



Filling in the voids

Volume #2

Topping

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How do you decide whether to use topping in the design of hollow core slabs for a project, and if so, what kind? These are some of the questions that may come up early in a design and can have significant impact on the quality of the finished project.

One thing to remember is that hollow core is first and foremost a structural product. The precast surface finish is generally limited to a standard plant-run machine finish, with only minor variations between manufacturers, and well established tolerances among PCI¹ certified plants. However, the requirements of a number of projects, owners or designers may best be accommodated by specifying some type of topping.

Composite structural concrete topping is the most widely used. Typically a minimum of 2 inches in thickness is recommended which may provide a noteworthy increase in the available load carrying capacity of the system as a result of the composite topping bonding to the hollow core slabs. Combining different depths of hollow core plank or varying the thickness of the topping slab can yield great flexibility in accommodating shallow step downs, depressions and sloping for drainage in exterior areas, entries and transitions. Coreslab Structures (Orlando) Inc. recommends concrete topping in all exterior areas.

Self leveling underlayment is also a popular option. Best known by trade names such as Gypcrete^{®2}, Durock^{™3}, or Firm-Fill^{®4}, self leveling underlayment can be poured much thinner than concrete topping and therefore will have less of an impact on total building height. Usually applied after drywall, self leveling underlayment is a great way to finish interior areas of a precast deck.

Regardless of whether topping is used or which type of topping slab is chosen, camber will be present in most hollow core spans and the topping thickness specified should always be measured at the center of the span. The hollow core will be designed to carry the additional topping at the bearing ends.

Coreslab Structures (Orlando) Inc. can assist you by providing more detailed information on anticipated camber based on the specific conditions on your next project allowing you to make a more informed choice.

¹Precast/Prestressed Concrete Institute, MNL-126-98

²Gypcrete[®] is a product of the Maxxon Corporation