

Table 2-2 Assembly 2 thermal modeling results

Exterior Insulation Thickness	Nominal Insulation R-Value (Cavity + Exterior)	Cavity + Exterior Insulation (Without Penetrations)	3D Thermal Modeling Effective R-Value (ft <sup>2</sup> ·°F·hr/Btu)	
			Masonry Ties @ 16" x 16" O.C.	
			14ga Plate Tie (0.05% Area)	
			Stainless	Galvanized
2"	15 + 8.4-12	19.4-22.9	17.7-20.3	15.7-17.4
3"	15 + 12.6-18	23.4-29.0	20.9-24.9	18.0-20.6
4"	15 + 16.8-24	27.7-35.2	24.4-29.6	20.6-23.7
			Thermally Optimized Screw Tie (0.05% Area)	
			Stainless Hook	Galvanized Hook
2"	15 + 8.4-12	19.4-22.9	17.0-19.3	16.9-19.2
3"	15 + 12.6-18	23.4-29.0	19.9-23.4	19.8-23.3
4"	15 + 16.8-24	27.7-35.2	23.1-27.5	23.0-27.4

Table 2-3 Concrete floor line thermal modeling results

Exterior Insulation Thickness	Nominal Exterior Insulation R-Value	Concrete Slab Edge with Anchored Masonry		
		3D Thermal Modeling Effective R-Value (ft <sup>2</sup> ·°F·hr/Btu)		
		Exterior Insulation (Without Penetrations)	Standoff Shelf Angle	Continuous Shelf Angle
2"	8.4 - 12	12.4-16.2	6.6-6.8	2.9
3"	12.6-18	16.8-22.3	7.2-7.3	3.1
4"	16.8-24	21.3-28.7	7.6-8.2	3.2

Table 2-4 Assembly 2 prescriptive energy code compliance values excerpted from Table i-2 of the introductory chapter

OPAQUE ABOVE-GRADE WALL - THERMAL ENVELOPE REQUIREMENTS												
Guide Assembly #	Energy Code	2012 SEC		2012 WSEC		2014 OEESC		2012 IECC				
		Climate Zone		5 and Marine 4		5, 6 and Marine 4		5 and Marine 4		5 and Marine 4		6
Classification		All Other	Group R	All Other	Group R	All Other	Group R	All Other	Group R	All Other	Group R	
2	Steel-Framed Wall with Anchored Masonry Veneer	Steel-Framed	R-13+	R-19+	R-13+	R-19+	R-13+	R-13+	R-13+	R-13+	R-13+	
			R-10ci	R-8.5ci	R-10ci	R-8.5ci	R-7.5ci	R-7.5ci	R-7.5ci	R-7.5ci	R-7.5ci	
			U-0.055 (R-18.2)	U-0.055 (R-18.2)	U-0.055 (R-18.2)	U-0.055 (R-18.2)	U-0.064 (R-15.6)	U-0.064 (R-15.6)	U-0.064 (R-15.6)	U-0.064 (R-15.6)	U-0.064 (R-15.6)	U-0.057 (R-17.5)

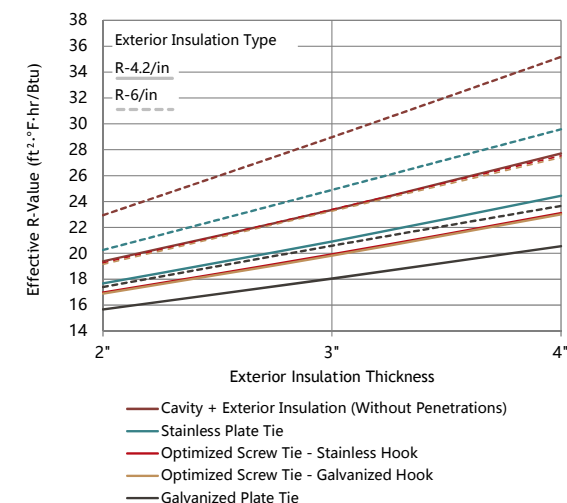


Fig. 2-14 Assembly 2 effective R-value comparison of different tie types. A range of insulation R-value per inch is represented.

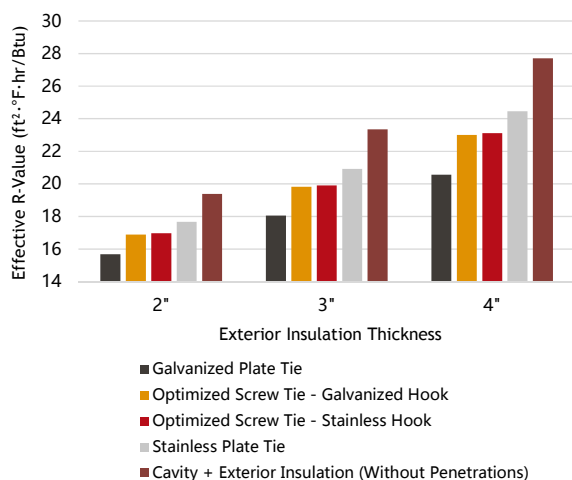


Fig. 2-13 Effective R-value modeling results for R-4.2/inch exterior insulation, various insulation thicknesses and various tie types.