2025

Engineering Excellence Awards

ACEC

American Council of Engineering Companies
of South Carolina

Engineering Excellence Awards

February 12, 2025
6:30 PM
DoubleTree by Hilton Hotel Columbia

Engineering Excellence is an annual competition sponsored by the American Council of Engineering Companies (ACEC) and its member organizations. It recognizes engineering achievements which demonstrate the highest degree of merit and ingenuity.

The ACEC-SC Palmetto Award (top overall project) and the five other entries judged to be the best overall are eligible to enter the ACEC National Competition. National winners are announced at a gala event in Washington, D.C. later this year.

The ACEC-SC competition is open to all firms engaged in the practice of consulting engineering. Projects must have been designed in the state of South Carolina with construction substaintially completed between Nov. 1, 2022 and Oct. 31, 2024. Projects may be constructed anywhere in the world as long as they were designed in South Carolina.

A distinguished panel of judges was selected. Each judge separately reviewed the projects. Criteria for judging included: original or innovative application of new or existing techniques; future value to the engineering profession and perception by the public; social, economic and sustainable design considerations; complexity; and exceeding owner/client needs. We applaud and congratulate all the firms that entered the 2025 Engineering Excellence Awards Competition.

ACEC

American Council of Engineering Companies
of South Carolina

Palmetto Award Winner

NF

ACEC National Finalist • ACEC-SC Engineering Excellence Award

Davis & Floyd
“Medical District Drainage Tunnel Extension”

City of Charleston
Waste and Storm Water

The Charleston Medical District includes major healthcare institutions such as MUSC Health, VA Medical Center, and Roper Hospital. The 27-acre Ehrhardt Streetwatershed within this district experienced frequent flooding, impacting emergency access and safety for the patients, staff, and public. The South Carolina Office of Resilience (SCOR) awarded $10 million in CDBG-MIT funding to the City of Charleston for stormwater improvements in this vulnerable area, making it SCOR’s largest project to date.

The City tasked Davis & Floyd and its team with developing a stormwater management solution to address these issues. Key components included extending the existing stormwater tunnel system 900’ to Ehrhardt Street, adding a 54” vertical drop shaft with a vortex structure to convey the stormwater runoff into the tunnel efficiently, and constructing a near-surface drainage system to allow for efficient runoff collection and conveyance to the drop shaft and tunnel.

This complex project required careful utility coordination and technical expertise, including tunneling through challenging soil conditions beneath existing structures. The result is a stormwater system that reduces flooding, improves emergency access, and enhances safety, ultimately protecting lives and supporting community resilience.

ACEC National Finalists

NF

ACEC National Finalist • ACEC-SC Engineering Excellence Award

W.K Dickson & Co., Inc.
“Charter Oak Elevated Tank”

Joint Municipal Water & Sewer Commission
Water Resources

The Lexington community united to develop a 1-million-gallon composite water storage tank, located across from Lexington High School. This project encompassed engineering design, permitting, construction support, and observation, but also became a symbol of local pride and collaboration. A key highlight was the involvement of Lexington High School students, who, under the guidance of their art teacher Allan Anderson, designed the tank’s logo. The design features the school’s wildcat mascot alongside symbols of local identity, such as Lake Murray and the area’s agricultural heritage.

The tank was voted one of the Top 10 tanks in North America, a testament to the community’s enthusiasm and connection to the project.

NF

ACEC National Finalist • ACEC-SC Engineering Excellence Award

Johnson, Mirmiran & Thompson (JMT)
“South Carolina's First GFRP Bridge Over Beresford Creek”

City of Charleston

Structural Systems

The Daniel Island Drive (S-33) bridge replacement over Beresford Creek was a key project for the City of Charleston. Daniel Island Drive is critical for egress to the community and carries 8,000 vehicles daily, including school bus routes. JMT inspected the bridge and found severe corrosion and broken pretressing stands. The bridge was closed for temporary emergency repairs. It was reopened but remained closed for trucks and emergency vehicles until a full bridge replacement was developed.

JMT provided comprehensive engineering services throughout the project, including traffic and hydraulic studies, bridge and roadway design, and permitting aligned with DES-BCM and USACE standards. The firm also managed construction engineering and inspection services, facilitating the relocation of essential utilities to minimize community disruption. JMT implemented a “close and detour” plan to address the bridge’s replacement efficiently. The innovative design incorporated pedestrian and bicycle paths, blending aesthetic and functional features at minimal cost.

The new three-span, 120-foot flat slab bridge, is the first public roadway structure in South Carolina to utilize glass fiber reinforced polymer (GFRP) in its design. This choice aims to extend the bridge’s lifespan by preventing corrosion and reducing construction labor and costs. Designed to meet SCDOT’s seismic specifications, the bridge opened to traffic on June 6, 2024, enhancing safety and performance while setting a precedent for future infrastructure projects in the region.

NF

ACEC National Finalist • ACEC-SC Engineering Excellence Award

GWA
“Archer School Apartment Homes”

Trident Construction Company, LLC
Building/Technology Systems

The Humanities Foundation, along with local and state agencies, renovated the former Archer School into affordable apartment units. This $42 million redevelopment project has converted the historic building in 89 affordable housing units for seniors, many having a personal history with the building. The new homes are expected to have a significant positive impact, addressing critical housing needs while preserving the legacy of the Archer School. This initiative not only honors the past but also secures a brighter future for senior citizens in the area, demonstrating the power of community collaboration and dedication.

GWA performed electrical engineering services for the renovation of the existing campus and the addition of buildings to create more housing, all while maintaining the historical integrity of Archer School. The school is a City of Charleston Historic Site.

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ACEC National Finalist • ACEC-SC Engineering Excellence Award

Parrish & Partners
“US 521 Bridge Replacement Over Big Pine Tree Creek”

SCDOT

Structural Systems

The design and project management led by the Parrish & Partners team successfully delivered the bridge replacement and US 521 reconstruction, thanks to the Parrish and Partners’ expertise and deep project understanding. The final design plans were crafted to minimize traffic disruptions, safeguard sensitive environmental and cultural resources, mitigate hydraulic impacts, and ensure a safe, durable US 521 bridge for the future. These innovative and efficient engineering efforts resulted in plans that were let construction both on time and within budget. As the project transitioned to the construction phase, Parrish & Partners’ meticulously detailed staged construction plans and effective communication with the contractor streamlined the process, enabling the newly constructed bridge with all traffic lanes to open to the public ahead of the 2024 new year.

NF

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TranSystems
“SC 34 Bridge Replacement Over Norfolk Southern Railroad”

SCDOT

Transportation

The SC 34 bridge replacement over Norfolk Southern Railroad is a critical infrastructure project that addressed pressing transportation needs in Newberry County, South Carolina. Designed by TranSystems, this innovative 185-foot, three-span steel girder bridge effectively elevates the roadway to meet modern clearance standards while ensuring uninterrupted access for heavy truck traffic. Through a strategic multi-staged construction approach, the project minimized disruption to local businesses and commuters, exemplifying best practices in engineering design and community engagement.

This project enhances public safety and supports economic growth by facilitating reliable transportation routes, reflecting a commitment to sustainable development. By implementing advanced engineering solutions, TranSystems has set a new standard for future infrastructure project, demonstrating the vital role of civil engineering in enhancing everyday life. The successful completion of this project within budget and on schedule underscores TranSystems’ dedication to meeting client needs and delviering high-quality engineering solutions.

ACEC-SC Engineering Excellence Awards

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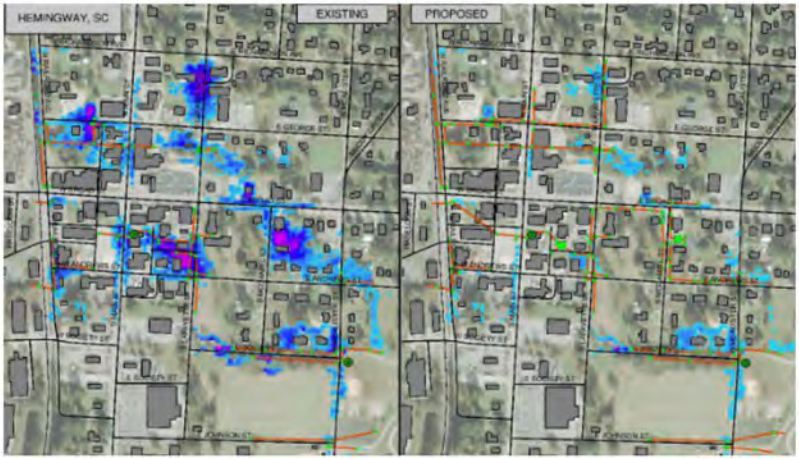
Harper General Contractors
“Clemson University WWTP Upgrades”

Clemson University
Waste and Storm Water

Serving as the CM At-Risk, Harper performed upgrades to the wastewater treatment facility on Clemson University’s campus. This facility services all of the University’s wastewater flow. The Clemson University WWTP faced challenges due to fluctuating wastewater flow from varying student populations and athletic events. To mitigate flow challenges, the project scope included modifying the existing two basin SBR to a four basin system, improving operations and increasing maintenance flexibility. The project was completed in phases, including installing a UV disinfection system and upgrading the SBR system. Despite setbacks, the team collaborated closely with the University to deliver the project two months ahead of schedule. Cost challenges, exacerbated by COVID-19 market escalation, were mitigated through value engineering and sustainable methods. The project prioritized environmental sustainability and client needs, resulting in a successful and trusted partnership with the University.



ACEC-SC Engineering Excellence Award

McCormick Taylor
“Georgetown & Williamsburg Counties H&H Study”

South Carolina Office of Resilience

Studies, Research, and Consulting Engineering Services

Working for the South Carolina Office of Resilience (SCOR), McCormick Taylor completed a hydrologic and hydraulic study within Georgetown and Williamsburg Counties. The study was funded by a United States Housing and Urban Development (HUD) Community Development Block Grant-Mitigation (CDBG-MIT) grant. It was intended to identify flooding issues, assess existing stormwater systems, develop and prioritize mitigation projects, and establish an implementation strategy for the identified projects. The breadth of the study area, spanning across multiple ecoregions and watersheds, required the project team to be well-versed in the evaluation and improvement of drainage systems in a wide range of settings. Through the study, McCormick Taylor identified 168 reported drainage issues and inventoried over 3,400 acres using GPS mapping. This included 300,000 linear feet of ditches, 170,000 linear feet of stormdrain pipe, and 25 bridges. For the 60 selected study areas, proposed mitigation projects totaled $147.4 million which could result in a total benefit of $253.8 million in reduced damages to the two-county area. Mitigation recommendations included improved drainage systems, larger culverts and bridges, installation of detention facilities, floodplain restoration, and green infrastructure. The report, models, data, and recommendations from this study can arm the communities and agencies with the engineering justification to proceed with the proposed improvement projects and protect the public from future flooding.

ACEC-SC Engineering Excellence Award

STV
“S-75/Cherokee Road Bridge Replacement over US 29”

SCDOT

Transportation

As the South Carolina Department of Transportation increases mobility and safety along the US 29 corridor, and throughout the state, a newly replaced bridge and interchange improvement at S-75 Cherokee Road in Anderson County are enhancing connectivity and accessibility between communities. STV provided full turnkey engineering services as lead designer. The final design features a new, single-span bridge, upgraded exit and entrances ramps from US 29 to S-75, mechanically stabilized earth (MSE) walls, and a roundabout at an adjacent intersection. The project is one of several improvements that SCDOT has initiated along US 29, as part of the approximately 500 bridges throughout the state that the agency is rehabilitating or replacing.

During the redesign, the team pinpointed that the proposed signalized intersection had a larger footprint, which could result in stream and wetlands impacts and right-of-way impacts. STV transformed a signalized intersection into a roundabout—a relatively unique and uncommon bridge approach for a rural project site. This unique feature resulted in cost savings and reduced environmental impact.

ACEC-SC State Finalist

Kimley-Horn
“Elmwood Avenue at Bull Street Intersection Improvements”

Richland County, SC
Transportation

Kimley-Horn worked with the Richland County Transportation Program as well as Bull Street District developers to complete improvements to the Bull Street and Elmwood Avenue intersection. The intersection is constrained by many elements and carries a significant amount of traffic on the morning and evening commutes into downtown Columbia. The intersection improvements were done in conjunction with the Bull Street Commons development and provides additional capacity for vehicles using the intersection to increase the level of service and traffic flow for both pedestrians and vehicles. Kimley-Horn’s team prepared plans for new lane configurations, new traffic signals, and improved pedestrian crossings into the Bull Street District. This project highlights Kimley-Horn’s ability to work with the County and other stakeholders, such as the South Carolina Department of Transportation (SCDOT) and developers. The intersection is constrained by many elements, including a historic wall along one side of Bull Street, a church on the northwest quadrant of the intersection, and businesses along Elmwood Avenue.

ACEC-SC State Finalist

Davis & Floyd
“Glenn McConnell Parkway Widening Project”

Charleston County
Transportation

The Glenn McConnell Parkway Widening Project in West Ashley, SC, is an achievement of innovative and community-centered engineering. This critical route faced severe congestion and safety concerns for both drivers and pedestrians while also being surrounded by flood-prone areas.

To ease traffic flow and enhance capacity, the Davis & Foyd team used the existing median to expand the eastbound lane inward, only adding a westbound lane outward. This approach minimized disruptions to nearby areas and stayed within existing right-of-way. In addition to widening the road, they incorporated measures to ease drainage issues of surrounding areas. By reshaping existing ditches and strategically placing control structures, they improved the parkway’s drainage capacity to be capable of managing peak water flow effectively.

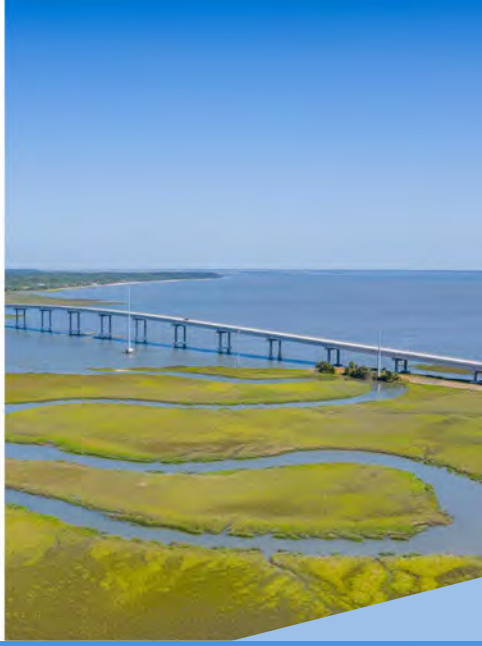
Davis & Floyd’s team designed a multiuse path along the back of drainage ditches where possible, allowing pedestrians and cyclists to travel safely, separated from the busy road. At intersections, they installed crosswalks and worked with the Charleston Area Regional Transportation Authority (CARTA) to add bus pull-outs, shelters, bike racks, and trash cans at bus stops.

This project demonstrates a blend of innovative engineering and careful planning, maximizing traffic capacity, safety, and pedestrian access without encroaching on additional land.

ACEC-SC

INFRASTRUCTURE WORKS INSTITUTE

The ACEC-SC Infrastructure Works Institute supports a civic and legislative environment for sustainable and increasing investment in South Carolina's infrastructure.



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ACEC-SC Infrastructure Works Institute

Thank you for attending the 2025 Engineering Excellence Awards Gala!

Please drive safely.

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Judges

A special thank you to the competition judges who volunteered valuable time to carefully review each project.

Dr. Mary K. Watson
Associate Professor
The Citadel

Robert "Bob" King, PE
SCDHEC Retired

Jayson Jordan, PE, MBA
Executive Director
SC Asphalt Pavement Association

American Council of Engineering Companies of South Carolina (ACEC-SC) is a member organization of the American Council of Engineering Companies. For information on ACEC-SC or the Engineering Excellence Awards competition, please contact us at
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