



AMERICAN COUNCIL OF ENGINEERING COMPANIES
of Connecticut

NEWS RELEASE

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ENGINEERING EXCELLENCE AWARDS ANNOUNCED

Nine local firms take top state engineering honors. Upgrading Connecticut's infrastructure prevalent among entries

MIDDLETOWN, CONNECTICUT, January 25, 2010 – The American Council of Engineering Companies of Connecticut (ACEC/CT) announces the recipients of the 2010 Connecticut Engineering Excellence Awards. Nine firms received honors with project entries that demonstrate outstanding technical prowess and responsiveness to four criteria.

The judging criteria were: originality; meeting or exceeding client needs; social, economic and sustainable design considerations; and complexity. The five top entries will compete in the national ACEC competition to be held in Washington, D.C. in April, 2010.

The 2010 ACEC/CT Engineering Excellence Award Winners are:

URS Corporation, AES, Rocky Hill, CT, is awarded the Grand Award for their design of the New Haven Harbor's twin 48 inch force main crossing. Client: Connecticut Department of Transportation. Owner: Greater New Haven Water Pollution Control Authority.

Before construction of the new Q-Bridge in New Haven harbor could begin, two sewer pipes buried under New Haven Harbor had to be replaced. In spite of severely constrained site access, variable geotechnical conditions and a complex angled path, URS designed twin replacement force mains connecting the New Haven region with the East Shore wastewater treatment plant using horizontal directional drilling. The high-risk plan was successfully executed and the Q-Bridge construction could begin on schedule while protecting the waters of Long Island Sound.

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HAKS, Middletown, CT, is awarded an Engineering Excellence Award for their analysis and evaluation of bridge truss gusset plates. Client: Connecticut Department of Transportation.

The collapse of the I-35 Bridge in Minneapolis, Minnesota in 2007 was a tragic incident that refocused national attention to the state of bridges on our nation's aging highway system. As a result of their investigation, the Federal Highway Administration issued guidelines for the immediate analysis and evaluation of bridge gusset plates. The Connecticut Department of Transportation assigned this special task HAKS. The project consisted of inspecting and evaluating a total of nine different truss bridges throughout the state and they evaluated over 600 gusset plate connections contained in over 35 spans. Some gusset plates were found to have section loss due to corrosion. HAKS worked closely with ConnDOT to develop rehabilitation and strengthening methods, and to prioritize the repairs

Gibble Norden Champion Brown Consulting Engineers, Inc, Old Saybrook, CT receives an Engineering Excellence Award for their structural engineering design for the Katharine Hepburn Cultural Arts Center, Old Saybrook, CT.

The newly completed Katharine Hepburn Cultural Arts Center, affectionately known as "The Kate" had its beginning in 1910 as the home of the Old Saybrook Musical and Dramatic Club. The building also housed the Town Hall in the lower level. In 2003, with the town offices' moved to the new town hall, the decision was made to renovate and restore this fine structure to its original use as a theater. Gibble Norden Champion Brown conducted the structural condition assessment survey and served as preservation and structural consultant for the \$3.5 million rehabilitation project. The new design included: removal of the entire 1950's second floor to restore the large interior theater space, upgrading the rear stage scenery support structure to modern theatrical requirements, providing structural reinforcing to support current seismic and wind code loadings and designing rooftop build-overs for the new gable roofs.

Tighe & Bond, Inc., Middletown, CT, is awarded an Engineering Excellence Award for their design of the Route 34 Roadway Improvement Project, New Haven, CT.

Tighe & Bond developed transportation improvement concepts to support the traffic generated by the new Smilow Cancer Hospital, as well as to address existing operational and safety deficiencies along Route 34 and city frontage roads. Because of this large development within the urban center of the city, a comprehensive transportation engineering study was required to support municipal approval and the State Traffic

Commission Major Traffic Generator certification for the development. Tighe & Bond engineered a comprehensive traffic operations plan defining the transportation system improvements. The scope of the project included all aspects of roadway design including layout of a modern roundabout, widening of existing Route 34 exit ramps, installation of a new internal Air Rights Garage ramp, signing and pavement markings modifications along the Route 34 Expressway, reconstruction of City frontage roadway and traffic control signal design.

Fuss & O'Neill, Inc., Manchester, CT, is being presented with an Engineering Excellence Award for the Town of Groton Water Pollution Control Facility upgrade.

The upgrade utilized an integrated fixed film activated sludge (IFAS) System that incorporated the modified Ludzack-Ettinger process to treat the facility's wastewater and reduce the total nitrogen concentration in the facility's effluent. By using the unique plastic IFAS media placed in the existing aeration tanks and modifying the operation of the plant, significantly smaller tanks were required to achieve the required treatment while the volume flow was increased by almost 50%. Other innovative improvements included enhanced preliminary treatment, including step screens. Flow handling was also modified to provide flexibility when splitting flows between the structures, and transferring flows between the various unit processes. Redundancy and segregation of key unit processes and equipment were incorporated with the installation of a second electric service with an emergency generator and transfer switch. This upgrade affords the Town more flexibility in how the plant can be operated or modified to meet whatever conditions may occur. Finally, the upgraded facility realized significant costs savings by using the IFAS process. This resulted in reduced impacts to the environment and commitment of resources for the plant's operation.

Woodard & Curran, Inc., Cheshire, CT is being presented with a Merit Award for their Athletic Field Improvement Project for the City of Stamford, CT.

The Athletic Fields Improvement project at West Beach Park, Westhill High School, and Lione Park included the permitting, design, and construction phase services for the redevelopment of existing natural grass athletic fields with synthetic turf. The project not only included the reconstruction of the playing

surfaces, but extensive contaminated soil management as well as stormwater management. The completed multipurpose athletic fields consist of soccer, baseball, lacrosse, field hockey, football, and cricket field layouts. The Lione Park site includes one of the first synthetic turf cricket fields in the region.

Gibble Norden Champion Brown Consulting Engineers, Inc., Old Saybrook, CT are being presented with a Merit Award for their structural engineering design of Beacon Hall at Housatonic Community College, Bridgeport, CT.

The previous abandoned Sears Building, once part of the downtown shopping mall, had been boarded up for more than ten years. In spite of extensive deterioration, the existing building shell was completely renovated and structurally upgraded to become the core of the new Beacon Hall with a new three-story addition. GNCB worked to reinforce the structural steel building by providing new steel braced frames between existing columns. GNCB Engineers teamed with Perkins Eastman, an international architectural firm from Stamford, in transforming a “eye sore” in downtown Bridgeport into a new learning center for the students of HCC and the City of Bridgeport.

Ahneman Kirby, LLC, Riverside, CT are being presented with a Merit Award for their foundation design of the Jay Heritage Center, Rye, NY.

The Jay Heritage Center wished to restore the magnificent 171 year old Peter Augustus Jay House for use as an educational center for the community. A National Historic Landmark, the design incorporated a sustainable geothermal energy system while maintaining the historic structure of the building. Ahneman Kirby designed a unique underpinning to the foundation to provide access for the geothermal system. Their design enhanced the structural integrity of the building and protected the architecture of the historic building.

Weston & Sampson Engineers, Inc., Rocky Hill, CT are being presented with a Merit Award for their design of the Taintor Hill Road Water Treatment Plant Upgrade, Colchester, CT.

In 2003, the Town of Colchester selected Weston & Sampson to study the Town's water treatment plant. The plant treated groundwater with high levels of iron and manganese that had caused fouling of the wells and steadily increasing operating costs. Weston & Sampson's design included an innovative filter media that acts, not only as a conventional filter, but also to catalytically precipitate and adsorb non-oxidized iron and manganese from the water. The design included an upgraded instrumentation and control system and a new well to maximize capacity of the plant. The upgrades allow Colchester to meet the drinking water needs of the community well into the future. The project design minimized overall project costs, while maintaining an optimum configuration for additional future expansion.

Camp Dresser & McKee, Inc., Wethersfield, CT are being presented with a Merit Award for their design of the upgrade to the Water Pollution Control Facility, Plainville, CT.

The \$29 million upgrade of the 32-year-old water pollution control facility addressed problems with reliability, water quality for the community and surrounding environment and compliance with the state's new nitrogen removal regulations. CDM's solution came in designing and implementing a new sequencing batch reactor (SBR) process, while seamlessly decommissioning the outdated facility. The new treatment process includes grit removal and pretreatment, advanced wastewater treatment, an ultraviolet light disinfection system, and bio-filtration odor control. Four pump stations and a new force main were part of the upgrade. Cost savings exceeded Plainville's expectations. The project received maximum funding from the Department of Environmental Protection (DEP) and secured grants from the local power company for use of energy-efficient equipment throughout the facility. What is more, the project came in under budget and was four months ahead of schedule. And now the town can sell – rather than buy – costly nitrogen credits because of the advanced treatment in place.

The following industry professionals judged the entries: Thomas Hansen, PE, Tata & Howard, Inc.; George Jacobs, PE, Dewberry-Goodkind, Inc.; Joseph Merluzzo, PE; Lois Roberts, PE, Lois Roberts & Associates and Paul Brady, ACEC/CT

The American Council Engineering Companies of Connecticut (ACEC/CT) is the business association of approximately 85 member firms employing over 2,000 employees in the independent private practice of consulting engineering. Consulting engineering firms in ACEC/CT provide expertise for a wide range of

activities including, civil, electrical, geotechnical, industrial, materials, mechanical, structural, transportation, water resources, and environmental engineering.

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Editor Note: Electronic versions of project photos are available upon request from Paul Brady at (860) 635-5522 or email pbrady@ctengineers.org.