




ACEC

AMERICAN COUNCIL OF ENGINEERING COMPANIES

50th Anniversary
Engineering
Excellence
Awards

Gala Evening

Tuesday, April 25, 2017
Marriott Wardman Park
Washington, D.C.



Special Thanks

ACEC THANKS THE FOLLOWING COMPANIES FOR THEIR GENEROUS SPONSORSHIP
AND SUPPORT OF THE 2017 ENGINEERING EXCELLENCE AWARDS.

DIAMOND

AECOM



Gannett Fleming

HDR

HNTB

EMERALD

ACEC Retirement Trust

Greeley and Hansen

Jaros, Baum & Bolles

STV

TranSystems

WSP | Parsons Brinckerhoff

Welcome to the
2017 ENGINEERING EXCELLENCE
AWARDS GALA

*We hope you enjoy this
celebration of the year's best
engineering achievements.*

A DISTINGUISHED PANEL OF JUDGES REPRESENTING A VARIETY OF PROFESSIONS HAVE SELECTED THIS YEAR'S BEST ENGINEERING ACHIEVEMENTS USING CRITERIA SUCH AS UNIQUENESS AND ORIGINALITY, AND TECHNICAL, ECONOMIC AND SOCIAL VALUE. THESE AWARDS AFFIRM THE VITAL ROLE THAT ACEC MEMBER FIRMS PLAY IN ENHANCING THE QUALITY OF LIFE AND SECURITY OF AMERICA AND THE WORLD.

2017 *Engineering Excellence Awards*

Gala Evening

APRIL 25, 2017

Honorary Chairs

THE HONORABLE JOHN BARRASSO
U.S. Senate

THE HONORABLE THOMAS R. CARPER
U.S. Senate

THE HONORABLE BILL SHUSTER
U.S. House of Representatives

THE HONORABLE PETER A. DEFazio
U.S. House of Representatives

Welcome

ACEC PRESIDENT & CEO, DAVID A. RAYMOND

Presentation of the Colors

U.S. JOINT ARMED FORCES COLOR GUARD

National Anthem

FREDDIE DUNN

National Recognition Awards Tribute

ACEC CHAIRMAN – PETER M. STRUB

Dinner

National Awards Presentation

MASTER OF CEREMONIES – KEVIN NEALON

Menu

Roasted Duck Breast

Red Onion Marmalade, Pear Garnish



Roasted Filet Mignon & Jumbo Crabmeat Stuffed Shrimp

Tomato Bordelaise, Lemon Beurre Blanc



Sweet Trio

*Raspberry Lemon Tart with Passion Fruit Meringue,
Morello Cherry Bundle, and Feuillette Noisette*



Estancia Pinnacle Ranches Chardonnay, California

Sterling Napa Valley Cabernet Sauvignon, California



A VEGETARIAN OPTION IS AVAILABLE UPON REQUEST TO YOUR SERVER.

Grand Conceptor Award



The winner of the 2017 Grand Conceptor Award for the year's most outstanding engineering achievement will be selected from one of the sixteen Grand Award recipients and announced on stage at tonight's Gala.

2017 *Engineering Excellence Awards*

Golden 1 Center, Sacramento, CA AECOM & Henderson Engineering, Orange, CA

Grand Award



The new home of the NBA's Sacramento Kings raises the bar for environmental leadership offering state-of-the-art comfort at more than 200 events per year for more than 1.2 million visitors. It is the nation's most energy efficient sports venue and the world's first indoor sports facility to achieve LEED platinum certification for energy and resource efficiency. The complex is powered by entirely by solar energy. Energy use is cut by 30 percent. Water use is cut by 45 percent. A first-of-its-kind displacement ventilation system delivers conditioned air directly beneath the seats, allowing fans to control temperature through a smartphone app. The arena's five-story, aircraft-hangar doors open to the city and the natural cooling breezes of the Sacramento Delta.

Jerome L. Greene Science Center, New York, NY Jaros, Baum & Bolles, New York, NY

Grand Award



The nine-story, 450,000-square-foot facility is the largest academic science building in New York City and a paragon for noise reduction, light and temperature control. A ground-breaking double-skin, all-glass curtain wall system diminishes noise from an adjacent elevated subway line—imperative for a neuroscience research facility. The double-skin curtain wall also features various glass compositions to meet exacting standards for light and temperature control, and connects with a unique mechanical ventilation system that repurposes exhaust air from the laboratory spaces, passing it between the layers of the glass curtain wall to keep the facility cool in summer and warm in winter.

Pearl Harbor Memorial Bridge, New Haven, CT AECOM, Rocky Hill, CT

Grand Award



The striking new structure is the first “extradosed” cable-stayed bridge in the United States. Utilized extensively in Europe and the Far East, “extradosed” bridges employ much shorter stay-towers and are used when height, navigation clearance, or aesthetic requirements make other options less feasible. The project team had to meet height restrictions, due to a nearby airport and clearance restrictions over an active marine channel. A centerpiece of the \$2 billion I-95 New Haven Harbor Crossing Corridor Improvement Program, the project adds a distinctive landmark in the New Haven skyline, evoking the profile of the battleships memorialized by its name.

2017 *Engineering Excellence Awards*

World Trade Center Transportation Hub (Oculus) Erection Engineering, New York, NY

**Buckland & Taylor International, an affiliate of COWI North America,
New York, NY**

Grand Award



Resembling a pair of hands releasing a white dove, this eye-catching steel and glass dome structure welcomes more than 200,000 daily commuters into Manhattan. Two parallel arches span the 300-foot-long oval shaped Transit Hall, providing a cathedral-like appearance and reaching a crown height of 100 feet. The dove “wings” consist of variable length rafters extending from the arches as long as 200 feet to form the exterior roof structure. Spaces between supporting columns are enclosed in glass to allow natural light to illuminate the main Transit Hall and create an unprecedented railway station experience.

Foundation Design for the New NY Bridge, (Tappan Zee Bridge Replacement) Hudson River between South Nyack and Tarrytown, NY

GZA GeoEnvironmental, Norwood, MA

Grand Award



Innovative pile foundation units will support two new 3-mile-long multiple-span structures for the new Tappan Zee Bridge replacement across the Hudson River. The project team overcame ground conditions that slope dramatically along the bridge route, including one-third of the alignment where the bedrock is more than 700 feet below weak river bottom deposits. Extensive subsurface testing and analysis precisely defined the size, length and required capacity of the 1,100 foundation support piles for the new superstructure. The foundation system is designed to last 100 years without major structural maintenance and will safely accommodate future rail service, and a pedestrian/bicycle path.

SR 520 Floating Bridge Replacement and HOV Program, Seattle, WA

HDR, Seattle, WA

Grand Award



This dynamic new 1.5-mile span is the world’s longest and largest floating bridge. The superstructure is supported by 21 of the heaviest, widest and deepest longitudinal pontoons ever built, each weighing nearly 11,000 tons. Further stabilized by 54 supplemental pontoons and cables and anchors, the bridge can resist winds of up to 98 miles per hour and 6.3-foot wave heights or the equivalent of a 100-year storm. The new bridge provides six travel lanes for vehicular traffic, a dedicated transit and high-occupancy vehicle lane in each direction, as well as a 14-foot wide shared-use pathway for cyclists and pedestrians; it will support the future addition of multimodal transportation options.

2017 *Engineering Excellence Awards*

U.S. 84 Mississippi River Bridge Pin-and-Link Replacement, Natchez, MS

HNTB Corporation, Baton Rouge, LA

Grand Award



Using a process never before attempted to replace the most deteriorated structural components of a 75-year-old bridge, the project team extended the structure's life another 40 years and avoided time and expense of building a completely new bridge. By developing highly detailed plans and guidance for removing damaged pins and links as well as rivets, the margin for error was reduced to almost zero. Despite many risks and unknowns, the pin-and-link replacement was completed successfully, and restored a vital connector between Natchez, Mississippi, and Vidalia, Louisiana.

Elliott Bay Seawall Habitat and Public Space, Seattle, WA

Magnusson Klemencic Associates, Seattle, WA

Grand Award



After 75 years of corrosion from tides and wind-driven waves, the 3,700-ft-long seawall—the city's largest piece of infrastructure—was replaced with a state-of-the-art, seismic-resistant version designed to last at least another 75 years. The design also incorporates an integrated salmon migration corridor—a first-of-its kind structure aimed at enhancing the tidal marine environment. Topped by a new pedestrian promenade that features a custom light-penetrating sidewalk, the project greatly benefits the city's overall quality of life, both above and below the water's surface.

Setting a New Standard for Infrastructure Renewal, Oakland/Macomb Counties, MI

NTH Consultants, Ltd., Northville, MI

Grand Award



After years of catastrophic failures, the massive Oakland-Macomb Interceptor Drain was one of Michigan's top wastewater treatment priorities. Because the sewer had no bypass capability, the project team incorporated an innovative watertight liner to prevent additional groundwater and soil infiltration and a chemical resistant barrier to prevent further corrosion of the concrete pipe. Never had such a repair solution been attempted on such a large diameter pipe (up to 13 feet), at such extreme depths (up to 110 feet), and over such a long distance (more than seven miles). The repaired system assures continuous wastewater service for more than 800,000 residents.

2017 *Engineering Excellence Awards*

Croton Water Filtration Plant, New York, NY

AECOM – Hazen and Sawyer (Joint Venture) New York, NY

Grand Award



Situated under one of the nation's first public golf courses is a four-story, 290 million-gallon-per-day water treatment plant that provides up to 30 percent of New York City's drinking water. Utilizing deep-rock excavation and tunneling, the project team integrated a variety of advanced treatment systems, including stacked dissolved air filtration/flotation tanks. The largest plant of its kind in the world, the massive complex includes an impressive array of sustainability measures that minimize environmental impacts. The utilization of natural processes to control and filter 40 percent of the site's storm water helps the nine-acre Moshulo Golf Course also become one of the nation's largest green roofs.

Claude "Bud" Lewis Carlsbad Desalination Plant, Carlsbad, CA

Arcadis-Kleinfelder, Carlsbad, CA

Grand Award



San Diego County's new \$922-million desalination plant is the largest in the Western Hemisphere, with a production average of 50 million gallons of fresh drinking water per day. An innovative design-build delivery process allowed the project team to improve drinking water and expedite completion. The plant will provide 400,000 residents with a locally controlled, drought-proof water supply that meets or exceeds state and federal drinking water standards. It helps San Diego County take a major step toward achieving its goal of supplying eight percent of the region's water needs from seawater desalination by 2020.

SR 826 (Palmetto Expressway) / SR 836 (Dolphin Expressway) Interchange Improvements, Miami, FL

BCC Engineering, Inc., Miami, FL

Grand Award



A reconstructed five-level interchange upgrades a vital link connecting two of the most traveled corridors in South Florida. The project team overcame constraints of a highly urbanized corridor that included three active rail lines which limited the interchange's horizontal footprint, in addition to its close proximity to Miami International Airport, which restricted project elevation. Reconstruction of the interchange included 49 new bridge structures and the relocation of a major drainage canal, and was achieved with minimal disruption to traffic.

2017 *Engineering Excellence Awards*

World Trade Center Transportation Hub, New York, NY Downtown Design Partnership (STV/AECOM Joint Venture), New York, NY

Grand Award



The gleaming new transportation hub is an iconic portal to the 16-acre World Trade Center site, providing seamless access to multiple passenger rail systems and internal pathways to nearby office towers and nearly 400,000 square feet of retail space. To accommodate an active subway tunnel which runs more than 1,000 feet across the site, the project team developed an innovative structural underpinning methodology to allow full subway operations throughout construction. Lateral bracing of the site's slurry walls mitigates the risk of failure of the walls that restrain the Hudson River.

Kansas City Downtown Streetcar, Kansas City, MO HDR, Kansas City, MO

Grand Award



Kansas City's new 2.2-mile state-of-the-art streetcar system provides a convenient new 16-stop transportation option for more than 10 million downtown visitors and workers. The system features the nation's first fleet of low-floor vehicles and level platform-to-car boarding to accommodate disabled passengers, bicyclists, and parents with strollers. The streetcar also marks the first U.S. transit project to achieve Envision® Platinum Verification for energy resource efficiency. More than \$400 million worth of announced developments have cited the streetcar as a factor in the decision to build within the district, confirming the new streetcar as a major economic boost for the corridor.

University Link Extension, Seattle, WA McMillen Jacobs Associates (on behalf of Northlink Transit Partners Joint Venture) Seattle, WA

Grand Award



Seattle's new University Link light rail extension efficiently connects the three largest urban centers in the state of Washington—downtown Seattle, Capitol Hill, and the University District. The project includes 3.15 miles of twin-bored, 21-foot-diameter tunnels and new underground stations in the Capitol Hill neighborhood and adjacent to Husky Stadium. The tunnels cross under a major downtown interstate and within 13 feet of a ship canal. The project also includes the 427-foot-long Montlake Triangle Pedestrian Bridge, which is one of the first U.S. applications of highly curved post-tensioned concrete in lieu of steel.

2017 *Engineering Excellence Awards*

Elizabeth River Tunnels Project, Norfolk and Portsmouth, VA

WSP | Parsons Brinckerhoff, Virginia Beach, VA

Grand Award



In developing a second tube at the Midtown Tunnel connecting Norfolk and Portsmouth, Va., the project team also had to rehabilitate two existing tunnels, add two new interchanges to the Martin Luther King Jr. Expressway, and relocate a 4,000-foot, 36-inch water main via directional drilling 170-feet beneath the Elizabeth River. The new tunnel was constructed in 11 prefabricated segments out of state and lowered into a trench excavated alongside the existing tube. The project also included 10 new bridges, two buildings, five pump stations, three noise walls and improvements to the regional Intelligent Transportation System network.

Lockheed Martin Technical Research Laboratory, Denver, CO

STV, Douglassville, PA

Honor Award



This pioneering technical research laboratory features four state-of-the-art laser laboratories that meet or exceed required ultra-low concentrations of environmental and airborne pollutants. Using computational fluid dynamics modeling, the project team was able to precisely control humidity and temperature—to within one-tenth of a degree Fahrenheit—creating a consistent, precise research environment for mission-critical experiments. Facility upgrades to meet exacting technical and security requirements were completed within nine months—less than half the time for a typical project of this complexity.

National Museum of African American History and Culture, Washington, DC

WSP | Parsons Brinckerhoff, Boston, MA

Honor Award



As the newest cultural and architectural landmark in the Nation's Capital, this spectacular facility is also a showcase for sustainable building design. The energy system features an innovative chilled beam heating and cooling system, perfectly controlling climate in the display areas and galleries containing sensitive artifacts, yet using nearly one-third less energy than a comparably sized structure. Additional features include a 384-panel rooftop solar panel array, demand-controlled ventilation, as well as a system for the capture, storage, and reuse of rainwater and groundwater.

2017 *Engineering Excellence Awards*

130th & Torrence Grade Separation, Chicago, IL Alfred Benesch & Company, Chicago, IL

Honor Award



One of Chicago's most noted traffic bottlenecks has been transformed into a smooth-flowing multi-tiered interchange that is also helping spur development of the nearby Chicago Manufacturing Campus. Each day, more than 38,000 vehicles, 50 freight trains and 41 passenger trains used the intersection, creating a crowded logjam. Further complicating the project was its close proximity to an automotive assembly plant, a railroad mixing yard, a residential area, and protected marsh area. The project realigned roadways and added six new bridges, including a 4.75-million-pound steel railroad truss bridge assembled in a nearby staging area then transported in just four hours to its permanent location.

Harry Tracy Water Treatment Plant, San Bruno, CA Kennedy/Jenks Consultants, San Francisco, CA

Honor Award



Combining advanced civil and structural engineering innovations, the project team designed an 11-million-gallon reservoir that will help a nearby water treatment plant quickly restore operations in the wake of a major earthquake. The massive above-ground, concrete reservoir includes a "tank within a tank" design, with an outer 3-million-gallon chlorine contact raceway for water treatment surrounding an internal 8-million-gallon treated water storage reservoir. The structure's floor-slab and roof-slab connections are an "anchored flexible" design to resist high vertical and lateral seismic forces allowing the system to deliver a minimum of 140 million gallons per day within 24 hours after a major earthquake.

U.S. Bank Stadium, Minneapolis, MN Thornton Tomasetti, Dallas, TX

Honor Award



The new \$1.1-billion home of the NFL's Minnesota Vikings is also a model of structural ingenuity. The 1.7-million-square-foot stadium features five 55-foot-wide steel-framed glass walls—some nine stories tall—which can pivot 90 degrees to create a large indoor/outdoor plaza with downtown views. The roof is deeply lofted for snow management and is one of the lightest steel roofs in North America. Covered by 246,000 square feet of a clear, lightweight polymer—it is the largest roof of its kind in North America and produces as much of an open-air feeling as many stadiums without roofs.

2017 *Engineering Excellence Awards*

Sellwood Bridge Replacement, Portland, OR

T.Y. Lin International, Beaverton, OR

Honor Award



A picturesque, three-arch bridge replaces a deteriorating 1925-era structure that was threatened by an encroaching hillside. The project team incorporated advanced seismic resilient bridge components and innovative landslide mitigation systems to stabilize the hillside. They also trimmed a year off the construction schedule by shifting the original steel deck truss to one side using hydraulic jacks, allowing the bridge to remain in service during construction. The new bridge carries two vehicular lanes, two bike lanes, two shared-use sidewalks, and will accommodate future streetcar service.

St. Patrick's Cathedral Restoration, New York, NY

Langan Engineering and Environmental Services, New York, NY

Honor Award



The \$177 million restoration of the historic St. Patrick's Cathedral included a pioneering scanning method to accurately assess renovation needs of the 138-year-old edifice. The first-of-its-kind method used hundreds of geo-referenced digital images to develop façade surveys. The images provided over 40 million points, more than eight gigabytes of data, and were so accurate that the preservation team was able to prepare detailed plans of the structure's most intricate and detailed features. The remarkable survey accuracy ensures that the restored building will maintain its historical integrity for decades to come.

Newtown Creek Waste Water Treatment Plant Upgrade, Brooklyn, NY

Michael Baker Int'l; CB&I; Gannett Fleming (Joint Venture)
New York, NY

Honor Award



Innovative upgrades helped double this waste water plant's wet-weather processing capacity to 720 million gallons per day, while increasing sediment and grit removal to 92 percent and reducing odor. To reduce discharges into the East River, the project team utilized advanced 4D modeling technology to deliver four new treatment components—totaling \$1.3 billion—and inspected the interiors of eight, 140-foot-high egg-shaped anaerobic digesters that sit atop the plant. They also implemented a biogas program that is expected to heat nearly 5,200 homes and reduce annual greenhouse gas emissions by more than 90,000 metric tons by the end of this year.

2017 *Engineering Excellence Awards*

C.W. Bill Young Regional Reservoir, Hillsborough County, FL Gannett Fleming, Camp Hill, PA

Honor Award



Imaginative engineering successfully restored Florida's largest off-stream potable raw water storage facility—a vital supply when available surface water withdrawals are limited. After abnormal cracks were discovered in the 1,100-acre reservoir's erosion control layer, the project team replaced the existing geomembrane liner with a first-of-its-kind composite polyvinyl chloride layer to control seepage. A new stair-step erosion control system enhances the reservoir's stability, while a state-of-the-art, re-curved seawall prevents hurricane-driven waves from overtopping into the 15.5-billion-gallon facility that serves more than 2.4 million people.

90-Inch Water Main Hot Tap & Line Plug, Des Plaines, IL GRAEF-TDW Services, Inc., Chicago, IL

Honor Award



A colossal 90-inch water transmission main was completely relocated to accommodate the rebuilding of the Jane Addams Memorial Tollway, while incredibly maintaining water service to 500,000 residents. The project team designed, tested, and constructed a unique thrust restraining system to absorb the massive forces generated by the risky hot tap procedure—where two pipes are connected without emptying pipe contents. The system safely absorbed the high-pressure force when water was diverted into the bypass section. It allowed a critical water supply to be preserved, the construction schedule to be reduced by a year, and renovation of the Tollway to proceed.

Lake Delhi Dam, Delhi, IA Stanley Consultants, Muscatine, IA

Honor Award



Six years after a devastating rain breached the original earthen Lake Delhi Dam, turning a popular nearby recreational attraction into 450 acres of mud; a redesigned spillway provides three times the overflow capacity of similar structures. The design team incorporated a unique accordion-shaped labyrinth spillway to pass high volumes of water across a short distance without need for mechanical gates or electrical systems. Shortly after the completion of Iowa's first—and the Midwest's largest—labyrinth spillway, Lake Delhi had its fifth largest recorded flood and the new dam performed flawlessly.

2017 *Engineering Excellence Awards*

Arthur Ashe Stadium Retractable Roof, New York, NY Hardesty & Hanover, New York, NY

Honor Award



The renowned U.S. Open Tennis stadium now has a new retractable roof to assure that championship play can continue in any weather. The project team overcame the challenge of placing a new roof on an existing stadium by employing two one-million-pound panels mounted on 16 wheel-axle assemblies which in just six minutes can move the panels together to enclose the 62,500-square-foot roof opening. In addition to handling the stress of panel movement, the mechanization system resists lateral winds and uplifts of as much as 50 mph. The new retractable roof saves millions of dollars in lost revenues from play stoppage and in the cost of constructing a new stadium.

Franklin Avenue Bridge Rehabilitation, Minneapolis, MN HNTB Corporation, Golden Valley, MN

Honor Award



Major restoration of this historic five-span arch bridge over the Mississippi River would normally require a two-year closure, yet the span was reopened to traffic after just 116 days. With the renowned 1923-era Minneapolis landmark needing extensive structural rehabilitation, the project team designed and fabricated numerous bridge elements and systems, including deck panels, rail panels, cap beams, and ornamental railing panels, prior to closing the bridge to traffic. The design also included polished stainless steel plates embedded in the underside of the precast deck panels to reduce the number of needed expansion joints. The project is a model for reconstructing a bridge within a short time frame.

Scioto Greenways, Columbus, OH Stantec with MKSK, Messer Construction, Resource International, Korda/ Nemeth, and ASC Group, Columbus, OH

Honor Award



As part of a stunning new 33-acre recreational greenway in Downtown Columbus, a 7,000-foot section of the downtown river was revitalized to its natural flow. The project included removal of an outdated dam, the installation of grade control systems and reconstruction of the river bed. Material excavated from the river bed was recycled to create new river banks. The project includes new green space for recreational activities along both banks, and is a catalyst for further private downtown investment.

2017 *Engineering Excellence Awards*

U.S. 36 Boulder Turnpike Express Lanes, Denver, CO HDR, Denver, CO

Honor Award



Colorado's first multimodal transportation facility integrates bus, vehicle and bicycle traffic. The project contains several statewide firsts: the first active traffic management system, which uses CCTV cameras to identify traffic patterns and direct drivers away from upcoming hazards; and buffer-separated lanes for express and general purpose traffic. An innovative diverging diamond interchange—one of only 34 in the U.S.—crosses traffic to the opposite side of the road to allow for unimpeded left turns onto freeway ramps to reduce traffic conflict points. The improvements have cut average rush hour commuting times by 25 minutes.

Cincinnati Bell Connector, Cincinnati, OH WSP | Parsons Brinckerhoff and HDR, Cincinnati, OH

Honor Award



A new 3.6-mile streetcar line provides a speedy connection between Cincinnati's central riverfront, its resurgent downtown and its Over-the-Rhine neighborhoods. Powered by an overhead electrical system, the \$148-million streetcar system shares the road with automobile traffic in mixed-use lanes. The design included removal of 8.5-foot-wide sections of pavement approximately 20 inches deep to install the rail-embedded reinforced concrete. The project includes 18 raised platforms, customized shelters, and aesthetics that mirror nearby historic areas, while also improving infrastructure efficiency through linked transportation systems.

Gay Head Lighthouse Relocation, Aquinnah, MA GEI Consultants, Woburn, MA

Honor Award



As the focus of national media attention including a PBS Nova documentary titled "Operation Lighthouse Rescue" a 159-year-old, 465-ton lighthouse was rescued from an eroding cliff and moved to a new elevated site to preserve the light's focal point and remain in service. The project team built a 129-foot-long precisely graded path with well-compacted aggregates and geotextile reinforcement, then raised the lighthouse onto steel beams and pushed it along steel rails along the path to its new foundation. The project team also worked with the local Wampanoag Tribe to restore the cliff site after the move.

2017 *Engineering Excellence Awards*

Peaks to Plains Trail: Clear Creek Canyon Segment, Jefferson/Clear Creek Counties, CO Muller Engineering Company, Lakewood, CO

Honor Award



Outdoor enthusiasts can now enjoy unprecedented recreational access to Clear Creek Canyon with completion of a three-mile segment of a planned 15-mile multi-use trail through the rugged terrain from Golden to Idaho Springs, Colorado. Sustainable design was a priority in creating the 10-foot-wide concrete trail, preserving existing large trees, riparian vegetation and rock outcroppings, while removing debris and eroded areas from past mining operations. Artistic native rock, colored concrete and weathered steel, allow the trail to blend with natural canyon colors. A major step toward the proposed 65-mile Peaks to Plains Trail, the new trail accomplishes planners' goal to "complement the Canyon terrain so well that users feel like the trail has always been there."

Maggie Daley Park Reconstruction, Chicago, IL Stantec & Infrastructure Engineering, Chicago, IL

Honor Award



This world-class 20-acre park features an eye-catching quarter-mile-long "ice ribbon" for skating. The ice ribbon winds through the park, rising and falling with the landscape. It can accommodate up to 700 skaters during the winter, and converts to a walking/jogging trail during warmer months. The park also includes two 40-foot-tall rock climbing structures and a three-acre play garden for children featuring a 125-foot long suspension bridge. The project team overcame the challenge of locating the park atop an existing underground parking garage by incorporating eco-friendly, lightweight geofoam fill to minimize loads.

Hydrothermal Processing Pilot System, Greenwood Village, CO Merrick & Company, Greenwood Village, CO

Honor Award



This pilot project proved that a hydrothermal processing system can be used to transform wet biomass waste into a valuable fuel at a useful scale. Hydrothermal processing uses water, high heat and high pressure to transform hydrocarbon-rich material—in this test case, algae—into bio-crude oil and natural gas. While the technology has been successfully tested in laboratories, this project was the first time a pilot-scale of the processing system was successfully built, tested, and commissioned. Currently now in operation in India, the pilot-scale system produces approximately 1,000 liters of fuel per day—a much higher quantity than any previous demonstration of the technology, and an indicator of its potential for other, larger applications.

2017 Engineering Excellence Awards

National Recognition Awards

ACEC/ALABAMA

Volkert, Inc.
Fairhope Water Resource Recovery Facility

ACEC/ARIZONA

GHD
Scottsdale Booster Pump Station 71

Psomas
Paseo de las Iglesias: Santa Cruz River Bank

ACEC/ARKANSAS

Bridgefarmer & Associates
I-430/I-630 The Big Rock Interchange

ACEC/CALIFORNIA

AECOM/Henderson Engineering Inc.
Golden 1 Center

Arcadis
Middle Harbor Redevelopment Program,
Phase 1

Arcadis/Kleinfelder
Claude "Bud" Lewis Carlsbad
Desalination Plant

Burns & McDonnell
500kV Underground Transmission Project

**Holdrege & Kull Consulting
Engineers & Geologists/Innovative
Construction Solutions, Inc./
Coastland Engineering Inc.**
Closed Lincoln Landfill Groundwater
Corrective Action

Kennedy/Jenks Consultants
Digester Biogas to Clean Burning
Vehicle Fuel

Kennedy/Jenks Consultants
Harry Tracy Water Treatment Plant -
Long Term Improvements

Kimley-Horn and Associates
Blue Line Light Rail Transit Renewal

Kimley-Horn and Associates
Interstate 80 SMART Corridor Integrated
Corridor Mobility Project

Kjeldsen-Sinnock & Neudeck
Regional Wastewater Facility 3D Scanning
& Modeling

Kleinfelder
Auto Center Drive Grade Separation

Kleinfelder
Cross Border Xpress Terminal Building and
Pedestrian Skybridge

Maintenance Design Group
L.A. County Bus Operations and
Maintenance Facility

ACEC/COLORADO

Dewberry
Rueter-Hess Water Purification Facility

HDR
South Platte Interceptor

HDR
U.S. 36 Boulder Turnpike Express Lanes

Merrick & Company
Antarctica in HD - Master Planning at the
Bottom of the Earth

Merrick & Company
Hydrothermal Processing Pilot System

Muller Engineering Company
Peaks to Plains Trail: Clear Creek Canyon
Segment

ACEC/CONNECTICUT

AECOM
Pearl Harbor Memorial Bridge

Lochner
I-95/I-91/Route 34 Interchange

**RACE Coastal Engineering/
GeoDesign, Inc.**
Steelpointe Harbor Waterfront
Improvement Project

WSP | Parsons Brinckerhoff
Rehabilitation of Route 8 Bridges

ACEC/FLORIDA

**Ayres Associates and GCI Inc.
(jointly with Kimley-Horn and
Associates and STV)**
Scour Evaluation for Bridges with
Unknown Foundations

BCC Engineering
SR 826 (Palmetto Expressway)/SR 836
(Dolphin Expressway)
Interchange Improvements

DRMP, Inc.
U.S. 17-92 Interchange at SR 436

Gannett Fleming
C.W. Bill Young Regional Reservoir

Hardesty & Hanover
Boca Grande Causeway Swing Bridge

Walter P Moore
DAYTONA Rising

ACEC/GEORGIA

Amec Foster Wheeler
Porsche Cars North America Headquarters/
Aerotropolis

American Engineers
5-Points Intersection Improvement Project

CH2M

Peachtree Corners Geospatial Asset
Inventory

Croy Engineering
Skip Spann Connector

Emprise Corporation
Gas Turbine Test Stand 6

ACEC/IDAHO

Parametrix
I-84 Meridian Road Interchange

T-O Engineers, Inc.
Friedman Memorial Airport

ACEC/ILLINOIS

Alfred Benesch & Company
130th Street & Torrence Avenue Grade
Separation

Baxter & Woodman
Wastewater Plant Combined Heat and
Power Project

GRAEF - TDW Services
90-Inch Water Main Hot Tap & Line Plug

Greeley and Hansen
O'Brien Reclamation Plant Adds UV
Disinfection System

**Hanson Professional Services Inc./
Maurer-Stutz, Inc.**
Ahsapa Reconnects Emiquon to Illinois
River

**Stanley Consultants; Chastain/Thomas
Joint Venture**
Fox River Bridge

Stantec/Infrastructure Engineering, Inc.
Maggie Daley Park Reconstruction

ACEC/INDIANA

CHA
U.S. 31 Hamilton County Freeway

Greeley and Hansen
Rabbit Run Storage Tank Reduces CSO
Plan Costs

Wessler Engineering
Fry Road Rain Trail

ACEC/IOWA

CH2M
Iowa 100 Extension Project - Phase I

HDR
Iowa Premium Wastewater Treatment Plant

HDR
Railroad Relocation Project

Stanley Consultants
Lake Delhi Dam

2017 *Engineering Excellence Awards*

ACEC/KANSAS

Burns & McDonnell
Riverton Unit 12 Combined Cycle
Conversion Project

ACEC/KENTUCKY

Bell Engineering
Nicholasville Road FEMA Flood Mitigation
Project

EA Partners
Kingdom Come State Park Access

Stantec
Hatchery Creek Stream Restoration

ACEC/MAINE

Amec Foster Wheeler
Fore River Seep Remediation

ACEC/MASSACHUSETTS

GEI Consultants
Gay Head Lighthouse Relocation

GZA GeoEnvironmental
Foundation Design for Tappan Zee Bridge
Replacement

Tetra Tech
Secondary National Roads Development
Project

Tighe & Bond
Biosolids Dryer Facility

VHB
Route 79/I-195 Interchange Improvements

WSP | Parsons Brinckerhoff
Marblehead Pipeline Replacement Project

WSP | Parsons Brinckerhoff
National Museum of African American
History and Culture

ACEC/METROPOLITAN WASHINGTON

A. Morton Thomas and Associates
Brookside Gardens Entryway and Parking
Lot

Summer Consultants, Inc.
U.S. Tax Court HVAC Improvements

Walter P Moore
The Charleston Gaillard Center

Whitman Requardt and Associates
Corbalis to Fox Mill Water Main

ACEC/MICHIGAN

Fleis & Vandenbrink Engineering
Muskegon River Survey with Drones & Boats

NTH Consultants
Oakland-Macomb Interceptor Drain
Rebuild

Prein & Newhof
Gerald R. Ford International Airport
Drainage Improvements

SME
Jimmy John's Field

Surveying Solutions
Gordie Howe International Bridge Mapping

ACEC/MINNESOTA

American Engineering Testing
U.S. Bank Stadium

Dunham Associates
Microgrid Technology Center

HGA Architects and Engineers
Ordway Center Concert Hall Expansion

HNTB Corporation
Franklin Avenue Bridge Rehabilitation

ACEC/MISSISSIPPI

HNTB Corporation
U.S. 84 Mississippi River Bridge Pin & Link
Replacement

ACEC/MISSOURI

Burns & McDonnell
The Daniel Boone Bridge: Beyond the
Basics

Crawford, Murphy & Tilly/EFK Moen
Bridging the Gateway

HDR
Kansas City Downtown Streetcar

KJWW Engineering Consultants
William H. Danforth Wing Research
Laboratory

Parsons
Columbia I-70 Bridges Design-Build Project

TranSystems
Southwestern Illinois Freight Transportation
Study

ACEC/MONTANA

DJ & A, P.C.
Missoula to Lolo Trail

HDR
Jackrabbit to Big Sky Transmission Line

Thomas Dean & Hoskins
Multiuse Athletic Field & Intermittent
Storm Water Detention Pond

ACEC/NEBRASKA

**EA Engineering, Science and
Technology, Inc., PBC**
Lincoln Park Phase 2 Sediment Clean-Up
Design

Lamp, Rynearson & Associates
Henry Doorly Zoo Stormwater
Management

ACEC/NEW JERSEY

**Amercom Corporation, Consulting
Engineers**
Metro Road Bridge Replacement in 9 Days

Dewberry
NJDOT Route 46 Rockfall Protection
Fence

Gannett Fleming
Centralizing for Efficiency

HNTB Corporation
Rehabilitation of Park and Watchung
Avenue Bridges

HNTB Corporation
Route 18 Bridge over Route 1

Jacobs Engineering Group
NJDOT Route 72 Manahawkin Bay Bridge

WSP | Parsons Brinckerhoff
New Route 72 Manahawkin Bay Bridge

ACEC/NEW MEXICO

WHPacific
McCarran Int'l Air Traffic Control Tower
and TRACON

ACEC/NEW YORK

**Downtown Design Partnership
(STV/AECOM Joint Venture)**
World Trade Center Transportation Hub

**Buckland & Taylor International, Inc., an
affiliate of COWI North America, Inc.**
World Trade Center Transportation Hub
(Oculus) Erection Engineering

CHA
Cleveland Drive over I-90 Bridge
Replacement

Dagher Engineering
VIA 57 West: Systems Innovations for the
Courtscraper

Gilsanz Murray Steficek
American Physical Society

Hardesty & Hanover
Arthur Ashe Stadium Retractable Roof

Hazen and Sawyer/AECOM
Croton Water Filtration Plant

HDR
Government Center Station Reconstruction

Jaros, Baum & Bolles
Jerome L. Greene Science Center

**Langan Engineering & Environmental
Services**
365 Bond

**Langan Engineering & Environmental
Services**
56 Leonard Street

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Langan Engineering & Environmental Services

St. Patrick's Cathedral Restoration

Lilker Associates, Consulting Engineers
The Beekman Hotel and Residences Restoration

ME Engineers

Billie Jean King National Tennis Center

**Michael Baker International/CB&I/
Gannett Fleming, Joint Venture**
Interim Upgrade of Newtown Creek Waste Water Treatment Plan

Sam Schwartz Engineering
Brooklyn Queens Connector

STV/URS

Reconstruction of Route 9A and Lower Manhattan Streets

Thornton Tomasetti
SOCAR Tower

Thornton Tomasetti
U.S. Bank Stadium

**WSP | Parsons Brinckerhoff/STV/
AECOM**

Gateway System Level Design

ACEC/NORTH CAROLINA

CDM Smith

Incinerator System Rehabilitation and Air Emissions Upgrades Project

McKim & Creed

UAS Proof of Concept for Beach Monitoring

ACEC/OHIO

Stantec

Fourth and Summit Complete Streets

Stantec with MKSK, Messer Construction, Resource International, Korda/Nemeth, ASC Group

Scioto Greenways

Wade Trim Associates, Inc.
CSO Advanced Facilities Plan

WSP | Parsons Brinckerhoff/HDR
Cincinnati Streetcar: Cincinnati Bell Connector

ACEC/OKLAHOMA

Guernsey

Boeing Office and Laboratory

Olsson Associates

Emergency Repair of May Avenue Bridge

Olsson Associates

Western Road Widening

ACEC/OREGON

HDR

Bridge Creek Water Supply and Treatment Plant

T.Y. Lin International

Sellwood Bridge Replacement

ACEC/PENNSYLVANIA

Gannett Fleming

Hulton Bridge Replacement

Gannett Fleming

Maintenance-IQ: GIS Application

Johnson, Mirmiran & Thompson

Guaranteed Pavement Information System Application

STV

Lockheed Martin Technical Research Laboratory

Urban Engineers

Environmental Services for the Extension of Delaware Avenue

Whitman Requardt and Associates
Manayunk Bridge Trail

ACEC/SOUTH CAROLINA

HDR | ICA

Bluffton Parkway Phase 5A

Stantec

U.S. 17 Median Improvements

TranSystems

Charleston County Bees Ferry Road Widening

Vaughn & Melton Consulting Engineers
Wastewater Treatment Plant Expansion

ACEC/TENNESSEE

Gresham, Smith and Partners
TDOT Fast Fix 8 Project

ACEC/TEXAS

Dannenbaum Engineering Corporation

Upper Texas Coast Hurricane Storm Surge Suppression Study

Garver

Fort Hood Belton Lake Recreation Area WWTP Energy Reduction Project

HDR

U.S. 190 Copperas Cove Reliever

Huitt-Zollars

Love Field Modernization Program

Kimley-Horn and Associates

The Star in Frisco

Parkhill, Smith & Cooper

Borger Northwest Wellfield Project

Parkhill, Smith & Cooper

Texas School for the Deaf 3-D Survey

Walter P Moore

City of El Paso Traffic Management Center Relocation

Walter P Moore

Texas Center for Proton Therapy

ACEC/UTAH

Reaveley Engineers and Associates
Provo City Center Utah LDS Temple

ACEC/VIRGINIA

**Dunbar Milby Williams Pittman & Vaughan, PLLC/
Schnabel Engineering, LLC**

Children's Hospital of Richmond Pavilion

WSP | Parsons Brinckerhoff

Elizabeth River Tunnels Project

ACEC/WASHINGTON

Brown and Caldwell

Chambers Creek Wastewater Plant Expansion

HDR

SR 520 Floating Bridge Replacement and HOV Program

Magnusson Klemencic Associates

Elliott Bay Seawall Habitat and Public Space

McMillen Jacobs Associates

(on behalf of Northlink Transit Partners Joint Venture)

University Link Extension

Shannon & Wilson

Fir Island Farms Estuary Restoration

WSP | Parsons Brinckerhoff

Sound Transit Regional HCT System Plan

ACEC/WISCONSIN

Donohue & Associates

Energy Optimized Resource Recovery

GRAEF

Wisconsin Ave. Transmission Main and Temporary Booster Station

Short Elliott Hendrickson

2016 Water Main Rehabilitation Project

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