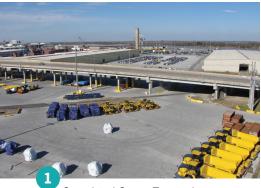


Portland Cement Association Southeast Region www.secement.org



PROMOTION SPOTLIGHT | 2015

Georgia's Port of Savannah Chooses Roller-Compacted Concrete For Its Ocean Terminal Expansion



Completed Ocean Terminal



Wash pad



RCC placement

By: Bob Nickelson Pavement Applications Director, Georgia Portland Cement Association, SE Region In the fourth quarter of 2012, the Georgia Port Authority (GPA) held a bid to expand the capabilities of its Ocean Terminal, located off the banks of the Savannah River in Savannah, Georgia, to provide more storage for the loading and offloading of medium duty cargo at their primary terminal.

Moffat and Nichols, the Port's engineering firm, approved bidders the option of using roller-compacted concrete (RCC) for the paving material. GPA had been using a hot mix asphalt (HMA) design, consisting of five inches of HMA over a 10-inch base of granular compacted material, for all of its pavements. The engineering caveat was that RCC had to be structurally equivalent to their typical 5/10 HMA design without adding additional cost.

The project consisted of grading, base and paving as well as electrical work to provide lighting for the facility. Phase I provided 48,600 square yards of paving with the provision of adding an additional 30,000 square yards of paving if the budget allowed for it.

The successful low bidder on the project was Morgan Corp., which has a 70-year history of commercial and industrial development. Morgan Corp. started using RCC in projects in 2008 and has successfully completed projects totaling more than one million square yards of RCC in the Southeastern U.S. Some of their projects include the Nuclear Power Generation Plant in Georgia; BMW Automotive; South Carolina Inland Port; and Bridgestone Tire in South Carolina; and Prichard Intermodal in West Virginia. Morgan Corp. provided value engineered options to GPA engineers that compared GPA's typical hot mix design to RCC designs based on industry-accepted design methods. Morgan Corp. showed Port engineers that a seven-inch layer of RCC over a nine-inch layer of cement-treated base (CTB) would provide a 33 percent higher strength at an initial cost savings of 19 percent when compared to their typical HMA design. The Port was pleased with the proposal and approved the design for the project. In fact, the budget was approved to proceed with the additional 30,000 square yards as Phase II for the project.

RCC has been widely used in heavy duty paving applications in ports and intermodal facilities across the nation, particularly in the Southeast. RCC's meteoric growth in those applications has been nothing short of incredible.

Industry leaders continue to seek additional GPA projects where RCC can be utilized to extend service life and reduce maintenance cost at a very competitive initial cost.



Ocean Terminal, Savannah, Georgia