

GlasRoc[®] and **M2TECH[®]** | For
SHAFTLINER **SHAFTLINER** Firewalls

GlasRoc® and M2Tech® Shaftliner for Firewalls

GlasRoc® and M2Tech® Shaftliner are specially formulated Type X products for applications where enhanced mould resistance is preferred. They can be used for firewalls in standard multi-family residential applications.

GlasRoc® SHAFTLINER

GlasRoc® Shaftliner is a paperless mould and moisture resistant gypsum panel combining reinforcing glass mats and a specially formulated fire and moisture resistive, non-combustible core. GlasRoc® Shaftliner provides:

- Long term protection (12 months) to weather exposure.
- A superior water resistant surface that does not inhibit water vapor permeance.
- Excellent Type X fire resistance properties, and numerous fire rated designs.
- Resists mould growth per ASTM D3273.

M2TECH®

M2Tech® gypsum board features M2Tech® moisture and mould resistant technology. M2Tech® gypsum board provides:

- Additional zone of protection against moisture and mould
- Numerous Type X fire-rated assembly designs for safety and performance
- Easy to cut and install. Does not require special tools
- May be finished, painted, or wallpapered using conventional gypsum board techniques
- Achieves score of 10 for mould resistance per ASTM D3273

The GlasRoc® and M2Tech® Shaftliner advantage...

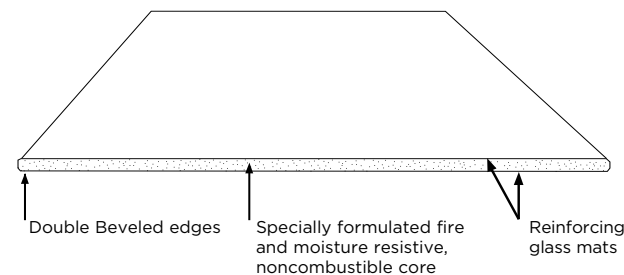
GlasRoc® and M2Tech® Shaftliner, and CertainTeed's gypsum panels that include M2Tech® technology, can be combined to offer superior mould resistance performance for Firewalls.

Gypsum Firewall systems are ICC and NBCC code approved (up to STC 71) and replace traditional masonry for fire separation between multi-family units. Some inherent advantages of gypsum Firewalls are: lighter weight, reduced thickness, ease and speed of installation,

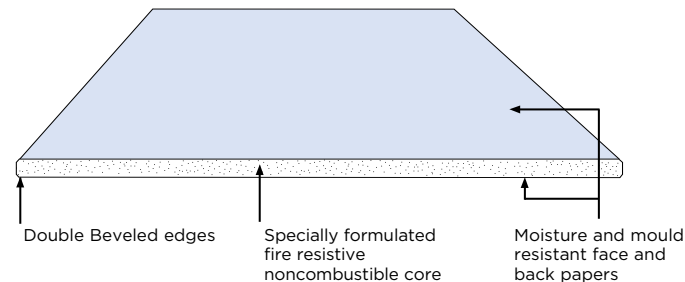
no requirement for scaffolding, and no requirement for an additional trade on the job.

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 71 when 12.7 mm (1/2") SilentFX® Quickcut™ is used as a substitute.

GlasRoc® Shaftliner



M2Tech® Shaftliner



GlasRoc® and M2Tech® Shaftliner are designed and engineered for use in construction of lightweight Shaftwall and Firewalls. These systems are UL Classified and ULC Listed for fire resistance. GlasRoc® and M2Tech® Shaftliner can be substituted with each other.

GlasRoc® and M2Tech® Shaftliner are 25.4 mm (1") thick gypsum panels with a specially formulated, Type X, fire resistive, noncombustible core. Double beveled edges make installation easier.

M2Tech® Shaftliner is enclosed in a moisture and mould resistant, light violet coloured, 100% recycled paper.

GlasRoc® Shaftliner has reinforced glass mats. When tested for mould resistance by an independent lab at the time of manufacturing, GlasRoc® and M2Tech® Shaftliner achieved the highest possible score of 10 per ASTM D3273, "Standard Test Method for Resistance to Growth of Mould on the Surface of Interior Coatings in an Environmental Chamber".

Firewalls

GlasRoc® and M2Tech® Shaftliner are used in conjunction with other CertainTeed gypsum board products in Firewalls.

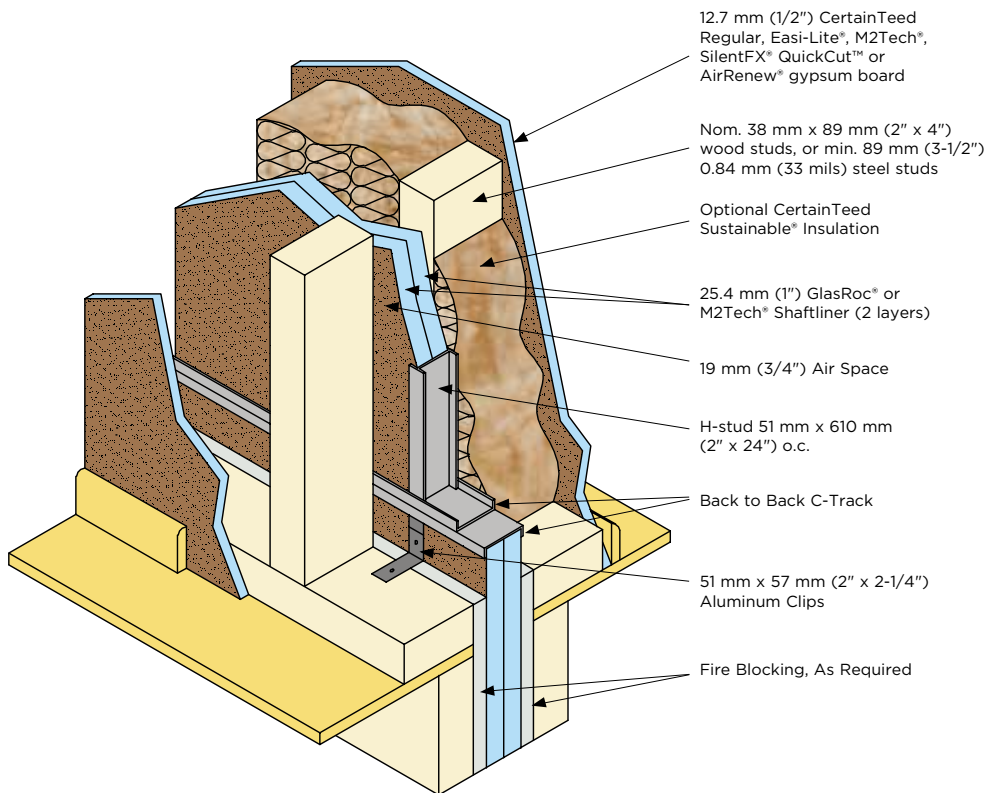
Firewalls are solid type separation walls assembled using 25.4 mm (1") M2Tech® Shaftliner gypsum panel, metal framing and 12.7 mm (1/2") CertainTeed® Regular, Easi-Lite®, M2Tech®, SilentFX® QuickCut™ or AirRenew® gypsum board for the interior finish. The firewall is easily stacked, floor to floor, allowing progressive construction.

For projects that require an exposure warranty for the shaftliner panel due to prolonged exposure to the elements

or inclement weather, we recommend GlasRoc® Shaftliner with its 12 month exposure Limited Warranty.

Breakaway aluminum clips are used to attach the interior wall to adjacent structural metal framing and provide lateral support. The firewall is the double layer of shaftwall board. It remains intact and is non-combustible, thus meeting the requirements of the Code for a firewall.

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



Thickness: 25.4 mm (1")

Widths: 610 mm (2') Standard

Lengths: 2440 mm (8'), 3050 mm (10') and 3660 mm (12') Standard

Edges: Double beveled

Paper: M2Tech has light violet coloured, 100% recycled, moisture and mould resistant paper face and back

BUILDING RESPONSIBLY

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, fence, decking, railing, trim, gypsum, ceilings and insulation.





Working with the Products

Handling and Storage

CertainTeed gypsum boards and panels 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 panels 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 Firewall system components.

Cutting

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

Steps:

1. On the face (logo) side, position a straight edge along the line of cut.
2. Score sheets with a knife or other suitable tool.
3. With a quick, firm motion, snap back away from the face.
4. The back paper/glass can be cut with either a knife or suitable tool, then separated by snapping 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 face and back and tap out the waste piece from the face side. Cut outs can also be made with a drywall saw. Gypsum panels 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.ca.

Installation

Firewall (Non-Loadbearing):

Steel framing and installation of 25.4 mm (1") GlasRoc® or M2Tech® Shaftliner gypsum panel for solid type Firewalls are used as the common wall of one unit. A Firewall can be constructed by following these steps before continuing to frame the adjacent unit.

1. Attach 51 mm (2") wide C-Track to slab at bottom of wall using suitable fasteners at a maximum of 610 mm (24") o.c. Allow a 19 mm (3/4") space from wood or steel stud framing on each side of the firewall.
2. Install vertical C-Track at the beginning of the wall and support as needed.
3. Insert two sections of 25.4 mm (1") GlasRoc® or M2Tech® Shaftliner gypsum panel in bottom channel with logo side facing weather exposure during construction. Plumb panels to vertical C-Track.
4. Install 25.4 mm (1") GlasRoc® or M2Tech® Shaftliner gypsum panels vertically. Continue wall as needed by placing H-Studs between the proceeding panels every 610 mm (24") for the length of the wall and enclose the end panels with vertical C-Track.
5. Cap the wall assembly before continuing higher using C-Track fastened to the H-Studs on alternate sides with 10 mm (3/8") 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 305 mm (12") o.c. and fastened with double 10 mm (3/8") Type S screws at ends and 610 mm (24") o.c.
6. Attachment Clips: Aluminum angle, 1.6 mm (0.063") thick, min. 51 mm (2") wide with min. 51 mm (2") and 57 mm (2-1/4") legs. Clips secured to each side of every H-Stud

(two per stud) to each side of every H-Stud (two per stud) with Type S screws 10 mm (3/8") long to H-Studs and steel framing, and with Type W screws 32 mm (1-1/4") long to wood framing through holes provided in the clip. Clips spaced a max of 3 m (10') o.c. vertically between wood and steel framing and H-Studs for separation firewalls up to 7 m (23') high. For separation firewalls up to 13.4 m (44') high, clips spaced as described above for the upper 7.3 m (24') and the remaining wall area below requires clips spaced a max. 1.5 m (5') o.c. vertically between wood framing and H-Studs.

7. For separation firewalls greater than 13.4 m (44') and up to 20.7 m (68') high; clips are spaced a maximum 1015 mm (40") o.c. for the lower 7.3 m (24') section, a maximum 1.5 m (5') o.c. for the 7.3 m to 13.4 m (24' to 44') section and a maximum 3 m (10') o.c. for the 13.4 m to 20.7 m (44' to 68') section.
8. This assembly can be repeated, per plan, up to 20.7 m (68') high. Cap the top of the assembly with 51 mm (2") C-Track and protect the entire installation from moisture.
9. Where required, use an approved acoustical sealant, such as such as SilentFX® Noiseproofing Sealant to caulk around the perimeter of wall sections and between horizontal back-to-back C-tracks.

Interior Finish Walls:

Protected Walls - (Loadbearing or Non-Loadbearing)

10. Wood Studs - 38 mm by 89 mm (nom. 2" x 4") max. spaced 610 mm (24") o.c.
Steel Studs - Min. 89 mm (3-1/2") 0.46 mm (18 mils) for non-loadbearing or 0.84 mm (33 mils) for loadbearing walls max. spaced 610 mm (24") o.c. Studs cross-braced at mid-height where necessary for clip



attachment. Min. 19 mm (3/4") separation between wood or steel framing and Firewall. As an alternate to the 19 mm (3/4") separation air space from wood or steel framing, the center Firewall steel framing components are permitted to be covered with 150 mm (6") wide batten strips of 12.7 mm (1/2") CertainTeed® Type C gypsum board attached to the steel framing with 25.4 mm (1") Type S drywall screws spaced 300 mm (12") o.c. Accessible attic areas typically use this alternate method. Non-accessible attic areas do not require the 150 mm (6") wide gypsum board batten strips.

11. Insulation (Optional) - CertainTeed Sustainable Insulation™, or equivalent, installed between wood or steel studs to meet listed STC performance.
12. CertainTeed gypsum board, min. 12.7 mm (1/2") thick, 1220 mm (4') wide, applied either horizontally or vertically. Gypsum board attached to wood studs with 32 mm (1-1/4") long drywall nails or 32 mm (1-1/4") Type W drywall screws spaced 200 mm (8") o.c. Gypsum board attached to steel studs with min. 25.4 mm (1") Type S drywall screws spaced 300 mm (12") o.c. Vertical joints located over studs. Joints and fasteners finished with CertainTeed Finishing system or equivalent.

Surface Preparation of Finished Sides

Joints, corners and fastener heads on the face side shall be finished in accordance with ASTM C840, 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 C475.

1. No surface treatment shall be done until the interior temperature has been maintained at a minimum of 10°C (50°F) 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 CertainTeed 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 100 mm (4") on each side.
5. Apply a third coat and feather to approximately 150 mm (6") on each side.
6. Allow each coat to dry before proceeding. Refer to GA-236 for the effects of environmental conditions on drying times.
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

CertainTeed gypsum panels 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 CertainTeed 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.

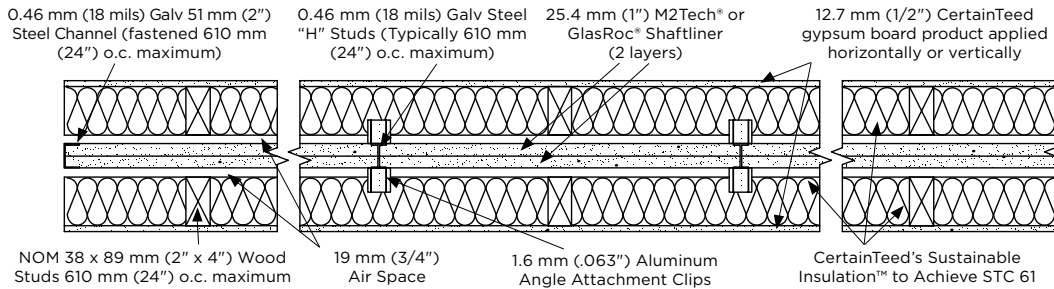
Refer to GA-214, GA-216, CAN/CSA-A82.31 and ASTM C840 for additional finishing instructions. Finishing is not required on the Firewall.

Limitations

- This Firewall is a non-loadbearing partition.
- CertainTeed gypsum boards and panels 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 52°C (125°F).
- Do not use shaftliner panels in unlined air-supply ducts.
- CertainTeed gypsum boards and panels 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 3660 mm (12'). The assembly may be used in buildings up to 4 stories with a total height not to exceed 20.7 m (68').
- Penetrations through the solid 51 mm (2") Firewall should be protected by a Firestop System in accordance with NBCC Article 3.1.9.1. or IBC in the USA.
- Penetrations in the solid 51 mm (2") Firewalls, designed as a Party Wall (a wall located on a property line between adjacent buildings which is used or adapted for joint service between the two buildings), i.e. Town homes are permitted to have party wall with a 1 hour fire rating in Part 9 of the NBCC. Such party walls shall be constructed in accordance with the requirements of Part 3. In the USA, refer to the IBC.

Non-loadbearing Fire Rating - 2 Hour

EXPOSED TO FIRE FROM FIREWALL SIDE ONLY

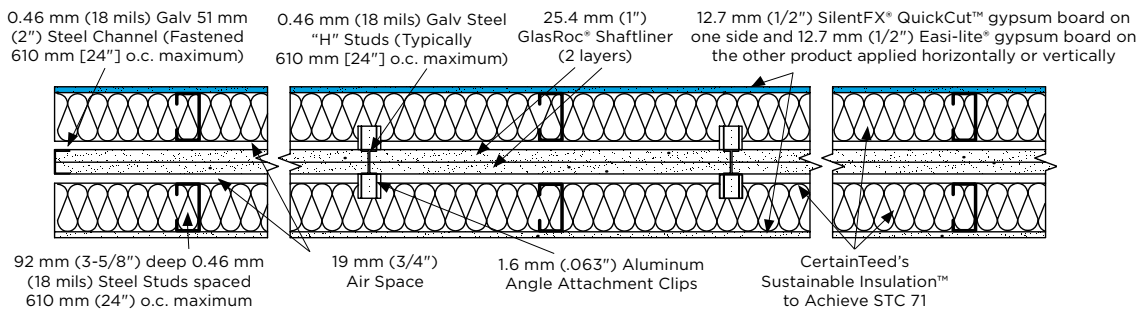


FIRE: ULC W311
ITS Report No.
100260628SAT-006A,
006B

SOUND:
RAL-TL00-176

STC: 61

EXPOSED TO FIRE FROM EITHER SIDE

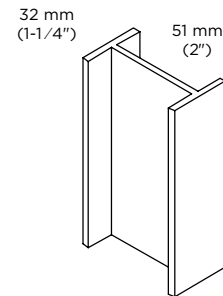
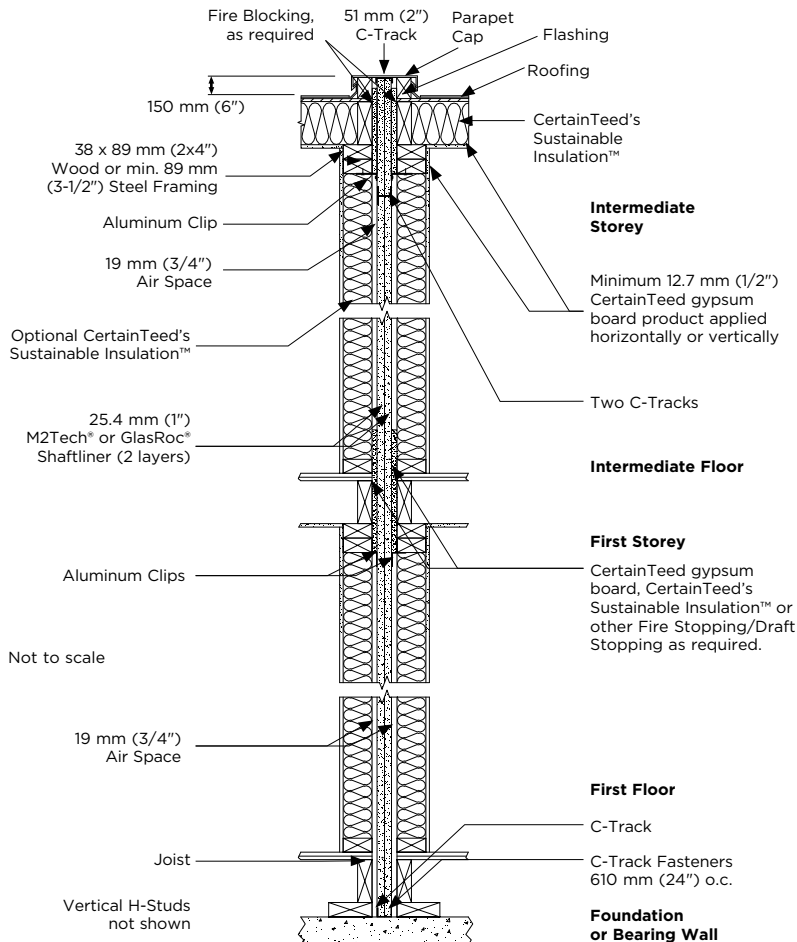


FIRE: ULC W311

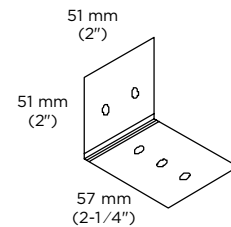
SOUND:
NGC 2017121_R2

STC: 71

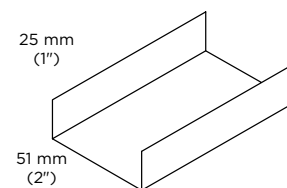
TYPICAL INSTALLATION DETAILS



H-STUD

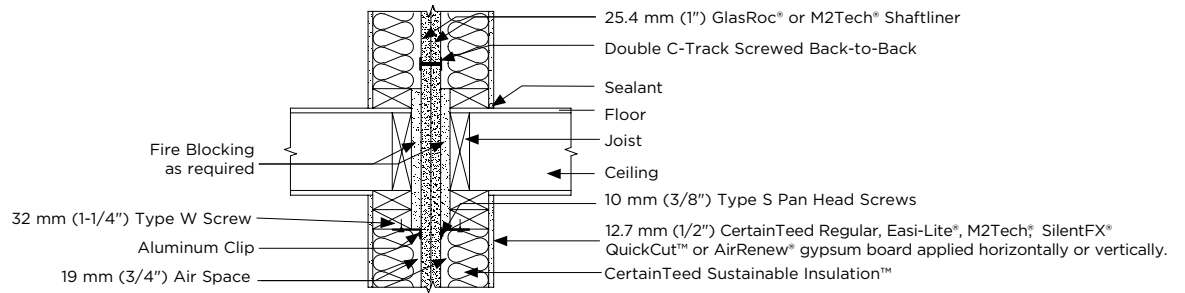


ALUMINUM CLIP

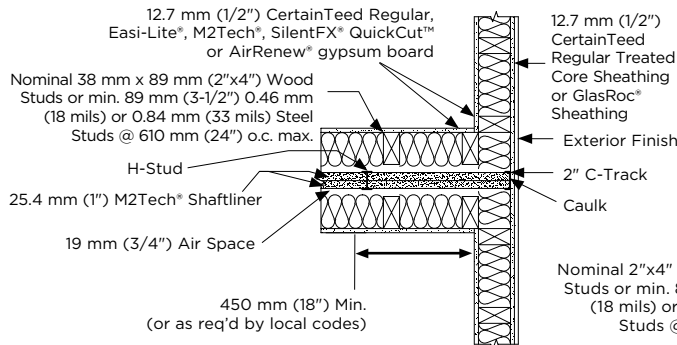


C-TRACK

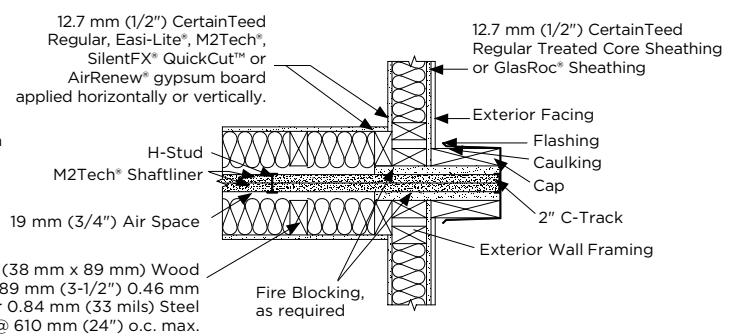
INTERMEDIATE FLOOR INTERSECTION LOCATION OF ASW CLIPS



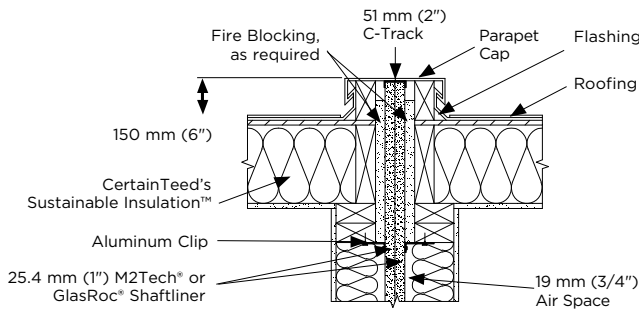
EXTERIOR WALL INTERSECTION



PROTRUDING EXTERIOR WALL



TYPICAL ROOF PARAPET DETAIL



Component Specifications

	M2Tech® Shaftliner	GlasRoc® Shaftliner	Steel
Standard	ASTM C1396 CAN/CSA A82.27	ASTM C1396 C1658	C-Track 0.46 mm (18 mils) 51 mm (2")
Thickness	25.4 mm (1")	25.4 mm (1")	H-Stud 0.46 mm (18 mils) 51 mm (2")
Width	610 mm (2')	610 mm (2')	Aluminum Clip 1.6 mm (.063"), 51 mm (2")
Lengths	2440 mm (8') 3050 mm (10') 3660 mm (12')	2440 mm (8') 3050 mm (10') 3660 mm (12')	
Approx. Weight	19.5 kg/m² (4.0 psf)	19.5 kg/m² (4.0 psf)	
Edges	Double Beveled	Double Beveled	

Surface Burning Characteristics

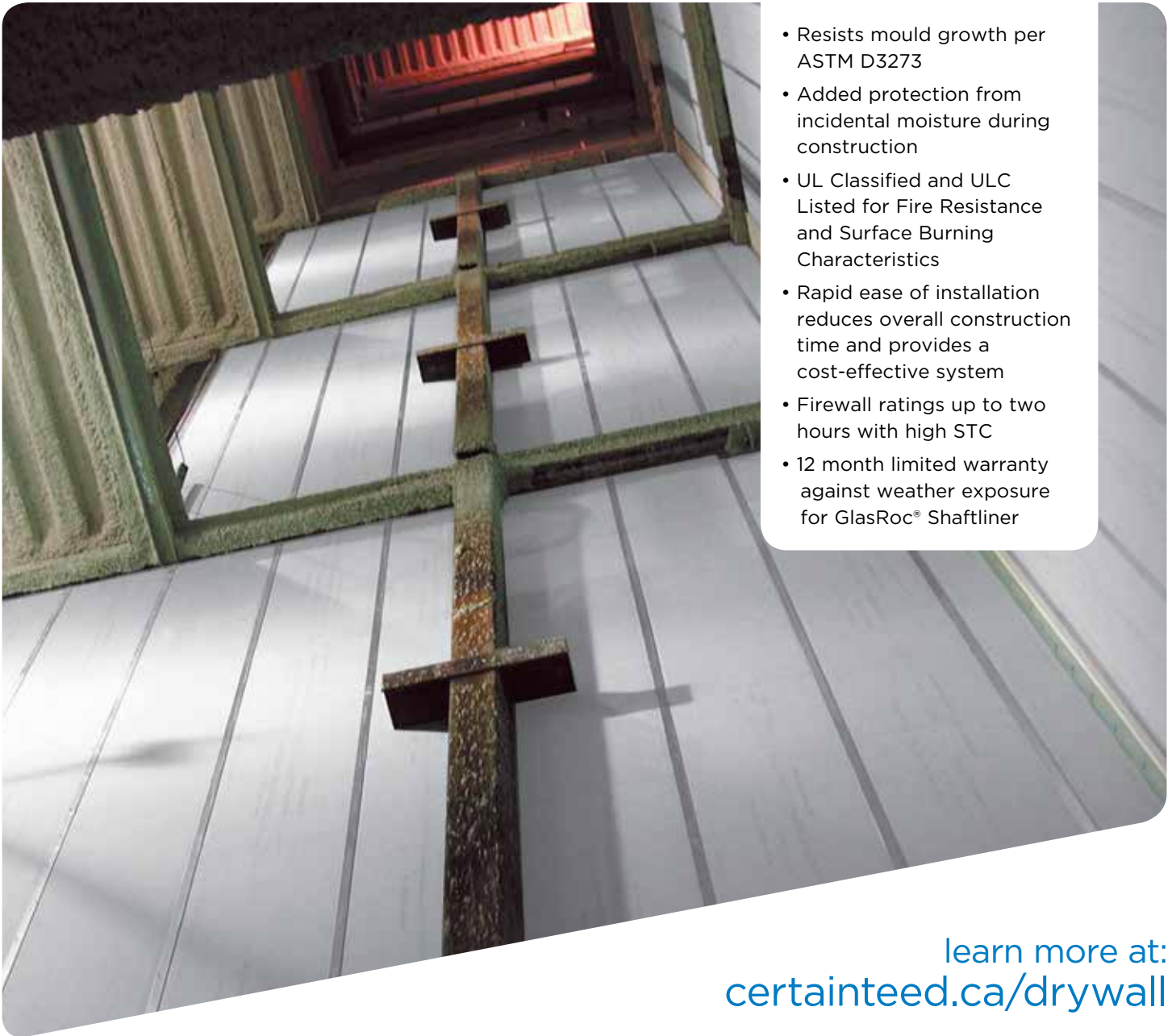
M2Tech® Shaftliner		
Standard	Flame Spread	Smoke Developed
ASTM E84	0	5 Class A
CAN/ULC-S102	5	5
GlasRoc® Shaftliner		
Standard	Flame Spread	Smoke Developed
ASTM E84	0	10 Class A
CAN/ULC-S102	0	0

Technical References

- ICC International Codes
- ULC W311
- UL/ULC Type Designation: Shaftliner
- Gypsum Association Publications GA-214, GA-216, G620 and GA-600
- ASTM E84 (CAN/ULC-S102), E119 (CAN/ULC-S101), E90
- ICC ESR-1338
- National Building Code of Canada
- Riverbank Acoustical Laboratories TL00-176 and TL00-177

Consult local building codes for regulations in your area.

Gypsum



- Resists mould growth per ASTM D3273
- Added protection from incidental moisture during construction
- UL Classified and ULC Listed for Fire Resistance and Surface Burning Characteristics
- Rapid ease of installation reduces overall construction time and provides a cost-effective system
- Firewall ratings up to two hours with high STC
- 12 month limited warranty against weather exposure for GlasRoc® Shaftliner

learn more at:
certainteed.ca/drywall



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