GlasRoc® *SHAFTLINER*

For Area Separation Firewalls

CertainTeed
SAINT-GOBAIN

GlasRoc® Shaftliner is a specially formulated product for applications where enhanced moisture and mold resistance is preferred. It can be used for firewalls in standard multi-family residential applications.

GlasRoc® Shaftliner Type X

GlasRoc® Shaftliner is a paperless mold and moisture resistant gypsum board combining reinforcing glass mats and a specially formulated fire and moisture resistive, non combustible core.

GlasRoc® Shaftliner offers:

• Long term protection (12 months) to weather exposure.

• A superior water resistant surface that does not inhibit water vapor permeance.

• Excellent fire resistance properties, and numerous fire rated designs.

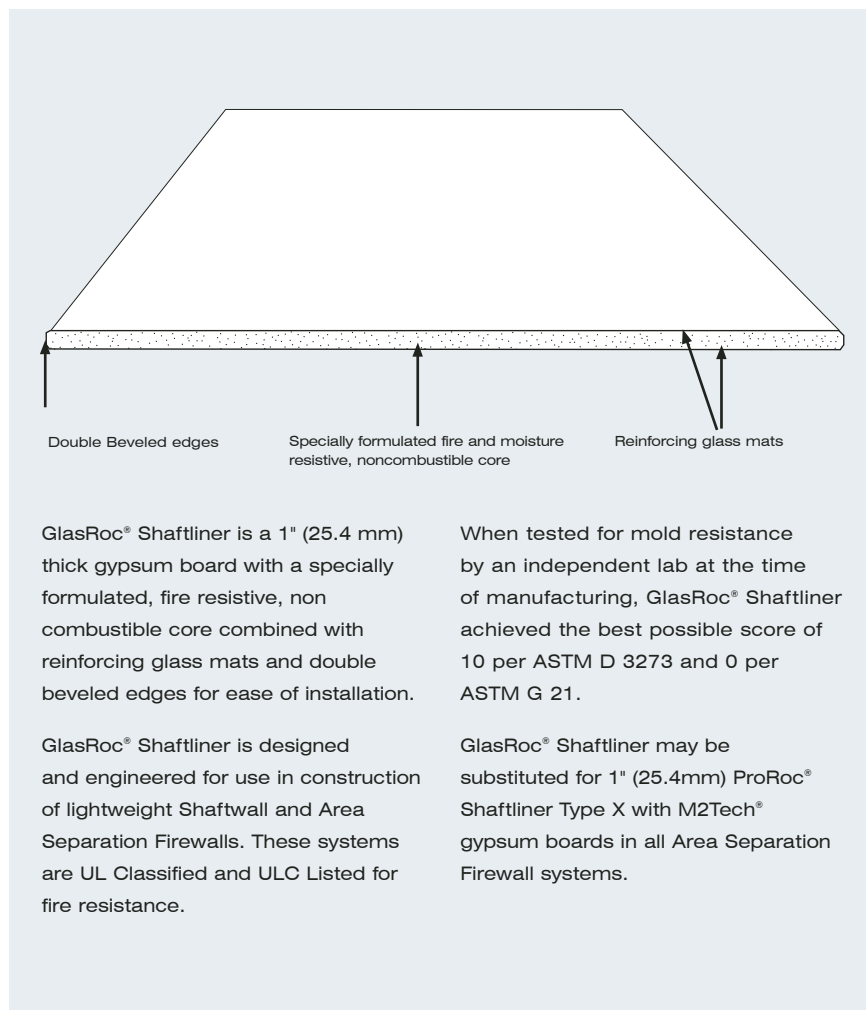• Resists mold growth per ASTM D 3273 and ASTM G 21.

The GlasRoc® Shaftliner Type X advantage…

GlasRoc® Shaftliner and ProRoc® Moisture and Mold Resistant Gypsum Boards with M2Tech® can be combined to offer superior mold resistance performance for Area Separation Firewalls.

Gypsum Area Separation Firewall systems replace traditional masonry for fire separation between multi-family units. Some inherent advantages of gypsum Area Separation Firewalls are: lighter weight, reduced thickness, ease and speed of installation, no requirement for scaffolding, and no requirement for an additional trade on the job.

Area Separation Firewalls offer the advantages of fire resistance and noise attenuation between adjoining housing units. These walls offer a 2-hour fire resistance rating line of defense between units and provide sound ratings up to STC 61.
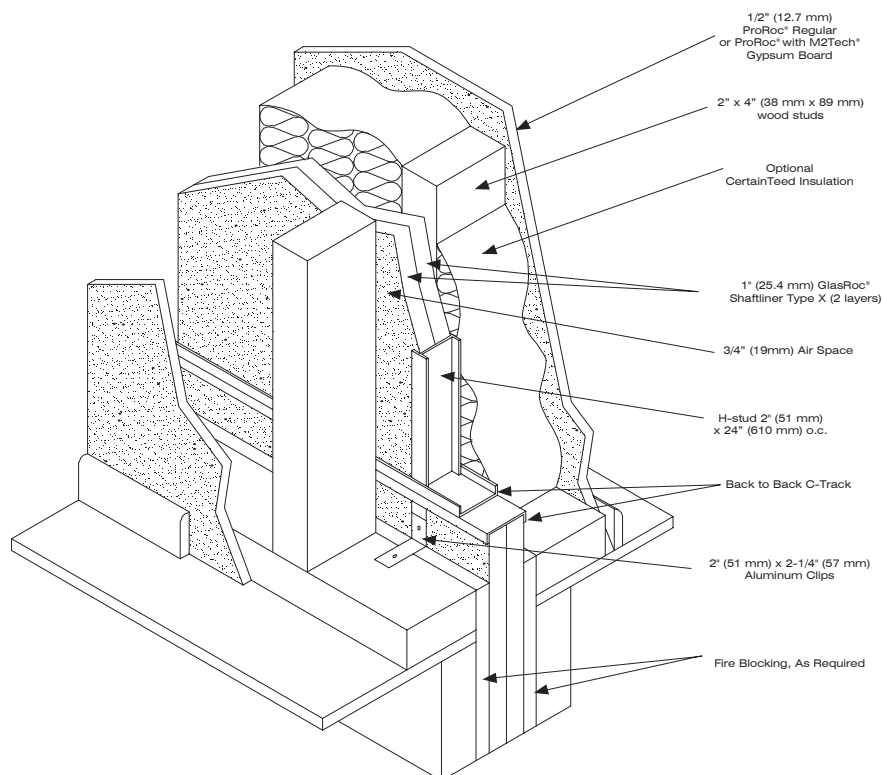

Double Beveled edges   Specially formulated fire and moisture resistive, noncombustible core   Reinforcing glass mats

GlasRoc® Shaftliner is a 1" (25.4 mm) thick gypsum board with a specially formulated, fire resistive, non combustible core combined with reinforcing glass mats and double beveled edges for ease of installation.

GlasRoc® Shaftliner is designed and engineered for use in construction of lightweight Shaftwall and Area Separation Firewalls. These systems are UL Classified and ULC Listed for fire resistance.

When tested for mold resistance by an independent lab at the time of manufacturing, GlasRoc® Shaftliner achieved the best possible score of 10 per ASTM D 3273 and 0 per ASTM G 21.

GlasRoc® Shaftliner may be substituted for 1" (25.4mm) ProRoc® Shaftliner Type X with M2Tech® gypsum boards in all Area Separation Firewall systems.

Area Separation Firewalls

GlasRoc® Shaftliner is used in conjunction with ProRoc® gypsum board products in Area Separation Firewalls.

Area Separation Firewalls are solid type separation walls assembled using 1" (25.4 mm) GlasRoc® Shaftliner gypsum board, metal framing and 1/2" (12.7 mm) ProRoc® Moisture and Mold Resistant Board with M2Tech® or ProRoc® Regular Gypsum Board for the interior finish. The firewall is easily stacked, floor to floor, allowing progressive construction.

Breakaway aluminum clips are used to attach the interior wall to adjacent structural metal framing and provide lateral support. When one side is exposed to fire, the clips yield from the heat and break away allowing the gypsum board interior wall on the fire side to collapse. Thus the Area Separation Firewall remains intact to protect neighboring spaces.

Area Separation Firewalls are easier and faster to construct, lighter weight, and take up less space than masonry wall systems.

1/2" (12.7 mm)
ProRoc® Regular
or ProRoc® with M2Tech®
Gypsum Board

2" x 4" (38 mm x 89 mm)
wood studs

Optional
CertainTeed Insulation

1" (25.4 mm) GlasRoc®
Shaftliner Type X (2 layers)

3/4" (19mm) Air Space

H-stud 2" (51 mm)
x 24" (610 mm) o.c.

Back to Back C-Track

2" (51 mm) x 2-1/4" (57 mm)
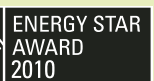Aluminum Clips

Fire Blocking, As Required

Thickness: 1" (25.4 mm)
Widths: 2' (610 mm) Standard
Lengths: 8' (2440 mm), 10' (3050 mm) and 12' (3660 mm) Standard
Edges: Double beveled

buildingresponsibly™

CertainTeed respects the environment through the responsible development of sustainable building products and systems.

U.S. GREEN BUILDING COUNCIL MEMBER®

CANADA GREEN BUILDING COUNCIL · CONSEIL DU BÂTIMENT DURABLE DU CANADA MEMBER

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Working With the Product

Handling and Storage

GlasRoc® gypsum boards should be stacked flat on a smooth, level surface, not stored directly on the ground. When spacers are used, position them closely enough together to minimize warpage. Care should be taken to prevent damage to edges and corners. Always keep gypsum board dry prior to installation.

CertainTeed assumes no responsibility for consequential damages that may result from the presence of standing water or where moisture is in direct contact with Area Separation Firewall system components.

Cutting

The score and snap method is a fast and efficient way to cut gypsum board.

Steps:

1. On the logo side, position a straight edge along the line of the intended cut.
2. Score the glass mat sheet with a knife or other suitable tool.
3. With a quick, firm motion, snap back away from the face.

4. Score the back glass mat with a knife or other suitable tool and then snap the piece in the opposite direction.
5. Smooth all cut ends and edges to ensure tight joints.

To make cut outs, score around the perimeter on the logo side and back side and tap out the waste piece from the logo side. Cut outs can also be made with a drywall saw. Gypsum boards can also be cut with a saw. Safety glasses should always be worn when using power tools. For information on avoiding dust inhalation, refer to the Safety Data Sheet available on our web site, www.certainteed.com.

Installation

Steel framing and installation of 1" (25.4 mm) GlasRoc® Shaftliner gypsum board for solid type Area Separation Firewalls are used as the common wall of one unit. An Area Separation Firewall can be constructed by following these steps before continuing to frame the adjacent unit.

1. Attach 2" (51 mm) wide C-Track to slab at bottom of wall using suitable fasteners at a maximum of 24" (600 mm) o.c. Allow a 3/4" (19 mm) space from wood stud framing on each side of the area separation firewall.

2. Install vertical C-Track at the beginning of the wall and support as needed.

3. Insert two sections of 1" (25.4 mm) GlasRoc® Shaftliner, with the logo side facing weather exposure during construction, in the bottom channel and plumb to vertical C-Track.

4. Install 1" (25.4 mm) GlasRoc® Shaftliner gypsum boards vertically. Continue wall as needed by placing H-Studs between the proceeding panels every 24" (610 mm) for the length of the wall and enclose the end boards with vertical C-Track.

5. Cap the wall assembly before continuing higher using C-Track fastened to the H-Studs on alternate sides with 3/8" (10 mm) Type S screws. A second C-Track for the next row of

shaftliner panels is then placed back to back with end joints staggered at least 12" (300 mm) o.c. and fastened with double 3/8" (10 mm) Type S screws at ends and 24" (600 mm) o.c.

6. Attachment Clips: Aluminum angle, 0.063" (1.6 mm) thick, min. 2" (51 mm) wide with min. 2" (51 mm) and 2-1/4" (57 mm) legs. Clips secured with Type S screws 3/8" (10 mm) long to H-Studs and with Type W screws 1-1/4" (32 mm) long to wood framing through holes provided in the clip. Clips spaced a max of 10' (3050 mm) o.c. vertically between wood framing and H-Studs for separation firewalls up to 23' (7000 mm) high. For separation firewalls up to 44' (13400 mm) high, clips spaced as described above for the upper 24' (7300 mm) and the remaining wall area below requires clips spaced a max. 5' (1525 mm) o.c. vertically between wood framing and H-Studs.

7. This assembly can be repeated, per plan, up to 44 feet (13400 mm) high. Cap the top of the assembly with 2" (51 mm) C-Track and protect the entire installation from moisture.

8. Where required, use an approved acoustical sealant such as Green Glue Noiseproofing Sealant to caulk around the perimeter of wall sections.

Interior Finish Wall:

9. Wood Studs - Nom 2" (38 mm) by 4" (89 mm) max. spaced 24" (610 mm) o.c. Studs cross-braced at mid-height where necessary for clip attachment. Min. 3/4" (19 mm) separation between wood framing and Area Separation Firewall.

10. Insulation (Optional) - CertainTeed CertaSound™ NoiseReducer™, Fiber Glass Building Insulation, or equivalent, installed between wood studs to meet listed STC performance.

11. ProRoc® Regular gypsum board or ProRoc® Moisture and Mold Resistant Gypsum Board with M2Tech®, 1/2" (12.7 mm) thick, 4' (1220 mm) wide, applied either horizontally or vertically. Gypsum board attached to studs with 1-1/4" (32 mm) long steel drywall nails or 1-1/4" (32 mm) Type W drywall screws spaced 8" (200 mm) o.c.

Vertical joints located over studs. Joints and fasteners finished with ProRoc® Finishing system.

Surface Preparation of Finished Sides

Joints, corners and fastener heads on the logo side shall be finished in accordance with ASTM C 840, GA-214, GA-216, CAN/CSA-A82.31, GA Fire Resistance Design Manual GA-600 and joint compound manufacturer's instructions. Joint compound shall comply with ASTM C 475.

1. No surface treatment shall be done until the interior temperature has been maintained at a minimum of 50°F (10°C) for at least 48 hours prior to application of compounds and until all materials have completely dried. Adequate continuous ventilation must also be provided.
2. Fill and level joints with ProRoc® joint compound.
3. Embed tape into the wet compound and allow to dry. For inside corners, crease the tape and work it into joint.
4. Apply a second coat of compound across the joint and feather to approximately 4" (100 mm) on each side.
5. Apply a third coat and feather to approximately 6" (150 mm) on each side.
6. Allow each coat to dry before proceeding.
7. Attach corner bead to outside corners and apply three coats of joint compound. Feather out each coat as described in steps 4-6.
8. Spot cover all fastener heads with three coats of joint compound applied in different directions.
9. Lightly sand the last coat of all treated areas, taking care not to rough the surrounding gypsum board paper. Smoothing can also be accomplished with a damp sponge.

Finishing Interior Walls

ProRoc® gypsum board can be finished with paint, texture or wallpaper. High quality primer/sealer must be used prior to any type of final decoration. For high gloss paint and severe lighting conditions, a thin skim coat of joint compound or ProRoc® Level V Wall/Ceiling Primer Surfacer should be applied across the entire surface (Level 5 Finish). This will help minimize the irregularities and porosity differences
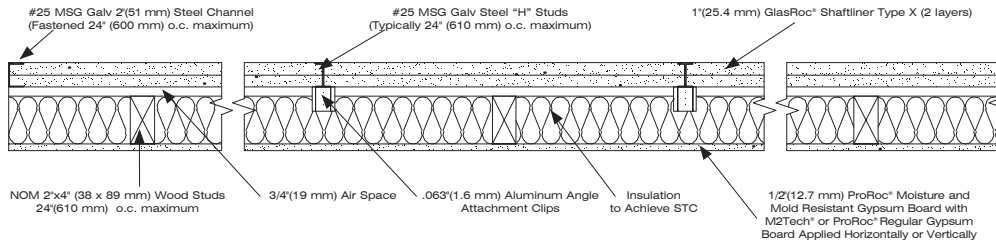
between the materials. Refer to GA-214, GA-216, CAN/CSA-A82.31 and ASTM C 840 for additional finishing instructions. Finishing is not required on Area Separation Firewall.

Limitations

• Area Separation Firewalls are for non-loadbearing partitions only.

• ProRoc® gypsum board must not be used in areas that are continuously or repeatedly exposed to excessive moisture or dampness.

• Systems shall not be exposed to sustained temperatures exceeding 125°F (52°C).

• GlasRoc® and ProRoc® gypsum boards should not come in direct contact with concrete, masonry or other surfaces that have a high moisture content.

• Unsupported wall height between floors should not exceed 12' (3660 mm). The assembly may be used in buildings up to 4 stories with a total height not to exceed 44' (13400 mm).

• Penetrations in Area Separation Firewalls are usually not permitted by code authorities.Consult your local building code authority.

EXPOSED TO FIRE FROM AREA SEPARATION FIREWALL SIDE ONLY

#25 MSG Galv 2"(51 mm) Steel Channel (Fastened 24" (600 mm) o.c. maximum)

#25 MSG Galv Steel "H" Studs (Typically 24" (610 mm) o.c. maximum)

1"(25.4 mm) GlasRoc® Shaftliner Type X (2 layers)

NOM 2"x4" (38 x 89 mm) Wood Studs 24"(610 mm) o.c. maximum

3/4"(19 mm) Air Space

.063"(1.6 mm) Aluminum Angle Attachment Clips

Insulation to Achieve STC

1/2"(12.7 mm) ProRoc® Moisture and Mold Resistant Gypsum Board with M2Tech® or ProRoc® Regular Gypsum Board Applied Horizontally or Vertically
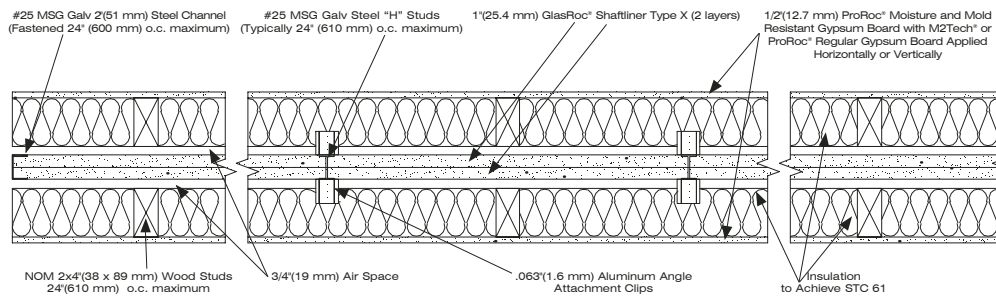
FIRE TEST
UL U366, ULC W311

SOUND TEST
RAL-TL00-177
STC 57

THICKNESS
6-3/4" (172 mm)

APPROX. WT.
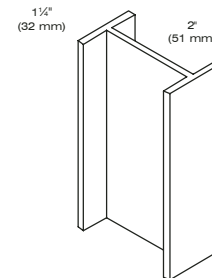10 psf (49 kg/m²)

EXPOSED TO FIRE FROM EITHER SIDE

#25 MSG Galv 2"(51 mm) Steel Channel (Fastened 24" (600 mm) o.c. maximum)

#25 MSG Galv Steel "H" Studs (Typically 24" (610 mm) o.c. maximum)

1"(25.4 mm) GlasRoc® Shaftliner Type X (2 layers)

1/2"(12.7 mm) ProRoc® Moisture and Mold Resistant Gypsum Board with M2Tech® or ProRoc® Regular Gypsum Board Applied Horizontally or Vertically

NOM 2x4"(38 x 89 mm) Wood Studs 24"(610 mm) o.c. maximum

3/4"(19 mm) Air Space

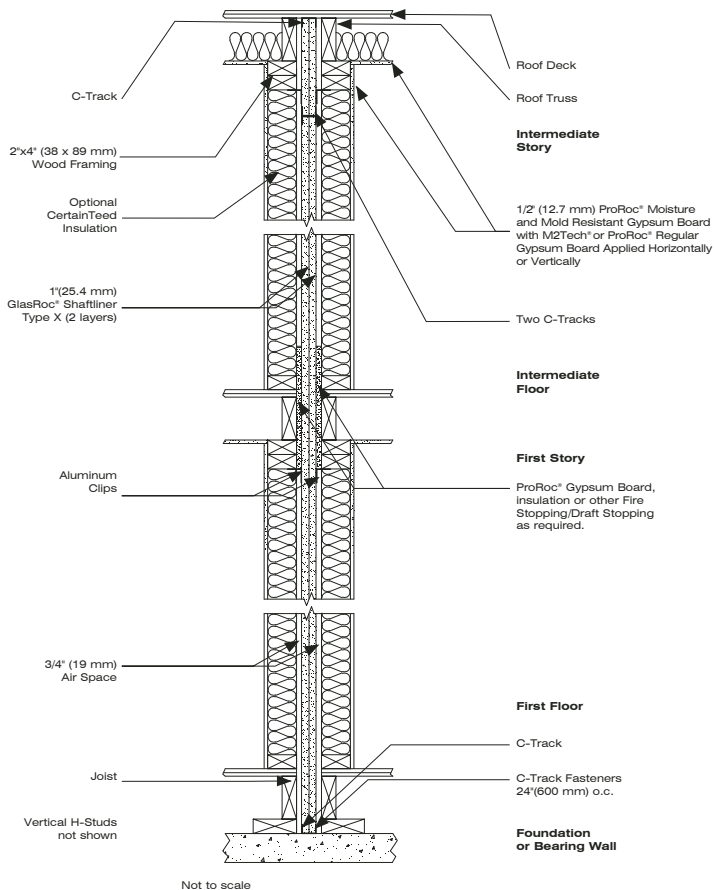.063"(1.6 mm) Aluminum Angle Attachment Clips

Insulation to Achieve STC 61
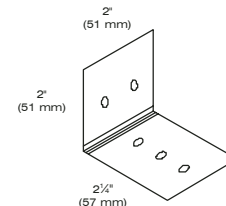
FIRE TEST
UL U366, ULC W311

SOUND TEST
RAL-TL00-176
STC 61

THICKNESS
11 1/2" (292 mm)

APPROX. WT.
13 psf (63kg/m²)

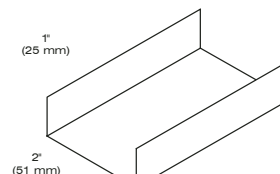## TYPICAL INSTALLATION DETAILS

C-Track
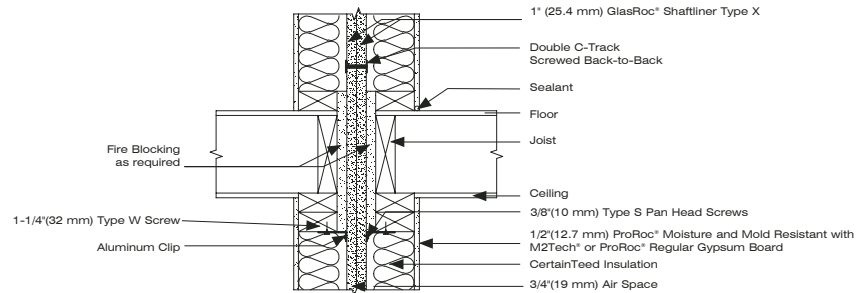
2"x4" (38 x 89 mm) Wood Framing

Optional CertainTeed Insulation

1"(25.4 mm) GlasRoc® Shaftliner Type X (2 layers)

Aluminum Clips

3/4" (19 mm) Air Space

Joist

Vertical H-Studs not shown

Roof Deck

Roof Truss

Intermediate Story

1/2" (12.7 mm) ProRoc® Moisture and Mold Resistant Gypsum Board with M2Tech® or ProRoc® Regular Gypsum Board Applied Horizontally or Vertically

Two C-Tracks

Intermediate Floor

First Story

ProRoc® Gypsum Board, insulation or other Fire Stopping/Draft Stopping as required.

First Floor

C-Track

C-Track Fasteners 24"(600 mm) o.c.

Foundation or Bearing Wall

Not to scale

1¼" (32 mm)

2" (51 mm)

H-STUD

2" (51 mm)

2" (51 mm)

2¼" (57 mm)

ASW ALUMINUM CLIP

1" (25 mm)

2" (51 mm)

C-TRACK
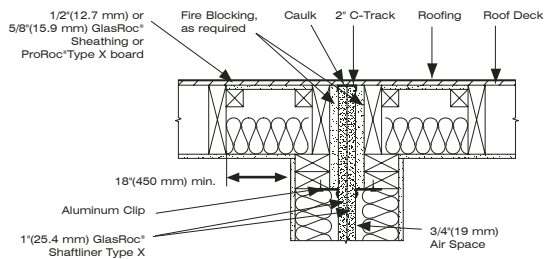
INTERMEDIATE FLOOR INTERSECTION LOCATION OF ASW CLIPS

1" (25.4 mm) GlasRoc® Shaftliner Type X
Double C-Track Screwed Back-to-Back
Sealant
Floor
Joist
Ceiling
Fire Blocking as required
3/8"(10 mm) Type S Pan Head Screws
1-1/4"(32 mm) Type W Screw
1/2"(12.7 mm) ProRoc® Moisture and Mold Resistant with M2Tech® or ProRoc® Regular Gypsum Board
Aluminum Clip
CertainTeed Insulation
3/4"(19 mm) Air Space

EXTERIOR WALL INTERSECTION

1/2" (12.7 mm) ProRoc® Moisture and Mold Resistant with M2Tech® or ProRoc® Regular Gypsum Board
Nominal 2"x4"(38 mm x 89 mm) Wood Studs @ 24"(610 mm) o.c. max.
H-Stud
1"(25.4 mm) GlasRoc® Shaftliner Type X
3/4"(19 mm) Air Space
1/2"(12.7 mm) GlasRoc® Sheathing
Exterior Finish
2" C-Track
Caulk
18"(450 mm) Min. (or as req'd by local codes)
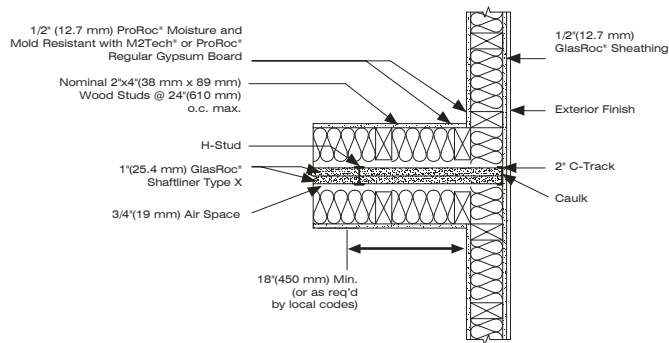
PROTRUDING EXTERIOR WALL

1/2" (12.7 mm) ProRoc® Moisture and Mold Resistant with M2Tech® or ProRoc® Regular Gypsum Board
H-Stud
GlasRoc® Shaftliner Type X
3/4"(19 mm) Air Space
Nominal 2"x4"(38 mm x 89mm) Wood Studs @ 24"(610 mm) o.c. max.
Fire Blocking, as required
1/2"(12.7 mm) GlasRoc® Sheathing
Exterior Facing
Flashing
Caulking
Cap
2" C-Track
Exterior Wall Framing
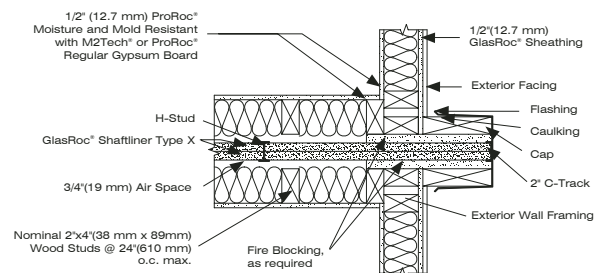
TYPICAL ROOF JUNCTION DETAIL

1/2"(12.7 mm) or 5/8"(15.9 mm) GlasRoc® Sheathing or ProRoc® Type X board
Fire Blocking, as required
Caulk
2" C-Track
Roofing
Roof Deck
18"(450 mm) min.
Aluminum Clip
1"(25.4 mm) GlasRoc® Shaftliner Type X
3/4"(19 mm) Air Space

TYPICAL ROOF PARAPET DETAIL

Fire Blocking, as required
2" C-Track
Parapet Cap
Flashing
Roofing
As Required (or As Req'd by Local Codes)
Aluminum Clip
GlasRoc® Shaftliner Type X
3/4"(19 mm) Air Space

Component Specifications

GlasRoc® Shaftliner Type X	
Standard	ASTM C 1396; C 1658; CAN/CSA A82.27
Thickness	1" (25.4 mm)
Width	2' (610 mm)
Lengths	8' (2440 mm), 10' (3050mm), 12' (3660 mm)
Approx. Weight	4.0 psf (19.5 kg/m²)
Edges	Double Beveled

Steel	
C-Track 25 ga, 2" (51 mm)	
H-Stud 25 ga, 2" (51 mm)	
Aluminum Clip .063" (1.6 mm), 2" (51 mm)	

Consult local building codes for regulations in your area.

Surface Burning Characteristics

GlasRoc® Shaftliner Type X		
Standard	Flame Spread	Smoke Developed
ASTM E 84	0	10 Class A
CAN/ULC-S102	0	20

Technical References
• ICC International Codes
• UL U366, ULC W311
• Gypsum Association Publications GA-214, GA-216, and GA-600
• ASTM E 84, E 119, E 90
• National Building Code of Canada

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Benefits of GlasRoc® Shaftliner Type X for Area Separation Firewalls

- 12 month limited warranty against exposure

- Resists mold growth per ASTM D 3273 and ASTM G 21

- Economical and efficient installation

- Scores and snaps easily with no special handling required

- UL Classified and ULC Listed for Fire Resistance

- Rapid ease of installation reduces overall construction time and provides a cost effective system

- Lightweight construction

- Reduced wall thickness means greater floor area

- Area Separation Firewall ratings up to two hours with high STC

Through the responsible development of innovative and sustainable building products, CertainTeed has helped shape the building products industry for more than 100 years. Founded in 1904 as General Roofing Manufacturing Company, the firm's slogan "Quality Made Certain, Satisfaction Guaranteed," quickly inspired the name CertainTeed. Today, CertainTeed® is North America's leading brand of exterior and interior building products, including roofing, siding, windows, fence, decking, railing, trim, foundations, pipe, insulation, gypsum, ceilings and access covers.

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www.certainteed.com   http://blog.certainteed.com

CertainTeed Corporation
P.O. Box 860
Valley Forge, PA 19482

Professional: 800-233-8990
Consumer: 800-782-8777

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