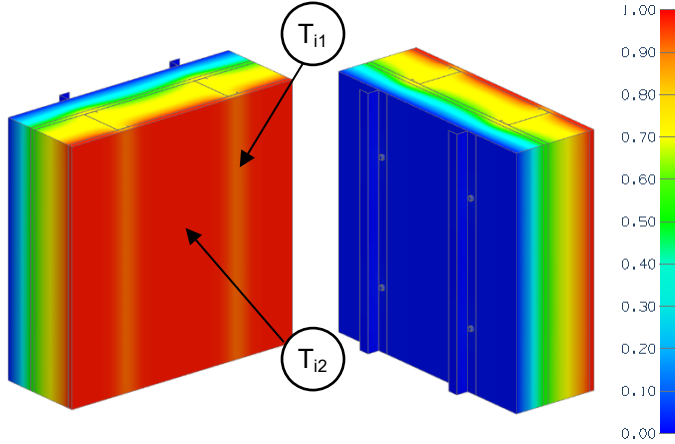


Detail 5.1.113

Exterior and Interior Insulated 6" x 1 5/8" Steel Stud (16" o.c.) Wall Assembly with High Compression Insulation and Through Insulation Stainless Steel Fasteners (16" o.c.) Supporting Cladding, Owens Corning ThermaFiber RainBarrier HC 80 Insulation and R-20 Batt Insulation in Stud Cavity – Clear Wall

Thermal Performance Indicators



| | | |
|-------------------------------|------------|--|
| Assembly 1D (Nominal) R-Value | R_{1D} | R-22.5 (3.96 RSI) + exterior insulation |
| Transmittance / Resistance | U_o, R_o | "clear wall" U- and R-value |
| Surface Temperature Index | T_i | 0 = exterior temperature 1 = interior temperature |

View from Interior View from Exterior

Nominal (1D) vs. Assembly Performance Indicators

| Exterior Insulation 1D R-Value (RSI) | R_{1D} ft ² ·hr·°F / Btu (m ² K / W) | R_o ft ² ·hr·°F / Btu (m ² K / W) | U_o Btu/ft ² ·hr ·°F (W/m ² K) |
|--------------------------------------|--|---|--|
| R-4.2 (0.74) | R-26.7 (4.70) | R-16.2 (2.85) | 0.062 (0.35) |
| R-8.4 (1.48) | R-30.9 (5.44) | R-20.1 (3.54) | 0.050 (0.28) |
| R-12.6 (2.22) | R-35.1 (6.18) | R-24.0 (4.22) | 0.042 (0.24) |
| R-16.8 (2.96) | R-39.3 (6.92) | R-27.8 (4.89) | 0.036 (0.20) |

Temperature Indices

| | R4.2 | R12.6 | R16.8 | |
|----------|------|-------|-------|---|
| T_{i1} | 0.39 | 0.57 | 0.62 | Min T on sheathing, at fastener along studs |
| T_{i2} | 0.24 | 0.47 | 0.54 | Min T on sheathing, between studs and fasteners |

Temperature indices listed for selected scenarios. All other scenarios to be interpolated.