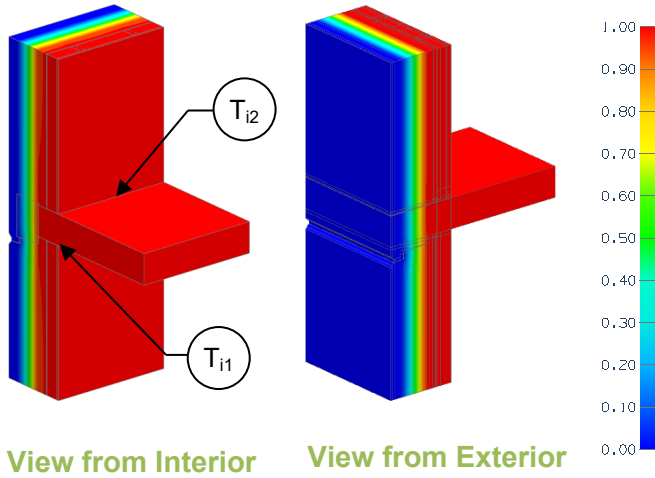


# Detail 7.2.25

## Insulated Precast Concrete Sandwich Panel Wall Assembly – Intermediate Floor Intersection with Inner Wythe Supported by Concrete Floor



### Thermal Performance Indicators

Assembly 1D (Nominal) R-Value	$R_{1D}$	R-3.9 (0.69 RSI) + insulation
Transmittance / Resistance without Anomaly	$U_o, R_o$	"clear field" U- and R-value
Transmittance / Resistance	U, R	U- and R-values for the overall assembly
Linear Transmittance	$\Psi$	Incremental increase in transmittance for intermediate slab

### Nominal (1D) vs. Assembly Performance Indicators

#### Base Assembly – Precast Clear Wall

Sandwich Panel Insulation 1D R-Value (RSI)	$R_{1D}$ ft <sup>2</sup> ·hr·°F / Btu (m <sup>2</sup> K / W)	$R_o$ ft <sup>2</sup> ·hr·°F / Btu (m <sup>2</sup> K / W)	$U_o$ Btu/ft <sup>2</sup> ·hr ·°F (W/m <sup>2</sup> K)
R-10 (1.76)	R-13.9 (2.45)	R-12.6 (2.22)	0.079 (0.45)
R-15 (2.64)	R-18.9 (3.33)	R-17.2 (3.03)	0.058 (0.33)
R-20 (3.52)	R-23.9 (4.21)	R-22.4 (3.94)	0.045 (0.25)

#### Slab Linear Transmittance – With Flashing

Wall Insulation 1D R-Value (RSI)	R ft <sup>2</sup> ·hr·°F / Btu (m <sup>2</sup> K / W)	U Btu/ft <sup>2</sup> ·hr ·°F (W/m <sup>2</sup> K)	$\Psi$ Btu/ft·hr·°F (W/mK)
R-10.0 (1.76)	R-11.7 (2.07)	0.085 (0.48)	0.043 (0.074)
R-15.0 (2.64)	R-15.7 (2.76)	0.064 (0.36)	0.041 (0.071)
R-20.0 (3.52)	R-19.5 (3.44)	0.051 (0.29)	0.047 (0.082)

#### Slab Linear Transmittance – Without Flashing

Wall Insulation 1D R-Value (RSI)	R ft <sup>2</sup> ·hr·°F / Btu (m <sup>2</sup> K / W)	U Btu/ft <sup>2</sup> ·hr ·°F (W/m <sup>2</sup> K)	$\Psi$ Btu/ft·hr·°F (W/mK)
R-10.0 (1.76)	R-12.3 (2.17)	0.081 (0.46)	0.013 (0.023)
R-15.0 (2.64)	R-16.6 (2.93)	0.060 (0.34)	0.015 (0.025)
R-20.0 (3.52)	R-21.9 (3.86)	0.046 (0.26)	0.007 (0.011)

### Temperature Indices

	With flashing			Without flashing			
	R10	R15	R20	R10	R15	R20	
$T_{i1}$	0.93	0.95	0.96	0.94	0.96	0.97	Min T on concrete ceiling slab at gypsum wall.
$T_{i2}$	0.93	0.95	0.95	0.94	0.96	0.97	Min T on concrete floor slab at gypsum wall.