

DATE: November 8, 2007

SUBJECT: Concrete Pavement Construction Bus Tour
And Meeting Minutes

TO: All Attendees

FROM: David Azzato, P.E., Acting Director/s/
Bureau of Construction and Materials

The 2007 PENNDOT/Turnpike/ACPA concrete pavement tour and meeting was held June 27-28, 2007, in Uniontown, PA.

On Wednesday the 27th, there was an overview of the day provided by John Becker, Bill Miller, and Bob Prisby along with welcoming comments by Joseph Sczcur, David Azzato, and Dave Sheridan. The tour covered active paving operations on Turnpike Route 43 (Sections 51A-2 and 51C&D) in Fayette County, and US-22 (Section B02) in Westmoreland County. The tour included commentary by PENNDOT, Turnpike, and industry personnel on several projects/corridors constructed with concrete, including Turnpike Route 43 in Washington County, Turnpike Route 66 in Westmoreland County, US-22 (Sections B03-07) and US-119 in Westmoreland County, as well as a Bonded Concrete Resurfacing of Asphalt Pavement (UTW) project on US-40 in Fayette County. A brief presentation of the PENNDOT/FHWA Smart Road Research project still underway on US-22 (Section B01) was also performed by University of Pittsburgh researchers during the tour.

ACPA and PennDOT would like to acknowledge our appreciation of the Pennsylvania Turnpike and PennDOT's Engineering District 12-0 as well as the construction and consultant companies for their hospitality and cooperation in making this year's tour very successful.

On Thursday the 28th, a group meeting was held where the following items were discussed:

- A recap of the tour was made by Bill Lowry and Mike Houser.
- Briefings from the Concrete Pavement Quality Improvement (CPQI) Teams were presented.
 - Strength and Testing – Bill Miller reported on maturity testing efforts that have been accomplished. The hardened air and pavement performance committee efforts are ongoing and will be completed by September 14. Joe Robinson will take the lead on S&T efforts moving forward, excluding the hardened air issue which will remain with Miller.
 - CPR – Joe Robinson reported for Steve Grassetti who was recently promoted to York County Maintenance. CPR best-practice workshops were presented in Grantville, Indiana, and Allentown. QA staff has been trained to present any and each of the CPR modules, and ACPA also offered to assist or present the workshop if requested by any District. The team is completing several CPR issues that have been raised. Terry Kohler will take the lead on the CPR efforts moving forward.

- Van Port Limestone – Paul Majoris reported continued diagnosis of Van Port skid issues, research to evaluate blending of aggregates, review of the economics of two-lift construction, and discussion on grinding and texture patterns.
- Dave Azzato and Bill Miller, along with John Becker addressed the 2006 follow up items, see attachments.
- Open discussions of the following new items were considered and where appropriate, 2007 follow up items have been established in the attachment:
 - A concern about lack of concrete paving work, as well as concerns about the converting of concrete paving work to asphalt was raised by the industry. A follow-up meeting to discuss this has been scheduled.
 - Training by the National Center for Concrete Pavement Technology on the Integrated Materials for Concrete Paving (IMCP) and on Concrete Overlay Technology Transfer will be pursued.
 - Cutting Tie Wires was discussed; research along with practices from other states shows that cutting the tie wires may not necessarily assure good joint behavior.
 - Coating the ends of dowels, being required on one project was discussed. Quality Assurance will discuss this inconsistency with appropriate project personnel.
 - Details for paving on projects with loop sensors were discussed; construction details will be reviewed for possible development of new details.
 - Documentation efforts related to completion and acceptance of Form 4171 was discussed. This will be pursued through APC.
 - Maturity Method – evaluating the benefit of using this method for opening pavements to traffic should be evaluated. Maturity testing is extensively used in the private sector.
 - Ride Measurement – Laser manufacturers have developed devices that better mimic the footprint of a tire; use of this technology for pavement management was suggested.
 - Harmonization of ASTM and AASHTO specifications related to cement manufacturing was discussed. The group was briefed on the review and implementation process.
 - Unbonded overlays – evaluating the economics of unbonded overlays versus other treatments needs to be undertaken.
 - The status for implementing Mechanistic-Empirical Design Procedures for Pavements was discussed.
 - 2008 Material needs – Districts are estimating the concrete, aggregate, and asphalt material needs for 2008. ACPA will be given the data when available.

- Hardened air – The Department and industry will be discussing hardened air in order to bring resolution to this topic.
- The Pennsylvania Concrete Conference is scheduled for January 29-31, 2008, at the Holiday Inn in Grantville. ACPA welcomes and encourages suggestions for topics and speakers.

The status of 2006 action items are listed in the attached pages. Action items identified during the 2007 meeting are also listed; items 1 thru 13 are continuations or modifications from 2006 action items. The timetable (completion) dates for the 2007 Concrete Pavement Follow-up Actions Items will be determined at the November, 2007 meeting.

If you have any questions, please contact William J. Miller, P.E., of my staff at wjmill@state.pa.us or 717-787-5610.

Attachments (3): 2006 Follow-up Action Items; 2007 Follow-up Action Items; Attendee List

425/WJM/as

cc: R. H. Hogg, P.E., Deputy Secretary for Highway Administration
Highway Administration Bureau Directors
Assistant District Executives-Construction
Assistant District Executives-Maintenance
Assistant District Executives-Design
Construction and Materials Division Chiefs
Maintenance and Operations Division Chiefs
American Concrete Pavement Association, Pennsylvania Chapter
Federal Highway Administration
PA Turnpike Commission

2006 Concrete Pavement Follow-Up Actions				
Item #	Issue	Responsible Group	Status/ Timetable	Comments
1	Investigate the effects of adjacent lanes placed in different environmental conditions when there is accumulated movement at isolated joints	BOCM	01/31/07	Ongoing; several projects monitored over past three years. Done. Email to close-out
2	Issue a clearance transmittal related to criteria for use of dowels for concrete shoulders.	BOMO	12/31/06	Clearance transmittal to be issued in 2006 Done. SOL issued.
3	Evaluate the effectiveness of protective coating and recommend policy on when to use.	QA-East		2007 Item 1
4	Evaluate appropriate applications for using GPB in lieu of treated permeable material.	CPQI (Base Team)		2007 Item 2
5	Evaluate plastic and hardened air data and share with industry	BOCM	04/30/07	Closed; effort redirected.
6	Develop a policy on sawing over-cuts during patching	CPQI (CPR Team)	03/31/07	Clearance transmittal to be issued in 2007 Done. Determined to issue special provision only if District has identified issue.
7	Re-evaluate the grinding specification in Section 514 related to Section 507.	CPQI (CPR Team)		2007 Item 3
8	Provide the available IRI and profile data in all bid packages where diamond grinding is specified.	BOD	01/31/07	Some but not all projects include this information Done. Project Development checklist revised to include this item.
9	Provide industry with 2007 estimated material needs.	BOCM	01/31/07	Done
10	Consider reevaluating thickness requirements for bases.	BOMO & CPQI Comm.		2007 Item 4
11	Consider evaluating the merits of denser bases.	BOMO & CPQI Comm.		2007 Item 5
12	Consider reevaluating appropriate trigger and limit values for JPCP and JRCP	BOMO		2007 Item 6
13	Evaluate appropriateness of using the maturity method for determining strength for use in opening pavements to traffic	CPQI (S&T Team)		2007 Item 7
14	Evaluate criteria and best practices for partial depth spall repairs	CPQI (CPR Team)		2007 Item 8
15	Evaluate joint resealing criteria for pavements originally sealed with neoprene seals.	CPQI (CPR Team)		2007 Item 9
16	Review criteria for cross slope and other design details for widened lanes.	BOD		2007 Item 10
17	Present material to PENNDOT on best practices for unbonded overlay techniques	ACPA	01/31/07	Presentation proposed for Concrete Conference Done January 31; ACPA to distribute NCPTC Overlay Document to Central Office & Districts
18	Present material to PENNDOT on traffic management best practices for concrete.	ACPA	01/31/07	Presentation proposed for Concrete Conference Done January 31.

19	Develop criteria for alternate bidding procedures	BOMO	7/31/07	Closed out. This is a Department Issue.
20	Evaluate merits of incorporating escalator costs into the LCCA process	BOMO		2007 Item 11
21	Policy on 7 day break if 28 day strength achieved	CPQI (S&T Team)		2007 Item 12 (Combined Item 21 & 22)
22	Acceptance of PCC if 28 day strength achieved day 56	BOCM & CPQI (S&T Team)		2007 Item 12 (Combined Item 21 & 22)
23	Cutting Tie Wires Necessary	BOCM /BOMO		2007 Item 13
24	Use of Aluminum Truck Beds	BOD	7/31/07	Issue resolved

**2007 Concrete Pavement
Follow-Up Actions**

Item #	Issue	Responsible Group	Status/ Timetable	Comments
1	Evaluate the effectiveness of protective coating and recommend policy on when to use.	BOCM/ QA-East		Ongoing: 1. Is protective coating needed? 2. Establish uniform policy
2	Evaluate appropriate applications for using GPB in lieu of treated permeable material.	CPQI (Base Team)		Ongoing: CT comments to be evaluated
3	Re-evaluate the grinding specification in Section 514 related to Section 507.	CPQI (CPR Team)		Ongoing: CPR Team drafting language)
4	Consider reevaluating thickness requirements for bases in Publication 242.	BOMO & CPQI		Ongoing: BOMO to make recommendations based on findings from European Scanning Tour
5	Consider evaluating the merits of denser bases.	BOMO & CPQI		Ongoing –BOMO to make recommendations based on findings from European Scanning Tour
6	Consider reevaluating trigger and limit values for JRCP to 40%	BOMO & ACPA		Ongoing- ACPA to provide reference document to BOMO
7	Evaluate appropriateness of using the maturity method for determining strength for use in opening pavements to traffic	CPQI (S&T Team)		Ongoing: BOCM/ETI Division has Pennoni Associates preparing specification & District application presentation.
8	Evaluate criteria and best practices for partial depth spall repairs	CPQI (CPR Team)		Ongoing: CPR Team soliciting info during CPR training classes & evaluating
9	Evaluate joint resealing criteria for pavements originally sealed with neoprene seals.	CPQI (CPR Team)		Ongoing: Info solicited during CPR training classes
10	Review cross slope & other design detail criteria for widened lanes.	BOD & BOMO		Ongoing: being coordinate with BHSTE
11	Evaluate merits of incorporating escalator costs into the LCCA process	BOMO		Ongoing. Publication 242 not revised with recent re-issuance to include this.
12	Evaluate acceptance criteria for concrete considering 7 day, 28 day and 56 day strengths	CPQI (S&T Team)		Ongoing: Review of 7 day breaks and consider strength gains through day 56.
13	Evaluate whether cutting tie wires is necessary	BOCM & BOMO		Ongoing: Evaluation by Turnpike under consideration
14	Provide industry with 2008 estimated material needs.	BOCM		
15	Pursue IMCP Training	ACPA		
16	Consider manufacturers recommendations for inserting tie bars (CPR projects) in lieu of 15 inch embedment	BOCM, BOD, & CPQI (CPR Team)		
17	Consider use of new IRI laser devices for high speed ride measuring devices	BOMO		
18	Brief Department & industry on MEDP implementation efforts	BOMO		Ongoing: BOMO hiring consultant to work on implementation efforts
19	Review AASHTO vs. ASTM specifications for cement (fly-ash substitution)	BOCM		