

# LOUISIANA CIVIL ENGINEER

Journal of the Louisiana Section

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## THE I-10 TWIN SPAN BRIDGES OVER LAKE PONTCHARTRAIN REPLACEMENT PROJECT

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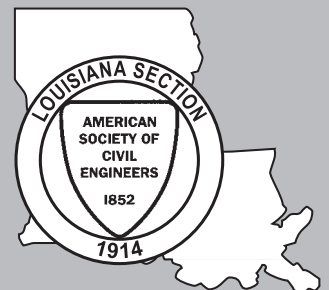
The I-10 Twin Span Bridges Over Lake Pontchartrain  
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The Louisiana Section is located in ASCE Region 5 that consists of the Louisiana, Mississippi, Alabama, Georgia and Florida Sections.



# President's Message

By Patrick J. Landry, PE

On behalf of the Louisiana Section, I hope everyone had a happy holiday season and will have a healthy and prosperous new year in 2011.

Christmas came early for the Louisiana Section, when on December 3rd, notification came from ASCE National that we were selected as the winners of the 2010 Outstanding Newsletter Award for large Sections and Branches. There are over 30 large Sections and Branches in ASCE and the Louisiana Section has now won the prestigious award three years in a row and seven of the last fifteen years. Many thanks are extended to all of the contributors who helped make the award possible, and in particular, thank you to Ms. Nedra Davis, our Editor, who works tirelessly to ensure that we produce a quality publication for our members. Section President-Elect Ronald Schumann accepted the award at the Multi-Region Leadership Conference in Portland, Maine in January.

The November issue of Money Magazine included a feature article entitled The 50 Best Jobs in America and not surprisingly, "civil engineer" was rated the sixth best job in America. A survey of more than 40,000 workers ranked jobs based on job satisfaction, stress level, flexibility and short and long term employment opportunities. The article noted that large infrastructure projects in China and India are creating a shortage of qualified civil engineers which is providing opportunities for U.S. talent and with America's own crumbling infrastructure in desperate need of an overhaul, the demand for qualified civil engineers will only rise in the future. One of the satisfying elements of our profession listed in the article, and one that I hear often, is that we have the opportunity to leave a tangible legacy of our work for future generations.

Regarding our country's crumbling infrastructure, ASCE National has taken an active role in working with the members of Congress to support the 15 cent federal fuel tax increase that was part of President Obama's deficit commission report. The proposal failed in December, however most of the Congressional panel members supported the gas tax increase. ASCE National hopes that the new Congress recently sworn in, will recognize that investments in transportation infrastructure is a base function of the federal government and ASCE staffers plan to meet with all 110 new members of Congress to educate them on the Society's priority issues. While fiscal restraint is paramount in reducing our soaring national debt, an investment in transportation infrastructure improvements not only benefit our nation short term by providing jobs but also provides long term benefits by providing quality roads, bridges and transit systems that will support a healthy economy for many years. ASCE strongly supports the premise that all taxes intended for the Highway Trust Fund should remain in the fund and be used for their intended and authorized purpose.

ASCE National hosts the Legislative Fly-In on March 29-31, 2011 which will provide an opportunity for Section leaders from every

state to meet with their respective members of Congress and discuss important infrastructure bills that affect all civil engineers. I've had the opportunity to attend the program in 2009 and 2010 and found the experience very worthwhile. This year, the Louisiana Section will be represented by President-Elect Ronald Schumann and Vice-President Kurt Nixon.



Patrick J. Landry, PE

On the state level, the Louisiana Section has been very busy preparing a Louisiana Infrastructure Report Card that will grade nine infrastructure categories: roads, bridges, dams, ports, aviation, levees, drinking water, wastewater, and solid/hazardous waste. All of the topic committee chairpersons have submitted their work plans to the executive board. The work plans outline the approach and schedule for obtaining and grading infrastructure data. Topic committee meetings are being held to gather and grade the data. The executive board will be working on establishing the most effective means to deliver the report card results to the public. We hope to have all of the data compiled by the committees by June 1st and to have a completed report card ready for presentation by September 1st. With an anticipated special session of the Louisiana Legislature this fall, we hope to be able to present our work to local and state representatives to help them with critical funding decisions. Last February, I had the opportunity to visit with the Chairperson of the Tennessee Report Card effort at a leadership conference in Atlanta. She told me that their volunteer effort consisted of her and eight committee chairpersons, a total of nine persons. To date, the Louisiana Section has about 50 volunteers working on our report card effort. Thank you to all who are volunteering for this massive project and in particular, our Executive Director, Dr. Kam Movassaghi, PE and Deputy Director, Joey Coco, PE.

ASCE has deemed February "Mentoring Month" with the highlight being "Engineers Week", February 20-26. All of us, at one time or another, has been mentored by someone who has helped shape our careers. It is our responsibility now to do the same for a high school or college student or someone just starting their civil engineering careers.

Finally, the Acadiana Branch is hosting the Louisiana Section Spring Conference on April 14-15 in Lafayette at the Cajundome Convention Center. Registration forms will be sent out in the next few weeks. I look forward to seeing you there.

# The I-10 Twin Span Bridges Over Lake Pontchartrain Replacement Project

By Artur W. D'Andrea, PE

## INTRODUCTION

In August 2005 the I-10 Twin Span Bridge across Lake Pontchartrain sustained serious damage from the storm surge associated with Hurricane Katrina. The Louisiana Department of Transportation and Development (LADOTD), and its private sector engineering and construction consultants, worked around-the-clock to repair the bridges and restore the vital Interstate Ten (I-10) transportation link. There was a need for both temporary repairs and a permanent replacement. The size and nature of the project as well as the project's physical site demanded a very efficient solution.

The I-10 Twin Spans cross Lake Pontchartrain between Slidell, Louisiana and New Orleans, Louisiana (Figure 1). This crossing is approximately 5.5 miles in length making this project a total of 11 miles of bridges. This corridor is important both nationally and locally. It connects New Orleans, New Orleans's ports, and the petro-chemical industry along the Mississippi River. The main channel provides 73 feet of vertical clearance and 200 feet

of horizontal clearance serving both commercial and leisure traffic. These bridges provide three lanes in each direction and serve as one of the main evacuation routes for New Orleans.

Two construction contracts were awarded, using the conventional design-bid-build method. The first contract was awarded to Boh Brothers LLC. This contract covers parts one and two (See Figure 2). The second contract was awarded to Traylor/ Massman Kiewit. They are charged with building the navigational channel portions of the bridges. In consideration of its location, size, and functional requirements these bridges were designed to take advantage of pre-casting as the primary method of construction.



Artur W. D'Andrea, PE



Figure 1. Location of the I-10 Twin Span Bridges

The precast bridge elements include the use of 36" square pre-cast pre-stressed concrete piles, 4'x5.5'x59.25' pre-cast caps and 135' long 78" Florida Bulb-Tee girders. The stay-in-place pre-cast forms were used to form the footings and the steel stay-in-place forms were used to form the concrete deck. Temporary ACROW bridge panels replaced one mile of damaged spans in order to maintain four lanes of traffic at all times. The majority of the structures are being built with the Florida Bulb-Tee girder spans supported by pile bents. The higher elevation section near the main channel crossing contains column bent structures on two main pile footings. The main navigational channel utilizes steel plate girder spans. The goals for these replacement structures include better storm protection, safe accommodation of six traffic lanes, enhanced barge collision resistance, and utilization of well-known materials and techniques to provide for a low maintenance and long service life. LADOTD and public's wishes for expedient construction had to be tempered with the realities of the emergency recovery budget. The 803 million project budget and schedule had to include traffic maintenance, building within the State's right-of-ways, and the limitations of undertaking a construction project of this magnitude in a post Katrina environment. In addition to the project management of the new bridges, a plan had to be developed to remove the old structures. The old bridges were retired in April 2010. Two dedicated contracts have been used for the demolition of the old bridges. Due to the volume and nature of the material created, an extensive effort is being made by government agencies and the public to provide

beneficial use of the demolished material. Currently, the project is over 95% complete and the bridges should be delivered ahead of schedule.

The new I-10 Twin Span Bridges are being funded entirely by the Federal Highway Administration (FHWA) and were designed by LADOTD. This article discusses LADOTD's expectations and design goals for the new bridges; the extensive use of precast elements - superstructure and substructures are described with the aid of nine, mostly onsite illustrations; challenges encountered with the ongoing mega-project; and a challenge issued to the bridge building industry itself in a call for sustainability, quality, and foresight.

The successful completion of this project has hinged on teamwork among the contractors, consultants, FHWA, and LADOTD. **LADOTD** is the engineer of record for the new bridges built civil, structural and mechanical. The address is 1201 Capitol Access Road, Baton Rouge, LA. **FHWA Division Office** dedicated a mega project engineer full time working in all aspects of the project. Financial and project plan have extensive requirements for projects over 500 million. **FIGG Engineering Group** was responsible for the electrical plans and assisted DOTD with the Project Management Plan as well as special provisions for HPC. **Wiss, Janney, Elstner Associates** worked with LADOTD and FIGG on the concrete performance specifications and with Volkert and LADOTD for the concrete permeability testing of all bridges. **Fugro West** performed the geotechnical investigation for all phases. Construction of this project is scheduled to be completed by 2011.

## DESIGN GOALS

The basic design needs to be met in replacing the Twin Spans are:

- 1) Meet Interstate Ten (I-10) traffic demands
- 2) Design a structure that can both resist storm surge and barge impact
- 3) Provide a one hundred year design life
- 4) Provide for quick service
- 5) Minimize environmental impact during construction and operation
- 6) The structure design should not interfere with existing traffic patterns
- 7) The project should not require any new right-of-way acquisition

The twin 5.5-mile structures can be divided into three parts. Part 1 (Figure 2) builds the horizontal and vertical transition and ramps with flaring width. The inability of the site to support fill heights in excess of

ten feet forces the design to resist storm surge forces up to the deck level for a length of about half-a-mile.

The second portion, Part 2 (Figure 2), of the structure is composed of longer constant width and zero grade spans set above wave force impacts to the superstructure. These spans were designed with the intent to minimize the number of pile bents used and minimize impacts to boat traffic on the lake.

The third part of the structures, Part 3 (Figure 3), is a twin one-mile piece over the navigational channel. This portion of the twin

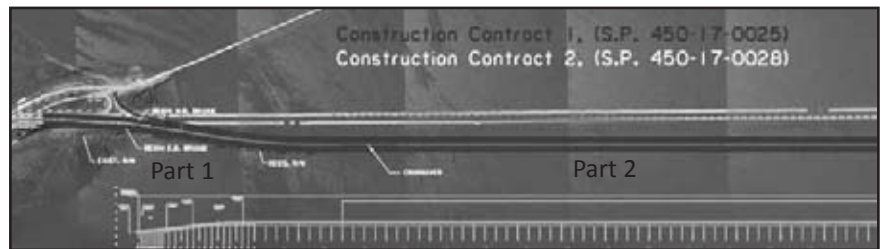


Figure 2. Project layout for contracts 1 & 2 showing parts 1 & 2 of the project

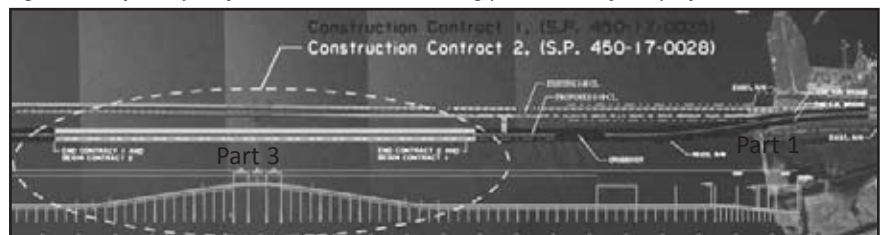


Figure 3. Project layout for contracts 1 & 2 showing parts 1 & 3 of the project

bridges was designed to resist large barge impacts and to provide higher navigational clearance, while at the same time resisting wave loads to substructure elements. This section has a significant number of above water footings.



Figure 4. Precast prestressed concrete piles 36-inch



## SUBSTRUCTURE

### Piles

Louisiana coastal regions' geological make up favors large displacement precast prestressed concrete piles (Figure 4). They are capable of developing large axial capacity with side friction, pile setup and sometimes point bearing. This project utilizes the 36-inch hollow square pile containing twenty-eight 0.6-inch diameter strands. This pile shape and strand configuration is capable of developing large moment capacity. It also supports fabrication and transport in long length. The hollow core can be reinforced where uplift or impact loads need to be resisted. The pile lengths vary between 100 and 180 feet. As of November 2010, all piles have been driven.

### *Pile to cap and piles to footing moment connection*

Depending on the design needs and application, the 36-inch precast pile hollow core was reinforced by pouring a six-foot cast in place moment plug (Figure 5). In other situations, the solid plug was extended to thirty feet in length. Piles are being relied upon to carry moments and in some cases significant uplift loads.



Figure 5. Moment connection for footing piles

### **PRECAST CAPS - 20,000 cubic yards**

For the major portion of the project, the winning bidder elected to use the precast cap alternate (Figure 6). The contractor further worked with the precast plant, Gulf Coast Pre-Stress Incorporated, and LADOTD in modifying the proposed precast cap offered in the original design. The precast cap is being used for the majority of the spans where span length, width and pile configurations are constant. The precast alternate is accommodating both vertical and batter pile to cap moment connection and restraining walls. The precast element weighs about 80 tons. The precast caps contain only mild steel.



Figure 6. Precast concrete caps

### **Permanent precast footing form**

There are four types of footings, typical dimension 44'x44'x7' with 24 piles. The footings are set above the low water elevation to facilitate construction. The plans also allow the use of stay-in-place precast concrete segments used as formwork to support all the footing construction and accommodate all of the pile arrangements. The footing forms (Figure 7) were fabricated by the contractor and designed by Genesis.



Figure 7. Permanent precast footing form

## SUPERSTRUCTURE

### **Girders-type III, 30,000 linear feet bt78, 315,000 linear feet**

The contracts for the bridges specify Type III precast, prestressed concrete girders in the vertical transition portion of the bridges. Type III (Figure 8) girders are very economical and versatile in the 70-foot range in conditions where grade flares and ramps exist. Due to the location below design wave elevation, the girders are anchored to resist uplift. On parts two and three of the bridge,





Figure 8. Type III end diaphragm



Figure 9. 135' BT78 girders

Florida BT 78 girders (Figure 9) are used in the majority of situations. The shape is very efficient in the 130-foot span range. This shape permits the use of wide girder spacing, and significant pre-stressing force. Site conditions facilitate the use of large barges to transport the BT girders. This fact eliminates the sometimes-problematic land transport issues associated with long precast members.

All girders are required to age a minimum of 90 days prior to making the span continuous.

#### **CONCRETE DECKS, 130,000 cubic yards**

Cast-in-place is LADOT's choice (Figure 10). The deck forming is made with the metal stay-in-place forms. Spans are made continuous. Expansion joint use is minimized. In order to control the shrinkage, closure pours have a waiting period.

#### **Concrete Mix**

Increasing concrete cover and controlling the permeability of the



Figure 10. Typical girder span deck

mix enhances the design life of the concrete for this project. The widespread use of high performance concrete is a key element used to insure a 100-year design life for a bridge situated in brackish water. Design strengths vary from 4500 psi to 8500 PSI and permeability is set at 1000 coulombs or less. Other mix improvements include the substitution of Portland cement with class F fly ash or granulated blast furnace slag (GGBFS) requiring a minimum of five percent silica fume. Detailed curing criteria such as match curing of precast elements and temperature range monitoring of mass concrete are also used throughout the projects.

#### **DEMOLITION OF THE OLD BRIDGES**

The I-10 Twin Span Demolition project consists of removing two 5.4 mile long bridges using an environmentally sensitive process.

#### **REQUIREMENTS, SCOPE, PHILOSOPHY AND INTENT**

The main requirement of the project was to remove the structures damaged by Hurricane Katrina as soon as practical. The project contained two independent structures. It was LADOTD's intent to offer this material to all eligible organizations in order to utilize it for beneficial uses. The westbound structure was in the worst shape including one mile of ACROW panels. The maintenance cost of approximately \$100,000.00 per month, load restrictions, and safety necessitated that the westbound structure be removed first; therefore, the removal of these two bridges was broken into three (3) phases.

Phase I was the removal of the ACROW panels. The panels removed are currently being stored and will be used during transportation emergencies.

Phase II removed sixty girder spans which were impeding the completion of the new twin span bridges. The span material from Phase II has been used to construct one artificial fishing reef, enhancing the environment and increasing the diversity of the habitat available to marine life. The Fishing Reef Project was designed and partially funded by the Louisiana Department of Wildlife and Fisheries (LADWF).

Phase III consists of removing an additional 600+ spans and 700+ bents. Phase III will generate 244,189 tons of concrete. Phase III material will be split among four users, Coastal Protection Restoration Authority (CPRA), LADWF, St. Tammany Parish, and a contractor. CPRA will utilize the majority of this material in order to create shoreline protection area along Lake Borgne. CPRA will also place 63 spans along Bayou Sauvage to decrease the rate of land erosion in this area. The LADWF will construct a second fishing reef with approximately 40 spans. St. Tammany Parish will create a fishing pier with 71 spans. Lastly, the chosen contractor will take possession of the remaining concrete bridge material.

## CONCLUSIONS

In order to judge success or compare infrastructure projects, the circumstances both in time and location need to be well understood. The measuring criteria often used are schedule and budget. The I-10 Twin Span Projects have succeeded in both accounts. In general, the industry should work toward sustainable specifications and norms aimed at fabricating and building new structures that will serve the public for many years. LADOTD or the Owners must plan for present and future conditions. For example, new bridges along major routes should be designed to accommodate rail as well as power. We must avoid a myopic approach and appreciate the permanency of these vital transportation facilities.

**Artur Wagner D'Andrea** earned his degree from Louisiana State University, BS Civil Engineering, in 1978. Mr. D'Andrea became a PE in 1983. Currently he is the Assistant Bridge Engineer, 31 years, with the LADOTD. He is the design project manager for the replacement of the I-10 Twin Span. He represents the state in the AASHTO Subcommittee T-18 that is responsible for establishing the guidelines for Bridge Management, Evaluation, and Rehabilitation. Also, Mr. A'Dndrea is currently serving in the panels for NCHRP Project 20-07/Task 294 NCHRP Project 12-78, NCHRP Project 12-82 and NCHRP Domestic Scan 07-05.

**Selected Publications and Awards** *Pontchartrain Bridge Collapse: Challenges for Replacement and Lessons Learned*. Presented at 85th TRB. Co-author, (2008) TRB Committee on Foundations of Bridges and Other Structures (AFS30) *Implementation Status Of Geotechnical Load And Resistance Factor Design In State Departments Of Transportation*. Co-author, *Roads and Bridges2010; Best Practices in Bridge Management Decision-Making* 2011. Transportation Excellence Award - Context Sensitive Solution/Public Involvement I-10 Twin Spans Existing Bridge Demolition.

## ACKNOWLEDGEMENTS

Disasters such as hurricanes bring out the best in people. Many people from the private sector and people from agencies and companies and organizations worldwide lent helping hands. Louisiana owes many thanks to everyone. On the I-10 Twin Spans Project, team leaders are listed here following their responsibility.

*Design-Environmental and Project Management--LADOTD, FHWA and FIGG*

*Survey, Right-Of-Way Acquisition--FHWA and LADOTD*

*Design-Structural, Road, Electrical and Mechanical--LADOTD and FIGG*

*Material Specifications and Testing--LADOTD, WJE, FIGG*

*CEI--Volkert and LADOTD*

*Geotechnical Engineering--LADOTD and Fugro*

*Concrete Precasters--GCP, Boykon, PSI, TKM*

*Steel Fabricators--Carolina Steel Corporation, Caddo, Fab and Manufab*

*General Contractors--Traylor Kiewit Massman, JV-- Boh Brothers Construction Company, LLC*

## Demolition Project

*Partners: FHWA, Coastal Protection & Restoration Authority of Louisiana, Louisiana Department of Wildlife & Fisheries (Coastal Conservation Association), United States. Fish and Wildlife Service, United States Coast Guard, US Army Corps Of Engineers,*

*CEI-- Volkert and LADOTD*

*General Contractors -- NASDI LLC*



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# The ASCE 2011 Workshop for Section and Branch Leaders

The ASCE 2011 Workshop for Section and Branch Leaders was held in Portland, Maine over a two day period, January 14th and 15th. This is the annual Leadership Conference for Regions 1, 2, 4 and 5 covering the Eastern United States. As President-Elect of the Louisiana Section I attended the workshop. The Louisiana Section was well represented at the conference as Joey Coco, President-Elect of the Baton Rouge Branch and Malay Ghose Hajra, President-Elect of the New Orleans Branch were also in attendance. Norma Jean Mattei, Society Director and Chair of the Region 5 Board of Governors attended and also participated in presentations made during the conference. Students from the LSU Student Chapter of ASCE were also present attending the Workshop for Student Chapter Leaders that was held in conjunction with the Workshop for Section and Branch Leaders.

The workshop covered a number of topics over the two day program. An overview of the national ASCE organization was presented by Geographic Services from ASCE Headquarters. This overview provided the attendees with an understanding of the organization and the services that were available to the Sections and Branches from the national organization. It also provided an opportunity to meet the individuals responsible for providing these services. Making these contacts and understanding the inner workings of ASCE Headquarters staff and their areas of responsibility provided good insight to how ASCE operates as a national organization and will prove invaluable in bringing the national support to strengthen the Louisiana Section in its goals and responsibility to its members.

A presentation was made on the ASCE Strategic Initiatives identified as, "Infrastructure, Sustainability and Competency". The focus of this session was on infrastructure and spoke of government relation and building advocacy. One of the ways the Louisiana Section is moving forward on this issue is through the development of the Louisiana Report Card. So this particular presentation was very relevant and timely considering the effort that the Section has initiated. Regional breakout sessions were then held allowing leaders from the Sections and Branches to meet with other leaders within our

respective region and our regional leadership. The Region 5 session was lead by Norma Jean Mattei, Chair of Region 5. During this session we focused on identifying issues of regional significance that we as a region could address; such as coastal protection and hurricane protection, and water resources issues impacting Florida and Georgia. The idea of the need for regional meetings to facilitate and coordinate the activities of the Sections and Branches within the region on these regional issues was also discussed. We were each asked to bring this discussion of regional meetings and what form these meetings should take back to our respective Sections to try to develop a consensus on whether or how the region should move forward on this issue.

After the regional meetings, a number of breakout workshop sessions were held. These sessions were held in smaller group settings bringing together Section and Branch Leaders with Regional Leaders to discuss and provide guidance on a number of topics. I attended "Connecting with People – Networking Tools" and "Creating Affiliations with the ASCE Institutes". The first session focused on communicating and creating effective networking skills. The second presented the reasons behind ASCE's development of the institutes and the purpose behind the institutes. It also covered how the Sections and Branches could work with the institutes to strengthen ASCE locally and create communities of specialty groups under the ASCE umbrella.



*Norma Jean Mattei and Ronald Schumann at Portland lighthouse*



*Ronald Schumann accepts national Outstanding Newsletter Award from national President Elect Andrew Herrmann*



*ASCE historical plaque on Portland lighthouse*



Awards presentations were made in which the Louisiana Section once again brought home the national Outstanding Newsletter Award. This award recognized our journal the "Louisiana Civil Engineer" as the best newsletter among large Sections and Branches. I had the privilege of accepting this award on behalf of the Louisiana Section from National President Elect, Andrew W. Herrmann, PE, SECB, FASCE.

The remainder of the conference focused on membership, volunteerism and the strategic initiatives of Competency and Sustainability. ASCE is continuing to advance the issue of competency and preparing the engineers of the future through its "raise the bar" initiative and "CE Body of Knowledge" efforts.

Sustainability has recently been added to ASCE's strategic initiatives in an effort to fill a vacuum that ASCE realized existed related to sustainable design in infrastructure projects. While the "LEED" certification process has addressed the issue of sustainability and established ratings for building type projects, ASCE recognized the need to bring this same focus on sustainable design to infrastructure projects. ASCE is in the process of putting in place a similar certification for infrastructure projects and will be rolling it out in the near future.

## Section Wins 2010 National Outstanding Newsletter Award

By Ronald Schumann, PE



*Nedra Davis, Editor and Patrick Landry, 2010 Publication Chairman accept the National Outstanding Newsletter Award*

The Louisiana Section was notified in December that we were selected for the 2010 National Outstanding Newsletter Award for Large Sections and Branches. This is the third year in a row and fourth time in the last five years that we have been recognized for this prestigious award, winning also in 2006, 2008, and 2009. I accepted this year's award at a presentation in Portland, Maine during the workshop for Section and Branch Leaders.

I would like to recognize the Editor, Nedra Davis, for the incredible efforts she

has made in maintaining the quality of our journal - keeping it the best in the nation. Also many thanks are in order for the special contributions that were made by Patrick Landry, as Publications Committee Chair; furthermore, I would also like to thank Christopher Knotts for continuing his efforts in keeping the journal #1.

I would also like to thank the people who contributed to the Section winning the award: the Section Board; the publication committee; technical authors; the Branch and Student Chapter Presidents; and Deborah Keller.

While most of the conference was spent on serious issues facing our profession and strategies for working with government, the public and media to bring the message of challenges we face as a nation to light, there was still time to soak in some of the local flavor that Portland, Maine had to offer. We did take the time to sample the local cuisine including Maine lobster and also spent a couple of hours touring some of the nearby lighthouses. It was somewhat amusing that the first lighthouse we happened upon had an ASCE marker on it. It turned out to be a "National Historic Civil Engineering Landmark". The Portland Head Light was the first light house completed and put into service by the Federal government under the Lighthouse act of 1789. It was completed in 1791. This brought to light, so to speak, the importance of civil engineering in protecting the safety, health and welfare of the public and the service we render everyday as civil engineers.

The conference was beneficial in numerous ways and I look forward to bring the lessons learned to the Louisiana Section in the areas of infrastructure awareness and education, membership recruitment and greater visibility of ASCE and the Civil Engineering profession in the eyes of the public.



*Ronald Schumann, Norma Jean Mattei, and Joey Coco at Portland lighthouse*

# Hurricane and Storm Damage Risk Reduction System Design Concerns

By Robert Turner, PE

The US Army Corps of Engineers (USACE) has been working on the Design and Construction of the new Hurricane and Storm Damage Risk Reduction System (HSDRRS) in Southeast Louisiana for the past 5 years. Much of the construction work will be completed this calendar year. The system is complex and made up of various components, including surge barriers, navigation gates, flood gates, concrete pile supported (T-Wall) floodwalls, I-Wall floodwalls, foreshore protection, earthen embankments, water control structures, drainage pump stations, etc. Several of these components are the largest in the world. The exterior perimeter of the system exceeds 130 miles. All things considered, the amount of work that has been accomplished in 5 short years is truly amazing, and much credit should be given to the dedicated hard working individuals who have been engaged in this work.

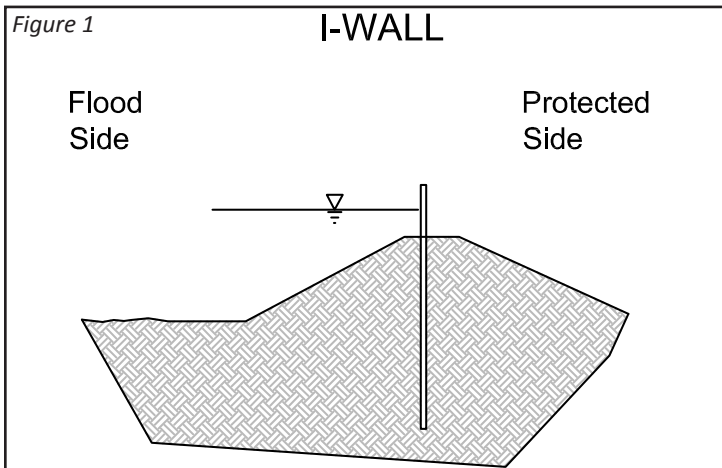
There is no doubt that many lessons have been learned as the work has progressed. Much of the knowledge gained through the HSDRRS planning, design, and construction will probably be applied to future Flood Control Projects throughout the United States.

It is also important, I think, to take a look back to consider those things that may need additional research and development by our profession to better understand system response to load and provide more standard methods for analysis and design. This article will briefly discuss the following items that I think fall into this category:

- I-Wall Analysis and Design
- Design of batter piles in highly settleable soils
- Flood Side armoring at T-Wall base
- Steel Corrosion Protection design requirements

## I-WALL ANALYSIS AND DESIGN

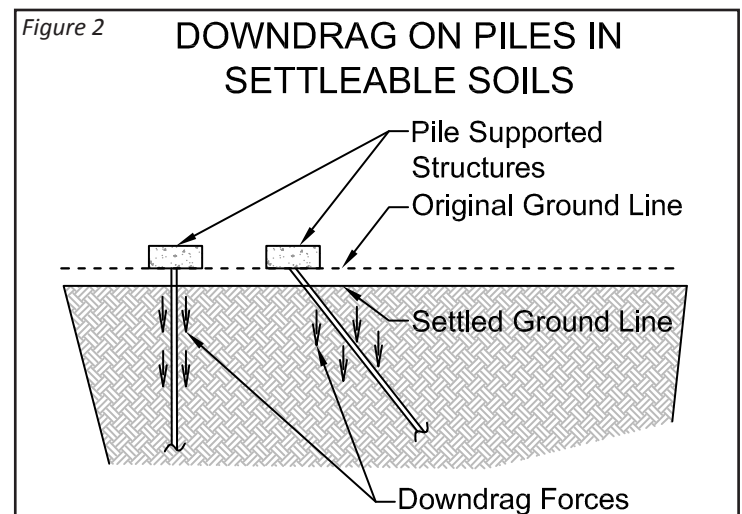
After Katrina, a considerable amount of work was done (ref IPET) to determine the cause of the failure of I wall type floodwalls along the outfall canals in New Orleans. (Figure 1) There now seems to be a fairly good understanding of the failure modes associated I-Walls. But it seems to me that additional work is needed to perfect our analysis and design techniques for such facilities. Current methods



being used limit "stick-up" above ground, specify minimum embedment lengths and use conservative assumptions for geotechnical and structural analysis. The use of these techniques across the country may lead one to believe that existing I-walls that have performed satisfactorily in the past are now inadequate. This could result in numerous National Flood Insurance Program (NFIP) system de-accreditations, perceived higher levels of flood risk, and/or expenditures of significant federal and local dollars for constructing "fixes". It may be better use of our limited monetary resources to first take a closer look at I-Wall analysis and develop better techniques based on thorough numerical and physical modeling.

## BATTER PILES IN HIGHLY SETTLEABLE SOILS

It is a well known fact that vertical piles driven in settleable soils will experience downdrag forces. As the soil settles, axial load is transmitted to the piles through skin friction. When the piles are not driven vertically (ie driven on a batter), however, both axial load and bending moments can be introduced, and the pile must be designed accordingly. (Figure 2) More work needs to be done to standardize a procedure for design of batter piles used in such conditions. Additionally, consideration must be given to the following scenario:



- As the soil settles over time, additional fill may have to be placed to restore the underlying embankment to design grade. This additional fill adds more weight and consequently will cause additional settlement. Will such actions add additional axial and bending stresses to the piles?



Robert Turner, PE

### FLOODSIDE ARMORING AT T-WALL BASE

The HSDRRS includes miles of pile supported concrete T-Wall floodwalls. Most of these structures are designed such that the base slab is embedded below the ground level or within an embankment. There are some areas where T-Walls are being constructed with the base slabs fully exposed above the underlying embankment. These same areas are subject to large waves. (Figure 3) Work has been done by the USACE to determine armor requirements at transitional areas and for wave overtopping of embankments. Erosion and scour potential on the floodside of "perched" T-Wall base slabs has not yet been thoroughly investigated. Methods should be established to determine the amount and type of armor required to prevent scour and erosion under such conditions.

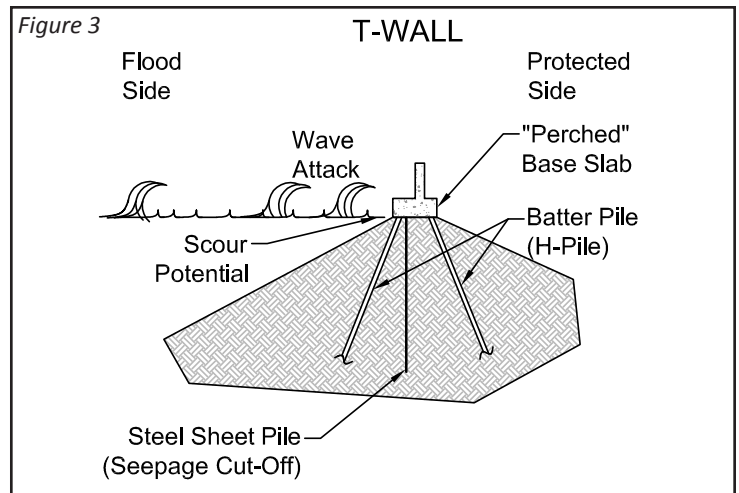
### STEEL CORROSION DESIGN

Various methods have been used successfully in the past to address corrosion in steel members. A considerable amount of work has already been done to determine design parameters and define the adequacy of corrosion resistant steels and externally applied coatings. There seems to be much less information available regarding the practice of using increased steel thickness to provide a "sacrificial" layer of steel to address corrosion. Additional research should be done to determine the conditions in which sacrificial steel can be effectively used as an adequate measure to protect against corrosion, and standardized methods should be developed to specify acceptable procedures for quantifying the additional amount of steel thickness needed to provide the desired level of corrosion protection.

**Robert A. Turner, Jr.** is a Registered Professional Civil Engineer with 30 years of experience in the field of engineering. He has served as the Regional Director of the Southeast Louisiana Flood Protection Authority - East since October 2007, and has an extensive background in flood protection and public works, including serving as the Executive Director of the Lake Borgne Basin Levee District from 2001 until his current appointment as SLFPA-E Regional Director.

Mr. Turner served as the Director of Public Works for St. Bernard Parish from 1993 to 2001, as well as an Associate Engineer at Burk-Kleinpeter, Inc. and Design Engineering Manager at Power Enterprises, Inc. In 2008, he was selected as the Louisiana State Representative for the National Committee on Levee Safety, a committee of federal, state, local and private sector members established to support levee safety programs through coordination and information exchange among federal and non-federal entities concerning the implementation of levee safety.

He is a graduate of Louisiana Tech University and a member of the American Society of Civil Engineers (ASCE) and the American Concrete Institute.



Much has already been learned about complex design issues associated with levee systems as work has progressed on the HSDRRS. And it is imperative that this wealth of knowledge is properly shared throughout our profession. But as the construction nears completion, we must realize that the learning process is only just beginning. For many years to come, the HSDRRS will remain fertile ground for the continued collection of performance data that can be used in research and development endeavors to advance our scientific understanding of levee system components and improve the methods we use to analyze and design them.

## Top Ten Tips for Launching Your Career

*Editorial By Deborah Ducote Keller, PE*

As spring approaches, new graduates will hopefully find a better economic climate than a year ago, but certainly not the bidding war for engineering talent of 2006-2008. This year's crop of new graduates will not have the benefit of a strong national economy nor the massive hurricane recovery initiatives that especially favored civil engineering graduates.

Employers are expecting to receive numerous applications for their limited job openings and a deluge of resumes from those hoping to entice employers to create new positions. This year's graduates need to understand that 2011 represents "the new normal," since it may take a very long time to return to the booming economy of

their high school years.

They will need to demonstrate more than a "Show me the money!" attitude as they seek opportunities. Employers look to invest resources in engineers that are interested in a career, rather than be used as a stepping-stone to a job that pays more.



**Deborah Ducote Keller, PE**



The consensus is that it takes three to five years before recent graduates are productive enough to earn their keep.

Once hired, new grads should remember that a career is a marathon, not a sprint. As golden parachute pensions disappear, this generation will likely be working well past traditional retirement age. Some will be lucky enough to find their niche early in their career. With civil engineering being such a wide field to practice, it may take some time for others to find a good match. Before embarking on a massive job search, graduates should do some soul searching similar to choosing a university. Visualizing the “ideal job” is a good exercise to sort out priorities, goals and objectives, and getting a career off to a good start.

At a recent university forum sponsored by a student engineering organization, I found that many of my remarks were similar to the other panelists as we reflected on things we wish someone would have told us upon graduation. I want to share some of this sage advice that may be useful to not only the newbies, but to the other “emerging leaders” as those in the early stages of a career are often called. In no particular order, here are my Top Ten Tips for Launching Your Career:

Tip 1: Unlike college, when professors counseled you on what courses to take and when, your supervisor isn’t going to discuss how to manage your career. At best, there may be a formal mentoring program; at worst it may be the “sink or swim” philosophy. Determine your career goals, both short-term and long-term, and how you will get there. It may require post-graduate courses or rotating through various departments or alternating between field and office work or changing employers. The surest path to a dead-end job is to not plan your career path.

Tip 2: You majored in engineering, but never forget that engineering is a business. If you don’t feel comfortable in social settings when it comes to business etiquette, read a handbook, take a seminar, or search the Internet to learn what is proper. While engineering school may have not provided much time for learning social graces, there is no excuse now that you are in a business world where you represent your employer, as well as yourself. Start with cleaning up your language, including eliminating cursing, swearing, and other vulgarities that are inappropriate. Use those big words you learned for the college entrance exam.

Tip 3: If you are looking for a simple principle to guide you in working with others, it’s the Golden Rule, i.e. do unto others. Whether it’s the CEO or the janitor, treat everyone with respect and be nice.

Tip 4: Don’t be a bully and don’t tolerate a bully. Bullies grow up, leave the playground, and end up at a job. Just because you are new, don’t hesitate to report a bully to your supervisor and/or human resource department. There are many forms of bullying including harassment, discrimination, and intimidation. A hostile work environment need not be tolerated.

Tip 5: Honesty does pay. You earn a lifelong reputation as being a person of integrity. Know the rules, work by the rules. Ask if you are unsure. Use the early stage of your career as the time to learn from mistakes and ask for assistance.

Tip 6: The engineering community is tight-knit. At least that has been my experience in Louisiana, especially in civil engineering. My career has been built upon building business relationships that often evolved into friendships after people retire or change jobs. As engineers we work together on projects, sometimes on the same team and sometimes representing opposing interests. We interact with various government entities, and network at professional events and seminars. Forge those relationships early in your career and don’t burn those bridges when a relationship ends for some reason.

Tip 7: Be a sponge. Soak up every assignment you are given. You have to spend time doing the mundane, routine, grunt work to really learn how to practice engineering from the bottom up. Some young people are so anxious to be managers that they want to skip this important step necessary to truly learn their career field. It would be a mistake to underestimate this opportunity. Never stop learning. In my 30 plus years after college graduation, I worked with engineers who had to be forced into using a desktop computer in the 1980s and office email in the 1990s. Don’t become a technical dinosaur.

Tip 8: Substance is more important than style, but it’s human nature to judge a person by their looks. So dress the part of the role you play in the organization. Notice how other employees dress. Consider if you will be working in the field, the office, or in a more formal business setting before setting out to work. Even if there is no code, dress for the position you want next, rather than the one you have now. If your office has casual dress code on Fridays, don’t dress like you are going to paint the house, go to the gym, or head to the beach. It may just mean you can wear denim.

Tip 9: Pace yourself and enjoy the ride. No one ever said in their final days that they didn’t spend enough time at work, so be a well-rounded person with friends, family, and hobbies. Someone once told me that the purpose of work was to make the money to buy the time to enjoy life.

Tip 10: Share your time and talent. Give back to your alma mater and your community. Sign-up to judge a school science fair, speak at career day, build a playground, plant marsh grass, do a project with a scout troop. There is so much opportunity in Louisiana to volunteer.

Whenever I do retire, I will remember the wonderful people I was privileged to know during my career. I will take more pride in the employees that I helped, the people I mentored, and the things they all taught me than in the projects I worked on. To the graduates of 2011, congratulations!

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**2011**

# **LOUISIANA SECTION SPRING CONFERENCE**

*HOSTED BY THE ASCE ACADIANA BRANCH*

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**CAJUNDOME CONVENTION CENTER  
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## Branch News

### ACADIANA BRANCH

*By Shaun R. Simon, PE, Branch President*

As most of you are aware, the Spring Conference will be hosted by the Acadiana Branch this year. The dates have been set as April 13th through 15th at the Cajundome Convention Center in Lafayette. We are currently searching for speakers, vendors, and exhibitors for this event. If you are interested in speaking, sponsoring, or having an exhibit, please contact me at (337) 268-9755 or by email at srs@eustiseng.com. Please see the sponsorship/vendor/exhibitor form included in this journal. Look for further information in the upcoming months to be posted on the Acadiana Branch website and the

State Section website. We hope you make plans to attend this event in support of the Acadiana Branch.

Several Acadiana Branch members and board members have given presentations to the University of Louisiana at Lafayette ASCE Student Chapter regarding what to expect as a recent graduate in the various disciplines of Civil Engineering. Special thanks to Randel Badeaux, Colby Guidry, and Shaun Simon for participating in this activity with our student chapter.

### BATON ROUGE BRANCH

*By Adam M. Smith, PE, Branch President*

As we move into the New Year let me begin by thanking the Board and the members of the Branch for making last year such a huge success. We would not have been able to accomplish so much without all of your dedication and hard work. I would like to mention a couple of events from the previous year before discussing our upcoming goals.

The November luncheon featured a presentation on the Inner Harbor Navigation Canal-Lake Borne Surge Barrier by Angela DeSoto-Duncan, PE of the U. S. Army Corps of Engineers. The barrier flood-wall is 10,000 feet long and is the largest design-build civil works project in Corps history. We also held our third annual food drive for the Greater Baton Rouge Food Bank at the November luncheon. The following day the Younger Members volunteered their time at the Greater Baton Rouge Food Bank sorting and boxing food donated for the Thanksgiving season. Thanks to Danielle Welborn for arranging another successful Younger Member event that benefited the local community.

Unlike the previous year, we didn't get any snow for the Christmas party but we still had a great time. The party was held at Bocage Racquet Club with about 100 members and guests in attendance. I would like to thank our sponsors for their continued support.

In February we will celebrate the 60th anniversary of Engineers Week. ASCE encourages Sections and Branches to participate in E-Week by promoting Civil Engineering to the public, especially children. I attended a seminar on Leading Kids to Engineering at the 2010 ASCE Conference. ASCE has lots of ideas and kits available as part of their K – 12 Outreach program. Several members of the Board along with members of

the LSU and SU Student Chapters will be visiting local schools during E-Week. This will be a great opportunity to introduce young students to the profession and encourage them to join the field of Civil Engineering. If you would like to get involved please email me at adam@owenandwhite.com.

One of the goals of the Board this year is to provide more PDH opportunities to the members of the Branch. We are working with LAPELS to offer an ethics PDH at one of the future luncheons. We are also planning a few half-day seminars following the luncheons. More details will be provided via email and our website at [www.ascebr.org](http://www.ascebr.org).

The Board is excited about the New Year and we are going to build on the momentum from the end of last year. I would like to encourage everyone to participate in the programs ASCE has to offer.



*Christmas Party at Bocage Racquet Club*

## **NEW ORLEANS BRANCH**

*By Meg Adams, PE, Branch President*

On November 10, 2010, the New Orleans Branch hosted a luncheon at Five Happiness restaurant. Our speaker was Tonja Koob, PhD, PE, MBA, CFM, LEED AP. Ms. Koob is with Gaia Engineers, and is also the treasurer of the Engineers Without Borders New Orleans Professional Branch. She gave a very interesting presentation on the EWB project in Amayo, Nicaragua, in which our local EWB chapter helped the town construct latrines (Please see her article in this journal). At the luncheon, the Branch announced a \$500 donation to the local EWB chapter, which was matched by one of our members, Frank Nicoladai, of N-Y Associates.

On December 15, the Younger Member group of the New Orleans Branch held their annual Christmas party at Cooter Brown's. It was a White Elephant gift party, and a good time was had by all! Daniel Bobeck is our new Younger Member chair. He is working on getting the email list updated in order to reach all eligible members. Please



*Christmas Party at Cooter Brown's*

## **SHREVEPORT BRANCH**

*By Matthew Redmon, EI, Branch President*

With 2010 behind us, the Shreveport Branch is looking forward to another great year in 2011.

We concluded the year with our Annual Christmas Luncheon and gift card raffle. This meeting gave us an opportunity to socialize and take a break from the hustle and bustle of the holiday season. We had a good turnout and six people went home with a \$25.00 gift card to area store or restaurant.

We resumed our regular monthly meetings on January 20. The speaker for this meeting was Randy Curtis with Ameriglobe. He informed our group about a new product, TrapBag, which provides erosion and flood control. Also during our meeting, our branch voted to adopt our newly revised by-laws.

In late January, the Student Chapter at Louisiana Tech University hosted its Annual Winter Banquet. Several members of our branch

let him know if you are interested in being included. His email address is [dbobeck@lhjunius.com](mailto:dbobeck@lhjunius.com)

The speaker at the January 12th luncheon, held at Zea's uptown, was Joseph Becker, General Superintendent, Sewerage and Water Board of New Orleans. Mr. Becker's topic was "Events leading to the Boil Water Advisory in New Orleans and the SWB response". Last year, a sudden loss of power to the main pump station resulted in a drop of water pressure throughout the Greater New Orleans area necessitating emergency procedures city-wide. The luncheon was attended by over fifty local ASCE members.

The Branch has been active in several volunteer activities recently. Several members participated in the annual Mathcounts competition on February 12th at UNO, acting as runners and judges. The Branch hosted the second annual volunteer event at New Orleans City Park

in mid-February to celebrate eWeek. Last year, a group of over thirty branch members replanted several areas near the playground on Dreyfus Avenue, near the Peristyle, which had been damaged during Katrina. The event also included a tour of the Surge Barrier site, hosted by the US Army Corps of Engineers.

Please visit [www.asceneworleans.org](http://www.asceneworleans.org) for upcoming events and news.

As always the board is interested in hearing from our members and encourages your input. You can always contact me at [megadams@cox.net](mailto:megadams@cox.net) with any questions, comments or ideas how we can better serve our members.

attended, and our branch presented \$1,000 scholarships to an outstanding junior and senior civil engineering student. The students were selected by the faculty as individuals who exhibit academic excellence and exemplary character.

As everyone knows, February is the month we celebrate E-Week. As is the tradition in Shreveport, we hosted our joint ASCE / LES Luncheon, which featured Ty Storms who gave a presentation on "Construction Law."

Looking forward, our annual ASCE Spring Classic Golf Tournament is quickly approaching. The venue has not been determined yet, but if you would like to participate, please feel free to contact me at [matt.redmon@psiusa.com](mailto:matt.redmon@psiusa.com).

# Accessible Water and Human Waste Reduction: Nicaragua

By Tonja Koob, PhD, PE, LEED AP

**Project Cost**  
\$10,000

**Funds Needed**  
\$8200

**Chapter**  
New Orleans  
Professionals

## Background

The village of Amayo has no running water; most of the people use the river as their water source. This river is located at the bottom of a long, hill that women and children must walk carrying open buckets of water to bring to their homes. The river is also used for bathing and washing. Livestock use the river for drinking water and deposit their waste in or adjacent to it. Only 3% of the village citizens have latrines. Most people use grassy areas adjacent to their homes as bathroom facilities. Improved access to potable water and latrine structures will greatly improve the public health of the community.



## The Need

The goal of the project is to improve the public health of the community through education and basic water and waste facilities. The objectives of the project are to improve access to potable water, provide latrines for each home, and develop a community public health education program.

## The EWB-USA Response Assessment

The village was only interested in digging a well to address their water problems. We proposed ceramic filters as an interim solution, and that was enthusiastically received. Rainwater catchment systems are favored, but there are currently only two public buildings on which they could be built. We will investigate with the community the possibility of adding these systems to individual homes.

## What Was Done

We purchased and distributed 30 Potters for Peace ceramic water filters for individual residences. We instructed the residents on proper hygiene and the importance of clean water. We also tested river and well water for nutrients and biological contamination. As part of our assessment trip, we made contact with local and regional governmental officials to engage them in our efforts in their community.



Engineers Without Borders™-USA (EWB-USA) is a non-profit organization established in 2000 to partner with developing communities worldwide in order to improve their quality of life.

Website: [www.ewb-usa.org](http://www.ewb-usa.org)

Phone: 303-772-2723

## Following Up

In February 2009 we returned to Amayo for the third time and for our first construction implementation trip. We purchased materials for 10 latrines and assisted the community in constructing 6 latrines during our one-week visit. The community committed to completing the remaining 4 latrines. We have been in contact with the community through our local contact, and he reported that 3 of the 4 latrines have been constructed.

## Moving Forward

We will continue to assess and explore sustainable solutions to Amayo's potable drinking water problems. As a second phase of this project, we would like to install a deep water well that will be available to all community members. We will also continue to construct latrines until each community household has its own latrine.

## How You Can Help

You can become a member of the New Orleans Chapter and volunteer your services. You can also make donations to EWB-NOLA at 536 Washington Avenue; NOLA 70130. For more information, please contact Tonja L. Koob, PhD, PE, LEED AP, Project Co-Leader at [tonja.koob@gaeconsultants.com](mailto:tonja.koob@gaeconsultants.com)



# Student Chapter News

## **MCNEESE STATE UNIVERSITY**

**By Jada O'Blanc, Student Chapter President**

As the New Year begins, the McNeese State Student Chapter of Civil Engineers is excited about the many events that are occurring. First, we are planning a hamburger fundraiser to collect funds for our annual trip to the Deep South Conference. We will be traveling to Starkville, Mississippi at the end of March for this event. We are also in the process of the design and construc-

tion of our concrete canoe and steel bridge for the Deep South Conference. At conference, our chapter will also be participating in the concrete bowling ball contest, surveying, mystery event, and the Mead paper competition. All of our members are looking forward to this year's conference! Our Chapter will also be participating in Engineering Week this spring. There will be an

open house with exhibits for members of the community and prospective students to view and enjoy. Some of the exhibits ASCE will be presenting are various surveying instruments, soil liquefaction, and fluid flow. We hope for a successful spring semester and an enjoyable conference in March.

## **LOUISIANA STATE UNIVERSITY**

**By Josh Bradley, Student Chapter President**

The Louisiana State University student chapter ended the fall 2010 semester with the election of new officers. The newly elected officers for 2011 are:

- President – Josh Bradley
- Vice President – Andrew Cook
- Secretary – Brittany Alexander
- Treasurer – Doug Ferrara
- Webmaster - Philip Goppelt
- Meeting Coordinator- Melissa Young
- Community Service Chair – Lesley Cates
- Fundraising Chair - Kristina Galindo

The chapter also had a good turnout at the annual Senior Banquet at *Walk-Ons* in Baton Rouge, LA to close the fall semester.

In 2011, the chapter will be very busy holding bi-monthly meetings as well as participating in many community service projects. The chapter plans on participating in the annual Engineering week in February by going to local schools to promote the field of civil engineering. ASCE at LSU is also planning a field trip to the John James Audubon Bridge before the end of the semester.

The LSU chapter is also preparing for the competitions held at the Deep South Conference on the Mississippi State University campus later this spring. The Concrete Canoe and Steel Bridge teams have resumed work on the preliminary designs. The Con-

crete Canoe team is working on developing a more workable mixture with the help of the Louisiana Transportation Research Center and has plans to construct the canoe later this spring. The Steel Bridge Team is hard at work designing their bridge with plans to start construction in the near future.

## **UNIVERSITY OF NEW ORLEANS**

**By Amy Robards, ASCE-UNO Vice President; Donald Jerolleman ASCE-UNO President**

2011 seems to be promising for ASCE, University of New Orleans Chapter. Our plans to attend the 2011 Deep South Regional Conference in Starkville, Mississippi, are well under way. For the conference, the UNO Chapter plans on sending approximately fifteen people to compete in the Concrete Canoe, Steel Bridge, and Surveying Competition. The changes in the competitions have been an exciting undertaking by our teams. The largest change to the steel bridge is the addition of a five foot cantilever to one end, where the concrete canoe has made its competition more difficult by requiring dif-

ferent recycled materials. Both projects are well under way, with the captains feeling the time crunch of mid-March.

Recapping 2010, ASCE-UNO was very busy with meetings, projects, and tours. With the help of the Army Corps of Engineers, ASCE-UNO was able to tour the Storm Surge Protection Barrier near the Mississippi River Gulf Outlet, as well as participating in a Rebuild Together project in the greater New Orleans area. We were also able to have speakers at each of our student meetings from local companies, such as, the Army

Corps of Engineers, LT Cooper, Modjeski and Masters, and Parsons Brinkerhoff.

This year our seniors have a unique and interesting design project; they will be working with Brad Pitt's Make it Right Foundation. Incorporating this project into their design class they will be surveying, designing, and overseeing the build of a pervious concrete street.

## UNIVERSITY OF LOUISIANA AT LAFAYETTE

By Alison Lognion, Student Chapter President

Fall 2010 was a great semester for the UL Lafayette Student Chapter. The chapter grew tremendously this semester increasing from 35 members in the spring to 59 members in the fall. There were six meetings during the semester with five young professional engineers, who recently received their license; they presented their work in the various fields of civil engineering. The chapter had great turnouts for all meetings last semester and expects that to continue this spring. The chapter's best turnout with 68 engineering students and with 10 faculty and professionals was for Chris Ursery's presentation on the FIGG engineered Lee Roy Selmon Crosstown Expressway in Tampa, FL.

For the Spring 2011 semester, the chapter is looking forward to continuing the biweekly meetings. The members, as well as the Steel Bridge Team, are gearing up for the March 25th - 26th Deep South Conference at Mississippi State University in Starkville. Upon return, the members will engage in the March 28th - April 1st UL Lafayette's Engineering Week. Wednesday, March 30th, Engineering Day, is dedicated to high school students in the Acadiana area. The students will get a chance to tour the engineering grounds and visit each engineering discipline. The ASCE members will decorate the department and will give tours in the various civil labs. Soon after, some of the students

will take the FE exam on April 9th, and then they will assist the Acadiana Branch in hosting the Louisiana Section ASCE State Conference on April 14th and 15th. On a different note, the "Concrete Creeps," as the chapter is known, competed against the other departments in the LES College of Engineering Sporting Events claiming 1st in softball, pulling out 3rd in flag football, and giving 110% in volleyball. This semester the chapter will participate in exciting games of both basketball and soccer. The sporting events have become great networking for all the engineering disciplines to get to know each other, as well as a fun-filled and enthusiastic atmosphere for the civil engineers.



Concrete Creeps Victory in Softball



2010-2011 ASCE Student Chapter Officers

## ASCE-SEI New Orleans Chapter News

By Om Dixit, PE, FASCE, Newsletter Editor

Since our report in November 2010 issue of this magazine, ASCE SEI New Orleans Chapter did not host any seminars. Earlier announced seminar on Marine Design and Masonry Code for Wind Design have been postponed to future dates. The following future seminars have been planned in New Orleans:

### Future Seminars:

The following dates are the projected seminar dates for 2011. The exact dates may change due to the availability of the speakers and UNO Lecture room.

- April 21 DHL Lecture - Concrete Repairs (Peter Emmons, Structural Group, Hanover, MD)

More details about this seminar will be posted on the ASCE New Orleans Branch website as soon as it is finalized. The committee is looking for good topics and speakers for future presentations. Members with expertise in above areas would be welcome to join the Executive Committee. For any suggestion and information on joining the Executive Committee, contact Chairman Pawan Gupta, PE, at [Pawan\\_Gupta@URSCorp.com](mailto:Pawan_Gupta@URSCorp.com).

The Chapter is again planning to sponsor New Orleans Regional Math Count competition hosted by Louisiana Engineering Society every year and the GNO Regional Science Fair.

All seminars are held at the University of New Orleans. Seminar dates, pertinent information, and registration can be found on the New Orleans Branch website at [www.asceneworleans.org](http://www.asceneworleans.org). To add your name to our mailing list, e-mail Om P. Dixit at [om@fenstermaker.com](mailto:om@fenstermaker.com).

# ASCE-T&DI Louisiana Chapter News

By Karen Holden, PE

Prior to the busy Holiday Season, the ASCE-T&DI Louisiana Chapter sponsored a seminar held at the LSU TTEC Auditorium in Baton Rouge. Hadi Shirazi, PE, LDOTD Statewide Highway Safety Engineer, delivered an interesting presentation titled "Roundabout Intersection Safety and Design". Roundabouts are a modern variation of the classic traffic circle. Mr. Shirazi demonstrated that the elimination of left turns can greatly improve intersection safety. All roundabout traffic enters and exits only through right turns, and this modification substantially reduces the occurrence of severe crashes, while maintaining traffic flow. Our thanks to Hadi for providing this informative lecture.



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The ASCE-T&DI Louisiana Chapter also participated in a Youth Members Roundtable held in Atlanta last October. Michael Paul, PE from TRC Solutions in Baton Rouge, and Luke Hebert, PE from C.H. Fenstermaker in Lafayette attended the two-day discussion. The roundtable was hosted by Marsha Bomar (President of Street Smarts) and Jonathan Esslinger (Director of ASCE-T&DI). The Atlanta Roundtable complimented an earlier T&DI roundtable held in Los Angeles in September. The 10 to 12 attendees at each meeting were composed of both engineers and planners.

The purpose of the roundtable was to allow the younger members to educate the T&DI leadership about what younger members need in order to make their membership in T&DI and/or ASCE more valuable. To this end, the Louisiana Chapter is seeking opportunities to improve its branding by teaming with other organizations to attract

new members, particularly individuals involved with planning and development.

On December 13th, the Louisiana Chapter helped sponsor a well-attended (free) Parsons Lecture at the Port of New Orleans. Dr. Anthony Perl of Simon Fraser University, Vancouver, BC presented "The Role of Sustainable Transport to Overcome Oil Dependence". In addition to the primary sponsorship provided by Parsons Corporation, T&DI teamed with the Gulf Coast Center for Evacuation and Transportation Research, Port of New Orleans, University of New Orleans, the World Trade Center of New Orleans, and Fehr & Peers Transportation Consultants to make this a successful and interesting lecture.

In an effort to increase awareness of our Louisiana Chapter, we also maintained a booth at the LTRC conference held in Baton Rouge January 9-12th. We utilized some of our seminar income to facilitate the booth displays, joined in providing door prizes to increase booth traffic, and distributed application forms to interested parties. Our sincere thanks to the many Chapter members who helped maintain the booth during the LTRC Conference.

The Louisiana Chapter will continue its seminar series throughout 2011. Training seminars are two hours in length and are typically presented from 5:30-7:30 pm in either the New Orleans or Baton Rouge area. We are open to hosting seminars in additional cities in the State, if requested. In keeping with the intent of the Institute to provide training and networking opportunities for all professionals involved in transportation projects, the Chapter is planning the following future seminars:

- Toll Road Feasibility for the LA1/I-10 Connector in West Baton Rouge Parish
- Hurricane Evacuation
- I-10 Twin Span Structure – Elevation Determination

If you would like a seminar on any special topic, please contact Karen Holden at [karenholden@providenceeng.com](mailto:karenholden@providenceeng.com) or Gay Knipper at [Knipper@pbworld.com](mailto:Knipper@pbworld.com).



LSU student, Tori Ocmand, and ASCE-T&DI member, Dan Aucutt, PE at the ASCE-T&DI Booth at 2011 LA Transportation Conference



## — Calendar of Events —

### MARCH 2011

March 25-26, 2011      Deep South Conference; Mississippi State University  
 March 29-31, 2011      Legislative Fly-In; Washington D.C.

### APRIL 2011

April 1, 2011              Article deadline for submission for May issue of Louisiana Civil Engineer Journal  
 April 14-15, 2011       Louisiana Section Spring Conference; Cajundome Convention Center; Lafayette  
 April 15, 2011              Louisiana Section Board Meeting; Cajundome Convention Center; 1:30pm

### JUNE 2011

June 1, 2011              OCEA/OPAL Award Nominations due to ASCE National  
 June 3, 2011              Louisiana Section Board Meeting; 10:30am; Location TBA

<http://www.lasce.org/calendar.aspx>

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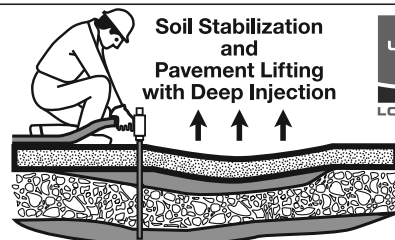


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