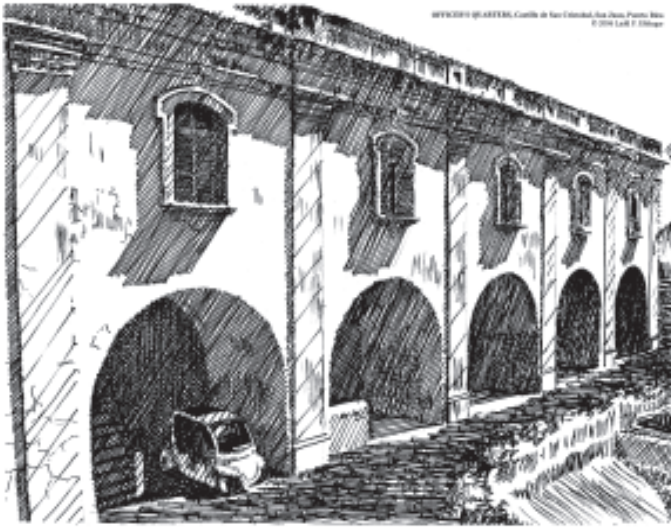




ARCHITECTURE

EHLINGER & ASSOCIATES

FIRST QUARTER 2006



OFFICERS' QUARTERS, CASTILLO DE SAN CRISTÓBAL

This issue's limited edition print of a sketch by Ladd P. Ehlinger is of the Officers' Quarters of Castillo de San Cristóbal, the land side fort at San Juan Puerto Rico. The view in the sketch is of the town side of the building which shows the five bays of barrel vaults of the cisterns which occupy the basement / first level of the building. They actually go below the grade level shown by about ten feet, and were the storage location of all potable water used in the fort. The barrel vault bays above reflect the same spacing, and were used as dormitories for the officers of the Spanish Army garrisoned here. The upper bays were interconnected with cross vaults that went through the supporting walls and formed a groin condition with the larger vaults. The cisterns were accessed from the upper courtyard by two wells, one used for drinking water and the other for washing.

This fort along with Castillo de San Felipe del Morro, the harbor entrance fort, was constructed by the Spanish beginning about 1515, and continued through the end of the 19th century until the Spanish American War, when it was ceded to the United States. The two forts were connected by a wall around the city of San Juan, which like the walls of the two forts was up to twenty feet thick.

When the writer was a student at LSU, he had a summer job in 1961 with

the Historical American Buildings Survey (part of the US National Park Service) as a Student Assistant Architect to measure and produce measured drawings of this building. This one done with one assistant to hold the "dumb" end of the measuring tape and to hold a rod for vertical measurements. All

drawings were produced by the writer and consist of plans, elevations, longitudinal and transverse sections, and details. These drawings along with others produced that summer reside in the US Library of Congress. Research was also done in the original Spanish architectural engineering documents from the 16th century.

KATRINA

Hurricane Katrina disrupted the schedule of the E&A newsletter along with all of the other disruptions of activity in the New Orleans area. We have not produced a newsletter since the 2nd quarter of 2005 (June 2005) for several reasons. We are doing fine though.

Even if we had wanted to produce and mail the newsletter at the end of September 2005, the U.S. Mail was so dysfunctional that few people would have received it. In fact, even today the mail is very unreliable — it may take one day for a first class letter to leave our office and arrive at its intended destination or it may take up to three weeks.

Another problem is that approximately 1/3 of our intended recipients no longer office or live where our mail list has them recorded, so we are uncertain that this will reach them in the first mailing. It will probably take a

lot of corrections of our mail list to ensure that you ultimately receive this and future mailings. If you know of someone's address that we don't obviously have, we would appreciate you telling us about it so all of our friends can receive this and future mailings.

Finally, the printer that did the prints of the sketches for us took a long time to return to the city as well. Many businesses have still not returned to service their customers, and many may never return because they are unable to overcome the losses they have sustained because of no insurance or bad faith response of their insurance companies to their losses.

KATRINA DAMAGE

The damage from Hurricane Katrina has been extensive, intensively devastating, and widespread. E&A has inspected damage caused by Hurricane Katrina, written reports about damaged properties, and in some cases designed repairs for damaged properties from just west of New Orleans and eastward to the Florida panhandle.

The damage in the New Orleans area is primarily from flooding with some wind damage with some notable exceptions in the case of high rise buildings, while in the Slidell area on toward and including the Mississippi and Alabama coasts, the damage was initially from intense winds and then compounded by the storm surge (flooding). A large complicating factor in all of this is what appears to be in the eyes of the writer bad faith on the part of the insurers of these properties.

In the New Orleans area, E&A has inspected and reported on two flooded houses where the foundations have been failed by the flood waters in addition to the other types of flood damage, such as loss of strength, mold, etc. Foundation damage is excluded from the flood insurance coverage unfortunately. Usually, the other types of damage are

so extensive that the flood claim was 'maxed' out anyway. The foundations were damaged most likely in the cases that we inspected because the original spread footings or pilings were not designed to be evenly loaded, and the soils became saturated for an extended period of time such that the engineering properties of the supporting soils were affected.

In one case, the pile foundation was loaded with approximately 9-1/2' of water (almost 600 pounds/SF), in the other, the spread footing foundation was loaded with approximately 5' of water (about 312 pounds/SF — both for an extended period of time (3 weeks). The pilings and the footings failed in settlement differentially. The piling house looked like a swaybacked horse with a roof ridge that dipped noticeably in the center and stair-step cracks on either side in the brick veneer walls. The spread footing house had topsy turvy movement within its raised basement and multiple cracks and distorted beams and floor joists above. Neither owner can collect for this damage because of the policy exclusion of foundation damage.

In Slidell and the Mississippi / Alabama Gulf coast property damage that we looked at, in many cases the building was mostly gone, with only the foundation slab remaining. But even in the cases where the building remained, but so damaged that it needed to be demolished, the insurer have taken the position that it is not possible to determine if the damage was caused by flood or by wind — therefore they shall pay nothing to the insureds until they determine the cause, even if the insurer wrote all of the coverage: flood, wind, liability, contents and alternative living expenses.

This is in the writer's opinion the rankest dishonesty, breach of contract and stall tactic, because it is determinable what came first — the wind or the flood. The insurance company simply does not want to pay and is looking for any excuse to hold on to the dollars until commanded to by a court.

Floods or storm surges come after the high winds in every hurricane as they are associated with the central area of

the storm. The writer has a friend that rode out Hurricane Camille in a tree with a video camera and lived to prove that his and his neighbor's houses blew away before the storm surge arrived. Floods and storm surges do not remove shingles from roofs. But most pointedly, the windward side of a building has positive pressure, while the sides and leeward face have negative pressure when loaded with wind. When one finds that after failure, the brick veneer is face up on what was the initial windward face, and the brick veneer is face down on the sides and leeward faces, then it is obvious by scientific / engineering deduction that the wind failed the walls prior to any storm surge, especially when there are shingles all over the ground, as well as other non-buoyant components such as steel beams and columns. The only components to float away in the storm surge are the buoyant ones, usually those of wood.

The writer heard an insurance industry spokesman give a radio interview last October in which he said that one of the reasons that the insurance companies are being slow to pay claims is that they want Congress to bail them out with a de-facto re-insurance of Hurricane Katrina damage. More chillingly, he also said that next year (2006), the likelihood of any insurance company writing wind coverage within a liability / fire policy would be very low. He said that the industry planned on writing a new type of policy wherein both wind and flood would be in one policy called a "Hurricane Policy" (for all Gulf and Atlantic states), with the Federal government providing reinsurance for all. Failure to provide the reinsurance would result in no policies being written at all to provide this type of coverage.

Please bear in mind that the insurance industry is presently exempt from anti-trust law. They can consult each other and trade information about their customers and finances with impunity. Perhaps it is time to revisit the immunity that they enjoy in this area.

6 Months Later

Two newsletters ago, I wrote about the closed-cell foaming insulation (hereafter referred to as "Magic Foam") which I placed in my attic. Well, it's been six months now, and being the anally retentive person that I am, I've compared my utility bills for the past six months against my utility bills over the past six years. In the scheme of things, six months may not be a definitive time period, but so far my utility savings have averaged about 35%.

I could not have picked a better time to install this material. In Huntsville, the natural gas rates are up 80% from last year. My bill for December was \$132.00, which at last year's rates would have been \$70.00. My actual bill last year was \$98.00 for December, so even though I'm paying more - I'm using less. Compared to my neighbor's bills, \$132.00 is a drop in the bucket. My energy conscious neighbor, who uses a boxwood stove to heat his house, still had a gas bill of \$162.00. My less fortunate neighbor had a gas bill of \$350.00. After receiving the gas bill on the fifteenth, I went and purchased a \$20.00 heating fan from Wal-Mart, which has so far been sufficient to heat the entire house, and we've only relied on the gas heater one night since then.

Now, my whole house insulation project hasn't gone much farther than the attic. My plan was (and still is) to insulate underneath the house, and to insulate all the exterior walls of the house. So far, I've only insulated under the floor in the master bedroom (no more cold floor!), and the only walls that I've insulated are in the living room, and in the bathroom. I've replaced a total of one window in the house - all the rest are original to the house (barely operable, painted over multiple times, single pane and drafty). This means that this one completed portion of insulation is solely responsible for these cost savings. Removing the blown in cellulose insulation from the ceiling joists, closing up the attic ventilation, and using the Magic Foam in between the rafters has accomplished a 35% decrease in my utility bill. Imagine what it will be like when I finish the project! - Perrin Ehlinger