Type S-12 drywall screws 8" o.c. at edges and 12" o.c. in the field. (For fire, screws spaced 12" o.c.)
Load Bearing Vertical joints staggered on opposite sides		

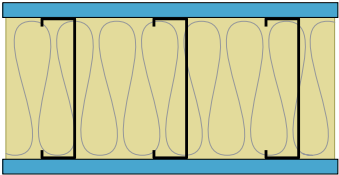
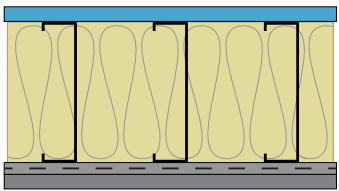
24" o.c.	16" o.c.	Description
<p>PGD-54-644-24</p> <p>STC 47</p> <p>NOAL 19-0725 – 24" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 5-3/8"</p> <p>Approx weight: 5.7 lb/ft²</p>	<p>PGD-54-644-16</p> <p>STC 46</p> <p>NOAL 18-0623 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 5-3/8"</p> <p>Approx weight: 5.9 lb/ft²</p>	<div><p>1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (For fire, minimum 1" screws spaced 12" o.c.)</p></div> <div><p>One layer: type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p></div> <div><p>3-5/8" 54 mil steel studs, 24" o.c. or 16" o.c.</p></div> <div><p>3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p></div> <div><p>Resilient channel applied at right-angle, 24" o.c.</p></div> <div><p>1/2" Type S-12 screws attaching resilient channel to stud at each intersection.</p></div> <div><p>One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p></div> <div><p>1" Type S drywall screws spaced 12" o.c. in the field.</p></div>
<p>Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		

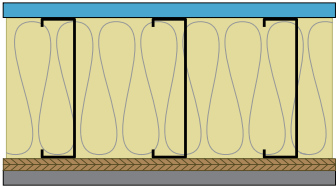








PGD-54-664-24	PGD-54-664-16	
<div>STC 46</div> <div>NOAL 19-0723 – 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 4-7/8"</div> <div>Approx weight: 6.1 lb/ft²</div>	<div>STC 41</div> <div>NOAL 18-0512 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 4-7/8"</div> <div>Approx weight: 6.3 lb/ft²</div>	<div><div>1-1/4" Type S-12 drywall screws 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" screws spaced 12" o.c.).</div></div> <div><div>One layer: 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically.</div></div> <div><div>3-5/8" 54 mil steel studs, 24" o.c. or 16" o.c.</div></div> <div><div>3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div></div> <div><div>One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div></div> <div><div>1-1/4" Type S-12 drywall screws 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1" screws spaced 12" o.c.).</div></div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		

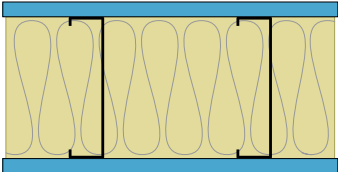
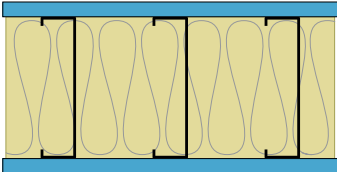






24" o.c.	16" o.c.	Description
PGD-54-667-24 STC 46 NOAL 19-0727 – 24" o.c.  Fire: 2 Hour - UL U425 Thickness: 6-1/8" Approx weight: 9.7 lb/ft²	PGD-54-667-16 STC 40 NOAL 21-0343 – 16" o.c.  Fire: 2 Hour - UL U425 Thickness: 6-1/8" Approx weight: 10.0 lb/ft²	<ul style="list-style-type: none"> 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c.). Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws). Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 3-5/8" 54 mil steel studs, 24" o.c. or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Base layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws). Face layer: 5/8" type X (FLAME CURB®, PABCO® Glass Interior, PABCO® Glass Sheathing) gypsum panel applied vertically. 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c.).
Limited Load Bearing Vertical joints staggered on opposite sides		
PGD-54-797-24 STC 40 NOAL 19-0726 – 24" o.c.  Fire: 1 Hour - UL U425 Thickness: 4-7/8" Approx weight: 5.5 lb/ft²	PGD-54-797-16 STC 35 NOAL 21-0342 – 16" o.c.  Fire: 1 Hour - UL U425 Thickness: 4-7/8" Approx weight: 5.9 lb/ft²	<ul style="list-style-type: none"> 1" Type S-12 drywall screws spaced 12" o.c. One layer: type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 3-5/8" 54 mil steel studs, 24" o.c. or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. One layer: type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S-12 drywall screws spaced 12" o.c.
Load Bearing Vertical joints staggered on opposite sides		

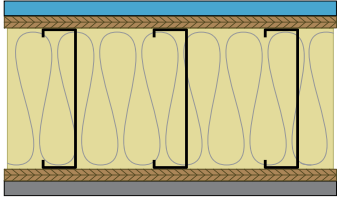










24" o.c.	16" o.c.	Description
	PGD-546-353-16	
	STC 62 NOAL 18-1111 – 16" o.c.	 1-7/8" Type S-12 drywall screws spaced 12" o.c. (for fire, minimum 2" screws spaced 8" o.c. at edges and 12" o.c. in the field.).
	Low Frequency Transmission Loss Hz TL 80 26 100 35	 One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.
		 6" 54 mil steel studs, 16" o.c.
	Fire: 1 Hour - UL U425 Fire: 2 Hour - UL W466	 6-1/2", R-19 glass fiber insulation friction fit into stud cavity.
	Thickness: 8-3/4" Approx weight: 14.3 lb/ft²	 One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.
Load Bearing (UL U425) Non-Load Bearing (UL W466) Vertical joints staggered on opposite sides		 1-7/8" Type S-12 drywall screws spaced 12" o.c. (for fire, minimum 2" screws spaced 8" o.c. at edges and 12" o.c. in the field.).

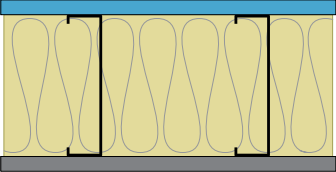
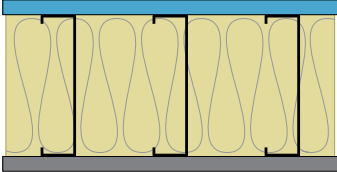






24" o.c.	16" o.c.	Description
	PGD-546-407-16	
	<p>STC 60 NOAL 21-0358 – 16" o.c.</p>  <p>Fire: 1 Hour - U425</p> <p>Thickness: 8-3/8" Approx weight: 9.2 lb/ft²</p>	<p> 1" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.).</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically.</p> <p> 6" 54 mil steel studs, 16" o.c.</p> <p> 6-1/4", R-19 glass fiber insulation friction fit into stud cavity.</p> <p> Resilient channel applied at right-angle, 24" o.c.</p> <p> 1/2" Type S-12 screws attaching resilient channel to stud at each intersection.</p> <p> Base layer: type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1" Type S drywall screws spaced 12" o.c.</p> <p> Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1-5/8" Type S drywall screws spaced 12" o.c.</p>
<p>Load Bearing Vertical joints staggered on opposite sides</p>		

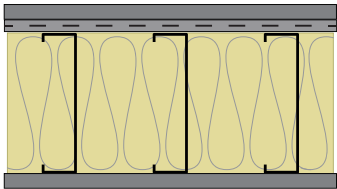
24" o.c.	16" o.c.	Description
	PGD-546-425-16 STC 54 NOAL 21-0362 – 16" o.c.  Fire: 1 Hour - UL V464 Configuration A Thickness: 7-1/4" Approx weight: 7.7 lb/ft²	<ul style="list-style-type: none"> 1" Type S-12 drywall screws 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" screws). One layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically. 6" 54 mil steel studs, 16" o.c. 6-1/4", R-19 glass fiber insulation friction fit into stud cavity. One layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically.
Non-Load Bearing Vertical joints staggered on opposite sides		<ul style="list-style-type: none"> 1" Type S drywall screws 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" screws).
	PGD-546-427-16 STC 54 NOAL 21-0357 – 16" o.c.  Fire: 1 Hour - UL U425 Thickness: 7-3/4" Approx weight: 7.1 lb/ft²	<ul style="list-style-type: none"> 1" Type S-12 drywall screws 8" o.c. at edges and 12" o.c. in the field. (For fire, minimum 1" screws spaced 12" o.c.) One layer: 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically. 6" 54 mil steel studs, 16" o.c. 6-1/4", R-19 glass fiber insulation friction fit into stud cavity. Resilient channel applied at right-angle, 24" o.c. 1/2" Type S-12 screws attaching resilient channel to stud at each intersection. One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.
Load Bearing Vertical joints staggered on opposite sides		<ul style="list-style-type: none"> 1" Type S drywall screws spaced 12" o.c.

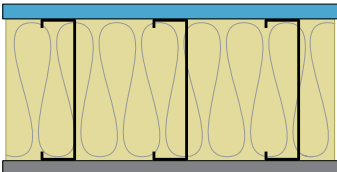
24" o.c.	16" o.c.	Description
	<div>PGD-546-447-16</div> <div>STC 50</div> <div>NOAL 24-0643- 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL V464 Configuration A</div> <div>Thickness: 7-3/4"</div> <div>Approx weight: 8.8 lb/ft²</div>	<div> 1-1/4" Type S-12 drywall screws 12" o.c. (for fire, screws spaced 8" o.c. at edges and 12" o.c. in the field.).</div> <div> One layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically.</div> <div> 6" 54 mil steel studs, 16" o.c.</div> <div> 6-1/4", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> Shear layer: 15/32" wood structural panel (OSB).</div> <div> 1-7/16" Type S-12 screws spaced 6" o.c. at edges and 12" o.c. in the field.</div> <div> Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-5/8" Type S-12 drywall screws spaced 12" o.c. (for fire, screws spaced 8" o.c. at edges and 12" o.c. in the field.).</div>
<div>Non-Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		

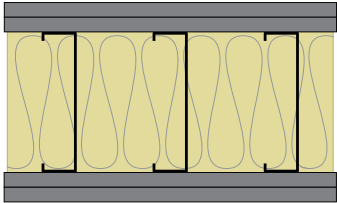
24" o.c.	16" o.c.	Description
<div>PGD-546-493-24</div> <div>STC 55</div> <div>NOAL 18-1114 – 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 7.1 lb/ft²</div>	<div>PGD-546-493-16</div> <div>STC 50</div> <div>NOAL 24-06040 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 7.7 lb/ft²</div>	<div> 1-1/4" Type S-12 drywall screws 12" o.c. (for fire, minimum 1" screws.)</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically.</div> <div> 6" 54 mil steel studs, 24" o.c. or 16" o.c.</div> <div> 6", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 1-1/4" Type S-12 drywall screws 12" o.c. (for fire, minimum 1" screws.)</div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		

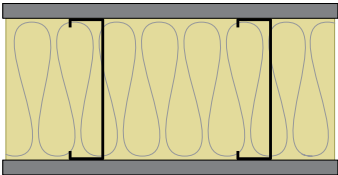
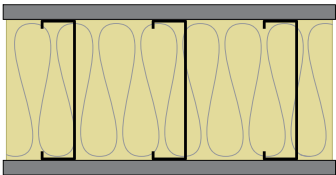
24" o.c.	16" o.c.	Description
	PGD-546-565-16	
	<p>STC 45 NOAL 24-06046- 16" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 8-1/4" Approx weight: 10.4 lb/ft²</p>	<p> 1-5/8" Type S-12 drywall screws 12" o.c. (for fire, screws spaced 8" o.c. at edges and 12" o.c. in the field.).</p> <p> Face layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically.</p> <p> 1-7/16" Type S-12 spaced 6" o.c. at edges and 12" o.c. in the field.</p> <p> Shear layer: 15/32" wood structural panel (OSB).</p> <p> 6" 54 mil steel studs, 16" o.c.</p> <p> 6-1/4", R-19 glass fiber insulation friction fit into stud cavity.</p> <p> Shear layer: 15/32" wood structural panel (OSB).</p> <p> 1-7/16" Type S-12 6" o.c. spaced at edges and 12" o.c. in the field.</p> <p> Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1-5/8" Type S-12 drywall screws 12" o.c. (for fire, screws spaced 8" o.c. at edges and 12" o.c. in the field.).</p>
Non-Load Bearing Vertical joints staggered on opposite sides		

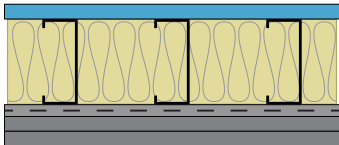
24" o.c.	16" o.c.	Description
<div>PGD-546-576-24</div> <div>STC 51</div> <div>NOAL 18-1115 – 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 6.5 lb/ft²</div>	<div>PGD-546-576-16</div> <div>STC 44</div> <div>NOAL 21-0355 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 7.0 lb/ft²</div>	<div> 1" Type S-12 drywall screws 12" o.c.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically.</div> <div> 6" 54 mil steel studs, 24" o.c. or 16" o.c.</div> <div> 6", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1" Type S-12 drywall screws 12" o.c.</div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		

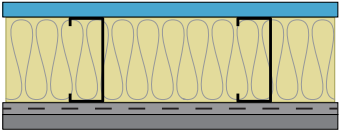
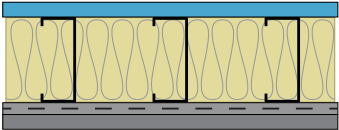








24" o.c.	16" o.c.	Description
	PGD-546-587-16	
	<p>STC 48 NOAL 21-0360 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 7-3/4" Approx weight: 6.5 lb/ft²</p>	<ul style="list-style-type: none"> 1" Type S drywall screws spaced 12" o.c. One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. Resilient channel applied at right-angle, 24" o.c. 1/2" Type S-12 screws attaching resilient channel to stud at each intersection. 6" 54 mil steel studs, 16" o.c. 6-1/4", R-19 glass fiber insulation friction fit into stud cavity. One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S-12 drywall screws 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c.)
<p>Load Bearing Vertical joints staggered on opposite sides</p>		

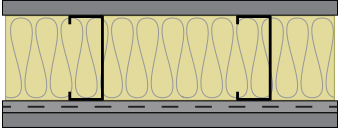
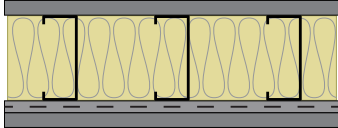
	PGD-546-595-16	
	<p>STC 47 NOAL 21-0361 – 16" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration A</p> <p>Thickness: 7-1/4" Approx weight: 7.1 lb/ft²</p>	<ul style="list-style-type: none"> 1" Type S-12 drywall screws 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" screws) One layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically. 6" 54 mil steel studs, 16" o.c. 6-1/4", R-19 glass fiber insulation friction fit into stud cavity. One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S-12 drywall screws 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" screws)
<p>Non-Load Bearing Vertical joints staggered on opposite sides</p>		

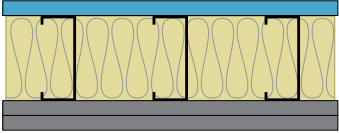








24" o.c.	16" o.c.	Description
	PGD-546-735-16	
	<p>STC 44 NOAL 24-06038 – 16" o.c.</p>  <p>Fire: 2 Hour - UL U425</p> <p>Thickness: 8-1/2" Approx weight: 10.6 lb/ft²</p>	<p>1-5/8" Type S-12 drywall screws spaced 12" o.c.</p> <p>Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>1-1/4" Type S-12 drywall screws 12" o.c. (for fire, minimum 1" screws.).</p> <p>Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>6" 54 mil steel studs, or 16" o.c.</p> <p>6-1/4" R-19 glass fiber insulation friction fit into stud cavity.</p> <p>Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>1-1/4" Type S-12 drywall screws 12" o.c. (for fire, minimum 1" screws.).</p> <p>Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p>
<p>Limited Load Bearing Vertical joints staggered on opposite sides</p>		<p>1-5/8" Type S-12 drywall screws spaced 12" o.c.</p>

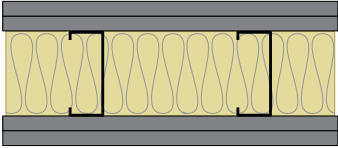
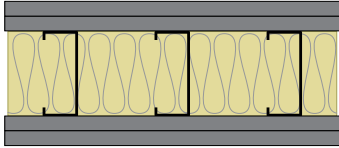
24" o.c.	16" o.c.	Description
<p>PGD-546-738-24</p> <p>STC 43</p> <p>NOAL 18-1120 – 24" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 7-1/4"</p> <p>Approx weight: 5.6 lb/ft²</p>	<p>PGD-546-738-16</p> <p>STC 39</p> <p>NOAL 22-0780 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 7-1/4"</p> <p>Approx weight: 6.5 lb/ft²</p>	<p>1"Type S-12 drywall screws 12" o.c.</p> <p>One layer: 5/8"Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>6" 54 mil steel studs, 24" o.c. or 16" o.c.</p> <p>6-1/4" R-19 glass fiber insulation friction fit into stud cavity</p> <p>One layer: 5/8"Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>1"Type S-12 drywall screws 12" o.c.</p>
<p>Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		

24" o.c.	16" o.c.	Description
	PGD-68-396-16	
	<p>STC 56 NOAL 18-0612 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 6" Approx weight: 9.0 lb/ft²</p>	<ul style="list-style-type: none"> 1-1/4" Type S-12 screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.) One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 3-5/8" 68 mil steel studs, 16" o.c. 3-1/2" R-13 glass fiber insulation friction fit into stud cavity. Resilient channel applied at right-angle, 24" o.c. 1/2" Type S-12 screws attaching resilient channel to stud at each intersection. Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S drywall screws spaced 12" o.c. Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-5/8" Type S drywall screws at 12" o.c.
<p>Load Bearing Vertical joints staggered on opposite sides</p>		


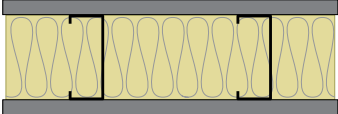
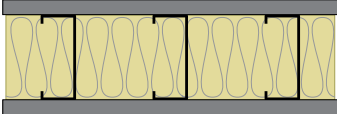





24" o.c.	16" o.c.	Description
PGD-68-534-24	PGD-68-534-16	
<div>STC 53</div> <div>NOAL 19-0718 – 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 5-3/8"</div> <div>Approx weight: 6.5 lb/ft²</div>	<div>STC 50</div> <div>NOAL 18-0611 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 5-3/8"</div> <div>Approx weight: 6.9 lb/ft²</div>	<div> 1-1/4" Type S-12 screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.)</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 3-5/8" 68 mil steel studs, 24" o.c. or 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> Resilient channel applied at right-angle, 24" o.c.</div> <div> 1/2" Type S-12 screws attaching resilient channel to stud at each intersection.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1" Type S drywall screws spaced 12" o.c.</div>
Load Bearing Vertical joints staggered on opposite sides		

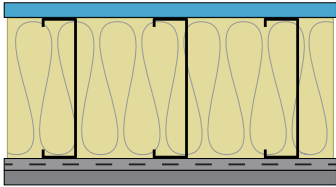
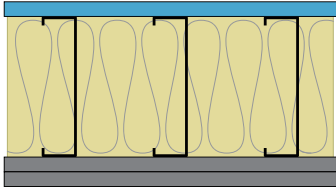
24" o.c.	16" o.c.	Description
PGD-68-607-24 STC 49 NOAL 19-0719 – 24" o.c.  Fire: 1 Hour - UL U425 Thickness: 5-3/8" Approx weight: 6.5 lb/ft²	PGD-68-607-16 STC 46 NOAL 18-0616 – 16" o.c.  Fire: 1 Hour - UL U425 Thickness: 5-3/8" Approx weight: 6.3 lb/ft²	<ul style="list-style-type: none"> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.) One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 3-5/8" 68 mil steel studs, 24" o.c. or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Resilient channel applied at right-angle, 24" o.c. 1/2" Type S-12 screws attaching resilient channel to stud at each intersection. One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S drywall screws spaced 12" o.c.
Load Bearing Vertical joints staggered on opposite sides		

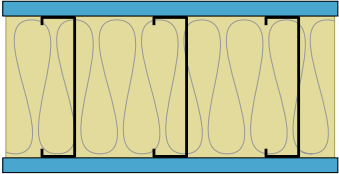






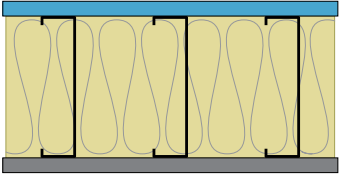






24" o.c.	16" o.c.	Description
	PGD-68-612-16	
	<div>STC 45</div> <div>NOAL 18-0608 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 5-1/2"</div> <div>Approx weight: 8.8 lb/ft²</div>	<div> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.)</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 3-5/8" 68 mil steel studs, 16" o.c.</div> <div> 3-1/2" R-13 glass fiber insulation friction fit into stud cavity.</div> <div> Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.)</div> <div> Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c.)</div>
Load Bearing Vertical joints staggered on opposite sides		

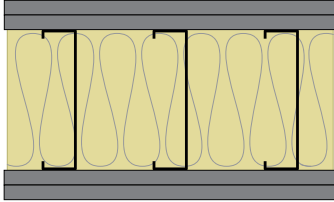
24" o.c.	16" o.c.	Description
PGD-68-648-24	PGD-68-648-16	
<p>STC 47 NOAL 19-0720 – 24" o.c.</p>  <p>Fire: 2 Hour - UL U425</p> <p>Thickness: 6-1/8" Approx weight: 10.0 lb/ft²</p>	<p>STC 43 NOAL 18-0620 – 16" o.c.</p>  <p>Fire: 2 Hour - UL U425</p> <p>Thickness: 6-1/8" Approx weight: 10.3 lb/ft²</p>	<p>1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c.)</p> <p>Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.)</p> <p>Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>3-5/8" 68 mil steel studs, 24" o.c. or 16" o.c.</p> <p>3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p>Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.)</p> <p>Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p>1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c.)</p>
<p>Limited Load Bearing Vertical joints staggered on opposite sides</p>		

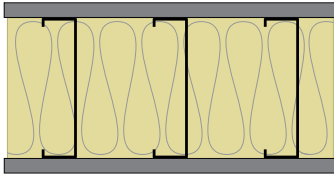


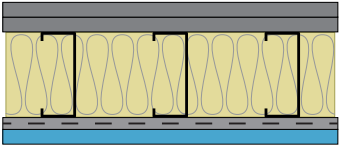










24" o.c.	16" o.c.	Description
PGD-68-798-24	PGD-68-798-16	
STC 40 NOAL 19-0721 – 24" o.c.	STC 38 NOAL 18-0623 – 16" o.c.	 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.)
		 One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.
Fire: 1 Hour - UL U425	Fire: 1 Hour - UL U425	 3-5/8" 68 mil steel studs, 24" o.c. or 16" o.c.
Thickness: 4-7/8" Approx weight: 5.8 lb/ft²	Thickness: 4-7/8" Approx weight: 6.2 lb/ft²	 3-1/2" R-13 glass fiber insulation friction fit into stud cavity.
Load Bearing Vertical joints staggered on opposite sides		 One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.
		 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.)

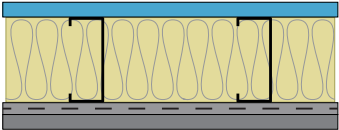
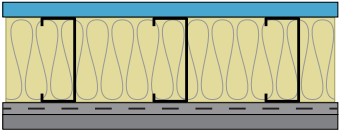








24" o.c.	16" o.c.	Description
	PGD-686-597-16 STC 54 NOAL 24-08049 – 16" o.c.  Fire: 1 Hour - UL U425 Thickness: 7-3/4" Approx weight: 7.5 lb/ft²	<ul style="list-style-type: none"> 1" Type S-12 drywall screws spaced 12" o.c. One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 6" 68 mil steel studs, 16" o.c. 6-1/4" R-19 glass fiber insulation friction fit into stud cavity. Resilient channel applied at right-angle, 24" o.c. 1/2" Type S-12 screws attaching resilient channel to stud at each intersection. One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S drywall screws spaced 12" o.c.
Load Bearing Vertical joints staggered on opposite sides		
	PGD-686-625-16 STC 48 NOAL 24-08046 – 16" o.c.  Fire: 1 Hour - UL U425 Thickness: 7-7/8" Approx weight: 9.4 lb/ft²	<ul style="list-style-type: none"> 1" Type S-12 drywall screws 12" o.c. One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 6" 68 mil steel studs, 16" o.c. 6-1/4" R-19 glass fiber insulation friction fit into stud cavity Base layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S-12 drywall screws 12" o.c. in the field. Face layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-5/8" Type S-12 drywall screws 12" o.c.
Load Bearing Vertical joints staggered on opposite sides		

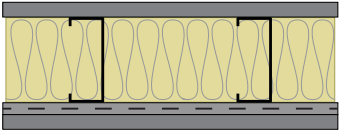
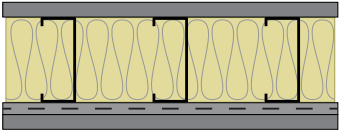








24" o.c.	16" o.c.	Description
	PGD-686-638-16 STC 47 NOAL 24-08048 – 16" o.c.  Fire: 1 Hour - UL U425 Thickness: 7-1/4" Approx weight: 7.9 lb/ft²	 1"Type S-12 drywall screws spaced 12" o.c.  One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.  6" 68 mil steel studs, 16" o.c.  6-1/4" R-19 glass fiber insulation friction fit into stud cavity.  One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.
Load Bearing Vertical joints staggered on opposite sides		 1"Type S-12 drywall screws spaced 12" o.c.
	PGD-686-662-16 STC 43 NOAL 24-08047 – 16" o.c.  Fire: 1 Hour - UL U425 Thickness: 7-1/4" Approx weight: 7.3 lb/ft²	 1"Type S-12 drywall screws 12" o.c.  One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.  6" 68 mil steel studs, 16" o.c.  6-1/4" R-19 glass fiber insulation friction fit into stud cavity  One layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.
Load Bearing Vertical joints staggered on opposite sides		 1"Type S-12 drywall screws 12" o.c.

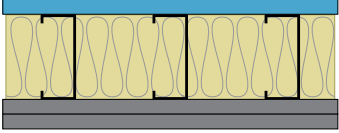








24" o.c.	16" o.c.	Description
	PGD-686-685-16	
	<p>STC 41</p> <p>NOAL 24-08044 – 16" o.c.</p>  <p>Fire: 2 Hour - UL U425</p> <p>Thickness: 8.5"</p> <p>Approx weight: 10.9 lb/ft²</p>	<ul style="list-style-type: none"> 1-5/8" Type S-12 drywall screws spaced 12" o.c. Face layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S-12 drywall screws spaced 12" o.c. Base layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 6" 68 mil steel studs, 16" o.c. 6-1/4", R-19 glass fiber insulation friction fit into stud cavity. Base layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1" Type S-12 drywall screws spaced 12" o.c. Face layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.
<p>Limited Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		<ul style="list-style-type: none"> 1-5/8" Type S-12 drywall screws spaced 12" o.c.

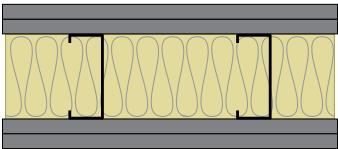
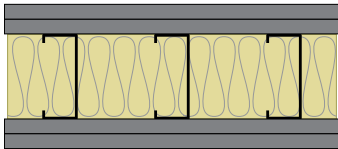










	PGD-686-733-16	
	<p>STC 38</p> <p>NOAL 24-08043 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 7-1/4"</p> <p>Approx weight: 6.7 lb/ft²</p>	<ul style="list-style-type: none"> 1" Type S-12 drywall screws 12" o.c. One layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 6" 68 mil steel studs, 16" o.c. 6-1/4", R-19 glass fiber insulation friction fit into stud cavity One layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.
<p>Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		<ul style="list-style-type: none"> 1" Type S-12 drywall screws 12" o.c.

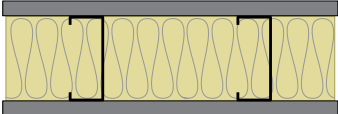
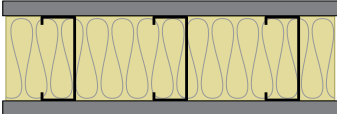






24" o.c.	16" o.c.	Description
	PGD-97-466-16	
	<p>STC 56 NOAL 18-0732 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 6" Approx weight: 9.9 lb/ft²</p>	<p> 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c.)</p> <p> Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.)</p> <p> Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 3-5/8" 97 mil steel studs, 16" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> Resilient channel applied at right-angle, 24" o.c.</p> <p> 1/2" Type S-12 screws attaching resilient channel to stud at each intersection.</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 1" Type S drywall screws spaced 12" o.c.</p>
<p>Load Bearing Vertical joints staggered on opposite sides</p>		

24" o.c.	16" o.c.	Description
PGD-97-516-24	PGD-97-516-16	
<div><p>STC 54</p><p>NOAL 19-0736 – 24" o.c.</p><p>Fire: 1 Hour - UL U425</p><p>Thickness: 5-3/8"</p><p>Approx weight: 7.1 lb/ft²</p></div>	<div><p>STC 50</p><p>NOAL 18-0729 – 16" o.c.</p><p>Fire: 1 Hour - UL U425</p><p>Thickness: 5-3/8"</p><p>Approx weight: 7.7 lb/ft²</p></div>	<div><p> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.)</p><p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p><p> 3-5/8" 97 mil steel studs, 24" o.c. or 16" o.c.</p><p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p><p> Resilient channel applied at right-angle, 24" o.c.</p><p> 1/2" Type S-12 screws attaching resilient channel to stud at each intersection.</p><p> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p><p> 1" Type S drywall screws spaced 12" o.c.</p></div>
<p>Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		

24" o.c.	16" o.c.	Description
<p>PGD-97-597-24</p> <p>STC 50</p> <p>NOAL 19-0737 – 24" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 5-3/8"</p> <p>Approx weight: 6.5 lb/ft²</p>	<p>PGD-97-597-16</p> <p>STC 47</p> <p>NOAL 18-0724 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 5-3/8"</p> <p>Approx weight: 7.2 lb/ft²</p>	<div><p>1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.)</p></div> <div><p>One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p></div> <div><p>3-5/8" 97 mil steel studs, 24" o.c. or 16" o.c.</p></div> <div><p>3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p></div> <div><p>Resilient channel applied at right-angle, 24" o.c.</p></div> <div><div><p>1/2" Type S-12 screws attaching resilient channel to stud at each intersection.</p></div><div><p>One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p></div></div> <div><p>1" Type S drywall screws spaced 12" o.c.</p></div>
<p>Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		

24" o.c.	16" o.c.	Description
	PGD-97-602-16	
	<p>STC 43 NOAL 18-0721 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U425</p> <p>Thickness: 5-1/2 Approx weight: 9.7 lb/ft²</p>	<p> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.)</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 3-5/8" 97 mil steel studs, 16" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.)</p> <p> Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, screws spaced 12" o.c.)</p>
<p>Load Bearing Vertical joints staggered on opposite sides</p>		

24" o.c.	16" o.c.	Description
PGD-97-604-24 <div> <div>STC 49</div> <div>NOAL 19-0739 – 24" o.c.</div> <div>  </div> <div> Fire: 2 Hour - UL U425 Thickness: 6-1/8" Approx weight: 10.6 lb/ft² </div> </div>	PGD-97-604-16 <div> <div>STC 40</div> <div>NOAL 18-0605 – 16" o.c.</div> <div>  </div> <div> Fire: 2 Hour - UL U425 Thickness: 6-1/8" Approx weight: 11.1 lb/ft² </div> </div>	<div> <div>  1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, spaced 12" o.c.) </div> <div>  Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. </div> <div>  1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.) </div> <div>  Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. </div> <div>  3-5/8" 97 mil steel studs, 24" o.c. or 16" o.c. </div> <div>  3-1/2" R-13 glass fiber insulation friction fit into stud cavity. </div> <div>  Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. </div> <div>  1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1" screws spaced 12" o.c.) </div> <div>  Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. </div> <div>  1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, spaced 12" o.c.) </div> </div>
Limited Load Bearing Vertical joints staggered on opposite sides		

24" o.c.	16" o.c.	Description
PGD-97-736-24	PGD-97-736-16	
<div>STC 43</div> <div>NOAL 19-0738 – 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 4-7/8"</div> <div>Approx weight: 6.4 lb/ft²</div>	<div>STC 38</div> <div>NOAL 18-0603 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U425</div> <div>Thickness: 4-7/8"</div> <div>Approx weight: 6.9 lb/ft²</div>	<div> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (For fire, minimum 1" screws spaced 12" o.c.)</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 3-5/8" 97 mil steel studs, 24" o.c. or 16" o.c.</div> <div> 3-1/2" R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (For fire, minimum 1" screws spaced 12" o.c.)</div>
Load Bearing Vertical joints staggered on opposite sides		

Walls & Interior Partitions

Staggered Steel Frame

ASSEMBLY COMPONENTS AND PICTOGRAMS

The assemblies in this guide have been divided into sections by framing material type and ordered by design file number. The assembly details are listed in order starting from the outermost layer (attachment); working from top to bottom and ending with the stud or insulation. Pictograms have been added to each assembly detail to provide visual separation of the individual assembly components.

Attachment: identifies screw/nail type, placement, and spacing for attachment of the face layer



QuietRock Layer: identifies the QuietRock product use as a face layer



Framing: Identifies stud framing material, size, thickness, spacing and/or unique framing methods



Insulation: Identifies insulation type, size used to fill assembly cavity (if applicable)



Base Layer: Identifies the PABCO Gypsum product that may be used



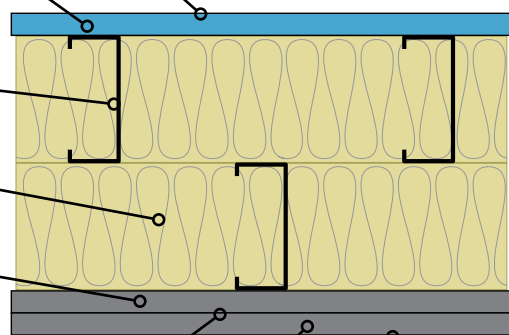
Attachment: identifies screw/nail type, placement, and spacing for attachment of the face layer

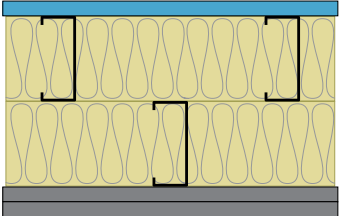










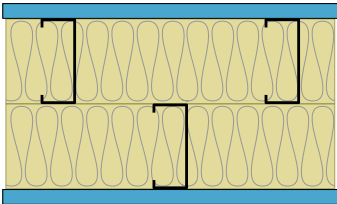






Face Layer: Identifies the PABCO Gypsum product that may be used

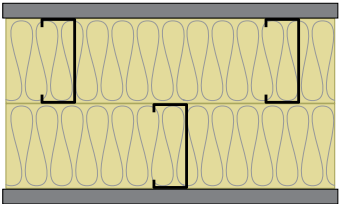








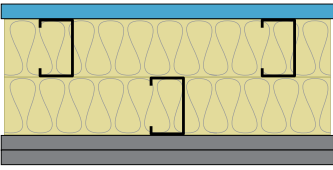
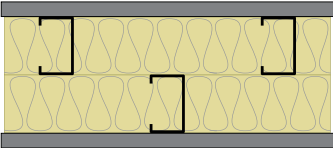
Attachment: identifies screw/nail type, placement, and spacing for attachment of the face layer



24" o.c.	16" o.c.	Description
	PGD-15S-286-16	
	<div>STC 65</div> <div>NOAL 17-0914 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL V464 Configuration B</div> <div>Thickness: 9-1/8"</div> <div>Approx weight: 8.1 lb/ft²</div>	<div> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" screws).</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> Staggered-double row 3-5/8" 15 mil steel studs, 16" o.c.</div> <div> 6-1/4" R-19 glass fiber insulation friction fit into stud cavity.</div> <div> Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" screws).</div> <div> Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-5/8" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Non-Load Bearing Vertical joints staggered on opposite sides		

24" o.c.	16" o.c.	Description
	PGD-15S-337-16	
	<div>STC 63</div> <div>NOAL 17-0912 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL V464 Configuration B</div> <div>Thickness: 8-1/2"</div> <div>Approx weight: 6.7 lb/ft²</div>	<div> 1" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" screws.).</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> Staggered-double row 3-5/8" 15 mil steel studs, 16" o.c.</div> <div> 6-1/4" R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div>
Non-Load Bearing Vertical joints staggered on opposite sides		<div> 1" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" screws.).</div>

24" o.c.	16" o.c.	Description
	<div>PGD-15S-468-16</div> <div>STC 56</div> <div>NOAL 17-0917 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL V464 Configuration B</div> <div>Thickness: 8-1/2"</div> <div>Approx weight: 5.2 lb/ft²</div>	<div> 1" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" screws.).</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> Staggered-double row (no air space) 3-5/8" 15 mil steel studs, 16" o.c.</div> <div> 6-1/4", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" screws.).</div>
<div>Non-Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		

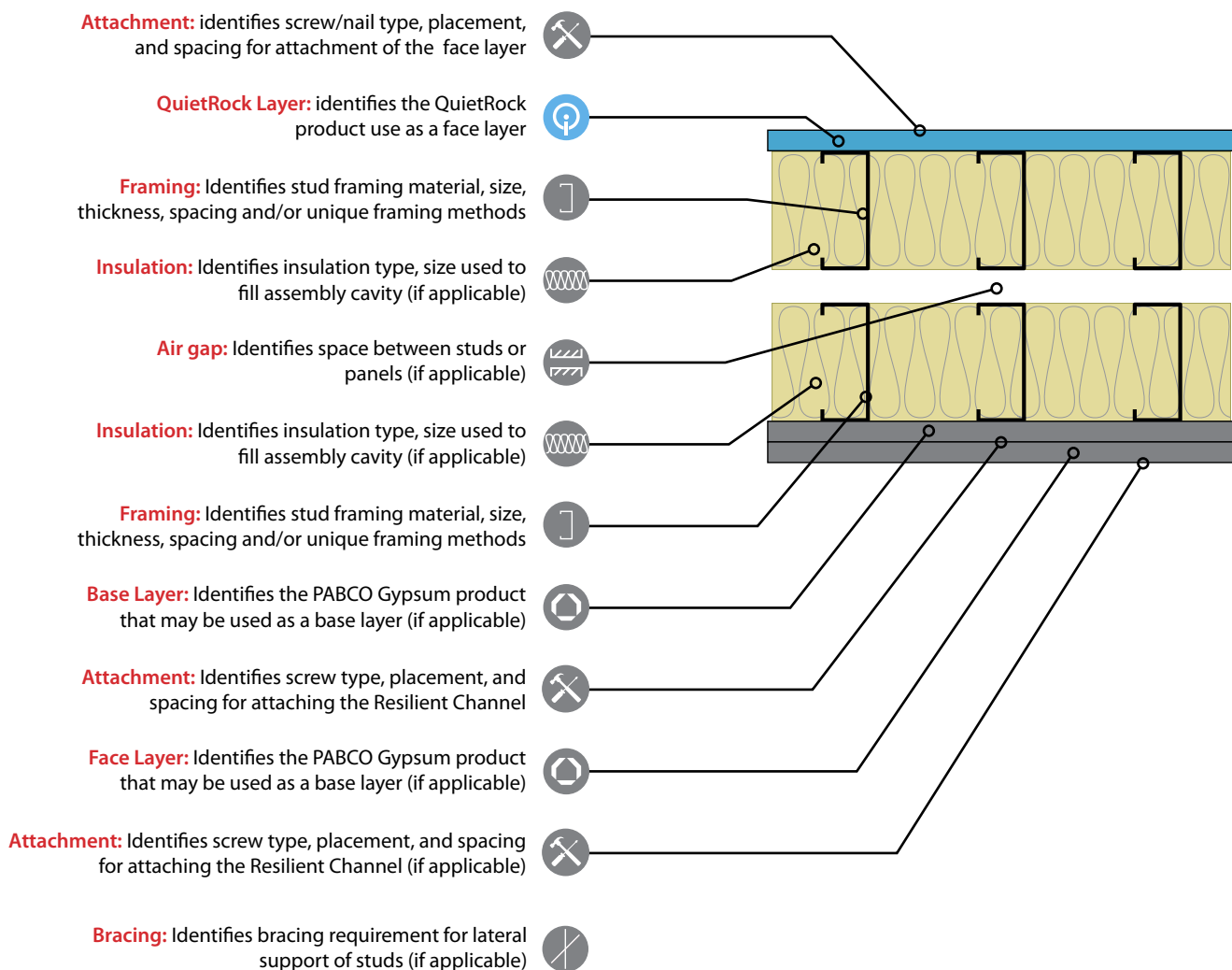
24" o.c.	16" o.c.	Description
PGD-332S-542-24 STC 62 NOAL 24-06054 – 24" o.c.  Fire: Non-Rated Thickness: 7-7/8" Approx weight: 8.4 lb/ft²		<ul style="list-style-type: none"> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. Staggered-double row (no air space) 2-1/2" 33 mil steel studs, 24" o.c. 2-1/2" R-8 glass fiber insulation friction fit into stud cavity. Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.
Non-Load Bearing Vertical joints staggered on opposite sides		
PGD-332S-572-24 STC 55 NOAL 24-06052 – 16" o.c.  Fire: Non-Rated Thickness: 7-1/4" Approx weight: 5.7 lb/ft²		<ul style="list-style-type: none"> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. One layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. Staggered-double row (no air space) 2-1/2" 33 mil steel studs, 24" o.c. 2-1/2" R-8 glass fiber insulation friction fit into stud cavity. One layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.
Load Bearing Vertical joints staggered on opposite sides		

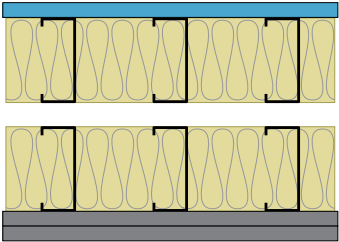











Walls & Interior Partitions

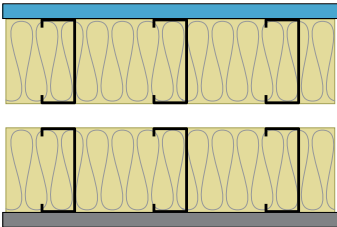









Double Steel Frame

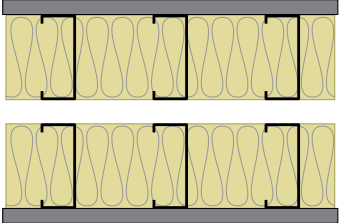









ASSEMBLY COMPONENTS AND PICTOGRAMS

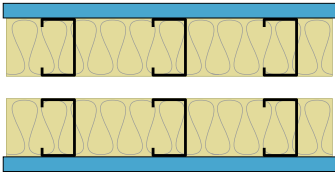









The assemblies in this guide have been divided into sections by framing material type and ordered by design file number. The assembly details are listed in order starting from the outermost layer (attachment); working from top to bottom and ending with the stud or insulation. Pictograms have been added to each assembly detail to provide visual separation of the individual assembly components.

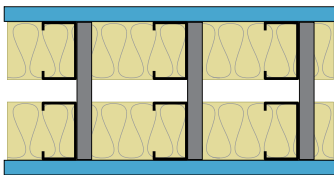












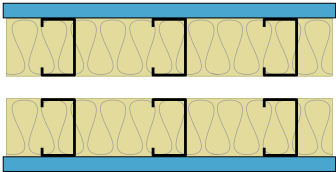









24" o.c.	16" o.c.	Description
	PGD-15D-265-16	
	<p>STC 66 NOAL 17-0926 – 16" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration C</p> <p>Thickness: 10-1/8" Approx weight: 8.0 lb/ft²</p>	<p> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" screws.).</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 3-1/2", R-11 glass fiber insulation friction fit into stud cavity.</p> <p> 3-5/8" 15 mil steel studs, 16" o.c.</p> <p> 1" air gap.</p> <p> 3-5/8" 15 mil steel studs, 16" o.c.</p> <p> 3-1/2", R-11 glass fiber insulation friction fit into stud cavity.</p> <p> Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. (for fire, minimum 1-1/4" screws.).</p> <p> Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1-5/8" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p>
Non-Load Bearing Vertical joints staggered on opposite sides		

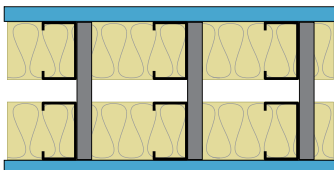










24" o.c.	16" o.c.	Description
	PGD-15D-375-16 STC 61 NOAL 17-0925 – 16" o.c.  Fire: 1 Hour - UL V464 Configuration C Thickness: 9-1/2" Approx weight: 5.9 lb/ft ²	 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1-1/4" screws.).  One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.  3-1/2", R-11 glass fiber insulation friction fit into stud cavity.  3-5/8" 15 mil steel studs, 16" o.c.  1" air gap.  3-5/8" 15 mil steel studs, 16" o.c.  3-1/2", R-11 glass fiber insulation friction fit into stud cavity.  One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.  1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1-1/4" screws.).
Non-Load Bearing Vertical joints staggered on opposite sides		

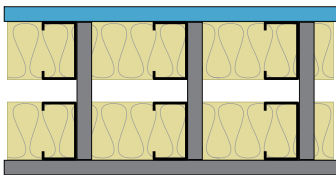
24" o.c.	16" o.c.	Description
	PGD-15D-423-16 STC 58 NOAL 17-0929 – 16" o.c.  Fire: 1 Hour - UL V464 Configuration C Thickness: 9-1/2" Approx weight: 5.3 lb/ft ²	 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1-1/4" screws.).  One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.  3-1/2", R-11 glass fiber insulation friction fit into stud cavity.  3-5/8" 15 mil steel studs, 16" o.c.  1" air gap.  3-5/8" 15 mil steel studs, 16" o.c.  3-1/2", R-11 glass fiber insulation friction fit into stud cavity.  One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.  1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1-1/4" screws.).
Non-Load Bearing Vertical joints staggered on opposite sides		

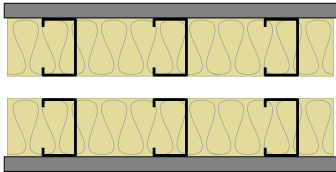









24" o.c.	16" o.c.	Description
	PGD-182D-512-16	
	<div>STC 59</div> <div>NOAL 22-1022 – 16" o.c.</div> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 6.5 lb/ft²</div>	<div> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</div> <div> 2-1/2" 18 mil steel studs, 16" o.c.</div> <div> 1" air gap.</div> <div> 2-1/2" 18 mil steel studs, 16" o.c.</div> <div> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Non-Load Bearing Vertical joints staggered on opposite sides		

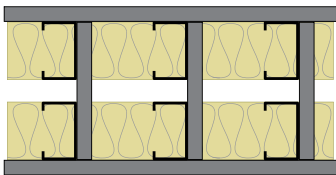










24" o.c.	16" o.c.	Description
	PGD-182D-512B-16	
	<p>STC 54 NOAL 22-1025 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U420</p> <p>Thickness: 7-1/4" Approx weight: 6.6 lb/ft²</p>	<p> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</p> <p> 2-1/2" 18 mil steel studs, 16" o.c.</p> <p> 6" x 12" x 5/8" gypsum board cross bracing fastened with 3 #6 x 1" Type S screws in each stud. Alternate: steel runners cut to min. 4-1/4", fastened with 2 #8 x 1/2" screws at studs. Vertical spacing of bracing not to exceed 48 in. o.c.</p> <p> 1" air gap.</p> <p> 2-1/2" 18 mil steel studs, 16" o.c.</p> <p> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p>
Non-Load Bearing Vertical joints staggered on opposite sides		

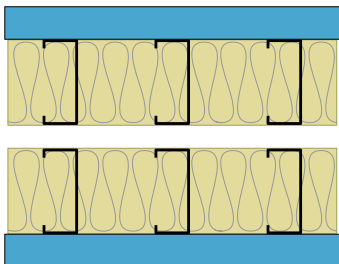









24" o.c.	16" o.c.	Description
	PGD-182D-522-16	
	<div>STC 58</div> <div>NOAL 22-1023 – 16" o.c.</div> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 6.5 lb/ft²</div>	<div> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 5/8" QuietRock® 530 or QuietRock® 530RF gypsum panel applied vertically.</div> <div> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</div> <div> 2-1/2" 18 mil steel studs, 16" o.c.</div> <div> 1" air gap.</div> <div> 2-1/2" 18 mil steel studs, 16" o.c.</div> <div> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" QuietRock® 530 or QuietRock® 530RF gypsum panel applied vertically.</div> <div> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Non-Load Bearing Vertical joints staggered on opposite sides		

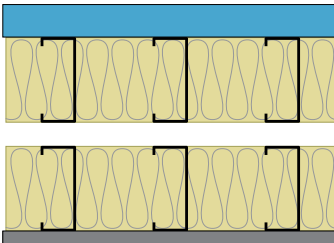









24" o.c.	16" o.c.	Description
	PGD-182D-522B-16	
	<p>STC 56 NOAL 22-1024 – 16" o.c.</p>  <p>Fire: Non-Rated</p> <p>Thickness: 7-1/4" Approx weight: 6.6 lb/ft²</p>	<p> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> One layer: 5/8" QuietRock® 530 or QuietRock® 530RF gypsum panel applied vertically.</p> <p> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</p> <p> 2-1/2" 18 mil steel studs, 16" o.c.</p> <p> 6" x 12" x 5/8" gypsum board cross bracing fastened with 3 #6 x 1" Type S screws in each stud. Alternate: steel runners cut to min. 4-1/4", fastened with 2 #8 x 1/2" screws at studs. Vertical spacing of bracing not to exceed 48 in. o.c.</p> <p> 1" air gap.</p> <p> 2-1/2" 18 mil steel studs, 16" o.c.</p> <p> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</p> <p> One layer: 5/8" QuietRock® 530 or QuietRock® 530RF gypsum panel applied vertically.</p> <p> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p>
Non-Load Bearing Vertical joints staggered on opposite sides		

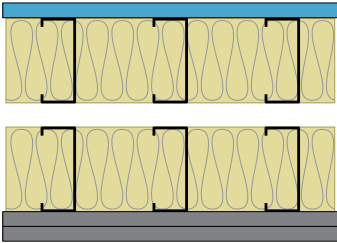











24" o.c.	16" o.c.	Description
	PGD-182D-527B-16 <p>STC 51 NOAL 22-1026 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U420</p> <p>Thickness: 7-1/4" Approx weight: 6.0 lb/ft²</p>	<ul style="list-style-type: none"> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 2-1/2", R-8 glass fiber insulation friction fit into stud cavity. 2-1/2" 18 mil steel studs, 16" o.c. 6" x 12" x 5/8" gypsum board cross bracing fastened with 3 #6 x 1" Type S screws in each stud. Alternate: steel runners cut to min. 4-1/4", fastened with 2 #8 x 1/2" screws at studs. Vertical spacing of bracing not to exceed 48 in. o.c. 1" air gap. 2-1/2" 18 mil steel studs, 16" o.c. 2-1/2", R-8 glass fiber insulation friction fit into stud cavity. One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.
Non-Load Bearing Vertical joints staggered on opposite sides		<ul style="list-style-type: none"> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.

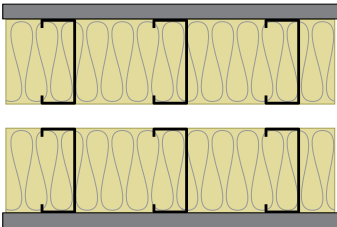









24" o.c.	16" o.c.	Description
	PGD-182D-560-16	
	<p>STC 54</p> <p>NOAL 22-1017 – 16" o.c.</p>  <p>Fire: Non-Rated</p> <p>Thickness: 7-1/4"</p> <p>Approx weight: 5.3 lb/ft²</p>	<p> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</p> <p> 2-1/2" 18 mil steel studs, 16" o.c.</p> <p> 1" air gap.</p> <p> 2-1/2" 18 mil steel studs, 16" o.c.</p> <p> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</p> <p> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p>
<p>Non-Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		

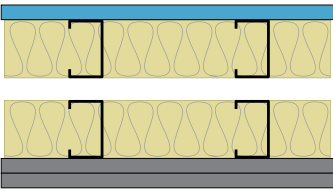











24" o.c.	16" o.c.	Description
	PGD-182D-560B-16	
	<p>STC 49 NOAL 22-1030 – 16" o.c.</p>  <p>Fire: 1 Hour - UL U420</p> <p>Thickness: 7-1/4" Approx weight: 5.4 lb/ft²</p>	<p> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</p> <p> 2-1/2" 18 mil steel studs, 16" o.c.</p> <p> 6" x 12" x 5/8" gypsum board cross bracing fastened with 3 #6 x 1" Type S screws in each stud. Alternate: steel runners cut to min. 4-1/4", fastened with 2 #8 x 1/2" screws at studs. Vertical spacing of bracing not to exceed 48 in. o.c.</p> <p> 1" air gap.</p> <p> 2-1/2" 18 mil steel studs, 16" o.c.</p> <p> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</p> <p> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p>
Non-Load Bearing Vertical joints staggered on opposite sides		

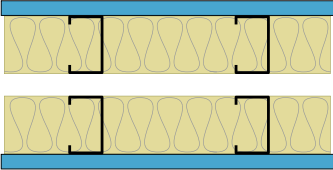









24" o.c.	16" o.c.	Description										
	<p>PGD-18D-355-16</p> <p>STC 74</p> <p>NOAL 22-1206 – 16" o.c.</p> <p>Low Frequency Transmission Loss</p> <table><tr><td>Hz</td><td>TL</td></tr><tr><td>50</td><td>31</td></tr><tr><td>63</td><td>38</td></tr><tr><td>80</td><td>41</td></tr><tr><td>100</td><td>46</td></tr></table>  <p>Fire: Non-Rated</p> <p>Thickness: 11"</p> <p>Approx weight: 10.4 lb/ft²</p>	Hz	TL	50	31	63	38	80	41	100	46	<p> 2" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> 3-5/8" 18 mil steel studs, 16" o.c.</p> <p> 1" air gap.</p> <p> 3-5/8" 18 mil steel studs, 16" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</p> <p> 2" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p>
Hz	TL											
50	31											
63	38											
80	41											
100	46											
Non-Load Bearing Vertical joints staggered on opposite sides												

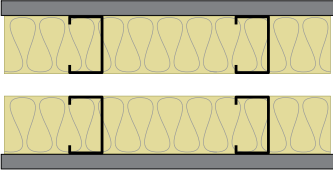









24" o.c.	16" o.c.	Description										
	PGD-18D-428-16											
	<div>STC 66</div> <div>NOAL 22-1207 – 16" o.c.</div> <div>Low Frequency Transmission Loss</div> <table><tr><td>Hz</td><td>TL</td></tr><tr><td>50</td><td>19</td></tr><tr><td>63</td><td>29</td></tr><tr><td>80</td><td>32</td></tr><tr><td>100</td><td>38</td></tr></table> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 10-1/4"</div> <div>Approx weight: 9.8 lb/ft²</div>	Hz	TL	50	19	63	29	80	32	100	38	<div> 2" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 3-5/8" 18 mil steel studs, 16" o.c.</div> <div> 1" air gap.</div> <div> 3-5/8" 18 mil steel studs, 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Hz	TL											
50	19											
63	29											
80	32											
100	38											
Non-Load Bearing Vertical joints staggered on opposite sides												

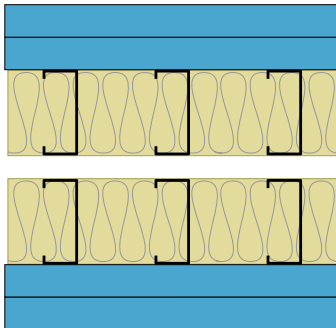













24" o.c.	16" o.c.	Description
	PGD-18D-438-16	
	<p>STC 65 NOAL 22-1213 – 16" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration C</p> <p>Thickness: 10-1/8" Approx weight: 8.3 lb/ft²</p>	<p> 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> 3-5/8" 18 mil steel studs, 16" o.c.</p> <p> 1" air gap.</p> <p> 3-5/8" 18 mil steel studs, 16" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1-7/8" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p>
Non-Load Bearing Vertical joints staggered on opposite sides		

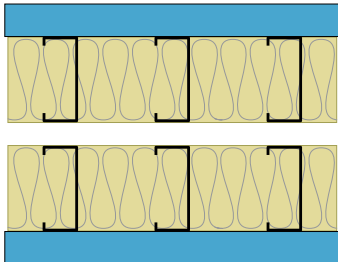









24" o.c.	16" o.c.	Description
	PGD-18D-527-16	
	<div>STC 58</div> <div>NOAL 22-1208 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL V464 Configuration C</div> <div>Thickness: 9-1/2"</div> <div>Approx weight: 6.8 lb/ft²</div>	<div> 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 3-5/8" 18 mil steel studs, 16" o.c.</div> <div> 1" air gap.</div> <div> 3-5/8" 18 mil steel studs, 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-1/4" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Non-Load Bearing Vertical joints staggered on opposite sides		

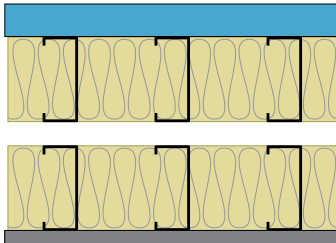









24" o.c.	16" o.c.	Description
<p>PGD-332D-472-24</p> <p>STC 62 NOAL 24-06049 – 24" o.c.</p>  <p>Fire: Non-Rated</p> <p>Thickness: 7-7/8" Approx weight: 8.3 lb/ft²</p>		<p> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</p> <p> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</p> <p> 2-1/2" 33 mil steel studs, 24" o.c.</p> <p> 1" air gap.</p> <p> 2-1/2" 33 mil steel studs, 24" o.c.</p> <p> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</p> <p> Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1-5/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p>
<p>Non-Load Bearing Vertical joints staggered on opposite sides</p>		

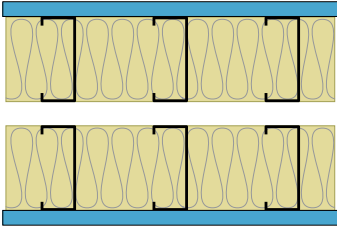









24" o.c.	16" o.c.	Description
<div>PGD-332D-502-24</div> <div>STC 59</div> <div>NOAL 24-06047 – 24" o.c.</div> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 6.8 lb/ft²</div>		<div> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</div> <div> 2-1/2" 33 mil steel studs, 24" o.c.</div> <div> 1" air gap.</div> <div> 2-1/2" 33 mil steel studs, 24" o.c.</div> <div> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Non-Load Bearing Vertical joints staggered on opposite sides		

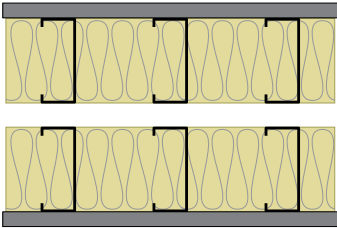









24" o.c.	16" o.c.	Description
<div>PGD-332D-552-24</div> <div>STC 54</div> <div>NOAL 24-06051 – 24" o.c.</div> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 5.6 lb/ft²</div>		<div> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</div> <div> 2-1/2" 33 mil steel studs, 24" o.c.</div> <div> 1" air gap.</div> <div> 2-1/2" 33 mil steel studs, 24" o.c.</div> <div> 2-1/2", R-8 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Non-Load Bearing Vertical joints staggered on opposite sides		

24" o.c.	16" o.c.	Description						
	PGD-33D-145-16							
	<div>STC 80</div> <div>NOAL 20-0753 – 16" o.c.</div> <div>Low Frequency Transmission Loss</div> <table><tr><td>Hz</td><td>TL</td></tr><tr><td>80</td><td>46</td></tr><tr><td>100</td><td>52</td></tr></table> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 13-3/4"</div> <div>Approx weight: 26.4 lb/ft²</div>	Hz	TL	80	46	100	52	<div> 3-1/2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> Face layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div><div> 2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div><div> Base layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div><div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div><div> 3-5/8" 33 mil steel studs, 16" o.c.</div><div> 1" air gap.</div><div> 3-5/8" 33 mil steel studs, 16" o.c.</div><div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div><div> Base layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div><div><div> 2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div><div> Face layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div><div> 3-1/2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div></div></div>
Hz	TL							
80	46							
100	52							
Non-Load Bearing Vertical joints staggered on opposite sides								

24" o.c.	16" o.c.	Description						
	PGD-33D-155-16							
	<div>STC 72</div> <div>NOAL 20-0754 – 16" o.c.</div> <div>Low Frequency Transmission Loss</div> <table><tr><td>Hz</td><td>TL</td></tr><tr><td>80</td><td>40</td></tr><tr><td>100</td><td>43</td></tr></table> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 11"</div> <div>Approx weight: 14.4 lb/ft²</div>	Hz	TL	80	40	100	43	<div> 2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 3-5/8" 33 mil steel studs, 16" o.c.</div> <div> 1" air gap.</div> <div> 3-5/8" 33 mil steel studs, 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Hz	TL							
80	40							
100	43							
Non-Load Bearing Vertical joints staggered on opposite sides								

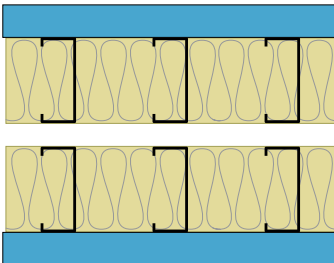









24" o.c.	16" o.c.	Description						
	PGD-33D-265-16							
	<div>STC 66</div> <div>NOAL 20-0742 – 16" o.c.</div> <div>Low Frequency Transmission Loss</div> <table><tr><td>Hz</td><td>TL</td></tr><tr><td>80</td><td>31</td></tr><tr><td>100</td><td>36</td></tr></table> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 10-1/4"</div> <div>Approx weight: 10.4 lb/ft²</div>	Hz	TL	80	31	100	36	<div> 2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 3-5/8" 33 mil steel studs, 16" o.c.</div> <div> 1" air gap.</div> <div> 3-5/8" 33 mil steel studs, 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Hz	TL							
80	31							
100	36							
Non-Load Bearing Vertical joints staggered on opposite sides								

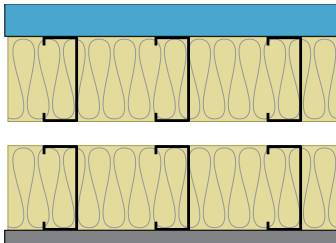









24" o.c.	16" o.c.	Description
	PGD-33D-317-16 STC 64 NOAL 20-0739 – 16" o.c.  Fire: 1 Hour - UL V464 Configuration C Thickness: 9-1/2" Approx weight: 7.6 lb/ft ²	<div>  1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. </div> <div>  One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. </div> <div>  3-1/2", R-13 glass fiber insulation friction fit into stud cavity. </div> <div>  3-5/8" 33 mil steel studs, 16" o.c. </div> <div>  1" air gap. </div> <div>  3-5/8" 33 mil steel studs, 16" o.c. </div> <div>  3-1/2", R-13 glass fiber insulation friction fit into stud cavity. </div> <div>  One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. </div> <div>  1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field. </div>
Non-Load Bearing Vertical joints staggered on opposite sides		

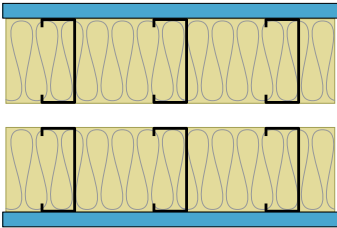









24" o.c.	16" o.c.	Description
	PGD-33D-404-16 STC 59 NOAL 18-1001 – 16" o.c.  Fire: 1 Hour - UL V464 Configuration C Thickness: 9-1/2" Approx weight: 6.4 lb/ft ²	<div>  1" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1-1/4" screws). </div> <div>  One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. </div> <div>  3-1/2", R-13 glass fiber insulation friction fit into stud cavity. </div> <div>  3-5/8" 33 mil steel studs, 16" o.c. </div> <div>  1" air gap. </div> <div>  3-5/8" 33 mil steel studs, 16" o.c. </div> <div>  3-1/2", R-13 glass fiber insulation friction fit into stud cavity. </div> <div>  One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. </div> <div>  1" Type S drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1-1/4" screws). </div>
Non-Load Bearing Vertical joints staggered on opposite sides		

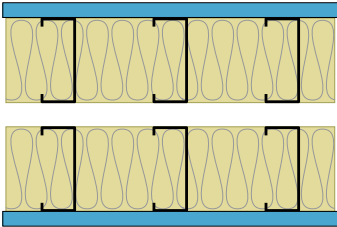









24" o.c.	16" o.c.	Description																
	PGD-54D-105-16																	
	<div>STC 83</div> <div>NOAL 21-1214 – 16" o.c.</div> <div>Low Frequency Transmission Loss</div> <table><tr><th>Hz</th><th>TL</th></tr><tr><td>25</td><td>31</td></tr><tr><td>31.5</td><td>35</td></tr><tr><td>40</td><td>41</td></tr><tr><td>50</td><td>41</td></tr><tr><td>63</td><td>46</td></tr><tr><td>80</td><td>52</td></tr><tr><td>100</td><td>57</td></tr></table> <div></div> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 18-3/4"</div> <div>Approx weight: 27.0 lb/ft²</div>	Hz	TL	25	31	31.5	35	40	41	50	41	63	46	80	52	100	57	<div> 3-1/2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> Face layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 1-7/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> Base layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 3-5/8" 54 mil steel studs, 16" o.c.</div> <div> 6" air gap.</div> <div> 3-5/8" 54 mil steel studs, 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> Base layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 1-7/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> Face layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 3-1/2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Hz	TL																	
25	31																	
31.5	35																	
40	41																	
50	41																	
63	46																	
80	52																	
100	57																	
Vertical joints staggered on opposite sides																		

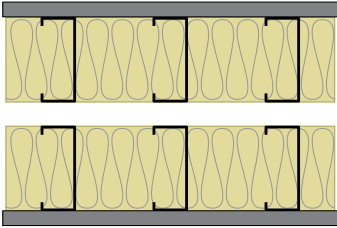









24" o.c.	16" o.c.	Description																
	PGD-54D-147-16																	
	<div>STC 80</div> <div>NOAL 21-1218 – 16" o.c.</div> <div>Low Frequency Transmission Loss</div> <table><tr><td>Hz</td><td>TL</td></tr><tr><td>25</td><td>28</td></tr><tr><td>31.5</td><td>32</td></tr><tr><td>40</td><td>39</td></tr><tr><td>50</td><td>41</td></tr><tr><td>63</td><td>45</td></tr><tr><td>80</td><td>49</td></tr><tr><td>100</td><td>54</td></tr></table> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 13-3/4"</div> <div>Approx weight: 27.0 lb/ft²</div>	Hz	TL	25	28	31.5	32	40	39	50	41	63	45	80	49	100	54	<div> 3-1/2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> Face layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 1-7/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> Base layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 3-5/8" 54 mil steel studs, 16" o.c.</div> <div> 1" air gap.</div> <div> 3-5/8" 54 mil steel studs, 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> Base layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 1-7/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> Face layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 3-1/2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Hz	TL																	
25	28																	
31.5	32																	
40	39																	
50	41																	
63	45																	
80	49																	
100	54																	
Non-Load Bearing Vertical joints staggered on opposite sides																		

24" o.c.	16" o.c.	Description										
	PGD-54D-172-16											
	<div>STC 75</div> <div>NOAL 23-09028 – 16" o.c.</div> <div>Low Frequency Transmission Loss</div> <table><tr><td>Hz</td><td>TL</td></tr><tr><td>50</td><td>27</td></tr><tr><td>63</td><td>37</td></tr><tr><td>80</td><td>41</td></tr><tr><td>100</td><td>46</td></tr></table> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 11"</div> <div>Approx weight: 15.6 lb/ft²</div>	Hz	TL	50	27	63	37	80	41	100	46	<div> 2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 3-5/8" 54 mil steel studs, 16" o.c.</div> <div> 1" air gap.</div> <div> 3-5/8" 54 mil steel studs, 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 2" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Hz	TL											
50	27											
63	37											
80	41											
100	46											
Non-Load Bearing Vertical joints staggered on opposite sides												

24" o.c.	16" o.c.	Description						
	PGD-54D-286-16							
	<div>STC 65</div> <div>NOAL 18-0917 – 16" o.c.</div> <div>Low Frequency Transmission Loss</div> <table><tr><td>Hz</td><td>TL</td></tr><tr><td>80</td><td>32</td></tr><tr><td>100</td><td>41</td></tr></table> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 10-1/4"</div> <div>Approx weight: 11.3 lb/ft²</div>	Hz	TL	80	32	100	41	<div> 1-7/8" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 1-3/8" QuietRock® 545 gypsum panel applied vertically.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 3-5/8" 54 mil steel studs, 16" o.c.</div> <div> 1" air gap.</div> <div> 3-5/8" 54 mil steel studs, 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Hz	TL							
80	32							
100	41							
Non-Load Bearing Vertical joints staggered on opposite sides								

24" o.c.	16" o.c.	Description
	PGD-54D-317-16	
	<div>STC 64</div> <div>NOAL 18-0920 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL V464 Configuration C</div> <div>Thickness: 9-1/2"</div> <div>Approx weight: 8.8 lb/ft²</div>	<div> 1" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1-1/4" screws).</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 3-5/8" 54 mil steel studs, 16" o.c.</div> <div> 1" air gap.</div> <div> 3-5/8" 54 mil steel studs, 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 1" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field (for fire, minimum 1-1/4" screws).</div>
Non-Load Bearing Vertical joints staggered on opposite sides		

24" o.c.	16" o.c.	Description
	PGD-54D-394-16	
	<div>STC 63</div> <div>NOAL 23-09029 – 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL V464 Configuration C</div> <div>Thickness: 9-1/2"</div> <div>Approx weight: 9.1 lb/ft²</div>	<div> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div> <div> One layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 3-5/8" 54 mil steel studs, 16" o.c.</div> <div> 1" air gap.</div> <div> 3-5/8" 54 mil steel studs, 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically.</div> <div> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</div>
Non-Load Bearing Vertical joints staggered on opposite sides		

24" o.c.	16" o.c.	Description
	PGD-54D-407-16	
	<p>STC 58 NOAL 18-0914 – 16" o.c.</p>  <p>Fire: 1 Hour - UL V464 Configuration C</p> <p>Thickness: 9-1/2" Approx weight: 7.6 lb/ft²</p>	<p> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p> <p> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> 3-5/8" 54 mil steel studs, 16" o.c.</p> <p> 1" air gap.</p> <p> 3-5/8" 54 mil steel studs, 16" o.c.</p> <p> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p> <p> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</p> <p> 1-1/4" Type S-12 drywall screws spaced 8" o.c. at edges and 12" o.c. in the field.</p>
Non-Load Bearing Vertical joints staggered on opposite sides		

Walls & Interior Partitions

Single Wood Frame

ASSEMBLY COMPONENTS AND PICTOGRAMS

The assemblies in this guide have been divided into sections by framing material type and ordered by design file number. The assembly details are listed in order starting from the outermost layer (attachment); working from top to bottom and ending with the stud or insulation. Pictograms have been added to each assembly detail to provide visual separation of the individual assembly components.

Attachment: identifies screw/nail type, placement, and spacing for attachment of the face layer



Face Layer: identifies the QuietRock product use as a face layer



Attachment: identifies screw/nail type, placement, and spacing for attachment of the face layer



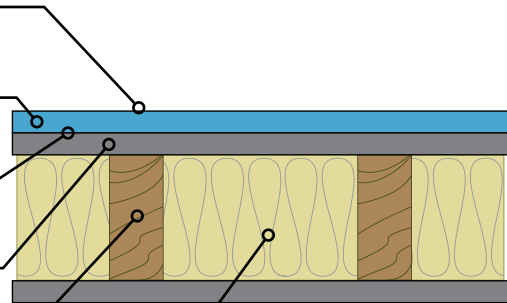
Base Layer: Identifies the PABCO Gypsum product that may be used as a base layer (if applicable)





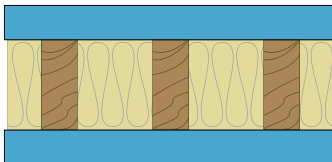



Framing: Identifies stud framing material, size, spacing and/or unique framing methods



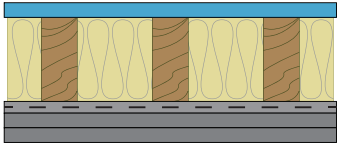
Insulation: Identifies insulation type, size used to fill assembly cavity (if applicable)



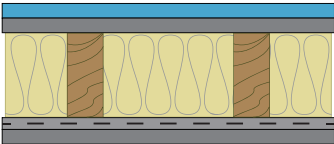


24" o.c.	16" o.c.	Description										
	PGD-W-397-16											
	STC 55 NOAL 23-09014 - 16" o.c.	 2" Type S or W drywall screws spaced 8" in perimeter and 12" o.c in the field.										
	Low Frequency Transmission Loss <table><tr><th>Hz</th><th>TL</th></tr><tr><td>50</td><td>21</td></tr><tr><td>63</td><td>23</td></tr><tr><td>80</td><td>20</td></tr><tr><td>100</td><td>23</td></tr></table>	Hz	TL	50	21	63	23	80	20	100	23	 One layer 1-3/8" QuietRock® 545 applied vertically or horizontally.
Hz	TL											
50	21											
63	23											
80	20											
100	23											
		 2 x 4 wood studs 16" o.c.										
	Fire: 1 Hour - UL U305	 One layer 1-3/8" QuietRock® 545 applied vertically or horizontally.										
	Thickness: 6-1/4" Approx weight: 13.7 lb/ft²	 2" Type S or W drywall screws spaced 8" in perimeter and 12" o.c in the field.										
Load Bearing Vertical joints staggered on opposite sides												


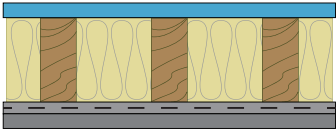









24" o.c.	16" o.c.	Description
	PGD-W-445-16 STC 57 NOAL 17-0745 - 16" o.c.  Fire: 1 Hour - UL U305 Thickness: 5-7/8" Approx weight: 8.5 lb/ft ²	<ul style="list-style-type: none"> 2' Type W drywall screws spaced 7" o.c. (for fire, minimum 1-7/8" screws) One layer 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically. 2 x 4 wood studs 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Resilient channel applied at right-angle, 24" o.c. 1-1/4 Type W pan head screw attaching Resilient Channel to studs. Base layer: type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally. 1" Type S drywall screws 8" o.c. Face layer: type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally.
Load Bearing Vertical joints staggered on opposite sides		<ul style="list-style-type: none"> 2' Type W drywall screws spaced 8" o.c. (for fire, minimum 1-5/8" screws)

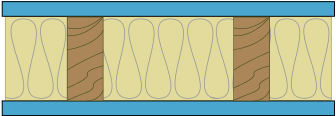








24" o.c.	16" o.c.	Description
PGD-W-463-24 STC 56 NOIAL 23-10085 - 24" o.c.  Fire: 1 Hour - UL U309 Thickness: 5-7/8" Approx weight: 8.2 lb/ft ²		<ul style="list-style-type: none"> 2-1/2" Type W drywall screws spaced 7" o.c. Face layer: 5/8" QuietRock® ES or QuietRock® ESMR type X gypsum panel applied vertically. 1-7/8" Type W drywall screws spaced 7" o.c. Base layer type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally. 2 x 4 wood studs 24" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Resilient channel applied at right-angle, 24" o.c. 1-1/4 Type W pan head screw attaching Resilient Channel to studs. One layer type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally. 1 " Type W drywall screws spaced 8" o.c.
Load Bearing Vertical joints staggered on opposite sides		

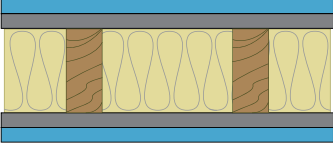












24" o.c.	16" o.c.	Description
	PGD-W-535-16	
	STC 53 NOAL 17-0747 - 16" o.c.	 2' Type W drywall screws spaced 7" o.c. (for fire, minimum 1-7/8" screws)
		 One layer 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically.
		 2 x 4 wood studs 16" o.c.
		 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.
		 Resilient channel applied at right-angle, 24" o.c.
	Fire: 1 Hour - UL U305	 1-1/4 Type W pan head screw attaching Resilient Channel to studs.
	Thickness: 5-1/4" Approx weight: 6.4 lb/ft²	 One layer type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally.
Load Bearing Vertical joints staggered on opposite sides		 1" Type S drywall screws 8" o.c.

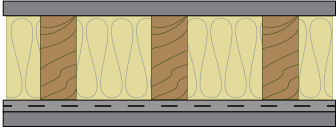










24" o.c.	16" o.c.	Description
<div>PGD-W-537-24</div> <div>STC 52</div> <div>NOIAL 23-10090 - 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U309</div> <div>Thickness: 4-3/4"</div> <div>Approx weight: 6.8 lb/ft²</div>		<div> 1-7/8" Type W drywall screws spaced 7" o.c. (for fire, minimum 1-5/8" screws spaced 12" o.c. at edges and 8" o.c. in the field).</div> <div> One layer: 5/8" QuietRock® 530 or 530RF gypsum panel applied vertically.</div> <div> 2 x 4 wood studs 24" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" QuietRock® 530 or 530RF gypsum panel applied vertically.</div> <div> 1-7/8" Type W drywall screws spaced 7" o.c. (for fire, minimum 1-5/8" screws spaced 12" o.c. at edges and 8" o.c. in the field).</div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		

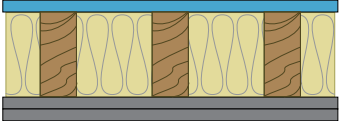


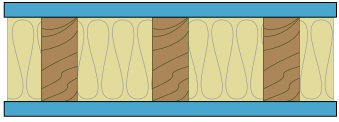
24" o.c.	16" o.c.	Description
PGD-W-539-24 STC 51 NOAL 23-10063 - 24" o.c.  Fire: 1 Hour - UL U309 Thickness: 6" Approx weight: 10.9 lb/ft²		 2-1/2" Type W screws spaced 7" o.c.  Face layer 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically.  1-7/8" Type W screws spaced 7" o.c.  Base layer type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally.  2 x 4 wood studs 24" o.c.  3-1/2", R-13 glass fiber insulation friction fit into stud cavity.  Base layer type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally.  1-7/8" Type W screws spaced 7" o.c.  Face layer 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically.  2-1/2" Type W screws spaced 7" o.c.
Load Bearing Vertical joints staggered on opposite sides		



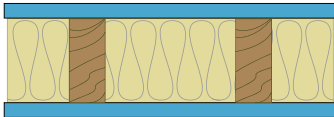
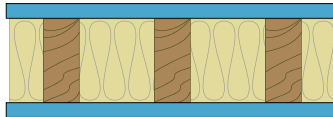






24" o.c.	16" o.c.	Description
	PGD-W-545-16	
	<div>STC 48</div> <div>NOAL 20-0723 - 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U305</div> <div>Thickness: 5-1/4"</div> <div>Approx weight: 5.6 lb/ft²</div>	<div> 1-7/8" Type W drywall screws spaced 7" o.c.</div> <div> One layer type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally.</div> <div> 2 x 4 wood studs 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> Resilient channel applied at right-angle, 24" o.c.</div> <div> 1/2" Type W pan head screw attaching Resilient Channel to studs.</div> <div> One layer type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally.</div> <div> 1" Type S drywall screws 8" o.c.</div>
Load Bearing Vertical joints staggered on opposite sides		

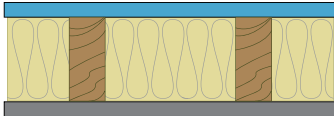








24" o.c.	16" o.c.	Description
	PGD-W-548-16	
	<p>STC 46 NOAL 20-0524 - 16" o.c.</p>  <p>Fire: Non-Rated</p> <p>Thickness: 5" Approx weight: 6.3 lb/ft²</p>	<ul style="list-style-type: none"> 1-1/4" type W drywall screws 12" o.c. One layer 1/2" QuietRock® 510 gypsum panel applied vertically. 2 x 4 wood studs 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Base layer 1/2" PABCO® Litecore® gypsum panel. 1-1/4" Type W screws 12" o.c. Face layer 1/2" PABCO® Litecore® gypsum panel. 1-7/8" type W drywall screws 12" o.c.
Vertical joints staggered on opposite sides		

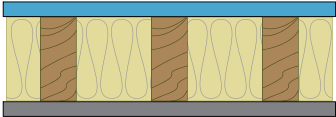






	PGD-W-557-16	
	<p>STC 45 NOAL 20-0525 - 16" o.c.</p>  <p>Fire: Non-Rated</p> <p>Thickness: 4-1/2" Approx weight: 5.7 lb/ft²</p>	<ul style="list-style-type: none"> 1-1/4" type W drywall screws 12" o.c. One layer 1/2" QuietRock® 510 gypsum panel applied vertically. 2 x 4 wood studs or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. One layer 1/2" QuietRock® 510 gypsum panel applied vertically. 1-1/4" type W drywall screws 12" o.c.
Vertical joints staggered on opposite sides		



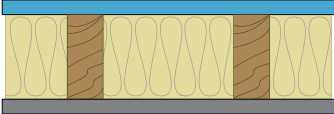
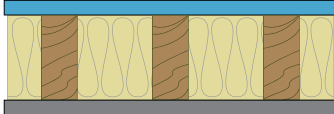






24" o.c.	16" o.c.	Description
<p>PGD-W-574-24</p> <p>STC 51</p> <p>NOAL 23-10071 - 24" o.c.</p>  <p>Fire: 1 Hour - UL U309</p> <p>Thickness: 4-3/4"</p> <p>Approx weight: 6.7 lb/ft²</p>	<p>PGD-W-574-16</p> <p>STC 45</p> <p>NOAL 20-0412 - 16" o.c.</p>  <p>Fire: 1 Hour - UL U305</p> <p>Thickness: 4-3/4"</p> <p>Approx weight: 6.8 lb/ft²</p>	<div> 1-7/8" Type W drywall screws 7" o.c.</div> <div> One layer 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 2 x 4 wood studs 24" o.c. or 16"</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 1-7/8" Type W drywall screws 7" o.c.</div>
<p>Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		

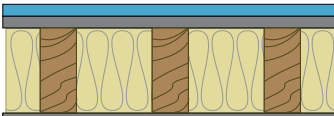








<p>PGD-W-636-24</p> <p>STC 48</p> <p>NOAL 23-10091 - 24" o.c.</p>  <p>Fire: 1 Hour - UL U309</p> <p>Thickness: 4-3/4"</p> <p>Approx weight: 6.1 lb/ft²</p>	<div> 1-7/8" Type W drywall screws 7" o.c. (for fire, minimum 1-5/8" screws spaced 12" o.c. at edges and 8" o.c. in the field).</div> <div> One layer 5/8" QuietRock® 530 or QuietRock® 530RF gypsum panel applied vertically.</div> <div> 2 x 4 wood studs 24" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally.</div> <div> 1-7/8" Type W drywall screws 7" o.c. (for fire, minimum 1-5/8" screws spaced 12" o.c. at edges and 8" o.c. in the field).</div>
<p>Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>	



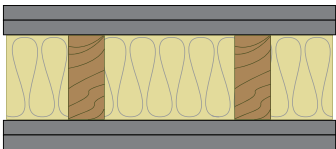
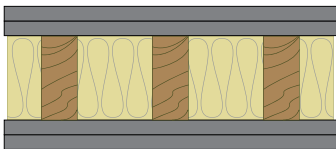
24" o.c.	16" o.c.	Description
	<div>PGD-W-642-16</div> <div>STC 42</div> <div>NOAL 20-0523 - 16" o.c.</div> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 4-5/8"</div> <div>Approx weight: 4.9 lb/ft²</div>	<div> 1-1/4" type W drywall screws spaced 12" o.c.</div> <div> One layer 1/2" QuietRock® 510 gypsum panel applied vertically.</div> <div> 2 x 4 wood studs 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer 1/2" PABCO® Litecore® gypsum panel.</div> <div> 1-1/4" type W drywall screws 12" o.c.</div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		



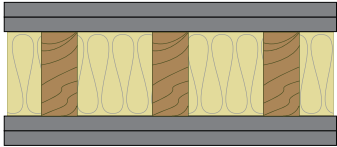
24" o.c.	16" o.c.	Description
PGD-W-646-24 STC 47 NOAL 18-0530 - 24" o.c.  Fire: 1 Hour - UL U309 Thickness: 4-3/4" Approx weight: 5.8 lb/ft²	PGD-W-646-16 STC 41 NOAL 17-0730 - 16" o.c.  Fire: 1 Hour - UL U305 Thickness: 4-3/4" Approx weight: 6.3 lb/ft²	 2" Type W drywall screws 8" o.c. (for fire minimum 1-7/8" drywall screws spaced 7" o.c.).  One layer 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.  2 x 4 wood studs 24" o.c. or 16" o.c.  3-1/2", R-13 glass fiber insulation friction fit into stud cavity.  One layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.  2" Type W drywall screws 7" o.c. (for fire minimum 1-7/8" drywall screws).
Load Bearing Vertical joints staggered on opposite sides		

	PGD-W-648-16 STC 41 NOAL 20-0507- 16" o.c.  Fire: Non-Rated Thickness: 5" Approx weight: 6.3 lb/ft²	 1-7/8" Type W screws 12" o.c.  Face layer: 1/2" QuietRock® 510 gypsum panel applied vertically.  1-1/4" Type W screws 12" o.c.  Base layer: 1/2" PABCO® Litecore® gypsum panel.  2 x 4 wood studs 16" o.c.  3-1/2", R-13 glass fiber insulation friction fit into stud cavity.  One layer 1/2" PABCO® Litecore® gypsum panel.  1-1/4" Type W screws 12" o.c.
Vertical joints staggered on opposite sides		

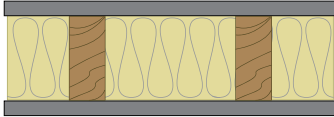
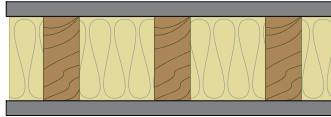














24" o.c.	16" o.c.	Description
PGD-W-824-24 STC 45 NOAL 23-10062 - 24" o.c.  Fire: 2 Hour - GA WP 4135 Thickness: 6" Approx weight: 9.6 lb/ft²	PGD-W-824-16 STC 38 NOAL 17-0734 - 16" o.c.  Fire: 2 Hour - UL U301 Thickness: 6" Approx weight: 9.9 lb/ft²	<ul style="list-style-type: none"> 2-1/2" Type W drywall screws spaced 8" o.c. (for fire, minimum 2-3/8" screws). Face layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally. 2" Type W drywall screws 6" o.c. (for fire, minimum 1-7/8" screws) Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally. 2 x 4 wood studs 24" o.c. or 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Base layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally. 2" Type W drywall screws 6" o.c. (for fire, minimum 1-7/8" screws) Face layer: type 5/8"X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally. 2-1/2" Type W drywall screws 8" o.c. (for fire, minimum 2-3/8" screws)
Load Bearing Vertical joints staggered on opposite sides		



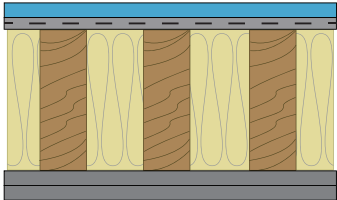
24" o.c.	16" o.c.	Description
	PGD-W-844-16	
	<p>STC 37</p> <p>NOAL 20-0505 - 16" o.c.</p>  <p>Fire: Non-Rated</p> <p>Thickness: 5-1/2"</p> <p>Approx weight: 7.0 lb/ft²</p>	<ul style="list-style-type: none"> 1-7/8 Type W drywall screws spaced 12" o.c. Face layer 1/2" PABCO® Litecore® gypsum panel. 1-1/4" Type W drywall screws spaced 12" o.c. Base layer 1/2" PABCO® Litecore® gypsum panel. 2 x 4 wood studs 16" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. Base layer 1/2" PABCO® Litecore® gypsum panel. 1-1/4" Type W drywall screws spaced 12" o.c. Face layer 1/2" PABCO® Litecore® gypsum panel.
Vertical joints staggered on opposite sides		<ul style="list-style-type: none"> 1-7/8 Type W drywall screws spaced 12" o.c.



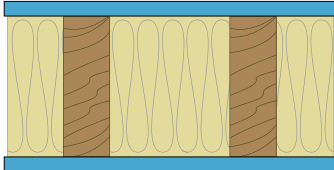
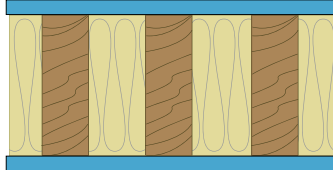






24" o.c.	16" o.c.	Description
<p>PGD-W-910-24</p> <p>STC 41</p> <p>NOAL 23-10066 - 24" o.c.</p>  <p>Fire: 1 Hour - UL U309</p> <p>Thickness: 4-3/4"</p> <p>Approx weight: 5.6 lb/ft²</p>	<p>PGD-W-910-16</p> <p>STC 35</p> <p>NOAL 23-10092 - 16" o.c.</p>  <p>Fire: 1 Hour - UL U305</p> <p>Thickness: 4-3/4"</p> <p>Approx weight: 5.5 lb/ft²</p>	<div><p>1-7/8" Type W drywall screws spaced 7" o.c.</p></div> <div><p>One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally.</p></div> <div><p>2 x 4 wood studs 24" o.c. or 16"</p></div> <div><p>3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</p></div> <div><p>One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied horizontally.</p></div> <div><p>1-7/8" Type W drywall screws spaced 7" o.c.</p></div>
<p>Load Bearing</p> <p>Load-Vertical joints staggered on opposite sides</p>		

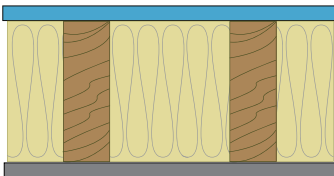






	<div>PGD-W-914-16</div> <div>STC 34</div> <div>NOAL 20-0506 - 16" o.c.</div> <div></div> <div>Fire: Non-Rated</div> <div>Thickness: 4-1/2"</div> <div>Approx weight: 4.1 lb/ft²</div>	<div> 1-1/4" Type W drywall screws spaced 12" o.c.</div> <div> One layer 1/2" PABCO® Litecore® gypsum panel.</div> <div> 2 x 4 wood studs 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer 1/2" PABCO® Litecore® gypsum panel.</div> <div> 1-1/4" Type W drywall screws spaced 12" o.c.</div>
Vertical joints staggered on opposite sides		



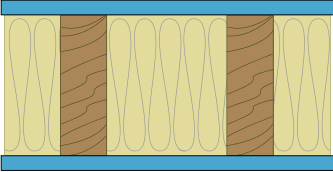






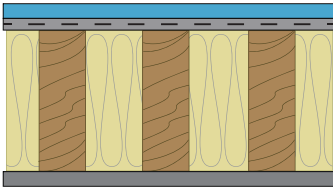








24" o.c.	16" o.c.	Description
	PGD-W6-455-16 STC 55 NOAL 21-0513 - 16" o.c.  Fire: 1 Hour - UL U305 Thickness: 7-7/8" Approx weight: 9.1 lb/ft²	<ul style="list-style-type: none"> 1" Type S drywall screws spaced 8" o.c. One layer 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically. Resilient channel applied at right-angle, 24" o.c. 1-1/4 Type W pan head screw attaching Resilient Channel to studs. 2 x 6 wood studs, 16" o.c. 6-1/4", R-19 glass fiber insulation friction fit into stud cavity. Base layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-7/8" Type W drywall screws spaced 7" o.c. Face layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 2-1/2" Type W drywall screws spaced 7" o.c.
Load Bearing Vertical joints staggered on opposite sides		



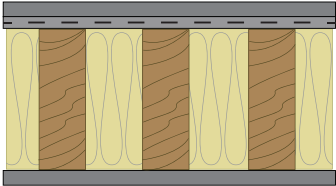








24" o.c.	16" o.c.	Description
<p>PGD-W6-467-24</p> <p>STC 53</p> <p>NOAL 22-0760 - 24" o.c.</p>  <p>Fire: 1 Hour - UL U309</p> <p>Thickness: 6-3/4"</p> <p>Approx weight: 7.4 lb/ft²</p>	<p>PGD-W6-467-16</p> <p>STC 49</p> <p>NOAL 21-1047 - 16" o.c.</p>  <p>Fire: 1 Hour - UL V310</p> <p>Thickness: 6-3/4"</p> <p>Approx weight: 7.7 lb/ft²</p>	<div> 1-7/8" Type W drywall screws spaced 7" o.c. (for fire, minimum 1-5/8" screws spaced 12" o.c. at edges and 8" o.c. in the field).</div> <div> One layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically.</div> <div> 2 x 6 wood studs 24" o.c. or 16" o.c.</div> <div> 6", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically.</div> <div> 1-7/8" Type W drywall screws spaced 7" o.c. (for fire, minimum 1-5/8" screws spaced 12" o.c. at edges and 8" o.c. in the field).</div>
<p>Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>		

<p>PGD-W6-565-24</p> <p>STC 53</p> <p>NOAL 21-1052 - 24" o.c.</p>  <p>Fire: 1 Hour - UL U309</p> <p>Thickness: 6-3/4"</p> <p>Approx weight: 6.6 lb/ft²</p>	<div> 1-5/8" Type S drywall screws spaced 12" o.c. at perimeter and 8" o.c. in field.</div> <div> One layer 5/8" QuietRock® 530 or QuietRock® 530 RF gypsum panel applied vertically.</div> <div> 2 x 6 wood studs 24" o.c.</div> <div> 6-1/4", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-7/8" Type S drywall screws spaced 7" o.c..</div>
<p>Load Bearing</p> <p>Vertical joints staggered on opposite sides</p>	

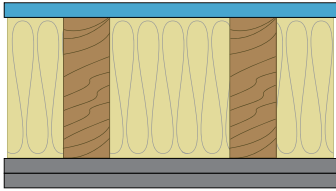


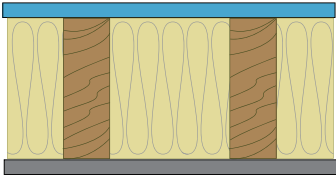
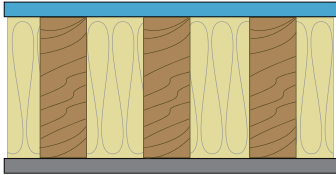
24" o.c.	16" o.c.	Description
PGD-W6-563-24 STC 52 NOAL 22-0770 - 24" o.c.  Fire: 1 Hour - UL U309 Thickness: 6-3/4" Approx weight: 7.3 lb/ft²		 1-7/8" Type W drywall screws spaced 7" o.c.  One layer 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically.  2 x 6 wood studs 24" o.c.  6", R-19 glass fiber insulation friction fit into stud cavity.  One layer 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically.  1-7/8" Type W drywall screws spaced 7" o.c.
Load Bearing Vertical joints staggered on opposite sides		
	PGD-W6-595-16 STC 50 NOAL 21-0514 - 16" o.c.  Fire: 1 Hour - UL U305 Thickness: 7-1/4" Approx weight: 7.0 lb/ft²	 1' Type S drywall screws spaced 8" o.c.  One layer 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically.  Resilient channel applied at right-angle, 24" o.c.  1-1/4 Type W pan head screw attaching Resilient Channel to studs.  2 x 6 wood studs 16" o.c.  6-1/4", R-19 glass fiber insulation friction fit into stud cavity.  One layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.  1-7/8" Type W drywall screws spaced 7" o.c..
Load Bearing Vertical joints staggered on opposite sides		



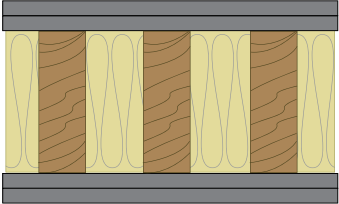










24" o.c.	16" o.c.	Description
	PGD-W6-625-16	
	<div>STC 48</div> <div>NOAL 21-0510 - 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U305</div> <div>Thickness: 7-1/4"</div> <div>Approx weight: 6.4 lb/ft²</div>	<div> 1' Type S drywall screws spaced 8" o.c.</div> <div> One layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> Resilient channel applied at right-angle, 24" o.c.</div> <div> 1-1/4 Type W pan head screw attaching Resilient Channel to studs.</div> <div> 2 x 6 wood studs 16" o.c.</div> <div> 6-1/4", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-7/8" Type W drywall screws spaced 7" o.c.</div>
Load Bearing Vertical joints staggered on opposite sides		



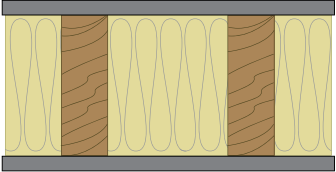
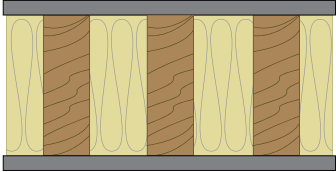






24" o.c.	16" o.c.	Description
	PGD-W6-672-16	
	<p>STC 46 NOAL 21-0503 - 16" o.c.</p>  <p>Fire: 1 Hour - UL U305</p> <p>Thickness: 7-3/8" Approx weight: 9.0 lb/ft²</p>	<ul style="list-style-type: none"> 1-1/4" Type W drywall screws spaced 8" o.c. One layer 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically. 2 x 6 wood studs 16" o.c. 6-1/4", R-19 glass fiber insulation friction fit into stud cavity. Base layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-7/8" Type W drywall screws spaced 7" o.c. Face layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 2-1/2" Type W drywall screws spaced 7" o.c.
<p>Load Bearing Vertical joints staggered on opposite sides</p>		

PGD-W6-753-24	PGD-W6-753-16	
<p>STC 48 NOAL 22-0771 - 24" o.c.</p>  <p>Fire: 1 Hour - UL U309</p> <p>Thickness: 6-3/4" Approx weight: 6.7 lb/ft²</p>	<p>STC 42 NOAL 21-0504 - 16" o.c.</p>  <p>Fire: 1 Hour - UL U305</p> <p>Thickness: 6-3/4" Approx weight: 6.9 lb/ft²</p>	<ul style="list-style-type: none"> 1-7/8" Type W drywall screws spaced 7" o.c. One layer 5/8" QuietRock® ES or QuietRock® ES MR Type X gypsum panel applied vertically. 2 x 6 wood studs 16" o.c. 6-1/4", R-19 glass fiber insulation friction fit into stud cavity. One layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically. 1-7/8" Type W drywall screws spaced 7" o.c.
<p>Load Bearing Vertical joints staggered on opposite sides</p>		



24" o.c.	16" o.c.	Description
	PGD-W6-824-16	
	<div>STC 38</div> <div>NOAL 21-0502 - 16" o.c.</div> <div></div> <div>Fire: 2 Hour - UL U301</div> <div>Thickness: 8"</div> <div>Approx weight: 10.5 lb/ft²</div>	<div> 2-1/2" Type W drywall screws spaced 7" o.c.</div> <div> Face layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-7/8" Type W drywall screws spaced 7" o.c.</div> <div> Base layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 2 x 6 wood studs 16" o.c.</div> <div> 6-1/4", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> Base layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-7/8" Type W drywall screws spaced 7" o.c.</div> <div> Face layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 2-1/2" Type W drywall screws spaced 7" o.c.</div>
Load Bearing Vertical joints staggered on opposite sides		



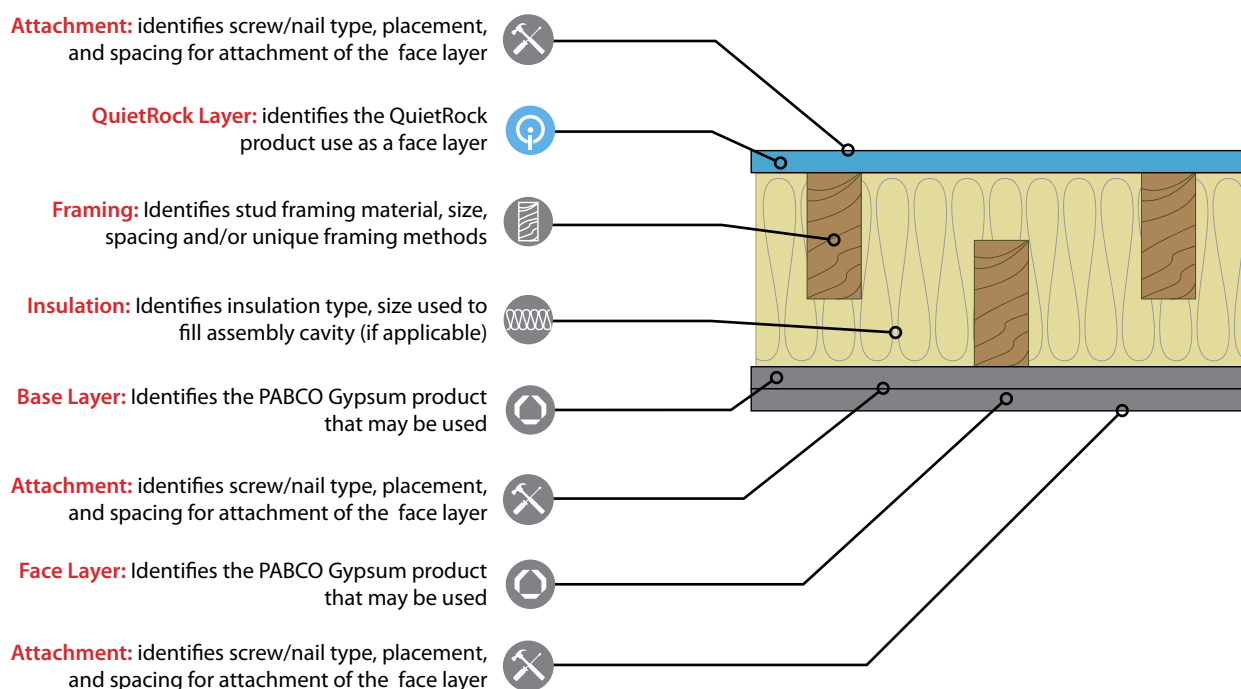
24" o.c.	16" o.c.	Description
<div>PGD-W6-914-24</div> <div>STC 42</div> <div>NOAL 21-1051 - 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U309</div> <div>Thickness: 6-3/4"</div> <div>Approx weight: 6.0 lb/ft²</div>	<div>PGD-W6-914-16</div> <div>STC 34</div> <div>NOAL 21-0501 - 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U305</div> <div>Thickness: 6-3/4"</div> <div>Approx weight: 6.3 lb/ft²</div>	<div> 1-7/8" Type W drywall screws spaced 7" o.c.</div> <div> One layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 2 x 6 wood studs 24" o.c. or 16" o.c.</div> <div> 6-1/4", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-7/8" Type W drywall screws spaced 7" o.c.</div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		

Walls & Interior Partitions

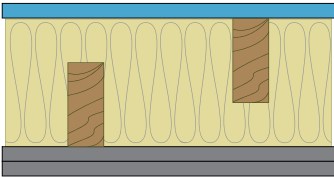
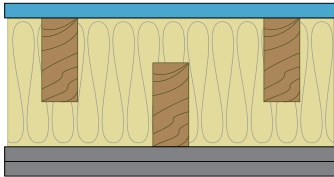
Staggered Wood Frame

ASSEMBLY COMPONENTS AND PICTOGRAMS

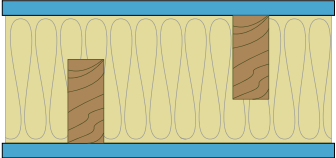
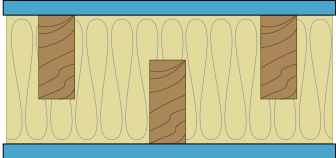






The assemblies in this guide have been divided into sections by framing material type and ordered by design file number. The assembly details are listed in order starting from the outermost layer (attachment); working from top to bottom and ending with the stud or insulation. Pictograms have been added to each assembly detail to provide visual separation of the individual assembly components.



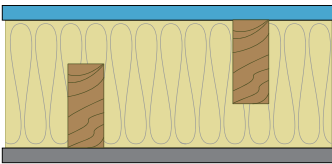
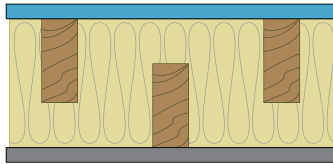








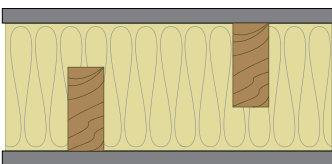
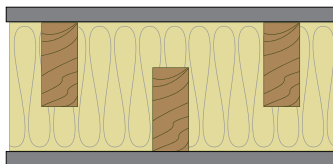






24" o.c.	16" o.c.	Description
PGD-WS-467-24 STC 56 NOAL 21-0623 - 24" o.c.  Fire: 1 Hour - UL U340 Thickness: 7-3/8" Approx weight: 8.8 lb/ft²	PGD-WS-467-16 STC 53 NOAL 17-0939 - 16" o.c.  Fire: 1 Hour - UL U340 Thickness: 7-3/8" Approx weight: 9.4 lb/ft²	<ul style="list-style-type: none"> 1-1/4" Type W drywall screws 8" o.c. (for fire 1-7/8" drywall screws 7" o.c.) One layer 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically. 2 x 4 wood studs on 2x6 plates: 24" o.c. staggered 12" o.c. or 16" o.c. staggered 8" o.c. 6-1/4", R-19 glass fiber insulation friction fit into stud cavity. Base layer: type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel. 1-7/8" Type W bugle head drywall screws 7" o.c. Face layer: type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel. 2-1/2" Type W bugle head drywall screws 7" o.c.
Load Bearing Vertical joints staggered on opposite sides		



24" o.c.	16" o.c.	Description
<div>PGD-WS-485-24</div> <div>STC 55</div> <div>NOAL 21-0625 - 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U340</div> <div>Thickness: 6-3/4"</div> <div>Approx weight: 7.4 lb/ft²</div>	<div>PGD-WS-485-16</div> <div>STC 55</div> <div>NOAL 17-0942 - 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U340</div> <div>Thickness: 6-3/4"</div> <div>Approx weight: 8.0 lb/ft²</div>	<div> 1-1/4" Type W drywall screws 8" o.c. (for fire 1-7/8" drywall screws 7" o.c.)</div> <div> One layer 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 2 x 4 wood studs on 2x6 plates: 24" o.c. staggered 12" o.c. or 16" o.c. staggered 8" o.c.</div> <div> 6-1/4", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 1-1/4" Type W drywall screws 8" o.c. (for fire 1-7/8" drywall screws 7" o.c.)</div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		



24" o.c.	16" o.c.	Description
<div>PGD-WS-537-24</div> <div>STC 53</div> <div>NOAL 21-0624 - 24" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U340</div> <div>Thickness: 6-3/4"</div> <div>Approx weight: 6.8 lb/ft²</div>	<div>PGD-WS-537-16</div> <div>STC 51</div> <div>NOAL 17-0940 - 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U340</div> <div>Thickness: 6-3/4"</div> <div>Approx weight: 7.3 lb/ft²</div>	<div> 1-1/4" Type W drywall screws 8" o.c. (for fire 1-7/8" drywall screws 7" o.c.)</div> <div> One layer 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 2 x 4 wood studs on 2x6 plates: 24" o.c. staggered 12" o.c. or 16" o.c. staggered 8" o.c.</div> <div> 6-1/4", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-7/8" Type W bugle head drywall screws 7" o.c.</div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		

<div>PGD-WS-647-24</div> <div>STC 47</div> <div>NOAL 21-0621 - 16" o.c.</div> <div></div> <div>Fire: 1 Hour UL U340</div> <div>Thickness: 6-3/4"</div> <div>Approx weight: 6.1 lb/ft²</div>	<div>PGD-WS-647-16</div> <div>STC 47</div> <div>NOAL 17-0936 - 16" o.c.</div> <div></div> <div>Fire: 1 Hour UL U340</div> <div>Thickness: 6-3/4"</div> <div>Approx weight: 6.7 lb/ft²</div>	<div> 1-7/8" Type W bugle head drywall screws 7" o.c.</div> <div> One layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 2 x 4 wood studs on 2x6 plates: 24" o.c. staggered 12" o.c. or 16" o.c. staggered 8" o.c.</div> <div> 6", R-19 glass fiber insulation friction fit into stud cavity.</div> <div> One layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 1-7/8" Type W bugle head drywall screws 7" o.c.</div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		

Walls & Interior Partitions

Double Wood Frame

ASSEMBLY COMPONENTS AND PICTOGRAMS

The assemblies in this guide have been divided into sections by framing material type and ordered by design file number. The assembly details are listed in order starting from the outermost layer (attachment); working from top to bottom and ending with the stud or insulation. Pictograms have been added to each assembly detail to provide visual separation of the individual assembly components.

Attachment: identifies screw/nail type, placement, and spacing for attachment of the face layer



QuietRock Layer: identifies the QuietRock product use as a face layer



Framing: Identifies stud framing material, size, spacing and/or unique framing methods



Insulation: Identifies insulation type, size used to fill assembly cavity (if applicable)



Air gap: Identifies space between studs or panels (if applicable)



Insulation: Identifies insulation type, size used to fill assembly cavity (if applicable)



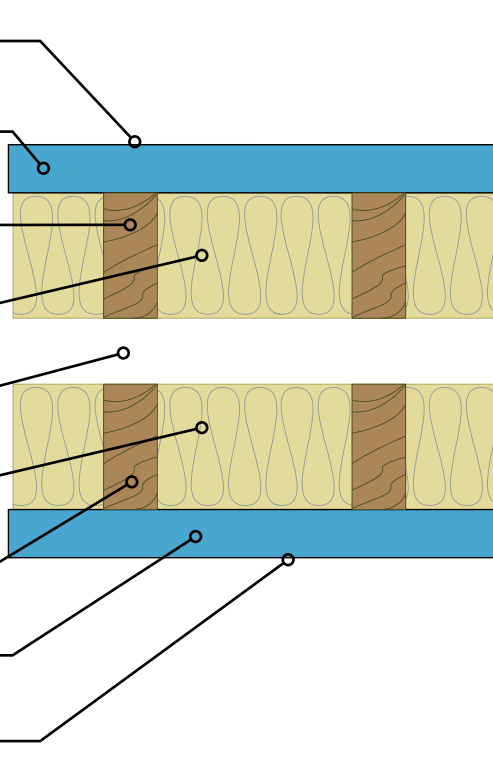
Framing: Identifies stud framing material, size, spacing and/or unique framing methods



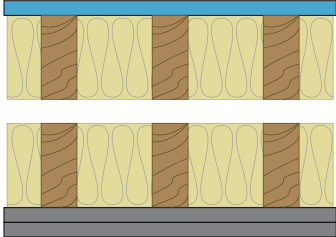











QuietRock Layer: identifies the QuietRock product use as a face layer



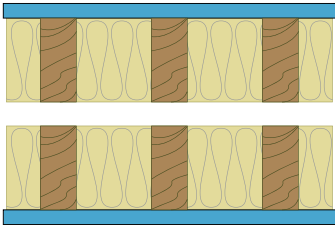









Attachment: identifies screw/nail type, placement, and spacing for attachment of the face layer



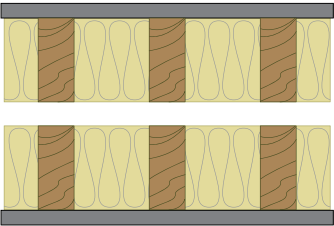











24" o.c.	16" o.c.	Description
	PGD-WD-354-16 STC 62 NOAL 17-1111 - 16" o.c.  Fire: 1 Hour - UL U341 Thickness: 9-7/8" Approx weight: 9.8 lb/ft²	 1-1/4" Type W drywall screws 8" o.c. (for fire, minimum 1-7/8" screws spaced 7" o.c.).  One layer 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.  2 x 4 wood studs 16" o.c.  3-1/2", R-13 glass fiber insulation friction fit into stud cavity.  1" air gap.  3-1/2", R-13 glass fiber insulation friction fit into stud cavity.  2 x 4 wood studs 16" o.c.  Base layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.  2" Type W bugle head drywall screws 7" o.c. (for fire, minimum 1-7/8" screws)  Face layer: 5/8" Type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.  2" Type W bugle head drywall screws 7" o.c. (for fire, minimum 2-1/2" screws).
Load Bearing Vertical joints staggered on opposite sides		



24" o.c.	16" o.c.	Description
	<div>PGD-WD-373-16</div> <div>STC 61</div> <div>NOAL 21-0740 - 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U341</div> <div>Thickness: 9-1/4"</div> <div>Approx weight: 8.3 lb/ft²</div>	<div> 1-1/4" Type W drywall screws 8" o.c. (for fire, minimum 1-7/8" screws spaced 7" o.c.)</div> <div> One layer 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 2 x 4 wood studs 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 1" air gap.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 2 x 4 wood studs 16" o.c.</div> <div> One layer 5/8" QuietRock® ES or QuietRock® ES MR type X gypsum panel applied vertically.</div> <div> 1-1/4" Type W drywall screws 8" o.c. (for fire, minimum 1-7/8" screws spaced 7" o.c.)</div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		



24" o.c.	16" o.c.	Description
	<div>PGD-WD-468-16</div> <div>STC 56</div> <div>NOAL 17-1107 - 16" o.c.</div> <div></div> <div>Fire: 1 Hour - UL U341</div> <div>Thickness: 9-1/4"</div> <div>Approx weight: 7.0 lb/ft²</div>	<div> 2" Type W bugle head drywall screws 7" o.c. (for fire, minimum 1-7/8" screws)</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 2 x 4 wood studs 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 1" air gap.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 2 x 4 wood studs 16" o.c.</div> <div> One layer: 5/8" type X (FLAME CURB®, MOLD CURB® Plus, ABUSE CURB®, PABCO® Impact Resistant, PABCO® Glass Interior, PABCO® Glass Sheathing or PABCO® Gypsum Sheathing) gypsum panel applied vertically.</div> <div> 2" Type W bugle head drywall screws 7" o.c. (for fire, minimum 1-7/8" screws)</div>
<div>Load Bearing</div> <div>Vertical joints staggered on opposite sides</div>		

Walls & Interior Partitions

Area Separation Walls

ASSEMBLY COMPONENTS AND PICTOGRAMS

The assemblies in this guide have been divided into sections by framing material type and ordered by design file number. The assembly details are listed in order starting from the outermost layer (attachment); working from top to bottom and ending with the stud or insulation. Pictograms have been added to each assembly detail to provide visual separation of the individual assembly components.

Attachment: identifies screw/nail type, placement, and spacing for attachment of the face layer



QuietRock Layer: identifies the QuietRock product use as a face layer



Framing: Identifies stud framing material, size, spacing and/or unique framing methods



Insulation: Identifies insulation type, size used to fill assembly cavity (if applicable)



Air gap: Identifies space between studs or panels (if applicable)



Framing: Identifies stud framing material, size, ga., spacing and/or unique framing methods



Breakaway Clips: identifies L-shaped aluminum break-away clip attached H-studs



Core Layer: Identifies the PABCO Gypsum product that may be used as a core layer



Insulation: Identifies insulation type, size used to fill assembly cavity (if applicable)



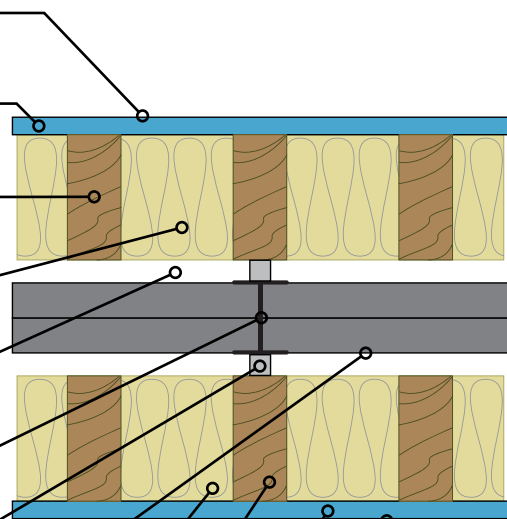
Framing: Identifies stud framing material, size, spacing and/or unique framing methods



QuietRock Layer: identifies the QuietRock product use as a face layer



Attachment: identifies screw/nail type, placement, and spacing for attachment of the face layer



Introduction to The QuietRock® Area Separation Wall System

Townhouses, apartments, condominiums, and mixed-use development are popular choices for residences. Their unique design requirement to separate portions of the structure into individual dwelling units demands special methods of construction to provide fire resistive and acoustical separation of the dwellings. The PABCO® H-Stud Area Separation Firewall System (ASW) has been developed to meet these critical design criteria.

The PABCO® H-Stud ASW provides a code compliant, efficient, lightweight, and low-cost solution for separating townhouses, condos, and other multifamily dwelling units by eliminating the necessity of costly footers and foundation modifications. An important benefit of the H-Stud ASW is that it may be easily erected directly onto a poured concrete slab by the contractor already on site. Carpenters can easily install the H-Stud ASW modular system progressively once the framing for one residence is completed and prior to the construction of the adjacent unit. The popularity of the H-Stud ASW assembly has grown as contractors and architects discover the efficiency, simplicity, and cost effectiveness of the system.

The Key Components Of The H-Stud ASW

The fire-resistive central wall provides code required vertical and horizontal continuity with a double layer of 1" PABCORE® Shaftliner Type X or PABCO GLASS® Shaftliner Type X panels installed in a continuous assembly from the foundation to the roof, or parapet, and from exterior wall to exterior wall. The shaftliner panels are fit into H-studs and capped at the perimeter with C-Runners which are easily stacked allowing progressive construction of the ASW during the framing stages of construction.

Two flanking walls of the ASW, one on either side of the central wall, are wood framed walls (steel studs may also be used) that are set a minimum 3/4" from the central wall. They can be load-bearing or non-load bearing depending on the need. The flanking walls are non-fire-resistance rated partitions that provide:

- Structural independence between dwelling units, required by building codes.
- Heat resistance that keeps the non-fire side under the temperature required.
- An aesthetic surface for the living areas.

The ASW assembly meets structural stability code requirements by attaching the central wall to each dwelling unit's framework (flanking wall) using L-Shaped aluminum "breakaway" clips. The breakaway clips are designed to soften and yield to the heat of the fire at approximately 1,100°F. When one side is exposed to fire, the breakaway clips on the exposed fire side soften allowing the structure on the side exposed to the fire to collapse. Structural integrity of the unexposed side of the ASW remain in tact, thus protecting the adjacent townhouse.

Other components include, fireblocking materials, insulation, and acoustical sealant (required for reported STC ratings).

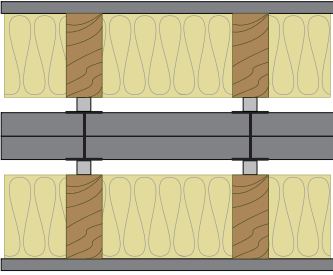
Acoustical performance of the PABCO® ASW can be increased depending on the gypsum panel used on the flanking walls. For example, installing 1/2" QuietRock® 510 on both flanking walls achieves an STC 69, creating one of the thinnest, lightest, and highest acoustically tested ASW assemblies designed.



24" o.c.	16" o.c.	Description
	<div>PGD-ASW-W-200-16</div> <div>STC 69</div> <div>RAL-TL07-119 - 16" o.c.</div> <div></div> <div>Fire: 2 Hour - WFCi 19045a</div> <div>Thickness: 11-3/4"</div> <div>Approx weight: 15.3 lb/ft²</div>	<div> 1-5/8" Type S or W drywall screws spaced 16" o.c.</div> <div> One layer 1/2" QuietRock® 510 gypsum panel applied vertically.</div> <div> 2 x 4 wood studs 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> 3/4" minimum air space.</div> <div> Two layers 1" x 24" PABCORE® Gypsum Shaftliner, or PABCO GLASS® Shaftliner Type X.</div> <div> Inserted between steel H-Studs between adjacent pairs of gypsum panels.</div> <div> L-shaped aluminum break-away clips. Contact PABCO Tech Services for proper clip attachment for wall height.</div> <div> 3/4" minimum air space.</div> <div> 2 x 4 wood studs 16" o.c.</div> <div> 3-1/2", R-13 glass fiber insulation friction fit into stud cavity.</div> <div> One layer 1/2" QuietRock® 510 gypsum panel applied vertically.</div> <div> 1-5/8" Type S or W drywall screws spaced 16" o.c.</div>
<div>Non-Load Bearing</div> <div>Vertical joints staggered on opposite sides</div> <div>Contact PABCO Tech Services for proper clip attachment for wall height</div>		

QuietRock Assemblies Area Separation Wall



24" o.c.	16" o.c.	Description
<p>PGD-ASW-W-280-24</p> <p>STC 62 RAL-TL07-373 - 24" o.c.</p>  <p>Fire: 2 Hour - WFCi 19045a</p> <p>Thickness: 11-1/2" Approx weight: 14.4 lb/ft²</p>		<ul style="list-style-type: none"> 1-5/8" Type S or W drywall screws spaced 16" o.c. One layer: 1/2" (PABCO® Regular, PABCO Glass® Interior, PABCO® litecore) gypsum panel applied vertically. 2 x 4 wood studs 24" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. 3/4" minimum air space. Two layers 1" x 24" PABCORE® Gypsum Shaftliner, or PABCO GLASS® Shaftliner Type X. Inserted between steel H-Studs between adjacent pairs of gypsum panels. L-shaped aluminum break-away clips. Contact PABCO Tech Services for proper clip attachment for wall height. 3/4" minimum air space. 2 x 4 wood studs 24" o.c. 3-1/2", R-13 glass fiber insulation friction fit into stud cavity. One layer: 1/2" (PABCO® Regular, PABCO Glass® Interior, PABCO® litecore) gypsum panel applied vertically.
<p>Non-Load Bearing Vertical joints staggered on opposite sides Contact PABCO Tech Services for proper clip attachment for wall height</p>		<ul style="list-style-type: none"> 1-5/8" Type S or W drywall screws spaced 16" o.c.

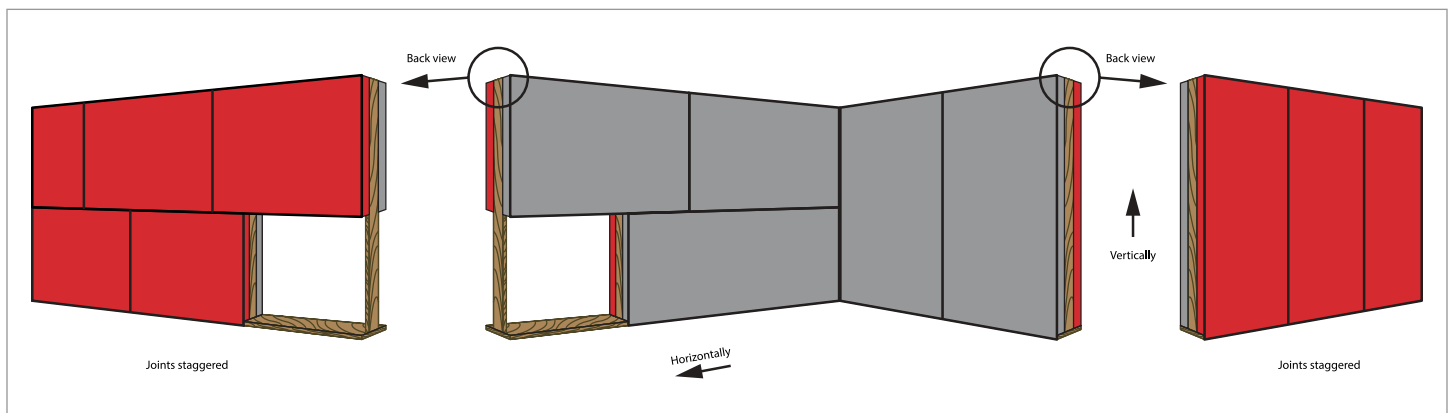
Gypsum Panel Orientation

Horizontal vs vertical vs railroad installation

HORIZONTAL AND VERTICAL INSTALLATION

Most often gypsum panels are installed in a vertical orientation, meaning the board length runs from floor to ceiling. This is best practice for both sound and fire since there is usually no horizontal joint (butt joint) through the wall.

There are instances when builders prefer to “**railroad**” panels in corridors (Chase Walls) so that ductwork penetrations in the plenum spaces can be addressed more efficiently or in healthcare facilities to accommodate wiring, plumbing and other devices into headwall fixtures.



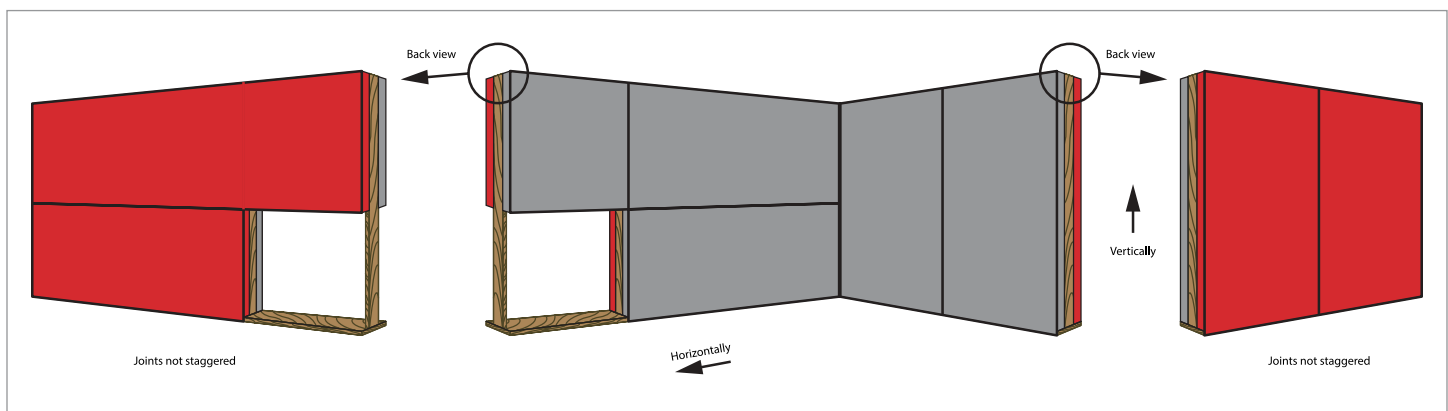
RAILROAD INSTALLATION

Installing gypsum panels horizontally in a “railroad” fashion is becoming a more common practice as builders look for creative ways to manage cost on the job. This technique of lining up panels horizontally on either side of the studs is believed to cut labor costs and decrease production time tables.

A railroad install is one in which the panels are installed horizontally – the length of the board goes across the wall, creating horizontal joint not

backed by a stud and vertical butt joints if the boards do not span the entire length of the wall. In addition to the horizontal orientation, the board joints are not staggered on opposite sides of the wall. Although this practice is not considered best practice, it is an acceptable application method when the assembly is fully fire tested for this application.

Not all gypsum products are approved for this type of an installation. **QuietRock® ES is currently the only internally damped panel that has passed full fire and hose stream tests required for a railroad installation.**



Alternate Fasteners



Substituting screws for nails

So what do you do when you discover that the fire test was done with nails and the sound test was done with screws?

The International Code Council (ICC) has issued an Evaluation Report (ESR-1338, Section 4.2.3.2 Alternate Gypsum Board Fasteners) that allow the substitution of screws for nails in fire rates assemblies provided that the screws meet the following criteria:

- 1. The screw penetration into the framing member is equivalent to the nail penetration
- 2. The screw spacing is the same as the nail spacing
- 3. The cross-sectional area of the screws is equal to that of the specified nails.

Based on information supplied by nail manufacturer, and drywall screw Manufacturer data supplied below, the 6D nail can be substituted for a #8 type W drywall screw.

Nail 					Screw 			
Size	Gauge	Shank Diameter	Shaft Length	Head Diameter	Size	Body Diameter	Length	Head Diameter
3D	14	0.083"	1-1/4"	1/4"	#6	0.103-0.108"	1-1/4"	0.315-0.335"
4D	12	0.109"	1-1/2"	1/4"	#7	0.112-0.117"	1-1/2"	0.315-0.335"
5D	12	0.109"	1-3/4"	1/4"	#7	0.112-0.117"	1-3/4"	0.315-0.335"
6D	11	0.12"	2"	17/64"	#8	0.121-0.126"	2"	0.315-0.335"
Individual manufacturer specifications may vary, please verify your selection based on the known products available in your area.								

Fire Protection

FIRE RESISTIVE PROPERTIES OF GYPSUM:

Gypsum is approximately 21 percent by weight chemically combined water which greatly contributes to its effectiveness as a fire resistive barrier. When gypsum board or gypsum plaster is exposed to fire, the water is slowly released as steam, effectively retarding heat transmission. It can, in a sense, be compared to what happens when a blowtorch is turned on a block of ice. Although the ice is being melted, one can hold a hand on the opposite side without being burned. Even though the ice gets very thin it effectively blocks the transfer of the intense heat and one's hand would not be burned until the ice is melted.

When gypsum-protected wood or steel structural members are exposed to a fire, the chemically combined water (being released as steam) acts as a thermal barrier until this slow process, known as calcination, is completed. The temperature directly behind the plane of calcination is only slightly higher than that of boiling water (212°F), which is significantly lower than the temperature at which steel begins losing strength or wood ignites. Once calcination is complete, the in-place calcined gypsum continues to act as a barrier protecting the underlying structural members from direct exposure to flames.

TYPE X GYPSUM BOARD

ASTM C1396 describes two types of gypsum board - regular and type X - each providing a different degree of fire resistance. Where fire-resistance rated systems are specified, type X gypsum board is typically required to achieve the rating. Type X gypsum board is defined in ASTM C1396 as gypsum board that provides not less than one-hour fire resistance for boards 5/8 inch thick or not less than 3/4-hour fire-resistance rating for boards 1/2 inch thick, applied parallel with and on each side of load bearing 2x4 wood studs spaced 16 inches on center with 6d coated nails, 17/8 inch long, 0.095 inch diameter shank, 1/4 inch diameter heads, spaced 7 inches on center with gypsum board joints staggered 16 inches on each side of the partition and tested in accordance with the requirements of ASTM E119.

In order to qualify for use in this Guide the Gypsum Association requires that 1/2 inch type X gypsum board shall achieve a one-hour fire-resistance rating when applied to a floor-ceiling system as described by GA File Number FC5410.

We incorporate herein by reference all notes and instructions contained in the GA-600 Fire Design Guide.

FIRE RESISTANCE TESTS

All fire-resistance classifications described in this Guide are derived from full-scale fire tests conducted in accordance with the requirements of ASTM E119 or CAN/ULC-S101 (as amended and in effect on the date of the test) by recognized independent laboratories.

Fire-resistance classifications are the results of tests conducted on systems made up of specific materials put together in a specified manner. There are a number of nationally recognized laboratories capable of conducting tests to establish fire-resistance classifications according to the procedures outlined in ASTM E119 or CAN/ULC-S101. The conditions under which tests are conducted are thoroughly detailed and the fire-resistance classification is established as the time at which there is excessive temperature rise, passage of flame, or structural collapse. In addition, failure may result because of penetration by the pressurized hose stream required in the fire test procedure for walls.

With reference to all tested systems, ASTM E119 states:

It is the intent that classifications shall register performance during the period of exposure and shall not be construed as having determined suitability for use after fire exposure.

Comprehensive research by fire protection experts has determined the average combustible content normally present within any given occupancy. In addition, evacuation times, the time required for the contents to be consumed by fire, and the resulting temperature rise have been quantified. Fire-resistance requirements are established accordingly in building codes and similar regulations.

In ASTM E119 fire tests, wall, ceiling, column, and beam systems are exposed in a furnace which reaches the indicated average temperatures at the time stated in the standard time-temperature curve (**Figure 1**) and Appendix X1 of ASTM E119. The unexposed surface of all systems refers to the surface away from the fire during a test. The exposed surface refers to the surface facing the fire.

WALL AND PARTITION SYSTEMS

All walls and partitions tested and classified are required to be at least 100 square feet in area with no edge dimension less than nine feet. Surface temperatures on the unexposed side of the test specimen are measured at a minimum of nine locations.

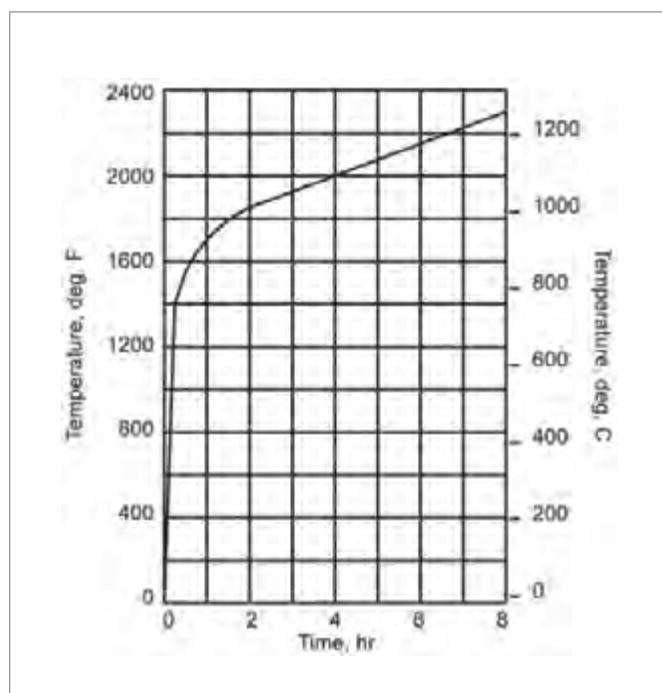
When load-bearing walls and partitions are tested, the applied load is required to simulate the working stresses of the design. Walls and partitions are required to stop flame or hot gases capable of igniting cotton waste. The average temperature of the unexposed surface is not permitted to increase more than 250°F above ambient nor is any individual thermocouple permitted to rise more than 325°F above ambient. A duplicate of the system (rated for one-hour fire resistance or more) is fire tested for one-half the specified fire-resistance period, but no longer than one-hour, after which it is required to withstand the impact, erosion, and cooling effect of a hose stream.

Openings in walls for fire door frames and fire window frames shall be coordinated between the architect, the general contractor, the drywall



contractor, and the frame supplier to ensure that installation details for the wall and the frame are considered. The installation instructions supplied with frames vary and shall be followed to comply with local code requirements. All fire door and fire window assemblies are required to be installed in accordance with ANSI/NFPA 80 and subject also to the conditions, limitations, and/or allowances of their certification label and listing.

Figure 1 - Standard Time-Temperature Curve (ASTM E119)

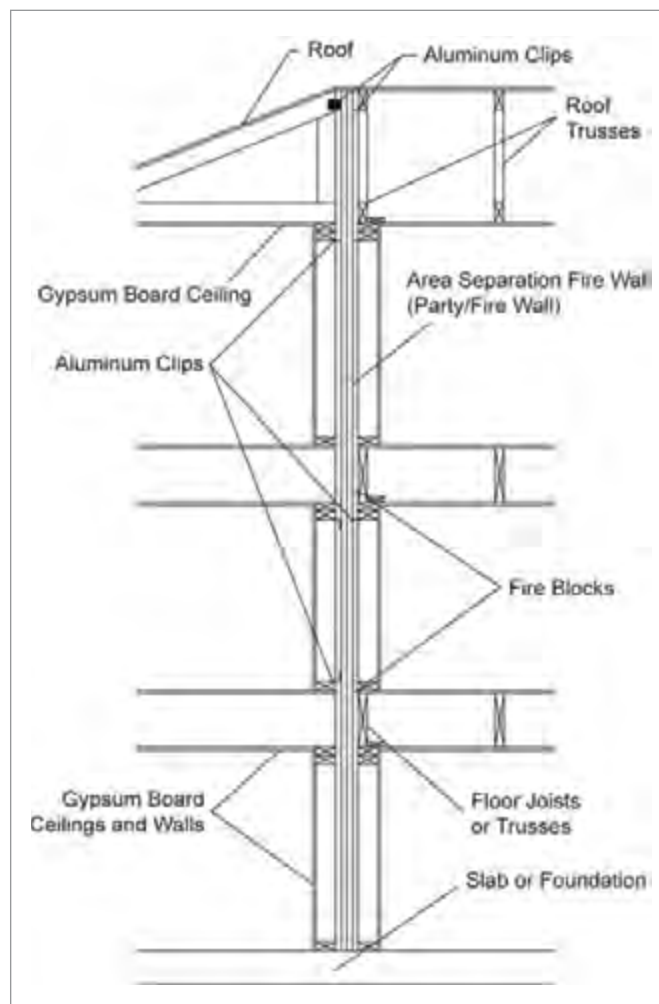


AREA SEPARATION FIRE WALLS (PARTY/FIRE WALLS)

Fire-resistance rated gypsum board systems (solid and cavity types) can serve as area separation fire walls (also known as party walls or fire walls) between adjacent wood frame and steel frame dwelling units such as townhouses, condominiums, and apartments; and in commercial and institutional buildings. These walls are erected one floor at a time, beginning at the foundation and continuing up to or through the roof. At intermediate floors metal floor/ceiling track shall be installed back-to-back to secure the top of the lower section of the partition to the bottom of the next section being installed.

At intermediate floors and other specified locations the area separation fire walls shall be attached to adjacent wood or steel framing on each side with aluminum clips that soften when exposed to fire (Figure 2). If one side of the structure becomes involved in a fire, the clips on the fire side allow collapse of the structure on that side. The clips on the other side support the area separation fire wall keeping it in place, thereby protecting the adjacent structure. Consult PABCO® Gypsum Technical Services and the PABCO® Gypsum Area Separations Wall Guide for clip detail, placement, and height limitations. Openings and through penetrations, including protected openings and penetrations, are not permitted in the area separation fire walls contained in this Guide.

Figure 2 - Typical Gypsum Board Area Separation Fire Wall Construction



CEILING OPENINGS

Many fire-resistance rated floor-ceiling systems have been tested with openings through the ceiling membrane for air ducts, electrical outlets, and lighting fixtures.

Building codes permit air duct openings in most ceiling systems when the air duct openings are protected with approved ceiling dampers. Building codes also permit membrane penetrations in maximum two-hour fire-resistance-rated horizontal systems by steel outlet boxes that do not exceed 16 square inches in area provided the aggregate area of such penetrations does not exceed 100 square inches in any 100 square feet of ceiling area and the annular space between the ceiling membrane and the box does not exceed 1/8 inch.

Many approved recessed lighting fixtures require special protection. Consult the fire test report or listing for the specific system for protection details and the opening area limitation.

SMOKE BARRIERS

Building codes require certain designated wall and ceiling systems to function as “smoke barriers” which are defined in the codes as continuous membranes that resist the passage of smoke. Fire-resistive gypsum systems with perimeters and penetrations sealed to achieve listed STCs also function to resist the passage of smoke.

Minimum one-hour fire-resistance rated gypsum board systems with joints finished in accordance with Level 1 as specified in GA-214 and perimeters, openings, and penetrations sealed as required by the applicable building code satisfy building code requirements for a smoke barrier.

SURFACE BURNING CHARACTERISTICS

The test method used to establish surface burning characteristics is ASTM E84 or CAN/ULC-S102, commonly referred to as the Tunnel Test. This test measures the relative flame spread and relative amount of smoke generated by the material being tested when compared to inorganic reinforced cement board and red oak flooring. The table below lists typical surface burning characteristics for gypsum products as well as the standard materials referenced in the test method.

Surface burning characteristics are intended to be used as a guide in the selection and use of interior finish materials and are obtained under controlled laboratory conditions for requirements.

SURFACE BURNING CHARACTERISTICS		
Material	Flame Spread	Smoke Developed
Inorganic Reinforced Cement Board	0	0
Gypsum Plaster Glass Mat Gypsum	0	0
Substrate for Use as Sheathing	0	0
Fiber Reinforced Gypsum Panels	5	0
Gypsum Lath	10	0
Exterior Gypsum Soffit Board	15	0
Gypsum Wallboard Gypsum Sheathing	15	0
Water-Resistant Gypsum Backing Board	15	0
Red Oak	100	100

Refer to the GA-600 for a more in depth discussion on fire controlled systems.

Glossary

Common terminology and definitions

ABSORPTION

Energy dissipation in materials wherein the energy is transferred into rather than reflected from or transmitted through the material. When a sound wave comes in contact with a surface, part of the acoustic energy is “absorbed” into the material and transferred into very small amounts of heat. The amount of absorbed sound energy is proportional to the amount of energy reflected back from the surface. This is not to be confused with **sound transmission**, which only characterizes the amount of sound energy transmitted through the surface.

In general, soft or porous materials absorb more sound energy than smooth, rigid materials. The absorption of specific materials is characterized by the absorption coefficient. The amount of sound absorption within a room can be quantified by the absorption area of the room surfaces, or the total absorption area. Absorption area is calculated from the room dimensions and the absorption coefficients of each of the room surfaces, and is particularly useful in the design of concert halls and recording studios.

ACOUSTICS

1. Physics. The category of physical phenomena associated with sound and sound waves.
2. The characteristics, measurements, and metrics applied to building structures that determine the audibility, fidelity, intelligibility, and comfort levels of the sound within.

ACOUSTICAL SEALANT

Any material (caulking, putty, or liquid) designed for application to a surface or fissure in order to form a resilient (non-hardening) barrier, thereby reducing the risk of sound leakage through penetrations or gaps in assembly partitions.

COINCIDENCE FREQUENCY

The frequency at which the acoustic wave number of the incident sound wave matches the structural wave number of the surface (panel, plate, beam, or string). It can usually be observed in STC reports where there is sudden drop in a sound transmission loss (STL) curve—normally at high frequencies—that would have otherwise followed a relatively linear path.

CONSTRAINED-LAYER DAMPING (CLD)

A vibration isolation technique that employs the application of materials that are viscoelastic—materials that can deform easily when stressed and then return back into their original form—between rigid plates or panels. The resulting composite panel uses shear-loading and vibration decay to reduce noise by 10 dB or more versus traditional treatments. **QuietRock** is an example of a constrained-layer damping (CLD) panel.

DAMPING

Any mechanism that causes dissipation, or loss, in energy.

Damping is not to be confused with dampening, which means “to make wet”.

DECIBEL (dB)

A base-ten logarithmic— \log_{10} , thus the “deci” in the unit name—ratio that is normally calculated as the ratio between measured energy and a reference energy value. For most building noise control measurements the decibel is calculated as 20 times the base-ten logarithm of the ratio between the measured sound pressure and a reference sound pressure (20 μ Pa). Decibels are logarithmic, not linear. Therefore, decibel levels of two different sound sources cannot be added linearly ($2+2=4$). For example,
 $80 \text{ dB} + 80 \text{ dB} = 83 \text{ dB}$.

DECOUPLING

The separation of mechanically- or structurally-coupled systems so that they may operate—or in regard to acoustics, vibrate—independently. Decoupling common to the building noise control industry involves mechanically isolating the gypsum wallboard from the structural members via materials such as resilient channels or sound isolation clips.

EXTENSIONAL DAMPING

Extensional damping is achieved by applying a surface damping compound, such as QuietCoat® to a nonporous metal or plastic substrate.

FIELD MEASUREMENT

Measurements made on-site in rooms or buildings instead of a laboratory. Some examples of field building noise measurements include:

ISPL – Impact Sound Pressure Level is a measurement of the impact noise transmitted from one floor to another

RTNISPL – Reverberation Time Normalized Impact Sound Pressure Level is a measurement of the impact sound pressure level that is normalized based on a reverberation time of 0.5 seconds.

ANISPL – Absorption Normalized Impact Sound Pressure Level is a measurement of the impact sound pressure level that is normalized based on the average absorption area of the test room.

NR – Noise Reduction is a measurement of the sound transmission loss through partitions without accounting for reverberation time, absorption, and flanking paths

NNR – Normalized Noise Reduction is a measurement of the sound transmission loss through partitions that is normalized based on a reverberation times of 0.5 seconds

ATL – Apparent Transmission Loss is a measurement of the sound transmission loss through partitions that is normalized based on the average absorption area of the test room

FTL – Field Transmission loss is a measurement of the sound transmission loss through partitions wherein all possible flanking paths and sound leakage points are treated before measurement and wherein the measurement is normalized based on average absorption area of the test room

FIELD METRICS

Calculations from measured data that normally result in a single-number rating used for characterizing materials, structures, and other physical phenomena. Field building noise control metrics attempt to characterize the performance of an installed building partition. Field metrics are not calculated based on the data measured in laboratories. Examples of field metrics used to characterize building noise control include:

ISR – Impact Sound Reduction is calculated from the ISPL measurement by fitting the ISR contour curve to the ISPL measurement data

NISR – Normalized Impact Sound Reduction is calculated from the RTNISPL measurement by fitting the NISR contour curve to the RTNISPL measurement data

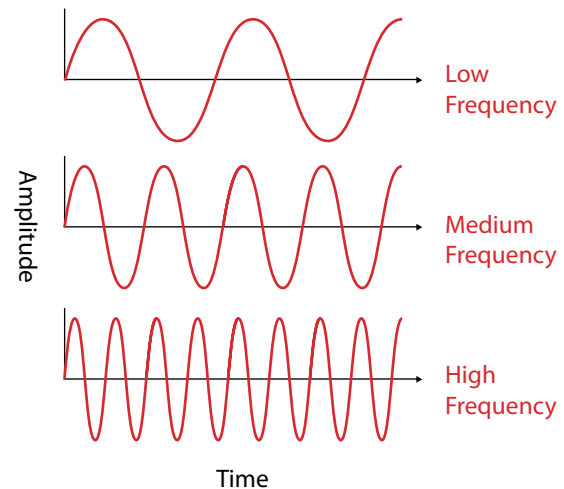
AIIC – Apparent Impact Insulation Class is calculated from the ANISPL measurement by fitting the AIIC contour curve to the ANISPL measurement data

NIC – Noise Isolation Class is calculated from the NR measurement by fitting the NIC contour curve to the NR measurement data

NNIC – Normalized Noise Isolation Class is calculated from the NNR measurement by fitting the NNIC contour curve to the NNR measurement data

ASTC – Apparent Sound Isolation Class is calculated from the ATL measurement by fitting the ASTC contour curve to the ATL measurement data

FSTC – Field Sound Transmission Class is calculated from the FTL measurement by fitting the FSTC contour curve to the FTL measurement data



LAB METRICS

Similar to Field Metrics except that the data is collected in a controlled laboratory environment and not in the field. Examples of laboratory metrics used to characterize materials and assemblies for building noise control include:

IIC – Impact Insulation Class is calculated from the Normalized Impact Sound Pressure Level (NISPL), the impact sound pressure level measured in a laboratory and normalized based on the absorption of a standard room, by fitting the NISPL data to the IIC contour curve

STC – Sound Transmission Class is calculated from the STL by fitting the STL data to the STC contour curve

FLANKING

Passing around. As with sound, a flanking path is the indirect transmission of sound around a partition of interest, frequently through building elements such as adjacent wall partitions, open plenum ceilings, window mullions, and HVAC ducts.

FREE-LAYER DAMPING

See [Extensional Damping](#).

FREQUENCY

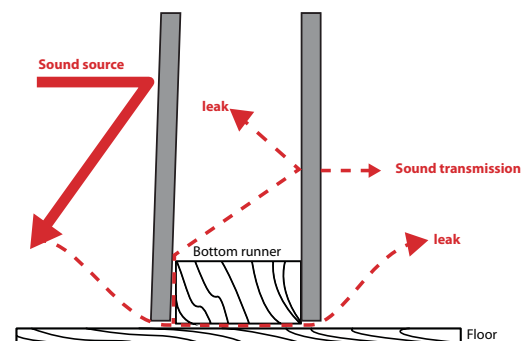
Frequency is measured as the number of wave oscillations per second. The unit for frequency is Hertz (Hz). A 1 Hz wave oscillates only once per second. Frequency is the property of a sound wave related to its pitch. The audible frequency range for humans is 20 Hz to 20,000 Hz (20 kHz).

GAUGE

A unit of measure of sheet metal or wire. For sheet metal, the scale is retrogressive (higher gauge means lower thickness) and starts with 10-gauge representing a thickness of 0.1345 inches. As the gauge number increases the thickness decreases by 10%.

LEAKAGE

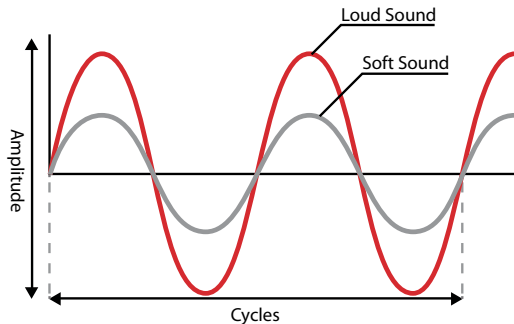
The loss of all or part of a useful agent. In the case of sound leakage, it is the flow of sound through an insulator or assembly component, typically via a crack or untreated segment of a wall, a wall penetration or through a flanking path. Sound leakage can most often be eliminated with acoustic caulking, or putty around perimeters, joints or other penetrations.



LOUDNESS

How we perceive fluctuations in the amplitude of sound pressure waves, measured in phons or sones. Loudness levels do not directly result from microphone **sound pressure level (SPL)** measurements themselves. Instead, the SPL at each distinct frequency is matched to an equal-loudness contour. Equal-loudness contours are data curves spanning the audible frequency range. Each curve varies according to the known

perceived loudness of the human ear at each frequency and is given a phon value. The phons can then be used to calculate the more linear sone value.



LOUDSPEAKER

A transducer that converts an electrical source signal into sound with the combination of an electro-magnetic device coupled with a diaphragm, similar to the design of a microphone, only a loudspeaker radiates acoustic energy rather than receiving it. Loudspeakers are most commonly used to reproduce speech and music. Field and laboratory sound testing often requires the use of loudspeakers to generate noise.

MASS

The property of an object, measured in grams, that is determined by its resistance to acceleration by a given force. Mass is not the same as weight.

MICROPHONE

A transducer or sensor that converts incoming sound waves into an electrical signal. Sound waves incident on the microphone diaphragm are converted into equivalent fluctuations in an electric signal that is transmitted to a measurement device or audio converter.

NOISE CRITERIA (NC)

A single-number metric that is used to rate the interior noise levels in enclosed spaces. The NC is calculated by fitting the interior Sound Pressure Level (SPL) measurement data to a set of predefined NC curves over a specified frequency range: from 63 Hz to 8,000 Hz. The value of the lowest NC curve that the SPL measurement data does not exceed is reported as the NC value of the enclosure.

NOISE

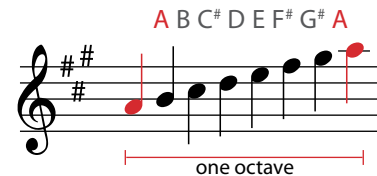
Unwanted sound. Noise is caused by numerous sound sources such as air handling equipment, construction equipment and machinery, and even computers and electric lighting. It has been known to cause increases in heart rate and stress levels, especially in the work place. "Noise pollution" is a term and is becoming common, as population density and industry rises.

NOISE REDUCTION COEFFICIENT (NRC)

A single-number rating that is related to the sound absorption of materials and surfaces. NRC values approaching zero characterize highly reflective surfaces and NRC values approaching or exceeding one characterize highly absorptive surfaces.

OCTAVE

The interval between two frequencies, based on a power of two. In music, the most common note used for tuning an orchestra is an A at 440 Hz. The A-note one octave higher is found at 880 Hz, twice the value of A at 440 Hz, while the A-note that is one octave lower will be found at 220 Hz. A major scale is typically written using eight notes with the interval between the first and last notes as one octave, or twice the frequency value.



1/3 OCTAVE

Similar to an octave-band measurement, but with two additional measured frequencies per octave. Whereas an octave-band measurement will be made at frequencies such as 125, 250, 500, and 1,000 Hz, the same measurement frequency range in one-third octave bands will have data at 125, 160, 200, 250, 315, 400, 500, 630, 800, and 1,000 Hz. For example, one-third points would approximate:

Note	Note Frequency (Hz)	Testing Frequency (Hz)
G2	98.0	100
B2	123.5	125
D#3	155.6	160
G3	196.0	200

OUTDOOR-INDOOR TRANSMISSION CLASS (OITC)

A laboratory and field metric that is used to characterize and rate the transmission of sound through exterior building facades and other elements. The OITC is measured and calculated from an A-weighted Sound Pressure Level (SPL) measurement of the sound source outside the building facade and the Sound Transmission Loss (STL), Outdoor-Indoor Transmission Loss (OITL), or Apparent Outdoor-Indoor Transmission Loss (AOITL).

REFLECTION

The physical phenomena that occurs when energy incident upon any surface or barrier is propagated back in the opposite direction of the incident energy. For sound in buildings, reflection is the propagation of a sound wave back into the enclosed space, resulting in **reverberation**.

REVERBERATION

The echo-effect in enclosures or acoustically reflective environments wherein sound is reflected from rigid or semi-rigid surfaces such as interior building partitions and concrete barriers. Reverberation Time (T60) is measured in seconds and, for building noise control measurements, is the amount of time it takes for the Sound Pressure Level (SPL) at each frequency to drop by 60 dB.



SHEAR

The deformation of solid objects such as beams, panels, and plates that occurs when one side of the material is forced in one direction and a parallel side simultaneously experiences an equal force that causes it to remain rigid. For example, when a foam pad is rigidly glued to a plywood sub-floor and a child attempts to slide across the floor on the foam, the foam will undergo a shear deformation wherein the side of the foam that is glued to the sub-floor remains rigid and the surface of the foam where the child is sliding will move in the same direction as the child. Gypsum wallboard panels that are rigidly attached to assembly partition framing experience shear deformation in the presence of sound waves.

SHORT CIRCUIT

The unintended contact of mechanical or electrical components that results in the transfer of energy directly through electrical circuitry or mechanically coupled structures.

In the case of building noise control, short-circuiting through resilient channels (RC) or other isolating components results in a partial or even full (if extreme) failure of the assembly to effectively isolate sound between rooms.

SOUND

The audible result of a pressure wave that is transmitted through a medium such as air or water; caused by the vibration of solid materials or turbulent fluctuations in air and other gases.

SOUND PRESSURE LEVEL (SPL)

Measurement of radiated sound pressure, in dB, usually by a microphone.

SOUND TRANSMISSION LEVEL (STL)

A laboratory measurement, in dB, of the transmitted Sound Pressure Level (SPL) through a partition dividing two spaces.

SOUNDPROOF

A commonly-used term that usually implies an intent to provide additional sound isolation to a partition, room, barrier, or building. Technically, the word "soundproof" is indicative of the absence of all sound, including ambient noise: a completely unattainable goal.

Building partitions can, however, be built with an acceptable degree of sound isolation.

SPEECH PRIVACY CLASS (SPC)

A laboratory or field metric that is calculated based on a measurement of the sound transmission loss between two enclosed rooms as well as the background noise.

For laboratory measurements, the SPC is calculated by arithmetically averaging the Sound Transmission Loss (STL) of the laboratory assembly partition from 160 Hz to 5,000 Hz and assuming an average background noise level based on either project-related background noise data for the partition in concern or on a standard background level cited in current research documents.

The average STL is then added to the average background noise level, plus one, for the Speech Privacy Class (SPC) result.

In the field, the SPC calculation is based on the measurement of the STL between two enclosed spaces for multiple noise source (loudspeaker) locations and at multiple locations within the receiving room, or the room

on the other side of the partition from the source room. The background noise level is then measured at each of the microphone locations. The STL and background noise levels are averaged between all loudspeaker and microphone locations and then, similar to the laboratory calculation, the SPC is calculated as the sum of the arithmetically-averaged STL and background noise level from 160 Hz to 5,000 Hz.

TRANSMISSION

The transfer of energy from point to another through a barrier.

Transmitted sound in buildings is primarily caused by:

Airborne noise - human speech, television, home theater systems, and the like cause sound pressure waves in the air that transmit through partitions.

Impact noise - high heel noise, closing cupboards, machinery, and other collision- or contact-based noise sources result in structural vibration that transmits through partitions via framing and other rigid connections.

Flanking noise - any airborne or impact noise transmitted from one space to another indirectly (not directly through the partition itself) such as through continuous sub-floors, window mullions, and open plenum ceilings.

METRIC CONVERSIONS

Gypsum Panel Product Thickness

1/4 inch - 6.4 mm
3/8 inch - 9.5 mm
1/2 inch - 12.7 mm
5/8 inch - 15.9 mm
3/4 inch - 19.0 mm
1 inch - 25.4 mm

Framing Spacing

8 inch - 203 mm
12 inch - 305 mm
16 inch - 406 mm
24 inch - 610 mm

Fastener Spacing

2 inch - 51 mm
2-1/2 inch - 64 mm
7 inch - 178 mm
8 inch - 203 mm
12 inch - 305 mm
16 inch - 406 mm
24 inch - 610 mm

Temperature

40°F - 5°C
50°F - 10°C
125°F - 52°C

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CURRENT UPDATED INFORMATION:

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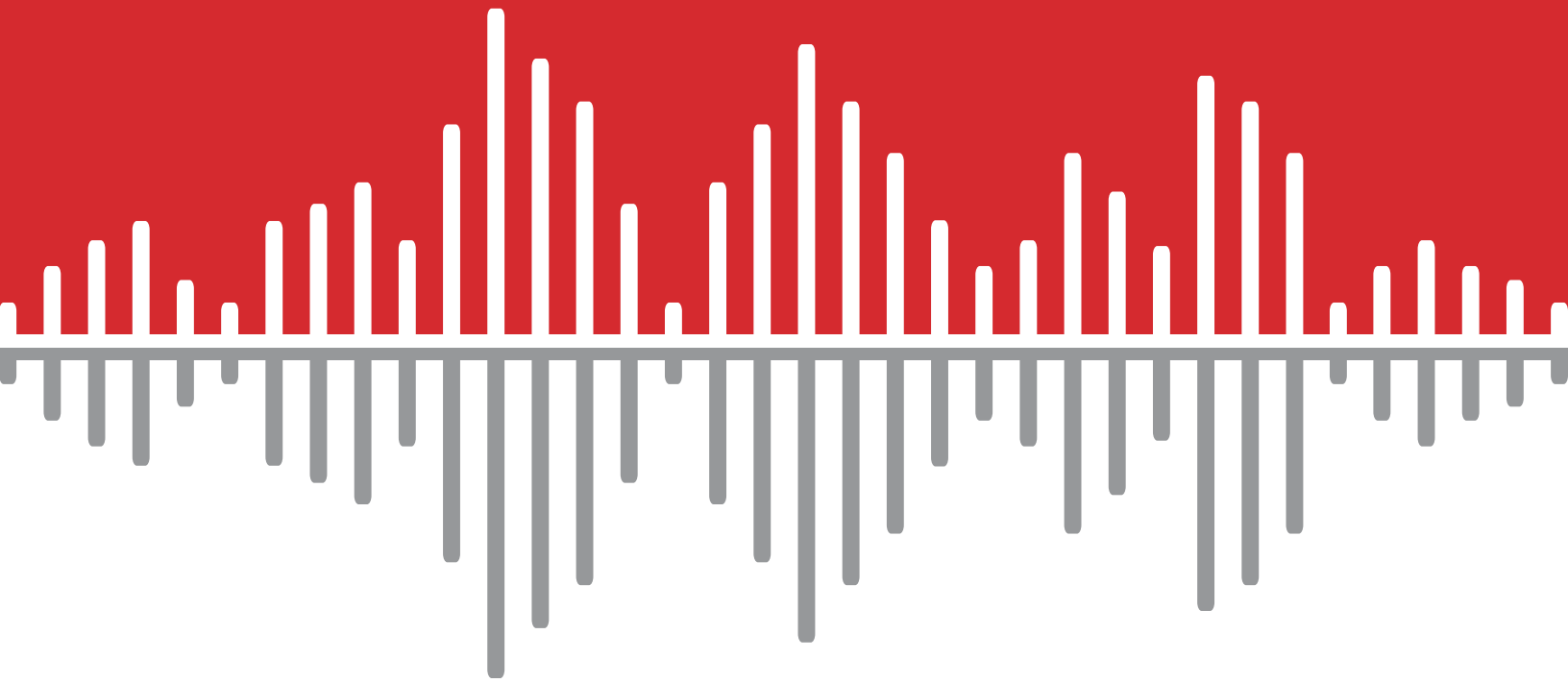


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