

Opinions

Modular construction: Here to stay or passing trend?

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Modular construction can make sense for some projects, but developers should consider the method's limitation as part of a well-thought-out approach.



By Warren Feldman

In recent years, the willingness of hotel brands and developers to use modular construction has expanded exponentially due in large part to improved quality of the modular components and technology that has enabled better coordination.

It is important to understand that modular hotel construction does not mean just stacking 150 mobile homes on top of each other and calling it a hotel. Rather, it involves creating repeatable components designed and manufactured to allow them to be pieced together to form a portion of or all of a hotel with some parts of the construction occurring offsite and other portions being completed on site.

The components could be as simple as pre-paneled exterior wall modules, which are constructed offsite with the sheathing, window and wall framing and set in place by crane as the building goes up. This creates a watertight enclosure much faster and allows for a rapid transition to installing interior finishes. It could be the use of prefabricated "bathroom pods," built offsite and tied together in the field to create a fully-plumbed system almost instantly as the hotel goes up.

It is also possible to create modules that include the entire guestroom and, in some case, even a guestroom corridor. These modules can be finished to varying degrees as the project warrants. Some projects have taken the prefabrication all the way to fully finished construction on the interior finishes of the guestroom including carpet, paint, lighting, wall vinyl, tile, luxury vinyl tile and plumbing fixtures. This allows the guestroom to be a sealed environment completely ready for furniture and final occupancy, just requiring on-site plumbing and electrical connections when the modules are set in place.

Timing is important, and decisions regarding modular construction must be made early in the design process, sometimes before additional construction costs may be known.

Because each room module is a separate component, the guestroom party walls become double stud walls. The guestroom floors and ceilings become separate joist systems. This means your building will be longer and taller than with conventional construction. If you have a tight site or a building height restriction, this will be an important consideration. The climate location of your project can also be an issue. The location of the vapor barrier in your exterior wall varies by location. With modular construction, that vapor barrier is typically located on the outside of your building sheathing, which is an important consideration in certain climates particularly.

The cost of modular or component systems is generally not lower than standard built-on-site systems unless the market has high labor costs. The major savings in modular or component systems is time. The use of modular components can save weeks and even months in the construction process. As developers know, time translates into lower construction loan carry costs and faster openings. The time savings is because rather than sequential trades commencing one after the other, a majority of the work is completed off-site ahead of time. While full modular construction is probably best suited for select service hotels, the component systems can be used all the way up to luxury properties.

Another consideration with modular construction is future maintenance and renovation costs. Bathroom toilets overflow from time to time. Typically, it is repaired from the floor below, but now the ceiling below has a seal (two actually) between it and the cavity of the toilet area in the bathroom above. Access will be more difficult, and the water may flow in ways other than straight down. Since each room is individually wired, there are few, if any, vertical chases for low voltage changes. These are new issues for which solutions will no doubt be developed as the process becomes more common.

The other hiccup in the system is the local permit office. The actual modular construction might be occurring in another state, and getting inspections to meet

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local codes needs to be resolved before you start the process.

The quality and process of modular construction will only continue to improve as new advancements are made; and developers will continue to embrace this construction method as it helps deliver projects to market faster.

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