



TRANSPORTATION RESEARCH BOARD

OF THE NATIONAL ACADEMIES

August 16, 2005

Mr. J. Richard Capka
Acting Administrator
Federal Highway Administration
U.S. Dept. of Transportation
400 Seventh Street, S.W.
Room 4218
Washington, DC 20590

Mr. John Horsley
Executive Director
American Association of State Highway
and Transportation Officials
444 North Capitol Street, N.W.
Suite 225
Washington, DC 20001

Re: Nineteenth letter report of the Transportation Research Board (TRB) Long-Term Pavement Performance (LTPP) Committee (“the Committee”)

Dear Mr. Capka and Mr. Horsley:

On June 2nd and 3rd of this year, the Committee met to review progress in the continuation of the LTPP studies. A roster indicating the members who attended this meeting is Attachment 1.

As you know, the LTPP studies initially were a part of the Strategic Highway Research Program (SHRP) and have been managed by the FHWA since 1992. Throughout its existence, SHRP was guided by a tripartite arrangement among the FHWA, AASHTO, and the National Research Council (NRC). By mutual agreement of the three parties, and through a contractual arrangement with the FHWA, the NRC continues to provide advice and assistance on the conduct of the LTPP studies through the work of its TRB LTPP Committee.

The Committee’s agenda consisted of briefings by the FHWA LTPP staff. The meeting addressed the continuing uncertainty of LTPP’s future funding caused by delays in passage of a new transportation reauthorization bill, the continuing difficulties in the planning and budgeting of LTPP’s operations caused by the funding uncertainty, and the status of LTPP traffic, materials, and distress data collection activities.

At the conclusion of the meeting’s open session, the Committee held a closed session to deliberate on its findings and formulate its consensus recommendations. The subjects of these recommendations were traffic data collection, forensic data collection, distress imaging data collection, LTPP’s post-reauthorization budget, and the Committee’s communication with the states. Our consensus recommendations on these subjects are presented here, and in a somewhat more expanded form in Attachment 2:

Traffic Data Collection: We recommend that LTPP re-examine its priorities, identify a new short list of top priorities, and develop a new budget that funds only those activities that support these top priorities. In our opinion, a robust traffic database is certain to be one of these top priorities.

We suggest a five-step process, as listed in the expanded presentation of our recommendations in Attachment 2.

Forensic Data Collection: We recommend that the FHWA communicate with the states early, long before test sites exit from the LTPP studies' testing matrix, so that the states' mobilization activities for rehabilitating or rebuilding these pavements can be developed to include forensic data collection.

Distress Imaging Data Collection: We recommend that FHWA re-institute, at the earliest possible time, the collection of a permanent record of surface distress images.

LTPP's Post-Reauthorization Budget: We are concerned that re-authorization issues will have an irreparable negative impact on LTPP's plans, activities, and accomplishments. We recognize the need to carefully plan the use of funds provided when re-authorization passes, to minimize these adverse impacts and maximize the number of LTPP's goals that can be accomplished by 2009.

A five-step process outlined in Attachment 2 for the development of new traffic data collection priorities is equally applicable to the development of new plans and budgets for the post-reauthorization period. We recommend that the FHWA implement this process as soon as re-authorization passes, and we welcome the opportunity to work with our FHWA colleagues in this endeavor.

Communications with the States: We recommend that FHWA intensify its face-to-face communications with the states on LTPP matters, and I and other members of the Committee are willing to participate in this activity.

This meeting was the second to be held this year and a third meeting is scheduled for December. I am pleased to report that the Committee's concern over the disruption of tripartite collaboration in the steering of the LTPP program, as expressed in Letter Report 18, has been totally dispelled by this resumption of a full schedule of regular meetings. I want to thank you and your staff for the speed and enthusiasm with which everyone reacted to address our concern.

I also want to take this opportunity to express thanks to the FHWA's Tommy Beatty, Aramis López, and the LTPP Team for a highly productive and pleasant meeting.

Sincerely,

Victor M. Mendez
Chairman
TRB LTPP Committee

Attachments:

1. Roster of Committee Members Indicating Attendance at the Meeting of June 2-3, 2005
2. Expanded Presentation of the Committee's Recommendations

Attachment 1

TRB LONG-TERM PAVEMENT PERFORMANCE COMMITTEE

Member Roster¹

Michael E. Ayers
Director of Pavement Technology Services
American Concrete Pavement Association

DON H. FREEMAN
State Highway Engineer
South Carolina Department of Transportation

Ralph Haas
Norman W. McLeod Engineering Professor
University of Waterloo

Gary Hoffman
Deputy Secretary for Highway Administration
Pennsylvania Department of Transportation

JOHN R. HOSANG
Assistant Deputy Minister
Manitoba Department of Highways &
Government Services

Henry G. R. Kerali
Senior Highway Engineer
The World Bank

JOSEPH M. LEONARDO
Chief Engineer (Acting)
California Department of Transportation

VICTOR M. MENDEZ
Director
Arizona Department of Transportation

CARL L. MONISMITH
Robert Horonjeff Professor of Civil
Engineering
University of California, Berkeley

David E. Newcomb
Vice-President, Research and Technology
National Asphalt Pavement Association

CHARLES A. PRYOR, JR.
Vice President, Engineering
National Stone, Sand & Gravel Association

ROBERT L. SACK
Deputy Chief Engineer
New York State Department of Transportation

Ted M. Scott
Executive Director of Government Relations
Roadway Express Inc.

WILLIAM H. TEMPLE
Chief Engineer, Office of Highways
Louisiana Department of Transportation and
Development

ROBERT WALTERS
Chief Engineer
Arkansas Highway and Transportation
Department

GARY C. WHITED
Deputy Administrator
Wisconsin Department of Transportation

JAMES MCFARLAND YOWELL
State Highway Engineer (Retired)
Kentucky Transportation Cabinet

¹ Attendees of meeting of June 2-3, 2005 are indicated in **BOLD CAPITAL LETTERS**

Attachment 2

TRB LONG-TERM PAVEMENT PERFORMANCE COMMITTEE

Expanded Presentation of the Committee's Recommendations

Traffic Data Collection

The FHWA's status report and the concerns voiced by the chairman of The TRB Expert Task Group on LTPP Traffic Data Collection and Analysis regarding the quality and quantity of data currently in the database indicate that:

- there is not sufficient high quality traffic data in the LTPP database,
- we are running out of time in which to gather this data, and
- due to lack of funds, the LTPP Specific Pavement Study (SPS) Traffic Pooled Fund Study, TPF-5(004), is not gathering sufficient data to remedy this situation.

We believe that LTPP traffic data collection needs a quick infusion of supplemental funds, and that the only secure source of additional funds is LTPP itself --- the program's "core" funding.

We recommend that LTPP re-examine its priorities, identify a new short list of top priorities, and develop a new budget that funds only activities that support these top priorities. In our opinion, a robust traffic database is certain to be a top priority. Monies currently budgeted to fund lower priority LTPP activities may need to be reprogrammed to supplement the funding of TPF-5(004).

At our meeting, the committee members and the FHWA LTPP research team discussed at length potential remedies and changes in priorities that would permit an expansion of traffic data collection on the SPS projects. In the course of the open meeting, a step-wise plan for implementing this suggestion emerged, and was reaffirmed during the closed session. All agreed that initiation of traffic data collection was urgent and delay would be injurious to the LTPP Specific Pavement Studies. The plan is outlined below; dates shown are tentative, but were agreed to by all parties during our discussions.

1. By June 20, the FHWA will examine the status of all pertinent information pertaining to all of the SPS test sites that are potential subjects of the pooled fund study, and provide this information to the chairmen of the traffic, materials, distress, data analysis, products, and database ETGs. This information will include the LTPP Team's proposed ranking of these sites in order of their importance to the traffic data collection activity.
2. By two weeks after the date of this letter, the ETG chairmen will consult with their respective groups and with each other, and report to the Committee their collective response to the proposed ranking. I will apprise the FHWA LTPP research team of any questions or comments raised in the ETG responses.
3. By two weeks thereafter, the FHWA will communicate to the Committee a proposed revision of the LTPP SPS traffic data collection plans that will accommodate the program's top priorities within the existing LTPP budget. This proposal will identify the test sites where traffic data would be collected, and for what period of time. Funding the high-priority traffic data collection may require other adjustments in the overall LTPP operations budget. If so, the proposal will identify those activities that will receive more funding than

at present, and those that will receive less. The proposal will identify all activities suspended or terminated as a result of these adjustments and explain in detail how the choices were made. Regarding TPF-5(004), the FHWA will consider using the already collected pooled funds more efficiently. As was explained to us at the meeting, short-term over/under-runs of the projected amount to be spent in any one state are permissible and can be rectified later either with funds reprogrammed from core LTPP funds or through additional contributions to the pooled fund.

4. By two weeks thereafter, the Committee will conclude its discussions (by email correspondence) of the FHWA's proposal.
5. By one week thereafter, the FHWA and the Committee will conduct a telephone conference to discuss the Committee's response to the FHWA's proposal and to reach consensus on the new short list of LTPP's top priorities and the new budget that funds this most important work. This telephone conference will be held as an open meeting in accord with the requirements of Section 15 of the Federal Advisory Committee Act.

On the second day of our meeting, Aramis Lopez, the FHWA LTPP Team Leader, announced that the LTPP research team had already begun work on the first task of this plan. As this letter is being written, further word was received that this first task has been completed. Given this prompt start, it seems to us that the re-ordering of LTPP priorities can be completed in early August of this year.

The collection of high-quality traffic data at LTPP's SPS test sites remains an activity of the highest importance to the Committee, but it is not the only activity to which we accord this status. Forensic data collection and distress imaging data collection are two other operational activities of major importance and concern. The LTPP database must contain substantial quantities of such data if it is to be of maximum value to pavement designers and researchers. However, lest you conclude that we have forgotten the financial constraints under which LTPP labors, we stress that these recommendations pertaining to data collection refer to **re-ordering** LTPP's existing priorities, not **adding** new priorities.

Forensic Data Collection

We believe that it is extremely important to the development of a comprehensive database, and to the ultimate understanding of how and why pavements deteriorate, for the FHWA to collect one-time forensic data at LTPP GPS and SPS test sites where routine data collection will shortly cease. We recommend that the FHWA communicate this to the states early, long before test sites exit from the LTPP studies' testing matrix, so that the states' mobilization activities for rehabilitating or rebuilding these pavements can be developed to include this forensic data collection.

Distress Imaging Data Collection

A permanent record of surface distress images collected at the LTPP test sites at frequent and regular intervals is an essential component of the LTPP database. Distress is related to time-dependent factors such as the age of the pavement, the traffic loading it has received, and the environmental conditions it has weathered, as well as other factors. It is not possible to postpone the collection of distress images at a particular point in a pavement's lifetime and expect to return at a later date to collect them. Pavement condition will have changed so that either the images are collected at that point in the pavement's life or they are lost.

We are concerned that the FHWA has chosen, on more than one occasion when funding has been scarce, to allow interruptions in the collection of these images as available monies have been used to continue other important aspects of the program. There is no higher priority than collecting distress image records, for, in the absence of other information, much about a pavement's behavior and how distresses develop can be discerned from the study of the images. We recommend that the FHWA re-institute, at the earliest possible time, the collection of a permanent record of surface distress images.

LTPP's Post-Reauthorization Budget

We repeat our firm conviction that LTPP must be funded at an average of \$20 million per year for the six-year period beginning in October of 2003 if the program is to deliver on its promises as summarized in our formal report in 2001¹.

We are concerned by the irreparable impact on LTPP's plans, activities, and accomplishments that is being caused by the delayed re-authorization of the federal-aid surface transportation program. We recognize the need to carefully plan the use of whatever funds are ultimately provided by re-authorization legislation, in order to minimize these adverse impacts and maximize the number of LTPP's goals that can be accomplished by 2009.

The five-step process outlined in Attachment 2 for the development of new traffic data collection priorities is equally applicable to the development of new plans and budgets for the post-reauthorization period. We recommend that the FHWA implement this process as soon as re-authorization is enacted, and we welcome the opportunity to work with our FHWA colleagues in this endeavor.

Communications with the States

It has long been recognized by the FHWA and the Committee that communication is the key to the states' and provinces' affirmative cooperation in test site data collection, and enthusiastic support of the program's data analysis and product development activities. This communication takes many forms, and many have been and are being used by the FHWA. We recognize the FHWA's many communication efforts, and applaud the arrival of the new LTPP Newsletter.

We believe that face-to-face communications are the most effective. We are certain that, when a member of the FHWA's LTPP Team speaks directly with someone in authority in a state highway agency, a "meeting of the minds" occurs and actions will follow. We recommend that the FHWA intensify its face-to-face communications with the states on LTPP matters, and I and other members of the Committee are willing to participate in this activity.

¹ "Fulfilling the Promise of Better Roads, A Report of the TRB Long-Term Pavement Performance Committee", National Academies Press, Washington, D.C., 2001, ISBN 0-309-07247-6.