FORM MARKS PROJECT FOCUS
EFCO'S NEWSLETTER FEATURING A SUCCESSFUL CONCRETE CONSTRUCTION PROJECT

Four-Faced Battered Column Bridge Formwork

Belle Chasse, Louisiana

NEW BRIDGE CONSTRUCTION LA 23

Traylor/Massman, a joint venture, was selected to construct a new bridge across the Intracoastal Canal on LA 23 in Plaquemines Parish, Louisiana. The new bridge will replace an old tunnel and lift bridge, which is now nearing the end of its lifespan. This bridge is expected for vehicular and maritime traffic connectivity to improve connectivity for vehicular and maritime traffic in the Gulf Intracoastal Waterway. The Traylor/Massman JV team selected EFCO to provide formwork solutions for this construction project. The partnership includes providing formwork solutions for constructing bridge pier caps, pier foundations, pier shafts, pier columns, and a heavy-duty gang overhang solution.

PIER CONSTRUCTION AT WATERWAY

Construction of the main pier structures in the waterway began at -27' elevation and topped out at 77', which is as tall as a ten-floor building. EFCO's **E-BEAM**® & **SUPER STUD**® system was chosen to form the 9' tall foundations. The same system was reconfigured to cycle through lifts of the 33' shaft, designed with plastic rub rails for waterway traffic impact resistance.

FOUR-FACED BATTERED COLUMN FORMWORK

The design of the 63' tall pier columns was battered on all four faces, presenting a unique challenge. EFCO's formwork solution used ***PLATE GIRDER***® panels placed together like a pinwheel and bolted together through pre-drilled holes by EFCO to ensure the column geometry. Using the pinwheel setup enabled Traylor/Massman JV quick erection and cycling of the rigid column gangs with minimal rework to reset. With a 1,700 psf pour rating, the *PLATE GIRDER* column formwork performed flawlessly and produced an excellent-looking concrete finish. ►

Because of the pour capacity of the* SUPER *PLATE GIRDER® system, the joint venture crew was able to place the cap rebar one pour ahead.

EFCO's formwork solution used PLATE GIRDER® panels placed together like a pinwheel and bolted together through pre-drilled holes by EFCO to ensure the column geometry.

A pour bridge made from EFCO **SUPER STUDS**® and **E-BEAMS**® was custom-built for the crew to have access between the two columns during the dual-column pour.

BRIDGE CAP FORMWORK WITHOUT SHORING

The bridge cap's dimensions are 6.5' thick x 8' tall x 76.5' long with a 45' clear span. The joint venture crew selected EFCO's **SUPER *PLATE GIRDER***® panels to act as the bottom beam and support the dance floor. Using the EFCO SUPER *PLATE GIRDER* system, which has over twice the moment carrying capacity of the classic *PLATE GIRDER*, was beneficial because it eliminated the need for shoring to the ground. The dance floor was constructed from EFCO E-BEAMS and SUPER STUDS. This equipment was added to the bottom cap made of SUPER *PLATE GIRDERS* and was lifted into place in one pick. Because of the pour capacity of the SUPER *PLATE GIRDER* system, the joint venture crew was able to place the cap rebar one pour ahead.

FORMWORK ASSEMBLY ON THE GROUND | ONE CRANE PICK

For the sides of the pier cap, the **EFCO LITE**® formwork system was selected. The sides, with the addition of windbeams, were assembled on the ground and lifted into place with a crane. Through detailed planning, engineering, and developing sound business processes that enhance performance and drive profit, EFCO can provide the lowest in-place concrete costs on your project, whether simple or complex.

EFCO DELIVERS | WHY TRUST ANYONE ELSE?

EFCO delivered on all counts. From providing over 600 pre-drilled bolt holes that accommodated the battered column geometry to engineering a cap form and dance floor solution. This EFCO solution kept the crew assembling equipment on the ground safely and also delivered an excellent concrete finish. When EFCO says we will provide the lowest in-place concrete costs, we mean it.

EFCO EQUIPMENT USED

SUPER *PLATE GIRDER*®, *PLATE GIRDER*® Columns, *PLATE GIRDER*® Self-Spanning, EFCO LITE®, E-BEAM® & SUPER STUD®, E-BEAM®, SUPER STUD®

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