Summary of test results and allowable load

Table 1 summarizes key results from experimental testing and the resulting allowable load for design. This summary is based on the detailed test results shown in Appendix 1.

In accordance with ASTM D7147-11 Section 13, the allowable downward load is calculated as the lesser of:

(a) The lowest ultimate load per OneLedge connector divided by 3.

(b) The average, over each OneLedge connector in each specimen, load that produces a vertical deflection of 0.125 inches at the bottom of the OneLedge connector with respect to the wall.

The ultimate load measured in the test was limited by the strength of the wood joists.

Table 1   Summary of test results and allowable load

specimen	ultimate load per OneLedge (lbs)	load per OneLedge at 0.125" deflection (lbs)		allowable load per OneLedge (lbs)
		OneLedge 1	OneLedge 2	
1	8191	2991	3292	
2	8990	4083	4274	
3	8675	4256	3975	
Minimum / 3 = 2730		Average = 3812		**Allowable = 2730**

Applicability of allowable load

Figure 1, Figure 2, and Figure 3 show the configuration and dimensions of the tested specimens. The allowable load specified above is applicable to OneLedge connectors having the configuration shown in Figure 2. Project parameters are permitted to vary within the ranges stated in Table 2.

Adjustments to allowable load

For applications on projects where the project specified concrete strength ($f'_{c,\ specified}$) for the ICF wall is less than 91% of the tested concrete strength ($f'_{c,\ tested}$) stated in Table 2, the allowable load stated above shall be reduced in accordance with ASTM D7147-11 Section 13.5.9 by multiplying by:

$\sqrt{(f'_{c,\ specified}/\ f'_{c,\ tested})} \leq 1.0$

For applications on projects where the project specified thickness (t_{spec}) and/or tensile strength (F_{u_spec}) for the OneLedge sheet metal material is less than the tested OneLedge sheet metal thickness (t_{tested}) and/or tensile strength (F_{u_tested}) stated in Table 2, the allowable load stated above shall be reduced in accordance with ASTM D7147-11 Section 13.5.7 by multiplying by:

$(3.0/2.5)(F_{u\_spec}/F_{u\_tested})\ (t_{spec}/t_{tested}) \leq 1.0$