PROJECT OVERVIEW REPORT

1. Center Identifying Number
   PANYNJ-RU9247

2. Project Title
   Laboratory Evaluation of Vestoplast Modified Hot Mix Asphalt (HMA)

3. Principal Investigator
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5. Project Description
   The scope of the work encompassed evaluating the affect of Vestoplast on the performance of hot mix asphalt. The Vestoplast was added to a PANYNJ FAA #3 asphalt mixture with a PG64-22 asphalt binder. Two baseline mixes were also evaluated for comparisons; 1) FAA #3 with a PG64-22 and 2) FAA #3 with a PG76-22. The FAA #3 with a PG64-22 was the base mix used prior to the addition of the Vestoplast. This allows for a comparison of the increase or decrease in performance simply due to the addition of the Vestoplast additive. The FAA #3 with PG76-22 would be the performance striving to achieve due to the Vestoplast modification. Mixture design information, conducted by the PANYNJ, can be found in the Appendix.

Three different characterization tests were used to evaluate the mixtures performance:

- Dynamic Modulus (AASHTO TP62-07) – used to evaluate the stiffness properties over a wide range of temperatures and loading frequencies. The different mixes were tested in triplicate and averaged for comparison purposes.
- Flexural Beam Fatigue (AASHTO T321) – used to evaluate the flexural fatigue properties of hot mix asphalt due to traffic loading. Five test specimens for each mix was tested at a different tensile strain to develop a relationship between tensile strain and fatigue life
- Repeated Load (NCHRP Report 465) – used to evaluate the resistance to permanent deformation due to cyclic loading at elevated temperatures. The different mixes were tested in triplicate and average for comparison purposes.
6. Dates and Budget
   Start date: 7/1/2008
   End date: 7/31/2008
   Total Dollars: $8,175

7. Keywords
   Flexural Beam Fatigue Testing, Permanent Deformation, Dynamic Modulus