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# News

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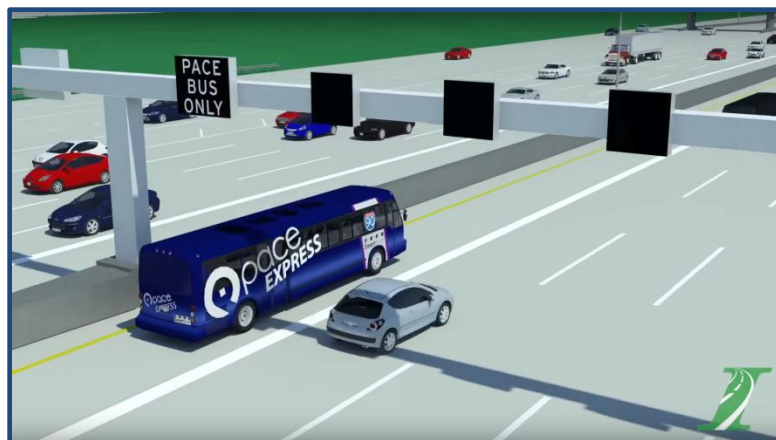
## Commute Smarter, Not Harder

*By Thomas Borges, P.E.*

It's no secret that Interstate 90 has been going through some major reconstruction over the past few years. The 77-mile segment between South Beloit and O'Hare International Airport, known as the Jane Addams Memorial Tollway, has been a near-permanent construction zone for what may seem like forever to many of its daily users. When was the last time you drove to an event at the Allstate Arena or to catch your flight at O'Hare without passing a dreaded "Construction Zone Ahead" sign?

As part of the Illinois State Toll Highway Authority's massive 15-year, \$12 billion capital program, *Move Illinois*, over 60 miles of I-90 has been rebuilt and widened since the program was approved back in 2011. By increasing the number of travel lanes to as many as four in each direction, capacity of the route will accommodate future demands

and in turn congestion and travel times will be reduced. In addition, paved shoulders along the route have been widened and will operate as "Flex Lanes" to allow Pace buses to utilize them for their express routes as they



**Figure 1: Flex Lanes for Pace Express Bus Routes** (Image courtesy of the Illinois Tollway)

already (quite successfully) do on I-55<sup>1</sup>. The Flex Lanes could also potentially (continued on page 10)

<sup>1</sup>

[http://www.pacebus.com/sub/vision2020/expressway\\_brt.asp](http://www.pacebus.com/sub/vision2020/expressway_brt.asp)

## President's Notes

John Lazzara, P.E.



The Illinois Section has had a very busy Spring. The technical institutes and groups have held numerous luncheons, dinners, and special events with keynote speakers from government agencies as well as many technical industry experts. I hope you have had a chance to attend some of these events and take advantage of educational and networking opportunities. The President Elect and Student Scholarship Dinner in April was very well attended and included two extra roundtable forums to exchange thoughts on topics ranging from infrastructure condition and funding to leadership development. One of the most recent events was the Legislative Drive Down trip to Springfield on May 18th.

The Illinois Section hosted the 10<sup>th</sup> annual trip to the State Capitol to talk with our state legislative leaders. ASCE members from the Illinois, Central Illinois, and St. Louis Sections represented over 3,200 civil engineers throughout the State. The event started with a gathering of the ASCE attendees to discuss the messages we wanted to emphasize this year which included:

- **ASCE Urges the General Assembly to Adopt a State Budget:**  
A lack of financial leadership is hurting the citizens of Illinois and the state's economy.
- **Invest in Illinois Infrastructure**

The state budget impasse has contributed to a sharp decline in infrastructure investment, which in turn is harming the state's long-term economic growth, employment, household income, exports, and competitive advantage.

- **Protect Qualifications Based Selection of Servicess (QBS)**  
ASCE supports qualifications-based selection procedures currently in place, and urges lawmakers to protect this process.
- **Protect the P.E. License**  
ASCE supports and promotes the professional licensure of engineers with appropriate standards for education, experience, examination, continuing professional development and professional conduct to protect and enhance the health, safety and welfare of the public. ASCE opposes any efforts to decrease the requirements for PE licensure.

We were fortunate to have Senator Karen McConaughay (District 33) as our keynote speaker during lunch to update our group on critical issues being discussed in the legislature such as passing a state budget and the future of transportation infrastructure. She also provided tips on key concepts for us to discuss with our Senators and Representatives. Her comments strengthened our messaging and increased our enthusiasm. Our group split up and attended (continued on page 14)

## ASCE Illinois Section News

**ILLINOIS SECTION NEWSLETTER**  
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Section - Region 3

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# ***Klein Creek Flood Mitigation Project at Carol Stream's Armstrong Park***

*By Kevin Klein, P.E.*

The \$12.5 million stormwater reservoirs at Armstrong Park passed their first significant test recently during the weekend storms of April 29<sup>th</sup> when they filled for the first time since the project was completed in the summer of 2015. The project along Klein Creek, located in Carol Stream, was a joint effort between DuPage County Stormwater Management, the Village of Carol Stream and the Carol Stream Park District to alleviate flooding in the area that had led to flooding in nearby homes several times in recent years. Of the total project cost of \$12.5 million, the County provided \$2.8 million by issuing bonds and the rest was funded by a U.S. Department of Housing and Urban Development grant.

Prior to the stormwater improvements at Armstrong Park, a large portion of the area had been a part of the floodplain of Klein Creek, which borders the eastern edge of the park. "The project originally came out of the need to update the original Klein Creek watershed plan with the July 2010 floods occurring while the update was in progress," said John Wills, President of WBK Engineering, LLC (WBK) who was the lead engineering design consultant for the project. "A high

groundwater table and a lack of open space had frustrated stakeholders during previous attempts to identify design

and a spirit of intergovernmental cooperation prevailed to find new opportunities."



## **Klein Creek in Armstrong Park**

Aerial view of Armstrong Park post-construction shows the stormwater updates and new park facilities. Reservoir Two is shown on the left and the smaller Reservoir One is between the basketball courts and softball fields on the right. Photo provided by WBK Engineering.

concepts to provide additional flood storage," Wills added. Anthony Charlton, Director of Stormwater Management for DuPage County, said "the flooding that occurred in 2010 really galvanized the community

The design of the entire system is unique; one that incorporates several water resource concepts. First, the relatively (continued on page 12)

# Beyond the Technical – Engineering Leadership and Personal Branding

By Tucker Raney

The typical collegiate curriculum for an engineering student involves hours of theory and design coursework focused on developing the technical proficiencies of future engineers. At the recent ASCE Central Region Younger Member Conference (CRYMC) in Minneapolis, MN, I discovered that soft skills developed outside of the classroom can be just as important in an engineering career. The leadership seminar I attended shared valuable information on developing important leadership traits as well as creating a personal brand within our profession. The insights from the seminar were directed at helping younger engineers move forward in their careers but I feel the information warrants sharing with civil engineers of all career levels. Technical skills are a requirement in engineering, but soft skills can set you apart and carry you forward in your career.

From George Foreman Grills to Trump Tower, we've all seen personal branding at work in the arenas of merchandise and lifestyle. But did you know that personal branding can also be an important tool in engineering? Personal branding can be thought of as how someone would describe you when you are not around, or the impression someone's character and actions

give off. Similar to a reputation, people's perception of your personal traits and strengths can be the edge that helps in landing a new job or promotion. For this reason, developing a strong, positive personal brand is beneficial no matter your age, experience or field of expertise. Each individual should consider strengths, values and characteristics that are important within our profession and think of ways to intentionally project that image to others. For example, an engineer may choose to develop a personal brand that is known for being technically proficient and meticulous though attention to detail in design and planning stages of projects. Professional personal branding can also be developed outside of projects and the workplace. Active involvement in organizations such as ASCE can develop a personal brand of an enthusiastic team player or hard worker that then carries over into the workplace. When developing your own personal brand it may be helpful to consider the leaders you admire, your individual skillset, and the expectations of your clients and organization. One question was repeatedly asked during an activity I participated in at CRYMC; what differentiates you from all the other engineers and project managers?

While there is no one-size-fits-all personal brand, trustworthiness is

a reputation that is widely recognized as an attractive quality in employees and coworkers. Trust is the foundation of a positive, effective relationship which fosters teamwork and drives results. The most important way to gain trust is to maintain honesty and follow through with your commitments. It takes only one little lie or forgotten deadline to lose the trust of a colleague. Once trust is lost, it can be much harder to earn back. Don't take this risk; instead make establishing trust the foundation of your engineering personal brand.

Not only is trust a valuable part of professional personal branding, but it is a key leadership quality. Leaders who establish a personal brand of reliability and consistency in their words and actions can champion successful, productive teams. Those who don't recognize the value of trust within a team will have a difficult time steering a project or company towards success no matter how competent they are in their area of expertise.

Whether you are a younger engineer just starting your career or a senior project manager, I challenge you to go beyond the technical and develop your own unique engineering personal brand. Set high standards through action, practice trustworthiness (continued on page 8)

# Region 3 Updates

By George Ghareeb, P.E., FASCE, Region 3 Director

On August 3<sup>rd</sup> and 4<sup>th</sup>, Region 3 will host the 9<sup>th</sup> annual Region 3 Assembly in Detroit, MI - a save the date notice will be sent out shortly. Thank you for all that have attended the assembly in the past and for those that are going to attend this year. The lineup for this year will again include several interesting discussions and topics and the status of the initiative at ASCE. We are currently working on several presentations to delineate some of the historical bridges in Detroit or the big bridge crossing to Canada.

Region three covers a large geographical area and recently we have acquired our friends from four Canadian provinces including Manitoba, Nunavut, Ontario, Saskatchewan. Region 3 will gain roughly 900 members from Canada. Your region board of governors is evaluating alternatives on the approach to handle the additional increase in membership and that could include the addition of a new governor or splitting the geographical regions among the existing governors.

I wanted to take this opportunity to relay to you the recent challenges that were discussed at the national board meetings, just highlighting a few of the activities:

1. Committee for America's Infrastructure chair Mr. Greg DiLoreto, P.E., P.L.S., D.WRE,

Pres.13.ASCE, presented the recent updates on the release of the 2017 report card. The goals of the report card were to inform the public and the legislatures in DC and everywhere else about the status of our nation's infrastructure. The release of the report this year was well received from all agencies including various news media where our legislative affairs office provided a pre-briefing to senators and congressional members along with the transportation and environmental committees in the house and senate. In addition, Mr. Chuck Hookham – a previous director testified in congress on the release of the report card and its effects on the nation's infrastructure. Please make sure you spread the word about the infrastructure report card.

2. The board is currently engaged in a strategic planning session where ASCE's vision, mission, goals along with the strategic initiatives are being evaluated. The outcomes of the board strategic planning sessions will be available to all members as soon as the sessions are completed and accepted by the board.

3. The chair of the Raise the Bar Committee, Mr. David B. Peterson, P.E., F.ASCE, provided an update on the status of the activities of the raise the bar committee. After the recent board mandate to cease all legislation efforts on raise the bar, the

committee requested the board to approve the revisions to policy statement 465. The Board of Direction APPROVED revisions to PS 465, "Academic Prerequisites for Civil Engineering Related Licensure and Professional Practice". This will enable one east coast state to garner support from the board on its legislation effort that seems to be working. This effort is being solely conducted by that state alone.

4. The task Committee on Governance Structure chair Mr. D. Wayne Klotz, P.E., D.WRE, F.EWRI, ENV SP, Pres.09.ASCE, provided an interim report from the committee. The committee evaluated the structure of the board and recommended that the board be represented by 4 region directors (instead of the current 10), 3 technical directors and 3 at large directors in addition to a president and vice president position. This proposal to say the least took the board by surprise not only for its proposed suggestions, but also on the method and approach this was presented. I truly believe that this topic will be as contentious as the raise the bar. Your ASCE always picks challenging and controversial subjects. Stay tuned for more information in the future.

5. Dream Big was released as well this year with an opening (continued on page 9)



# It's Time to Nominate Your Peers, Projects, and Firms for the 2016 ISASCE Awards

By Pat Lydon, P.E.

With the construction season in full swing, it is the time of year when the ASCE Illinois Section solicits nominations for individuals, exceptional projects, and employers for their contributions to civil engineering and our Society. The Illinois Section needs your help in identifying and recognizing qualified individuals, projects, firms, and agencies. The Illinois Section will be reaching out to those Life Members to participate in nominating potential recipients. The award winners will be acknowledged during our Annual Awards Dinner taking place October 5, 2017 at the Palmer House Hotel.

## HOW TO NOMINATE?

Nomination forms and additional information on award requirements can be found on our website at

[www.isasce.org/scholarships-awards](http://www.isasce.org/scholarships-awards). For nominations of individuals, a complete application consists of a nomination form, a letter of support, resume, and letters of recommendation. Project nomination packets must consist of the nomination form and letter, a narrative, and pictures highlighting the unique attributes

of the project or construction aspects. A statement of support from the owner or client is also needed for project nomination packets.

Nominations for all 2016 awards are due by **July 28, 2017**. Please submit the original nomination(s) to Pat Lydon at 1266 Orchard Road, Montgomery, IL 60538 and a pdf of the nomination packet electronically to [plydon@michels.us](mailto:plydon@michels.us). Feel free to call Mr. Lydon (630.423.0804) with any questions or comments.

## WHAT ARE THE CATEGORIES?

ISASCE has eleven (11) awards available for individuals, firms, and projects. Below is a brief description of each available award. Additional information and details can be found on ISASCE's website.

### Outstanding Civil Engineering Achievement Award

The Outstanding Civil Engineering Achievement Award recognizes outstanding projects that contribute to civil engineering progress and to society. The project must have been completed by the end of 2016 to be eligible. Three project size categories are available – Projects having a Cost

of \$10M or less, Projects with a cost over \$10M but less than \$25M, or Projects with a cost of \$25M or more. **Projects may be nominated for the National OCEA Award.**

### Sustainability in Civil Engineering Achievement Award

The Sustainable Project of the Year award recognizes creativity in the form of innovative sustainability. Projects may be any that demonstrate innovation in sustainability and that were constructed by the end of 2016 and demonstrate adherence to the principles of economic, social, and environmental sustainability.

### Civil Engineer of the Year

The Civil Engineer of the Year award recognizes an outstanding professional engineer, who has made contributions to society through extraordinary professional conduct in a specific instance or having an established reputation for professional service.

### Young Civil Engineer of the Year

This award will be presented to a civil engineer with either EIT or PE registration who is employed (continued on page 13)

# ASCE Great Lakes Regional Conference (GLRC) Recap

The ASCE Great Lakes Regional Conference (GLRC) was held at the Milwaukee School of Engineering on March 30th through April 1st. 19 regional universities participated in various engineering competitions, including the Concrete Canoe and Steel Bridge competitions. The ASCE student chapters from the Illinois Institute of Technology (IIT), Northwestern University (NU) and the University of Illinois at Chicago (UIC) all participated in the competition.

Below is a summary of the results for each school:

- **IIT:** Placed 9th overall
  - 2nd in Mystery Design (Paper Airplane), 2nd in Quiz Bowl, 5th in Steel Bridge, 6th in Materials Design, 7th in Technical Paper, 11th in Environmental Design, 12th in Concrete Canoe
- **NU:** Placed 18th overall
  - 7th in Quiz Bowl, 8th in Environmental Design, 11th in Technical Paper,

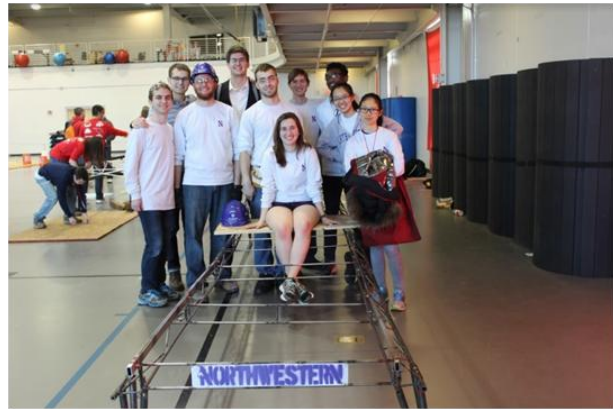
18th in Mystery Design (Paper Airplane)

- **UIC:** Placed 4th overall
  - 1st in Environmental Design, 1st in Mystery Design (Paper Airplane), 6th in Steel Bridge, 6th in Geotechnical Design, 10th in Technical Paper, 15th in Concrete Canoe

Congratulations to all of the teams!! Next year's GLRC will be hosted at UIC, so stay tuned for opportunities to volunteer at this fun event!



IIT Team



Northwestern Team



UIC Team

# 2018 Report Card for Illinois Infrastructure

On the heels of the 2017 ASCE Infrastructure Report Card ([www.infrastructurereportcard.org](http://www.infrastructurereportcard.org)), the Illinois Section is embarking on an update to our 2014 Report Card for Illinois Infrastructure. The 2014 Grade for Illinois Infrastructure was a “C-“ and showed incremental progress from the 2010 Report Card Grade of “D+”, but have our elected officials continued this commitment to the State’s Infrastructure?

The 2018 Report Card will focus on the following categories of

Infrastructure within our State:

- Aviation
- Bridges
- Dams
- Drinking Water
- Navigable Water
- Ports (New Category for 2018)
- Rail
- Roads
- Transit
- Wastewater

Each category will be evaluated by a panel of Civil Engineers according to eight criteria developed by ASCE National.

The 2018 Report Card effort was kicked off on May 4<sup>th</sup> with an in-person meeting with ASCE National Legislative Staff and the Report Card Committee. The Committee members are from throughout the State including public and private sector Civil Engineers from as far away as St. Louis.

The 2018 Report Card for Illinois Infrastructure will be released in coordination with Engineers’ Week in February 2018.

## Beyond the Technical – Engineering Leadership and Personal Branding

(continued from page 4)

and cultivate your positive, individual traits to become a true leader in our industry.

**Tucker Raney** is a structural engineer at Jacobs and is an active member of

the ASCE-IL Younger Member Group, currently serving as Treasurer.

## 2017 ASCE Illinois Section Student Chapter Resume Book

The ASCE Illinois Section has produced its *Seventh Annual Resume Book* for 2017. Members of the ASCE Student Chapters at the Illinois Institute of Technology, Northwestern University, and the University of Illinois at Chicago have submitted one-page resumes for internships and full-time positions. A published PDF copy of this year’s resume book is freely available to all professional members of the ASCE Illinois Section upon request. If you are an employer interested in obtaining the resume book, please provide your ASCE membership number and contact **Sherryl Malanao** at [Sherryl.Malanao@jacobs.com](mailto:Sherryl.Malanao@jacobs.com).



# ASCE 2017 Younger Member Group Award Received by IL Section ASCE Younger Member Group

The Illinois Section is proud to announce that our very own YMG has been selected by the ASCE Committee on Younger Members to receive the **2017 Younger Member Group Award** for large groups. The purpose of this award is to promote excellence among the Younger Member Groups in ASCE and recognize the outstanding professional, technical, social, outreach, and community service activities that are hosted throughout the year. On average, the Illinois Section YMG hosts 3-4 events per month and the selection committee was particularly impressed by the group's student outreach efforts and organized community service activities.

A big thank you to all the YMG members who regularly participate in our monthly events. Your commitment and efforts are the reason we have received this honor! The current YMG Board of Directors would also like to thank the Illinois Section for their continued support and all of the employers who encourage their younger engineers to participate in ASCE events. Please visit our website at [www.isasce.org/technical-groups/younger-member-group](http://www.isasce.org/technical-groups/younger-member-group) for a list of current board members and more information on how to get involved in YMG events.



YMG is all smiles after winning the 2017 Younger Member Group Award! Picture left to right: Past Chair, Megan McDonald of Clark Dietz; Past Chair, Robert Brzezoni of Milhouse Engineering; Past Annual Events Director, Alina Randall of TERRA Engineering; Current Treasurer, Tucker Raney of Jacobs; Current Chair, Monica Crinion of WBK Engineering; and Current Social Director, Tina Revzin of TranSystems. Photo Credit: Andy Wilding

## Region 3 Updates

(continued from page 5)

night at the Air Space museum in Washington DC. The release was extremely successful and as you are aware the movie has been released at several cities across the nation.

6. The committee on diversity and inclusion presented to the board in the march meeting

the first reading of the addition of canon 8 – a new cannon for ASCE. Canon 8 will solely focus on the diversity and inclusion effort being led by ASCE. The board approved the first reading and the committee was entrusted to come up with the proposer wording for the canon to be

presented at the summer meeting for a second reading.

7. Finally, the financial status of your organization is in good condition, but cash is decreasing as ASCE continues to have negative operating results, the reserves are down by about (continued on page 10)

## Region 3 Updates

(continued from page 9)

2.5%, and revenues continue to be a challenge. Expenses are increasing due to labor inflation, program growth and business infrastructure improvements. However, ASCE has cut expenses each year, but needs to make measurable efforts to perform deeper cuts. This could possibly include elimination of the lower priority initiatives, and a leaner organization that focuses on member value.

Thank you all for allowing me to serve in my capacity as your

director, and I know I cannot perform this task without the support of the region governors. They do an excellent job in reaching out to all the sections and branches. Please let me know if I can be of any assistance to your section or branches, my line is always open.

*Mr. Ghareeb serves as a Vice President for TERRA Engineering, Ltd. (TERRA) where he is responsible for administration, operations and business development. Prior to joining TERRA, Mr. Ghareeb started*

*his career as the Bridge Management Engineer for the Illinois Department of Transportation (IDOT). He later served as a Project Manager for Dar Group, an international design firm where he was instrumental in the completion of a 400 million dollar airport project. His international experience exposed him to engineering practices in countries, including England, Italy, Egypt, Saudi Arabia, Dubai, Qatar and Lebanon. Mr. Ghareeb is a Director/Chair for ASCE Region 3.*

## Commute Smarter, Not Harder

(continued from page 1)

operate as additional traffic lanes when needed.

Although 2016 saw the completion of the majority of this ambitious project, one of the most important improvements has yet to make its grand debut. The Tollway's I-90 SmartRoad has

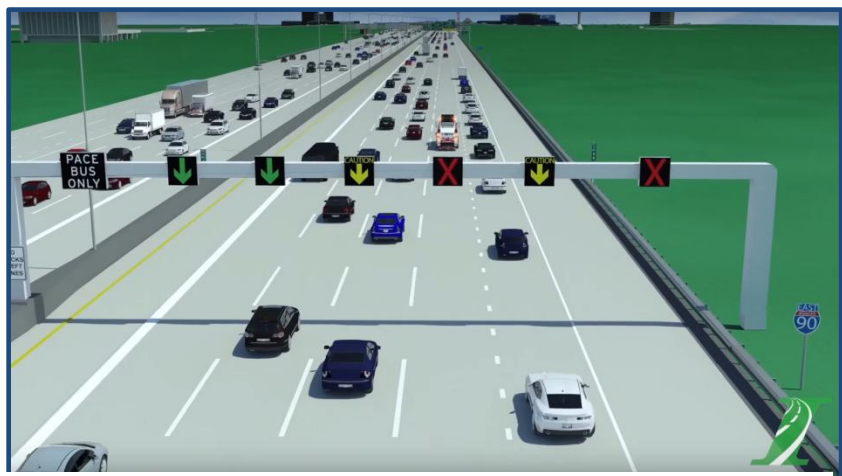
**Every gantry provides a dedicated electronic message board for each travel lane, as well as both the inside and outside shoulders.**

been hiding in plain sight for the past several months, with overhead gantries installed every half-mile on the portion of the Jane Addams east of Barrington Road in Hoffman Estates. Every gantry provides a dedicated electronic message board for each travel lane, as well as both the

inside and outside shoulders<sup>2</sup>.

The simplistic design of each message board was created to give the traveling public "as much information as possible, as timely

as possible," describes Greg Bedalov, Executive Director of the Illinois Tollway. Green arrows will signify that the lane is operating under normal free-flow



**Figure 2: Various Lane Designations Displayed on Overhead Message Boards**  
(Image courtesy of Illinois Tollway)

2

<https://www.illinoistollway.com/projects/jane-addams/i-90-corridor-overview>

conditions; yellow arrows will represent a slow-down in traffic (continued on page 11)

# Commute Smarter, Not Harder

(continued from page 10)

and might suggest switching lanes; a red “X” will designate a lane that has been closed to traffic, either due to an accident or temporary roadwork. The interconnected system is designed to update drivers on the fly – when an incident occurs a mile or so up the road, the message boards will direct drivers to merge to other lanes far enough in advance with the intention of preventing heavy congestion at the point of lane reduction, otherwise known as a traffic bottleneck. “We’re going to try to give people as much advance notice because obviously we don’t want people doing the last-second merge,” Bedalov explains. This state-of-the-art system of real-time traffic optimization is known as Active Traffic Management (ATM), and eventually it will be hard to imagine driving on such a major roadway without its assistance.

The message boards also serve an important role for the aforementioned Flex Lanes, as they will designate when a shoulder or traffic lane is to be utilized by Pace buses. Larger, less frequent message boards located along the outside edge of

**Larger, less frequent message boards located along the outside edge of pavement will display more traditional information such as travel times, weather conditions, seatbelt reminders and amber alerts.**



Figure 3: Larger Message Board Displaying Weather Conditions (Image courtesy of the Illinois Tollway)

pavement will display more traditional information such as travel times, weather conditions, seatbelt reminders and amber alerts. Amid concerns of over-messaging the public, Bedalov stresses that they are focused on limiting distractions and will use the signs to “make sure that traffic moves as smoothly as possible.” In anticipation, Tollway engineers have determined the optimal positioning and frequency of the boards to mitigate distraction.

Perhaps most important of all is that the I-90 SmartRoad is truly future-proof. The infrastructure that has been built, most notably the system of conduits containing fiber optic cables installed within the median, will allow the Tollway to easily incorporate other smart features as they become available, such as integration with connected vehicles and (eventually) driverless vehicles. “We’ve put enough power and fiber into the

road that we’ll be ready to communicate with connected vehicles,” says Bedalov, who explains that the utilization of connected vehicles is the first step before going fully-autonomous. Although still requiring a person behind the wheel, connected vehicles will talk to each other using short-range radio signals that alert the driver of upcoming dangers in order to allow as much reaction time as possible<sup>3</sup>. In fact, according to Bedalov, the Tollway will soon begin testing a small-scale connected vehicle pilot program using 10 of their own maintenance vehicles.

**The Tollway will soon begin testing a small-scale connected vehicle pilot program using 10 of their own maintenance vehicles.**

With the recent announcement regarding moving forward with plans to reconstruct the 22-mile segment of the Central Tri-State Tollway (I-294) between Balmoral Avenue and 95<sup>th</sup> Street<sup>4</sup>, Bedalov insists that smart road technology will be an important part of the project as well as other future reconstruction projects. “As we evaluate it, monitor it and see how [the I-90 and I-294 SmartRoad technology] is doing, it’s my intention and my hope that (continued on page 12)

<sup>3</sup> [https://www.its.dot.gov/cv\\_basics](https://www.its.dot.gov/cv_basics)

<sup>4</sup> <https://www.illinoistollway.com/outrach/projects-in-your-community>

# Commute Smarter, Not Harder

(continued from page 11)

we can implement it across the entire system,” he says.

The past decade has seen seismic shifts in many economic sectors due to the rapid rise of “smart” technology, and the transportation industry is far from immune. Agencies will need to anticipate these new technologies with innovations of their own and the I-90 SmartRoad is a bold step in that direction. The Executive Director expects the system to be

fully up and running by August of this year, with Pace bus routes operating in the Flex Lanes as early as June. The SmartRoad is sure to deliver on its name and hopes to serve as a model for future infrastructure not only in Illinois, but nationwide. So, the next time you use your smart phone to buy your Allstate Arena concert tickets or check your flight status while en route to O’Hare, do not overlook the “smart” technology that also

exists under your feet and above your head.

**Thomas Borges, P.E.**, is a Project Engineer at Bloom Companies, LLC with over 7 years of experience in the transportation industry. He currently serves as Chair of the IS-ASCE Transportation and Development Institute.

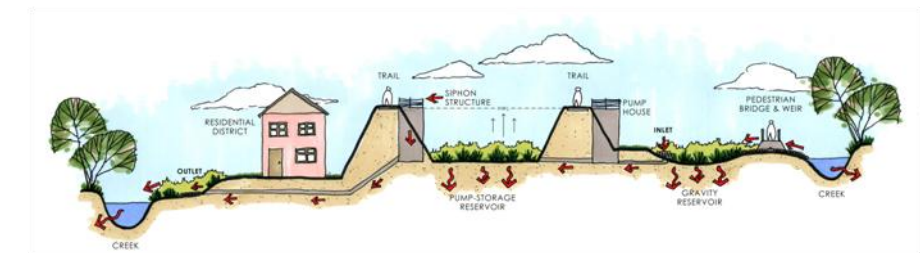
A special thank you to Illinois Tollway Executive Director Greg Bedalov for providing insight and updates on the project.

# Klein Creek Flood Mitigation Project at Carol Stream’s Armstrong Park

(continued from page 3)

smaller Reservoir One adjacent to Klein Creek accepts water when the levels in the creek rise over a fixed, concrete weir. This diverts floodwaters away from the majority of the park and the nearby neighborhood. This reservoir fills via gravity and drains back into Klein Creek when floodwaters recede.

However, if the level in Reservoir One reaches the benchmark flood stage level, the floodwaters will then be pumped into the much larger Reservoir Two along the southwest edge of the park by two large pumps that can pump at a rate of 20,000 gallons per minute. This reservoir is located where the southern portion of Lake George had been previously. Greeley and Hansen provided the design of the pump station to pump the water from Reservoir One to Reservoir Two.



## Schematic Stormwater Improvements

Schematic section of the stormwater improvements at Armstrong Park shows (from right to left) the overflow from the creek entering via gravity into Reservoir One, pumped up into Reservoir Two, and outlet via siphon structure back to the creek downstream.

The challenge with Reservoir Two was that the groundwater table was not very deep, meaning that the design team needed to look at alternatives to increasing the flood storage below the existing groundwater table. “Realizing that in the act of pumping the water to the higher elevation for the reservoir storage, an opportunity to provide a ‘siphon’ was realized.

When the high water level was reached in Reservoir Two, a gradient for a gravity-driven force main was available,” Wills said. The flood control storage in Reservoir Two was designed to be above the groundwater table and is approximately 15 to 20 feet above adjacent grading. (continued on page 13)



## Klein Creek Flood Mitigation Project at Carol Stream's Armstrong Park

(continued from page 12)

Another consideration for the larger reservoir was the fact that the 15-foot tall berm surrounding Reservoir Two was technically considered a dam by the Illinois Department of Natural Resources. This meant that the embankments needed to be lined with Articulated Concrete Blocks (ACB) to armor the surface and protect it from erosion. An open-cell block was used to allow for some vegetation at the surface to try to somewhat match the surrounding park atmosphere.

Lastly, the overflow for Reservoir Two needed to be designed so that in extreme conditions, it would not overflow to the park and surrounding homes. Sarah Hunn, Chief Stormwater Engineer, DuPage County, worked with WBK to design the 60-inch siphon that acts as the overflow for the reservoir and diverts these flows underground through the adjacent neighborhood, sealed and

pressure tight, so when the reservoir was full of water, pumping into it from Reservoir One could continue. Water pumped into the reservoir “then essentially became the inflow to the siphon even though the reservoir is full,” Wills said. The siphon then discharges back into Klein Creek about half a mile downstream behind the Carol Stream Fire Protection District headquarters on Kuhn Road. In total, the reservoirs have a capacity to hold nearly 113 acre-feet of floodwater.

The recent rainfall in late April and early May proved to be a good test for the relatively new system. “Before construction, the amount of rainfall we received at the end of April could have caused structural damage to surrounding homes or, at the very least, induced fear in these residents, but having the facility in place and operable ensured

structures would not incur surface flooding from an event of this size,” Charlton said.

**Kevin Klein, P.E.**, is a Stormwater Consultant for Contech Engineered Solutions. He currently serves as an officer for the Urban Planning & Development Group (UPDG), a technical group of the ASCE Illinois Section.

**John Wills, P.E., CPESC**, is President of WBK Engineering, LLC, with Illinois offices located in Aurora and St. Charles, and is an expert in all aspects of stormwater management.

**Anthony Charlton, P.E., and Sarah Hunn, P.E.**, are Director of Stormwater Management and Chief Stormwater Engineer of DuPage County, respectively. They are responsible for design, permitting, and construction of flood control and habitat restoration projects.

## It's Time to Nominate Your Peers, Projects, and Firms for the 2016 ISASCE Awards

(continued from page 6)

in the private sector and is under 35 years old as of February 1, 2017. This candidate will be evaluated on having gained significant professional achievement through advancement of the profession, evidence of technical competence,

high character and integrity, and contribution to public service.

### **Government Civil Engineer of the Year**

This award will be presented to a distinguished registered

professional civil engineer employed in public service with evidence of sustained outstanding civil engineering performance in the public sector, showing evidence of high character and professional integrity.  
(continued on page 14)

# It's Time to Nominate Your Peers, Projects, and Firms for the 2016 ISASCE Awards

(continued from page 13)

## Young Government Civil Engineer of the Year

As above, this award is presented to a civil engineer with either EIT or PE registration who is employed full-time in the public sector and is under 35 years old as of February 1, 2017. This person has shown excellent performance and demonstrated leadership potential in the public sector, evidence of high character, and professional integrity.

## Citizen Engineer of the Year

This award is to be presented to a member who has made volunteer efforts that better our world in such areas as local or national legislation, education at all levels, non-profit volunteer organizations, community activities, etc.

## Public Involvement Award

Presentation of this award will go to an IL Section member or group, which has made volunteer efforts that better our world in such areas as local/national legislation, education at all levels, non-profit volunteer organizations, and community activities.

## Public Sector Employer Recognition Award

This award will be presented to a public sector employer who encourages their engineers to actively participate in ASCE. Special recognition will go to those organizations who exhibit exemplary support as evidenced by: providing a model for involvement through agency-wide participation; allowing engineers time off to attend ASCE meetings/seminars/events; supporting and encouraging technical and professional growth; encouraging engineers to prepare articles for publication in ASCE professional and technical journals; and assisting in the payment of society dues.

## Private Sector Employer Recognition Award

This award will be presented to a private sector employer that encourages their engineers to actively participate in ASCE. Special recognition will go to those organizations who exhibit exemplary support as evidenced by: providing a model for involvement company-wide; participation in local, regional, and/or national ASCE activities; allowing engineers time off to

attend ASCE meetings/seminars/events; supporting and encouraging technical and professional growth; encouraging participation of younger members; and assisting in the payment of society dues.

## ASCE Excellence in Journalism Award

This award was founded in 1994 for the ASCE National Awards. This award is given annually to a reporter or reporters whose news coverage enhances public understanding of civil engineering issues and the impact of civil engineers in this state or nation. Only reports from general (non-trade) print publications are eligible. News stories must be published in English, in Illinois, and between May 1, 2016 and April 30, 2017.

For additional information and more in depth award criteria, please go to ISASCE's website – [www.isasce.org/scholarships-awards](http://www.isasce.org/scholarships-awards).

**Mr. Lydon** is the Director of Operations for Michels Foundations specializing in deep foundations and below grade construction. He serves as a Director to 2017.

# President's Notes

(continued from page 2)

meetings with legislators representing our districts, some pre-arranged and some last minute

drop-ins. Senator McConnaughay was very gracious to arrange for a picture with our group on the

Senate floor later in the afternoon when their session was over (continued on page 16)

**Summer 2017**

In an effort to inform Illinois Section members of the discussions at the monthly Board meetings, the Section Secretary contributes this article to the newsletter. Any questions or comments on the Board activities are welcome by contacting Megan McDonald, at [megan.mcdonald@clarkdietz.com](mailto:megan.mcdonald@clarkdietz.com).

**■ Treasurer's Report**

▲ A treasurer's report was presented at the March, April, and May meetings. All reports were approved.

**■ Highlights from Illinois Section Activities and Group Reports.**

▲ **ASCE National Infrastructure Report Card Release** – The ASCE National Infrastructure Report Card was released March 9, 2017.

▲ **ASCE IL Section Legislative Drive-Down** – The Legislative Drive Down for the IL Section is scheduled for May 18, 2017.

▲ **President-Elect and Student Scholarship Dinner** – The IL Section hosted an executive roundtable and Past President Panel prior to the dinner with ASCE National President-Elect Kristine Swallow.

▲ **Geo-Institute 2017 Lecture Series** – The Geo-Institute held

their 2017 Lecture Series on May 5, 2017.

▲ **Structural Engineering Institute 22<sup>nd</sup> Biennial Lecture Series** – The SEI Biennial Lecture Series concluded on April 12, 2017.

▲ **Environmental & Water Resources Institute McCook Reservoir Tour** – EWRI will be holding a McCook Reservoir tour on June 8, 2017 at their Mainstream Pump Station in Hodgkins, IL.

▲ **Congratulations to our Younger Member Group** – The IL Section YMG was honored with the 2017 Younger Member Group Award for large groups by the Committee on Younger Members.

▲ **Young Member Group Riverwalk Tour & Social Event with T&DI** – YMG and T&DI will be organizing a tour of the Riverwalk with a happy hour to follow on July 20, 2017.

▲ **ASCE IL Section Annual Awards** – Applications for award nominations will be available soon, so please begin thinking of projects and qualified engineers to nominate for an ASCE IL Section award this October.

▲ **Envision Certification Training** – Training will be held

September 13, 2017 at the Northwestern University Kellogg School of Management, Chicago Campus. More information and registration to be announced.

▲ **Sustainability Workshop** – A charrette style workshop using Envision to rate projects in preparation for the Envision Certification Training will be on August 16, 2017 at the Northwestern University Kellogg School of Management, Chicago Campus.

▲ **IL Section ASCE Minority Affairs Committee Golf Outing** – The MAC Golf Outing will be at The Highlands of Elgin Golf Course on August 24, 2017. Additional details forthcoming.

The Illinois Section Board Meetings are held every first Monday of every month with the exception of holidays. The next board meeting is scheduled for June 5, 2017 at 5:30pm at the Clark Dietz office located at 118 S. Clinton Street, Suite 700, Chicago, IL. Please note the meeting location. Future meetings will be held on July 3, August 7, and September 4.

By Megan McDonald  
ASCE Secretary 2016-2017  
[megan.mcdonald@clarkdietz.com](mailto:megan.mcdonald@clarkdietz.com)

## Illinois Section

## Activities

### ASCE IL Section EWRI McCook Reservoir Tour (Full)

Date: Thursday, June 8  
Time: 1:00pm - 2:00pm  
Place: Mainstream Pumping Station MWRD  
6100 River Road  
Hodgkins, IL 60525

RSVP: Jerome McGovern at [jeromemcgovern@att.net](mailto:jeromemcgovern@att.net).

### ASCE IL Section EWRI Chapter Board Meeting

Date: Tuesday, June 13  
Time: 5:30pm - 6:30pm  
Place: Hofbrauhaus  
Rosemont, IL

RSVP: Brian Olson at [bolson@greeley-hanson.com](mailto:bolson@greeley-hanson.com)

### ASCE IL Section T&DI Chapter Board Meeting

Date: Tuesday, June 13  
Time: 5:30pm - 6:30pm  
Place: American Surveying & Engineering  
150 N. Wacker Drive  
Suite 2650  
Chicago, IL 60606

RSVP: Thomas Borges at [tborges@bloomcos.com](mailto:tborges@bloomcos.com)

### ASCE IL Section T&DI June Luncheon Event

*Bruce Marcheschi – Metra Chief Engineering Officer*

Date: Wednesday, June 14  
Time: 11:30am - 1:15pm  
Place: Maggiano's  
516 N. Clark Street  
Chicago, IL 60654

Cost: \$50-Members  
\$60-General  
\$35-Government  
\$25-student  
\$100 Bronze Level (Includes 1 seat)  
\$200 Silver Level (Includes 2 seats)  
\$350 Gold Level (Includes 5 seats-half table)  
\$650 Gold Level (Includes 10 seats-full table)

RSVP: [Register Here](#)! By Monday June, 12, 2017. All registrations after this date will be charged the General fee plus a \$10 late fee.

### ASCE IL Section 23rd Annual Minority Affairs Golf Outing

Date: Thursday, August 24  
Time: 12:00pm, Registrations & Lunch  
1:00pm, Shotgun Start  
Place: Highlands of Elgin Golf Club

875 Sports Way  
Elgin, IL 60123  
Cost: \$120 per player

RSVP: Jay Olson: [jolson@gsg-consultants.com](mailto:jolson@gsg-consultants.com); 630-536-6807  
Nick Nigro (SAME);  
[nkn@eccsmobilelab.com](mailto:nkn@eccsmobilelab.com); 608-692-7645  
Keith Peltason (ISPE):  
[keithpeltason@gmail.com](mailto:keithpeltason@gmail.com); 312-431-2714  
[Golf Outing Flyer](#)

### ASCE IL Section Committee on Sustainability ENVISION SP Accreditation Training (SAVE-THE-DATE)

Date: Wednesday, Sept. 13  
Location: Chicago  
PDHs: 6.0 PDHs

### ASCE IL Section 2017 Annual Awards Dinner (SAVE THE DATE)

Date: Thursday, October 5  
Time: 6:00pm, Cocktail Reception  
7:00, Dinner & Awards  
Place: Palmer House Hilton  
17 E. Monroe Street  
Chicago, IL 60603

[Save the Date Flyer](#)

**For all Section, Group and Committee events, check out the Section website at:**

[www.isasce.org/web/section/calendar.html](http://www.isasce.org/web/section/calendar.html)

## President's Notes

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Some of the Illinois Legislative Day Attendees with State Senator Karen McConnaughay

which gave us another opportunity to talk with her.

As the ASCE year approaches the summer months, please think about your participation in the IL Section activities and consider picking a

few additional events to attend this year. Reach out and invite another ASCE member or a potential member to join you and experience the benefits ASCE has to offer.