

62nd Annual New Jersey Asphalt Paving Conference
US Route 1 from Quakerbridge
Road to Ridge Road
Working with BRIC and SMA



DELLA PELLO
PAVING, INC



US Route 1 from Quakerbridge Road to Ridge Road

Working with BRIC and SMA

- ▶ US Route 1 – Heavily Traveled Land Service Highway
 - ▶ Expected to experience 35 million ESALs over the next 20 years
- ▶ Surface distresses ranged from fair to deficient
 - ▶ Composite pavement deteriorating rapidly
- ▶ NJDOT determined significant rehabilitation was necessary
 - ▶ Mill to concrete, BRIC intermediate course, SMA surface course



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- ▶ Della Pello Paving awarded contract on September 27, 2017
- ▶ 333,000 square yards of milling
- ▶ 57,250 tons of asphalt pavement
 - ▶ 14,600 tons of BRIC
 - ▶ 29,200 tons of SMA
 - ▶ 13,450 tons of 12.5M64 HMA
- ▶ Shopping malls, hotels, other businesses to remain open
- ▶ All night paving
- ▶ Substantial Completion by May 2019



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- ▶ Other considerations to coordinate
 - ▶ Ongoing construction at southern end of the project
 - ▶ Maintenance resurfacing at northern end and within project limits
 - ▶ Signalized intersections
- ▶ Milling and BRIC placement required to be done in the same shift
- ▶ SMA Surface Course required to be placed within 7 days of BRIC construction



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- ▶ In order to ensure compliance with the specifications and restrictions, Della Pello employed a number of efficiencies:
 1. Pave SMA within 2 days of BRIC placement
 2. Subcontract BRIC paving to Trap Rock
 3. Trap Rock produced both BRIC and SMA at the same time
- ▶ Della Pello was thus able to get 2 days ahead in milling and BRIC paving before placing SMA
- ▶ Trap Rock used Evotherm to reduce production temperatures and eliminate fibers in the SMA
 - ▶ Using Evotherm improved efficiency with the additive blended by the binder supplier and eliminating fiber added at the plant

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- ▶ The project was successful because:
 - ▶ Della Pello and Trap Rock communicated constantly
 - ▶ Trap Rock plant only 4 miles from project site
 - ▶ Seamless coordination between both companies' crews
- ▶ Results:
 - ▶ Completed ahead of schedule
 - ▶ Rutting below 3.5 millimeters
 - ▶ Fatigue cracking on overlay tester exceeding 1200 cycles
 - ▶ Ride Quality averaged 43.8 inches per mile (target was 63)
 - ▶ Full bonus for density

