



Concrete Pavement Business Systems and Economics

Implementing Business Track 11

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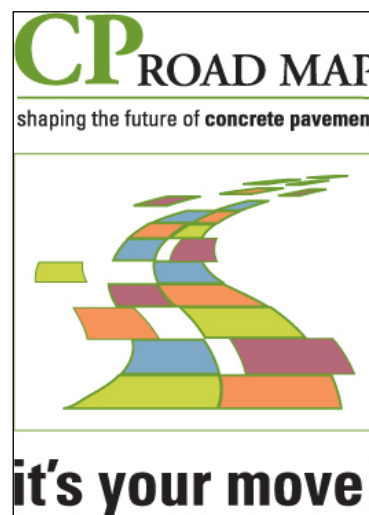
Background

This track addresses business and economics issues in concrete paving. It has two main goals: 1) to address the management and financing of the Executive Committee functions, including innovative management systems and 2) to address concrete pavement economics.

The Executive Committee has been operational since 2006. Funding for the Committee, along with Operating Procedures have been developed and implemented. The Executive Committee is an advisory board that identifies and suggests to the concrete pavement community the priority areas for research and technology. It supports the establishment of Track Research Leadership Groups that look to actually promote, implement, and evaluate the research and technology areas, with the Committee assuring that there is cross-cutting coordination among the Tracks.

Additionally, the Committee looks at ways that collaboration strategies can be identified and implemented so as foster more cooperation and accelerate the accomplishment of the goals identified in the Road Map. Finally, the Committee also concerns itself with identifying systems that would accelerate the exchange of knowledge and education on concrete pavements to the broader highway community.

The second major mission of the Executive Committee is to promote the quantification, value and benefits of concrete pavements and ensure that adequate delivery mechanisms are in place to supplement and complement the conventional low-bid system. With the price of asphalt-based products at an all time high, the interest in concrete pavements has never been higher in traditionally non-concrete areas. This track calls for the examination of the impact of this new economic reality, including ways to bring concrete pavement to new customers in a faster way. Related to the economics is the emerging use of alternative bidding, design-build, build-maintain, warranties, performance specifications, public-private partnerships, and other mechanisms that are both creating opportunities, capital, and risk transfer to the concrete industry.





Subtracks

The Track 11 Business Subtracks in the CP Road Map include:

1. Concrete Pavement Research and Technology Management and Implementation
2. Concrete Pavement Economics and Life-Cycle Costs
3. Contracting and Incentives for Concrete Pavement Work
4. Technology Transfer and Publications for Concrete Pavement Best Practices
5. Concrete Pavement Decisions with Environmental Impact

Track Goal

The research in this track will clarify the relationship between concrete pavements and economic issues, capital availability, risk and risk transfer, and alternative contracting.

Business Track Activities To Date

The Executive Committee, with the help of the CP Administrative Team has focused most of its initial energy on the major administrative tasks aimed at establishing institutional framework for both the Committee and the Tracks.

To that end, the Committee identified and supported the following initiatives:

1. Secure longer term funding for the CP Road Map Executive Committee and the Operations Support Team.
 - A DOT pooled fund study was established that provides reasonable resources for the administration of the Road Map through 2011.
 - FHWA continues to support the CP Road Map with funds placed into the pooled fund study.
2. Prioritize the CP Road Map Tracks.
 - Tracks related to Mix, Design, NDT/ICS, Surface Characteristics and Sustainability have been established as priorities.
 - The Sustainability Track is of particular importance. It was originally designated as a cross-cutting issue, but with global attention to the environment, it was elevated to full track status.
 - Additionally, the Committee endorsed the acceleration of the Concrete Overlay Subtrack and elevated it to priority status as well.
3. Established Track Teams for each of the priority tracks.
 - All priority tracks are up and running with key members from across the concrete pavement community.



- Several of the Tracks will be managed via conference calling, such as the Design Track, in order to minimize travel resources
4. Established a collaboration system among various DOTs and the FHWA.
 - The Executive Committee approved a process for linking DOTs together in a collaborative fashion.
 - One state has signed the collaboration paper.
 5. Establish a comprehensive website and communication mechanism.
 - Significant discussions were held on this subject with ideas ready for implementation.
 - They included blog testing on the SC Track.

Business Track Activities for Future Consideration

This promises to be an important transition period for the CP Road Map and the Executive Committee. Several issues relate to the need to more strongly formalize the Executive Committee as a voice for the concrete pavement industry as it relates to research and technology transfer.

Management and Administrative Issues: Short Range Plan

The following seven initiatives are offered to help focus on critical Management and Administrative Issues related to the Road Map. They are organized as a possible foundation plan for 2009-2010.

1. Administrative Funding: The funding for the management and administrative program is relatively minimal. Research Track committees do not have the funds to do all the work they need to in order to assure progression of the work.
2. Research and Technology Funding: Reauthorization of the Transportation Program will involve action to promote the accomplishments under the Road Map, but also to identify the benefits of its continuation.
3. Road Map Status Report: To that end, the Executive Committee should prepare a Road Map Status Report for both FHWA, the DOTs, and ACPA.
4. Strategic Direction: The Executive Committee should revisit the entire CP Road Map strategic approach and determine if the priorities and processes should be adjusted or stay the same.
5. Outreach: The Committee should examine the outreach mechanisms available to both promote ongoing research sharing, research findings, and education programs. Webinars, blogs, and other webbased methodologies should be examined, especially in light of limited transportation funding to go to conventional conferences and workshops.
6. Collaboration: The Executive Committee and the Research Track Leaders should continue to



focus on encouraging collaboration for both research and for education programs despite differences in institutional priorities or goals. To get the collaboration process underway, it is proposed to work with state DOTs to identify priority research they are interested in funding at their in-state university. From there the research will be brought to groups such as the National Concrete Consortium for presentation and determination of interest on the part of other DOT agencies.

7. Integration: The Committee should examine how the tracks are proceeding with integration efforts to assure cross-track issues are addressed. Communication between Track Leaders is essential to ensure the overall goal of the Road Map is pursued without duplication.

In addition to the Management and Administrative Issues, the Committee should help establish studies in the following economic areas:

Economic Issues: Short Range

1. Economics Study: What does the cost of asphalt products really mean to the concrete industry? A strategic and thorough examination of initial costs and whole costing should be examined to determine the long range impact on research, technology, and education.
 - Estimated Cost: \$50,000 8 months
2. Alternative Pavement Bidding: The DOTs have been using alternate bidding for asphalt-concrete solutions. The results to date should be synthesized with best practices highlighted. The effort should examine FHWA and DOT policies, procedures as they relate to both bidding and value engineering practices.
 - Estimated Cost: \$100,000 12 months
3. Innovative Contracting Practices: A study of design-build, best value, design-build-maintain, and public-private partnerships should be considered to determine the best ways to address specifics related to concrete pavements.
 - Estimated Cost: \$75,000 12 months
4. Incentives: Incentives for smoothness, strength, and sometimes air have been used in the industry since the late 80's. The paving industry believes they have a positive impact on their operations. There appears to be a lack of interest in continuing incentives and to learn from previous accomplishments. It is suggested that a full evaluation of existing programs be examined, including changes in DOT practices. Additionally, the study should examine new ways to provide incentives for both quality and timeliness attributes. A similar study was also suggested to SHRP II under their rapid renewal program and can be used as a framework for this study.
 - Estimated Cost: \$150,000 12 months
5. Technology Transfer: an accelerated technology transfer and rapid education programs for the future concrete paving workforce is paramount to getting the word out on both conventional



and emerging knowledge of concrete pavements. This has taken on a new urgency with the relative equality of concrete-asphalt prices and the interest this has generated in new markets.

- Estimated Cost \$75,000 12 months

The Executive Committee should discuss the merits of each of these six ideas and suggest a priority slate of work. The Administrative Support Group will then develop a more complete scope of work and look to find the funding to conduct the studies.

Conclusion

This is a critical year for the CP Road Map. Executive Committee support of the concepts, tracks and the focus of the future research are critical. It is especially important that the upcoming Transportation Reauthorization Bill and FHWA initiatives support the overall goals of the concrete pavement research and technology identified in the plan.