

Foundation Specifications for Pre-Cut SIPs

Introduction:

As with most pre-cut and pre-assembled building systems, Foard Panel makes basic tolerance assumptions for the foundation. If the foundation is too far from the drawings, panels will need to be re-cut in the field, and, possibly, some will need to be re-made. These tolerances should be within the capabilities of most concrete contractors, but discussing expectations never hurts. These requirements apply to typical residential scale foundations. Foundations that are very deep, complicated, or have very high loads may have different specifications and must come from the foundation structural engineer.

Match the plans: straight, level, and square:

Straightness of each wall: $\pm 1/4$ " , Concrete edge varies no more than a $1/4$ " from a straight line pulled from outside corner to outside corner of wall (this should be true of either edge of wall).

Levelness of each wall: $+0 / -1/2$ " , Wall cannot be any higher than specified and no more than $1/2$ " lower than height specified on plans.

Squareness of Building: diagonal $\pm 1/2$ " , The diagonal from corner to opposite corner can be off by no more than $1/2$ " from the plans and/or the opposite diagonal.

All walls must be plumb. This is not a requirement for SIPs but a general structural requirement for all foundations.

Anchor Spacing and Specifications:

Our recommendations for anchor bolt spacing are based on typical residential scale buildings in an inland wind zone. These recommendations are our suggestions, the structural engineer's recommendations always supersede ours.

Anchor Specification: 5/8" diameter x 12" Hot Dipped Galvanized anchor bolts.

Embedment Specifications: Anchor bolts embedded at least 8" into concrete, with 4" sticking out of concrete.

Anchor Bolt Edge Distance: Anchors are preferably at least 2- $1/2$ " from the edge of concrete. Exact edge distances are dependent on job specific wall to foundation details including thickness of panel, but center of the anchor bolts must not be within 1" of the panel skins.

Anchor Bolt Spacing: No more than 3 feet apart along length of wall. There must always be an anchor bolt within 12" of a corner or wall height change, in both directions from the corner or height change.

Hold-Downs, Straps, and Other Anchors:

When Foard Panel is hired to install the wall panels, it's most common that our crews hammer-drill and epoxy all of the threaded anchors into the foundation for all specified hold downs. Threaded anchors or tension straps can be cast into the foundation, but they must be done so in close coordination with Foard.