



The RD&T

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SCDOT HOLDS RESEARCH TOPIC SOLICITATION MEETING

The South Carolina Department of Transportation (SCDOT) held its Research Topic Solicitation Meeting on April 27, 2011 in Columbia, SC. The purpose of this meeting is to identify needs in the Department that can be addressed by research and to develop a prioritized list of possible research topics for consideration by the SCDOT Research and Development Executive Committee (RDEC) for funding as studies in the State Planning and Research (SPR) Program.

Approximately 80 people, including representatives from the SCDOT, FHWA, USGS, academia, and industry, participated in the meeting. Logistical and administrative support for the meeting was provided by the Transportation Technology Transfer (T3) Service at Clemson University.

To aid in the organization of this meeting, the Research Unit contacted the Department's upper management to identify appropriate personnel to participate in the meeting to ensure all areas of the Department were included. A moderator from the Office of Materials and Research was assigned to each breakout group. The six breakout groups included:

- Construction/Materials
- Maintenance/Bridge Maintenance
- Traffic/Safety
- Preconstruction
- Planning/Environmental
- Intermodal/Freight/Business Operations

The meeting began with an overview of the SCDOT research program followed by each participant attending one of the six breakout sessions. As in past meetings, all participants attended the morning breakout sessions. Unlike previous meetings, this year topics were allowed

to be submitted prior to the meeting. These topics were discussed along with new topics presented during the morning session while all attendees were present. However after lunch, the attendees from academia, industry, and USGS were excused and only SCDOT and FHWA attendees participated in the afternoon breakout sessions to determine the higher priority topics. This change was made in an effort to reduce bias toward topics and help ensure that topics most beneficial to SCDOT were advanced for consideration by the RDEC. The higher priority topics were identified through multi-voting or weighted voting or a combination of the two techniques.

A closing session with all participants was held to allow moderators to present the high priority research topics from each breakout group.

There appeared to be a good deal of interest in the results from the breakout groups. It is not unusual to lose a large percentage of the audience for the closing session of any meeting. However, a large number of the participants remained to hear the breakout reports during the closing session. The high attendance indicates that the participants were interested in hearing the priority research topics from the various breakout groups.

The meeting was considered a success, with approximately 130 potential research topics discussed, 33 of which were identified as higher priority topics. A “Champion” from the DOT was identified for each of the higher priority topics and problem statements prepared. The RDEC will ballot the research topics and develop a final prioritized list for funding.

A final summary report was prepared for the 2011 Research Topic Solicitation Meeting. A link to the report can be





found on the Research Unit webpage at <http://www.clemson.edu/t3s/scdot/index.htm>. Or you may contact Mr. Terry Swygert by phone at (803) 737-6652 or, by email at swygerttl@scdot.org to obtain a copy.

SCDOT INITIATES STUDY ON THE RATE OF DETERIORATION OF BRIDGES AND PAVEMENTS AS EFFECTED BY TRUCKS

An effective transportation infrastructure system provides both mobility and marketing, and the US has historically seen great benefits in these areas from its transportation infrastructure. However, system deterioration combined with the increased

traffic loading and limited funding for maintenance and improvements are causing both functional and structural difficulties for the national infrastructure system as well as for the states.



Several years ago, the South Carolina Department of Transportation conducted a study of the effects of overweight trucks requiring special permits and implemented a fee structure for such vehicles. Although the user fee was an improvement over the previous attempts to capture some of the deterioration and administrative costs, it still failed to cover all of the costs incurred as a result of these overweight trucks. In addition, some aspects of the process were not adequately addressed in the initial study and resulting fee structure. These areas needed to be revisited.

Therefore, SCDOT recently initiated a research project with Clemson University to investigate the effects of current and future truck loads on South Carolina's bridges and roads. This study also includes the development of models to help shape policy recommendations for the future. Dr. Ronnie Chowdhury is the Principal Investigator (PI). The project will be guided by the Steering and

Implementation Committee. Members include:

- Mr. Lee Floyd, *State Bridge Maintenance Engineer (Chairman)*
- Mr. George Hetherington, *Pavement Management*
- Dr. Andrew Johnson, *State Pavement Design Engineer*
- Mr. Mark Kwayisi, *Assistant State Maintenance Engineer*
- Ms. Mechelle Mabry, *Oversize/Overweight Permits Director*
- Mr. Jim Garling, *Pavement, Materials, Research, and Technology Engineer, FHWA*

Specifically, the research will investigate: 1) the impact of heavy vehicle traffic on pavements and bridges in South Carolina; 2) the development of policy recommendations supported by technical analysis and in consideration of the modern political and institutional environment in South Carolina.



SCDOT CURRENT AND COMPLETED PROJECTS

For a complete list of current and/or completed research projects, please visit the Materials and Research web site located at www.clemson.edu/t3s/scdot. The current research projects page lists the project name, principal investigator, and the objective of the project. The completed research projects page shows summaries of completed research projects and a number of them have pdf copies of final reports attached. The Research Problem Statement Form is also located on the website for your convenience.