

“From The Drawing Board”

Disposable Housing?

For years now, people have been saying that we live in a disposable society. Aside from diapers, we have disposable contact lenses, razors, cameras, eating utensils, packaging, medical products and tools. We even have disposable housing. The term disposable housing refers mainly to structures built to quickly solve affordable housing issues (initially in impoverished urban areas). Much of this housing is constructed so cheaply (and quickly) that it begins to come apart after just a couple of years, achieving exactly the opposite of what the original intent was (a nice house for somebody to live in along with the betterment of the neighborhood). Another area that has fallen victim to this unintended plan is the suburban middle-class housing development. Families, hoping for a piece of the American Dream find tracts of affordable homes in planned suburban communities, only to be faced with some of the same (poor) construction issues as their lower income, inner-city dwelling counterparts. Along with these two, a third region that is beginning to experience parts of this tendency is the fast growing resort, comprised mainly of investment (rental income) properties. The quicker a house can be completed; the sooner one can begin to see a return on their investment.

Nice and new to tired and old often starts with squeaky floors, sticking doors, and leaky windows in a very short period of time. And the repair of these flaws often involves the use of “Band-Aid” repairs, such as the application of caulking around the outside of a leaky window, instead of replacing it (if it’s defective), or re-setting it into a properly flashed and weather tight opening. In little time, the caulking fails, allowing water to find its way back inside the wall cavity, potentially causing irreparable damage to the structure, and finish materials. Moreover, it’s nearly impossible to repair the defects that are concealed within the walls without major reconstruction.

Because of the harshness of the coastal environment (especially on the Outer Banks) these construction concerns are multiplied. Aside from just keeping the water out, if other important steps of the construction process are skipped, the results can be devastating. Forgotten or rotted “hurricane strapping” (an integral framing component, anchoring the roof, walls and decks), could result in major structural damage in hurricane force winds or a tidal surge. The current building codes spell out how these houses are to be built in order to survive in these severe conditions. In general, newly constructed homes do conform to these standards, as the people who build them adhere to the prescribed codes, insisting that they be put together with reliable construction techniques.

However, the building code generally sets the *minimum* acceptable standard, not the *maximum*. If someone expects their new ocean-front house to last more than a generation (the un-written minimum is a hundred years – an ambitious goal here), meeting the minimum of the building code will not be enough. For example, without question, the pilings will need to be deeper, and standard metal tie-downs, anchor bolts and other fasteners exposed to the elements will need to be upgraded as well (the typical upgrade to galvanized steel is often not enough; stainless steel is better). These “upgrades” are not

popular topics of discussion – especially when people are working with tight construction budgets in an expensive construction market, and when many of these betterments are hidden from view once construction is complete. And, none of this takes the maintenance into account – houses here require more maintenance than typical houses elsewhere.

The damage that was sustained during Hurricane Isabel is a good indication of the ability for structures to last in this brutal environment. Although some houses may have been poorly constructed, we can assume that the ones that didn't survive were originally built to meet the code. But over time, bolts and nails rusted, pilings became undermined, and when the hurricane hit, these houses were severely damaged – even destroyed. Sometimes it's simply luck that one house survives in the middle of devastation. But generally, that's not the case. It's usually because that house was built to endure, and was properly maintained (deeply rusted anchor bolts and straps replaced, leaks properly repaired, piling bracing kept intact).

Here on the Outer Banks, I often see houses being moved (usually up to “the four wheel drive area”). These are generally small houses that are being replaced by bigger rentals. The general trend in other parts of the country is to demolish a house when it's being replaced by a bigger and newer one. But on the Outer Banks, if Mother Nature hasn't taken it *yet*, it's probably not disposable.

Jeffrey W. Jahnke, AIA practices architecture in NC and CT.

Aside from designing custom houses, he is currently working on designs for affordable, hurricane-defiant homes on the Outer Banks.