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South Wastewater Treatment Plant, Wet Weather Improvements – Phase II (Brasfield & Gorrie: Image #140303 611, Date: 03.03.2014, Phone: 888.542.0231)

FEATURE: Building for the Future: the Baton Rouge SSO Program Get your tickets to the Centennial Celebration Gala ASAP! Limited Seating Available - see page 14 Centennial Celebration Posters Available - Order Now! see page 16 Project Finalists Names in 15 Special Categories of Louisiana Civil Engineering Achievement see page 15



MAY 2014 VOLUME 22 • NO 3



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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 Robert W. Jacobsen, PE

In my February message I used a recent Dilbert cartoon to highlight our penchant for asking inconvenient, probing questions. Of course, engineers aren't the only profession which emphasizes rigorous analysis and critical thinking. Today I'd like to move on to a more complicated and essential role that really defines engineers—design. In my November message I noted that the term "engineer" derives from the same root word that gives us the adjective "ingenious." So I'd like to briefly explore just what constitutes "ingenious design," and how we don't just aspire to it but how we achieve it!

The important thing to recognize about design is that it might start with the need to thoroughly understand a vexing problem, and it might progress to one or more great creative ideas, but ultimately it is much more: design seeks to actually BUILD SOMETHING. During design the engineer is confronted with the need to consider crucial practicalities. The practicalities include effectiveness, constructability, special resource requirements, costs (including construction, O&M, and opportunity costs), construction schedule, adverse impacts, design-life, and sustainability. These practicalities lead to the key steps that define design-identification and detailed evaluation of feasible alternatives followed by optimization of the preferred alternative. In undertaking these steps, civil engineers must often address issues on a large, public scale. This inevitably draws other experts and interested parties into the process: economists, contractors, politicians, community leaders, environmental and neighborhood groups, etc. The process of civil engineering design thus places a premium on the "art of compromise." Early in their career the EIT will probably pick up on the design meme: of a choice between faster, cheaper, and better—you can only have two.

Ingenious design is thus the practice of developing an elegant compromise to satisfy the competing demands for what constitutes a successful highway, bridge, levee, pump station, large facility, public building, restored coastal wetland, etc. More than analysis, good design depends on the engineer's experience—their assimilation of decades of scientific, technical, construction, financial, managerial, and interpersonal lessons learned. Including the most important lesson: what compromises to reject!

This leads me to three conclusions. The first is it behooves us to closely study examples of ingenious design. This Centennial Celebration year our Section has been engaged in the process of identifying historic projects throughout the state. A final Master List of Historic Projects, prepared by a "Super Committee" of eight past Section Presidents, will soon be published on our website. The Master List includes over 100 sterling examples in a range of disciplines. If you've worked in one of these disciplines for many years, then you should be familiar with the historic projects from that category. If you're just beginning your career, then the list provides a good starting point to learn more about ingenious design in your chosen field.

The second conclusion is we need to do more to cultivate and champion the ingenious designers among us. Many years ago, when



Robert W. Jacobsen, PE

our profession was smaller, it was common for civil engineers to promote their colleagues who were the experienced discipline leaders within their community, no matter where they were employed. Today, in the Age of Google, I think we often succumb to the fantasy that we can quickly become experts ourselves. Competition has an important role in our profession, as does the large, multi-disciplinary engineering corporation. However, we lose something special when we don't honor, respect, and seek out the truly ingenious among us. To this end, I am pleased that our Section has recently formed a special committee to prepare nominations for ASCE Distinguished Members.

My third and final conclusion is our profession should stand up and honor examples of ingenious design. Given our highly public role, prominent recognition of superior projects is our best way of telling others what it is we really do and what we want to do more of in the future! The Section and Branches have come up with six posters celebrating Louisiana civil engineering achievements. Please buy one or more, frame them, and display them at your office. Even better, put some up in your local high school's physics classroom. And please come to the Centennial Celebration Gala on August 9th to help us recognize our finalists in 15 categories of Historic Louisiana Civil Engineering Projects!

Region 5 - ASCE 2014 Spring and Summer Continuing Education Seminars and Workshops

Geographic Services is proud to announce the Continuing Education schedule of seminars and workshops for the spring and summer that are scheduled in your geographic area. These seminars/workshops have been produced by ASCE's Continuing Education Department with your members in mind.

SEMINAR / WORKSHOP	DATE	LOCATION
HEC-HMS Computer Workshop	May 22-23, 2014	New Orleans, LA
Design of Metal Building Systems: Avoid Pitfalls in Specifying and Procuring	May 29-30, 2014	Tampa, FL
HEC-RAS Computer Workshop	June 11-13, 2014	Cincinnati, OH
Designing Non-Building Structures Using ASCE/SEI 7-10	June 12-13, 2014	New Orleans, LA
Project Delivery Methods for Transportation Engineers and Owners - NEW	June 19-20, 2014	Orlando, FL
Design of Lateral Force-Resisting Systems Using the 2012 International Building Code	August 14-15, 2014	Atlanta, GA
Earthquake-Induced Ground Motions	September 4-5, 2014	Orlando, FL
Dam Breach Analysis Using HEC-RAS	September 24-26, 2014	Atlanta, GA
Deep Foundations: Design, Construction, and Quality Control	September 25-26, 2014	Orlando, FL

Lake Borgne Surge Barrier Wins Civil Engineering Award

The American Society of Civil Engineers has declared the 1.8-milelong, 26-foot-high Lake Borgne surge barrier, built for the U.S. Army Corps of Engineers by a team of design and construction firms for close to \$1.1 billion, to be the 2014 Outstanding Civil Engineering Achievement, the society's highest annual honor.

According to Doug Scott, ASCE News assoc. editor, the OCEA award, which "recognizes a project that makes a significant contribution to both the civil engineering profession and society as a whole," is the

highest and most prestigious honor ASCE can bestow on an infrastructure project.

"Engineering a project of this magnitude is an amazing feat, given its complexity and sheer size," said Randall S. Over, president of ASCE. "Not only has this surge barrier helped restore hope in a community decimated by Hurricane Katrina, but as the barrier proved during Hurricane Isaac, which hit southeast Louisiana in August 2012, it will also provide formidable protection from future storm surges."



The U.S. Army Corps of Engineers (USACE), New Orleans District Inner Harbor Navigation Canal (IHNC) Lake Borgne Surge Barrier

Introduction

The City of Baton Rouge is focusing on the future of the community where a radical revitalization of the infrastructure continues to lay the foundation for sustainable growth. The Baton Rouge Sanitary Sewer Overflow Control and Water Facilities Program (SSO Program) is a key part of that essential work with the focus on rehabilitation of the existing wastewater infrastructure while providing for management of wastewater and wet weather flows for existing and anticipated footprint of East Baton Rouge Parish.

The SSO Program has its origins as the comprehensive 1998 Remedial Measures Action Plan (RMAP) which was developed during Consent Decree negotiations with the U.S. Environmental Protection Agency (EPA). Engineering alternatives within the RMAP were evaluated through a value engineering study which resulted in a Composite Plan to eliminate sanitary sewer overflows (SSOs) throughout the East Baton Rouge Parish during the design storm condition (2 year-12 hour). The Composite Plan consisted of two parts: the First Remedial Measures Action Plan (RMAP1) and the Second Remedial Measures Action Plan (RMAP2).

To date, the projects included under RMAP1 have been completed, and RMAP2 projects are under construction. These projects include rehabilitation of the existing sewer network, capacity increases providing for expansion of the existing network and extension for future growth, and upgrades at the South Wastewater Treatment Plant (SWWTP). Improvements in the sewer infrastructure, in addition to the RMAP2 are also being done through deployment of centralized monitoring and control of the collection network, utilization of existing excess capacity at the SWWTP, improvements to the North Wastewater Treatment Plant (NWWTP), and installation of local standby generation capacity at all of the 460 pump stations. The RMAP2 projects are being constructed using open-cut and more standard trenchless technologies, and have also required the use of less frequently used methods such as microtunneling, pipe bursting, and aerial crossings. This article provides background on these various construction methods including photographs from SSO Program construction projects.

Types of Projects in the SSO Program

Rehabilitation Projects

Rainfall dependent infiltration/inflow (RDII) is the major cause of wet weather related capacity deficiencies. Previously conducted concurrent monitoring of flow and rainfall throughout the wastewater collection system during several rainfall events of different magnitudes was used to characterize RDII and predict the system's wet weather response to rainfall. These data were used to model the Parish's collection and transmission system with each drainage area evaluated separately to establish the share of rainfall predicted to enter the sewer system. Areas where RDII was excessive have been arranged into 31 comprehensive rehabilitation

projects. About 5 million feet of gravity sewer will be inspected during these projects. The estimated total Program cost of these rehabilitation projects is approximately \$223 million.

Each project requires the characterization of the area through closed-circuit television (CCTV), smoke testing, and manhole inspection. The characterization assesses the overall condition of each sewer component independently, and is based solely on the severity of the structural defects and Infiltration and Inflow (I&I) of each component. The findings of the characterization is used within a subsequent engineering analysis to define and prioritize a scope of work for each detailed rehabilitation design.

Rehabilitation projects include

- Replacement of pipe by Point Repairs (partial line replacement)
- Replacement of pipe from Manhole to Manhole (full line segment replacement)
- Pipe Restoration from Manhole to Manhole
- Manhole Cleaning, Rehabilitation (elevation adjustment, patching, lining, etc.), and Replacement

Partial and full line segment replacement is done using the techniques described for Capacity Projects.

Pipe Restoration/Replacement

Replacement and point repairs of pipe can include both trenching and trenchless methodologies as used for both rehabilitation and capacity projects, to be discussed later. Replacement and point repairs are utilized as a "last resort" when the structural condition of the pipe is such that rehabilitation with Cured In Place Pipe, or CIPP, is not possible. On the Program, CIPP is used for piping up to 36 inches in diameter although the technique is routinely used for much larger piping. CIPP has been used for approximately 40 years

to install "a pipe within a pipe" eliminating much of the excavation work thereby eliminating the restoration efforts required for traditional open cutting. The installation system accesses a sewer manhole and inverts a resin-saturated, coated felt tube into а damaged pipe. Steam (or heated water) is used to cure the resin forming a polyvinyl chloride (PVC) liner



along the walls of the $\overline{Figure 1. Deploying CIPP Liner}$

pipe forming a jointless replacement pipe. Once the liner has cured, service laterals can then be cut into the liner using robotically

controlled cutting devices, and the rehabilitated pipe is inspected by CCTV. A crew deploying a large diameter liner is shown on Figure 1. A chipping unit set up over a manhole to steam cure the resin is shown on Figure 2.



Figure 2. Steaming CIPP Liner into place

Manhole Rehabilitation

Manholes are selected for rehabilitation as a result of visual field inspection and/or the review of robotic televising of manholes. Rehabilitation of manholes can include many forms: removal of corroded manhole steps, patching voids in manhole walls and manhole benches, patching around manhole pipe entries (gravity, force mains, service laterals, etc.) and around manhole castings and risers, and the installation of a liner and/or manhole replacement. In many cases, the manhole castings and risers may need to be reset as a result of disturbance or settlement. Sometimes just the raising or lowering of the manhole casting will correct the elevation. Casting adjustment is done by the removing or adding and sealing of riser rings, or the removal and replacement with a new frame and cover. In those cases where the manhole condition is considered too deficient for just patching and the manhole is in an area where it cannot be replaced, a spray on cementitious and/or epoxy liner is required, which will re-instate the substandard manhole to a like new condition. An example of 'before' and 'after" pictures are shown on Figure 3.



Figure 3a. Manhole before rehab

Figure 3b. Manhole after rehab

Capacity Projects

Capacity improvement projects are being constructed where hydraulic modeling and field information indicate that the existing collection or transmission system is inadequate to handle the future peak wet weather flows projected during the wastewater master planning process. The collection network was divided into 10 hydraulically independent basins, and the collection and transmission systems were analyzed with the output evaluated using planning and design criteria. The evaluations were then used to develop the capacity improvement projects for the SSO Program. Capacity improvement projects include new or upsized sewer mains, and new or rehabilitated pump stations. The cost of Program capacity improvement projects is approximately \$689 million.

Capacity Improvement Projects will increase hydraulic capacity in the system and convey wet weather flows to new downstream storage facilities or to the wastewater treatment plants. These projects include the installation of larger mains to increase conveyance capacity, as well as the replacement or upgrade of pump stations to handle future wet weather flows.

Sewer Mains

Sewer mains are being installed in multiple ways on the Program including conventional construction methods such as open-cut, horizontal directional drilling and jack and boring, and some that are less frequently used such as pipe-bursting and microtunneling.

Trenching, or open cutting, is the most common method for installation of new pipelines, and is also frequently used in rehabilitation projects for isolated pipeline replacements or point repairs. Trench excavation dimensions are dictated by the pipe size, needed depth, soils, and restrictions imposed by the area surrounding the construction. In all cases, identification of utilities in the construction right of way is critical, and open cutting can allow planned and careful exposure of utilities. Trench dimensions and soils conditions dictate whether support for the excavation walls is needed in accordance with OSHA standards. Projects

frequently use trench boxes or sheet piling to maintain excavation sidewalls, providing protection for the contractors working within the trench. See Figure 4 for an example of use of pile sheet to stabilize an excavation for installation of а trench.



pipeline in an open *Figure 4. Sheet pile used to stabilize an* trench. *excavation*

Horizontal Directional Drilling (HDD)

HDD is used for installation of pipes primarily under roads and drainageways where trenching is too disruptive and precise control of grades is not required. Basically HDD requires establishing a pilot bore through installation of a drill string by drilling through the subsurface at the grades and angles established by the project designers into an exit pit where either the carrier pipe, reamer, or carrier pipe/reamer combination is attached and pulled back through the bore hole.

The drill rig (seen in Figure 5) is secured by on-board augers, and is located behind the entry point to allow the drill to enter the ground with an entry angle typically 8 to 16 degrees. Pits for capturing

drilling fluids/ returns are dug in both the launch and exit areas. The drill string consists of hollow rods that used for are pumping drilling fluids down the bore hole, and through the drill bit, with the fluids stabilizing the bore and extracting returns from the bore hole. The



Figure 5. HDD rig

annular space is filled with drilling mud to reduce chances of future surface settlement.

Most drill bits have a slant face which is used by the operator to change direction, stopping rotation and continuing pushing to move in the direction that the bit's slant-face is pointing. Straight line operation uses both rotation and pushing to advance the drill string. Controls on board the drill rig allow the operator to monitor the orientation of the bit and the general direction of the bore. A walk over tracking system is used to monitor the position of a transmitter located near the front of the drill string, and provides position and depth of the transmitter and clock-face position of the drill bit. A drill rig in the process of HDD is shown on Figure 6.



Figure 6. HDD rig in operation

When the pilot bore reaches the exit area, reaming and installation of the pipe begins with the hole reamed in one or more passes to approximately 1.5 times the required diameter. At that point, the pipe is attached to the drill string with a pulling head and swivel and pulled back to the rig, installing the pipe.

Jack and Bore and Microtunneling

Jack and Bore (J&B) is used to install casings which for SSO Projects will contain carrier pipes under roads, railroads, drainageways or other environmentally sensitive areas. For most SSO projects, J&B requires the excavation of an entrance pit with the bottom at the starting elevation of the casing. The entrance pit contains a

temporary platform supporting the boring machine and starting alignment track. The casing is jacked by manual control along the track with simultaneous excavation and removal of the soil contained in the casing annular space. Removal of the soils is typically done using a helical auger rotating inside of the casing, although infrequently, soils removal is done by hand. J&B typically provides limited tracking and steering, with support to the excavation face usually provided as part of the pit excavation support. J&B requires entrance and exit pits of sufficient size to allow installation of the jacking rig and to safety handle the pipe lengths required for the project. The need to develop and maintain these substantial excavations in the urban environment contributed to the decision to utilize microtunneling on several projects rather than J&B to install casing. A jacking pit with machine installed in shown on Figure 7.



Figure 7. Jacking pit with Jack and Bore machine installed

Microtunneling is similar to J&B in that it requires access shafts at both entrance and exit locations for installation and operation of the microtunnel boring machine (MTBM) and to allow pipe segments to be lowered into the entrance shaft for installation. The MTBM provides continuous support to the excavation face to counterbalance earth and hydrostatic pressures. On some of the SSO Program projects, an initial pilot bore was done to provide laser guidance of the MTBM during tunneling. Tunneling is remotely controlled at the surface with a guidance system which communicates line and grade to a target inside the articulated MTBM steering head. Figure 8 shows the MTBM that was used for the River Road



Figure 8. Microtunneling Boring Machine under assembly

microtunneling and Figure 9 is a close-up of the microtunneling head used for that work. Figure 10 shows the e q u i p m e n t layout required for the River Road project.



Figure 9. Microtunneling head used for River Road



Figure 10. Microtunneling layout along the Mississippi River

Pipe Bursting

Pipe bursting has been chosen for some projects on the Program where the pipe size increase was small enough that the technique would work well given the burst length, existing pipe material and soils conditions. Pipe bursting allows the use of the existing alignment without removal of the existing pipeline by advancing a bursting head with a slightly larger diameter through the existing pipe. This fragments the existing pipe and pushes the fragments into the resulting annular space leaving room for the new pipewhich immediately follows the bursting head and is pulled into place. Pipe bursting has been used where a pipe needed to be upsized by no more than two pipe sizes or for rehab use where a pipe had several intermittent point repairs to be done. Pipe bursting is useful for burst lengths up to 450 feet, but has limited utility in those areas where there are lateral connections to be addressed as it doesn't currently have associated technology to allow reestablishment of laterals as CIPP does. Figure 11 and 12 show a pipe bursting head with the pipe attached during the initial phase of this type of installation.



Figure 11. Pipebursting head



Figure 12. Pipebursting head

Pump Stations

Pump stations are utilized to convey flow in areas where gravity sewers are not practical, especially with respect to the depth of the pipe. The pump stations in Baton Rouge have two categories: lift stations and manifolded pump stations. The lift stations simply lift the flow from one gravity sewer to another, higher gravity sewer. The manifolded pump stations are mainly located in the two suburban transportation networks (STNs) in the North and South areas of the City-Parish, although there are several smaller manifolded systems throughout the City-Parish. The STNs were created in the late 1980s so that packaged wastewater treatment systems could be eliminated and pumped to the large wastewater treatment plants downstream. All types of pump stations are designed with one standby, or extra, pump, so that the pump station can operate at full capacity with one pump out of service. The City-Parish has standard pump stations with two or three installed pumps, and the SSO Program has design requirements for pump stations with more than three pumps. The stations are all being designed to meet the future (2032) flow conditions at peak, wet weather flows obtained from the hydraulic model at the 2-year, 12-hour design storm. Figure 13 shows the new Booster Pump Station 514 valve pit, and Figure 14 is a typical larger SSO Program pump station.



Figure 13. BPS 514 Valve Pit



Figure 14. Typical larger SSO Program pump station

Wastewater Treatment / Storage Projects

The SSO Program includes four reservoir storage and repumping projects, and two wastewater treatment capacity and/or compliance projects. The reservoir and repumping projects incorporate the design and construction of a storage facility which detains peak wet weather flows during a storm event, releasing the stored water



Figure 15. South Wastewater Treatment Plant

back into the collection system when capacity demand is lower. Construction of these storage facilities eliminates upsizing of many miles of pipe in the downstream collection system, and provides a way to shave the peak hydraulic flow to the wastewater treatment plants, reducing the scope and cost of downstream capacity



Figure 16. Construction of the splitter box, SWWTP



Figure 17. Wet weather storage impoundment at Red Mud Lakes

projects and mitigating the need to increase treatment capacity at the existing treatment plants. The storage facilities have odor-control in use when the facility is on line, and contain integral wash systems which are used after each use, with the facilities remaining clean until the next event. These facilities are sized for the 2-year, 12-hour design storm, with the completed facilities already being used in significant rain events in the Parish. An aerial photograph of the SWWTP showing the storage tanks is included as Figure 15. Construction of the splitter box near the new solids contact basis at the SWWTP is shown in Figure 16. A photograph of the storage impoundment constructed at the Red Mud Lakes impoundments near the North landfill is Figure 17. The estimated total Program cost of the Wastewater Treatment/Storage Projects is \$335 million.

The City/Parish plans to consolidate the Central Wastewater Treatment Plant and the SWWTP necessitating several wet weather improvements to the SWWTP which are being accomplished in two projects, one of which is complete. These projects will allow the SWWTP to process wet weather flows up to 366 mgd by equalizing the flow to not more than a 205 mgd maximum flow into the SWWTP with 66 MG of equalization storage. The multiple upgrades underway at the South Plant include:

- New electrical substation
- Preliminary treatment facility sized to process 200 mgd
- Odor control facilities for the influent pump stations, storage facilities, preliminary treatment facility, primary clarifiers weir, and solids processing building
- Expanded treatment processes
- Conversion from chlorine gas disinfection to hypochlorite disinfection
- Construction of a new effluent pump station and pipeline

Capacity improvements are not required at the North Wastewater Treatment Plant, so there are no wet weather projects at the facility. Improvements are being done in conjunction with the Consent Decree response to improve the plant and the surroundings and include:

- Establishment of a buffer around the facility
- Green space/neighborhood beautification (tree and shrub plantings)
- Comprehensive odor control facilities, including odor control at the preliminary treatment facility, primary clarifier weirs, solids handling facilities, and dewatering building
- Conversion from chlorine gas disinfection to hypochlorite disinfection
- Flow splitting improvements
- New Preliminary Treatment and Influent Pump Station

Program Challenges

While there are overall challenges to conducting as many simultaneous sewer construction activities as the SSO Program requires, there have been some individual projects and activities unique to the Program which are worth mentioning.

HDD for Avoiding Environmental Impact

Upsizing the capacity of the network in the older sections of the City has occasionally required crossing areas previously used for legacy industrial activity. An area near downtown Baton Rouge had previously been contaminated with low levels of PCBs due to transformer maintenance activities which is undergoing monitored remediation by natural attenuation. The presence of the contamination eliminated the possibility of using trenching for installation, and avoiding construction at the site dramatically increased the cost of construction. A design utilizing HDD was developed, stretching 1100 feet under the area. Once the route was confirmed and the depth of the HDD under the area established, permission was granted by the LDEQ to install the 36"pipeline under the area to provide additional sewer capacity in the area.

Microtunneling to manage multiple impacts

Avoiding impacts was also the primary driver behind the microtunneling installation of a 42" pipeline down River Road paralleling the Mississippi River levee through downtown Baton Rouge. The installation took approximately 10 months, and required the installation of 12 microtunneling shafts, 11 of which were 20' in diameter with one 16.5' in diameter. The shafts ranged from 18 to 20 feet deep, and were in use during the 2011 Mississippi River flood requiring work to be halted and the shafts flooded allowing for hydraulic equalization of the operation. The project also included features outside of the typical sewer project design such as construction of numerous special sidewalks and crossings of the bypass line to allow access to the Mississippi River levee, and the USS Kidd and its museum complex. Figures 8, 9 and 10 are photographs from this project.

Proactive management of schedule and cost

Working with the regulatory agencies to address site conditions and developing strategies to control costs has also at times presented challenges. The Zachary Area Transmission Network Improvements Project, or ZATNIP, consists of approximately 18 miles of new pipeline, 3 new pump stations and a 20 million gallon wet weather equalization facility. The project reroutes the flows from the Zachary area directly to the NWWTP freeing up capacity in the Baker network currently utilized by the Zachary flows. The pipeline section between the equalization facility and the NWWTP crosses several legacy industrial areas which are currently under subsurface remediation. This has required careful delineation of depths and areas of documented contamination which have to be managed through design and construction. Techniques used include HDD, jack and bore, and aerial crossings, with trenching used where feasible. Soils removed through trenching in areas in the vicinity of subsurface remediation have to be maintained on site in containers until it is confirmed that they can be taken to a non-hazardous disposal

facility. The normal sequence of excavation-containerizationsampling-disposal introduced several days of lag time requiring container rental and maintenance while samples were being analyzed. This lag time was minimized by development and approval of a strategy to grid the soils and sample prior to excavation allowing segregation of soils of concern at the time of excavation.

Stakeholder Engagement a critical factor

The mix of rehabilitation and capacity improvement projects has necessitated the SSO Program working throughout residential neighborhoods, sometimes disrupting traffic flow even along major roadways. While some impacts are unavoidable because of the nature of the construction, the inconvenience to the community has been lessened by aggressive communications through neighborhood outreach during preparation for construction, and a focus on timely engagement and response to stakeholder concerns. The SSO Program early on implemented a Stakeholder Engagement Plan (SEP) to address these needed activities undertaken on behalf of the community. The SEP provides a comprehensive, effective, public engagement toolbox with measurable success markers that are tracked by Program management. Outreach strategies for the major stakeholder groups (businesses, organizations, and residents) are implemented to communicate construction impacts and provide resources to address stakeholder inquiries. Proactive engagement with the community through educational outreach on processes and project updates, assessing risks before they become challenges, and fostering relationships with key stakeholders and community leaders has allowed the Program technical team to focus on constructability and maintain balance in overall Program delivery.

Early utility identification reduces later delays

Avoiding impacts to utilities during construction is a major concern of the Program and an aspect that requires continual management. The Program's utility coordinator is active in the monthly utility council meetings where identified utility conflicts can be addressed and ongoing Program activities can be verified with the utilities operating within the Parish. While Program contractors utilize the La OneCall system prior to excavation, locating utilities is necessary during the design phase to eliminate many project delays and is currently done through non-destructive potholing. This methodology uses high pressure water and air to dig and vacuum to excavate to depths up to 15' providing a way to identify the utilities, size of the utility installation and material of construction.

Construction completed by the end of 2018

Design of SSO Program projects is rapidly winding down and the number of construction projects is now increasing as the Program drives toward the regulatory deadline of December 31, 2018. The Program was designed to deliver service at the current population level and build toward the future even while addressing problems of the past. While the community will see Program construction completion in the near term, the benefits to be realized from these environmental improvements lay the foundation for continuing improvement in the quality of life for the community.

Susan Douglas, PE works in the Baton Rouge SSO Program Land/Utilities/Permitting Group for CH2M Hill. She has over 30 years experience including process, environmental, sustainability, and permitting.

ASCE's 14th Annual Legislative Fly-In drew 200 members from all 50 states to Washington, DC, to fan out across Capitol Hill, telling lawmakers that the nation's infrastructure problems are solvable if Congress will show strong leadership. The message was bolstered by the National Report Card and its app for smartphones and tablets, which was well received by their staffs as a tool they will be able to use to better understand the state of our infrastructure. The representatives from the Louisiana Section this year were Christopher Humphreys, PE, Professional Service Industries, Inc. (PSI); Kam Movassaghi, PhD, PE, Fenstermaker; Norma Jean Mattei, PhD, PE, University of New Orleans; and, Nedra Davis, Louisiana Section ASCE.

Many ASCE members took advantage of a unique opportunity to meet with their U.S. House and Senate representatives regarding the need to invest in our nation's infrastructure, reiterating our 2013 Report Card for America's Infrastructure, and to learn about public policy issues affecting the profession of civil engineering and how they can influence the legislative process. Fly-In attendees met with the staff members of the 114th Congress who are unfortunately tasked with helping their Senators and Representatives on limiting government spending and reducing the national debt, and placing heightened scrutiny on all federal expenditures, including those to repair or replace the nation's infrastructure.

Mr. Humphreys, Dr. Movassaghi, Dr. Mattei, and Ms. Davis attended the Fly-In breakfast, March 19, 2014 where the Department of Transportation Secretary Anthony Foxx spoke in front of over 200 civil engineers outside of Washington, D.C. Secretary Foxx spent his time urging ASCE members to tell their Members of Congress about America's infrastructure needs and how the impending insolvency of the Highway Trust Fund will hurt our nation's economy and global competitiveness. Secretary Foxx thanked the civil engineers for their work, saying, "You are the ones that do the work in helping America's infrastructure." The Secretary argued that Congress must get off of its "extension addiction," and create a long-term solution to boost our economy and leave future generations a better country.

The issues focused on at Capitol Hill by our ASCE Louisiana Section members:

- Surface Transportation Authorization
- Water Resources Development Act (S.601, HR 3080)

Mr. Humphreys, Dr. Movassaghi, Dr. Mattei, and Ms. Davis met with staff from the offices of Senator Vitter, Senator Landrieu, Representative Boustany, and Representative Cassidy on Capitol Hill. These ASCE Louisiana Section members addressed Surface Transportation Authorization issues with our leadership urging them to find a long-term federal funding solution for the nation's surface transportation systems, as reauthorization that will expire this fall. Budgeting for the Highway Trust Fund, which allocated \$15 billion in 2012, has not been adjusted since 1993.While transportation demands have grown over time; the Highway Trust Fund has not been able to keep up with that demand. ASCE does not take a stand supporting any particular funding mechanism; we just wanted to request that our legislatures keep an open mind and consider all alternatives. Our key messages are: 1. The clock is ticking - our federal funding for roads bridges, and transit - the

Highway Trust Fund – will be insolvent by September 2014, or even sooner. 2. If we allow the Fund to run dry, the U.S. economy will lose jobs, projects will stop, and productivity will come to a halt. 3. We must fix this problem now with longterm, sustainable revenue solution to keep America competitive.

While sharing the Report Card, the ASCE Louisiana



Christopher Humphreys; Kaitlin Sighinolfi, Trade Policy Advisor for Hon. Charles W. Boustany, Jr., MD; and Dr. Kam Movassaghi meet in Representative Boustany's office at Capitol Hill (Not pictured: Dr. Norma Section members also Jean Mattei and Nedra Davis).



Dr. Norma Jean Mattei; Nedra Davis; Andrew Holleman, Legislative Correspondent for Senator Mary Landrieu; and, Dr. Kam Movassaghi meet in Senator Landrieu's office at Capitol Hill (Not pictured: Christopher Humphreys) (Not pictured: Dr. Mattei also met with Christopher Gillott, Norma Jean Mattei meet in Senator Vitter's office at Capitol Hill (Not Legislative Director for Representative Bill Cassidy, MD)



Christopher Humphreys; Charles E. Brittingham, II, Republican Professional Staff Member U.S. Senate Committee on Environmental and Public works for Senator David Vitter; Dr. Kam Movassaghi, and, Dr. pictured: Nedra Davis)

strongly urged their representatives to pass a new Water Resources Development Act final conference report in this session. Traditionally reauthorized every two years, the last WRDA was passed in 2007. ASCE's 2013 Report Card for America's Infrastructure graded the Nation's ports a "C", inland waterways a "D-", dams a "D", and levees a "D-". Our nation's water resources are critical to our economy, our infrastructure, public safety, and the preservation and enhancement of our environmental resources. In fact, ASCE's Failure to Act economic study on the nation's marine ports and inland waterways shows that underinvesting in just these two sectors threatens more than 1 million U.S. jobs and \$270 billion in U.S exports by 2020. A WRDA bill that fosters economic growth and job creation through policies that strengthen U.S. infrastructure will allow the nation to remain competitive in the Twenty-First Century. Our key messages are: 1. Create a National Levee Safety Program. 2. Reauthorize the National Dam Safety Program. 3. Restore Trust in the Harbor Maintenance Trust Fund.

Here are some great ways you can interact with Members of Congress from your state:

- Attend a town hall or other local events with elected officials. Visit your representative's website or check local newspapers for announcements.
- Schedule a Back Home Visit with your lawmaker. Call their District or Washington office today to set up a time to meet with them. See our tips on effective Back Home Visits (http:// www.asce.org/Government-Relations/Key-Contact-Program/ Back-Home-Visits-Materials/).
- Organize your own legislative day in your state capitol. ASCE Government Relations staff can provide assistance.
- Write your legislators through the Click and Connect with Congress (http://capwiz.com/asce/home/) on our top issue of transportation authorization and funding.

• Join the Louisiana Section Government Relations Committee; contact Jeffrey Duplantis: Jeffrey.L.Duplantis@us.mwhglobal.com.

Influencing elected officials and increasing investment in infrastructure starts at the local level! Identify infrastructure success stories in your community as well as current needs and communicate them to your elected officials who make decisions impacting investment at the state and federal levels.

ASCE References

- ASCE brochure, "Modernizing the Nation's Surface Transportation Program: A Blueprint for Success"
- ASCE 2013 Report Card for America's Infrastructure download the app at www.infrastructurereportcard.org
- ASCE Testimony on WRDA is Available at: http://www.asce.org/Government-Relations/Testimony-and-Correspondence/Testimonies-and-Correspondence/
- Policy Statements Available at: http://www.asce.org/policystatements/
- ASCE Failure to Act report covering ports and inland waterways at: www.asce.org/failuretoact
- House of Representatives Transportation and Infrastructure Committee webpage on WRRDA: www.transportation.house.gov/wrrda
- ASCE Staff Contact Brian Pallasch, Managing Director, Government Relations and Infrastructure Initiatives, bpallasch@asce.org, phone: 202-789-7842

The Centennial Celebration Gala will be held on August 9th, 2014 at the Renaissance Hotel in Baton Rouge. The event will include the following:

- A opening social and cocktail party starting at 6:00pm
- A sit-down dinner starting at 7:00pm with a speech from our Guest of Honor DOTD Secretary Sherri Le Bas
- An awards ceremony celebrating Louisiana's top civil engineering accomplishments over the past century
- An evening reception with live music and dancing
- Tickets: General Admission tickets are \$75/person and include hor d'oeuvres, a three course dinner, two drink tickets, and the evening reception.
- Reserved Tables: A limited number of Reserved Tables will be sold for \$1000. Purchase of Reserved Tables will be a first come, first serve basis. Reserved Tables will be located near the stage area and will include a sign that prominently honors the purchaser of the table. The purchase of a table includes ten individual tickets which will include the same amenities as the General Admission tickets.
- For information on purchasing General Admission tickets or Reserved Tables, please contact the Gala Committee at: ccgala2014@gmail.com.

LOUISIANA SECTION 100TH ANNIVERSARY GALA AWARDS SELECTED

Since the beginning of the year, the Louisiana Section has been working on a program to honor significant Civil Engineering projects in the state of Louisiana as part of its celebration of the Section's 100th anniversary. This article will explain the selection process and announce the top three projects in each of the fifteen award categories.

The first step in the process was the identification of significant projects throughout the state of Louisiana. Using a list developed by the History and Heritage Committee for identifying potential nominees for historical distinction as a base, the Louisiana Section solicited additional nominations from its membership through an online nomination process. These nominations were sorted by Branch, who then reviewed the list for any possible additions.

Once the master list was finalized, the Awards Super Committee began the process of selecting the award categories and the award recipients. This committee was comprised of eight past presidents of the Section, with two members from each Branch. The members are as follows: Ali Mustapha (Shreveport), Mark Snow (Shreveport), Dr. Kam Movassaghi (Acadiana), E.R. DesOrmeaux (Acadiana), Chris Knotts (Baton Rouge), Paul Fossier (Baton Rouge), Bill Gwyn (New Orleans), and Chair Miles Bingham (New Orleans). These individuals should be commended for their dedication and contribution to this effort.

The first order of business for the Awards Super Committee was to decide on what categories should be used for the awards. Three central ideas arose, and subcommittees were formed to examine these ideas. Two of the ideas produced similar results, but the third (Innovation) generated another category of awards. As a result, the committee decided on twelve discipline related awards and three innovation related awards.

With the award categories set, each committee member submitted three nominees for each category. This produced a list of projects to be considered in each award category. Members were then asked to choose their favorite two. Any project that received less than two votes was eliminated from the list. From a list now of between four and six projects, the members were asked to rank their top three in each category. At this point, a project was selected the winner if it received five or more votes. None of the selections were unanimous, but several received seven first place votes during this round.

In several instances, the competition was very tight, and an additional round was needed to separate the top projects. In these cases, two to three projects had garnered the most votes, and the committee members were asked to select a winner from these projects. At this time, the Awards Super Committee is pleased to announce the Finalists in each category. The actual winner will be announce live at the GALA on August 9, 2014 in Baton Rouge. The Awards and the Finalists are as follows:

AWARD	AWARD DESCRIPTION	AWARD FINALISTS		
	—	Huey P. Long Bridge		
1	Transportation	I-10 Atchafalaya Basin Bridge / Crossing		
	Structures (Large)	Lake Pontchartrain Causeway		
2	Transportation	Houma Tunnel		
	Structures (Small)	Texas Street Bridge		
		I-10 Airline Highway Interchange		
3	Air & Surface	Barksdale Air Force Base		
	Transportation	Port of New Orleans		
	(Large)	I-10 through Maurepas/McElroy Swamp		
	Air & Surface Transportation (Small)	Union Passenger Terminal		
4		New Orleans Streetcar		
		Railroad/Traffic Center Swing Span Bridge		
	Flood Control (Large)	IHNC Storm Surge Barrier		
5		Mississippi River Levees		
		Old River Control Structure		
		New Orleans Drainage & Pump Station		
6	Flood Control (Small)	Whiskey Bay Pilot Channel		
		Morganza Floodway		
_	Waterways	Red River Navigation Project		
7		Old River Navigation Project		
		Eads Pass / Jetties		
	Water & Wastewater Systems			
8		MicNeill Pump Station		
		New Orleans Sewer Pump Station		
0	Building Structures	One Snell Square		
9		New Louisiana State Capitol Building		
10	Oil & Gas Structures and Facilities	Stratogic Potroloum Posonyos (Salt Domos)		
10		Shell's Cognac Platform in G.O.M.		
		Waterford 3		
11	Industrial Facilities	Port of New Orleans Facilities on M.R.		
	maastnarraemties	Barksdale Air Force Base		
		Teche-Vermilion Freshwater Diversion Works		
12	Environmental	New Orleans Lakefront Improvements by WPA		
	Environmental	LA Coastal Marsh Creation / Restoration		
		I-10 through Maurenas/McElroy Swamp		
13	Construction	Spliced Piles for high Rise Construction in New Orleans		
	Innovations	Fads Pass / letties		
	Operational	Strategic Petroleum Reserves (Salt Domes)		
14		Port Fourchon		
	Innovations	Wood Screw Pumps in New Orleans		
		Spliced Piles used for Buildings and Bridges		
15	Material Performance	Hale Boggs (Luling) Bridge		
	Innovations	Charenton Canal HPC Bridge		
		John James Auduhon Bridge		
	I	tonittanico radanon briage		

Centennial Anniversary

Special Edition Centennial Celebration Posters Are Now Available

The Louisiana Section is pleased to announce that six Special Edition Posters are available honoring 100 years of outstanding civil engineering projects throughout the state. The "History and Heritage" poster is designed to be used in school as an educational tool. The five "Historic Civil Engineering" posters comprise a set, and individual or multiple posters can be ordered in any combination:

National Historic Civil Engineering Landmarks - Louisiana Section Historic Civil Engineering Projects - New Orleans Branch Historic Civil Engineering Projects - Baton Rouge Branch Historic Civil Engineering Projects - Acadiana Branch Historic Civil Engineering Projects - Shreveport Branch

The set was created by Stun Design, an award winning graphics firm which previously assisted the Section with our 2012 Report Card graphics. The Branches supplied photos for the posters. In addition there is a sixth poster that is laid out in an educational format that may be more appropriate for donating to schools. The suggested retail price is \$15 each. Posters can be ordered by sending an email request to your local Branch Poster Contact. Delivery, payment, and any special arrangements are at the discretion of each Branch, so discuss these with the Branch Poster Contact:

Acadiana: Tyler Roy, Branch President, troy@wilcomarshbuggies.com

Baton Rouge: Joey Coco, Branch President, <u>icoco@</u> <u>forteandtablada.com</u>

New Orleans: Debbie Mitchell, Assistant to Steve Johns, Branch President, <u>Debbie.Mitchell@WSNelson.com</u>

Shreveport: Mitch Guy, Branch President, mguy@cdg-apec.com



ASCE-

2014 Louisiana Section Spring Conference

By Christopher Humphreys, PE and Nedra Davis

The Acadiana Branch recently held the 2014 Louisiana Section Spring Conference on April 24th and 25th in Lafayette, LA at the Cajundome Convention Center. The conference was a wonderful success and we had a great lineup of speakers and presenters. The Acadiana Branch would like to say thanks to all who attended especially our conference sponsors and exhibitors. Your support is greatly appreciated and makes events like the conference possible. This year's conference included 19 total sessions for attendees to obtain up to 11 PDH's. Thursday's luncheon included a presentation by William Marcuson, PhD, PE, ASCE National Past President. Thursday's lineup also included a crawfish boil that everyone enjoyed. Friday's luncheon featured a presentation by Pat Natale, PE, ASCE National Executive Director and also featured the 2014 Life Member Awards, presented by Bob Jacobsen, PE, President of the Louisiana Section; the Order of the Ring Ceremony, presided over by Norma Jean Mattei, PhD and PE; and, recognition of the Distinguished Civil Engineering Senior Students Award, present by Jerry Klier, PE, of which Philip Goppelt from Louisiana State University and Katie Hinson from Mcneese State University were present to accept their awards. The branch would like to thank ASCE National, the Region 5 Governors, E. Ray DesOrmeaux, Bob, Jerry and Norma Jean and all the others that made this event a success and congratulate those who participated in the Order of the Ring Ceremony and the students for their hard work throughout their studies.

The Distinguished Civil Engineering Senior Students Awardees:

Phillip Alan Goppelt, Louisiana State University Salvatore Pellittieri, Louisiana Tech University Ryan Gerken, University of New Orleans Katie Hinson, McNeese State University Michelle Lynn Campbell, University of Louisiana at Lafayette Vernell Banks, Southern University

The 2014 Annual LASCE Membership Meeting was held Friday after the Spring Conference and the sign up sheet and minutes can be obtained by contacting Matt Redmon, PE at matt.redmon@psiusa. com. All attendees who participated in the sessions can obtain copies of the sign-in sheets on our website. Please go to www. asceacadiana. net and click on the "PDH Archive" link. If you have any questions or issues please contact: Ronke Osibajo, PE at 337-347-5599.



(left side) Kam Movassaghi, Tyler Roy, Pat Natale (right side) Patrick Furlong, Matt Redmon



New Orleans Branch

Gerald William Hanafy PE, M.ASCE Ronald Barry Pierce PE, M.ASCE

Acadiana Branch Russell J Bellard PE, M.ASCE

Baton Rouge Branch Vijaya K A Gopu PhD, PE, M.ASCE Robert A SeGall PE, M.ASCE

Shreveport Branch Desmond C Sprawls PE, M.ASCE



Distinguished Civil Engineering Senior and Bob Jacobsen, PE (right)



Philip Goppelt (middle) receives the Katie Hinson (middle) of McNeese University receives the Distinguished Civil Students Award from Jerry Klier, PE (left) Engineering Senior Students Award from Tyler Roy, EI (left) and Bob Jacobsen (right)



ASCE National Past President, William Marcuson, PhD, PE, speaks at the Thursday luncheon



Region 5 Governors show their support of Louisiana by attending the Spring Conference (left to right): Chad Gartrell, Eric Czerniejewski, Tony Palmer, Bill Grogan, Brett Goodman, E. R. DesOrmeaux



ASCE-COPRI Louisiana Chapter News





COAST, OCEANS, PORTS AND RIVERS INSTITUTE

The Louisiana Chapter of the American Society of Civil Engineers (ASCE) Coasts, Oceans, Ports, and Rivers Institute (L.COPRI) is continuing to promote membership and visibility throughout the State of Louisiana by conducting joint seminars with local Branches and State Sections of ASCE.

On March 27th, 2014 the L.COPRI Chapter held a spring event at the Port of New Orleans. The theme of this short seminar was 'Port Expansion in the Wake of the Panama Canal Expansion'. The first speaker was Gary LaGrange, President/CEO of the Port of New Orleans. Gary spoke on the history, statistics, and recent expansions of the Port. He also presented the Port's goals for facilitating the larger container vessels associated with the Panama Canal Expansion. The

second speaker was Juan Quiroz, PhD, PE of MWH Global. Dr. Quiroz is the lead structural engineer for the Panama Canal Third Lock Expansion. Dr. Quiroz presented the Authority's need for expansion, the design constraints associated with the project, and a brief overview of the construction progress to date. This seminar was well attended with over 60 ASCE/COPRI/T&DI Members in the audience.

L.COPRI's next event will be a marsh restoration workshop that will focus on the re-creating coastal wetlands with hydraulically dredged sediment. This event will likely be held in July. Also, L.COPRI has begun planning its annual half-day conference that will take place in October.

ASCE's Outstanding Civil Engineering Achievement (OCEA) Award is annually recognized as an exemplary civil engineering project that best illustrates superior skills and represents a significant contribution to civil engineering progress and society. The winner of the 2014 OCEA award was announced at the OPAL Gala on March 20, 2014 in



PORTS16 Planning Committee meets in New Orleans to plan the COPRI ports conference in 2016. L.COPRI representatives include Dennis Lambert, PE and Erin Rooney of our YPG. Deborah Keller, PE, Director of Port Development for the Port of New Orleans, attended along with members of our national COPRI Board



Arlington, VA and awarded to the IHNC Lake Borgne Surge Barrier. For more details, visit: http://blogs.asce.org/ocea-project-finalistinner-harbor-navigation-canal-surge-barrier/

The L.COPRI Young Professionals Group (YPG) co-hosted a crawfish boil with the ASCE New Orleans Younger Members on May 10. The YPG will also be touring the Port of New Orleans in mid-May. Congratulations to LCOPRI's membership chair, Tyler Ortego, PE on winning the 2014 Water Challenge. The Water Challenge is a collaborative initiative of The Idea Village and the Greater New Orleans Foundation to encourage and support entrepreneurial solutions in the water sector.

The activities of L.COPRI will arrange seminars, workshops and other activities to benefit all ASCE and COPRI members. One does not have to be an Engineer to join COPRI. These Institutes are formed for the benefit of ASCE and non-ASCE members to participate and interact with other professionals interested in coastal restoration efforts in the Gulf of Mexico. If you have any questions or to add your name to our mailing list, please contact Tyler Ortetgo, PE, L.COPRI Membership Committee Chair at tortego@gmail.com.



IHNC Lake Borgne Surge Barrier wins Opal Award



Gary Lagrange, President/CEO of the Port of New Orleans addresses L. COPRI on the benefits of the Panama Canal Expansion

Infrastructure Awareness Day How do you like your tofu?

By the Louisiana Section ASCE (L.ASCE) Government Relations Committee

Engineers generally view politics as a necessary evil, a shadowy pursuit dominated by suspiciously cheerful men and women with a gift for sleight-of-hand, hidden agendas or worse. That certainly describes some notorious characters that have infected Louisiana over the years, but the truth is that most politicians do not deserve the bad rep. The average Louisiana legislator listens to more problems than a marriage counselor and tries to fashion solutions through a Byzantium process of committees, lawyers, lobbyists, media and special interests.

It's likely that neither the engineer nor the legislator likes the system, which has evolved over the years into what is now commonly referred to as "The Circus." But that's the way the sausage is made, and the hungry can get in line or develop a taste for tofu.

Over the past several years, sausage has been in short supply for Louisiana engineers. Stimulus funding from the federal ARRA program is over, as are the days of giant post-Katrina surpluses that fueled so many large-scale transportation projects. Public works budgets are not keeping up with rising costs, money from the state's Transportation Trust Fund is being tapped for general fund expenses, and the current administration has made it clear that no new revenues are on the horizon.

It is time for Louisiana's engineering community to become more engaged in the political process. In 2014, the L.ASCE's Government Relations Committee joined forces with the Louisiana Engineering Society, American Council of Engineering Companies of Louisiana and the Louisiana Good Roads and Transportation Association and organized the first-ever "Infrastructure Awareness Day" at the state capitol. Our goal is to raise awareness among lawmakers of the state of our infrastructure, why it is important and how we can work together to dedicate more resources to it. The "backbone" of our effort is the 2012 Report Card for Louisiana's Infrastructure (http:// www.lasce.org/ReportCard.aspx), a historic report prepared by more than 50 volunteer engineers.

The take away:

Louisiana's infrastructure is in poor condition

ASCE's 2012 Report Card for Louisiana's Infrastructure was the firstever comprehensive, private-sector assessment of Louisiana's critical infrastructures.

The report gave a "D" to roads, a "D+" to bridges, and drinking water and a "C-" to levees, ports, and wastewater.

The grades are a direct result of chronic underfunding for operations, maintenance, capacity and resiliency for new and existing infrastructure.

Protect the Transportation Trust Fund

Tens of millions of transportation dollars are being siphoned from the voter-approved TTF to pay for non-transportation related items. These raids leave less money for our weakened infrastructure, making future maintenance and repairs more costly.

ASCE GOVERNMENT RELATIONS

We support legislative efforts to protect the voter intent of using TTF money only for transportation.

Dedicate transportation-related taxes to transportation projects

The 2008 law to dedicate vehicle sales taxes to transportation has never been realized because the "trigger" prevents the transfer if the state budget is in crisis, which is an annual occurrence.

As a transportation-related tax, vehicle sales taxes should go to the TTF. Repealing the trigger is the right thing to do and will give the public more confidence in the Louisiana Legislature.

We support legislation to immediately transfer vehicle sales taxes to the TTF.

There is support among legislators and citizens to dedicate additional funds to transportation

89.6 percent of legislators agree that Louisiana's transportation system is very important to how citizens and visitors perceive our quality of life and that the system is critical to improving the economy and attracting jobs to the state.

1. 69 percent of Louisiana's citizens do not believe our roads and bridges are in good condition, and 97 percent agree that transportation "is important to Louisiana's quality of life and economy."

2. 52 percent of citizens support and increase in the state gasoline tax if the money were dedicated to improving roads and bridges.

3. About 20 engineers and supporters gathered at the Pentagon Barracks on April 3 to listen to a briefing by Leslie Nolen of ASCE's national office. We then welcomed members of the House and Senate transportation committees to a luncheon, which was attended by several legislators and staff members. Many of us were pleasantly surprised to learn how well-informed our legislators are about the issues. They are aware of the backlog of transportation



Leslie Nolen, National ASCE Government Relations briefs the Louisiana ASCE Government Relations Committee, Louisiana Engineering Society, American Council of Engineering Companies of Louisiana, and the Louisiana Good Roads and Transportation Association members



Bryant Hammett, PE, Bryant Hammett & Associates, LLC; State Representative Karen St. Germain; Ann Trappey, PE, Forte and Tablada, Inc.; and Leslie Nolen, National ASCE Government Relations discuss infrastructure issues





Representative and House Speaker Forte and Tablada, Inc. Pro Tempore Walt Leger, and Kam Movassaghi, PhD, PE, Fenstermaker

Jeffrey Duplantis, PE, MWH, State Katie Giroir and Joey Coco, PE,





Renee Mozee and Elba Hamilton. Leslie Nolen, ASCE National, Nedra PE, Aillet Fenner Jolly & McClelland Inc.

Davis, Louisiana Section ASCE and Jared Evans

Get the Latest Version of the Report Card App



Recently, ASCE released a new update to the mobile and tablet Report Card apps!

If you've already downloaded the Report Card to your phone or tablet, the new version is only a few clicks away. To get the latest and greatest version, just go to your app store of choice (iTunes or Google Play) and click on "Updates." Hit "Update," and you'll have all the new information automatically loaded.

While you're in the iTunes or Google Play store, we'd really appreciate it if you'd take a few minutes to rate our app and tell others why they should download it too.



Ken Perret, PE, Louisiana Good Roads, Kurt Evans, PE, Digital Engineering and Ann Trappey, PE, Forte and Tablada, Inc. discuss infrastructure issues

projects, the problems facing our critical infrastructure and the funding situation that makes maintenance a challenge and upgrades a near impossibility. But, as one legislator told us, "I'm aware of the problems, and I agree with you. But how are we going to pay for it?"

Everyone is looking to grab a bigger piece of a pie that probably is too small. Health care and education advocates are vocal about their causes, and we must be equally vocal about the need for Louisiana to re-invest in its vital infrastructure. We must convince lawmakers that infrastructure spending is not a means to an end but is a vital part of our economic health.

On April 7, just four days after Infrastructure Awareness Day, Sen. Robert Adley testified before the Finance Committee on his proposal to dedicate half of all future out-of-state internet sales taxes to transportation, once the federal government allows such collection. One member of the committee demurred, noting that the bill did not dedicate any money to health care. Adley then asked if he could make one final point before the committee shelved his bill.

"The infrastructure in this state is what's going to build income for us in the future," Adley said. "You cannot grow, and we cannot create income without infrastructure, and ours is falling apart."

On the House side, Rep. Karen St. Germain has authored a bill to begin phasing in the transfer of vehicle sales tax revenues from the general fund to transportation, a move than eventually will boost transportation spending by more than \$400 million a year.

But no one will survive as a lone wolf for long. We must support legislators like Sen. Adley and Rep. St. Germain by building a sustainable program to educate lawmakers and the public on infrastructure issues.

We must get involved. Or, try throwing the tofu on the grill and see how that works.

If you would like to be involved with L.ASCE's Government Relations Committee (GRC) and help shape the future of our efforts, please contact any of the LASCE GRC executive committee members -Jeffrey Duplantis, Joey Coco, Kirk Lowry, Nedra Davis or Kahli Cohran.

References:

- 1 Louisiana Statewide Transportation Plan update Legislative Questionnaire (August 2012)
- 2 Louisiana Statewide Transportation Plan update Public Telephone Survey (Feb 2013)
- 3 2013 Louisiana Survey by the LSU Public Policy Research Lab

ASCE-T&DI Louisiana Chapter News By Michael Paul, PE, Newsletter Editor



In continuation of our efforts to promote interest in transportation planning and engineering, the T&DI Louisiana Chapter contributed to the 2014 Louisiana Science and Engineering Fair held on March 24-26 at the Royal Cotillion Ballroom at the LSU Student Union. The State is divided into 12 Regions. Each region holds a Science Fair early in the year. The top winners from each region can participate at the State level. The Judges for the transportation-related exhibits consisted of T&DI Executive Committee members Joffrey Easley, PE; Dan Aucutt, PE; Michael Paul, PE; and, LSU's Dr. Minkyum Kim. The special awards winners for the Junior and Senior Divisions are show below:



Junior Division (Grades 6-8): 1st Place: Adam Cook (right) "Effects of Hull Design on the Drag of a Ship" 2nd Place: Lydia McGaha (left) "A Bridge That Can Take A Shake"



Senior Division (Grades 9-12): 1st Place: Marygrace Duggar (left) and Olivia Guidry (Middle) "A Greener Shade of Grey: The Effects of Fly Ash in Concrete" 2nd Place: Paige Fatland (right) "Effect of Lintel Length on Amount of Mass Supported"

In March the T&DI Louisiana Chapter co-hosted the Panama Canal Expansion seminar with the Louisiana Chapter of the Coasts, Oceans, Ports and Rivers Institute (COPRI). The seminar was presented at the Port of New Orleans. Speakers were Gary LaGrange, president & CEO of the Port of New Orleans and Juan Quiroz, PhD, PE lead engineer for MWH working on the third set of locks.

If you are interested in co-sponsoring a seminar at your branch, the T&DI Louisiana Chapter has prepared a Seminar Coordinator's Check List to assist you in your preparation. Contact David Kanger, PE, at DAKanger@ modjeski.com for a copy of the checklist. Our 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. As indicated, we are open to co-hosting seminars in additional Louisiana cities, with proper planning. 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:

- I-49 South Corridor
- Louisiana ITS
- Hurricane Mooring Regulations
- Toll Road Feasibility for I-10/LA 1 connector in Baton Rouge
- Pavement Engineering (Part 3 of 3) Application of Earthwork and Embankment Materials
- New Pavement Design / Empirical Methods
- Mitigation Banking
- Louisiana P3



SAVE THE DATE!

Call for Potential Speakers and Exhibitors!

We are proud to announce the dates for the 24th Annual Louisiana Civil Engineering Conference and Show. This event, a joint effort from the New Orleans Branches of ASCE and ACI, is the premiere gathering for the Civil Engineering community in the Greater New Orleans Area. We are in the process of soliciting sponsors and exhibitors and establishing the technical program for the fall conference, which will be held on September 24-25, 2014, at the Pontchartrain Center in Kenner, Louisiana.

For additional information on the conference, please visit our web site at www.LCECS.org

Branch News

ACADIANA BRANCH By William Tyler Roy, El, Branch President

On March 11, 2014 the Acadiana Branch and the L.COPRI Young Proffesionals Group held a luncheon tour of the USGS National Wetalnds Research Center. Attendees toured the impressive facility on Cajundome Blvd. and got an inside look at interesting research projects the USGS is currently working on. Phil Turnipseed, PE and Gabrielle Bodin made the event possible. The branch would like to thank them for providing access to the facility and taking time to give the tour.

The Acadiana Branch recently held the 2014 Louisiana Section Spring Conference on April 24th and 25th in Lafayette, LA at the Cajundome Convention Center. The conference was a wonderful success and we had a great lineup of speakers and presenters. The Acadiana Branch would like to say thanks to all who attended especially our conference sponsors and exhibitors. Your support is greatly appreciated and makes events like the conference possible.

Customarily, the Acadiana Branch winds down branch activity during the summer months as many of our members enjoy this

time on family vacations. We are currently planning our end of summer/fall activities which will begin in August. In September we will host the section awards and installation banquet where we will install Pamela Granger, PE from the Acadiana Branch as the new Louisiana Section president. We will keep everyone informed as plans are developed.



Left to right: Bob Jacobsen, Pat Natal, Tyler Roy, and Ray DesOrmeaux

BATON ROUGE BRANCH By Joey Coco, PE, Branch President

The Baton Rouge Branch of ASCE began the year with a very active agenda. In January, we held a branch luncheon where the membership learned about using foam as a suitable backfill material from Chip Coughlan with Insulfoam. In February, we participated in the E-week banquet with the Louisiana Engineering Society. Kylan Douglas, a civil engineering student of Southern University, was the recipient of a \$1000 scholarship from the branch, which was handed out at the banquet. In March, we held a professional ethics luncheon and hosted two speakers. Miles Williams, PE of Sigma Consulting Engineers presented on the topic of Professional Engineering Ethics. His



With regards to the Louisiana Section 100 year celebration, several past presidents of the branch met to recommend projects to a super-committee. The group filtered through a list of high-



A joint luncheon with the Louisiana Engineering Society was held at Juban's. We would like to thank the Mayor for his participation.



Paul Fossier, PE his Fellow Award

Baton Rouge Branch President, Joey Coco, PE gives Baton Rouge Mayor Kip Holden speaks at joint LES/ ASCE Luncheon

NEW ORLEANS BRANCH By Steve Johns, PE, Branch President

The New Orleans Branch has always been involved with outreach programs in the city and this year has been no exception. Steve Johns, PE of Waldemar S. Nelson & Co participated in the Mathcounts competition by grading many of the participating students Mathcounts tests. Many of the questions were surprisingly difficult. The New Orleans branch also donated money in support of the Mathcounts event as well as cash prizes to the top two civil engineering projects at the Greater New Orleans Science and Engineering Fair (GNOSEF) in both junior and senior levels, as well as to the teachers of the winning students. The New Orleans branch also provided funds to the University of New Orleans (UNO) Concrete Canoe and Steel Bridge competition teams to participate in the Deep South competition.

On April 29th Branch members participated in a one-day outreach activity to inspire High School students to pursue a career in Science or Engineering. It was held at the New Orleans Charter Science and Mathematics High School. During five class periods we answered questions of the students about what engineers do and what is it that high school students should do to prepare themselves to pursue a career in engineering. The previous week in collaboration with the New Orleans Branch, the UNO College of Engineering hosted 114 high school students and 11 teachers. The students and teachers toured the different facilities within the UNO College of Engineering. They also met with UNO students from all four departments. The high school students also were given presentations of the concrete canoe, steel bridge, Mini Baja, and Robot. In support of the students the New Orleans Branch donated lunch.

Our participation in the Louisiana Section Poster project was to offer 10 projects to be included on the New Orleans Branch poster. The projects selected by the New Orleans Board are: the Superdome, Inner Harbor Navigation Canal Surge Barrier, New Orleans Drainage and Pump System, Crescent City Connection, Causeway Bridge, Huey P. Long Bridge, St Charles Streetcar line, Port of New Orleans, Bonnet Carré Spillway, and One Shell Square.

The New Orleans Professional Chapter of Engineers Without Borders has initiated outreach to local community organizations and groups in the New Orleans area in need of basic infrastructure,

flood water mitigation, drainage and site work, and other engineering related services, in an effort to improve the quality of life and functionality of our city and it's infrastructure. EWB-NO's domestic partnership group is currently engaged with the Tulane City Center and the Carrollton-Hollygrove organization to develop a 50 foot wide swath of land, above an underground canal, into a series of places for neighborhood activities and urban farming. This land is located in a low lying district of New Orleans between Carrolton Avenue and the Jefferson Parish line, and is currently owned by the Sewerage and Water Board. EWB-NO has participated with the partner organizations by providing survey and boundary expertise, hydraulic groundwater modeling analysis, and a plan to use basic engineering principles to devise an educational component for future portions of the project. Current progress on site has led to the implementation of five rain gardens on land adjacent to the project site, with many more improvements planned.

We had an excellent turnout for our March luncheon at The Five Happiness Restaurant. Our speaker was Norma Jean Mattei, PhD, PE who gave a presentation on ethics titled "The Good Engineer: Ethics and Sustainability". The April meeting was held at Zia's on St Charles and was attended by an almost overflow crowd. Dan Bradley of the U.S. Corps of Engineers and John Koneck with Kiewit Corporation provided an overview of the Permanent Canal Closures & Pump stations (PCCP) at the 17th Street, Orleans Avenue, and London Avenue outfall canals. The presentation



High School Outreach Event conducted at UNO on April 22, 2014



New Orleans Branch, continued.

addressed the specifications for each pump station, construction status, major milestones, and the public engagement strategy.



Members of the New Orleans Board and other New Orleans Branch Members meeting with students at the New Orleans Charter Science and Mathematics High School to inspire the engineers and scientists of the next generation on April 29, 2014

SHREVEPORT BRANCH By Mitch Guy, PE, Branch President

On Thursday, March 6th, five (5) members from the Shreveport Branch travelled to the Section's Monroe Outreach event at Copeland's of New Orleans. The event was attended by 18 engineers. Tyson Rupnow, PhD, PE of LTRC presented on "Roller Compacted Concrete" and Chris Knotts, PE of LADOTD delivered a presentation on "LADOTD Public Works." The event was well received by our Monroe membership and the Shreveport Branch looks forward to future opportunities in the area.

Our March Meeting on Wednesday, March 19th at the Petroleum Club in Downtown Shreveport was attended by over 40 people consisting of engineers, contractors, suppliers and students. Greg Campbell of Ash Grove Cement Company delivered a presentation on "Concrete Jointing" on behalf of the Concrete & Aggregate Association of Louisiana (CAAL). A number of CAAL members were present at the meeting representing the following organizations: Air Force Global Strike Command, Ash Grove Cement, Builders Supply Co., Headwaters Resources and TXI. I would like to give a special thanks to Headwaters Resources and TXI who were kind enough to sponsor our meeting.

On Thursday, April 17th, we held our April meeting at the Petroleum Club. Clark York with CONTECH delivered an overview



March meeting in Monroe

The 24th Annual Louisiana Civil Engineering Conference & Show returns to the Pontchartrain Center for two days - Wednesday and Thursday, September 24-25, 2014. This annual event, jointly sponsored by the New Orleans branches of ASCE and ACI, is a favorite with engineers who need to earn Professional Development Hours to maintain licensure. Last year over 600 design and construction professionals filled the building. I encourage everyone to participate in the conference as well as nominate great speakers for the different sessions. More information about the conference and speaker nomination form can be found at http://www. louisianacivilengineeringconference.org.

It is that time again when the Board begins to look for nominations for next year's board. If you are interested in being a part of next year's New Orleans Branch of ASCE, please forward your information to Steve Johns at Steve.Johns@WSNELSON.com. Being a member of the Board is a rewarding experience and all nominations are welcomed.

on "Green Rainwater Harvesting and Decentralized Waste Water Treatment."

We were very pleased to have two awards presented to members of the Shreveport Branch at the ASCE Louisiana Spring Conference. Desmond Sprawls, PE, PLS received his recognition as a Life Member and Salvatore Pellittieri was awarded the Distinguished Civil Engineering Senior Award from Louisiana Tech University. Both members received their awards at the Shreveport LES Chapter meeting on Wednesday, May 14th.

The Shreveport Branch was also excited to participate in the Louisiana Municipal Users' Forum on Trenchless Technology on Thursday, May 22nd at the Louisiana Tech University Shreveport Center. The purpose of the regional municipal forum was to allow personnel from individual municipalities to meet and share their experiences in apply trenchless technologies to underground utility problems. It also allowed them to cooperate on essential activities related to trenchless technology that are difficult, time consuming and expensive to undertake individually. The Shreveport Branch enjoyed helping out with the event.



President Mitch Guy, PE



Desmond Sprawls, PE, PLS (left) Salvatore Pellittieri (left) was awarded received his recognition as a Life the Distinguished Civil Engineering Member, awarded by Branch Senior Award from LA Tech University by Branch President, Mitch Guy, PE

ASCE-SEI New Orleans Chapter News

By Om Dixit, PE, FASCE, Newsletter Editor



Since our report in November 2013 issue of this magazine, ASCE SEI New Orleans Chapter was busy with the participation in LES New Orleans MathCounts and Greater New Orleans Science and Engineering Fair.

ASCE SEI New Orleans Chapter sponsored Coaches Lounge at the LES Regional MathCounts competition held at University of New Orleans in February 2014 and provided a few volunteers for managing the competition.

The ASCE SEI New Orleans Chapter sponsored awards at Greater New Orleans Science and Engineering Fair (GNOSEF) held in February 2014. The award winners were:

Junior Division

The First Place (\$150) award was given to Zoe Lee of T.H. Harris Middle School for his project "Pyramids vs. Cube – Which provides Greater Foundation Stability?" The Second Place (\$100) award went to Thomas Pool John Curtis Christian) of Haynes Academy for advance Studies for his project "Do Bridges Support More Weight than Beam Bridges"

Senior Division

The First Place (\$150) award was given to Paige Fatland of John Curtis Christian for his project "Effect of Lintel Length on Amount of Mass Supported" The Second Place (\$100) award was given to Rose Coats of John Curtis for his project "Which Bridge Design Withstands Flooding Best?"

This year the awards of \$50 were also given to the Teachers of the first place project's school for encouraging their students to do a Structural Engineering project. These teachers were Natalie Praetorius (Ben Franklin) and Don M Shannon (T.H. Harris Middle School).

The following future Seminars are in process of being finalized:

June 3, 2014 STRENGTH DESIGN OF MASONRY

by Dr.Richard Bennett

The other topics for the future seminars are being considered Non Destructive Testing, Direct Shear Design with AISC, Joplin Missouri Tornado Investigation Study Report and a few more current topics.

The committee is looking for good topics and speakers for future presentations. Members with expertise in the field of structural engineering would be welcome to join the Executive Committee. For any suggestion and information on joining the Executive Committee, contact Chairman Stevan M. Fall, P.E., at sfall@ cox.net.com.

All seminars are held at the University of New Orleans. Seminar dates and pertinent information on registration or addition of your name to the emailing list can be requested by e-mailing to Om P. Dixit, P.E. at omdixit@cox.net.



SEI Banner at the LES New Orleans MathCounts Award Ceremony

Student Chapter News



Picture of all the Louisiana Universities who competed in the 2014 Deep South Conference and their awards (Louisiana swept the floor!) McNeese State University, LA Tech University, University of Louisiana at Lafayette, Louisiana State University, and University of New Orleans

LOUISIANA TECH UNIVERSITY

By Seth Strong, Student Chapter President

The month of March was off to a busy start with beginning of Spring Quarter, Engineering and Science Day, and Deep South Conference just on the horizon. Every year in the spring Louisiana Tech University has Engineering and Science Day where high school students from the surrounding schools learn what the College of Engineering and Science has to offer. Concrete Canoe and Steel Bridge worked over time to have their finished products ready for Engineering and Science Day to show all of the high school students.

Steel Bridge completed fabrication ahead of time giving them plenty of time to practice the assembly portion of the competition. At competition the team put the bridge together in 9 minutes and 30 seconds, the fastest time at conference. We passed sway testing with ease, although were not as successful with loading the 2500



The Concrete Canoe Racing Team on race day

UNIVERSITY OF NEW ORLEANS By Christina Melara, Student Chapter Secretary

It's been an exciting year for us here at the University of New Orleans. Months of tireless preparation came to a riveting conclusion when we competed during ASCE's Deep South Regional Conference in Memphis, Tennessee. The six-hour drive from New Orleans to Memphis was a grueling one, but not even the torrential downpour that greeted us when we arrived could dampen our spirits.

After a good night's sleep that Thursday, we woke up bright and early Friday morning for the concrete canoe races. Our steadfast vessel, The Blue Pearl, effortlessly glided through the murky waters of Patriot Lake. "It was like watching poetry in motion-very moving," reminisced Andrew Jensen, concrete canoe co-captain. Universities from Louisiana dominated the top spots in not only the races, but in aesthetics and best overall products. The University of New Orleans placed in the top three in many of the races, and we sailed our way to second overall.

pounds. The bridge hit maximum deflection of 3 inches with a 2450 pound load. Steel bridge has set a goal for next year to pass the loading part of competition.

The Concrete Canoe team's hard work and dedication really showed off during competition. The team achieved overall first place by sweeping every race, and will be attending nationals competition in Pennsylvania during the month of June. The team will continue to have regular paddling practices to improve their race times before nationals.

In the month of April we plan to have elections for the 2014-2015 school year. The old and new officers will work together until the end May to ensure the new elected officers are ready for the 2014-2015 school year.



Members of the Steel Bridge team loading for the deflection test

Our steel bridge, Blue Steel, was one of the more interesting designs at competition. Having practiced constructing the bridge countless times before competition, we moved like fluid during our actual run. "Our steel bridge team was so blindingly fast! My eyes couldn't keep up with them," said Ryan Gerken, ASCE-UNO's student chapter president. Unfortunately, our deflection under the loading condition was too great, and we were disgualified from the competition.

We took away many amazing experiences and lessons from this year's Deep South Regional Conference. We look forward to passing all of this knowledge to younger students and inspiring them to be active participants in the Civil Engineering program here at UNO. We are making a strong comeback after all these years. Look out for us at Conference next year; we plan on winning it all!



Co-ed Concrete Canoe Sprint Team



Steel Bridge Team

MCNEESE STATE UNIVERSITY

By Jessica Trahan. Student Chapter President

McNeese State University attended the 2014 ASCE Deep South Conference in Memphis, Tennessee hosted by Christian Brothers University. McNeese competed in the following events: Concrete Canoe, Surveying, and the Mystery Event. One of our senior students, Benny Nero, represented McNeese with his Meade paper and presentation at conference. We are very proud of our canoe this year, The Time Machine; we believe this is our strongest and most cost efficient canoe that McNeese ASCE has ever designed. Each canoe that competes at the regional conference must pass a swamp test where the canoe is to be completely submerged underwater and must break the surface on its own under 2 minutes. Not only did The Time Machine pass the swamp test with flying colors, but when loaded with our paddlers, it had one foot of freeboard (which is the distance from the water level to the upper edge of the canoe). This is also our first canoe that has made it to conference and back home without any damage which allows us to use the canoe as our practice canoe for next year.

Aside from conference awards, members of our ASCE chapter have also received awards at our 2014 Engineering Banquet. Three stu-



dents, Aron Johnson (senior), Yubrani Eid (senior), and Katie Hinson (senior) received the SASHTO Award, awarded by the Louisiana DOTD. Katie Hinson also received the Distinguished Senior Award, awarded by the ASCE Acadian Branch. Trent Whitley (senior) received the Geo-Science Award, awarded by Fugro. Justin Jordan (senior) is the first recipient of the Outstanding McNeese ASCE Member award for his hard work this year getting us to conference. Jessica Trahan (senior) received the Leadership Award, awarded by the McNeese State University's Department of Engineering.

Along with our members receiving outstanding awards, McNeese State University's ASCE has also been recognized. We have made it a goal to work on improving our organization as a whole by participating in various volunteer services such as Engineering Week at McNeese State and also volunteering our time with the levee project in Holly Beach. By doing so, our organization has been awarded a Letter of Significant Improvement and also a Letter of Honorable Mention (only awarded to the top third organizations). We plan to continue improving and look forward to next year's service projects.



McNeese State University's ASCE and our awards

The Time Machine and it's crew

LOUISIANA STATE UNIVERSITY By Emily Weigand, Student Chapter President

The ASCE LSU student chapter participated in the concrete canoe, steel bridge and mystery event competitions that took place during the 2014 Deep South Conference hosted by Christian Brothers University in Memphis, TN on March 28-29, 2014. Thirteen ASCE at LSU members attended the conference as members of the teams. The concrete canoe team placed third overall, which was an improvement from last year. The canoe was improved this year by decreasing the thickness of the sides from over an inch to one-half inch and lightening the concrete mix by removing coastal sand and expanding clay. The team also practiced regularly at the lakes on campus before the conference to improve their rowing skills. The women placed second in both the 600m slalom and 200m sprint



2013 Concrete Canoe Team: Jabari Landry, Brendan Copley, Laura Iverson, 2013 Steel Bridge Team: Paul Wedig, Blake Villarrubia, Josh Kohler, Ryan Alicia Fortier, Sean Moore, Emily Weigand

races. The four-person co-ed 400m sprint placed third. The men placed second in sprint and third in slalom. The steel bridge team improved this year by painting their bridge purple and gold to be more aesthetically pleasing, using I-beams to decrease weight, and decreasing their build time. Steel bridge had a competition build time of 9:15 minutes before penalties and deductions, which was one of the best construction times among the nine teams participating to the competition. Unfortunately, their bridge failed during loading just after the final weight was added. Additionally, the LSU team worked together to win first place in the mystery event. Contact ASCE at LSU: asce@lsu.edu | www.asce.lsu.edu



Jeansonne, Brad Jacobs

— CALENDAR OF EVENTS —							
		AUGUS	51 2014				
August 9, 2014 Centennial Gala – Renaissance Hotel – Baton Rouge, LA							
August 9, 2014 Centennial Posters available at Centennial Gala							
		SEPTEM	BER 2014				
September 24-25, 2014 24th Annual Louisiana Civil Engineering Conference and Show – Kenner, LA							
		ОСТОВ	ER 2014				
October, 2014 144th Annual Conference 2014 – Panama City, Panama Please check for latest updates online: <u>http://www.lasce.org/calendar.aspx</u> PROFESSIONAL LISTINGS							
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LOUISIANA CIVIL ENGINEER

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