CONTRACTOR SUPPORT SERVICES
Specialty engineering is a critical element of both small and complex transportation projects, and RS&H offers the expertise and resources to ensure your success. RS&H can design elements for permanent or temporary facilities, ranging from casting beds for girder production to spreader beams and rigging to handle prefabricated products. Marine related projects and bridges often require unique solutions, such as trestles, barge slips, fender systems, seawalls, specialized bracing, and construction load analysis. We have a strong history performing design-build services and construction engineering for contractors, and have unsurpassed capability in the design of these facilities.

WHY RS&H?
» Demonstrated understanding of and ability to meet the needs of contractors
» Saving clients time and money on projects without sacrificing value
» Strong working relationships with owners and agencies expedite approvals keeping projects on schedule
» Over $2 billion in design-build projects (construction to date)
» Over 300 professional engineers covering the full services of engineering disciplines
» Nearly 900 associates nationwide
RS&H served Archer Western as prime design consultant on a design-build team for the SR 9 (I-95) Overland Bridge replacement.

The project extends for 2.56 miles near the Fuller Warren Bridge over the St. Johns River in downtown Jacksonville. The improvements provide long overdue upgrades to the city’s largest arterial and main evacuation route.

The design-build team developed numerous innovations through the Alternative Technical Concept (ATC) process that resulted in significant schedule and cost savings. Innovations included a simplified maintenance of traffic (MOT) plan, a shortened schedule, more efficient drainage and utility designs, and elimination of a critical utility conflict saving 500-days on project’s relocation schedule. One particular innovation eliminated an 800-foot-long bridge, reduced thousands of vehicular weave movements and saved the owner over $30 million in planned right-of-way costs.
In August 2005, the Bay Saint Louis Bridge was completely destroyed by Hurricane Katrina, severing a vital link between the towns of Pass Christian and Bay Saint Louis. As a major design subconsultant to the construction joint venture of Granite-Archer Western, RS&H provided design and post-design services for the eastern portion of the new bridge. Hugh Ronald, as an independent subconsultant, provided specialty engineering services to the joint venture. The project’s aggressive schedule required that the design team complete the majority of the contract plans in only four months. On May 17, 2007, the new bridge was opened to two lanes of traffic reuniting the two communities of Bay Saint Louis and Pass Christian, setting a record for the largest, fastest, continuously-sustained bridge reconstruction project in the United States.
I-10 TWIN SPAN BRIDGE

In August 2005, the I-10 Bridge over Lake Pontchartrain was severely damaged by Hurricane Katrina’s powerful storm surge, severing the main route into and out of New Orleans. Boh Bros. teamed with Hugh Ronald to offer a precast alternate for the bent caps on the replacement bridges to expedite reconstruction of this critical link on the interstate highway system. Working in conjunction with the LADOTD, this Value Engineering Concept Proposal (VECP) was swiftly approved and implemented, resulting in significant acceleration of the project schedule while providing a high quality precast substructure for the new Twin Span Bridge.

NATCHEZ TRACE PARKWAY BRIDGE

This twin cell post-tensioned box girder bridge is one of several bridges provided to the National Park Service under a design-build contract on the southern leg of the Natchez Trace Parkway in Mississippi. Working with Hill Bros., Hugh Ronald acted as the Engineer-of-Record on this unique project. Though supported on only two piers, the 138’ main span was flanked by 38’ end spans cantilevering beyond the piers on either side, balancing the weight of the arched center span. The bridge incorporated both a sharp horizontal curve and superelevation transition. To simplify construction the arched superstructure was built on grade, then the passage underneath was excavated out of the hillside, resulting in a slender arched bridge over the roadway below.

HUEY P. LONG BRIDGE

Serving as both a crucial link for rail traffic and motorists over the Mississippi River in New Orleans, the Huey P. Long Bridge recently underwent a major expansion. To construct new bents under the approach spans and allow for demolition of the existing steel trestles during two weekend closures to rail traffic, the existing trestles were shored for staged demolition. Half of the trestle was (partially) removed to install new girders, while the other half remained in service under Cooper E-90 loading. This successfully allowed uninterrupted rail traffic over the bridge. Working with Boh Bros., Hugh Ronald acted as the contractor’s Specialty Engineer on this project.
ST. GEORGE ISLAND BRIDGE

The St. George Island Bridge is Florida's third longest bridge, traversing Apalachicola Bay, a National Marine Estuary and home to Florida's largest commercial oyster industry. In the mid 1990s, the bridge was replaced using the design-build method of procurement. Hugh Ronald served as Engineer of Record for the high level bridge, which includes a 5-span spliced girder channel unit, currently the longest continuous spliced girder unit in the country. His responsibilities continued into construction, during which he designed temporary falsework for the channel unit erection, and provided all manner of engineering support to Boh Bros. Construction.

US 90 BILOXI BAY BRIDGE

Hurricane Katrina, not only demolished the US 90 Bay Saint Louis Bridge, it also destroyed the US 90 Biloxi Bay Bridge, effectively severing the main coastal highway at both ends of the State.

Both bridges were let using design-build and similarly constructed on an accelerated time schedule. The main channel unit was a 3-span spliced girder, employing the same section used on the Bay Saint Louis Bridge. For the joint venture of Massman and Traylor Bros., Hugh Ronald provided construction engineering support on the Biloxi Bay Bridge, designing the falsework for erection of the bridge's channel unit. Though similar superstructures were employed on both the Bay Saint Louis and Biloxi Bay bridges, the falsework varied considerably due to differing waterline footing designs and a much higher vertical clearance for the Biloxi Bay Bridge.
Hurricane Katrina's most devastating damage occurred in New Orleans, and prompted the US Army Corps of Engineers to launch their largest ever design-build undertaking – the Inner Harbor Navigation Channel Surge Barrier. The surge barrier seals off the Gulf Intracoastal Waterway and Mississippi River Gulf Outlet from the City of New Orleans – preventing future storm surge from taking a direct hit on the city. Working with Gulf Coast Pre-Stress, Hugh Ronald designed the 66-inch diameter cylinder piles in the surge barrier for the loading calculated by the US Army Corps of Engineers, and later value-engineered the structure's massive cast-in-place cap beam to a precast structure, expediting construction and reducing project costs.
I-40/440 PAVEMENT RECONSTRUCTION DESIGN-BUILD

Both on bid-build and design-build projects, RS&H performs efficient traffic control and construction staging designs, optimizing contractor’s production while providing the safest possible work zone. On many projects, we have re-worked owner provided traffic control/staging plans to improve construction operations. The I-40/440 project with Granite Construction consists of rebuilding 11.5 miles of interstate along the busy southern leg of the Raleigh inner loop. RS&H provided a workable design incorporating a barrier wall section in lieu of a grassed median that increased production rates, simplified the maintenance of traffic (MOT) plan, improved worker and vehicular safety, and saved project costs.

SR 60/TAMPA INTERNATIONAL AIRPORT CONNECTOR

RS&H provided on-call engineering design services to joint-venture contractor Flatiron-Tidewater Skanska (FTS) for reconstruction of the SR 60/Tampa International Airport (TPA) interchange in Tampa, Florida. The FTS team’s goal was to implement new traffic phasing to facilitate construction and shorten the project’s duration while maintaining all existing levels of traffic. RS&H developed the team’s ideas into FDOT-approved engineered concepts and served as Engineer-of-Record for changes. RS&H also served as a Specialty Engineer for several structural elements that solved engineering problems without delaying the project.
Recently completed in Stuart, Florida, the Veterans Memorial Bridge was constructed in a sensitive marine environment. There remains little trace of impact on the waterway due to a carefully designed and constructed work trestle, innovative launching and erection of girders, and use of cofferdams to minimize environmental impact. Extensive coordination between the Contractor - Archer Western, RS&H - the Engineer of Record, and Hugh Ronald - Specialty Engineer led to the successful delivery of the project on behalf of the FDOT.
CONTACT US TODAY TO DISCOVER ALL THAT RS&H HAS TO OFFER.

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