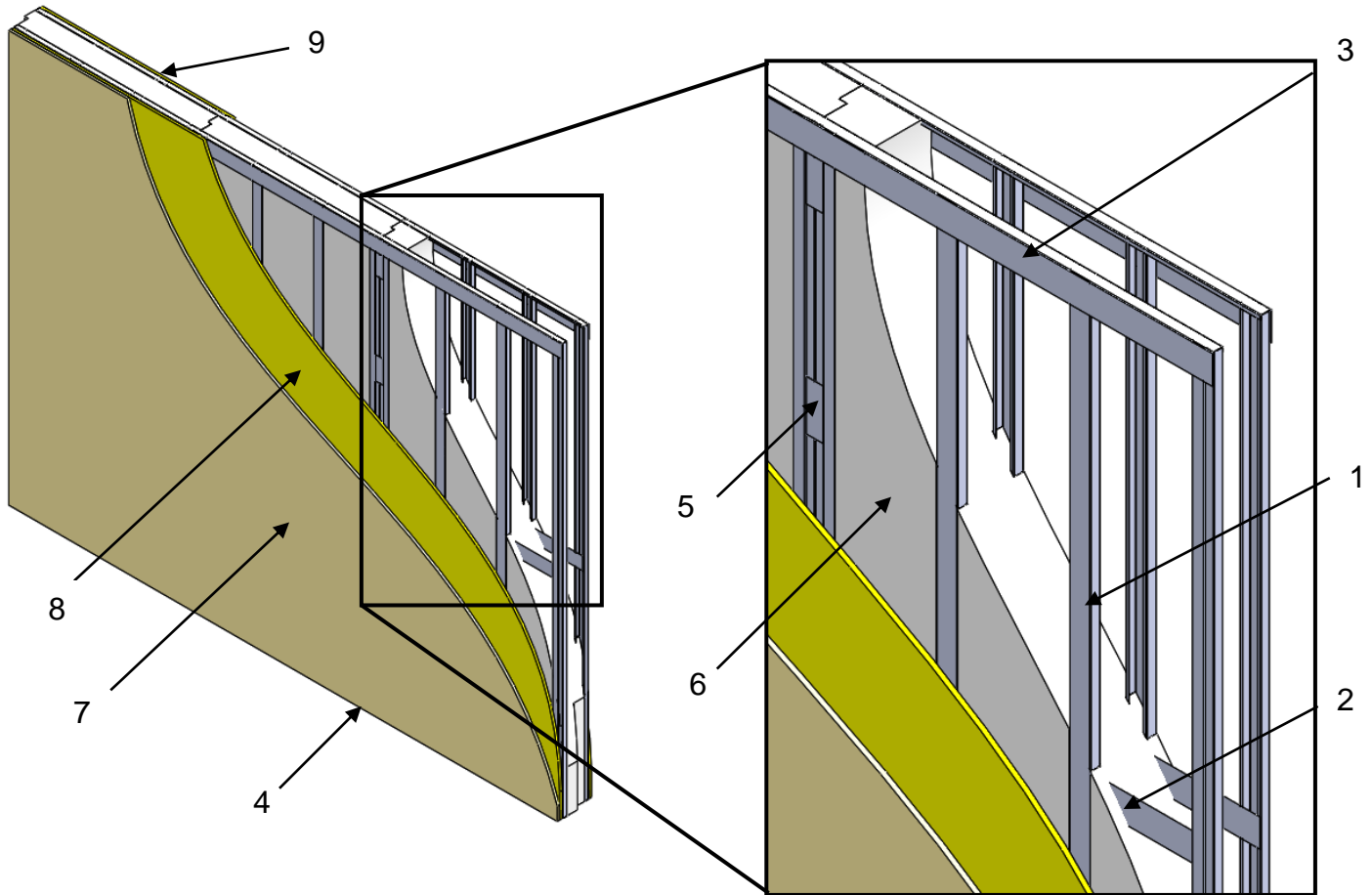


**QAI Design B1100-1b – Greenstone Structural Solutions Inc. – CAN/ULC-S101
 1 Hour Fire-Resistance Rated Load Bearing¹ Prefabricated Wall Assembly**



No.	COMPONENT	DESCRIPTION
1	Wall Stud ²	Minimum 1.25 mm (18 Gauge) x 64 mm (2-1/2 in.) x 30 mm (1-3/16 in.) steel C-channel wall studs. The end studs at the joint have a 3 mm (1/8 in.) x 25 mm (1 in.) jog in the channel along the 64 mm (2-1/2 in.) dimension. Studs are to be spaced at maximum 406 mm (16 in.) on center (OC).
2	Internal Bracing ²	Minimum 0.71 mm (22 Gauge) x 86 mm (3-3/8 in.) horizontal steel strapping on the interior of the stud framing. Located at 1.37 m (4.5 ft) vertical height on the wall panels.
3	Top Track ²	Minimum 1.65 mm (16 Gauge) x 89 mm (3-1/2 in.) x 32 mm (1-1/4 in.) J-shaped steel channel with a 13 mm (1/2 in.) return. Fastened to the wall studs with #10 x 19 mm (3/4 in.) self-drilling pan head screws.
4	Bottom Track ²	Minimum 51 mm (2 in.) x 51 mm (2 in.) steel angle shall be placed underneath the bottom track on both sides of the wall. Fastened to each stud with one #10 x 19 mm (3/4 in.) self-drilling pan head screw.
5	Connection Plates ²	Minimum 1.25 mm (18 Gauge) x 152 mm (6 in.) x 51 mm (2 in.) steel plates fastened using six #10 x 19 mm (3/4 in.) self-drilling pan head screws. The plates are to be placed at maximum 610 mm (2 ft.) starting 152 mm (6 in.) from the bottom.
6	Foam Insulation	Type: Type 2 (Type II) Expanded Polystyrene (EPS) per CAN/ULC-S701 (ASTM C578), listed by approved agency.
		Maximum Density: 26.5 kg/m ³ (1.65 lb/ft ³).
7	Interior Sheathing Layer 1	Type: Megcrete MgO Board.
		Minimum Thickness: 13 mm (1/2 in.).
		Fastener Detail: The boards are to be fastened with #6 x 32 mm (1-1/4 in.) Type S drywall screws spaced at maximum 203 mm (8 in.) OC.

continued

8	Interior Sheathing Layer 2	Type:	Type X gypsum board compliant with ASTM C1396, listed by approved agency.
		Minimum Thickness:	13 mm (1/2 in.).
		Fastener Detail:	The boards are to be mounted horizontally with #6 x 32 mm (1-1/4 in.) Type S drywall screws spaced at maximum 203 mm (8 in.) OC.
9	Exterior Sheathing	Type:	Megcrete MgO Board.
		Minimum Thickness:	13 mm (1/2 in.).
		Fastener Detail:	The boards are to be fastened with #6 x 32 mm (1-1/4 in.) Type S drywall screws spaced at maximum 203 mm (8 in.) OC.

Notes:

1. The maximum allowable loading for the fire-resistance rated assembly is 55 kN/m (3,800 lb/ft).
2. All steel materials shall be size determined in accordance with CAN/CSA-S16 for anticipated service loading.
3. The listed assembly is evaluated for interior fire only.