



## **Progress Report 2005-4** (October-December)

*Jim Grove, Center for PCC Pavement Technology*

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### **TPF-5(066) Material and Construction Optimization for Prevention of Premature Pavement Distress in PCC Pavements**

Purpose of Project: To develop optimal mix design and test methods for monitoring Key performance parameters and conduct demonstration tests in participating states.  
<http://www.ctre.iastate.edu/pccpoolfund/>

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#### Progress Report:

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|--|-----|
| • Project is on schedule                     | Yes |
| • Project is within budget                   | Yes |
| • Significant changes in project description | No  |

#### Products and tangible results this quarter (*reports/articles written, oral reports/interviews given*):

- The presentations given at the October 25, 2005 TAC meeting are posted on the web site.

#### Interaction with Technical Monitor and/or Project Advisory Committee:

- The regular monthly teleconference with the executive committee was not held in October due to the TAC meeting, the November meeting was cancelled due to conflicts, the December meeting was held on December 14.
- The fall meeting of the Technical Advisory Committee was held in Ames, IA on October 25th. There were 36 attendees with 14 of the 16 states represented.

#### Brief summary of this quarter's research:

- Conducted the Ohio shadow project October 17-October 26, 2005.
- Conducted the Indiana shadow project October 26-November 2, 2005.
- Continued laboratory testing at the ISU lab on shadow project concrete samples. Rapid air, chloride permeability, compression, flow table, slump, XRF, and I-Q drum (calorimetry) tests were conducted.
- Continued work on the analysis of the data from the field test results to date and prepared preliminary correlations for presentation at the TAC meeting.
- Presented preliminary material from the IMCP manual to the Municipal Street Conference in Ames to receive feedback. It was very well received.
- Held a video conference on November 15 for a final panel review of the IMCP Manual.

#### Expected activities for next quarter:

- Conduct a review and discussion of the final layout and draft of the IMCP Manual with FHWA and then submit the completed document.
- Continue lab testing of materials from completed shadow projects.
- Continue analysis of the data from the field test results to date.
- Develop the outline for the final MCO report and begin organizing material for the report.

|   | Task Description   | Expected Completion | % of Task |
|---|--|---------------------|-----------|
| 1 | <b>Data Collection</b><br>Survey of past projects which experienced problems<br>Compile local state testing practice<br>Gather research information  | Dec 2005            | 95%       |
| 2 | <b>Test Development</b><br>Develop suite of tests to measure concrete properties<br>Define test procedures   | 2006                | 85%       |
| 3 | <b>Demonstration projects</b><br>Demonstrate test procedures on participating state projects<br>Development of protocol for sampling and testing<br>Field verification of laboratory testing and solutions | 2006                | 65%       |
| 4 | <b>Technology transfer</b><br>Develop initial standards/guidelines ("Best Practices")<br>Demonstrate tests and procedures<br>Conduct technology transfer   | 2007                | 35%       |

**COOPERATIVE AGREEMENT NO. DTFH61-01-X-00042: Project No. 18  
MATERIALS AND CONSTRUCTION OPTIMIZATION**

**DATA FOR THE QUARTER ENDING DECEMBER 31, 2005**

| BUDGET CATEGORY<br>DESCRIPTION          | AMOUNT<br>BUDGETED  | EXPENDITURES<br>THIS PERIOD | CUMULATIVE<br>EXPENDITURES |
|---|---------------------|-----------------------------|----------------------------|
| SALARIES/WAGES                          | \$172,275.00        | \$28,086.69                 | \$157,404.24               |
| BENEFITS                                | \$57,762.00         | \$6,685.60                  | \$42,371.00                |
| TRAVEL                                  | \$83,756.00         | \$8,324.24                  | \$37,578.84                |
| SUPPLIES/MATERIALS                      | \$1,300.00          | \$162.32                    | \$854.14                   |
| OTHER DIRECT COSTS                      | \$42,277.00         | \$40,792.35                 | \$81,994.85                |
| <b>TOTAL DIRECT COSTS</b>               | <b>\$357,370.00</b> | <b>\$84,051.20</b>          | <b>\$320,203.07</b>        |
| INDIRECT COSTS (University<br>Overhead) | \$92,916.00         | \$21,853.31                 | \$83,252.79                |
| <b>CATEGORY TOTALS</b>                  | <b>\$450,286.00</b> | <b>\$105,904.51</b>         | <b>\$403,455.86</b>        |

**NOTES:**

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