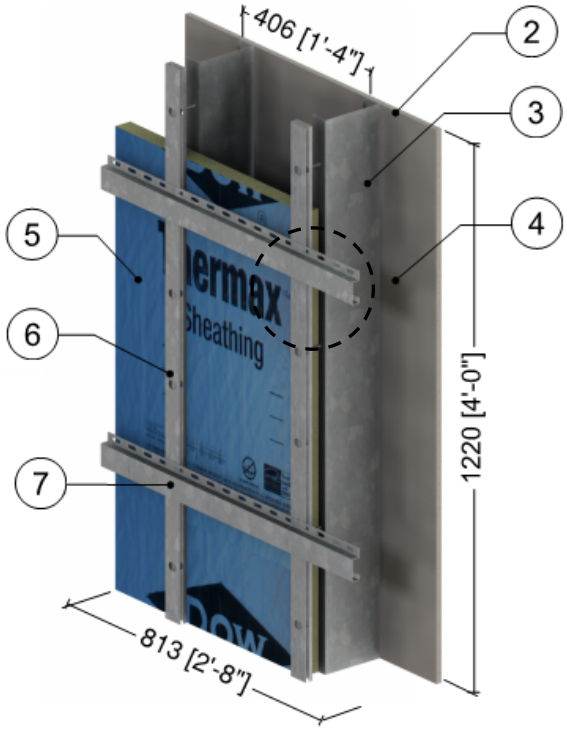
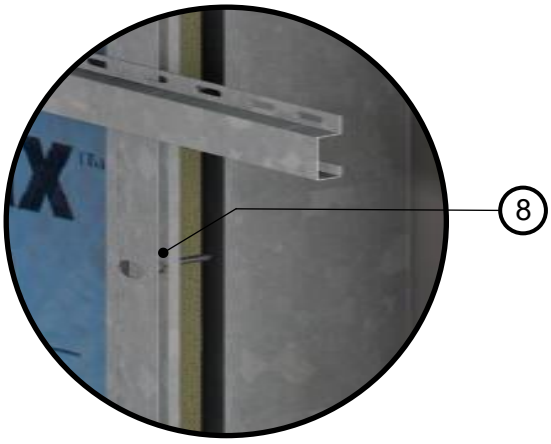
Detail 5.1.38

Exterior Insulated 6” x 1 5/8” Steel Stud (16” o.c.) Wall Assembly with Knight CI-System (8” o.c.) – Clear Wall





Isolator Detail

ID	Component	Thickness Inches (mm)	Conductivity Btu·in / ft²·hr·°F (W/m K)	Nominal Resistance hr·ft²·°F/Btu (m²K/W)	Density lb/ft³ (kg/m³)	Specific Heat Btu/lb·°F (J/kg K)
1	Interior Films[1]	-	-	R-0.7 (0.12 RSI)	-	-
2	Gypsum Board	1/2" (13)	1.1 (0.16)	R-0.5 (0.08 RSI)	50 (800)	0.26 (1090)
3	6” x 1 5/8” Steel Studs (16”o.c.)	18 Gauge	250 (36)	-	489 (7830)	0.12 (500)
4	Air in Stud Cavity	4 1/2” (114)	-	R-0.9 (0.16 RSI)	0.075 (1.2)	0.24 (1000)
5	Exterior Polyisocyanurate Insulation	Varies	-	R-10.1 to R-19.0 (1.78 to 3.35 RSI)	-	-
6	#12 Stainless Steel Fasteners (8” o.c.)	0.21” (5.3) Ø	12 (20)	-	489 (7830)	0.12 (500)
7	Steel Vertical and Horizontal Rails	18 Gauge	250 (36)	-	489 (7830)	0.12 (500)
8	Isolator	3/16” (4)	0.12 (0.21)	-	-	-
9	Metal Cladding with vented airspace incorporated into exterior heat transfer coefficient					
10	Exterior Film[1]	-	-	R-0.7 (0.12 RSI)	-	-

[1] Value selected from table 1, p. 26.1 of 2009 ASHRAE Handbook – Fundamentals depending on surface orientation