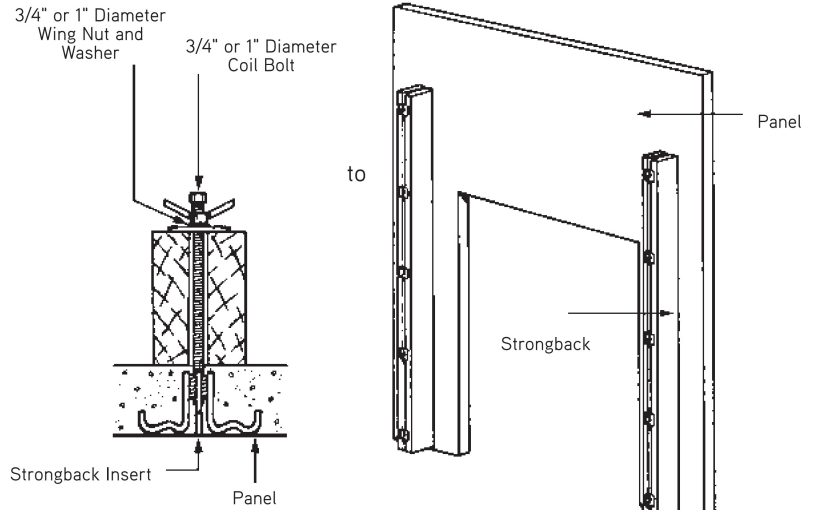


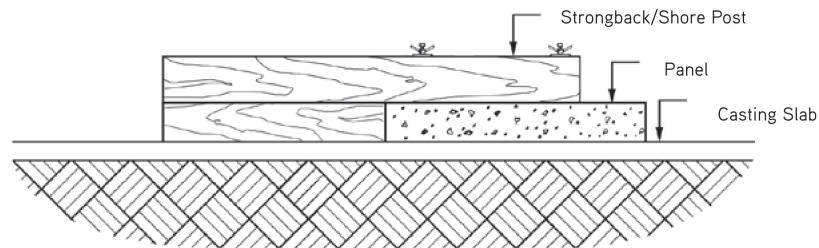
Strongbacks

When openings are required in a tilt-up panel, they often create greater bending stresses in the remaining concrete sections. If additional reinforcing steel is not an option or practical, strongbacks can be used effectively to stiffen the panel. Strongbacks may be fabricated from lumber, aluminum or steel and are usually reusable. DSC Engineers design using Steel Strongbacks. Designs using other types of material may be requested by the customer, but will require additional information.

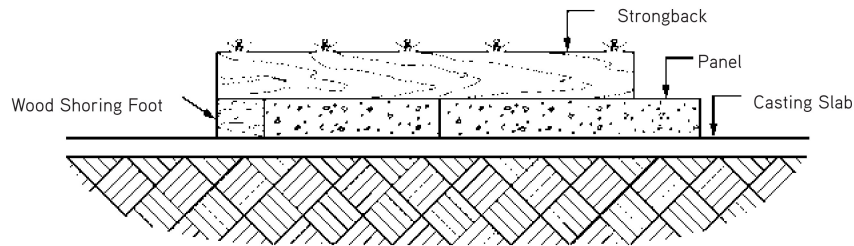


Section Through Strongback

Strongback Stiffened Tilt-Up Panel



Strongback/Shore Post



Strongback With Foot

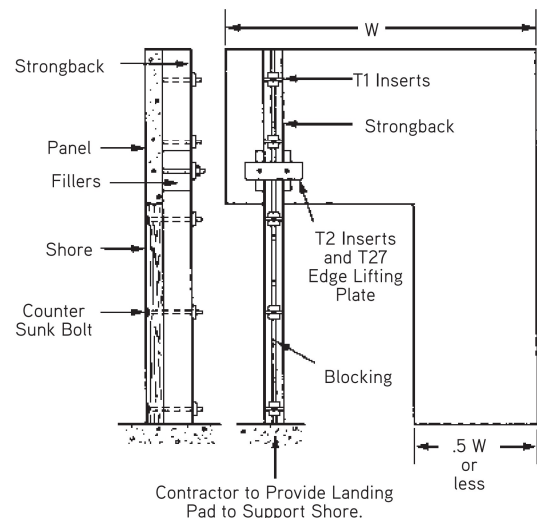
Strongback System

Strongback-Shore/Blocking

The strongback-shore system is used to reduce stresses during the lifting process and stabilize the panel during and after erection. Generally, this system should be utilized on panels where an offset opening is equal to or greater than 1/2 the panel width. The concrete leg section must be checked for stresses to determine if additional reinforcing steel or strongbacks are needed.

Strongback size should be of sufficient width and depth to carry erection loads and consist of material strong enough to withstand repeated use. The shore depth should be the same nominal size as the panel thickness, i.e., a 6" panel would require a 4x6 or 6x6 shore.

The shoring/blocking must be adequate to support the wall's weight when in place at its full vertical position. This blocking is design and specified by the Field Engineer, based on the vertical loads and shoring material.



Strongbacks

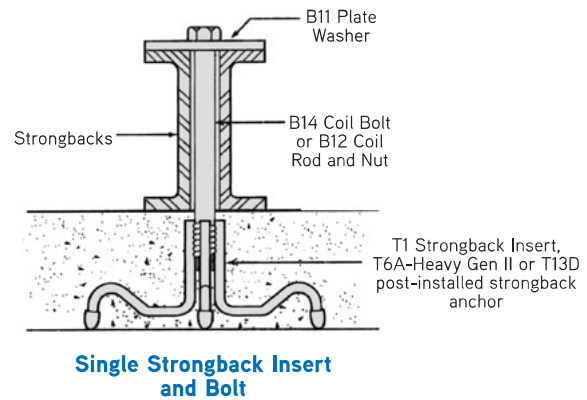
When strongbacks are specified, they must be of the proper number, size and located as shown on the Panel Layout Sheet. Strongbacks, depending on type specified, must meet the following requirements:

- Aluminum strongbacks must be Dayton Superior T63 Aluminum Strongbacks.
- Symons Soldier Beam
- Steel strongbacks must meet ASTM Standard A36.

Bolts used to attach strongbacks must be securely tightened to resist movement of the strongbacks during the erection process.

Maximum space between strongbacks is the bolt diameter plus 1/2".

Strongbacks Using Coil Inserts, Coil Bolts and Flat Washers



T63 Aluminum Strongback Beams

The Dayton Superior T63 Aluminum Strongback beams are heavy aluminum channels available in 10 ft., 15 ft., 20 ft., and 25 ft. lengths for use as strongbacks for concrete tilt-up panels. T63 beams are furnished in sets of two channels each.

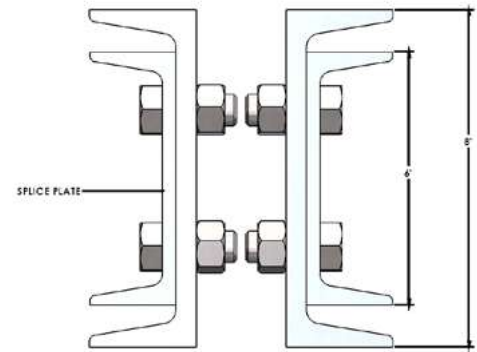
NOTE: All product located on the West Coast only.

To Order:

Specify: (1) quantity, (2) name, (3) length.

Example:

12 sets, T63 Aluminum Strongback Beams, 20' long.



T63S Splice Plate for T63 Beams

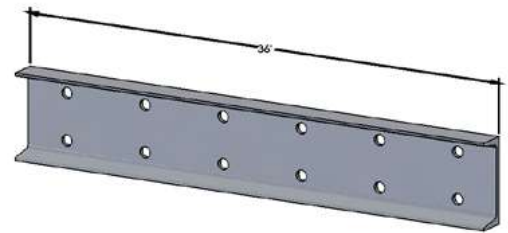
The Dayton Superior T63S Splice Plate is available for splicing T63 beams to extend their effective strongbacking length.

To Order:

Specify: (1) quantity, (2) name.

Example:

6 sets, T63S Splice Plates.



Strongback System

Strongback Assemblies

T63 Aluminum Strongbacks are available in stock lengths of 10 ft., 15 ft., 20 ft., and 25 ft. However, by using the T63S Aluminum Splice Plate Assembly to splice together various combinations of stock length strongbacks, you can also make up 30 ft., 35 ft., 40 ft., 45 ft. and 50 ft. lengths.

Some methods of attaining the various lengths of strongbacks are illustrated below.

