RCC PAVEMENT
Roller-Compacted Concrete
for Ports and Intermodal Terminals

The right choice for tough duty
The future

U.S. Cargo is expected to double in volume by 2020, and demand will exceed current capacity of many U.S. ports by as much as 200%. Industry trends will include larger ships, larger terminals and higher throughput volumes. America needs tough pavements to handle the required expansion of ports and intermodal facilities.

Increase in Cargo

Asphalt Damage

Asphalt pavements can be overwhelmed by heavy loads, resulting in bearing capacity failure, severe rutting and surface deterioration. Repairing these pavement failures is expensive and disruptive to terminal operations.

Heavy Loads

Equipment at port facilities and intermodal terminals include rubber tired gantries (RTGs), top lifters, and straddle carriers, all of which have heavy loads and require strong pavements to operate.

“CONGESTION could CRUSH U.S. ports by 2010.”

—Journal of Commerce Online
Roller-compacted concrete (RCC) takes its name from the construction method used to build it. It is placed with conventional or high-density asphalt paving equipment, and then compacted with rollers. RCC has the same basic ingredients as conventional concrete: cement, water and aggregates. It has a drier consistency that is stiff enough to be compacted by vibratory rollers. It needs neither forms nor finishing, nor does it contain dowels or steel reinforcing. These characteristics make RCC simple, fast and economical to construct.

Today, RCC is used for any type of industrial or heavy-duty pavement. The reason is simple. RCC is concrete, so it’s strong and durable—even under severe loading in adverse environments. And it can be placed quickly, using standard construction methods. RCC’s speed of construction, durability, and low-maintenance economy have taken it from specialized applications to mainstream pavement.

**TOUGH**

The high strength of RCC pavement eliminates common and costly problems traditionally associated with flexible pavement types.

- eliminates rutting
- withstands heavy concentrated loads
- resists deterioration from fuel and hydraulic fluid spills
- immune to high and low temperature extremes
- very low maintenance over the long term

**ECONOMICAL**

RCC is a high-performance pavement that is typically equal to or less than the cost of other pavements. Low cost continues to draw engineers, owners and construction managers to RCC. Very little maintenance is required, resulting in further savings.

**FAST**

RCC uses a very low water-cement ratio, allowing for quick and easy placement of RCC with a conventional asphalt paving machine. RCC pavements can often be opened to heavy traffic 24 to 48 hours after placement.
PORTS WITH RCC

North American container through-put demand will double as early as 2015.

• Baltimore
• Boston
• Houston
• Los Angeles
• Norfolk

INTERMODAL TERMINALS WITH RCC

Intermodal freight demand will grow 4.5% per year, or almost 25% in just 5 years.

• Calgary
• Columbus
• Denver

For more information, contact:

PoRTs WITh RCC

www.rccpavement.info

www.cement.org/pavements