The Calm Before the Storm: Building Infrastructure to Survive the Next Katrina

By Clarke Drummond

In the wake of Hurricane Katrina, the cities along the Gulf Coast that were directly hit have realized the need for a stronger utility infrastructure. The weak levies that released the historical flood waters into New Orleans monopolized the spotlight for a while, casting an ugly shadow over the lack of preparedness by the City of New Orleans and its ability to control the immediate aftermath. Now the spotlight is widening, casting new light upon the other weaknesses in hurricane-prone areas, such as electrical and water distribution methods, not to mention housing.

A few months after Katrina, I had the opportunity to visit New Orleans and survey the damage first hand. I was on a sales call with my company, which manufactures and installs precast concrete buildings, expecting to find some easy sales in an area that desperately needed new utilities and housings to protect them.

However, I didn't realize that New Orleans and the rest of the Gulf Coast towns that were hit so hard by Katrina weren't to the stage of rebuilding the infrastructure yet; they were still cleaning up the streets and making sure everyone was safe. I found a hotel downtown that was open, but it had been damaged. The smell of new carpet and fresh lumber permeated the air in the lobby. Right outside, construction workers lined the streets with their hardhats and reflective vests, working on random utility projects above and below the streets.

I began calling on engineering firms to drop off my card and my company literature, but soon realized there weren't that many interested firms. Almost everyone I spoke with was either too busy or just not interested, and asked if I could just e-mail my information. But one gentleman was interested: an engineer currently testifying in Federal court on behalf of the City of New Orleans, defending the old levy system, and giving advice on building a new one.

He explained to me that even though I had a great product, the city was not to the stage of reinforcing all of the lift stations and electrical substations. He said what the city needed right then was housing for the residents and the horde of construction workers that had come to the city looking for work. White FEMA trailers spotted the landscape everywhere you looked on the outskirts of the city. However, most people did not want that way of life and ended up leaving the city in search of employment and a fresh start. Thousands of flooded cars were piled under the interstates, sometimes on top of each other, all the same color with the grey-brown mud stains.

A few months later, I traveled down to the Mississippi Gulf Coast, which was amazingly more devastated than New Orleans. We had sold a few buildings to a Biloxi casino golf course and I went down to take pictures and check on the installations. I am not sure why coastal cities like Pascagoula, Bay St. Louis, Moss Point, Ocean Springs, Pass Christian, Gulfport, Long Beach and Biloxi didn't get more news coverage than New Orleans. Everything down there was blown away. Every building was damaged and the coastline was ravaged. Three-story casino barges were completely out of the water on the other side of the street, being torn apart for scrap metal.

The precast concrete buildings that we delivered to Biloxi were housings for mechanical equipment on the golf course. The owners of the course didn't want to worry about another storm damaging their equipment, so for them, an Easi-Set® precast concrete building manufactured by AES Precast Company, Inc., was the obvious choice.

Our buildings are designed to withstand wind, water and projectiles from a storm like Hurricane Katrina, since each building carries a standard wind load of 140 mph, or a wind load of 150 mph if tied to a concrete slab. Additionally, our buildings are an ideal choice for salt water environments since they can be outfitted with fiberglass doors and frames, stainless steel hinges and lock sets on the doors, and aluminum louvers. These customizations result in durability even in the highly corrosive salt air found along the coast. AES Precast uses the same doors and components to control corrosion in our hazardous storage buildings.

The golf course buildings were installed the same day they were delivered and were fully operational by the time I arrived. Everything went just right and the customer had full confidence in the ability of these buildings to withstand the next big storm.

Soon after that, we completed another project in Ocean Springs, Miss. Our company manufactured three sewage lift station housings that were placed on concrete pilings to elevate them out of flood stage. These were located in a residential neighborhood, so it was important that the structures blend in with the surrounding houses. We first took the design and came up with an adequate floor plan and size. After sizing the HVAC system and insulation with the heat load of their equipment, we decided to incorporate a gabled roof and a smooth finish painted a light pink color to help the buildings blend in with the surrounding beach houses. The finished product was three sewage lift station housings that looked more like miniature beach houses than utility stations. They took the place of old, dingy CMU structures that had been damaged by Katrina, and drastically improved the look and feel of the neighborhoods where they were placed. With just a little creativity and willingness to try new methods, we had successfully beautified an area and solved a utility problem.

One of the primary advantages of using concrete modular buildings is that they can be customized efficiently. They are custom built at the manufacturing plant to house any type of electrical or mechanical equipment, with environmentally controlled interiors and reinforced concrete walls, roof and floor. Lift station housings can come floorless and drop directly onto a pre-existing pump with a slab, or an attached 6-inch floor slab can be cut to incorporate any size equipment or piping, including well holes. Our buildings are two-hour fire rated, UL-752 level 4 bulletproof and highly vandal resistant. They are rated for seismic zone four, can come equipped with Miami-Dade approved doors and louvers, and are Florida Department of Community Affairs approved. Once the building is in place, the interior will be protected in even the most extreme conditions.

With hurricane season coming just around the corner, there is still time to protect vulnerable infrastructures. At AES Precast, we can design, build, ship and even set your buildings. Easi-Set® buildings are available from local manufacturers across the country, and can be installed in just one day. ❑

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