

A Method of INSTALLATION

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*A reliable,
time efficient,
and goof-proof
installation
system.*

AFTER INSTALLING LARGE, hand-carved, wood signs for a number of years, one tends to develop a system that is reliable, time efficient and even goof-proof. We present this strategy, which of course applies to HDU substrates as well, with the hope that others will profit from it.

THE JIG IS UP

The first thing we built was a *calibratable* installation jig that provides numerous assists in various stages during installation. The jig is 10 feet long and six inches wide, made of ash wood (to minimize warping).

Two blocks, which will rest on top of 6x6 posts, can be repositioned (calibrated) along the jig to accommodate any panel up to 10 feet wide.

Let's assume we are working with a panel that is 60" wide. The panel will *float* two inches from the inner-side of each post, thus the distance from the outer-side of each post will be $60'' + 15'' = 75''$. We arrive at the 15" measurement by doubling the width of the post (nominal 6x6 posts are actually $5\ 1/2'' \times 5\ 1/2''$) and adding 4" to allow for the two inch *float* space on each side of the panel.

The jig first serves as a template marking the position of the postholes. White marker paint is sprayed around the jig marks and digging commences. Post hole (clam) diggers usu-

ally do the job, but you may have to employ a probe now and then to loosen and dislodge rocks.

When a depth of three feet is reached, we place a *post leveler* in each hole. (This device is simply a 2x4 with a 2" segment of a post attached to its bottom.) These post levelers serve two purposes: first, they can be used to tamper the bottom of the hole; and second, in conjunction with the jig and a level, they determine whether both holes are at the correct depth.

After the posts are inserted, plastic *plumb-levelers* are attached to the posts and the jig is reintroduced to check for level and proper distance separation. Any necessary adjustments are made at this point.

With the jig in place and the posts level and plumb, we secure the posts with 120 lbs. of dry cement per post. Soil is returned to the hole and is tamped in layers to ensure a compacted tight fit.

When the remaining soil is gathered around each post, it is tamped again with a large 8" x 8" tamper.

With the posts properly spaced, level, plumb and secured, the jig is removed and the panel is readied for attachment to the posts.

FITTING THE PANEL

In the coating process, we had attached *handles* to the panel's edge to assist in flipping and in transporting (sincere thanks to Jay Cooke for this idea). We remove the handles and fill the screw holes with wood epoxy.

We had *The Old Dutchman Ironworks* hand craft the channel brackets in steel with a shoe at the base and 12" threaded rods on the sides. Each channel bracket also has two holes through which 2" lag screws will be tightened



The finished product!

CONTINUED



1 Our calibratable installation jig provides numerous assists in the various stages of the installing process. The 10-foot long jig is made of ash to minimize warping. The jig serves as a template for marking the locations where the postholes will be dug.



2 The posts are inserted into the postholes. A post leveler in each hole serves to tamper the bottom of the hole and, in conjunction with the jig and a level, determine whether both holes are at the correct depth.



3 Plastic plumb-levelers are attached to the posts and the jig is reintroduced to check for level and proper distance separation.



4 The posts are secured with 120 lbs. of dry cement. Eventually ground water will interact with the cement to produce a large pod around each post. When the remaining soil is gathered around each post, it is tamped again with a large 8" x 8" tamper.



5 We remove the handles from the panel's edge.



6 Fill the screw holes with wood epoxy.



7 In the milling phase we had hand-routed a recessed edge on each end-grain of the panel to accommodate the channeled bracket that will hold the panel to the posts.



8 Pilot holes for the lag screws were previously drilled and are filled with 100% silicone.



9 Nuts and washers are attached to the threaded rods of the channel brackets before they are inserted into the pre-drilled holes in the posts.

It will require two people to attach the panel to the channel brackets. The eight bolts that hold the brackets to the posts are now tightened. Note the extra length of the threaded rods on the brackets; the surfeit allows us to shift and slide the panel and brackets from left to right during the lag bolting operation.



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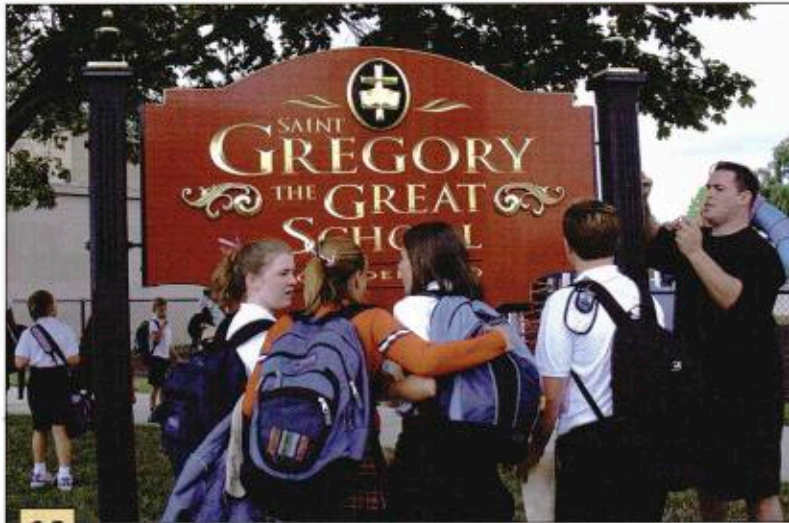
The excess length of rods must be removed. We use a cordless Sawsall to remove the excess.



12 We then smooth out the saw cut with a cordless grinding wheel.



13 To complete the posts we attach finials and caps with silicone being sure that they are level.



14 Exuberant and grateful school children admire their new school sign.

into the panel end-grain edges. Pilot holes for the lag screws were previously drilled and are filled with 100 percent silicone.

Two people are required to attach the panel to the channel brackets. First we slide the substrate into the left channel, sitting it securely on the *shoe*. Next, the channel on the right side is brought in contact with the right edge of the panel, sitting on the *shoe*.

Since the inside distance from post to post is 4" more than the width of the panel, we can easily insert and tighten the 2" lag screws into the panel edge. After the right side is bolted, the panel with the two brackets is shifted to the right so that the lags can be secured on the left edge. The panel with attached brackets is then shifted until it is centered between the two posts leaving two inches of space between post and panel edge.

The eight bolts holding the brackets to the posts are now tightened. The extra lengths of rods are then removed using a cordless Sawsall (a hacksaw can also be used) and the ends smoothed out using a cordless grinding wheel. Next, the pre-

painted nuts, bolts, and washers are touched-up with 1-Shot paint because invariably the paint gets chipped in the tightening process.

To complete the posts, we attach finials and caps with silicone. The posts, which are solid southern yellow pine treated wood, were stained with two coats of solid color stain prior to installation. However, because they get dusty during installation, we *spritz* the posts with water and give them one more coat of stain using a 4" foam brush.

Finally, we attached our brass company nameplate to the pole. While we were doing this, we were delightfully surprised to be surrounded by exuberant school children admiring their new school sign. It was a rewarding and perfect ending to a flawless installation.

About the author: Francis S. Lestingi is a former physics professor who saw the light and got into the sign business. He now owns and operates Signs of Gold, Inc., Williamsville, N.Y. and specializes in hand-carved, gilded signs. 