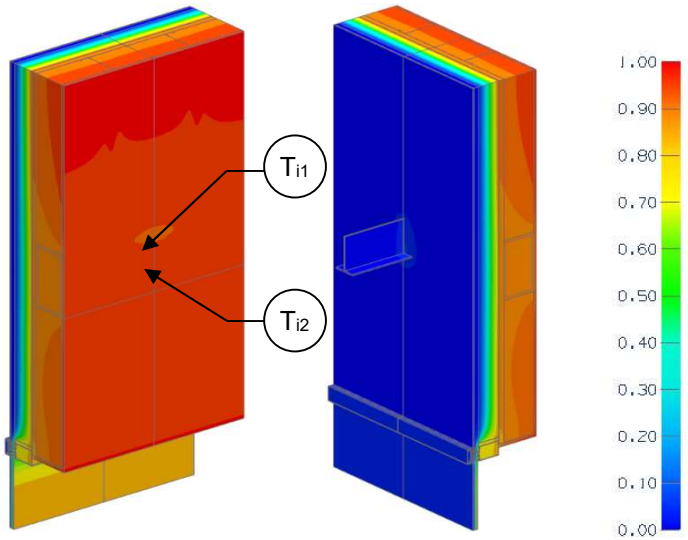
Detail 2.4.2

Conventional Curtain Wall with Insulated Spandrel Panel & 5 5/8" x 1 5/8" Steel Stud (16" o.c.)- Beam Intersection Connected to Steel Beam



View from Interior View from Exterior

Thermal Performance Indicators

Assembly 1D (Nominal) R-Value	R_{1D}	R-3.2 (0.57 RSI) + ackpan insulation
Transmittance / Resistance without Anomaly	U_o, R_o	"clear wall" U- and R-value of spandrel without beam
Transmittance / Resistance	U, R	U and R-values for the assembly including spandrel and beam intersection
Surface Temperature Index[1]	T_i	0 = exterior temperature 1 = interior temperature
Point Transmittance	χ	Incremental increase in transmittance for steel beam attached to a steel beam

[1]Assumptions and limitations for surface temperatures identified in ASHRAE 1365-RP

Nominal (1D) vs. Assembly Performance Indicators

Backpan Insulation 1D R-Value (RSI)	R_{1D} $ft^2 \cdot hr \cdot {}^oF$ / Btu (m^2 K / W)	R_o $ft^2 \cdot hr \cdot {}^oF$ / Btu (m^2 K / W)	U_o Btu/ft^2 $\cdot hr \cdot {}^oF$ (W/m^2 K)	R $ft^2 \cdot hr \cdot {}^oF$ / Btu (m^2 K / W)	U Btu/ft^2 $\cdot hr \cdot {}^oF$ (W/m^2 K)	χ Btu/hr $\cdot {}^oF$ (W/K)
R-8.4 (1.48)	R-11.6 (2.05)	R-9.5 (1.67)	0.105 (0.60)	R-7.1 (1.25)	0.141 (0.80)	0.268 (0.14)
R-16.8 (2.96)	R-20.0 (3.53)	R-13.5 (2.38)	0.074 (0.42)	R-8.8 (1.55)	0.114 (0.65)	0.296 (0.16)

Temperature Indices

	R8.4	R16.8	
T_{i1}	0.49	0.52	Min T on knife edge and backpan, at intersection
T_{i2}	0.66	0.69	Min T on steel beam, below knife edge intersection