Filling in the voids

Volume #4

Sloped roofs

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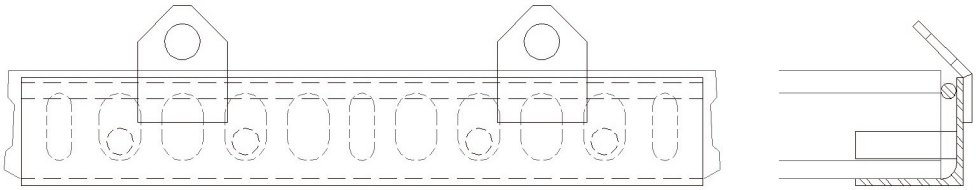
Hollow core plank and sloped roofs have not traditionally been a match made in heaven. Of particular concern is the desire for an overhang at the lower end creating a conventional soffit effect. Erection of such projects means rigging and hoisting individual precast units on an angle matching the desired roof slope, and the need to then fully support the plank until at least a temporary connection is made. In the past, this often involved notching the edges of the hollow core to make spaces that serve both to prevent plank/choker slippage and allow for choker removal.

The hollow core clasp has been created by Coreslab Structures (Orlando) Inc. in an effort to greatly reduce the need to notch hollow core plank erected on a slope with a cantilever at the lower end. The clasp is designed to fully support the lower end of the plank during hoisting and erection while the upper end is supported with a standard sling or choker.



Use of the clasp was instrumental in the construction of a large single family custom home in Orlando (below). Consisting of 236 pieces of hollow core plank on a 4:12 pitch, about 85% of the units were hoisted and set using this system. The clasp easily allowed each slab to be held in place while it was drilled and pinned to the supports using a quick-setting grout. The speed, safety and efficiency achieved using this technique exceeded all expectations.

Unfortunately not every situation lends itself to the use this new method. Sloping simple spans, skewed slabs, and some planks at the end of bays would likely still use the tried and true notching process. In most of these instances the need to hold the precast in place until a connection is made is not as critical as the overhanging end condition the clasp was designed specifically to address.