

2015
ACEC-Illinois
Engineering Excellence
Awards



ACEC

AMERICAN COUNCIL OF ENGINEERING COMPANIES
of Illinois

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2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS

The Engineering Excellence Awards Competition recognizes projects of engineering achievement by Illinois consulting engineering firms. Entries are judged on the basis of engineering excellence, the degree to which the client's needs are met, and the benefits to the public welfare and private practice of engineering.

➤ MERIT AWARDS

are given for those projects worthy of recognition for the engineer and the owner/client.

➤ SPECIAL ACHIEVEMENT AWARDS

are given for those projects worthy of special recognition of the engineer and the owner/client for achieving engineering excellence.

➤ HONOR AWARDS

are given for those projects which are recognized for exceptional engineering that meet the needs of the client and benefit the public welfare.

➤ EMINENT CONCEPTOR AWARD

recognizes an engineering achievement which demonstrates a high degree of merit and ingenuity, contributes to the advancement of the private practice of engineering, and enhances the economic and social welfare of the general public.



Cover photos and page 2 photos: **New I-70 Mississippi River Bridge & Corridor** - Winner of the 2015 Engineering Excellence Eminent Conceptor Award. Designed by **HNTB Corporation / AECOM / exp US Services Inc. / Crawford, Murphy & Tilly Inc.**

2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS

EMINENT CONCEPTOR AWARD

► **Structural Systems**

HNTB Corporation / AECOM / exp US Services Inc. / Crawford, Murphy & Tilly Inc.
New I-70 Mississippi River Bridge & Corridor

Owner: Illinois DOT / Missouri DOT

Consultants: ABNA Engineering Inc. / Added Dimension LLC / Basilico Engineering Inc. /
Coombe-Bloxdorf P.C. / David Mason & Associates / EFK Moen /
Engineering Design Source Inc. / Geo Services Inc. / Geotechnology Inc. / Hoelscher
Engineering P.C. / Kaskaskia Engineering / Lin Engineering, Ltd. /
Marks & Associates / National Constructor's Group / Norm Abramson /
RWDI Consulting Engineers / Scott Olson Associates / TapanAm Associates Inc. /
TSi Engineering Inc. / Volkert & Associates Inc. / Webb Engineering Services Inc. /
WHKS & Company / Zroka Engineering P.C.

The New I-70 Mississippi River Bridge, approach structures, interchanges and corridor connect Southwestern Illinois to downtown St. Louis, MO. The project was a monumental example of successful multi-state, agency, consultant, and stakeholder coordination with more than 30 entities working side-by-side to ensure the river bridge and its connecting interchanges were completed on time. With a main span of 1,500 feet — the third longest cable-stayed in the U.S. — the river bridge was designed in half the time of similar bridges. The team's design innovations transformed the previous, unattainable \$1.6 billion design to an affordable, buildable design at \$676.3 million.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS HONOR AWARD WINNERS

► Building/Technology Systems

Hanson Professional Services Inc.
Camp Lincoln Headquarters Geothermal System

Owner: Illinois Army National Guard

Consultants: Illinois Geothermal Engineering Inc.

The Illinois National Guard's Camp Lincoln headquarters in Springfield, Ill., houses the Illinois Department of Military Affairs. An aging heating, ventilating and air-conditioning system and failing chiller made heating and cooling the 74,000-square-foot facility a challenge. The building was one of the Guard's highest energy users.



Worked with the Guard to study innovative, energy-efficient and cost-effective options.

Hanson also found a \$1.2 million grant from the U.S. Department of Energy to help fund the project. Hanson designed a hybrid geothermal variable refrigerant system to serve the Guard's immediate needs while allowing for future expansions to the building's entire system.

► Building/Technology Systems

Primera Engineers, Ltd.

EI Centro

Owner: Northeastern Illinois University

Consultants: JGMA / Forefront Structural Engineers, Inc. / Prism Engineering Inc. / Site Design Group, Ltd. / Arup

Due to the growing needs of its students, Northeastern Illinois University has worked to expand and modernize its academic programming by opening its new EI Centro location in Chicago's Avondale neighborhood. This 66,000-square-foot facility expands NEIU's capabilities by providing technology-enhanced classrooms, state-of-the-art laboratories, and modern offices and spaces.



Working closely together with Juan Gabriel Moreno Architects, Primera provided all the building engineering systems designs. Primera delivered a new sustainable building featuring high efficiency HVAC, energy saving daylight harvesting, occupancy lighting control, low flow plumbing fixtures, system metering and measurement, and programmable HVAC schedules for reduced energy consumption during off-peak hours.

2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS HONOR AWARD WINNERS

► **Structural Systems**

AECOM / Parsons Brinckerhoff

Rehabilitation of Wells Street Bascule Bridge

Owner: Chicago DOT

Consultants: DB Sterlin, Inc. / AAA Engineering, Inc. / Muller + Muller Architects / Dynasty Group / Johnson and Laskey Architects

Wells Street Bascule Bridge carries two major CTA rail lines in a busy downtown business district of Chicago. "River Arm" portions of the trusses were replaced entirely during two nine-day shutdowns. The river arm leafs were carried by a barge to the project site and spliced back with the existing trusses in matter of hours. Vehicle and pedestrian traffic were detoured and river traffic was accommodated by keeping one leaf operational at all times. The design team balanced the need for in-kind replacement of historic elements with the need to upgrade systems with current technology to improve bridge operations and lifespan.



► **Structural Systems**

Parsons

Hastings Bridge Design-Build

Owner: Minnesota Department of Transportation

Consultants: Ayres Associates, Inc. / Michael Baker Jr., Inc. / Dan A. Brown and Associates / IIZ United LLC / Hansen Thorp Pellinen Olsen Inc. / Illumination Arts LLC / Rowan Williams Davies & Irwin Inc. / Touchstone Architecture & Consulting, P.A. / Wiss, Janney, Elstner Associates, Inc.

The innovative Hastings Bridge, a 545-foot freestanding tied-arch bridge, carries Trunk Highway 61 over the Mississippi River in Minnesota. This structure is the longest freestanding arch in North America, has a 100-year life, and utilizes a steel box arch rib with a post-tensioned concrete tie girder and a network hanger system. With its approaches, the bridge features 11 spans, totaling 1,938 feet. The main span was erected on land, transferred onto barges using self-propelled modular transporters, floated downriver, and lifted 55 feet into place using strand jacks. Additional elements include roadway, drainage, maintenance of traffic, and overall quality systems management.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS HONOR AWARD WINNERS

► Environmental

Baxter & Woodman, Inc.
Barium/Radium Removal Pretreatment System
Owner: Village of Gilberts, IL

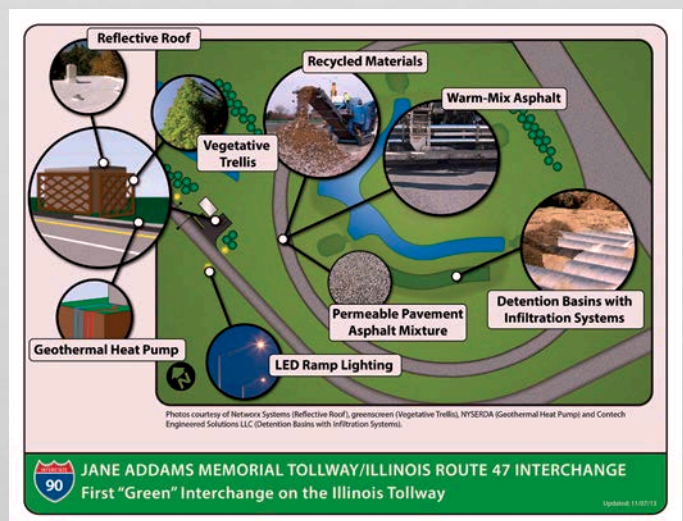
Baxter & Woodman developed an innovative Pretreatment System at the Village of Gilberts' water plant. A Barium/Radium Removal Pretreatment System was added to the Village's existing municipal ion exchange softener regeneration system, allowing compliance with new IEPA NPDES limits and IEMA residual disposal regulations in a cost-effective manner. The Pretreatment System uses technologies not previously utilized at municipal water treatment plants. During the process, highly corrosive wastewater, contaminated with barium and radium, is separated from normal regeneration wastewater. The barium and radium precipitates in a specially designed vessel. Then, dewatered sludge, complying with IEMA regulations, is sent to a landfill for disposal.



► Environmental

Huff & Huff, Inc. / GRAEF
Illinois Route 47 Interchange at I-90
Owner: Illinois Tollway
Consultants: HDR Engineering, Inc. / TranSystems Corporation

The Illinois Route 47 interchange at the Jane Addams Memorial Tollway (I-90) Project upgraded and expanded the existing interchange with myriad sustainable features. The project emphasized energy conservation in the construction and operation phases and improved water quality by reducing storm water runoff and enhancing treatment. Energy savings were achieved through the use of warm-mix asphalt, geothermal energy sources, a reflective roof on control buildings, and light emitting diode (LED) lighting. Water quality was improved by using permeable pavement for greater infiltration and by using infiltration cells, micro pools, plantings and bioswales to filter out suspended solids and contaminants.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS HONOR AWARD WINNERS

► **Waste and Storm Water**

Thouvenot, Wade & Moerchen, Inc.
Belleville Water Reclamation Facility
Owner: City of Belleville

Thouvenot, Wade & Moerchen, Inc. collaborated with the City of Belleville, Illinois to develop a Long-Term Control Plan for Combined Sewer Overflows (CSO), as required by the Illinois and U.S. EPA. The first, and largest, phase of this plan included an expansion of and modifications to the existing Water Reclamation Facility. TWM converted existing sludge lagoons at the Facility into CSO management basins, providing holding capacity for wet weather flows. Nearly all flows will be returned to the expanded Facility for full biological treatment, exceeding EPA requirements. TWM's design minimized costs and utilized limited available space at the Facility.



► **Water Resources**

Hurst-Rosche Engineers, Inc.
Otter Lake Water Treatment Plant UV Treatment
Owner: Otter Lake Water Commission

The Otter Lake WTP Ultraviolet Light – Advanced Oxidation Process (UV-AOP) treatment system is the first UV-AOP system permitted by IEPA and installed in the State of Illinois. The UV-AOP system consists of parallel 3.5 MGD UV reactors; 24 ft x 60 ft UV Vault addition; hydrogen peroxide chemical feed; stand-by generator; and updates to the SCADA system. The system provides 1.5-log removal (96.8%) for taste and odor, and 3-log removal (99.9%) of cryptosporidium (crypto), and has been proven to provide removal of taste and odor, while also providing required IEPA crypto disinfection credits.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS HONOR AWARD WINNERS

► **Water Resources**

Strand Associates, Inc.

Innovative Treatment Saves Romeoville's Well

Owner: Village of Romeoville

With the implementation of this project, the first permanent and permitted ultraviolet (UV) treatment system for inactivating bacteria in groundwater is operational in Illinois. Before this project, the Village of Romeoville faced expensive and environmentally unfriendly options: dump chemicals down Well 3 to treat it or abandon Well 3 and construct a new well. The project team not only obtained IEPA approval for the use of UV in a unique application but also proposed dosing requirements, which IEPA subsequently adopted as standards to be applied to future innovative and beneficial UV applications of this type in Illinois.



► **Transportation**

Civiltech Engineering, Inc.

Algonquin Western Bypass

Owner: McHenry County Division of Transportation

Consultants: Jorgensen & Associates, Inc. / Midland Standard Engineering & Testing, Inc. / Hey and Associates, Inc. / Krogstad Land Design, Ltd. / Applied Ecological Services, Inc.

As part of a feasibility study initiated in 1996, the McHenry County Division of Transportation in cooperation with the Illinois Department of Transportation identified the Algonquin Western Bypass as the solution to severe congestion at the intersection of Illinois Route 31 and Illinois Route 62 in downtown Algonquin. Construction the Western Bypass was completed in 2014 and included rerouting Route 31 through an abandoned gravel pit with a compressed diamond interchange at Route 62 including four new bridges, twelve retaining walls, lighting, traffic signal improvements, and major modifications to Towne Park, including restoration of a previously altered creek alignment.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS HONOR AWARD WINNERS

► **Transportation**

T.Y. Lin International / Knight E/A
I-294/I-57 Interchange Project Phase One

Owner: IDOT / Illinois Tollway

Consultants: Geo Services, Inc. / Huff & Huff, Inc. / HR Green, Inc. / American Surveying & Engineering, P.C. / EJM Engineering, Inc. / Ciorba Group, Inc. / Dynasty Group, Inc. / GSG Material Testing, Inc. / R & G Engineering, Inc. / The Roderick Group, Inc. / Wight and Company

Prior to October 2014, I-294 at I-57 was one of two locations in the country where two interstates met without connecting. In a joint-effort, the Illinois Department of Transportation and Illinois Tollway worked with T.Y. Lin International and team to create an interchange between these two busy roadways.

This included construction of new ramps, raising the level of earth embankment, drainage culvert extension, creek re-alignment, erosion and sediment control, shoulder removal and replacement, median improvements, and pavement and bridge construction.



This undertaking created thousands of jobs and will result in significant savings in travel time, energy costs, and fuel emissions.

► **Transportation**

Collins Engineers, Inc. / TranSystems
I-90/94 at Ohio Street Replacement & Rehabilitation

Owner: IDOT

Consultants: DB Sterlin / SPAAN Tech / Wang Engineering

The I-90/94 Interchange at Ohio Street is a major gateway into Chicago's Central Business District. The replacement and rehabilitation of the highly trafficked interchange called for innovative methods to avoid major lane and ramp restrictions and minimize negative impact on the 300,000+ daily users. A crucial phase of construction called for a portion of the interstate to be shut down for demolition of a box beam structure over the course of two weekends. This "get in and get out" approach was a first in Chicago. It was successfully executed, and is now being considered for use on other major projects.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS HONOR AWARD WINNERS

► **Transportation**

Crawford, Murphy & Tilly, Inc.
Morgan Street Bridge Community Revitalization

Owner: City of Rockford

Consultants: HNTB, Inc. / Testing Service Corp. / Fehr-Graham & Associates /
Teska Associates, Inc.

Replacing the aging Morgan Street bridge in Rockford served as a rallying point to revitalize an area that was once the center of a thriving river town. The Morgan Street Bridge and Community Revitalization project is centered on a 503-ft, network tied-arch structure, and includes quality-of-life enhancements, neighborhood revitalization and economic development. Value engineering solutions resulted in savings of \$1 .36 million and included an ambitious railway consolidation effort. A unique approach was taken for the modeling, fabrication and installation of the structural steel. Construction was completed ahead of schedule and under budget at a cost of \$30 Million.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS HONOR AWARD WINNERS

► **Transportation**

TranSystems / Burns & McDonnell Engineering
I-90 Rebuilding and Widening, Western Segment

Owner: Illinois Tollway

Prime Design Firms: Bowman, Barrett & Associates/
Christopher B. Burke Engineering/Ciorba Group/
Fehr-Graham & Associates/H.W. Lochner/Hanson
Professional Services/McClure Engineering
Associates, Inc./Primera Engineers/Staley
Consultants

Prime Construction Management Firms: AES
Services/Bollinger, Lach & Associates/Globetrotters
Engineering/Harry O. Hefter, Associates/HR
Green/Milhouse Engineering & Construction/SDI
Engineering/Spaan Tech

Subconsultants: 2IM Group/ABNA Engineering/
American Surveying & Engineering/APS Consulting/
Artisan Consulting Engineers/Atlas Engineering Group/Baxter & Woodman/Chicago Testing Laboratory/
Collins Engineers/Coordinated Construction Project Control Services/Crawford, Murphy & Tilly/DB Sterlin
Consultants/DAAR Engineering/d'Escoto/DuSABLE/Dynasty Group/EJM Engineering/Everest Engineering
Company/Fuhrman Engineering/Gandhi & Associates/Geo Services/GSG Consultants/GSG Material
Testing/Huff & Huff/Jacobs Engineering Group/Material Service Testing/Millennia Professional Services/
Parsons Transportation Group/R.M. Chin & Associates/Quigg Engineering/Regina Webster & Associates/
Rubino Engineering/Rubinos & Mesia Engineers/SE3/S.T.A.T.E. Testing/TechKnow Engineering/Terracon
Consultants/Thomas Engineering Group/Wang Engineering/Zroka Engineering



The Jane Addams Memorial Tollway (I-90) western segment extends 37 miles between the Elgin Toll Plaza and the Cherry Valley Interchange in Rockford, Illinois. This \$644.1 million widening and reconstruction project is one of the first projects completed under the Illinois Tollway's 15-year, \$12 billion capital program, Move Illinois. It is a state-of-the-art tollway that increases mobility by adding a third lane in each direction while providing for future transit opportunities through the use of a wider inside lane and median. Design and construction were completed in less than three years and involved more than 50 engineering firms and more than 40 construction contracts.

2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS HONOR AWARD WINNERS

► **Small Projects**

Ciorba Group, Inc.

Rollins Road Millennium Trail Underpass

Owner: Lake County Forest Preserve District

Consultants: Soil and Material Consultants, Inc.

The project was part of the completion of the Millennium Trail a 35 mile multi-purpose trail that connects central, western and northern Lake County communities and the Lake County Forest Preserve's Des Plaines River Trail. The trail work included two crossings on a new alignment at two County roads, Rollins and Wilson. One of the project goal was to minimize impacts to wetlands and trees. We studied different type of bridges from pre-engineered to signature bridges and underpasses and compared pros and cons including a cost comparison. The selected option at Rollins Road was a cast-in-place concrete underpass with aesthetics finishes.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS

SPECIAL ACHIEVEMENT AWARD WINNERS

► Studies, Research and Consulting

CDM Smith Inc.

Western Springs LPRO Water Treatment Plant

Owner: Village of Western Springs

Consultants: Benton & Associates, Inc.

The village of Western Springs discovered its three-million-gallon-per-day (mgd) lime softening and sand filtration plant, used to remove hardness and iron from the water, was reaching the end of its useful life. In concert with the village to establish cost-effective, reliable treatment, CDM Smith designed the new Low Pressure Reverse Osmosis Water Treatment Plant to continue serving the village's 20,000 residents and treat deep aquifer groundwater containing high levels of radium 224/226, iron, and hardness. During design, CDM Smith piloted an Amiad system to optimize the operation of iron and radium wells, and cost-effectively fit the new treatment process.



► Building/Technology Systems

Henneman Engineering, Inc.

Illinois State Supreme Court Building Renovation

Owner: State of Illinois - Capital Development Board

Consultants: 4240 Architecture, Inc. / Harboe Architects / AON Engineering / Carnow Conibear & Associates, LTD / Vasconcelles Engineering Corp. / Tylk, Gustafson, Reckers, Wilson, Andrews, LLC / Construction Cost Systems / Weidlinger Associates, Inc.

This project was the first complete renovation of this historic building since it opened in 1908. The Illinois State Supreme Court Building was designed in neo-classical style by William Carbys Zimmerman with landscape design by Jens Jensen. The project provided an all new central HVAC system with modern controls systems, new technology and lighting (and restored original lighting fixtures in historic spaces). Also featured were new life safety systems, security, window replacement and new finishes; all while maintaining and restoring the historic spaces and elements of the building, including restored original murals, tapestries, and woodwork.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS

SPECIAL ACHIEVEMENT AWARD WINNERS

► Surveying & Mapping Technology

Hermann & Associates, LLC

Knox Co Highway 4 Reconstruction 3D Modeling

Owner: Knox County Highway Department

Consultants: Surdex Corporation / Hutchison Engineering / Hanson Professional Services / McCleary Engineering / Bruner, Cooper & Zuck, Inc. / Perry Land Surveying

The Knox County Highway 4 Reconstruction required the contractor to use Three-Dimensional (3D) Modeling and Automated Machine Guidance. Although contractors have been using this technology for years, its use has not been required on IDOT let projects. Usually if contractors desire to utilize this technology they must convert the two dimensional plans to a 3D model data package at their own expense. For this project, the 3D model data was made available to contractors prior to bidding at no expense to the contractor. When utilizing this technology, contractors gain a significant increase in earthwork production; resulting in lower project costs.



► Environmental

SCI Engineering, Inc.

Metro East Levee Improvement Project

Owner: Republic Services

Consultants: Blankenship Construction / DJM Ecological Services

Unique combination of clients and needs resulted in the creation of a 52.4-acre wetland in the Mississippi River watershed. The solution to a need for mitigation by the levee district was also a solution to more stormwater management. The project used all available materials to support sustainable practices by Republic Services, and benefitted the environment by creating wetland habitat.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS

SPECIAL ACHIEVEMENT AWARD WINNERS

► **Waste and Storm Water**

Engineering Enterprises, Inc.
Wastewater Treatment Facility Expansion

Owner: Village of Hinckley

Consultants: Hutter Trankina Engineering / Archer Consulting Engineers /
Terracon Consultants, Inc.

Given the need to replace antiquated equipment with new processes to meet IEPA regulations, the Village of Hinckley identified the expansion of its wastewater treatment facility as a priority. Engineering Enterprises, Inc. (EEI) developed a design that included the conversion from a fixed film process (rotating biological contactors) to a suspended growth process (activated sludge) for biological treatment with new biosolids treatment components, and reused several existing structures and processes to reduce costs. Constant communication and coordination between the project team, Village officials, USEPA, and IEPA were required throughout the duration of the project.



► **Water Resources**

Farnsworth Group, Inc.
New Water Treatment Plant

Owner: City of Princeton

Consultants: Bowen Engineering Corporation / Testing Service Corporation

The City of Princeton's water usage had increased and was reaching the maximum capacity of their existing plant. Farnsworth Group was retained by the City to prepare a comprehensive planning report to evaluate various alternatives for upgrades or replacement. Based on the results, the City authorized Farnsworth Group to design, permit and provide construction engineering services for the recommended alternative of a new 4.0 MGD lime-softening water treatment plant, a new well field and water main piping. The project was separated into two phases in order to utilize funding opportunities provided by the ARRA economic stimulus.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS

SPECIAL ACHIEVEMENT AWARD WINNERS

► **Water Resources**

Hey and Associates, Inc.
Village of Niles Stormwater Relief Basins
Owner: Village of Niles

In response to the disastrous flood of September 2008, the Village of Niles developed a detailed stormwater improvement program. Several priority projects were identified and the Village initiated design and construction processes to provide flood risk reduction for residents through stormwater detention and improved drainage infrastructure. These projects were unique because the Village was able to work closely with Our Lady of Ransom Parish and the Archdiocese of Chicago to utilize portions of their properties for these community projects. The projects included significant stakeholder coordination to develop solutions that are practical for stormwater while maintaining functional use of the property.



► **Water Resources**

Christopher B. Burke Engineering, Ltd.
Brewster Creek Flood Control Project
Owner: DuPage County Stormwater Management
Consultants: Testing Service Corporation

In response to flooding in September 2008, The Village of Bartlett, DuPage County Stormwater Management and the Forest Preserve District of DuPage County Stormwater worked to develop a flood control project for the Brewster Creek Headwaters. The Village of Bartlett began the project with the preliminary engineering and development of the Watershed Plan. The Watershed Plan was approved by the County in February 2010 and identified conveyance and flood storage improvements to provide a 100-year level of protection to 11 homes, one State highway (IL59), a County roadway (Stearns Road) and multiple roadways within the Bartlett Estates Subdivision.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS SPECIAL ACHIEVEMENT AWARD WINNERS

► Transportation

Horner & Shifrin, Inc.

IL 15 / IL 158 Interchange Reconstruction

Owner: IDOT Region 5, District 8

Consultants: Coombe-Bloxdorf, P.C. / Kaskaskia Engineering Group, LLC

Horner & Shifrin, Inc. prepared design plans, specifications and cost estimates for the reconstruction of the ramp terminal intersections at the interchange of IL 15 and IL 158 including the intersection of IL 158 with IL 13 in Belleville, Illinois. The end result was replacing three signalized intersections (two of which were only a few feet apart) with two roundabouts. The northern roundabout has six legs of traffic and the southern roundabout has five legs of traffic.



What is outstanding is the design of construction staging allowed both roundabouts to be constructed while open to traffic, something rarely done.

► Transportation

Gewalt Hamilton Associates, Inc.

Destination: Downtown Skokie Reinvented

Owner: Village of Skokie

Consultants: McDonough Associates, Inc. / Parsons Brinckerhoff, Inc. / Riley Construction Company, Inc. / SmithgroupJJR, Inc. / Alliance Contractors, Inc. / Western Remac, Inc.

As part of a comprehensive effort to invigorate the community and reestablish the Downtown area as a place to shop and gather, the Village of Skokie undertook a thorough revitalization of the Downtown. This multi-phased improvement project began with the Village's CTA Yellow Line Oakton Street Station and ancillary transit, pedestrian and landscaping additions. Subsequent improvements along the Oakton Street corridor, as well as Lincoln Avenue, Brown Street and Warren Street, encourage commuters and residents to take advantage of all the Downtown has to offer by establishing a pedestrian friendly environment, adding on-street parking, and enhancing pedestrian and vehicular safety.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS SPECIAL ACHIEVEMENT AWARD WINNERS

► **Small Projects**

TERRA Engineering, Ltd.
Main and University Intersection Improvements
Owner: City of Peoria

TERRA Engineering led a design-build team to reconstruct the Main and University intersection with an aggressive project schedule. Spurred by a water main break in the intersection, the City wished to utilize the water company's restoration dollars toward re-design including new intersection geometry, green storm water management, improved pedestrian accommodations, new signals, intersection lighting, neighborhood traffic calming, and water main replacement. Located adjacent to Bradley University, the intersection has one of the City's highest pedestrian volumes – driving the need for safety improvements for both motorists and pedestrians. Extensive public involvement including residents, businesses and students, faculty and staff was essential.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS

MERIT AWARD WINNERS

► Studies, Research and Consulting

Clark Dietz, Inc.

I-55 at Weber Road Interchange

Owner: Illinois Department of Transportation/Will County Division of Transportation

Consultants: Lin Engineering, Ltd. / Huff & Huff, Inc. / Planning Communities, LLC / Wang Engineering, Inc. / Singh & Associates

A study commissioned by Will County and performed by Clark Dietz under contract to IDOT, resulted in the selection of a Diverging Diamond Interchange (DDI), to optimize traffic flow, safety, and operations at the I-55/Weber Road Interchange. Due to rapid residential, commercial, and industrial growth, existing intersections experienced delays due to high-volume turning movements, large numbers of heavy vehicles, and closely spaced signals. After extensive public involvement, evaluation and analysis, the DDI was selected as the preferred solution to increase overall intersection capacity, decrease traffic delays, eliminate left-turn conflicts and potentially reduce turning, rear end, and right angle crashes.



► Studies, Research and Consulting

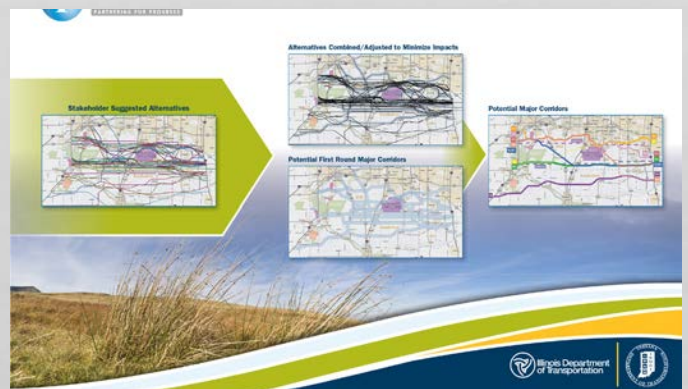
Parsons Brinckerhoff, Inc.

Illiana Corridor Tier One EIS

Owner: IDOT

Consultants: H.R. Green Co. / Christopher B. Burke Engineering, Ltd. / GSG Consultants, Inc. / Images, Inc. / Huff & Huff, Inc. / Cardno JF New, Inc. / American Surveying and Engineering, P.C. / Apex Consulting Engineers, LLC / Stantec Consulting Services / Aero-Metric, Inc. / the al Chalaba Group, Ltd. / Eaton & Hancock / Sease, Gerig & Associates

In a unique bi-state collaboration, the Illinois and Indiana Departments of Transportation retained Parsons Brinckerhoff to prepare a tiered environmental impact statement (EIS) and preliminary engineering studies for the Illiana Corridor on an expedited schedule. The Tier One EIS study, initiated in June 2011, was completed just 19 months later in January 2013 with a combined Final EIS/Record of Decision. This combined document—the first of its kind in the United States—selected for further study a new limited access transportation corridor, approximately 50 miles long and 2,000 feet wide, connecting I-55 near Wilmington, Illinois, and I-65 near Lowell, Indiana.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS

MERIT AWARD WINNERS

► **Studies, Research and Consulting**

Epstein

Illinois Tollway Maintenance Facility Planning

Owner: Illinois Tollway

Consultants: Environmental Design International Inc. / Quigg Engineering, Inc. /
GSG Consultants, Inc. / Effective Management Decisions, LLC /
Maron Structure Technologies / Cotter Consulting

Epstein was recently hired to provide Phase I and Phase II engineering services for the development of a strategic system-wide Master Plan to include LEED certified structures, site specific master plans, and phased repair plans for the Illinois Tollway's maintenance facilities. As a part of the 'Move Illinois' Program, the Tollway is reconstructing and rehabilitating its aging maintenance facilities. This program entails the design and construction documents for two sizes of maintenance facilities, master plans for 10 other sites, and facility assessments of all sites on a two-year re-occurring basis.



► **Building/Technology Systems**

Burns & McDonnell Engineering Company, Inc.

Profile in Partnering: The Joint Use Facility

Owner: Dept. of Military Affairs - Illinois

Consultants: Farnsworth Group / Terracon / Consulting Engineers and Scientists

Burns & McDonnell completed the design of a joint use Readiness Center facility for the Illinois Army National Guard at Heartland Community College in Normal, Illinois. A first of its kind in Illinois, this project provides a permanent readiness and training center to meet the mission requirements of the National Guard 404th Maneuver Enhancement Brigade (MEB). This project is a joint use facility with the Heartland Community College integrating both classroom space as well as office/administrative spaces. The Readiness Center encompasses approximately 56,000 SF and the Prairie Style design is compatible with the architectural style of the existing buildings on the Heartland Community College campus.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS

MERIT AWARD WINNERS

► Building/Technology Systems

CDM Smith Inc.

McDonough County Public Transit Facility

Owner: City of Macomb

Consultants: Benton & Associates, Inc. / Maintenance Facility Consultants, Inc.

To consolidate operations in one location, McDonough County Public Transit contracted CDM Smith for the architectural, structural, HVAC, plumbing, fire protection, and electrical design of a new 66,683-square-foot administration, maintenance, and storage transit facility. The building features a flexible maintenance area for vehicles of varying sizes, consolidation of fixed-route and demand-response staff for improved efficiency, an enhanced public presence for the agency, and a myriad of sustainable elements. In addition to reusing an abandoned factory building, green features include high-efficiency water fixtures, energy-efficient forced air HVAC systems, natural daylighting, as well as utilizing recycled and regionally-sourced materials during construction.



► Structural Systems

Harry O. Hefter - Associates, Inc.

Torrence Avenue Lift Bridge Rehabilitation

Owner: Chicago DOT

Consultants: Singh & Associates, Inc. / Techma Associates, Inc. / Bridge Machinery, Inc. / Nakawatasa Wyns & Associates, Inc.

The 70 year old Torrence Avenue Lift Bridge over the Calumet River was designed by the Chicago Department of Public Works and constructed in 1938. The bridge has a main span of 276 feet, width of 66 feet, and lift of 104 feet. The 1996 Project Development Report recommended the bridge rehabilitation effort achieve a service life of 40 years. The entire span is lifted similar to an elevator by means of cables connected to large drive motors and counterweights. Awarded to F.H. Paschen, S.N. Nielsen & Associates for \$24, 078,000 in 2011 the bridge rehabilitation was completed in 2013.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS

MERIT AWARD WINNERS

► **Structural Systems**

Fehr Graham

Scout Camp Road Bridge

Owner: Jo Daviess County Highway Department

Consultants: Midwest Testing Services, Inc.

The 74 year-old bridge, located at Scout Camp Road over the Apple River in Jo Daviess County, was in need of replacement due to its “structurally deficient” state. In order to address vertical and horizontal alignment deficiencies, the roadway was realigned and the new bridge repositioned. To respond to varying geotechnical site conditions, foundation treatment varied significantly at each substructure unit. The roadway realignment allowed the existing bridge and roadway to be utilized during the majority of the construction operations, minimizing disruptions to the traveling public. The project was completed on schedule and greatly appreciated by local highway users.



► **Structural Systems**

Willett Hofmann & Associates, Inc.

CH 8 Over the IAIS Railroad & Hennepin Canal

Owner: Bureau County Highway Department

Originally constructed in 1931, the existing structure carrying C.H. 8 over IAIS Railroad and the Hennepin Canal was a six span structure that included a single span Historic Pratt Truss. The project involved removing and replacing the structure and rehabilitating the Historic Pratt Truss for use at another location nearby. In addition to the relocation and structure replacement, the profile of C.H. 8 was raised approximately 10', resulting in the realignment of Tow Path Road, reconstruction of the railroad crossing and a portion of the multi-use path, and extending an existing double barrel reinforced concrete box culvert.



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► **Structural Systems**

HDR Engineering, Inc.

I-270 Canal Crossing: Deficient to Efficient

Owner: IDOT

Consultants: ABNA Engineering, Inc. / Kaskaskia Engineering Group, LLC / McDonough Associates, Inc. / Volkert, Inc. / Coombe-Bloxdorf, P.C.

Structurally deficient and functionally obsolete — the technical terms for “way past its prime” — is the best way to describe the twin truss bridges carrying I-270 of the Chain of Rocks Canal near Granite City, Illinois. Built in 1963, the bridges have served as a major St. Louis commuter link between Illinois and Missouri, crossing the canal that acts as a Mississippi River Bypass for all barge traffic traveling through St. Louis. With so many impacts to the traveling public, IDOT worked collaboratively with HDR to study and design a replacement bridge in a condensed 24-month schedule.



► **Structural Systems**

URS Corporation

Services Road Tunnels-O’Hare Airport

Owner: Chicago Department of Aviation

Consultants: Delta Engineering, Inc. / Environmental Design International, Inc. / O’Brien & Associates, Inc. / Technow Engineering, LLC / Gandhi & Associates, Inc. / Cotter Consulting, Inc.

The service road tunnels provide grade separations at intersections in alignment of Mount Prospect Road/Taxiway Z, South Access Road/Taxiway AA and Post Office Road/Runway 10R/28L. Due to their location, the design provided a 75-year service life, low maintenance and be aesthetically pleasing. The design addressed critical clearances for aircraft and roadway traffic, FAA security requirements, fire protection, roadway lighting, video surveillance, emergency communications, and traffic control.

To meet the sustainable goals the design used recycled materials, smart lighting controls, collecting storm runoff containing winter deicing chemicals, and unique deck design which minimizes taxiway/runway pavement surface icing above each structure.



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► **Structural Systems**

BCP Tollway Partners JV I-90 Bridge over the Union Pacific Railroad

Owner: Illinois Tollway

Consultants: EJM Engineering Inc. / Everest Engineering Co. / Geo Services, Inc. / Huff & Huff, Inc. / Thomas Engineering Group, LLC. / Structure Designs, Inc. / Burns and McDonnell

Dual bridges over the Union Pacific Railroad were designed by BCP Tollway Partners JV (BCP) as part of the Jane Addams Memorial Tollway (I-90) Rebuilding and Widening Project – Western Segment. Built in the 1950s, the original bridges were structurally deficient, and functionally obsolete. BCP coordinated with the Illinois Tollway, UPPR and Illinois Commerce Commission to design a bridge that balanced the interests of all parties, innovatively used materials, provided clear span for a future railroad track and was selected for a research program by the University of Illinois. BCP progressed from concept to final plans within nine months.



► **Structural Systems**

Ciorba Group, Inc.

I-90/Bridges over the Kishwaukee River

Owner: Illinois Tollway

Consultants: Huff & Huff / Millennia Professional Services of Illinois / Wang Engineering / Zroka Engineering

The project consisted of the replacement of the existing seven-span dual precast prestressed concrete (PPC) bridges over the Kishwaukee River. The new four-span weathering steel-plate girder bridges utilize integral abutments; these bridges are now the longest of this type in Illinois. River hydraulics were improved through the realignment and reduction of the total number of piers in the river. Design included a causeway and haul roads to overcome environmental restrictions to perform work in the river. The structures were each completed in a single construction season. Because of the innovative design of this project the eastbound bridge is instrumented to gain insight into the behavior of long integral abutment bridges.



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MERIT AWARD WINNERS

► Surveying & Mapping Technology

Horner & Shifrin, Inc.
Marion Cemetery Digs GIS
Owner: City of Marion

The project consisted of developing a web-based Geographic Information System (GIS) and mobile mapping system to locate/ reconcile data pertaining to existing burial sites, real-time, at three cemeteries totaling nearly 35,000 burial sites. Many sites have multi-level burials requiring 3"-4" accuracy. The new process breaks from the traditional way of collecting data with a total station survey, high accuracy GPS receiver, matching data to points, and then populating a traditional map. Instead, a combination of a Trimble VRS network, a sub decimeter hand-held receiver, and a web-based GIS and mobile mapping system results in more accurate, real-time data available immediately.



► Surveying & Mapping Technology

Environmental Design International inc.
Calumet TARP Drop Shaft Screens
Owner: Metropolitan Water Reclamation District of Greater Chicago
Consultants: Rubinos & Mesia Engineers, Inc. / V3 Companies Ltd.

EDI performed laser scanning of the ground floor of the MWRD TARP Shaft building and of the east and west wet shafts connecting to the Deep Tunnel system. Scanning a shaft 360 feet deep with no real access points except from above presented a logistical and procedural problem.

EDI mounted the scanner inverted on the bottom of a man cage. The scans were performed every 20 to 25 feet vertically. The scans were then registered to match the point clouds together, and a 3D model was produced along with horizontal cross-sections of the drop shaft taken every 10 feet vertically.



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MERIT AWARD WINNERS

► **Transportation**

HR Green, Inc.

Johnsburg Rd Widening and Reconstruction Contract 2

Owner: McHenry County Division of Transportation

Consultants: State Testing

The Johnsburg Road Widening project consisted of the construction of the first roundabout in McHenry County in the Downtown area of the Village of Johnsburg. The project also included widening of Johnsburg Road from Spring Grove Road to Fairview Avenue, installation of traffic signals at the intersection of Spring Grove and Johnsburg Roads, installation of roadway lighting, decorative pedestrian lighting with banner arm and planter arms, innovative decorative thermoplastic crosswalks, installation of sidewalks within downtown Johnsburg with decorative brick paver sidewalk banding and brick pavers, decorative planting within the center of the roundabout, and decorative retaining walls.



► **Transportation**

HR Green, Inc.

Grove Road Realignment

Owner: Kendall County Highway Department

Consultants: Traffic Surveys, Inc. / McCleary Engineering

The project consisted of the realignment of approximately one mile of Grove Road, north of Illinois Route 126. The north and south legs of Grove Road previously intersected Route 126 approximately one-third mile apart. The realignment of the north leg resulted in one, 4-way intersection where previously only the south leg intersected Route 126. The new alignment also eliminated the existing, substandard reverse curves near Roberts Drive, approximately one-half mile north of Route 126. Associated improvements included the widening of Route 126 and the south approach of Grove Road to accommodate added auxiliary turn lanes at the new, combined intersection.



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MERIT AWARD WINNERS

► **Transportation**

Infrastructure Engineering, Inc.
(I-355) Resurfacing and Bridge Repairs

Owner: Illinois Tollway

Consultants: Hanson Professional Services, Inc. / Dynasty Group, Inc. / SpannTech / HBM Engineering Group, LLC

Resurfacing and repairs of an 18 mile corridor of the Veterans Memorial Tollway (I-355) was initiated to address safety, mobility and improve guidance along this highly traveled interstate. The work included mainline patching, resurfacing, lighting replacement, median barrier and bridge parapet extension, rehabilitation of retaining and noise abatement walls, I-88 underpass lighting replacement and four overhead segmental bridge structures repair. Precast panels for pavement patching and fiber wraps for overhead bridge repairs were used to expedite construction and minimize inputs to traffic flow. Exit numbering signs were added to better direct drivers and overall roadway safety was enhanced.



► **Transportation**

STV Incorporated
IL 2 Reconstruction

Owner: IDOT

Consultants: American Surveying Consultants / Ground Engineering Consultants

The Illinois Department of Transportation's new IL Route 2 four-lane expressway runs from Elmwood Road to Latham Road. Congestion caused by increased population growth and new development prompted the need for improvements in this area. The project goal was to improve safety and travel time in northern Illinois, and spur economic growth along the corridor. The project includes three new signalized intersections, a new two-lane frontage road, twin single-span integral abutment bridges over the Mud Creek, and a two-span, 160-foot-long bridge carrying Latham Road over the new IL 2 and 15 box culverts.



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► Transportation

Patrick Engineering Inc.
Illinois Route 47 at College Drive Intersection

Owner: Waubonsee Community College

Consultants: Wang Engineering, Inc. / Huff & Huff, Inc. / Santacruz Land Acquisitions

The Waubonsee Community College worked with the Kane County Division of Transportation to secure a federal Highway Safety Improvement Program grant through IDOT for safety upgrades to their north entrance. Through a QBS process WCC selected Patrick Engineering to perform the Phase I Study required to be able to utilize these funds.

The scope of work of the improvement included the installation of a traffic signal, realignment of the west leg of Old Oaks Drive, addition of a northbound right turn lane, and offsetting (or burying) the left turn lanes along IL 47 to improve sight distance and safety.



► Transportation

TAPS Ramp Partners, a joint venture between
Thomas Engineering Group, LLC and APS Consulting, Inc.
Non-Planar Precast Concrete Pavement on Tri-State Ramp

Owner: Illinois Tollway

Consultants: Lin Engineering, Ltd. / Alfred Benesch & Company / Wang Engineering, Inc.

In 2013, the Illinois Tollway put a new twist on precast concrete pavement (PCP) when it designed and reconstructed long sections of a multi-lane ramp along the Tri-State Tollway (I-294). This project utilized innovative non-planar PCP which was the first non-planar application in the state of Illinois. This project called for two continuous placements (a 1,130-foot section and a 325-foot section) on a multilane ramp with complex geometry (narrowing pavement width, reverse horizontal curves, superelevation, superelevation transitions, and vertical sag curves). This project proved that PCP can be applied to situations other than pavement patching with planar or flat panels.



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► Transportation

Chastain & Associates LLC
South Country Club Road-A Path to the Future
Owner: Macon County
Consultants: SKS Engineers, LLC

The South Country Club Road project delivered on all of its goals.

The intermodal path meandering through scenic vistas has delivered program opportunities for Scovill Zoo and the Children's Museum.

The project was the missing link in an intermodal loop around Lake Decatur Basin 2. Local running/ bicycling clubs who had petitioned Macon County are now very pleased.

There was no intermodal Safe Route to School for children attending Muffley School. Students now can actually walk to the Zoo and Museum as part of their education.

This project hit a grand slam with the residents of Decatur and Macon County!



► Special Projects

OMEGA
US 34 Reconstruction
Owner: IDOT
Consultants: Atlas Engineering Group

OMEGA provided construction engineering services for this \$15 Million reconstruction of US 34. The project consisted of 1.94 miles of roadway reconstruction and widening, the installation of an enclosed storm sewer system, and modernization of three signalized intersections from east of Lew Street to west of Eldamain Road in Plano, IL. Additionally, the bridge over Big Rock Creek was widened to accommodate two lanes of traffic in each direction, and two stamped concrete retaining walls were installed to ensure structural stability. A shared use path was also installed throughout the project for the safety and convenience of pedestrian traffic.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS

MERIT AWARD WINNERS

► **Special Projects**

OMEGA

143rd Street Reconstruction

Owner: Will County Division of Transportation

Consultants: Material Service Testing, Inc. / MST

This improvement consisted of the removal of an existing two lane asphalt pavement and replacement with a five lane full-depth asphalt pavement. A major component of the work was to construct extensive new drainage facilities and two 2.6 million gallon detention basins to increase storm water storage capacity and eliminate flooding which had been a major problem for this area. Ancillary construction included extensive soil stabilization, sidewalk, curb and gutter, traffic signal modernization, landscaping, pavement marking, and other appurtenant work on 143rd Street from Greystone Drive to Pinewood Drive and on Will-Cook Road from Heather Drive to Ruggles Court in Will and Cook Counties.



► **Special Projects**

ESI Consultants, Ltd.

(I-88) Rebuild and Widen, Route 56 to Orchard

Owner: Illinois Tollway

Consultants: dsi Associates, Inc. / Materials Service Testing Laboratories / TranSystems

ESI Consultants, Ltd., provided construction management services for the widening of an existing four-lane Interstate highway to six lanes. Project work included construction of two-lift black rock composite concrete pavement for the mainline lanes; reconstruction of the drainage system; median barrier wall; warm-mix asphalt shoulders; and new lighting, signing, and pavement striping. Bridge work included substructure repairs, replacement of the parapets, bridge deck patching, and a latex concrete overlay. The work, completed in stages, maintained two open lanes in each direction at all times. The bridge work was completed within 40 days.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS

MERIT AWARD WINNERS

► **Special Projects**

Christopher B. Burke Engineering, Ltd.
Lake Cook Road Multi-Use Path

Owner: Forest Preserve District of Cook County
Consultants: Altamanu, Inc. / Material Service Testing

The project consisted of the construction of a multi-use path between the northern termini of the North Branch Trail and the Green Bay Trail in Glencoe, IL. The Lake Cook Road Multi-Use Path provides an important link between these two regional trails and provides bicycle and pedestrian access to the Chicago Botanic Garden (CBG) and Metra's Braeside Station. The path is approximately one mile long and located within and adjacent to the grounds of the CBG and the Forest Preserve District of Cook County (FPDCC). The path is ten feet wide with two foot wide aggregate shoulders on both sides.



► **Special Projects**

Collins Engineers, Inc.
Wells Street Bascule Bridge Reconstruction

Owner: CDOT
Consultants: Walsh/II in One (JV) / Parsons Brinckerhoff / AECOM

The two-level Wells Street Bridge carries rail traffic, vehicles, and pedestrians over the Chicago River. Throughout the yearlong reconstruction of the bridge, vehicle and pedestrian traffic were detoured. However, CTA rail traffic was uninterrupted except for two nine-day windows when the center four bays of each truss were removed and the new truss arms were installed. Collins and Walsh developed the plan that minimized the length of the shut-downs and their impact on commuters: the new movable truss arms were pre-assembled off-site, floated up the river to the project site, and floated into place, all within the approved time limits.



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MERIT AWARD WINNERS

► **Special Projects**

Globetrotters Engineering Corporation
Illinois Century Network BTOP Addition

Owner: Illinois Department of Central Management Services

Consultants: G4S Technology LLC / Archaeology and Geomorphology Services

Globetrotters designed and engineered an 1100 mile fiber optic addition to the State of Illinois Central Management Services' Illinois Century Network under the Broadband Technology Opportunity Program and performed the Environmental Assessment for its authorization. The design contained 12 construction packages, 24 fiber backbones, and 158 fiber laterals to deliver the 1,485,546 fiber strand miles to 229 community anchor institutions in 55 counties in central and eastern Illinois. The fiber backbone was routed along Interstate Highway ROW through 7 IDOT Districts. 800 permits were prepared for river, railroad, and pipeline crossings. 5000+ drawings were prepared.



► **Small Projects**

Arc Design Resources, Inc.

Winnebago Landfill Kilbuck Creek Crossing

Owner: Winnebago Landfill Company

Consultants: Applied Ecological Services

In preparation of the opening of the west landfill unit expansion, Winnebago County Landfill made the decision to improve the creek crossing. Access to the western portion of the landfill has historically occurred via a ford through Kilbuck Creek. The ford caused silt to be deposited in the creek and was not always available for truck traffic due to high water elevations. This project keeps heavy packer trucks and waste haulers off of the adjacent public roads, improving local traffic safety and contributing to an enhanced environmental condition for Kilbuck Creek, a local natural resource and wildlife habitat.



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MERIT AWARD WINNERS

► **Small Projects**

Stanley Consultants

Bus Circulation Enhancement Project

Owner: Museum of Science and Industry

Consultants: CYLA Design Associates / EJM Engineering

Safety and traffic flow has been improved through the Bus Circulation Enhancement Project at the Museum of Science and Industry's Group Center drop off area, which is heavily used by school buses dropping off students. The new traffic flow configuration improves pedestrian safety by establishing an efficient traffic ingress/egress pattern and an organized parking and staging area. Permeable pavers used in the project double as a sustainable stormwater management system component. The Museum of Science and Industry is the only Chicago museum to incorporate this innovative and sustainable method of stormwater management into its facilities.



► **Energy**

Primera Engineers, Ltd.

DC J31 Plainfield Facility Relocation

Owner: ComEd

Consultants: M.J. Electric, LLC / Prit Service, Inc.

Due to the widening of U.S. Route 30 and the addition of a new bike path, the facilities at ComEd's DC J31 Plainfield substation needed to be relocated. Primera engineered this project, which included the design of all: construction drawings, sequencing sketches, material lists, and civil and electrical calculations.

This project had special considerations that Primera had to take into account, including: nonconventional property boundaries, reduction of property space, avoidance of existing structures, and the alignment with new distribution poles. As a result, Primera designed an asymmetrical layout that provided many benefits while limiting outage time for each transformer.



2015 ACEC-ILLINOIS ENGINEERING EXCELLENCE AWARDS

➤ **PANEL OF JUDGES**

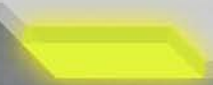
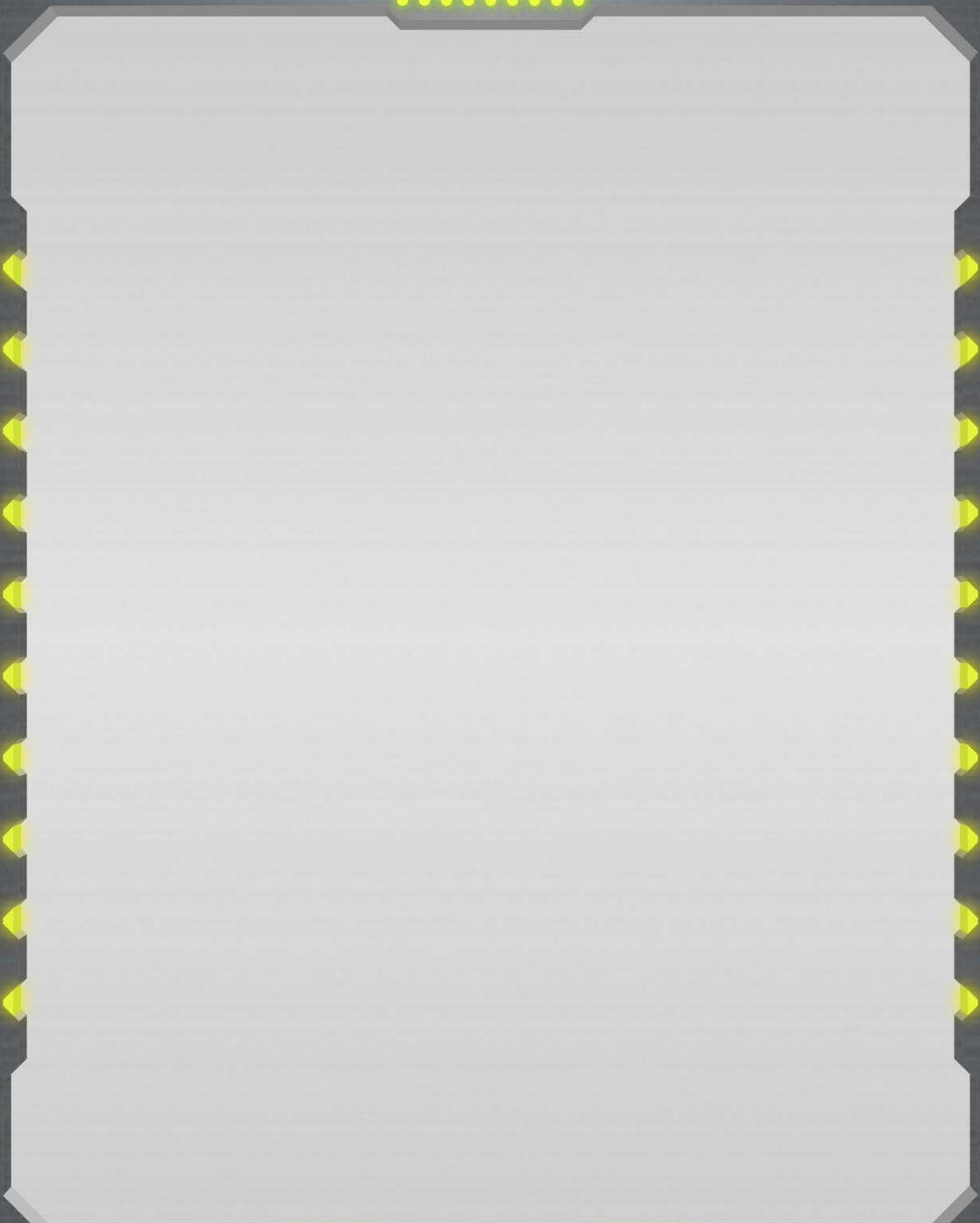
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Marva Boyd Capital Development Board
Dan Fox Nicor
Clarita Lao Illinois Tollway
Bill Pratt WIU School of Engineering
Tony Quigley IL Dept. of Transportation District 1

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