By David Zanchetta

BERMINGHAM ASSISTS DEAL WITH COLOMBIA PILES

Cartegena, Colombia

In 2015, Stefano Gabaldo of Bermingham was contacted by DEAL (of Italy) to assist with the piling portion of a new Beam Launcher project in Cartegena, Colombia. DEAL parent company of Rizzani de Eccher was to build a 5 km bridge with bents spaced at 37 meter increments. This bridge was the final section of the highway connecting Barranquilla to Cartagena to be upgraded.

The selected piles for the bents were to be 1 meter diameter precast concrete with segments up to 42 meters in length with an approximate mass of 1 ton per linear meter. A total of over 800 piles were to be driven in the construction of the bridge.

DEAL, a worldwide leader in beam launching girder systems, already partnered with Bermingham to supply two similar systems for the construction of a bridge in Washington, North Carolina, USA in 2007. Bermingham was to add all the necessary foundation abilities to these Launching Girders turning them into groundbreaking Top Down Construction Equipment. After the successful completion of the Washington Bypass project,

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DEAL proposed the use of the same technology for the Cartagena Bridge Project. The wetlands and shallow water in the area prevent conventional floating equipment and cranes. The top down methodology addresses the challenges of this unique environment.

The launcher cantilevers forward to allow the installation of the piles and the subsequent formation of the next pier without ever having to touch down on the ground. Within the launcher there is a tilting lead that is loaded with a pile horizontally and then is rotated to a vertical position and driven into place at the bents. Bermingham designed a custom 48 inch box lead for this project based on the selected pile design. Two launching systems were to be utilized starting from either end of the bridge. One launcher system would start first and the second would follow half a year later. Despite the staggered start of the launchers, Bermingham was still required to deliver both systems at the same time. Bermingham supplied two lead systems and refurbished the B-6505HD diesel impact hammers from the Washington project in order to meet the tight delivery time-frame. At the time of publication, the lead system has installed 12 bents and the second launcher was put into service in early 2017.

The estimated completion date is 2019. Bermingham would like to thank DEAL for the opportunity to work together again and look forward to new and exciting projects in the future. ■