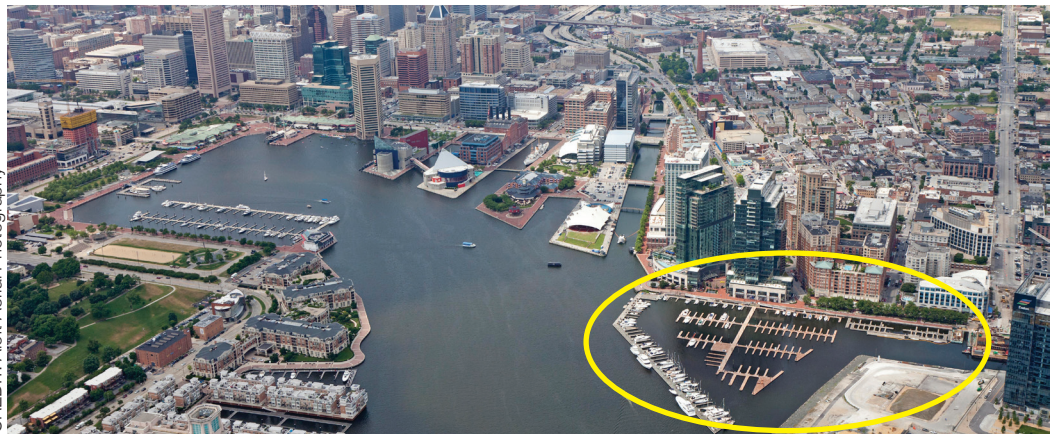
DISSEN & JUHN COMPANY

CASE STUDY

Project:
Harbor East Marina, Baltimore, MD
Design/Build for Marina Replacement & Dredging

Client:
Harbor East Marina, LLC

Architect:
Moffatt & Nichol Engineers
Baltimore, MD



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PROJECT SCOPE:
In the fall of 2016 the Dissen & Juhn Company was awarded a contract to replace the floating docks at the 175 slip Harbor East Marina with a new modern marina steps away from Baltimore's newest live, work, and play destination.

Due to the size and complexity of the project, the new marina was installed in two phases, each comprised of approximately 33,000 SF of docks. The two phases ran concurrent with the winter offseason to minimize disruption within the facility.

CHALLENGES AND SOLUTIONS:
Urban settings pose unique construction challenges especially when it comes to the staging and storage of materials. Initially, Dissen & Juhn had access to a commercial bulkhead and material storage area just downstream from the job site. All of the construction materials were to be trucked to the storage area in advance and stored for subsequent use. In addition, this area was to be used for unloading the demolished materials and dredge spoils.

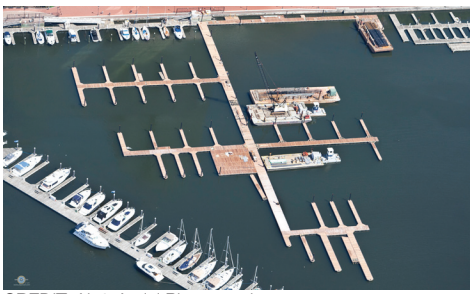
All of that changed shortly after construction began. The new plan required Dissen & Juhn to receive and store construction materials in small quantities. Use of the site was subject to time restrictions to lessen noise during peak business hours, and no demolished docks, piles, or dredge spoils could be unloaded at the bulkhead at all.

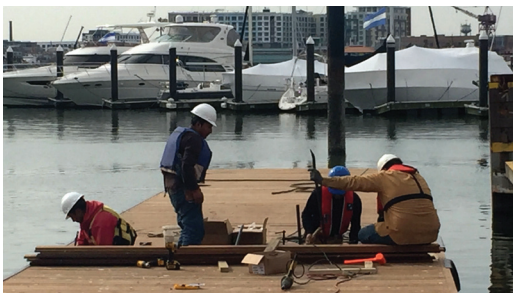
To overcome this challenge, alternative unloading sites were located within the greater Baltimore area and points farther south. However, the absence of a convenient bulkhead to unload dredge spoils necessitated a major change in the contractor's dredging methodology. Instead of loading the sandy/silty mixture directly into trucks at the bulkhead as originally planned, now the Dissen & Juhn crew had to load it directly into a 2,500 CY mud scow and tow it 3½ miles to a state-owned dredge material placement (DMP) site where it was unloaded hydraulically into large diked basins.

The demolition and disposal phase of the project was also challenging for the same reason. To address this issue, the existing docks were first rendered into large pieces while still in the water, loaded onto barges, then towed to a commercial bulkhead farther down the Chesapeake Bay where they were unloaded and disposed of.

For maximum productivity and in order to meet the customer-imposed project delivery requirements, construction of the new marina was performed using three primary and sequential operations – dock assembly, pile driving, and utility installation. Independent of the dock work was the dredging, which utilized yet a fourth crew. When the project was in full swing, all four crews were operating in a highly coordinated and productive manner.

The completed marina boasts 184 slips ranging in length from 30' to 100' with 40s and 50s being the most numerous. Larger boats can take advantage of 500 feet of alongside dockage. There are also several platforms incorporated into the floating docks for marina events and private gatherings, the largest of which is tented and features 1,600 SF of deck space. Large, 12" diameter x 60' long and 18"x 60' steel pipe piles hold the new docks firmly in place. In total, the Dissen & Juhn crew drove 120 piles totaling 7,215 feet.





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