ARCHITECTURE

EHLINGER & ASSOCIATES FIRST QUARTER 2021

Houmas House Plantation

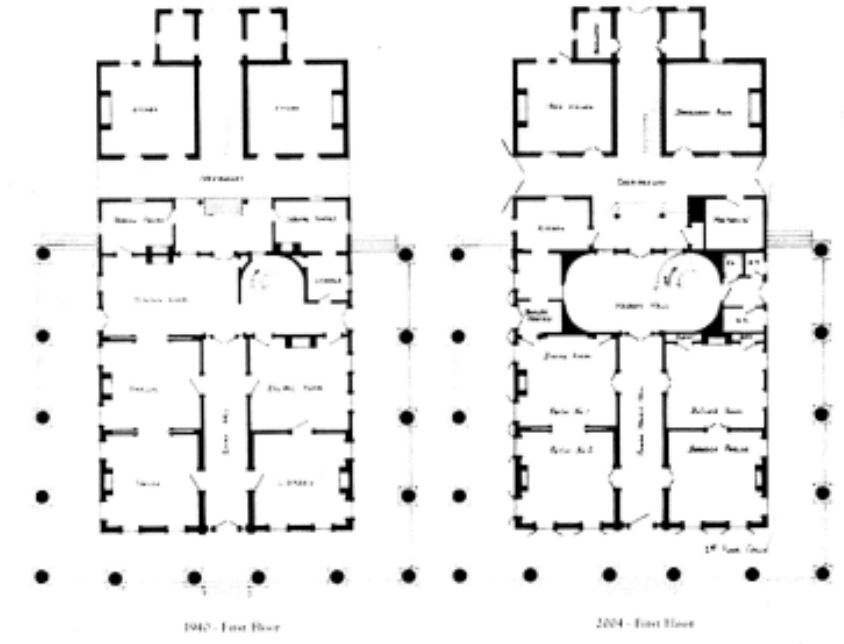
The Houmas House site was once owned by the Houmas Indian Tribe. It has had a succession of various owners through the years, each of whom put their mark on the land and the buildings. From Daniel Clark, one of the first owners, to the Marquis of Auconne, the Bringier family, the Wade Preston and the Hampton families, to John Burnside, who died in 1881 with no direct heirs, and then to his designated heirs the Biernes, then to the Miles families. Then it was bought in 1940 by Dr. George B. Crozat, a New Orleans orthodontist. Dr. Crozat's heirs (my cousins) operated it as a tourist attraction from the 1960s until the estate sold it in 2003 to the Kelly Family.

The original house in the Colonial style was built by the Bringiers around 1800 and it is obscured from view by the main house which was started in 1829 and completed in 1840 by General Wade Hampton (some have attributed this to Preston). The initial architects for both dwellings are unknown. When Dr. Crozat acquired the property, he engaged Douglass Freret, Architect of the Freret & Wolf firm from New Orleans, to make alterations to the house. The original house had been joined to the main house on the second level, leaving a breezeway (Porte Cochere) between the two at the first level. Various other changes were made to the interiors of both, but especially in the main house to the staircase area. Numerous outbuildings were demolished. Though at the time the garçionièrres (outbuildings for young bachelors to be rowdy in) were preserved. Dr. Crozat furnished the mansion with federal and early Louisiana style antiques from his family.

The exterior character of the house is defined by the massive modified Doric (Tuscan) columns that support the roof and the galleries, six across the front with five spaces between, and five columns across the side with four spaces between. The front spaces between columns are in a varied rhythm of medium wide space at the outside bays, then wider spaces as your eye moves inboard, with the center space as the narrowest; whereas on the side facade, the widest spaces are outboard with narrower ones inboard.

At it's zenith, the Houmas House Plantation had over twelve thousand acres of the finest quality of Mississippi River deposited cultivatable land. It was primarily a sugar cane plantation, though many other types of crops would grow on this type of land. The property was manned by over five hundred fifty slaves. It was probably the finest plantation possessed by a single owner in all of America

Ladd P. Ehlinger, AIA.



2200 Houma Blvd., Metairie, LA 70001-1399 (504) 455-8911 3109 Ivy Ave. SW, Huntsville, AL 35805-4698 (256) 534-1900

This 5-Over-1 under construction illustrates the concrete to wood transition, and the design, even unfinished, clearly indicates the different usage types intended.

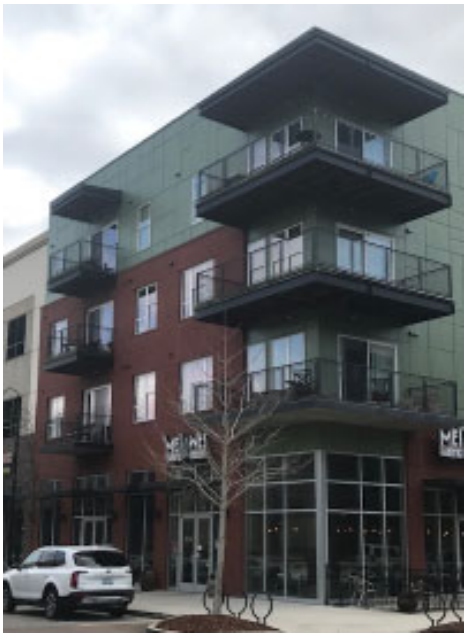
5-Over-1 Podium Design

R. Perrin Ehlinger, AIA

Every now and then, building codes, zoning ordinances, and market demand line up to produce some pleasant, useful, and lasting designs. This would be the case for what the industry has termed "5-Over-1" design.

5-Over-1 refers to wood frame construction over concrete construction. In the Building Code, wood framing is considered Type-V (Five), and concrete Type-I (One) construction. So, it's not a literal counting of a building's stories, but a description of the construction material types.

The building code sets height limits on wood frame construction, and requires a strong fire protection between changes of use. The first 1 to 2 stories of concrete provide that fire separation between business/parking and residential. Then, with sprinklers, the wood frame construction can go up to 75' high, depending upon the zoning height limits.



This building illustrates how 5-over-1's interact with street & pedestrian traffic, however cookie-cutter their design may be.

The result is a return to the general concept of low to mid-rise, mixed-use urban design that was abandoned after World War II in favor of International Design, which was reinforced by poor zoning decisions and building code requirements. While these newer structures generally look nothing like pre-war, brick low-rises, the function of the buildings is a mirror of those pre-war uses.

Now, instead of mirrored glass and metal frames or concrete slamming into an unpleasant sidewalk or unusable courtyard, these designs provide an interaction between the street level and the building that helps return urban space to walkable and usable areas.

While there is plenty of criticism of 5-Over-1 as "cookie-cutter" design, these comments are more directed at the lack of budget, imagination, talents and value-engineering of the design and development teams. Any structure with strict planning and design restrictions runs the risk of monotonous outcomes.

What makes the 5-Over-1 different from other repetitive design systems is that even a poor or cheap design will retain the street level interactivity and help achieve a residential density that will support the surrounding businesses, without the need for transportation.

Expect to see more 5-Over-1 style construction as cities realize that single family zoning and destination shopping areas can no longer provide a tax-base that supports the infrastructure required.

Vertical Farming

There is a perfect storm brewing for vertical farming. Vertical Farming is the use of indoor farming techniques in buildings. While there are a variety of techniques, like hydroponics, or aquaponics, all of them fall under the category of Controlled-Environment Agriculture, which is as simple as it sounds - controlled temperatures, humidity, water supply and quality, and lighting for the maximum growth benefit of selected crops.

With the advancement and cost reductions of sensors, robotics, artificial intelligence, lighting, and a/c, the technical aspect of converting buildings or building new structures for Vertical Farming is already a reality. Coupled with increasing transportation costs, supply chain disruptions, and more frequent weather phenomena that damage farming, Vertical Farming may soon be a profitable industry.

There are any number of crops that can be grown using Vertical Farming, and they can deliver yields multiples over what the equivalent farm land area can, using far less water, pesticides and fertilizer, offsetting increased electrical use. The easiest to grow are herbs, leaf vegetables, peppers, tomatoes, strawberries and other vine fruits, along with beans, peas and root vegetables, like carrots and potatoes

Larger tree fruits, bushes and grain crops, because of the space they require, tend to be avoided, but specialty agriculture like Cacao trees, Coffee plants, or Banana trees will grow indoors, if not yet profitably.

Several start-up companies specializing in Vertical Farming have facilities in the U.S. and around the world, including publicly traded Aerofarms and Appharvest. Aerofarms is currently converting an old steel manufacturing plant in New Jersey into a Vertical Farm. After companies like these iron out the logistics and operations of commercial Vertical Farming, expect to see them popping up in close proximity to larger towns and cities. *R. Perrin Ehlinger, AIA*