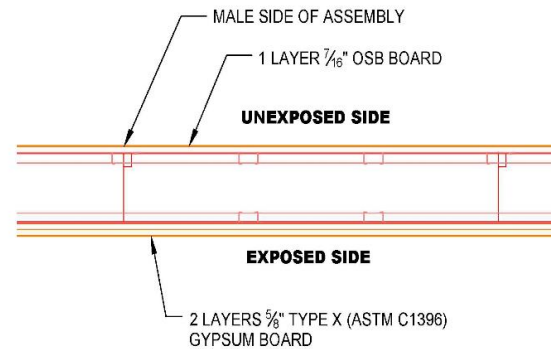
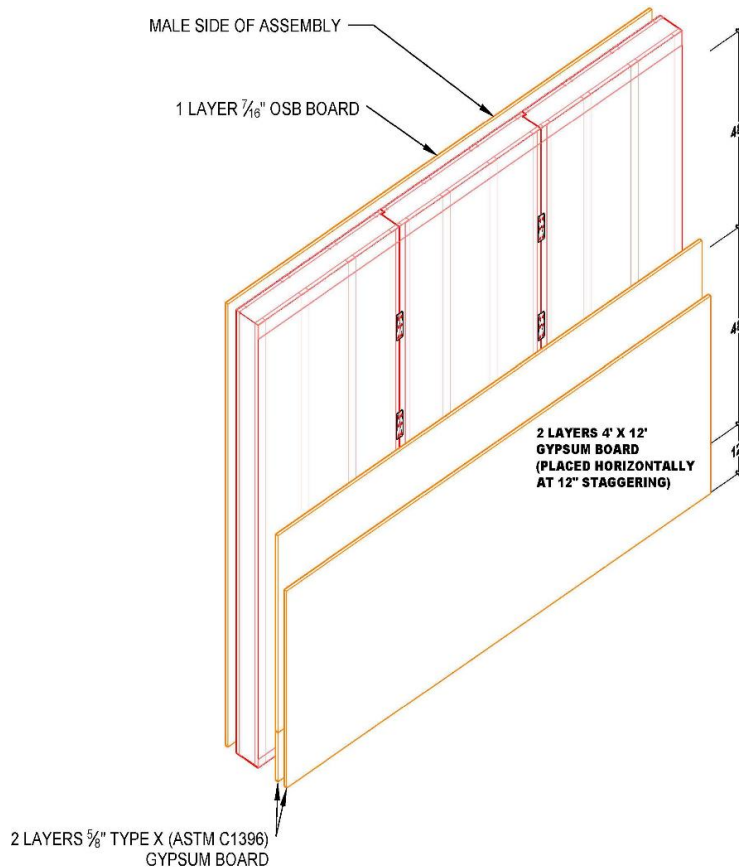


**QAI Design B1122-1a – Greenstone Building Products Ltd. – CAN/ULC-S101 / ASTM E119
1 Hour Fire-Resistance Rated Load Bearing¹ Prefabricated Wall Assembly – Interior Facing Fire**



* DURABOND 90 COMPOUND APPLIED AT ALL DRYWALL JOINTS

60 MINUTE GYPSUM ASSEMBLY

COMPONENT	DESCRIPTION	
Wall Assembly	Manufacturer:	Greenstone Insulated Composite Envelope (ICE) Panel.
	Minimum Thickness:	7.5 in. (191 mm).
	Installation Description:	ICE panels installed with 2 layers of 5/8 in. (16 mm) Type X gypsum on each panel face. Panel connections to top track, bottom track and adjacent panels per Greenstone Connection details manual and this report. Exterior sheathing of 7/16" (11 mm) oriented strand board.
Wall Stud¹	Minimum 20 Ga (1.25 mm ¹) x 2-1/2 in. (64 mm) x 1-3/16 in. (30 mm) steel C-channel wall studs. The end studs at the joint have a 1/8 in. (3 mm) x 1 in. (25 mm) jog in the channel along the 2-1/2 in. (64 mm) dimension. Studs are to be spaced at maximum 16 in. (406 mm) on center (OC).	
Top Track¹	Minimum 16 Gauge (1.65 mm) x 3-1/2 in. (89 mm) x 1-1/4 in. (32 mm) J-shaped steel channel with a 1/2 in. (13 mm) return. Fastened to the wall studs with #10x3/4 in. length (19 mm) self-tapping pan head screws.	
Bottom Track¹	Minimum 2 in. (51 mm) x 2 in. (51 mm) steel angle shall be placed underneath the bottom track on both sides of the wall. Fastened to each stud with one #10x3/4 in. (19 mm) length self-tapping pan head screw.	
Connection Plates¹	Minimum 18 Gauge (1.25 mm) x 6 in. (152 mm) x 2 in. (51 mm) steel plates fastened using six #10 x 3/4 in. (19 mm) self-tapping pan head screws. The plates are to be placed at maximum 2 ft (610 mm) starting 6 in. (152 mm) from panel top.	

Foam Insulation	Type:	Type II Expanded Polystyrene (EPS) per ASTM C578, listed by approved agency.
	Density:	1.65 lbs/ft ³
Interior Sheathing	Type:	2 layers of Type X gypsum board compliant with ASTM C1396, listed by approved agency.
	Minimum Thickness:	5/8 in. (16 mm).
	Fastener Detail:	Both layers are to be fastened at maximum 8 in. (203 mm) OC around the perimeter and in the field. The first layer is to be fastened using #6 x 1-1/4 in. (32 mm.) Type S drywall screws. The second layer shall be fastened using #6 x 2 in. (51 mm) Type S drywall screws. All screw heads are to be covered with code compliant drywall compound.
Exterior Sheathing	Type:	Oriented Strand Board (OSB) PS2 rated.
	Minimum Thickness:	7/16 (11 mm).
	Fastener Detail:	The boards are to be fastened with #6 x 1-1/4 in. (32 mm) Type S drywall screws spaced at maximum 8 in. (203 mm) OC. around the perimeter and in the field. The fasteners were located a minimum of 1 " (25 mm) from panel edges.

Notes:

1. The maximum allowable loading for the fire-resistance rated assembly is 50% of the allowable calculated per AISI S100 or CSA S136 based on Load and Factor Reduction (LRFD) methodology.
2. All steel materials shall be size determined in accordance with CSA S136 or AISI S100 for anticipated service loading, with minimum Gauges and dimensions noted above required for fire-resistance rating.
3. The listed assembly is evaluated for interior fire only.