

Gorbel Articulating Jib Crane Assists Maintenance of Chesapeake Bay Bridge

With a total distance of nearly five miles and at one point being named as the world's longest continuous over-water steel, the Chesapeake Bay Bridge is certainly a site to see. As a major outlet feeding the Baltimore-Washington DC metropolitan area which serves an estimated 61,000 vehicles daily, it's also quite a site to maintain.

The company behind the structure's construction and maintenance was working on bearing retrofits along the bridge's columns. Rather than closing down lanes for several weeks, they had installed access platforms about 20 feet beneath where the bearing retrofit would take place at two locations. The access platform was the staging area for the project, with structural steel components, tools and other hardware coming from down below. With much of that material weighing several hundred pounds, they needed a way to lift the components from the access platform to the work area.

"This particular project was unique," said the engineering company's Project Manager. "We used the access platform to allow us more time and keep us from closing lanes, but it meant we didn't have a lot of room for large equipment."

In seeking a solution to the lifting, the rigging requirements prohibited any permanent impact on the existing bridge structure, and any lifting equipment would need to be small enough to have little to no effect on passing traffic. The company considered a mobile crane, but decided it was much too large and could potentially impede traffic flow.

The solution came in the form of 2 Gorbel articulating jib cranes, one for each of the identical work areas. The 1000 pound capacity jib cranes measure 14' of overall span (8' for the primary arm, 6' for the secondary). The jib model used is a freestanding design, though it installed without a supporting column in order to flush mount on the side of the bridge. Because rigging restrictions prohibited any permanent impact on the existing structure, the jib was fixed on the edge of the bridge with squeeze plates securing it in place without penetrating the surface.

"With the jib crane, we were able to lift our materials up from the access platform, and swing them over to the bearing, which was within range of the jib," said the Project Manager.

Although the jib crane was only in place for the two month duration of the project, it was a great fit for the job. "Even though we only used it for the two months, the cost of the jib was much better than the alternative of closed lanes. It was the right tool for the job, and exactly what we needed."

