



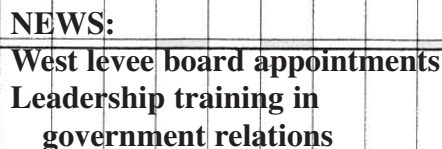
May 2007

Engineering issues and historic buildings

Can a structural engineer truly determine whether wind or storm surge caused the damage to property during Hurricane Katrina?

FUTURE:
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THE LOUISIANA CIVIL ENGINEER

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President's Message

By Timothy M. Ruppert, PE

We had a wonderful Annual Spring Meeting and Conference in March thanks to the outstanding efforts of the host Shreveport Branch leadership. In case you missed it, I would like to tell you about a couple important issues that were discussed. And even if you were able to attend, please indulge me as I expound for a few paragraphs on these important topics.

I think it is a given that we engineers love numbers. We love our slide rules, our calculators and our spreadsheets. They are steady and reliable companions, they make our work easier, and they provide us the useful and accurate information we rely on to do the good work we do for the public and our clients.

Here is what we do not love: *politics*. I think most of us cringe at the very thought. Unlike engineers, who are guided by science and analytical methods, politicians appear to be malleable and eager to adapt to emotional, public opinion. On our list of "favorite" activities, getting involved in politics probably ranks up there near *Having a root canal and Serving as a pall bearer*. But the reality is we do not have a choice. I would even say that it is an integral part of our job — our obligation to the public — as engineers.

Our code of ethics requires us to speak honestly and openly to alert the public about dangerous situations or proposals. When the Legislature is debating building codes, how can we not get involved? When the Legislature is considering funding for highway improvements, how can we not speak up? When the Legislature is discussing whether government should encourage citizens to build safer, stronger homes, how can we not offer a considered opinion?

When I say we should get involved in politics, I do not mean that we should become participants in the unseemly partisan and parochial mud fights that all too often make the headlines. I am very sure most of us would not want to stoop to that level. What I am advocating is that we participate as non-partisan professionals. We should offer our expert advice, seasoned opinions and level-headed solutions. We should voice support for laws and programs that we deem beneficial, but always avoid taking sides in

degrading party and personality related debates.

Our goal should always be to provide accurate, unbiased information in a manner that honors our profession and our fellow engineers. We must become engaged in the political process as trustworthy advocates without becoming entrapped in the distasteful and often disgraceful struggles for money and influence.

You may be wondering if this is a legal or ethical issue. As a non-profit organization organized under IRS code 501(c)3 for educational, literary and scientific purposes, ASCE cannot give money to candidates for political office. We cannot even endorse them, and I think that is entirely appropriate for this society.

What we CAN do is speak up on the issues. We can go to the public and speak for or against any particular legislation. We can offer advice to our elected representatives and encourage them to support or oppose any proposition. We can do this as individuals, and we can do this as a professional association. In short, we can fulfill our role as both citizens and engineers without conflict, and without acquiring the stench of mercenary lobbyists or partisan political players. I am happy to report that we have already taken some important first steps.

At the national level, ASCE has produced the *Infrastructure Report Card* to both inform the public and encourage lawmakers to take action. The Report Card has been widely recognized as an authoritative and unbiased assessment of the infrastructure in America. Almost all of the major media reported on its release and policy makers still regularly refer to it when the severity of infrastructure crisis is being discussed.

Here in Louisiana, two new levee boards came online earlier this year with the goal of providing our citizens with the services and leadership of commissioners who have professional credentials instead of more of the same with commissioners appointed based on political patronage. We can all be proud of the key role ASCE members played in effectively launching these new levee boards.

The Section Board nominated Jerry Klier (Baton Rouge Branch) to represent ASCE on the levee board nominating committee. Working closely with the committee, Jerry was able to seat



4 ASCE members on the Southeast Louisiana Flood Protection Authority (SLFPA) boards. They are Larry McKee (Baton Rouge Branch), Tom Jackson (New Orleans Branch), Kerwin Julien (New Orleans Branch) and Mark Morgan (Baton Rouge Branch).

The SLFPA-East also named Tom Jackson as its president. I hope you had the opportunity to read about Tom in the cover story of the April 2007 edition of *Civil Engineering*. Tom was about to embark on a well-deserved retirement when Hurricane Katrina crashed ashore. Tom now works as hard as he ever has, and for nothing more than state per diem and the satisfaction of a job well done.

Tom and his fellow SLFPA-East members are leading the way for reform in Louisiana. They are showing us that getting involved in the political process does not require getting caught up in the more unpleasant aspects of politics. For their example, we owe them our gratitude.

I encourage you to find your place in the political process as well. It may be simply writing letters to the editor of your local newspaper, to your legislative delegation in Baton Rouge and to your congressional delegation in Washington. Or it may be volunteering to serve on a government commission or running for public office. Perhaps if a few more of us got involved in public policy, we could be a positive influence so politics would not be so distasteful.

Wherever you go, I look forward to working with you as civil engineers building a better world.

Letter to the President

I read your President's Message in *The Louisiana Civil Engineer* February 2007 issue with great interest. It covers the problem of assessing risk considering a 100-year level of protection. In your article, you demonstrated that the computed risk of experiencing an event at the 100-year level of protection over the 30 year period, is a "whopping" 26 percent. I compliment you for your analysis discussing the high probability of a disastrous flood event occurring in the New Orleans area over the service life of a structure and during the life span of our residents.

After Hurricane Betsy destroyed the Gulf

Coast in September 1965, the Flood Control Act of 1965 gave the U.S. Army Corps of Engineers the responsibility to design the flood control levees for anticipated hurricanes. In the absence of the Saffir-Simpson Scale at the time, the criterion for which the Corps was authorized to design the levees was described as the *Standard Project Scale*. By today's measures it is the equivalent of a fast-moving Category 3 storm. At the time, the probability of an equivalent Category 4 or 5 storm had not been considered. Even today, the effect of a slow-moving Category 3 storm has not been considered in the Corps criteria to the

(Continued on Page 7)

About the cover: It isn't pretty but this impromptu field sketch is very effective. It was made as part of the documentation of a storm damage survey for a residential structure with no plans available to use for easy markups. It facilitated the engineering work described in the article "Can a structural engineer truly determine..." and it serves as a reference — Figure 2 — in the article.

Editor's note: The incomplete website address "<http://www.lasce>" that appeared in the new title on the cover of the February 2007 issue without its extension ".org" is my error. I truly regret any confusion or inconvenience that it may have caused you.

Engineering issues and historic buildings

By Andrew Ferrell

The National Center for Preservation Technology and Training (NCPTT) has been operating in Natchitoches, Louisiana, on the campus of Northwestern State University since 1994. Created by Congress as part of the National Park Service (NPS), the mission of the NCPTT is to advance the application of science and technology to historic preservation in the United States. The roles of the Center discussed herein are in better preparing engineers to work with heritage buildings, engineering issues for historic buildings post-Katrina, and innovative survey work that is currently under way.

Engineering for historic buildings

Historic buildings are valued as cultural artifacts that tell us important information about the past. Historic buildings, almost by definition, predate modern construction standards. They often make use of archaic building materials and systems that are no longer used and they are rarely available today. Historic materials, like all materials, deteriorate over time and with exposure to the elements.

Retaining historic fabric is a basic tenet of historic preservation, so wholesale replacement is usually not a viable option. An engineer is one of the first people consulted when a project involves a historic building. The engineer is asked whether the structure is sound and can withstand the planned preservation work and possibly additional loads. How do engineers learn to address the unique problems inherent in historic buildings and come up with solutions that meet both engineering and historic preservation needs?

At the prompting of then NCPTT Board member, Nick Gianopoulos, PE, a renowned preservation engineer, the NCPTT began investigating how engineers were being trained to deal with the specialized aspects encountered in the rehabilitation of older and historic buildings. In 1999, the Center began by reviewing the preservation content of engineering programs around the United States accredited by the Accreditation Board for Engineering and Technology (ABET). While many professors in these programs expressed interest in historic structures and the issues their preservation may raise, there was no evidence of formal preservation content in any of the engineering curricula investigated.

In 2000 the NCPTT organized a colloquium in Philadelphia to discuss how it might improve historic preservation training opportunities for engineers. The meeting was attended by representatives of private engineering firms, engineering and preservation professional organizations and university engineering departments.

Upon inquiry, the engineers attending the workshop revealed that they had largely acquired their preservation knowledge from their experienced colleagues through mentoring, and by reading, discussions with experts, historic preservation seminars and on-the-job experience/training. The clear consensus among them was the need for an organized program of study to better prepare engineers to work with the historic building systems and materials encountered in rehabilitation of historic buildings. Thus began NCPTT's *Professional Development Program for Engineers in Historic Preservation*.

Preservation training for engineers

The NCPTT partnered with Michael Henry, PE, AIA, and Sam Harris, PE, RA, JD to develop 4 course modules:

- *Materials and older buildings*
- *Building pathology*
- *Investigations and diagnostics methodology* and
- *Treatment strategies and interventions.*

Working from the engineer's standpoint, the course modules introduce the specific issues and technical challenges that are encountered in older and historic buildings and offer illustrative solutions. A description of the contents of each of course modules follows:

Materials and older buildings. Addresses functional requirements and physical properties of historic building materials; common mechanisms of deterioration in historic buildings; concerns when introducing contemporary building materials into older or historic buildings.

Building pathology. Addresses functional requirements and vulnerabilities of the systems and components comprising the building envelope and structure; combinations of deterioration processes; environmental factors that are necessary for the most common deterioration mechanisms; matching older building components and assemblies with modern replacements; flawed structures which have nonetheless survived.

Investigations and diagnostics methodology. Addresses research and documentary review; impact of prior repairs and environmental conditions on the present state of the building; limitations of single-point observations and ways to overcome such limitations; going beyond observable symptoms of deterioration and identifying probable mechanisms and enabling factors; developing and validating a hypothesis as to the mechanism(s) of deterioration.

Treatment strategies and interventions.



Addresses systematic multidisciplinary approach to investigate deterioration mechanisms and develop effective treatment strategies; documenting the process of selecting treatment strategies; impact of conflicting technical and non-technical considerations; evaluating potential success of treatment strategies; documentation and evaluation of implemented intervention.

Summer Institute

The initial version of the courses was offered as a 2-day workshop at the 2003 Association for Preservation Technology International Conference in Portland, Maine. In June 2004, the courses were expanded and offered in Natchitoches, LA as part of the NCPTT's first Summer Institute. The NCPTT held additional workshops as part of the Summer Institute in 2005 and 2006. All 4 modules were offered over 2 weeks as *Engineering for Older and Historic Buildings*. The course combined lectures, laboratory exercises, case studies and field work. The course concluded with student presentations of proposed intervention strategies that aimed to meet both preservation and engineering needs.

The primary field sites were the circa 1800 Yucca and Africa Houses, located at Melrose Plantation in northwest Louisiana. The classes also visited many of the historic buildings at Cane River Creole National Historical Park. These nationally significant buildings provided a living laboratory where students examined complex historic fabric including hand hewn and sawn timber, soft, low-fired brick, lime mortar and *bousillage* — a traditional clay and Spanish moss building material. These materials were of advanced age, with layers of interventions and multiple deterioration mechanisms at work.

Since the inception of *Engineering for Older and Historic Buildings*, partners have included the Architectural Engineering Institute

Andrew Ferrell is the Chief of Architecture and Engineering at the National Center for Preservation Technology and Training in Natchitoches, Louisiana. He earned his Bachelor's in German Language and Linguistics in 1992 from Louisiana State University followed by a Master's in International Relations from Boston University - Brussels in 1995, and a Master's in Architecture/Historic Preservation in 1997. Ferrell joined the NCPTT in 1999 and previously served as an Architecture and Engineering Research Fellow coordinating its national training initiative for architects and engineers. Prior to joining the NCPTT, Ferrell was employed with Gulf Engineers and Consultants as a cultural resource management specialist and environmental resources technician and he taught in the Cultural Resource Management Program at Southeastern Louisiana University.

of the American Society of Civil Engineers and the Historic Resources Committee of the American Institute of Architects. Both organizations provide continuing education credits to participants. Additional partners included the Association for Preservation Technology International, the Association for the Preservation of Historic Natchitoches, Cane River Creole National Historical Park, Cane River National Heritage Area and Northwestern State University.

After offering the workshop in Natchitoches for 3 years, the Center is now investigating expanding the program nationally. The NCPTT is focusing on developing the course materials into a training manual that will be available through its website (<http://www.ncptt.nsp.gov>). This will allow the NCPTT to convey the information to a larger audience and allow instructors to incorporate this information into their classes or workshops. This will ultimately serve to preserve and protect more of the nation's historic resources.

Disaster response

With the historic preservation expertise of the NCPTT and the proximity of the Center to the Gulf Coast, the Center was involved in the

cultural resource response to Hurricanes Katrina and Rita. The NCPTT has had a long interest in disaster mitigation and response for cultural resources and has funded research dealing with the issue.

One of the Center's research priorities is to "protect cultural resources against vandalism, looting, terrorism and natural disasters." After the 2005 hurricanes that affected the Gulf Coast, the NCPTT became involved in cultural resource recovery as members of the Heritage Emergency National Taskforce, leading a collaborative effort by

- developing assessment tools
- embedding staff members with FEMA
- creating a web-based clearinghouse for technical information on disaster recovery
- helping create *Team Tarp* — Operation Roof Aid — in New Orleans
- organizing and sponsoring wet recovery workshops for museum collections and
- providing technical assistance to FEMA, communities, and individuals.

The U.S. Census Bureau estimates that prior to September 2005 there were 4,913,897 total housing units inside the FEMA designated Individual and Public Assistance Areas in Texas, Louisiana, Mississippi, and Alabama.¹ While not

every structure in this area was affected, 100,000s suffered minor to massive damage from wind and water. In Louisiana alone 204,500 homes were damaged by the 2005 Hurricanes.² This number does not account for the structures that house businesses, offices, hospitals, or utilities.

One of the immediate problems facing historic structures after a disaster is the initial condition assessment that can possibly determine whether or not they are demolished. Post-disaster assessment forms vary widely from city to city and state to state with no way to compile historic information, and they often ignore the historic value of structures. The Heritage Emergency National Task Force recommended developing standardized and streamlined assessment tools that reasonably ensure historic information is gathered on all structures, which can be used long-term by national, state and local preservation organizations.

NCPTT's Andrew Ferrell, Chief of Architecture and Engineering Program, and Mary Striegel, Chief of the Material Research Program, worked with FEMA in the Greater New Orleans area. Ferrell participated in reviewing the historic integrity and conditions of all red-tagged buildings in the City's National Register



Students discuss African House during a Building Pathology class in Melrose, Louisiana.



Students explore material properties during a Historic Materials class in Melrose, Louisiana.



Storm damaged historic residence in Holy Cross in New Orleans.

Districts while Striegel provided condition assessment of damaged library and museum collections and technical assistance in collections recovery. This experience led to a number of presentations and discussions about disaster preparedness and response for cultural resources across the United States.

The NCPTT compiled hurricane technical assistance data for cultural resources and added it to its home page, providing links to the NPS and non-NPS information. The NCPTT website became one of the primary national information resources for the cultural resource response. NPS provides direct links to this page at <http://www.nps.gov/katrina/>, where the NPS posts all information on hurricane response and recovery. The NPS maintains a list of historic sites and museums impacted by Hurricanes Katrina, Rita, and Wilma on the NCPTT website.

In disaster areas, the U.S. Army Corps of Engineers runs a temporary tarping program that installs plastic sheeting over damaged roofs. Unfortunately, this program does not install tarps on roofs covered with metal, tile, slate, asbestos, and other hard roofing materials often used on historic buildings. The NCPTT worked with partners in New Orleans to provide assistance to homeowners with damaged roofs that were not eligible for the Corps' program. Building on these efforts, the NCPTT entered into an agreement with the Tulane School of Architecture and *Tarp New Orleans* (TNO) to produce, edit and publish a substantial body of information pertaining to the preservation work of TNO to tarp historic structures in New Orleans immediately after Hurricanes Katrina and Rita. The project will result in technical information on methods, materials and approaches to tarping; an analysis of the data gathered and varying results of the overall tarping effort, and preliminary data from the NCPTT materials science testing of selected tarping materials.

The Materials Research Program, in partnership with American Institute for Conservation and numerous state and federal agencies, held workshops titled *After the Storm: Recovery of Wet Collections* in March 2006. Funding for the workshops was provided by the Samuel H. Kress Foundation and donations from several other partners. These workshops were offered to assist persons in charge of cultural collections with post-disaster response and planning for future disasters.

Post disaster lessons

While many lessons were learned post Katrina and Rita concerning health and safety, civil works, and in other areas, perhaps the most critical lesson in all areas is that time is of the essence. While taking care of life safety issues is the highest priority post disaster and clearly requires the quickest response, the survivability of historic buildings is time sensitive.

One of the most critical lessons is the importance of having an up-to-date survey of historic buildings and sites. Critical to disaster planning, mitigation, and recovery is having a reliable inventory of all historic properties and other resources of the area, including maps of historic building sites. Normally state and local preser-

vation organizations collect such information. However, it is not always entirely up-to-date, nor easily accessible after a disaster.

Innovative strategies for rapid documentation of historic resources

The experience in the aftermath of Hurricanes Katrina and Rita underscored the limitations in current approaches for documenting and assessing heritage resources in a post-disaster context. Traditional paper-based damage assessment processes proved slow and inadequate for measuring post-disaster impacts on heritage resources.

The NCPTT is embarking on a project with Louisiana State University to develop the means for the rapid documentation of heritage resources using new survey technologies. These means will rely on special equipment to simultaneously capture digital imagery and geographic information. The NCPTT and LSU researchers will develop and test technologies and methodologies for data collection and integration into geographic information systems platforms, analysis, and query-retrieval. It is hoped that this will allow the documentation of a variety of historic resources in a relatively short time. With the new technologies and methodologies, it is anticipated that entire neighborhoods could be documented in the time one block is surveyed using traditional methods.

The researchers will also develop training workshops to disseminate the technologies and methodologies; train and manage rapid deployment documentation/damage assessment teams capable of using the technologies and methodologies; facilitate ongoing research and development of the technologies and methodologies by working with partner organizations on other resource documentation projects. These technologies and methodologies will possibly allow web accessibility permitting engineers, architects, preservationists and conservators to access the information and effectively participate in the disaster response from outside of the disaster area.

The Center will continue to work with engineers and other professionals to develop training opportunities that will increase the practitioners' breadth of knowledge to allow them to more effectively deal with historic buildings and other cultural resources. At the same time, the NCPTT will continue to support innovative research that has the prospect to advance the application of science and technology to historic preservation and that will lead to a better understanding and the preservation of America's important cultural heritage.

References

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❖ Quote ❖

Infrastructure: Any bid to improve roads and bridges in Louisiana always seems to boil down to two facts: The need is there (and) the political will to pay for it is not... Without more money... (the) backlog (of roads and bridges) will grow by about \$300 million a year... Most voters believed state roads were in bad shape but they also opposed a gasoline tax increase to improve them. Motorists (in Louisiana) now pay 38.4 cents a gallon in road taxes... (while) the national average is 46.8... Like other expensive issues in Louisiana, lots of voters want something for nothing... (and) think someone else should pay for them... (They) have never gotten over the days when energy dollars paid for many state services.

- Will Sentell,
Reporter for Capitol news bureau
Sunday Advocate 8/6/06

(Continued from Page 4)

best of my knowledge. Considering the possibility of the intensity of storms exceeding Category 5 in the future because of the global warming, the impact of high intensity storms and storm surge on our infrastructure could be much more destructive.

Your article, in my opinion, addresses the risk based on the probability of flooding from events such as heavy rains and the related response for the flood control — the data generally used by the insurance companies. If a similar probability is not considered for protection from sustained wind and the accompanying storm surge, the City of New Orleans, and for that matter, the entire Gulf Coast region, will be left vulnerable and given future storm events it may possibly be relegated to only a faint memory of what it once was. This is in part because of the loss of the wetlands and similar other protective natural or manmade elements that may contribute to disproportionate damage in future years.

Then what could be done? In Europe, most of the engineered, manmade protective barriers against natural forces are designed for at least a 1000-year level of protection or more. Is it now prudent that we start designing our levees and protective structures for at least a 500-year level of protection. This will give a 5 percent probability of experiencing an event exceeding the 500-year level of protection over a 25-year service life and 10 percent over a 50-year service life. No doubt that this will increase the cost per life significantly and increase the factor of safety of structures from 1.3 as designed today to near 2. Considering that dams are generally designed for a factor of safety of 1.5, would it now be sensible for our flood protection levees, that protect 100,000s of lives and \$100 billions in property, be designed for a higher factor of safety than that? I urge you to bring this issue to the forefront. As an engineering society, we owe it to the public.

Subhash Kulkarni, President
Kulkarni Consultants

Can a structural engineer truly determine whether wind or storm surge caused the damage to property during Hurricane Katrina?

By Subhash Kulkarni, PE

Hurricane Katrina

Katrina was one of the 3 worst hurricanes to visit the Gulf Coast in recent history. It formed as a tropical depression near Nassau, Bahamas, on August 23, 2005, then made a landfall in the Miami, Florida area as a Category 1 storm. She continued northeast in the Gulf of Mexico gaining strength. By August 28th Katrina was located about 250 miles south-southeast of the mouth of the Mississippi River and had become a Category 5 storm. On August 29th at 6:10 am CDT, Katrina made first landfall in Buras, Louisiana with sustained winds of 127 mph. She continued northward making landfall near Waveland, Mississippi, at about 10:00 am CDT with sustained winds of 130 mph that correspond to a Category 3 storm.

The storm tide or surge reported in Waveland by the National Weather Service was more than 26 feet, completely destroying most of the residences along the Mississippi Gulf Coast. As a result, 1000s of insurance claims were made by the owners of the affected residences and businesses. Many of them were denied coverage by their insurance companies based on the argument that the storm damage was caused by the surge — flooding often not covered by their insurance policies — and not by the wind that was covered by their insurance policies. Thus, those without

flood insurance were ostensibly left without coverage.

Property description

I was contacted in November 2005 to survey the storm damage to a residential property in Waveland, Mississippi, and perform an investigation to definitively determine, if possible, whether the storm damage was caused by the wind or the surge. This is a summary of the investigation performed and some of the conclusions that resulted.

The property, a two-story residential structure more than 75 years old, faced the Gulf and it was located within 300 feet of Beach Boulevard that parallels and follows the Gulf shore. The site featured a rise in grade elevation of about 5 to 6 feet from street-level to the residence that was surrounded by trees and vegetation.

I was furnished photographs of the residence taken prior to Hurricane Katrina. There were no drawings or plans of the residence available at the time. A photograph of a front view of the residence prior to Hurricane Katrina is shown in Figure 1. The frontal property boundary is parallel and adjacent to Beach Boulevard that is on a northeast bearing. However, for simplicity, references to direction made here forward are based on the assumption that the front of the residence



faced due south.

The residential structure had a basement with a footprint of approximately 44'-6" x 64'-8" with its 44'-6" dimension oriented east/west and parallel to Beach Boulevard as indicated in the field sketch from the damage survey shown in Figure 2 that appears of the cover of this issue. The basement had a floor-to-ceiling clearance of approximately 8'-0" and it featured a concrete floor slab and a 6-inch-thick concrete perimeter wall that extended above grade approximately 3'-6". The concrete basement slab supported several brick pilasters that together with the perimeter wall supported a wood frame superstructure at its first floor level.

Concrete decks approximately 6 inches thick extended about 10'-6" beyond the basement perimeter walls on the north and south sides of the residence. The top of these slabs matched closely to the top of basement perimeter wall. One edge of the concrete decks was supported by the basement perimeter wall and the other was supported by an integral concrete edge beam resting on brick pilasters spaced at approximately 10' centers. This provided for a crawl space under these concrete decks. The concrete deck on the south side (front) of the residence that faced the storm surge had a 2x6 wood sill plate embedded in its concrete. In the crawl space under the concrete deck on the north side of the residence, the concrete steps leading to the basement entrance were supported by 2 concrete wingwalls.

On the west side of the residence was a brick fireplace and its chimney that stood about 24 feet above grade. Also on west side of the residence was a steel fire escape that provided an entrance to the upstairs of the residence and also served as a stairway between a raised first floor entrance and grade.

A carport on the east side of the residence featured an on-grade concrete slab bounded by



Figure 1. Photograph of the front of the residence before Hurricane Katrina.

Subhash V. Kulkarni, PE, is President of Kulkarni Consultants which he founded in 1981. He earned his BS in civil engineering in 1965 and his Master of Technology in soils engineering in 1967 from the Indian Institute of Technology and his MS in Structural Engineering in 1970 from the South Dakota School of Mines and Technology. A licensed engineer in Louisiana, Mississippi, Texas, and several other states, Kulkarni has planned and designed numerous civil and structural engineering projects located throughout the South and Midwest. He is a Fellow of the ASCE and a member of the ACI, LES, NSPE, PCI, SBC and other engineering-related organizations. He was honored by the ASCE - Louisiana Section with its 2003 Outstanding Civil Engineer of the Year Award.



Figure 3. Scattered roof tiles and building contents observed in a debris field leading northwest from the original location of the residence (sketch number 2).



Figure 4. Concrete deck slab is broken from its support and it has moved about 2 1/2" to the west (sketch number 3).

the basement perimeter wall and a low brick wall on its opposite edge that supported the columns of a canopy over the carport near its ends. A concrete pathway about 6'-0" wide leads from Beach Boulevard to the residence and it is connected to its concrete steps that face Beach Boulevard and provided access to the first floor level of the residence from the pathway. Two curved walls constructed of brick provided support for the concrete steps.

The wood studs in the framing were supported on and toenailed into a continuous 2x6 wood sill plate that was anchored into the concrete basement perimeter wall by a series of anchor bolts. Several of the toenails that connected the wood studs to the wood sill plate remained after the storm and were visible during the damage survey. Several of the anchor bolts that anchor the 2x6 wood sill plate into the concrete basement perimeter wall were also visible.

Wind damage survey

To the best of my knowledge and from its appearance, the site had remained undisturbed from immediately following Hurricane Katrina's visit to the Gulf Coast until the damage survey

was made. The concrete basement perimeter walls and concrete decks on the north and south sides of the residence remained in place but most of the wood framing above it was totally demolished and its debris field was located about 225' away from — and northwest of — the original location of the residence. Several trees — some more than 30' tall — surrounding the residence had fallen to the west. The trees that survived the storm were leaning to the west. There was a trail of roofing tiles leading in a northwest direction away from the original location of the residence. The scattered contents of the residence followed a similar trail shown in Figure 3. (Note that the sketch number provided in the caption of each damage survey photograph is referenced in the field sketch shown in Figure 2.)

It was obvious from observing the orientation of the debris field and structural damage and other evidence that the components and contents of the residence were moved to the west by the high wind forces during Hurricane Katrina. The brick pilaster at the northeast corner of the concrete deck on the north (back) side of the residence and shown in Figure 4 was broken off from the slab that was moved to the west about

2 1/2". The toenails connecting the studs to the sill plate that remained in the sill plate were bent to the west as shown in Figure 5. This indicated that the stud walls moved due to the wind forces from the east. Several of the wood sill plate anchor bolts embedded in the concrete basement perimeter wall were also bent to the west confirming that the residence was moved by the wind forces from the east. The brick pilasters in the basement were broken into several pieces and they fell to the west as shown in Figure 6.

The base of the fireplace on the west side of the residence was detached from the basement perimeter wall and floor framing as shown in Figure 7. It was inclined to the west leaving a gap of about 3" at floor level. The chimney above the fireplace fell to the west and broke into 3 segments coming to rest adjacent to the steel fire escape that also fell to the west as shown in Figure 8.

Close observation of the connections of roof tiles to the wood planks of the roof deck revealed more information on the failure of the structure and its sequence. Several nails had popped

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Figure 5. An example of a toenail that attached a stud to the remaining sill plate is typically bent to the west (sketch number 4).



Figure 6. The brick pilasters supported on the basement floor slab fell to the west (sketch number 6). The pilasters together with the basement perimeter walls supported the structure at the first floor level.

Branch News and Leadership Forum

SHREVEPORT

By Elba U. Hamilton, EI, President

Spring is usually a busy time for the Branch and this Spring is no exception. On Monday, May 14, we will host our traditional Spring Classic Golf Tournament at Southern Trace. President-Elect Rusty Cooper is once again organizing this event that, like last year's, promises to be a great success. I would like to remind you that the golf tournament is our only fundraiser of the year to benefit Louisiana Tech civil engineering students.

Thanks to funds raised last year, the Shreveport Branch presented 2 scholarships of \$500 each to the outstanding senior of the year, **John David Brown**, and the outstanding junior of the year, **James Ellingburg**. The scholarships were presented during the Winter Banquet hosted in February by the Tech ASCE Student Chapter.

Depending on your anticipated continuing support we plan to continue to present these scholarships to Louisiana Tech students each year. If you would like more information on the golf tournament, including teams and sponsorships, you can download the forms from our webpage at <http://www.lasce.org/shreveport/index.aspx> or contact Rusty Cooper at cixx06@gmail.com or (318) 286-6877.

Gordon C. Russell, PE, who died unexpectedly in February, was a dear member of the Shreveport Branch. He was scheduled to be the guest speaker for the February Branch membership meeting. Louisiana Tech Assistant

Professor, **Luke Lee**, graciously agreed to be our speaker. He gave a very informative presentation, "Rehabilitation of Reinforced Concrete Structures." As usual, our Tech faculty is always available to the Branch and willing to serve in whatever way that is needed.

Last month, the Branch hosted the Section's Annual Spring Meeting and Conference at the Clarion Hotel in Shreveport. I am very proud to report that the Conference was a success and that all of our officers worked very hard during that week to make it possible. Among the technical session presenters were several professors from Louisiana Tech University and University of Louisiana at Lafayette, including two notables in ULL Dean of Engineering, Mark Zappi, PE, and ASCE Region 5 Director, Steven C. McCutcheon, PE.

The Shreveport Branch Board of Directors has made several important decisions during the past 3 months. First, approved by the Board, was a \$1000 contribution to the Louisiana Tech ASCE Student Chapter to help with its preparations for the 2007 Deep South Conference it hosted and that took place the same week as the Section Annual Spring Meeting and Conference.

The Board also approved designating the Branch's outstanding senior scholarship, usually selected by the Tech faculty, as *The Freddy Roberts Outstanding Senior Scholarship*, in memory of our dear member and professor **Freddy L. Roberts**, PE, who died March.

Additionally, I would like to thank you for supporting all the activities that we have organized since the beginning of the year, especially the recently concluded Conference. A special thanks to all the companies that participated as sponsors and exhibitors. Through their participation and support, we were able to keep the cost to our participating members to a minimum. We hope that our previous sponsors will again consider being one of our sponsors for the Golf Tournament in May.

Mustapha recognized

By Ali M. Mustapha, PE

The Civil Engineering Department of the Louisiana Tech University College of Engineering and Science recently honored Ali M. Mustapha, PE as a 2007 distinguished alumni. Mustapha, a 1985 civil engineering graduate, was recognized for his accomplishments, service, dedication, and contributions to the engineering profession. He is currently the Vice President of the Section. He previously served as President of the Louisiana Engineering Society.

Mustapha is currently serving on the Louisiana Professional Engineering and Land Surveying Board and he is a member of the Trenchless Technology Center Industry Advisory Board. He is employed by the Engineering Division of the City of Shreveport as the Assistant City Engineer responsible for drainage, water distribution, and sewer collection systems. He is also the City's Floodplain administrator.



Ali Mustapha

ACADIANA

By M. Jamal Khattak, PE, President

The program for the January Branch membership meeting and luncheon was a presentation by Said M. Ismail, PE, the Pavement Management Engineer and Administrator at the Louisiana DOTD. He presented and demonstrated the use of the video images and pavement distress data available through the DOTD's VISIDATA software. This pavement data is collected and processed continuously for all of the pavement on the state highway system in Louisiana.

The data is collected on a 2-year cycle at highway speeds from a specially equipped vehicle with kinematic differential GPS location technology, high definition video cameras, and other instrumentation in the vehicle. The data collected every 0.100 mile provides images and measurements for pavement distresses and its location including cracking, rutting, faulting, etc. Incidentally, the location of — and the legend on — highway signs, highway bridge locations and clearances and ramp locations, and roadway curvature and slope are measured.

This data provides the DOTD with the information and the means to develop comprehensive, current inventories of the pavements and any

other visible features along the roadway for developing databases and comprehensive needs analyses. For the pavement management process, the data is converted into the information needed for developing a cost-effective strategy for the timely application and choice of reconstruction, rehabilitation or routine maintenance treatments that are consistent with the budget available.

The Branch chose not to have a February membership meeting due to the Louisiana Transportation Engineering Conference sponsored by the Louisiana DOTD and the Mardi Gras holiday. However, an early March membership meeting was scheduled to avoid a conflict with the Section Annual Spring Meeting and Conference hosted by the Shreveport Branch later in the month. Our guest speaker was Donald Hayes who made a presentation titled "A Holistic Approach to Sediment Remediation." Hayes joined the University of Louisiana at Lafayette faculty in January 2007 as the Co-Director of its Institute for Coastal Ecology and Engineering and the UNOCAL/BORSF

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BATON ROUGE

By Brant B. Richard, PE, President

Membership events

There was a Branch membership meeting and luncheon in March. The guest speaker was Andrew Beall, employed by the Louisiana Department of Natural Resources. The title of his presentation was "Integrated Ecosystem Restoration and Hurricane Protection – Louisiana Comprehensive Master Plan for a Sustainable Coast." Beall's presentation proved to be very interesting. He discussed the challenges facing the Department, considering the demand of Louisiana's population to live in the vulnerable coastal zones, and how the plan was in conformance with the overall Coast 2050 plan.

In 1998, the State of Louisiana and its Federal partners approved a coastal restoration plan titled, *Coast 2050: Toward a Sustainable Coastal Louisiana*. That document presented strategies jointly developed by federal, state, and local interests to address Louisiana's massive coastal land loss problems. For the first time, solutions were proposed to address fundamental ecosystem needs to prevent the loss of this natural treasure. By implementing the plan's regional ecosystem strategies, it is envisioned that a sustainable ecosystem will be restored in coastal Louisiana in large part by using the same natural forces that had originally built the coastal zone landscape.

Following this luncheon presentation, a one-hour PDH seminar was presented by Steven C. McCutcheon, PE, titled "Disaster Preparedness for Civil Engineers: U.S. population moving into harms way." Steve is the Chair of the ASCE Region 5 Board of Governors and he is currently at the University of Georgia. It was a pleasure to have Steve visit our branch and volunteer to

present this seminar to our membership.

Engineers Week activities

February 18-24, 2007 was the week designated for the celebration of this year's Engineers Week. In Baton Rouge, it featured various activities designed to interest young people in engineering and technology. The Baton Rouge Branch was involved in the following activities:

- Awarding three scholarships to engineering students attending LSU and Southern University
- Placing two billboards advertising Engineers Week on Interstate routes in Baton Rouge
- Appearing on a local television morning program to discuss Engineers Week.

In recent years, we give back through scholarships to future civil engineers during the annual Engineers Week Banquet sponsored by the Baton Rouge Chapter of the Louisiana Engineering Society. This year, we were pleased to be able to present three scholarships. The recipients were

- Tynekia Hampton of Southern University
- Ineaka Carbo of Southern University and
- Danielle Chabaud of LSU.

A national ASCE state public affairs grant (SPAG) was awarded to the Baton Rouge Branch for its proposal to develop and place an Engineers Week advertisement on a high visibility billboard. The billboard was to be rented during the month of February in observance of Engineers Week. There were 2 billboards rented from the LAMAR Outdoor Advertising. They were located in Baton Rouge on Interstate route I-12 near Sherwood Forest Boulevard — a standard vinyl billboard — and on Interstate route I-

10 near College Drive — a digital billboard. The graphic used on the billboards with the slogan, "Civil Engineers Make a World of Difference" appears on the cover of the February 2007 issue of this journal.

On February 12, I was able to get scheduled to appear on WAFB-TV to promote awareness of civil engineers and civil engineering in the community and encourage young people to consider engineering as a viable career choice. We need more engineering leadership making and taking similar public relations opportunities to support the future need for engineers in the profession. The news of the television spot made the *ASCE News* as an example to encourage branches and sections throughout the nation to consider following suit.

Get involved...

As we continue to proudly pursue and enjoy the career we have chosen as civil engineers, I believe that we have a civic duty to promote our profession. We need for young people at all ages to better understand the nature of engineering and to consequently be excited about what the engineering profession has to offer as a career. This is why I believe that it is extremely important to be *involved*. Involvement can take on the form of many effective activities that can be devised and/or selected according to the interests and talents of our many members. It can range from informal discussions of the importance of engineering at impromptu social gatherings to formal presentations to math and science students eager to learn about the character of — and

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Professor of Civil Engineering. On behalf of the Branch, I wish to welcome Donald Hayes who I believe is a valuable addition to our professional community.

We are all aware that Louisiana's highway transportation infrastructure has not received adequate funding for decades. The deplorable condition of the state highway system is testament to the fact. Gasoline tax is the major source of revenue for funding the state highway system.

The revenue from the State gasoline tax for highways has not increased significantly since 1984 while in the same time period inflation has substantially increased the cost of construction and maintenance of highways. In calling attention to this sad state of affairs, the Lafayette Chamber of Commerce has initiated a campaign for additional state transportation funding. The Chamber supports a proposition that "all highway user fees be dedicated to building and maintaining our highways."

State Representative Donald M. "Don" Trahan will be as the guest speaker for the Branch membership meeting and luncheon in April. It is anticipated that a number of bills will be introduced to increase state highway funding. Representative Trahan is leading the formation

of a coalition of fellow legislators to introduce and seek the passage the legislation necessary to accomplish this goal. Representative Trahan's District 31 consists of the southern part of Lafayette Parish and Vermilion Parish. He will be speaking more generally about the upcoming legislative session.

A few months ago, the Board decided to launch a digital newsletter transmitted via email to our membership. Since then, the attendance at the membership meetings became and remained lower than usual. The Board understands that this is probably due in part to the decision to changing the newsletter to the digital form without a transition. Moreover, the email address of members has not been a vital communication link used by the ASCE in the past. Therefore, the current email address has not been well maintained by our members. Nevertheless, the Board decided to switch back to the hard copy of the newsletter for the remainder of the year.

As a part of the Branch's public outreach effort, it participated in the career exposition held by the University of Louisiana at Lafayette during Engineers Week in February and the career connections event in the Cajundome in April. The Branch manned a booth to provide informa-

tion about the ASCE. The booth was decorated with information and attractive posters, and the Branch leadership were present to answer questions. It was a great success. Further, the public outreach committee plans to launch its previously developed Powerpoint presentation for high school students April 20th at Northside High School Engineering Academy. This presentation is designed to attract high school students to the civil engineering profession as a viable career choice.

The Branch finalized the date for the one-day Spring Seminar it is planning to sponsor. The May 9th seminar will cover 4 major subject areas in civil engineering:

- geotechnical
- hydraulics/hydrology
- structures and
- transportation.

It will be offered at an affordable fee. The Branch has also planned its May Crawfish boil in concert with the Lafayette Chapter of the Louisiana Engineering Society and the Lafayette Section of the Institute of Electrical and Electronic Engineers. The tentative date for this event is May 17th.

NEW ORLEANS

By Christopher L. Sanchez, PE, President

On March 16th, James R. (Jim) Danner, PE, and I attended the award ceremonies for the Greater New Orleans Science Fair. Traditionally, the Fair has been hosted by the University of New Orleans in its Arena. However, the Arena is still undergoing repairs from hurricane damage so this year the Fair was hosted by the First Baptist Church of New Orleans.

The Senior Pastor of the Church opened the award ceremony with a brief prayer about how God gave us science so we can make the world a better place for all. Being a Christian, it occurred to me what a great way this was to connect the spiritual, scientific and engineering worlds together for our historically and exclusively science/engineering oriented event and its participants — students and engineers who may not have considered the connection no matter what their religious affiliation may be.

The Senior Pastor's message paralleled the purpose of Jim Danner's and my presence — outreach. We were present to introduce the youthful contestants to the engineering profession and its connection to science through practical application. More specifically, we were there to present the 1st and 2nd place prizes — \$75 and \$50 cash awards — respectively for the junior and senior high school divisions.

The Branch and its Structural Engineering Institute Chapter — formally the Branch Structures Committee — have traditionally participated in and supported this event. However, there are a growing number — currently about 50 — organizations that now support this event.

While this increasing support is surely appreciated and encouraging for the purposes of the event, it presents a challenge for the Branch to keep the previous ASCE message and civil engineering profile from being diminished.

Jim Danner came up with a great idea to meet the challenge by gaining everyone's attention and encouraging teacher involvement. How? you ask. Double the cash awards and offer additional prizes — \$50 gift certificates — to the students' teachers. While the Branch supports Jim's idea, I see it as a short term solution and believe that it will not take long for it to catch on with some of the other supporting organizations.

Clearly, to substantively set the ASCE apart, I believe we need to use the unique assets we have and consider a mentoring program supported by the members of the Branch. This would be mentoring student contestants and their teachers through their project selection and early project development explaining what engineering really is about. This is not about having the students and the teachers work with engineers to develop a better and more impressive science fair project. This is about exposing the students and their teachers to the engineering process so the students may be better informed about — and more interested in — engineering when they consider college curricula and careers and the teachers may more effectively counsel their other talented and interested students in curriculum and career choices.

Jim, I and the Branch leadership who serve with us typically set aside several hours a month

in service to our civil engineering community and we appreciate that there is only so much of this volunteer effort that we can carry. A member of our branch leadership, and the Section's Governor to Region 5, Norma Jean Mattei, PE, leads the Branch's excellent outreach program for the New Orleans Area. By my estimate, we just need a few more people who can make and meet a commitment to set aside several hours once or twice a year to mentor the students and their teachers for the various science fairs.

Similarly, volunteer commitments are needed to

- support the Mathcounts events
- support other student competitions
- work the kid's booth at Jazzfest or
- develop and execute new ideas.

Our goal is not simply to recruit young people into engineering, it is to inspire them to define and pursue their own goals with a clearer understanding of engineering and particularly civil engineering as a career opportunity.

Hurricane Katrina provided or heightened public awareness of civil engineering around which the Branch is building many of its programs. We need to keep the momentum going. Those Branch members interested in supporting the Branch's efforts should contact a member of the Branch Board or of the executive committee of its SEI Chapter. Contact information can be obtained from the Branch website, www.asce-neworleans.org.

2006 Annual Report of the Branch SEI Chapter

Om P. Dixit, PE, Chair

Some readers may be wondering about this new Branch entity. It is not new. It is the same old Structures Committee of the Branch with a new name. The SEI Chapter is still an integral part of the New Orleans Branch but it is now also an integral part of the Structural Engineering Institute.

Seminars presented

Since the last committee report in November 2006 issue, the Chapter hosted the following series of seminars in the Branch:

- April 27, 2006 — *The World Trade Center Investigation: Analysis and Recommendations*. Fahim Sadek from the NIST, Washington, DC presented the recommenda-

tions from the investigation of The World Trade Center collapse. This presentation was the Chapter's Annual David Hunter Lecture.

- June 6, 2006 — *New Orleans Levee Failure*. Gordon P. Boutwell, PE, from Baton Rouge presented the facts from the Investigation Committee Report about the New Orleans levee failures during the Hurricane Katrina. A record of more than 150 members attended this seminar.
- August 17, 2006 — *Achieving Flood Resistant Design Seminar*. Chris Jones from North Carolina gave a timely seminar about ways to design the structures that will serve as flood resistant.

- October 26, 2006 — *Sheet Pile Design Seminar*. Richard Hartman from New Jersey presented a very informative 8-hour seminar on sheet pile design. Hartman shared with the attendees his considerable experience in this discipline. Approximately 90 members attended the seminar and received two handouts including design examples and copies of the seminar notes.
- November 14, 2006 — *Offshore Seminar*. Jose Vasquez of Houston presented the Annual Offshore Seminar on Soft Berth concept. It was a unique concept of maximizing the LNG unloading at the Port of Louisiana.

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career opportunities in — engineering.

As I look back over our recent Engineers Week experiences in the Branch, I believe that we should continuously recognize the need to effectively present the message that there is and will be an ongoing and pressing need for engineers well into the future. As such, the future of the engineering profession is in the young people of this country who are now seeking a challeng-

ing and rewarding career in providing the fabric that supports and advances our civilization. I challenge you to get involved in your local community. Make and take the opportunities that allow you to make a difference as an engineer. Remember, *Engineers Turn Ideas into Reality*.

Here are some examples of involvement:

- Volunteer to tutor in math and science in local schools

- Volunteer to present and discuss civil engineering on career day
- Write a letter to the editor about the importance of engineering in community issues
- Tell someone about engineering once a week, and
- Plan public relations opportunities in your community.

Highlights of the Annual Spring Meeting and Conference

There were approximately 65 participants in the Section Annual Spring Meeting and Conference. They were able to choose from 18 technical sessions presented by 15 different speakers that provided professional development units required to maintain professional engineering licensure in Louisiana. In addition to the many technical sessions offered, conference attendees were able to listen to the keynote speaker for the Thursday luncheon, Cedric Glover, Mayor of Shreveport. This luncheon was dedicated to the memory of Shreveport Branch member **Gordon C. Russell, PE**, who died unexpectedly in February.

As part of the Conference, the Branch hosted the traditional awards banquet to honor the ASCE members who recently achieved the status of Life Member. Also, the Section's distinguished senior civil engineering students from the civil engineering departments housed in Louisiana's universities were also honored. The awards banquet this year was dedicated to the memory of Louisiana Tech University professor **Freddy L. Roberts, PE**, who died in March.

On behalf of the host, Shreveport Branch, I wish to thank Branch member **O. Lee Underwood, PE**, for helping us to honor our newest Life Members in such a dignified man-

ner. Always willing to serve the Branch, Lee served as the master of ceremonies for the Life Member certificate presentations during the awards banquet. He presented a brief summary of the careers and achievements of the 4 Life Members who were present during the banquet to accept their certificates. This presentation left the audience impressed with their many professional and personal accomplishments.

The brief history of each of the Life Members **David N. Williams, PE**, **Donald M. Edington, PE**, **Jerry G. Lazenby, PE**, and **Steven P. Rider, PE**, who were present during the banquet follows:

David N. Williams, PE, is a resident of Baton Rouge and since 2001 he has been the Civil/Structural Department Manager for CDI Engineering Solutions, Process and Industrial. Williams is a native of Saint Joseph, Michigan, and in 1964 he earned his BS in civil engineering from Tri-State University, Angola, Indiana. He is currently licensed to practice in 21 states and territories of the United States.

Williams is married to his childhood sweetheart and friend for life, the former Nancy Lee Rose, of Saint Joseph, Michigan. They have 4 daughters who graduated from Louisiana State University in Baton Rouge and have graced them

with 10 grandchildren. Of their 4 sons-in-law, 2 hold degrees from Louisiana Tech University and Louisiana State University.

He began his career in the Chicago area as a Structural Engineer, designing commercial and residential high-rise structures. He was an associate with the joint venture of the businesses including Daniel, Mann, Johnson, and Mendenhall — Max O. Urbahn — Seeley, Stevenson, Value, and Knecht — and The George A. Fuller Construction Company. Collectively known as DUSAF it was commissioned to engineer and construct the National Accelerator Laboratory west of Chicago, now known as the Fermi Laboratory, www.fnal.gov. For his part in this project, Williams was instrumental in the structural design of the 16-story Robert Rathbun Wilson Hall, the 830-seat Norman F. Ramsey Auditorium, and the Meson Laboratory located in the Fixed Target Experimental Area on the 6,800-acre complex.

In 1973, Williams moved to Baton Rouge where he continued his career as a Senior Structural Engineer in the capacities of Lead Engineer, Project Engineer, and Department Manager with the engineering firm of Barnard and Burk Inc. In 1989 he joined Salmon and Associates as the Chief Structural Engineer and Manager of the Civil/Structural Department. In 1992 he moved to Lakeland Florida as Vice-President and Chief Engineer of the firm's Florida Operations.

Donald M. Edington, PE, a native of Springhill, Louisiana and a 1965 graduate of Louisiana Tech University, earned his BS in Civil Engineering and continued a semester of graduate studies in Environmental Engineering. He attended Navy Officer Candidate School in Newport, Rhode Island and was commissioned as Ensign. He served in the U.S. Navy Civil Engineering Corps and attended the Navy Civil Engineering Corps School in Port Hueneme, California. From there he served as Facility

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David Williams receives his Life Member certificate from Section President Tim Ruppert.



Donald Edington receives his Life Member certificate from President Ruppert.



Jerry Lazenby receives his Life Member certificate from President Ruppert.



Steven Rider receives his Life Member certificate from President Ruppert.



Guest speaker and radio personality Moon Griffon pictured with Shreveport Branch President Elba Hamilton during the Awards Banquet.



John David Brown receives his commemorative plaque from Shreveport Branch President Elba Hamilton for the Louisiana Tech University Distinguished Senior Civil Engineering Student Award.



Lauren Johnson receives her commemorative plaque from President Hamilton for the LSU Distinguished Senior Civil Engineering Student Award.



Brandon DeJean receives his commemorative plaque from President Hamilton for the Southern University Distinguished Senior Civil Engineering Senior Award.

(Continued from Page 13)

Engineer, Public Works Center, Subic Bay, Philippines, 1966-1967; and Assistant Public Works Officer, Naval Air Station, Lemoore, California, 1967-1968.

In 1969 Edington continued his graduate studies at Louisiana Tech in Environmental Engineering where he and his wife Patricia Carroll from LaSalle Parish met and were married. He was employed as Project Engineer, International Paper Company, Mobile, Alabama, 1970-1974 — Community Development Engineer, Research and Development Center, Jackson, Mississippi, 1974-1981 — Engineer Supervisor, Resource Recovery and Development Authority, Baton Rouge, Louisiana, 1981-1985 — Parish Engineer and Parish Administrator, DeSoto Parish Police Jury, 1985-2000, from which he retired. He has since served as Branch Manager for Meyer, Meyer, LaCroix & Hixson, Inc. to present.

Don and his wife Pat have a daughter, Suzanne.

Jerry G. Lazenby, PE, is President of Lazenby and Associates, Inc. in West Monroe, Louisiana. The firm offers consulting engineering and land surveying services. A 1965 graduate of Louisiana Tech University, Jerry began his engineering career with the Federal Highway Administration. In 1974 he moved to West Monroe joining the consulting firm of Jenkins and Madden Engineering Company that evolved into Lazenby and Associates.

Jerry is a past chairman of the Professional Engineers in Private Practice, a practice division of the Louisiana Engineering Society, and a past President of the Monroe Chapter of the LES. He is the 1993 recipient of the LES Charles M. Kerr Public Relations Award and the 1994 recipient of the LES Andrew M. Lockett Civic Affairs Award.

A past President of the Consulting Engineers Council of Louisiana, Jerry also served as its Louisiana National Director 1997-1998 and chaired its Transportation Committee. In 2000

Jerry received the A.E. Wilder, Jr. Award for Outstanding Service to the CEC/L. He has been elected to the position of Fellow in the American Consulting Engineers Council and the Institute of Transportation Engineers. Jerry was appointed to — and served 6 years as a member of — the Louisiana Professional Engineers and Land Surveyors Board and he has remained active in service to the National Council of Examiners for Engineers and Surveyors.

Jerry has served on the Louisiana Tech Engineering Foundation, and the Tech Civil Engineering Advisory Committee and Engineering and Science Foundation. In 1995 he was awarded Tech's Distinguished Alumnus Award in Civil Engineering and elected a Life Director of Tech's Engineering and Science Foundation.

In his community, Jerry is a member and past president of the West Monroe/West Ouachita Chamber of Commerce and the West Monroe Rotary Club and he is a *Paul Harris Fellow*.



Rebecca Sherer receives her commemorative plaque from President Hamilton for the UNO Distinguished Senior Civil Engineering Senior Award.



Atieh Sehati receives her commemorative plaque from President Hamilton for the University of Louisiana at Lafayette Distinguished Senior Civil Engineering Senior Award.



David Minton receives his commemorative plaque from President Hamilton for the McNeese State University Distinguished Senior Civil Engineering Senior Award.

Jerry and Christine, his wife of 41 years, have 2 sons, a daughter and 9 grandchildren. Christine is also a Louisiana Tech graduate. They are active members of the First Baptist Church of West Monroe. Jerry's hobbies include deer hunting and fishing.

Steven P. Rider, PE, graduated from college in 1965 and began working for Rust Engineering in Calhoun, Tennessee. He moved to Northeast Engineering in Springfield, Massachusetts and then proceeded to earn his MS from the University of Cincinnati in 1975. In this setting, he was the only student licensed to practice in California and he gave the professor a hard time about leaving out parts of the seismic calculations. The following 13 years he worked for Pedco in Cincinnati, Ohio and then for Fluor Daniel in Cincinnati, Ohio and in Richmond, VA for 16 years. He retired in 2000. Since retirement, Williams works on small jobs for McCormick & Co. At one time, he was licensed in 13 states including Civil in California and Structural in Illinois. He has worked all over the world, including service in the countries of Mexico, Uruguay, the Philippines, India, Turkey, and all over the United States.

He currently lives in Shreveport with his wife and they were recently blessed with a grandchild.

The distinguished senior civil engineering students honored during the banquet were **John David Brown** from Louisiana Tech University, **Lauren Johnson** from LSU, **Brandon DeJean** from Southern University, **Rebecca Sherer** from UNO, **Atieh Sehati** from the University of Louisiana at Lafayette and **David Minton** from



Jerry Klier (standing), Chair of the Section Student Awards and Activities Committee, visits briefly with some of the civil engineering students during the Awards Banquet prior to the awards presentations.

McNeese State University. The keynote speaker for the banquet was radio personality Moon Griffon from the *Moon Griffon Show*. He gave an informative and entertaining presentation about "Louisiana Politics."

The Conference concluded with the Section's Annual Spring Meeting presided over

by Section President Tim Ruppert. During this meeting, the Section Board of Directors for the next administrative year was nominated and elected by the Section members present. President-Elect **E. R. DesOrmeaux, PE**, will succeed to the office of President of the Section for the 2007-2008 administrative year.

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- December 7, 2006 — *Are you using ASCE-SEI 07/05 Correctly for Wind Design?* Frank Bernardo from Florida presented the ways to use ASCE-SEI 07/05 for wind design. Besides giving a lot of design tools and references Bernardo presented the changes in the Miami Dade County building code and the reasoning behind the changes.
- February 7, 2007 — *Prediction for the Life-Cycle of Engineered Structures Using Fabrication Quality Control and Structural Health Monitoring.* Vivek R. Dave from Santa Fe, New Mexico presented this seminar on predicting the life-cycle of engineered structures. He introduced us to state-of-the-art integrated methodology for the monitoring, control, and prediction of defects that could be life-limiting for the entire life-cycle of engineered structures, or engineered assembled systems. Some of the examples of types of structures included oil and gas structures, naval structures and large civil infrastructure such as bridges and commercial buildings.

Seminars planned

- May 10, 2007 — *Professional Practice and Business of Forensic Engineering.* Robert Ratay from Manhasset, NY, specializes in field of analysis of failures of structures, will present the Annual David Hunter Lecture this year.

- June 9, 2007 — *Underwater Inspection of Structures.* Ken LeBrey, C.H. Fenstermaker and Associates, Lafayette, LA.
- August 11, 2007 — *What Should Structural Engineers Know About a Geotechnical Report?* William Gwyn, PE, of Eustis Engineering, Metairie, LA and David Lourie, PE, of Lourie Consultants, Metairie, LA.

All seminars sponsored by the Chapter are held at the University of New Orleans. Seminar dates, registration and pertinent information can be found on the New Orleans Branch website at www.asceneworleans.org. To add your name to our mailing list for announcements, email Om Dixit at om@fenstermaker.com. The Chapter is always interested in new seminar topics and potential speakers. Any recommendations you have may be forwarded to jdanner@denisoneng.com.

Chapter business

The Chapter also has continued its support of Mathcounts and the Regional Science Fair. This support to both events comes in the form of providing judges during the events, monetary awards and donations. The awards provided to the Regional Science Fair consisted of cash prizes for the First Place and Second Place projects in the Junior and Senior Divisions.

The Chapter's Executive Committee recently approved the addition of William E. Rushing,

Jr., PE, of Waldemar S Nelson, New Orleans, and Dale T. Hunn, PE, of Parsons Technology as new members. Rushing has been very active with American Concrete Institute and Hunn has been very active in National Society of Professional Engineers. The Executive Committee welcomes these individuals for their added expertise on the committee. Anyone interested in joining the Chapter's Executive Committee may contact any one of its members for more information.

Did you know...

...that according to a survey commissioned by the American Management Association with responses from 1121 managers and human resources types, the leading factor most likely to cause unethical corporate behavior is business objectives and deadlines? Some others in the order of their effect on unethical behavior are the

- desire to further one's career
- desire to protect one's livelihood
- cynicism, poor morale; ignorance and lack of training concerning ethics, and lack of consequences if caught
- need to follow orders
- peer pressure or need to be a team player
- desire to harm the organization and
- desire to help the organization.

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STUDENT CHAPTER NEWS

UNO

By Rebecca Scherer, President and Mark Middleton, Treasurer

The Chapter focused its attention this past year on rebuilding its labs and preparing for the Deep South Conference. We had many interested and eager students ready to plan and participate in all of the events the Conference had to offer including the Concrete Canoe, Steel Bridge, Concrete Frisbee, the Mystery Event, Surveying competitions, and the Daniel Meade paper. There were 21 students and 3 faculty members who attended the Conference. The faculty members were Gianna M. Cothren, PE, Faculty Advisor; Michael D. Folse, PE, Professor, and Byron Landry.

In the concrete canoe races, the paddlers were Daniel Flores, Mark Even, and Chris Rau for the Men's Endurance; Jennifer Schindler, Melissa Montz, and Rebecca Scherer who took 2nd place in the Women's Endurance; Mark Even and Daniel Donahoe who took 1st place in the Men's Sprint; Jennifer Schindler and Noelle Coupel who took 3rd place in the Women's Sprint; and Daniel Flores, Daniel Donahoe, Lesley Cedotal, and Mallory Davis for the co-ed sprint.

Through unfortunate circumstances on race day, our canoe suffered several severe fractures that threatened its integrity. Through the efforts of the 24 students and faculty that came to conference, we were able to get the canoe functional for the last two races of the competition. Though the repaired canoe was not going to win a speed event at this point, the final 2 races were completed with considerable pride and effort. The canoe crossed the finish line in both races, and has since been retired.

Thanks to the extracurricular efforts of some of our seniors, the Chapter was for the first time in 2 years able to field a team to compete in the steel bridge competition. Their efforts produced a beautiful bridge with an efficient design. The steel bridge team included Carmelo Gutierrez, Corey Gaudet, Daniel Donahoe, Brian Froeba, Mark Even, Michael Villaraza, and Shawn Ledig.

The Chapter's Concrete Frisbee competition team constructed 7 concrete frisbees. They were required to toss them toward predetermined goals. The frisbees had to stay in one piece and get as close to the goal as possible. The members

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The UNO Student Chapter contingent following the Conference Awards Banquet.



UNO concrete canoe competition team with their repaired canoe "The Caribbean." Kneeling from the left are Noelle Coupel, Jennifer Schindler, Mallory Davis, Rebecca Scherer, Melissa Montz, Lesley Cedotal and Daniel Flores. Standing from the left are Dustin English, Mark Middleton, Mark Even, Jeremy Pagoda, Daniel Donahoe, Chris Rau, Yelena Riviera and Josh Hutchinson.

Call for speakers for the Louisiana Civil Engineering Conference and Show

By Nathan J. Junius, PE

Preparations are active for the 2007 ASCE/ACI Louisiana Civil Engineering Conference and Show scheduled for September 13-14, 2007 and sponsored by the New Orleans Branch and the Louisiana Chapter of the American Concrete Institute. At this time, the Conference's agenda, including its 2-day agenda of 3 concurrent technical sessions, is being

organized and filled. For the approximately 600 registrants who will be in attendance, the technical sessions will minimally span the general subject areas of Civil, Structural, Geotechnical, Environmental, Transportation, Management/Legal, Professional Topics, and Construction. If you are interested in presenting a technical session during this conference, please submit the

completed Speaker Information Sheet available at <http://www.lasce.org/documents/spkrinfo07.doc> on or before June 15, 2007. You may also contact either Ryan Koenig at ryan_koenig@urscorp.com or (504) 218-0847, or Nathan Junius at njunius@lhjunius.com to obtain a copy of the Sheet.

UNIVERSITY OF LOUISIANA AT LAFAYETTE

By *Sehati Atieh, Secretary*

The Chapter began the Spring 2007 semester with its January membership meeting featuring guest speakers Ryan P. Reviere, PE, and Kurt M. Brauner, PE. They are both employees of the Louisiana DOTD where Reviere is a Bridge Engineer Manager. They made an informative presentation about the DOTD Bridge Design Section.

The 2007 Science Olympiad was held on the campus of the University of Louisiana at

Lafayette. This competition is for high school and middle school students. One of the events is Tower Building. Civil engineering students and faculty act as judges for the events. The objective of the tower building event is to design and build the lightest tower, with the greatest structural efficiency — capable of supporting a load up to 15 kg. Student contestants are allowed to work in teams of 2 people and 7 teams participated in this year's event. Shin-Tai Song and E.

R. DesOrmeaux, PE, served as judges and there were 4 Chapter members who served with them as assistant judges.

Deep South Conference

The Chapter participated in the 2007 Deep South Conference of student chapters in Ruston, Louisiana. There were 10 chapter members that

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The Chapter members who participated in the 2007 Deep South Conference pictured from left are Divina Lanclos, Jarred Veazey, Chris Giglio, William Roth, Andy Sellers, Deborah Hunter and Patrick Broussard.

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of the team were Mark Middleton and Josh Hutchinson.

The mystery event required 4 participants who were given a few simple items to construct a device to catch water balloons. The winner was determined by the greatest distance a water balloon could be thrown and successfully caught in the device. Our team consisted of Jeremy Pagoada, Dustin English, Chris Rau, and Josh Hutchinson. They successfully tossed the balloon approximately 55 feet.

The Surveying team had to find the elevation of a point on the top of a building on the LA Tech campus. The competition was not without its tribulations, but our team, Jeremy Pagoada, Dustin English, Daniel Flores, and Yelena Riviera, were very dedicated and determined to complete the task successfully no matter how long it took.

Senior Noelle Coupel wrote a paper on "Eminent Domain and an Engineer's Ethical Responsibilities" for the Daniel Meade paper contest. She presented her paper at the conference, and did a wonderful job with the presentation and the writing of the paper.

Ultimately, through the efforts of many dedicated individuals and the generous donations of our sponsors who are listed below, a strong foundation was set for the Chapter's future. The Chapter has successfully bounced back from the setbacks of Hurricane Katrina, and with many students returning for next year it can only grow from here.

A very special thanks goes to all of the sponsors who supported the Chapter. They include:

- Julien Engineering
- Waldmar S. Nelson and Company
- Engineering Dynamics Inc.
- Boh Brothers
- Morphy Makofsky Inc.
- Eustis Engineering Company, Inc.
- ASCE - New Orleans Branch, and
- ASCE - Louisiana Section.



Chapter members participating in the Mystery Design event during the 2007 Deep South Conference.



UNO steel bridge competition team from the left is Carmelo Gutierrez, Daniel Donahoe, Shawn Ledig, Corey Gaudet, Brian Froeba, Mark Even and Michael Villaraza.

LOUISIANA TECH UNIVERSITY

By Nathan Lindhardt, President

Chapter events

The 2006-2007 school year for the Chapter was a busy one. An improved emphasis was placed on growing its membership while keeping focused on hosting a great regional conference of student chapters. The officers planned numerous events to keep the chapter members interested, while attracting as many freshmen and sophomores as possible. These events ranged from socials, to service on the teams building the competition concrete canoe and steel bridge, to community service projects.

We started recruiting even before the school year began by hosting an information table during freshman orientation. This did not bring in many new members, but got our name out there to the incoming engineering students before other professional engineering groups. The first social event we had for the members was our annual Burger Burn. We had a barbecue to welcome the Chapter members back to school before most of them even had a class. This was also a chance for the members to socialize with some of the professors. The Chapter had a strong showing at the ESA Gumbo Fest, getting 2 new recruits from the freshman class early in the year including next year's Marshal, Stephanie Bayne. Chapter President Nathan Linhardt won the coveted Ice-cream Bar Eating Competition.

One main focus of the Chapter this year was

service to both the community and Tech. In participation with the College of Engineering and Science, the Chapter hosted the tailgating at Tech's first home football game by having professor Dixie Griffin in a dunking booth. To better serve the community, the Chapter participated in Up Til Dawn for St. Jude's hospital, MathCounts for the local schools, and The Big Event to help clean up Tech.

The monthly Chapter membership meetings were full of guest speakers from organizations like Applied Research Associates, NCI Building Systems, Pate Engineering, the Louisiana DOTD Bridge Design Section, ABMB, and Coyle Engineering. This year we had social events at most of the membership meetings to attempt to bring a degree of levity to everything. One way we did this was to have our own Christmas party at the December meeting. We are happy to say that due to the increased efforts of all the members the Chapter has grown in both quality and quantity of members.

The strength of the Chapter's membership was evident during the Deep South Regional Conference. Our chapter hosted a great conference, while fielding outstanding teams for both the concrete canoe and steel bridge competitions. The students put forth good management and planning skills to host a great conference. The real credit belongs to Mary Lou Schwaller, the

Deep South Conference Chair, our co-Faculty Advisors Luke Lee and Mike Baumert, and all the committee's Vice Chairs. The Chapter as a whole followed their lead and helped out with anything that was needed.

The officers for the 2007-2008 academic year were elected in March. They begin their service in their respective positions during the Chapter's April membership meeting. One of their first priorities is to honor Freddy Roberts, who died from cancer in March. They have high aspirations to reach and I am confident that they will achieve them as a strong unified group.

2007 Deep South Conference

What happens when over 300 civil engineering students, faculty, and professionals get together for a weekend in Ruston? Bridges are built, distances are measured, and concrete flies and floats! On March 22-24, 2007, Louisiana Tech University's ASCE Student Chapter hosted the 2007 meeting of the Deep South Conference of ASCE student chapters. Practicing engineers, and the students and faculty from the 13 universities in the Conference located in Arkansas, Louisiana, Mississippi, and Tennessee converged on Ruston for an eventful weekend of comradery and competition in the

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Surveying competition team at work.



Timed steel bridge construction.



Setting up for a concrete canoe race.



Final touches on the timed bridge construction.

The Chapter's steel bridge competition team began work on its bridge in the Fall semester of 2006. A team of 7 students was formed for the task. Several design alternatives were evaluated using the Visual Analysis computer program. The design was finalized and a material selected.

The bridge was designed to be light yet rigid. The materials were ordered in December before the Christmas break. In January, the fabrication of the bridge began. The team worked long hours every weekend to get the bridge ready for competition.

On March 24, the steel bridge team competed in the 2007 Deep South Conference in Ruston. The team did very well in this competition, placing first in efficiency and third overall. The efficiency category pertains to the weight of the bridge and the amount of deflection it sustains under load. The bridge was the lightest overall at 171 pounds, but it did not place first in this category because of a minor weight penalty. The bridge also had a very small aggregate deflection of 0.901 inches.

Due to its strong showing in the regional competition, the team received an invitation to the National Steel Bridge Competition that will

be hosted by California State University, Northridge. To prepare for this competition, that will be held May 25-26, the team will make a few changes to the bridge and spend a great

amount of time practicing to reduce its construction time. The team is looking forward to representing Louisiana at the National Steel Bridge Competition.



The LSU steel bridge competition team pictured with their bridge following the competition in the Deep South Conference in Ruston.

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- concrete canoe
- steel bridge
- concrete frisbee
- professional paper presentation
- surveying and
- mystery event.

The Deep South Conference is typically hosted by a member university's student chapter in a rotation once every 13 years. The hosting duties involve an entire year of planning and fundraising led by the dedicated members of the chapter. The Louisiana Tech Chapter's planning committee led by Mary Lou Schwaller included Jared Allen, Jim Ellingburg, Rachel Hicks, Nathan Linhardt, Hailey Prince, Michael Rister, Brittany Rojas, William Watson, Paul Will and Faculty Advisors Mike Baumert and Luke Lee.

Competition

Throughout the Conference the competition is designed to challenge the competing teams to cooperatively apply the methods and knowledge gained from the civil engineering classroom to design, analyze, build, test, prepare and present their work. For instance, the competitors in the steel bridge competition were awarded for the

lightest, stiffest, most economic and most efficient bridge entry, and fastest construction. The competitors in concrete canoe competition are awarded for the best design paper, oral presentation, finished product and performance through a series of canoe races. The competitors in the professional paper competition are required to give an oral presentation to defend their ideas and analytical methods in the presence of judges who are licensed engineers.

The concrete canoe, steel bridge and the professional paper — the Daniel W. Mead Prize for Students — are all conference/regional competitions where the winners have the opportunity to advance to a national competition. The 20th Annual National Concrete Canoe Competition will be June 14-16, 2007 hosted by the University of Washington in Seattle, Washington. The 2007 National Student Steel Bridge Competition will be hosted on the California State University at Northridge campus May 25-26, 2007. The winning Mead papers are published in the ASCE's *Civil Engineering* magazine.

The surveying competition challenged the teams to measure the height (372.9 feet) of a

black marker on the top of the red light located on top of Wiley Tower. This was accomplished using leveling, pacing, and computational techniques developed in the classroom.

The 2-day conference and the competition depicted in part herein concluded with an awards banquet where the competing teams were recognized. Guest speakers at the banquet included Stan Napper, Dean, Louisiana Tech College of Engineering and Science; Steve McCutcheon, Chair, ASCE Region 5; and Tim Ruppert, President of the Louisiana Section. The overall Conference team winners for the concrete canoe and the steel bridge competitions were the Mississippi State University and the Arkansas State University Chapters, respectively. For the summary of the results of all of the competitions tabulated under the title **2007 Deep South Conference Results**, and more pictures of the Conference events, please visit the Conference website at www.deepsouthconference.com. In other news from the Conference, the LSU Student Chapter agreed to host the 2008 Conference and the UNO Student Chapter agreed to host the 2010 Conference.

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attended the Conference participating in the Surveying and Mystery Design events. The Chapter appreciates the thoughtful organization of the Conference events and the efforts made by the host chapter, the Louisiana Tech University Student Chapter.

Engineers Week

Engineering Week as celebrated on the UL at Lafayette presents a great chance for Chapter

members to display their skills for the other students in the College of Engineering, and for the participating high school students that attend the event and toured the engineering facilities. This year's event was scheduled for March 25-30, and it was sponsored by the Louisiana Engineering Society Student Chapter.

The UL at Lafayette College of Engineering welcomed Steven C. McCutcheon, PE, as a distinguished visitor during its Engineers Week cel-

ebrations. McCutcheon is currently Director of ASCE Region 5 and a member of the ASCE Executive Committee, and he is a past President of the American Ecological Engineering Society. On Monday evening, he was the principal speaker for the Engineers Week opening event for the College of Engineering. On Tuesday, he provided Power Point presentations of digital photo-

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McNEESE STATE UNIVERSITY

By Renus Kelfkens

The Chapter had a very successful year. Its participation in the 2007 Deep South Conference was a big success. We were able to walk away with 2 victories. One was in the Concrete Frisbee competition and the other was in the Surveying competition.

We were unable to have a concrete canoe this year due to various complications, but we took a couple weekends out of the semester to design the concrete mix for the frisbees. Three different mixes were designed, cured and later tested. We selected the best design, and then performed more testing on the final mix to guarantee the strength. The Concrete Frisbee team would be required to play Frisbee golf so they practiced their throwing. The Chapter team was the second team to compete that day, and the team consisting of Dane Dupont and John Winfield won the competition.

The surveying competition allowed the use of a total station to measure angles, but all distances had to be measured by pacing. The objective was to measure the height of the tallest building on the Louisiana Tech campus. The Chapter's Surveying team had a strong determination to find the exact height, a determination that ultimately put them only 0.03 foot short of the actual height of the building. The competition started at 8:00 am, the team of Ben Boudreaux, Austin Buckels and Jeff Tyson worked until 3:15 pm opting to skip lunch to ensure the accuracy of their work. The team's superior field book, accu-



From the left, Jay Uppot, Faculty Advisor, with the McNeese State Surveying competition team John Winfield, Austin Buckels, Ben Boudreaux, Jeff Tyson, Dane Dupont.

rate measurements and calculations gave the Chapter its second win of the Conference.

In addition to hosting the various competitions, the Louisiana Tech Student Chapter also hosted a social event the one evening that was totally optional. The event required the design of a balsa wood airplane, all materials were provided. We participated wholeheartedly with the team designing a total of 4 planes. Even though

no one on the team is an aeronautical engineer, the designs were innovative, original and the event was an excellent way to decompress after a competitive day.

The Chapter would like to thank all of its sponsors for supporting this year's efforts and we look forward to next year's Conference that will be hosted by the LSU Student Chapter.



The McNeese State Concrete Frisbee competition team.



The McNeese State Concrete Frisbee competition team in the heat of the competition.

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graphs to 2 groups of students and faculty depicting the structural damage in Sri Lanka that resulted from the tsunami in 2005, and the structural damage on the Mississippi Gulf Coast that resulted from Hurricane Katrina. That evening, McCutcheon was one of the 3 judges of the student paper competition in the College.

The events Wednesday were attended by 860 high school students from various schools throughout Louisiana and Mississippi. Civil engineering students served as their tour guides, and performed various laboratory experiments for those attending.

❖ Quote ❖

Ethics: Always do right: this will gratify some people and astonish the rest.
- Mark Twain

Section News and Information

Highlights of the February Board of Directors meeting

The ASCE representative on the Nominating Committee for the Southeast Louisiana Flood Protection Authority — East and the Southeast Louisiana Flood Protection Authority — West, Jerome M. Klier, PE, provided an oral and a written report providing an accounting of the Nominating Committee's actions since the previous Board meeting. Jerry advised that the Committee provided a new slate of 11 nominees for the Southeast Louisiana Flood Protection Authority — West for the Governor's consideration, from which she appointed its 7 members on February 6, 2007. The Governor had previously appointed the members for the Southeast Louisiana Flood Protection Authority - East. See the article in this issue for more details.

The Section's reserve funds in its investment accounts will be moved into 4 certificates of deposit of approximately equal amount. Initially there will be 4 CDs with a 3 month, 6 month, 9 month and 12 month maturity. As each matures an automatically renewable 12 month CD will be purchased. This conservative investment strategy was deemed more consistent with the Section's purposes and its lack of the consistent hands-on financial management required for the more aggressive investment strategy associated

with an investment account.

The CDs can be purchased through the Whitney Bank where the Section maintains its checking and savings accounts. This will consolidate all of the Section's finances in one institution and since Whitney Bank has offices in cities statewide, each Secretary-Treasurer rotating among the 4 branches of the Section can easily move the management of the Section's accounts to a nearby Whitney Bank office.

It was reported that the attendance by the Section leadership during the ASCE Region 4 and Region 5 joint leadership conference in Nashville, Tennessee was disappointing. It was suggested that more priority, attention and advanced planning needs to go into attending this annual event. It is an important opportunity for the ASCE leaders attending to become better informed concerning national issues, network with leaders across sections and regions, and gain valuable training and insight in leading their respective organization components.

In other matters

- The Acadiana Branch is in the early stages of planning a Spring seminar to be scheduled sometime in April.
- Samantha E. Miller, the Younger Member

Committee Chair for the Baton Rouge Branch, was appointed to simultaneously serve as the YMC Chair for the Section.

- The 2006-2007 Section annual budget item for website development and maintenance was increased by \$1500 to cover the anticipated costs for the remainder of the administrative year.
- The New Orleans Branch proposal was approved to expend its \$4665 portion of the surplus Section funds being disbursed on the purchase of new cabinets to secure the equipment in the engineering laboratories at UNO. This is where its ASCE Student Chapter fabricates its competition concrete canoes and steel bridges.
- Robert W. Jacobsen, PE, who had agreed to represent the Section during the Congressional Fly-In Annual Leadership Training in Government Relations in Washington, D.C. had to withdraw because of unanticipated business commitments. Subsequently, the Board approved Ronald L. Schumann, Jr., PE, and Reid L. Dennis, PE to represent the Section on 2/14/07.

Leadership training in government relations

Reid L. Dennis, PE

I had the distinct honor and pleasure to represent Louisiana by attending the ASCE Leadership Training in Government Relations sessions in Washington, D.C. this March. The purpose of the sessions is first to provide training in how to effectively lobby one's congressional delegation and second to gain practical experience by meeting with delegation members to lobby for bills important to the ASCE. In 2005, the ASCE developed a report card for America's Infrastructure. It includes evaluations of

- Aviation
- Bridges
- Dams and Levees
- Drinking Water
- Energy
- Hazardous Waste
- Navigable Waterways
- Public Parks
- Transportation
- Railroads
- Schools
- Security
- Solid Waste
- Transit and
- Wastewater.

The result of the evaluations suggests that America's infrastructure has a grade point average of a D — Security had an Incomplete. The bills supported by the ASCE during the 110th Congress are believed integral to improving this dismal grade.



Representative David Vitter and Reid Dennis

I had the opportunity to meet with staff representatives of

- Senator Mary Landrieu
- Senator David Vitter
- Congressman Bobby Jindal and
- Congressman William Jefferson

and lobby them for their bosses' support for the following bills supported by the ASCE:

National Infrastructure Improvement Act. This bill was in committee for development. It

would establish the National Commission on the Infrastructure of the United States to reasonably assure that the nation's infrastructure will meet its current and future demands and that it will support future economic growth. Landrieu, Vitter, Jindal and Jefferson support this bill and they are committed to voting for it once it reaches the floor of the House and Senate.

Water Quality Financing Act of 2007 (H.R. 720). This bill would authorize the appropriation of \$20 billion over 5 years for the construction and repair of America's aging wastewater treatment plants. Landrieu, Vitter, Jindal and Jefferson support this bill. It passed the House 303 to 108 and it is currently being considered in the Senate.

Dam Rehabilitation and Repair Act (H.R. 1098). This bipartisan bill in committee would provide \$200 million over 5 years for repair, rehabilitation and removal of publicly owned dams. The ASCE estimated that \$10.1 billion is needed over the next 12 years to repair just the most critical dams — public and private — that pose a risk to human life. Landrieu, Vitter, Jindal and Jefferson all support this bill and they are committed to voting for it once it passes out of the respective committees onto the floors of the House and Senate.

Reauthorization of the Federal Aviation Transportation Program. The reauthorization of

(Continued on Page 23)

Freddy L. Roberts dies

Freddy L. Roberts, a resident of Ruston, was born December 29, 1941 in Dermott, Arkansas and died March 16, 2007 at his home surrounded by family and friends following a courageous battle with cancer. Freddy was a member of Christ Community Church where he served as an elder. He is preceded in death by his parents and survived by his wife of 42 years, Judy, and their two daughters and a granddaughter. Freddy earned his BS and MS degrees from the University of Arkansas and his PhD from the University of Texas. During his career, he taught at Clemson University, University of Texas, Texas A&M and Auburn University before accepting his position at Louisiana Tech University in 1990 as the T.L. James Eminent Scholar Chair in the College of Engineering. As



Freddy L. Roberts

a professor of civil engineering, Freddy specialized in pavement management systems, pavement performance, design of asphalt pavements, and the behavior of asphalt and other paving materials. He was a member of the ASCE and a licensed civil engineer in Louisiana. The week prior to his death, Freddy was elected *Professor of the Century* by his students and he was awarded the title Professor Emeritus of Louisiana Tech University. Those interested in remembering Freddy Roberts in a meaningful way may consider contributing to The Freddy Roberts Memorial Scholarship Fund • Louisiana Tech Foundation • Post Office Box 3183 • Ruston, LA 71272

Gordon C. Russell dies

ASCE member Gordon C. Russell, PE, of Logansport, Louisiana died February 8, 2007. He was born November 15, 1927 in Kinston, Alabama. Russell is survived by his wife of 45 years, Anne Stubblefield Russell, his son, two daughters, and 7 grandchildren. Russell was a member of the First United Methodist Church of Logansport where he served as a Sunday school teacher, Chairman of the Administrative Board, and choir member. Russell was a member of the Kiwanis Club and he was a Mason. He also served on the Sabine River Authority.

Russell graduated from Bastrop High School in 1944 and earned his BS in civil engineering from Louisiana State University in 1951. He was a Colonel, United States Army, Retired and served in the U.S. Army Corps of Engineers during the Korean War, and later served as com-



Gordon C. Russell

mandant of the 4158th Army Reserve school in Shreveport until his retirement. Russell owned and operated Russell Engineering and Surveying Company in Logansport for over 45 years. He also served as a rural mail carrier for the U.S. Postal Service for 25 years.

An active member of the ASCE Shreveport Branch and a member of the Louisiana Engineering Society, Russell was scheduled to speak on "Post tension slabs in Northwest Louisiana" during the February meeting of the Shreveport Branch to be held jointly with the Shreveport Chapter of the LES. Russell is described by the Shreveport Branch leadership as a faithful member of the Branch who was very supportive of its activities. "It was always a joy to be around him."

West levee board appointments

Out of the Governor's concerns about the residency requirements for the 2 original nominees from Jefferson Parish submitted by the Nominating Committee for Southeast Louisiana Flood Protection Authority - West for her consideration on December 22, 2006, the appointments were delayed. The office of the Attorney General reviewed the Governor's concerns and advised that these appointees must be residents of the west bank of the Mississippi River and within the territorial jurisdiction of their respective parishes of the west bank authority.

Consequently the Governor requested that the Nominating Committee withdraw its original slate of nominees and open a new application process for a new slate of nominees. The Nominating Committee began deliberations on January 19, 2007 and opened a new application process. On February 1, 2007 the Nominating Committee submitted a new slate of nominees for the Governor's consideration for appointment. The slate included 11 nominees to be considered to fill the seats of the 7-member board of

the Southeast Louisiana Flood Protection Authority - West. On February 6, 2007, the Governor appointed the following members to the Board:

- Mark Lee Morgan, PE, Civil Engineer, Baton Rouge
- Michael Louis Merritt, Geologist, Baton Rouge
- Joannes Jacobus Westerink, Professor/Water Resources, South Bend, Indiana
- Susan Helen Maclay, Executive Director - Nonprofit, Harvey
- Robert Edward Howson, CEO (retired), New Orleans
- David Joseph Binewald, Sr., Project Manager, Harvey
- Kerwin Eldred Julien, PE, Consultant, New Orleans

Morgan and Julien are both licensed civil engineers in the state of Louisiana and they are members of the ASCE and the Louisiana Section.

❖ Quotes ❖

Economics: *The challenge is funding. States don't have the needed funding for critical structural maintenance and repair. While user costs are important, they would significantly reprioritize the way limited resources are spent, requiring even more funding to cover critical structures and maintenance.*

- Jim Cooper, FHWA Chief Bridge Engineer (retired)

Nowadays, there are a relatively large number of technical articles that are accessible through electronic venues. However, the impressive amount of data does not imply that all of those articles provide new or relevant information, or that one can find these articles easily. For example, conference papers are tough to obtain if you did not actually attend the event. In some instances, the information conveyed seems to be a regurgitation of other articles. It has become increasingly difficult, I think, to identify the publications that really contribute to the improvement of engineering.

- Cathy Bazáán-Arias, EIT

- Career Benchmarks -

Section members **Eric S. Borne, PE, Lisa A. Bourgeois, PE, Kevin D. Durbin, PE, David J. Girouard, PE, Heather E. Myers, PE** and **Christopher L. Sanchez, PE** recently earned their professional engineering license in Louisiana. If you are in contact with any of them, please offer your congratulations on their accomplishment.

Louisiana residents **David A. Branch, PE, Stephanie S. Cavalier, PE, Israel G. Cecchini, PE, Koby J. Coulon, PE, Christopher B. Domingue, PE, Ned G. Doucet, PE, Karim T. El Kheishy, PE, Nicholas A. Fagerburg, PE, Benjamin J. Fisher, PE, Niccola D. Gill, PE, Joshua T. Hardy, PE, Steven R. Joubert, PE, Mary E. Kincaid, PE, Jason M. Lacombe, PE, Walid Shahla, PE, Hayward E. Simonton, III, PE, David T. St. Marie, PE, Mingjiang Tao, PE, Michael K. Tate, II, PE, Travis P. Trahan, PE** and **Charles E. Williams, PE**, recently earned their professional engineering license in Louisiana. They are civil engineers or in a related discipline and they are not members of the ASCE. A copy of this issue of the journal is sent to them as an informal introduction to the Section. If any of them wish to join and/or find out more about the ASCE, they are hereby invited to visit the ASCE national website, <http://www.asce.org>. If you are in contact with any of these engineers, please consider formally

— net surfing —

This feature is discontinued. With the completed implementation of the Section website that is operated in close conjunction with this journal, all of the website addresses previously referenced in this feature are now either referenced on — or linked through — the Section website.

(Continued from Page 21)

the Federal Aviation Transportation Program required in 2007 had not been presented. Due to its importance, the ASCE wants to educate Congress in preparation for its presentation. The ASCE believes that its reauthorization should be focused on 3 goals:

- expanding infrastructure investment
- enhancing infrastructure delivery and
- maximizing infrastructure effectiveness.

I found the discussion of these bills very interesting. While my initial perception was that I would speak directly with my Congressman or Senator, I actually met with their legislative assistants. These assistants gather information to be discussed with their boss and they advise lobbyist about their boss' current position on the issue(s) in question. I found the legislative assistants to be very engaging and particularly interested in the ASCE position. They were each very aware of the ASCE report card for America's infrastructure and understood how each of the bills discussed would support its vitality. I believe that the Louisiana Section benefits significantly from this involvement, and I would look forward to repeating as its representative if given the opportunity.



Mark L. Morgan



Kerwin E. Julien, Sr.

introducing them to the Section by inviting them to attend a branch meeting as your guest.

The following Section members have recently become Life Members; from the Baton Rouge Branch: **Lewis Burruss, Nilmani Banerjee, Joe H. Harmon, David N. Williams, PE, James M. Aronstein, Jr., PE, and James L. Foush;** from the New Orleans Branch: **John C. Gribar, Lloyd A. Held, PE, Eugene A. Brian, PE, Ronald J. Shaw, PE, Leo W. Gagnon, Jr., PE, Enrique J. La Motta, PE, Larry R. Heston, and Harry W. Stinchcomb;** and from the Shreveport Branch: **Donald M. Edington, PE, Stephen P. Rider, and Jerry G. Lazenby, PE.**

Governor Blanco, after a short delay due to questions raised concerning residency requirements, appointed the 7-member board of the Southeast Flood Protection Authority — West on February 6, 2007. Among the appointees are **Mark L. Morgan, PE, and Kerwin E. Julien, PE** who are both Louisiana Section ASCE members and licensed civil engineers in Louisiana.

Mark L. Morgan, PE, is a resident of Baton Rouge and a licensed engineer in Louisiana and 7 other states. He is also the designee for his company's contractor's licenses in 7 states including Louisiana where it is certified for levee construction. He also holds a driller's license. Morgan is currently the President of the Baton Rouge Chapter of the ACEC/L and he serves on the engineering selection board for the City of Baton Rouge. Historically, Morgan has been

active in the ASCE and the Louisiana Engineering Society. Morgan's family of origin has resided in the New Orleans metropolitan area since 1958. As a youth, he experienced firsthand the storms and/or the aftermath of Hurricane Audrey in 1960, Hurricane Betsy in 1965 and Hurricane Camille in 1969.

Morgan entered Louisiana State University in Baton Rouge in 1973 where he earned his BS degree in civil engineering in 1978; after which he was employed by Servitron, Inc. — a multi-discipline engineering consulting company and he became a permanent resident of Baton Rouge. His work experience with Servitron included flood studies for FEMA that included St. Charles Parish. Morgan worked with the Corps of Engineers on 100 year storm surge projections where for example "...we modeled a 100 year storm surge of 12.5 feet MSL..." on the western end of Lake Pontchartrain. He then specialized in drilling monitoring wells in conjunction with the requirements of the Resource Conservation and Recovery Act moving him into the environmental business.

In 1981, Morgan became a minority owner of GEC Engineering that absorbed Servitron's drilling business in conjunction with its geotechnical work for revetments and flood control structures from Texarkana to Morgan City and Vicksburg to Venice. He moved to Pearce and LeBlanc Constructors and Engineers in 1983 where he gained valuable experience in earth-work construction contracting.

In 1986, Morgan was employed by IT Corporation that is now part of Shaw. He managed the eastern division of its Groundwater Field Services Division. He was responsible for 13 offices from Boston to Austin. In 1992, IT Corporation eliminated its Groundwater Field Services business and a number of its key staff members started SEMS, Inc. where Morgan currently serves as its President. SEMS, Inc. does consulting engineering and contract construction in the southeastern United States.

Kerwin E. Julien, Sr., PE, is a resident of New Orleans. Julien earned his BA degree in Physics from Xavier University in 1987, BS degree in civil engineering from Tulane University in 1987 and MS degree in civil engineering from the University of New Orleans in 1992. He is a licensed engineer in Louisiana and 3 other states and his experience from 1988 to 1995 is mostly in civil/structural engineering design and project management. From 1995 to present he is the owner and President of Julien Engineering and Consulting, Inc. of New Orleans where his principal duties include project management and oversight of the firm's civil/structural engineering work.

Editor's note: There are three disciplines that are licensed by the Louisiana Professional Engineering and Land Surveying Board and that may be considered closely related to civil engineering. They are the environmental, structural and architectural engineering disciplines. As of June 2006, the active engineering licenses conferred by the Board were approximately 5,937 in civil, 741 in environmental, 58 in structural and 8 in architectural.

Membership: Housekeeping

As you may appreciate, it is and always has been important for you as a member of the ASCE to keep your contact information current and accurate so that you can gain the full value of your ASCE membership in part by receiving all of the ASCE communications that are directed to you. As the national organization, the section and the branches move more into the use of email communication with the membership when it is effective to do so, it becomes more important for you as an ASCE member to keep your email address current as part of your contact

information. It is appreciated that email addresses tend to change more frequently than residential and business mailing addresses and as a result they probably need more regular attention to keep them current.

Tabulated below are the 103 section members who have email addresses listed in the ASCE database that are either not active or for some other reason they did not receive a recent email transmission attempted. Tabulated on the facing page is the more than 300 Section members listed by branch that do not have an email

address in their contact information in the national ASCE membership database. As you may be aware, all of the contact information is provided to the Section and the branches through the national ASCE database. This database is where all of the basic information is kept for ASCE members and it can be reviewed and modified on the ASCE website by the individual member. Members without on-line access may also review and revise their membership data via the ASCE toll free telephone number 1-800-548-2723.

Section members invalid email address listed:

Aguetant	Jennifer	E	Estopinal	Stephen	V	Kemp	Jimmy	W	Perrin	Felicien	
Alawady	Mohamed	A	Fenner	Robert	D	La Biche	Wayne	M	Peterson	Wayne	R
Alvarez	Hector	F	Fergus	Richard	H	Lachin	Philip	J	Petitbon	John	B
Babatunde	Michael	A	Foust	Henry	C	Langley	Welda	E	Pfeiffer	David	R
Badeaux	J	A	Fuselier	Charles	A	LaSalle	Shelby	P	Phan	Tang	D
Bhatti	Ataur	R	Fuselier	Ryan	J	Lauderdale	Anne	C	Pizzolato	Vincent	P
Bodin	William	J	Gaines	Avis	H	Leininger	Jacob	E	Poland	Clayton	L
Bourgeois	Lisa	A	Gaines	Timothy	F	Lipari	Frank		Ranken	Catherine	M
Broussard	Leon	A	Galloway	Richard	C	Loddell	Larry	W	Reed	Barry	
Buskie	Stephen	W	Gaspard	Brendon	E	Love	James	C	Renard	Joshua	K
Cammarata	Nick	G	Gattle	Thomas	M	Lucas	Elihu	R	Roussel	Herbert	J
Coco	Russell	J	Gautreau	Glynn	P	Maji	Amritendu		Royer	Bruce	A
Cole	Howard	D	Geihlsler	James	A	Marlborough	Dwayne	A	Ruckstuhl	Bernard	L
Colombatto	Terrence	J	Grimball	Ross	G	Masson	Gabriel	E	Sannino	Megan	R
Conover	Nelson	P	Gross	Greg	A	Mayfield	Jimmy	G	Schindler	Newell	H
Cox	Bobby	E	Gudiel	Joaquin	F	McHie	William	F	Sensebe	Joseph	E
Culver	Frederick	H	Haggerty	Daniel	R	Miller	Frank	C	Sharma	Radhey	S
Curwick	Philip	B	Harper	Lonnie	G	Mills	Brady	P	Szabo	August	J
Daly	Linda		Haydel	Norman	C	Moise	Harold		Tisdale	Travis	E
Danforth	Elmo	J	Heinzen	Morris	R	Morris	Jack	D	Vanderbrook	Kevin	C
Diamond	Alfred	J	Hunn	Dale	T	Morrison	Sinyale		Walker	John	
Drouant	Bradley	W	Icenogle	Gary	D	Normand	Chris		Warner	Alton	R
Ehlinger	R	P	Inabnet	Courtney	P	Okubo	Ronald	S	Williams	Janice	P
Ehrensing	Lucas	H	Jacobs	Wesley	D	Olinde	Thomas	R	Wilson	Ken	P
Elguezabal	Domingo	J	James	E	L	Ovunc	Bulent		Zappi	Mark	E
Estevez	Fernando		Jensen	Dale	R	Patin	Daryl	B			

Real illusions: How we trick ourselves about finances

Submitted by Thomas R. Thurmond

We all like to think that we make rational and wise decisions when managing our money. But most of us are influenced far more by our emotions than our brains. Why do smart people make irrational investment decisions so commonly and so easily? The fascinating study of behavioral economics and decision science fills many books, but let us look at a few of the ways in which investors' minds play tricks on them.

The timid bunny — Worrying over risk

Why do so many people bank their money in savings accounts, CDs and money markets when they are often actually losing money if measured against inflation and taxes? Some people do it because they are so fearful of risk that they do not consider that such fixed investments are not risk-free. The interest credited to your account each month is subject to the likelihood of shrinking purchasing power, especially over time. A canoeist struggling to get upstream against current and wind will have the illusion of movement, but he will have to switch to a boat with a motor to make real progress.

The hoarding pack rat — Treasuring what we own

The preference to keep things the way they are is called the *status quo bias*. We tend to fall in love with what we own and stick to the familiar even if we would likely be financially better off with a different investment. We validate our prior choice by sticking with it. What we know feels better than what we do not know.

The foolish sheep — fearing loss

We are so averse to accepting loss that we will throw good money after bad. This is sometimes called the *sunk cost fallacy* — our inability to let go of money that is already been spent or lost. We will invest more money on car repairs simply because we have already spent so much on the car. Rather than evaluate a losing investment on its cost — as we are prone to do — it makes more sense to assess its current potential for loss or gain. If you would not choose to buy that investment today, then why do you make the choice every day to keep your money invested in it? Usually, it is because you are focusing on the

past — what you have already spent. But it has no relevance to the future.

The little chicken — Focusing on the negative

We feel the pain that comes from loss more acutely than we do the pleasure from an equal or greater gain. If you invest \$100,000 in a stock portfolio, and it rises in value to \$150,000 but then drops to \$130,000, you are more likely to be motivated by the disappointment in your loss of \$20,000 than the pleasure in your net gain of \$30,000. You may focus on your phantom loss rather than your available gain. This can lead you to be less willing to sell a profitable stock and buy an undervalued one, even though we have all heard that it makes more sense to buy low and sell high.

The stubborn mule — Refusing to change

We frequently decide not to decide, and that inaction can cost serious money. There are so many options out there that we become para-

(Continued on Page 26)

Section members with no email address listed:

Baton Rouge Branch :

Adkins Kenneth W
Arceneaux Kenneth S
Babin Lance
Baker John R
Banerjee Nilmani
Boles Jimmy P
Briggs George
Campbell Pressley L
Chopin Lamy J
Clary James
Coates Charles H
Costner Harry H
Cox Allen L
Cox Ross E
Danielson Donald W
Dart Olin K
Davis David E
De Blanc Edward M
Dyson Gerald R
Eslinger Charles R
Evans Edward E
Garber Benjamin A
Guissinger Roger P
Hammett Bryant O
LeBas Sherri D
Hargrave Wallace J
Heroy Frank
Hickey William
Huang Andrew T
Jimenez Michael
Justice James W
Kalivoda Eric I
Kern Sheelagh B
Killen Mark A
Kleinpeter Henry E
Klier Jerome M
Langlois Cletus
Le Bas Michael
Leak Harrison C
Lewis Stanley J
Loup Jeffrey J
Magill Natalie
McClanahan Edwin A
Meyer Vernon F
Moody Gene B
Moody Lamont L
Morgan Rollin D
Overall Robert C
Patterson Clint V
Perrault A Jackson
Perrault Charles
Porta Lloyd E
Prochaska Billy R
Rodi Ronald J
Roth Charles J
Sayes Malcolm D
Schoeffler Paul
Schott Henry K
Shah Shyam N
Shortess John R
Shread Richard R
Slaughter Scott H
Smith Jon J
Starring John W
Theriot Alexandre
Tilley Frederick L
Tucker Robert C
Tullier Daniel
Walker Roy E

New Orleans Branch :

Alsop Othniel
Armbruster James W
Arnold William E
Bellanger Earl T
Bernard Jules C
Bisso Louis C

Bivona Bruce J
Blackburn Brent R
Blessey Walter E
Boh Robert H
Bonie Walter C
Bonura Timothy P
Brignac Edmond M
Buisson Robert
Burk William R
Burke Richard J
Cabiro Richard J
Cali Peter R
Camp Charles R
Campbell Emily B
Campo Juan J
Cartier Roy A
Cenac Michael A
Chin Agustin
Chopin Michael D
Chrysosvergi Joseph E
Combe Adrian J
Cunningham Murray H
Davis George B
Desselle Earl P
Diasselliss Kenneth P
Dickson Edwin M
Dimitrios Don F
Dorsa Joel S
Douglas August H
Egeseli Engin A
Evans Kurt M
Falati Matthew J
Fall Steven M
Fant Andree L
Faschan Adam
Fleming Cletus G
Flynn Harold J
Follett Prescott H S
Foster Frank S
Fromherz Thomas A
Fry A Kevin
Gagnon Leo W
Garrett Elwood
Gautreaux James H
Gerrity Daniel M
Ghose Malay H
Giddens John B
Gilbert James G
Gillen Glenn P
Gonzalez Jose A
Graham James B
Gray E M
Grieshaber John B
Guiza Donato
Hannoura Alim P
Hardy Rixby J
Haydel Gerald M
Hedges Charles S
Heston Larry R
Hornberger Frederick C
Horne Wendy E
Hotard James S
Housey John J
Huang Chunwei
Hymel Norwood F
Jackson Frank J
Jolissaint Robert E
Judlin Walter D
Kaufmann Ray J
Kramer Norman E
Lambert Laurence L
Lang Meinrad F
LeCorgne William R
Legendre James
Logan Neil D
Lopez Francisco S
Luton Loyd E
Martin Charles A

McGinnis Richard R
McNamara Edward J
McCabe Raymond J
Meyn Kenneth J
Miller Donald J
Morehiser Mervin B
Munson Christopher M
Myers Fred H
Naomi Alfred C
Nataraj Mysore S
Nguyen Quy V
Ory Francis J
Parent John B
Parjus Antonio
Pepper Jerome
Peterson Nikolai
Pillie Glen M
Pittman Charles R
Ponder Russell J
Prucz Zolan
Ramirez Adolfo
Rawls Joseph S
Reddy Pratap P
Riviere Michael R
Roach John W
Rushing William E
Sanders Herbert C
Shires John H
Skinner Joseph C
Sloan Charles L
Smith William C
Smythe Arnold R
Sosa Luis F
Stamps Michael J
Stoll George J
Stumpf Edmund P
Sullivan George J
Suthon Felton
Thibodeaux Jean M
Todd Brett P
Treas Jaret M
Tsai Long-Shen
VanWootten Richard A
Villafane Joaquin T
Vossen Jean S
Wagner David A
Walk Frank H
Wethem Clarence A
Williams Jerry L
Williams Robert M
Winer Harley S
Wurtzel David R
Zaeringer Kevin P

Shreveport Branch :

Atchley Ben
Benedict Osme V
Bowman John R
Brown Billie W
Brynsvald John H
Cormier Paul B
Downs Donald R
Erlund Michael N
Flynn Homer
French Enoch J
Gadberry Foy B
Garrett Darryl D
Garrett William R
Grillot Sidney L
Grogan Dexter L
Hansel Bradley L
Harrison Donald R
Hazen Steven M
Hogan Michael G
Holloway Benoit
Huey Stanton E
Hyde Clyde D
Johnson John W

Jones Roy D
Kirschenbaum Neil E
Madden Jerry M
Marsalis Gordon A
McDaniel John S
Meredith Robert F
Miller Fletcher C
Mohr James D
Munn Malcolm R
O'Hare Maurice W
Peterson Otis E
Poole Ronald G
Pressley Charles W
Raley Frank J
Rider Stephen P
Snelling Murdock M

Acadiana Branch :

Alexander Cassie
Aucoin Karl J
Bailey George V
Ballard Stacey D
Beeble Warren P
Bellard Michael C
Boudreaux Aldes T
Bowie James E
Broussard Larry F
Courville Calvin
Croft Scott
Dahlberg Carl F
De Blanc Michael
DeMarco Tony
Diaz Ivan M
Domingue Emery
Gates Thurmond J
Glaubrecht George
Going E Jackson
Heikamp Albert J
Hibbeler Russell C
Hoppe Peter A
Hughes Robert C
Ivey Don L
Kingston J. R
Landry B J
Landry Matthew
Letz Harold J
MacDonald Robert W
Malla Bala K
Maniscalco Joe
Marchand Amanda C
Mc Gee Ralph D
Montagnet Andre E
Moore Charles D
Mouton James P
Nguyen Ba
Poirrier Martin T
Pontiff Darrell J
Provost Raymond A
Richard Christopher K
Richard Donald L
Richards Paul
Robichaux Neal P
Sadreddini Mohammad
Savoy Mark L
Scarborough N D
Sellers Eugene M
Smart Claude D
Snyder Millard P
Stephenson Mark A
Stutes Shirley A
Talley Willis J
Thibodeaux Rodney T
Thompson Mack F
Todd Garry L
Touchet Kim J
Vincent Walter C
Wang Robert S
Wyble Mitchell P

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lyzed and stay with the familiar. Often this is motivated by fear of short-term regret at making a less-than-perfect decision even though we know that there are no perfect decisions. But, as Mark Twain said, "Twenty years from now, you will be more disappointed by the things you didn't do than by the things you did do." By placing more emphasis on what we have already expended than on what could be gained by change, we ignore lost opportunity costs because they do not seem real. But with your financial security at stake, where you are headed is much more important than where you have been.

Thomas R. Thurmond, Senior Vice President, Wealth Advisor with Morgan Stanley in New Orleans, Louisiana. He may be contacted by email at thomas.thurmond@morganstanley.com or by telephone at (504)587-9669 or (800)659-0009. Any particular investment should be analyzed based on its terms and risks as they may relate to your specific circumstances and objectives. Information and data in this article were obtained from sources considered reliable and published for general information and educational purposes only. Morgan Stanley makes no representation or warranty with respect to the accuracy or completeness of this material and the giving of the same is not an offer or solicitation to buy or sell any security or other financial instrument or participate in any trading strategy. It was prepared by Morgan Stanley sales, trading or other non-research personnel. Morgan Stanley does not render advice on tax or tax-accounting matters. This material was not intended or written to be used, and it cannot be used by any taxpayer, for the purpose of avoiding penalties that may be imposed on the taxpayer under U.S. federal tax laws. Consult your tax or legal advisers before making any tax- or law-related investment decisions. Investments and services are offered through Morgan Stanley DW Inc., member SIPC.

Did you know...

...that self-propelled robot traffic cones have been developed that will position themselves to mark off repair zones and reduce the need for workmen to put themselves in harm's way placing and removing such markers manually? The cones are on a 3-wheeled base featuring two electric motors and a 12-volt battery. The activities of a fleet of robot traffic cones is coordinated by a lead robot or shepherd that is controlled by an operator with a laptop. The operator views a camera image of the road and uses software to mark the cone positions onscreen and can open and close traffic lanes faster than human workers. The cones employ dead reckoning to find their positions. The shepherd uses a laser-based radar system to correct any positional errors of the cones and ensure that the fleet is properly located. The cost of the robot traffic cones must be lowered to become commercially viable.

- *New Scientist* 04/28/04

— Calendar of Events —

June 6-8, 2007	ASCE Seminar * Design of Foundations for Dynamic Loads, New Orleans.
June 7-8, 2007	ASCE Seminar * Pipe and Pipeline Renewal, New Orleans.
June 7-8, 2007	ASCE Seminar * Wind Loads for Buildings and Other Structures, Galveston, Texas.
June 7-8, 2007	ASCE Seminar * Structural Renovations of Buildings, Atlanta, Georgia
June 7-8, 2007	ASCE Seminar * Treatment Plant Hydraulics for Civil Engineers, Atlanta, Georgia.
June 14-15, 2007	ASCE Seminar * Pumping Systems Design, San Antonio, Texas.
June 21-22, 2007	ASCE Seminar * Fundamentals of Earthquake Engineering, Austin, Texas.
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- In Memoriam -

Sidney L. Poleynard died December 28, 2006 in Atlantic Beach, Florida. A native of St. Martinville, Louisiana born November 27, 1916 he served his country in the U.S. Army Air Corps in World War II and in the U.S. Air Force in the Korean Conflict. Sidney is survived by his wife, Betty, and their daughter, two sons and six grandchildren. He earned his BS degree in civil engineering from Louisiana State University in 1947 and was employed that same year by the Louisiana Department of Highways in its Bridge Department. After a year with the Department, Sidney left to join a private company before volunteering for Korea in 1951. In 1952, he returned to the Bridge Department and was promoted to head the Bridge Department in 1954 where he invested much of his distinguished career with the Department. Sidney was a licensed professional engineer in Louisiana and he was appointed by the Governor to serve as a member of the Louisiana State Board of Registration for Professional Engineers and Land Surveyors — a 9-year term one of which he served as its chairman. Sidney also served his profession as an active member of the ASCE and the Louisiana Engineering Society. He served on the Board of Directors of the ASCE Baton Rouge Branch including a term as its President in 1971-1972. Sidney retired from the Department in 1978 after advancing to the position of Assistant Director of Highways in 1972 and transferring to Assistant Secretary of the Office of Highways of the Louisiana Department of Transportation and Development. Upon retirement from the Department, he joined Raymond International as a vice president with responsibilities in mar-



keting and providing engineering services worldwide and from which he and Betty retired in 1983 to Skidaway Island in Savannah, Georgia where they lived for 20 years before moving to Atlantic Beach. Sidney was involved in the design and construction of a major portion of the bridges on the Interstate highway system in Louisiana. Chief among them were the Mississippi River bridges at Baton Rouge (I-10), at Vicksburg (I-20) and at Luling (I-310), the Calcasieu River bridge at Lake Charles (I-10) and the Atchafalaya Basin Floodway elevated roadway (I-10). He was also involved in the design and construction of

the Atchafalaya River bridge at Simmesport (LA 1), the Red River bridge at Alexandria (US 167) and several other major bridges crossing the navigable waterways of Louisiana. Sidney developed new concepts in bridge design and he was significantly involved in the implementation and further development of the precast prestressed concrete elements that have been used extensively in Louisiana's highway bridges since 1960. Recognized as a foremost authority in pile driving, Sidney was also nationally recognized for his contributions in the field of bridge design and construction. He served as the Chairman of the Subcommittee on Bridges and Structures of the American Association of State Highway and Transportation Officials. For his outstanding service in — and contributions to — bridge engineering in Louisiana, Sidney was inducted into the Louisiana Highways and Transportation Hall of Honor in 1991. In his memoirs, "Memories of a Louisiana Cajun," written at the urging of his children, Sidney elegantly concluded:

As I sit here in my study reflecting on what I have written, I realize how rich my life has been. Rich in the friends of my childhood and those of later years. Rich in the experiences that I have had — in the challenges given and taken. Rich in having had the opportunity to work with many talented men and women throughout this nation. But above all, rich in what has given my life full meaning — Betty, my constant companion for 48 years and my three beloved children. So when the ends of my life ring touch and I must leave, I will know full well that I have been indeed a fortunate man. S.L.P. April 1992

ACEC/L Annual Meeting

The Annual Meeting of the American Council of Engineering Companies of Louisiana is scheduled for May 31 through June 3, 2007. It will be held in the Bluffs Resort located in St. Francisville, Louisiana. Part of the agenda is an 8-hour and 8 PDH seminar titled, "Business finance for building value in your business." Topics that will be discussed during this seminar are

- accounting principles
- financial metrics
- building value in the firm
- ownership transition and
- exit strategies.

This seminar will be of value to those who currently own a business and to those with the aspiration to own a business. It is open to both the members of the ACEC/L and nonmembers and the fee structure accommodates those who would wish to attend the seminar only. Either email cecl@bbipmail.com or call (225) 927-7704 to request more details about the ACEC/L Annual Meeting registration, travel and accommodations, or visit <http://www.lasce.org>.



Figure 7. The fireplace was detached from the building and was inclined to the west (sketch number 9).



Figure 8. The steel fire escape stair and the chimney located on the west side of the residence fell to the west (sketch number 10).

(Continued from Page 9)

straight upwards indicating that the wind forces acted upward from underneath the planking causing uplift. The sequence of the failure of the building framing could be envisioned by observing the location of a wooden screen door found on top of the roofing debris. This confirms the sequence of events indicating that the roof lost its integrity first when it was detached from the building frame by the wind uplift forces and blown away. Following the loss of the roof, other structural components from the first and second floors like the screen door were scattered over the debris field to the west and on the top of the demolished roof components.

The damage to the brick wall supporting the carport canopy columns also confirmed the direction and magnitude of the wind forces. The 3'-0" high wall collapsed at both ends where the carport canopy column supports were attached. This indicated that the carport canopy supports connecting to the wall were uplifted by wind forces causing its ends to fall in opposite directions as shown in Figure 9. The bricks from this wall were scattered nearby forming a trail to the west.

The stud wall around a water closet on the east side of the residence collapsed into the basement against basement perimeter wall on the west side of the basement giving another clear indication that wind forces causing this damage were from east.

Storm facts

The National Aeronautics and Space Administration recorded the maximum wind speeds as shown in Figure 10 when Hurricane Katrina made landfall on the Gulf Coast August 29, 2005. The recorded speed of the wind gusts in the Waveland area varied from 130 to 145 mph. This would explain the severe destruction to the roof and framing constructed of wood. The National Climatic Data Center reported that "...as the hurricane made its landfall on the Mississippi and Louisiana Gulf coasts, the wind speeds were approximately 125 mph..." This puts the wind gusts at higher than 145 mph.

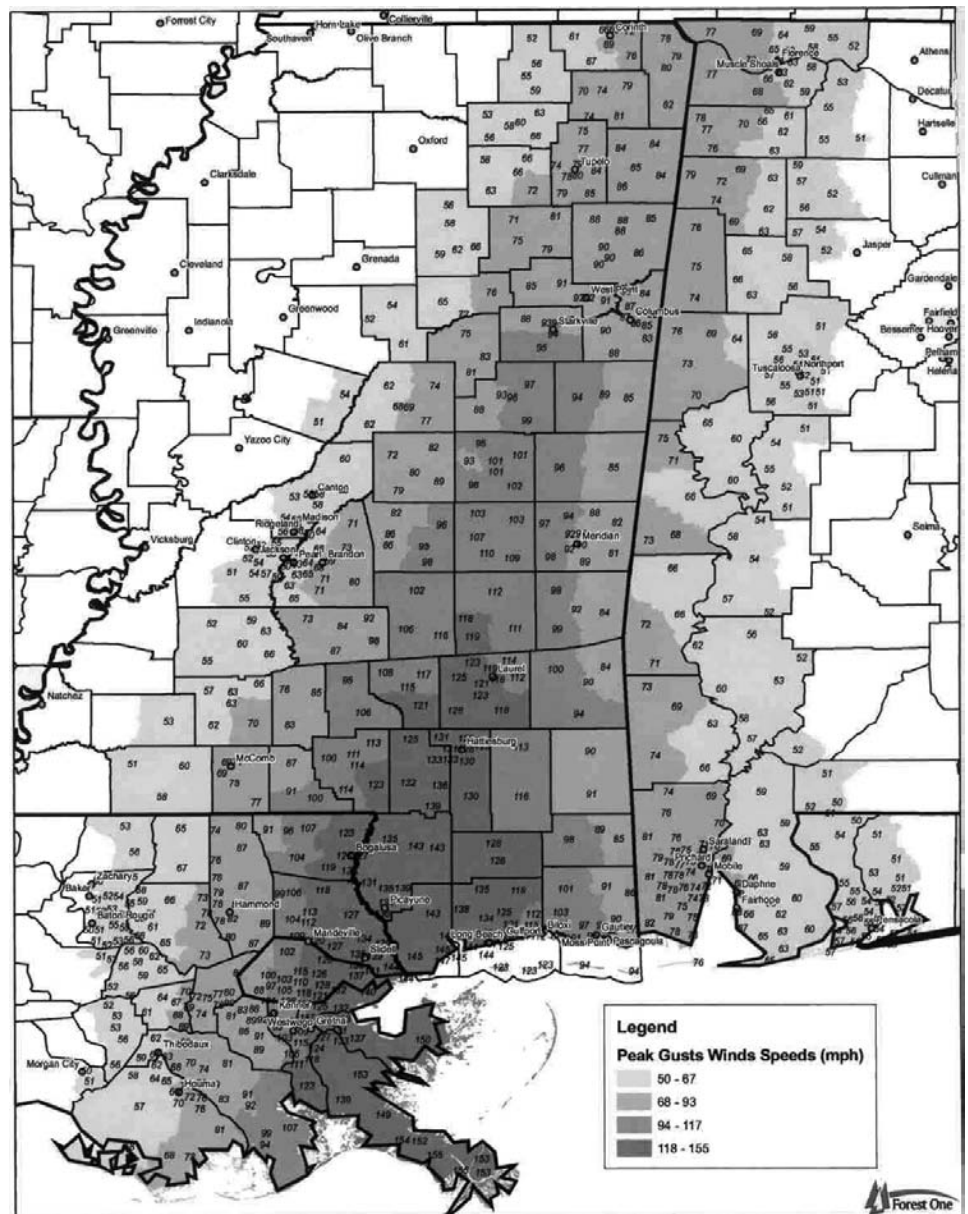


Figure 10. Hurricane Katrina wind speed map.



Figure 9. The carport canopy supports at each end of its low wall were lifted and fell away from the wall (sketch number 11).



Figure 12. The concrete deck slab on the south (front) side of the residence was cracked, separated into segments and displaced to the north (sketch number 13).

"Saffir-Simpson Hurricane Scale"

All Hurricanes are dangerous, but some are more so than others. The way storm surge, wind and other factors combine determines the hurricanes destructive power. To make comparisons easier and to make the predicted hazards of approaching hurricanes clearer to emergency managers, National Oceanic and Atmospheric Administration's hurricane forecasters use a disaster-potential scale which assigns storms to five categories. This can be used to give an estimate of the potential property damage and flooding expected along the coast with a hurricane.

The scale was formulated in 1969 by Herbert Saffir, a consulting engineer, and Dr. Bob Simpson, director of the National Hurricane Center. The World Meteorological Organization was preparing a report on structural damage to dwellings due to windstorms, and Dr. Simpson added information about storm surge heights that accompany hurricanes in each category.

Category	Winds	Effects
One	74-95 mph	No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Also, some coastal road flooding and minor pier damage
Two	96-110 mph	Some roofing material, door, and window damage to buildings. Considerable damage to vegetation, mobile homes, and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of center. Small craft in unprotected anchorages break moorings.
Three	111-130 mph	Some structural damage to small residences and utility buildings with a minor amount of curtainwall failures. Mobile homes are destroyed. Flooding near the coast destroys smaller structures with larger structures damaged by floating debris. Terrain continuously lower than 5 feet ASL may be flooded inland 8 miles or more.
Four	131-155 mph	More extensive curtainwall failures with some complete roof structure failure on small residences. Major erosion of beach. Major damage to lower floors of structures near the shore. Terrain continuously lower than 10 feet ASL may be flooded requiring massive evacuation of residential areas inland as far as 6 miles.
Five	greater than 155 mph	Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. Major damage to lower floors of all structures located less than 15 feet ASL and within 500 yards of the shoreline. Massive evacuation of residential areas on low ground within 5 to 10 miles of the shoreline may be required.

Examples

Category	Sustained Winds (MPH)	Description	Examples
1	74-95	Minimal	Florence (1988) LA Charley (1988) NC
2	96-110	Moderate	Kate 1985 FL Bob 1991 NY
3	111-130	Extensive	Alicia 1983 TX
4	131-155	Extreme	Andrew 1992 FL Hugo 1989 NC

Figure 11. Damage expected from different categories of hurricanes.

The damage potential for hurricane wind speeds between 131 and 155 mph is expected to be extensive as explained in the information provided in Figure 11. This chart prepared by the National Oceanic and Atmospheric Administration (NOAA) indicates the damage expected for different categories of storms/hurricanes and it states that for wind speeds between 131 to 155 mph

...extensive curtainwall failures with some complete roof structure failure on small residences can occur... (and) major damage to lower floors of structures near the shore...

can be expected.

This clearly describes the damage that was observed during the damage survey of the subject property.

From the evidence depicted in Figures 2 through 11 and the above observations, it was obvious that damage to the property occurred in the east-to-west direction. This provided the unquestionable conclusion that this destruction was caused by the high wind forces consistent with the velocities and the east-to-west direction of the winds reported in the "Summary of Hurricane Katrina" of the NOAA Satellite and Information Services.

A partial list of the structural analyses performed following the wind damage survey in an attempt to confirm the evidence follows:

- Wind forces on exterior skin of the structure based on Standard Building Code.
- Uplift forces at the base of studs, building, as well as carport.
- Shear forces at the top concrete basement perimeter wall.
- Anchor bolt shear.
- Brick mortar stresses.
- Shear stresses in concrete slab due to storm surge.
- Brick mortar stresses in pilasters due to storm surge.
- Stability of the fireplace and chimney.
- Shear stresses in wood members due to uplift.

Surge damage survey

(Continued on Page 30)

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the north-to-south orientation also. Some of the walls that face in the north/south direction fell differently. The concrete deck slab on the south (front) side of the residence was completely detached from its supporting brick pilasters as shown in Figures 12 and 13 and it was moved to the north 12" to 14". This was caused by the storm surge that followed the high wind forces about 2 to 2.5 hours later.

At the front steps, the concrete deck slab had been moved toward the north shearing off contact between brick and the concrete deck. This was the result of the storm surge forces pushing the deck slab horizontally to the north and away from the Gulf. The magnitude of horizontal force from the storm surge was so large that the concrete deck slab had cracked in 4 locations and displaced into separate sections as shown in Figure 12. The brick wing wall on the side of the front steps was cracked. The concrete deck and its integral edge beam was also completely separated from its supporting brick pilasters and pushed northward causing the concrete basement perimeter wall to which it is attached to buckle.

The continuous concrete edge beam supporting the concrete deck slab and spanning between the brick pilasters was cracked in several locations as shown in Figure 14. The brick pilaster at the southwest corner of the concrete deck was broken and separated from the concrete deck slab that was pushed into the broken part of concrete

basement perimeter wall almost 5 feet in north-west direction. This failure was due to the large horizontal forces from the storm surge.

The south-to-north direction of the storm surge was clearly visible from the direction in which the shrubbery and small plants were leaning as shown in Figure 15. They were leaning over — some almost touching the ground — to the north, away from the Gulf and in the direction of the storm surge.

Conclusion

Based on the available data and the observations from the damage survey, it was concluded that

- the winds caused severe damage to the roof and the framing of the residence completely destroying and displacing its superstructure.
- The damage to the residence caused by wind was in the east-to-west direction.
- The storm surge followed the high winds and caused damage to what remained — the concrete deck slab on the south (front) side of the residence.
- The damage to the residence caused by storm surge was in the north-to-south direction.

The cause of the damage to the property in this case whether it was due to wind or to storm surge forces can be determined by the evidence available on the site. The evidence is carefully

and completely documented by a hand sketch of the undisturbed damage and the debris fields on the site and the photographs of the site taken immediately after the storm and during the damage survey. To effectively assess the damage, it is also important that a structural engineer performs or supervises the damage survey and takes into account not only the structural damage to the facilities but also gives proper consideration to the surroundings, including the character of the debris fields and the response of the vegetation and trees to the wind and/or storm surge forces.



Figure 13. The concrete deck slab at the south-east corner of the residence was detached from its support and displaced 10" to 14" to the north (sketch number 12).



Figure 14. The continuous concrete edge beam supporting the concrete deck on the south side of the residence and spanning between the brick pilasters was cracked and damaged (sketch number 14).



Figure 15. Bushes observed leaning north from the effects of storm surge (sketch number 15).

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