Monroe Expressway
Mecklenburg & Union Counties

Cement Treated Base

John Edwards
Site-Prep, Inc. of NC

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Monroe Expressway

- Design-Build Contract
- Opened to traffic November 2018.
- Length – 18 miles
- Prime Contractor – Monroe Bypass Constructors, LLC
  - United Infrastructure
  - Anderson Columbia Company
  - Boggs Paving
- Base Subcontractor – Site-Prep, Inc. of NC
Alternate Technical Concept

- Original Base – 8.5 inches Asphalt Concrete Base Course
- Asphalt Concrete Base Course Structural Coefficient – 0.30/inch
- Base Structural Number – 2.55
- Replacement Base – 8.5 inches Cement Treated Base Course (CTBC) and Soil Treatment
- CTBC Structural Coefficient – 0.23/inch
- CTBC Structural Number – 1.96
- Lime Treated Soil (8 inches) - SN = 1
- Total ATC Structural Number – 2.96
- Estimated Cost Savings – 40% to 50%
Cement Treated Base

- Approximately 692,000 square yards
- Placed between January 2017 and August 2018
- Average placement rate 38,400 square yards per month
- Placement rate range 8,800 to 90,200 square yards per month
- Cement treated base was mixed in place using a reclaimer.
Aggreate Base
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Cement Spreader
Cement Spreader
Mixing Train
Mixture very similar to FDR
Base kept moist during fine grading and compaction
Base course primed to maintain moisture for curing
Thank you.