

# Introducing...

## *STURDI-WALL PLUS<sup>+</sup>*



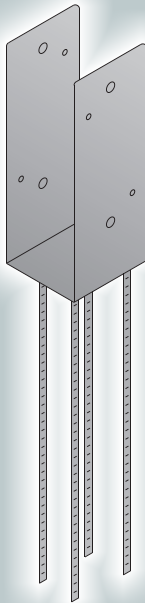
### *The Sturdi-Wall Plus<sup>+</sup> Advantage*

- **EASY** - One step bracket placement.
- **STRONG** - Designed for Shear, Uplift, & Moment (resistance to bending).
- **DURABLE** - Powder coat adds durability and a professional look to every project.
- **ECONOMICAL** - High speed stamping line and robotic welding results in an economical product.

### Alternative Use



**Pier Bracket**

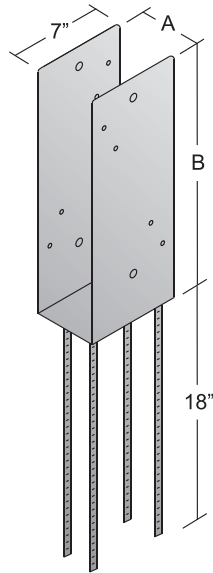
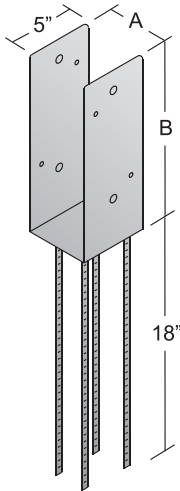


### Poured Wall Installation



## SW8P SERIES

## SW6P SERIES



	TYPE	DIM A	DIM B
SWP46	4" X 6" POST	3-5/8"	13"
SWP66	6" X 6" POST	5-5/8"	13"
SWP63	3 PLY 6" LAM COL	4-5/8"	13"
SWP64	4 PLY 6" LAM COL	6-1/8"	18"
SWP83	3 PLY 8" LAM COL	4-5/8"	18"
SWP84	4 PLY 8" LAM COL	6-1/8"	18"

Table 6.1: Allowable Shear, Uplift, and Bending Moment for Sturdi-Wall Plus Base Brackets							
Sturdi-Wall Plus Bracket Components				Sturdi-Wall Plus Bracket Capacities			Required Development Length for Rebar
Model	Post Size	Perma-Column Bracket Spec.	Rebar Size	Shear (lbs)	Uplift (lbs)	Moment (in-lbs)	
SWP46	4x6	PC4600	(# 4) 1/2"	6561	9019	28000	18"
SWP66	6x6	PC6600	(# 4) 1/2"	6638	9019	28000	18"
SWP63	3 ply 2x6	PC6300	(# 4) 1/2"	6638	9019	28000	18"
SWP64	4 ply 2x6	PC6400	(# 4) 1/2"	6638	9019	30000	18"
SWP83	3 ply 2x8	PC8300	(# 5) 5/8"	9138	11519	59000	18"
SWP84	4 ply 2x8	PC8400	(# 5) 5/8"	9138	11519	59000	18"

**Notes:**

- This chart is for Sturdi-Wall Plus Brackets for use in Post Frame Building Applications to connect wood columns to a concrete wall or foundation.
- Loads applied to the brackets from the columns are a vertical uplift force, horizontal shear force, and a moment about the strong axis of the column.
- Column weak axis loads are assumed to be taken by adequate diaphragm action of roof and shearwalls.
- Wood to steel connections were calculated as per the NDS 2001 for Wood Construction, using Southern Yellow Pine columns and a dry use condition.
- The bolted connection of the Perma-Column Bracket to the post governed all allowable bending moments except for the SWP64 in which the rebar development length governed.
- The allowable loads in wood have been increased by 60% for wind or seismic loading.
- The allowable loads in concrete have been decreased by a factor of 1.6 to convert from LRFD.
- Concrete design numbers are based on a minimum concrete compressive strength of 4000 psi.
- All rebar is weldable A706, Grade 60, #4 for 4 and 6 series brackets and #5 for 8 series brackets.
- Bolts are to be 0.5" diameter ASTM A325 with hex nuts.
- Screws are to be 1/4" diameter x 3" Strong Drive Screws (SDS) by Simpson Strong Tie, or approved equal.
- The calculated full development length of deformed bars in tension according to the ACI 318-99 is 19" for #4 rebar and 23.7" for #5 rebar, development length reflects straight rebar, no standard hooks are used.
- The required development length was obtained by multiplying the calculated full development length by a reduction factor that was developed from a ratio of the actual tension in the rebar due to the allowable bending moment to the fully developed rebar tension.
- Minimum development length for any rebar shall not be less than 12" as per ACI 318-99, Section 12.2.1.
- Minimum concrete cover for rebar shall be 3" when permanently exposed to earth or 2" when exposed to weather.
- Wood column above the bracket and concrete foundation below the bracket to be designed by others.
- Gravity loads shall be supported on an adequate foundation, in order to use the charted allowable uplift values an equal or greater than weight of concrete must be provided below the bracket.
- Install all fasteners as per the manufacturers recommendations and these notes.
- Final bracket design should include a complete building analysis performed by a design professional.

The Sturdi-Wall Plus design manual can be downloaded via our website: [www.sturdiwall.com](http://www.sturdiwall.com)