

Track 13:

Concrete Pavement Sustainability

CP ROAD MAP
shaping the future of **concrete pavement**



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Framing Document: A Plan to Fill the Gaps

- S.1: Materials and Mixture Design
- S.2: Design Procedures
- S.3: Construction Practices
- S.4: Preservation/Rehabilitation/Recycling Strategies
- S.5: Improved Economic Life Cycle Cost Analysis
- S.6: Environmental Life Cycle Assessment
- S.7: Identification and Quantification of Additional Environmental and Social Considerations
- S.8: Technology Transfer and Implementation



Early Products Currently Under Way

- A Briefing Document (delivered 08/09)
- A “Best Practices” training manual and implementation package for concrete pavement sustainability (initiated 1/10)
- A conference on sustainability of concrete pavements that addresses economic, environmental, and societal impacts (09/10)
 - International Conference on Sustainable Concrete Pavements: Practices, Challenges, and Directions, Sacramento, CA Sept. 15-17



Framing Document: Project List

- In total, 39 potential projects have been identified
- Detailed problem statements have yet to be developed
 - Opportunity to advance this Track
- List should be reviewed and updated



What Else is Happening?

- FHWA advocating “Green Paving” technologies
 - Recycled concrete, two-lift paving
- Environmental benchmarking/ratings will likely be adopted within the next year
- Life cycle assessment workshop being held in Davis CA in early May
- Various transportation agencies embracing sustainable technologies
- Multiple conferences in the next year



Cement Driven Initiatives

- ASTM C595 blended cements
- ASTM C1157 performance cements
 - Portland-limestone cements
- High-volume fly ash mixtures
 - Alkali-activated systems
- Inorganic polymers (geopolymers)
- Carbon sequestering cements



In Closing

- This is a very active area of interest right now
- Track is attempting to “ride the wave”
 - DOT projects are just getting going
- Need to formalize information collection and reporting process

