

August 14, 2003

American Concrete Pavement Association
Summer Concrete Pavement Construction Bus Tour
And Meeting Minutes

All Attendees

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The 2003 ACPA/PennDOT concrete pavement tour and meeting was held on July 23 and 24, 2003, in the Indiana area.

On Wednesday the 23rd, there was an overview of the day provided by John Becker and Bob Prisby. The tour covered the following projects: US-119 (Golden Triangle), US-22 Blairsville Interchange (A&L), US-22 Murrysville (Mascaro), I-79 Turnpike Connector (Dick/Gulisek), US-422/SR-68 Interchange (Merlo), and US-422 Rehabilitation (Matcon Diamond)

On the 24th, the following items were discussed at the follow up meeting:

- A recap of the tour was made by Joe Szczur
- Pat Gardiner addressed the 2002 follow ups.
- Briefings from the Concrete Pavement Quality Improvement Task Force teams were presented.
 - Chris Cepko reported that the Stabilized Base Team has developed 2 Special Provisions and pilot projects are proceeding in District 8. The Team wants to expand the pilots to include some Northern Tier projects. A users guide is being developed to go from design to construction.
 - Paul Ingram presented the Mix Design Status. The quick cure and grind pilot has been dropped because of the inability to measure curl. A clearance transmittal has been circulated for Cement Treated Permeable Base to allow curing compound and add fines to enhance the stability of the material. The current direction of the Team is to focus on: paste factor, cement grind, over design policy, well graded aggregates, and curing application rate.

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- Dan Dawood provide the status of the Dense Base Team. There is a lot of concern as to the definition of dense base. Considerations include hot mix asphalt, 2A aggregate, and asphalt treated permeable base with 20% fines. Drainage is a key factor in base performance because the water has to get out somehow. All three items are being considered for evaluation. Stripping of asphalt will also be considered.
- Steve Grasseti informed the group on the direction of the Surface Texture Team. A skid evaluation program has been established for Van Port Limestone projects and other limestones to determine the magnitude of the issue. Random transverse texture has become the required texture. Longitudinal texturing and diamond grinding are being looked at along with the depth of tinning.

The following new items were discussed and where appropriate, follow up items have been established in the attachment:

- Linseed oil requirements and the direction and value of its use. Some projects have it in and others do not. The specification does not have a time of year requirement.
- Curing application rates were based on smooth surfaces. The pavement texture increases the surface area by 40 %, which minimizes the effectiveness.
- Longitudinal tie bar placements sometimes get too close to the dowel baskets. ACPA proposed an alternate layout scheme.
- When early pavement cracking occurs while a project is still ongoing, the specification states it is the contractor's responsibility. Strategies for repairing the cracks and the appropriate responsibility are being addressed.
- The repeatability of lightweight profilers lasers footprint. Single point lasers vary more based on texture than an area laser.
- Full depth patching concepts on pavements with skewed joints. The RC Drawings only show straight joints.
- Pavement Policy Manual criteria for cross slope correction on rehabilitation projects.
- Advantages and disadvantages of placing sand between the concrete pavement and the base material to prevent bonding and interlock.
- Aspects of having vehicles drive on asphalt treated permeable base.
- Utilizing alternate base material in isolated areas in lieu of asphalt treated

permeable base.

- Constructability issues of sawing and sealing joints relative to multiple phases of traffic control.

Action items identified during the meeting are listed on the attached pages. Items 1 thru 8 are continuations or modifications from 2002 action items.

Attachment

cc: Basil Shorb, APC

2003 FOLLOW UP ACTIONS

1. BCM will reevaluate the patching standard for reinforced concrete.
2. BCM will clarify the stake length for baskets on RC-20.
3. BOMO will revise the RC Standards for geotextile covering of drains. The current detail cannot be built. The separation layer of geofabric is also to be addressed.
4. BOMO will evaluate an alternate semicircle keyway design.
5. BCM will consider the curing and compaction of the cement treated permeable base.
6. BOMO will evaluate an alternate tie bar placement scheme that ACPA proposed.
7. BCM will consider the magnitude of the penalty for shy depth pavement for Section 501 paving.
8. BCM will investigate the effects of adjacent lanes placed in different environmental conditions when there is accumulated movement at isolated joints (ongoing).
9. BOMO will issue a Strike off letter and change RC-25 to specify full depth pavement for shoulders.
10. BOMO will evaluate the design calculations for load transfer units that ACPA will provide.
11. BCM is to evaluate the effectiveness of protective coating, Item 0503-0001 (linseed oil), and policies on when it is required.
12. BOMO will consider 14-foot wide lanes to minimize edge stresses.
13. BOMO will provide guidance on the appropriate base material to be utilized at specific applications such as: small quantity operations, bridge projects, reconstructing intersections under traffic, patching, etc.
14. CQITF will work with District 10 on evaluating the various base materials on the rehabilitation project at Kittanning to Ford City.
15. CQITF will re-evaluate the curing compound application rate.

16. BCM will write a Strike Off Letter emphasizing the importance of sealing the side of the concrete slab top to bottom at joints prior to paving the next lane.
17. CQITF will develop a repair strategy for early cracking and a process to define responsibility
18. BOMO will develop patching details to include skewed joint concept in RC drawings
19. BOMO is to provide ACPA on the number of miles of pavement that have less than 1 ½ % cross slope on Interstates and on Expressway Look-a-likes.
20. BCM is to evaluate the pilot project information with sand on the ATPB. BOMO will do FWD testing in this area.
21. BCM will consider allowing construction vehicles to drive on the ATPB.
22. BOD will consider MPT and Staging plan earlier in the design process.
23. BCM will evaluate curing compound requirements for concrete patches including patches that are to be overlaid with bituminous.
24. BOMO is to discuss at the Pavement Engineers Meeting the concept of crack and seat, rubblizing and overlay.

Target dates will be established after discussions with the Chief Engineer and coordination through the Concrete Pavement Quality Improvement Task Force.