

# Roadway and Structures

## Meeting Minutes

### AASHTO Subcommittee on Construction

#### August 12 – 17, 2012 San Francisco, California

##### 2012 – 2013 Section Leadership

*Chairman – David Ahlvers, Missouri DOT*

*Vice Chairman (Structures) – David Hoyne, Vermont AOT*

*Vice Chairman (Roadway) – Vacant*

*Secretary – Anthony Sarhan, FHWA*

##### **Monday – August 13<sup>th</sup>** (1:15 – 4:00 PM)

Meeting is brought to order by Mr. Ahlvers at 1:19 PM. Attendees include 14 representatives from State DOT's, 3 representatives from FHWA, 1 representative from TRB, 1 representative from academia, and 10 representatives from industry. An attendance list is attached for reference.

**Introductions:** Attendees briefly introduce themselves and new attendees are welcomed. Attendees are requested to indicate whether they are a member of the committee or a guest on sign-in sheet being circulated.

**Update Roadway & Structures Membership Contact Information:** Members are requested to provide any updates to their contact information.

**2011/2012 Work Plan:** Attendees discussed the 2011/2012 Work Plan items as outlined below.

1. Complete “Guideline for Development and Implementation of Comprehensive QA Programs” and “Improving Inspection for Construction QA”

Greg Doyle gave a brief presentation on the status of the draft guidelines. Several editorial revisions have been made since the 2011 meeting addressing the guideline's flow and structure. The guide is currently being revised to include more specific information on Design-Build contracts in accordance with the recent release of [FHWA Publication No: FHWA-HRT-12-039 “Construction Quality Assurance for Design-Build Highway Projects”](#).

After the update Mr. Ahlvers initiated a discussion on the general use of quality control/management plans. MoDOT is currently looking at instituting a system wide approach based on experiences from selected Design-Build projects. Mr. Stott and Mr. Suscko indicated that Caltrans is looking into expanding the current system they have in place for items like Hot Mix Asphalt (HMA) into a standard approach based on a performance type specification. Caltrans is preparing to pilot a project using performance based specifications for structural work in San Diego. Messrs. Stott and Suscko indicated that Caltrans has developed Special Provisions and can make them available. Caltrans is also in the process of consolidating

pertinent documents into a QA program manual. Elements of the program currently reside in many different areas.

Discussion next turned to the FHWA Tech Brief (see above). While the focus of the Tech Brief is on Design-Build, the fundamentals are applicable across types of contracting methods. Mr. Bryant commented that NCHRP is also looking at this issue for different types of delivery methods – e.g. PPP’s. Mr. Sadler mentioned that hand back requirements are a way to address issues on PPP’s. Mr. Hogan mentioned the recent release of [FHWA Publication No. FHWA-HIF-12-045 Acceptance of Non-Structural Precast Elements](#) as another resource.

2. Develop requirements for IRI to be incorporated in the Construction Guide Specification publication.

Mr. Sarhan briefly mentioned that Bob Orthmeyer (FHWA) has been the lead on this item and the Sub-Committee on Materials is continuing to drive the development of this item. FHWA had limited attendance at the 2012 Sub-Committee on Materials (SCOM) meeting, and it is uncertain whether this item was moved forward. Mr. Wlaschin indicated that he did attend the SCOM and was aware of discussions taking place on this item, but was unsure of any actions that had been taken. Mr. Sarhan indicated he would contact Mr. Orthmeyer for an update in time for the Thursday breakout meeting.

The discussion then shifted the broader topic of measuring network health. Mr. Wlaschin noted that IRI is typically used for construction acceptance, but State DOT’s are also using IRI for HPMS reporting. It is expected that AASHTO will likely recommend IRI be used (at least initially) to report network level information to FHWA in response to the establishment of performance measures in MAP-21. IRI is currently collected by all agencies, but there is no commonality in the way it is recorded and reported. A group is currently looking at how it can be used as a network level tool. It is acknowledged that IRI is a trailing indicator and a Joint Technical Committee is preparing to survey the states on what they feel comfortable as a measurement for pavement condition. FHWA is working on establishing a standard, but needs help from the states. The intent is to have a standard so that, for example, the State of California can tell someone how Interstate 5 is doing health wise from the Mexican border up to the Oregon border.

Mr. Sadler mentioned that FHWA needs to look at how and why states are using their indicator programs. The indicator programs are a tool that “moves” a portion of road into a state’s work program and it is not one number. Mr. Hoyne mentioned that Vermont uses a composite index, and it is an annual struggle to explain what the index means to those outside the transportation community. Mr. Wlaschin mentioned that there have been indications that there could be urban and rural measures and there is no set expectation at this time that there needs to be a “one size fits all” approach. There was general discussion among the group on use of IRI specifications, and the distinctions between IRI for acceptance and a systems level tool. Mr. Ahlvers offered that the Roadway and Structures group can take this on as a work item. There was general discussion among the group on use of IRI specifications. Attendees concluded that the Roadway and Structures section would gather information on the various IRI and pavement indicator indexes the State’s are using and forward that information onto FHWA.

3. Coordinate changes to HEC-2 calculations with the Subcommittee on Bridges and Structures (SCOBS)

Mr. Ahlvers indicated that he had approached SCOBS and did not get a lot of interest from that group on this issue. Mr. Hoyne indicated that in Vermont Tropical Storm Irene caused severe scour in some instances, and that he was not as likely to support this issue going forward based on that experience. Mr. Sadler indicated that this tends to more of an issue on widening projects when new piles must be driven significantly deeper than the existing piles. General consensus of the group is that this item likely has little traction and will be taken off the work plan.

4. Identifying best practices and specifications for the use of Prefabricated Bridge Elements and Systems (PBES)

Mr. Sarhan gave an overview of Mr. Benjamin Beerman's presentation on "[What are Prefabricated Bridge Elements & Systems for Accelerated Bridge Construction \(ABC/PBES\)?](#)" done as part of FHWA's outreach under Every Day Counts (EDC). The group went over the numerous PBES [resources](#) available on FHWA's EDC page, and discussed that PBES had been carried over into EDC2. Specific items shared with the group included FHWA Publication No. FHWA-IF-09-010 [Connection Details for Prefabricated Bridge Elements and Systems](#), and the FHWA sponsored [Manual on Use of Self-Propelled Modular Transporters to Remove and Replace Bridges](#). Mr. Bryant indicated that several resources on this topic are also covered by SHRP 2 R04. Mr. Bryant indicated that under R04 a toolbox is under development that includes a sample standard and sample LRFD based specifications. Mr. Sarhan asked if there were specific items members needed in this area that were not covered under the current set of resources in this area. Attendees mentioned the need for guidance on proper construction inspection of PBES. The development of construction inspection guidance may carry on as a work plan item for 2012/2013.

5. Develop solutions to longitudinal joint durability issues experienced by DOT's

This work item is complete. Mr. Stephen Cooper (FHWA) to present an overview to the general session of the recently completed cooperative study conducted by FHWA and the Asphalt Institute. FHWA and AI are offering free workshops addressing "*Best practices for specifying and construction HMA longitudinal joints*".

6. Survey states to determine availability of Bridge Ride Quality Specifications

Mr. Smythe presented Iowa DOT Specification 2428 [Smoothness of Bridge Decks and Bridge Deck Overlays](#) as an example of an existing bridge ride quality specification. No formal survey conducted by the group, but discussion indicated that use of a bridge quality ride specification is widespread enough that several examples are available for those DOT's that are interested. Representatives from the Georgia DOT and Caltrans both indicated that they have a bridge ride quality specification based on profilograph measurement that extends either 50 ft (CA) or 100 ft (GA) beyond the deck. Caltrans also mentioned that they have a quiet deck specification (either longitudinal tining, or grind and groove). Mr. Sadler mentioned that Florida DOT profile grinds all decks and questioned whether tining is even needed. Attendees discussed tining and implications on friction and whether states have friction requirements on bridge decks.

7. Survey states to determine best practices for thin bridge overlays

This activity was not completed and will be carried forward into the 2012/2013 work plan.

8. Post installation inspection of drainage pipes

Mr. Hogan (ACPA) gave a presentation on the practice of and advantages of conducting post installation inspection for drainage pipes. After the presentation attendees discussed availability of technology and challenges to writing a proper specification.

**Research Topics:** Attendees discussed the 2012/2013 Research Topics as follows

1. Mr. Smythe discussed potential for changes in the current process with the group. The current process involves research committee chairs attending a breakfast meeting on Tuesday mornings from 6:30 to 8:00 AM. There is not enough time to put together a good research plan during this breakfast meeting. There is a proposal to have an additional person from each group sit on the research committee to take some of the commitment off the vice chair and allow a more effective use of time. Mr. Ahlvers solicited the group for any interest in serving in a research capacity. The commitment usually involves a monthly call. Interested members should contact either Mr. Ahlvers or Mr. Smythe.
2. NE Peer exchange identified risk of material testing QA as a research item. Work has already started on this item
3. Carryover item from last year was discussed. Integrating sustainable practices and requirements in construction activities (NCHRP 10-91). This activity is ongoing.
4. Optimal construction inspections staffing – this activity is funded.
5. Managing impaired driver intrusions into work zones. – California has had three workers killed in the last month and are asking what is the best approach. Is there a better way to handle impaired drivers in general? This is predominantly an issue in areas where positive protection is not an option. THIS ITEM TO BE DISCUSSED AT THE BREAKFAST MEETING.
6. Credentialing of CEI inspectors. What is the investment and should the states be looking at regional initiatives and establishment of common standards? Georgia, for example does not have reciprocity with other states, but the use of consultant inspection is prevalent in both Georgia and Florida. Several states have looked at NICET, but there are limitations that hamper the ability to use NICET effectively. All attendees indicated that they expect an increase in the use of consultant inspection in the future. The group agreed that a synthesis of current practice is probably the appropriate starting point. THIS ITEM TO BE DISCUSSED AT THE BREAKFAST MEETING.
7. Buy America. The tracking of items on projects has become an administrative issue for several states. Requirements have become so burdensome for some suppliers that they have indicated they need full time staff. Suppliers are increasingly frustrated with the requirements. State DOT's are asking how the administrative effort required to be compliant with Buy America fits in with the message of Every Day Counts? – NOT A RESEARCH ITEM. THIS WILL BECOME A NEW WORK PLAN ITEM.

**Closing:** Mr. Ahlvers requested that participants think about presentation topics. Mr. Ahlvers time as chair is coming to a close, and members are requested to start thinking about coming aboard as either the chair or as a vice-chair. Meeting adjourned at 4:00 PM.

**Thursday August 16, 2012** (1:15 PM to 4:00 PM)

Mr. Ahlvers calls meeting to order at 1:15 PM. Attendees include 10 representatives from State DOT's, 3 representatives from FHWA, and 3 representatives from industry.

**Strategic Plan**

Attendees reviewed the current draft of the Strategic Plan and offered comments on the general structure as well as some specifics on the goals and objectives. A copy of the draft strategic plan, including comments discussed during the meeting will be distributed to members for further comment. Comments are to be sent to Mr. Hoyne.

**Overview of Research Meeting**

Mr. Smythe gave a summary of the discussions at the breakfast research meeting as follows. Group discussion occurred after each item was presented by Mr. Smythe.

1. There was considerable overlap between the Roadway and Structures group and another working group on the issue of accreditation and qualification of inspectors. Consensus of the research committee was to request a synthesis of practice to see what the states are doing. Group discussion then turned back to NICET. Many attendees mentioned that their state had looked at it, but it was not specific enough for highway work. The general consensus among the attendees is that establishing regionally based standards is probably a good first step rather than diving into a national approach.
2. Drivers in work zones. The research committee is planning on reaching out to other sub-committees before taking very much action on this.
3. Discussion about adding a Friday morning research session rather than continuing with the current Tuesday morning breakfast meeting. Jeff Carpenter (WSDOT) will be assuming role of chair for the research committee.

**Develop 2012/2013 Work Plan**

**Old Items**

1. Draft Guideline for Transportation Construction QA  
**STATUS:** On-going. Item will remain on work plan.  
**ACTION:** Task force to finalize and coordinate with AASHTO for publication/posting with SOC
2. Develop requirements for IRI to be incorporated into the Construction Guide Specification Publication  
**STATUS:** On-going. Item may remain on work plan.  
**ACTION:** Anthony Sarhan to follow up with Bob Orthmeyer whether this will be pursued.
3. Survey States on best practices or specifications to prevent cracking in mass pour concrete structures  
**STATUS:** On-going. Item will remain on work plan.  
**ACTION:** Florida and Louisiana to provide sample specs.
4. Coordinate changes to HEC-2 calculations with subcommittee on structures.  
**STATUS:** Complete. Sub-committee on Bridges and Structures (SCOBS) has shown no interest in this item.  
**ACTION:** Remove from work plan.

5. Longitudinal Joints – Survey of Best Practices  
**STATUS:** Complete  
**ACTION:** Remove from work plan
6. Bridge Ride Quality  
**STATUS:** Complete  
**ACTION:** Remove from work plan
7. Thin Bridge Overlays  
This item came up for discussion during the 2011 General Session, in particular the use of thin overlay treatments that don't delaminate. There appears to be mixed practices across the country. Florida does not overlay bridge decks. Kansas is moving away from overlaying bridge decks and instead doing full depth bridge decks with polymer overlays immediately after the deck is ready. Rhode Island is also moving away from overlays to full depth bridge decks. There has been mixed success with thin overlays in Massachusetts.  
**STATUS:** On-going – possible survey of best practices  
**ACTION:** Volunteers needed to head up this work item
8. Prefabricated Elements  
**STATUS:** Complete  
**ACTION:** Take off work plan. New work plan item associated with inspection to be added.
9. Effect of Rumble Strips/Stripes on Durability of Pavement  
**STATUS:** On-going  
**ACTION:** Volunteers needed to head up this work item
10. Camera inspection of pipes  
**STATUS:** Complete.  
**ACTION:** Remove from work plan

#### **New Items**

1. IRI Performance Indicators  
**STATUS:** New work plan item  
**ACTION:** Volunteer needed to head up this item. Survey States on the use and availability of IRI performance indicators, and composite index ratings for pavements. This information will be provided to FHWA (Butch Wlaschin).
2. Prefabricated Bridge Elements  
This item is based on the results of Old Work Item # 8 above. Based on discussion with the group there is still a need for guidance on inspection methods when using PBES.  
**STATUS:** New work plan item  
**ACTION:** Volunteer needed to head up this item.
3. Develop construction guide specification for pipe inspection  
**STATUS:** Pending  
**ACTION:** Volunteer needed to head up this item.
4. Inspector Certification

This item has started receiving attention from many different DOT's. Increased use of consultant inspection is leading States to look into the most efficient approach. Two distinct options appear to be most ready for consideration 1) Standardization throughout a region, and 2) state by state reciprocity. Mr. Mastronardi has indicated that Georgia Tech University is conducting research on this topic, and has offered to develop a program. Mr. Figola mentioned that NICET is forming a committee on certification and is looking at rewriting their approach – this could be a good time for AASHTO to influence the direction NICET takes to meet their needs. Mr. Sadler noted that we need to have an understanding on how regions share resources as this would be a big influence on whether a regional approach makes sense.

**STATUS:** New work plan item

**ACTION:** Develop and distribute a survey on standards for inspector certification.

5. Managing Consultant Inspectors

Attendees discussed if there were any best practices for the management of consultant inspectors. Mr. Alvarado stated that Arizona uses a web-based tracking system.

**STATUS:** Pending

**ACTION:** Develop Synthesis of best practices

6. Buy America

**STATUS:** New work plan item

**ACTION:** Roadway and Structures section will draft position statement on Buy America addressing applicability to size and scope along with administrative burden.

7. Risk Based Inspection

Focusing efforts on what is important. Attendees notes that CE costs on small jobs can be very high because there are some fixed costs that just cannot be discounted. Mr. Sadler noted that FDOT is looking into WSDOT's "witness and hold-point" point model. MoDOT is experimenting with contractors providing a QMP, then conducting a risk analysis to identify hold points.

**STATUS:** New work plan item

**ACTION:** Roadway and Structures group to push for scope of current effort on risk based inspection of materials be broadened to include construction inspection.

8. Tack Coat Bonding

**STATUS:** Pending

**ACTION:** Pending

9. Performance Based Specifications

States share their experiences with Performance Based Specifications. FDOT has had performance specification for HMA since 2004, and PCCP since 2005. FHWA noted that they are looking for opportunities to promote new concrete pavement smoothness technology and are interested in what the States are doing in this area. Mr. Stott noted that most of Caltrans specifications are a mixture of method and performance type specifications, but as technology improves they would like to move towards more performance based specifications. Mr. Howell noted that GDOT has instituted a performance specification for striping.

**STATUS:** Pending

**ACTION:** Pending

10. Positive Protection Requirements

**STATUS:** Pending

**ACTION:** Pending

### **Discuss potential presentations for 2013 meeting**

Attendees discussed the following items as potential presentation topics for the 2013 meeting

1. Miami Tunnel (Florida)
2. International Bridge project (Michigan)
3. Auto manufacturer test tracks
4. General presentation from auto industry
5. Presentation from Midwest CPN discussion project in Detroit
6. I-93 FAST 14 (Massachusetts)
7. Pawtucket River Bridge (Rhode Island)
8. SR 520 Floating Bridge (Washington)
9. SR 99 Deep Bore Tunnel (Washington)
10. Michigan DOT pipe study
11. Stainless steel reinforcing (Vermont)
12. In-place recycling
13. Caldecott and Devil's slide tunnel projects (California)
14. Two lift paving with smog eating concrete (Missouri)
15. Precast pavement panels
16. Cement treated bases with FDR (Vermont)
17. General pavement preservation techniques (back to basics)

### **Other Items**

Attendees discussed the following items

- 1) FDOT runs an annual construction career day to help introduce younger people to the construction industry. FDOT is looking at doing a survey to determine how many people currently in the work force attended the career day in their past.
- 2) There is a split among the states on whether inspection personnel are degreed or not. For example Vermont requires at least a 2-year degree. Missouri is seeing more degrees among inspectors. Florida and Georgia have no degree requirements. California technicians have coursework requirements and have a high percentage of engineers on staff.
- 3) Some State DOT's are experiencing recruitment and retention issues.

### **Post Meeting Items**

Marc Mastronardi (Georgia DOT) is the new Vice Chairman (Roadway)

Julio Alvarado (Arizona DOT) is the new Vice Chairman (Research)

Attendance

**AASHTO Sub-Committee on Construction  
Roadway and Structures**

| Name                              | Organization           | E-mail   | 8/13/12 | 8/16/12 | * |
|-----------------------------------|------------------------|--|---------|---------|---|
| <b><u>State Agencies</u></b>      |                        |  |         |         |   |
| David Ahlvers                     | Missouri DOT           | <a href="mailto:David.Ahlvers@modot.mo.gov">David.Ahlvers@modot.mo.gov</a>         | x       | x       |   |
| Alden "Casey" Allen               | Louisiana DOTD         | <a href="mailto:alden.allen@dot.gov">alden.allen@dot.gov</a>                       | x       | x       | M |
| Julio Alvarado                    | Arizona DOT            | <a href="mailto:JAlvarado@dot.gov">JAlvarado@dot.gov</a>                           | x       | x       |   |
| Rob Davis                         | Nebraska DOR           | <a href="mailto:rob.davis@nebraska.gov">rob.davis@nebraska.gov</a>                 | x       |         |   |
| Andy Dearmont                     | Nebraska DOR           | <a href="mailto:andy.dearmont@nebraska.gov">andy.dearmont@nebraska.gov</a>         | x       | x       |   |
| Doug Hoever                       | Nebraska DOR           | <a href="mailto:doug.hoever@nebraska.gov">doug.hoever@nebraska.gov</a>             | x       |         |   |
| Thomas Howell                     | Georgia DOT            | <a href="mailto:thowell@dot.ga.gov">thowell@dot.ga.gov</a>                         | x       | x       | M |
| David Hoyne                       | VTrans                 | <a href="mailto:david.hoyne@state.vt.us">david.hoyne@state.vt.us</a>               | x       | x       |   |
| Marc Mastronardi                  | Georgia DOT            | <a href="mailto:mmastronardi@dot.ga.gov">mmastronardi@dot.ga.gov</a>               | x       | x       |   |
| David Sadler                      | Florida DOT            | <a href="mailto:david.sadler@dot.state.fl.us">david.sadler@dot.state.fl.us</a>     | x       | x       |   |
| Tony Sheffield                    | Mississippi DOT        | <a href="mailto:tsheffield@mdot.state.ms.us">tsheffield@mdot.state.ms.us</a>       | x       |         |   |
| John Smythe                       | Iowa DOT               | <a href="mailto:john.smythe@dot.iowa.gov">john.smythe@dot.iowa.gov</a>             | x       | x       | M |
| Rob Stott                         | Caltrans               | <a href="mailto:rob.stott@dot.ca.gov">rob.stott@dot.ca.gov</a>                     | x       | x       |   |
| Chuck Suscko                      | Caltrans               | <a href="mailto:chuck.suscko@dot.ca.gov">chuck.suscko@dot.ca.gov</a>               | x       |         |   |
| <b><u>FHWA &amp; TRB</u></b>      |                        |  |         |         |   |
| James Bryant                      | TRB/SHRP2              | <a href="mailto:jbryant@nas.edu">jbryant@nas.edu</a>                               | x       |         |   |
| Greg Doyle                        | FHWA                   | <a href="mailto:gregory.j.doyle@dot.gov">gregory.j.doyle@dot.gov</a>               | x       | x       |   |
| Anthony Sarhan                    | FHWA                   | <a href="mailto:anthony.sarhan@dot.gov">anthony.sarhan@dot.gov</a>                 | x       | x       |   |
| Butch Wlaschin                    | FHWA                   | <a href="mailto:butch.wlaschin@dot.gov">butch.wlaschin@dot.gov</a>                 | x       | x       |   |
| <b><u>Academia</u></b>            |                        |  |         |         |   |
| Cliff Schexnayder                 | AZ State University    | <a href="mailto:cliff.s@asu.edu">cliff.s@asu.edu</a>                               | x       |         |   |
| <b><u>Industry and Trades</u></b> |                        |  |         |         |   |
| Bill Adams                        | Hancock Conc Prod      | <a href="mailto:bill.adams@hancockconcrete.com">bill.adams@hancockconcrete.com</a> | x       |         |   |
| Daniel Figola                     | ADS                    | <a href="mailto:dfigola@ads-pipe.com">dfigola@ads-pipe.com</a>                     | x       | x       |   |
| Kent Hansen                       | NAPA                   | <a href="mailto:khansen@asphaltpavement.org">khansen@asphaltpavement.org</a>       | x       |         |   |
| Al Hogan                          | ACPA                   | <a href="mailto:ahogan@concrete-pipe.org">ahogan@concrete-pipe.org</a>             | x       |         |   |
| Jeff Hite                         | Rinker Materials       | <a href="mailto:jefferya.hite@cemex.com">jefferya.hite@cemex.com</a>               |         | x       |   |
| David Matocha                     | Hanson Pipe & Precast  | <a href="mailto:david.matocha@hanson.com">david.matocha@hanson.com</a>             | x       |         |   |
| Jim Merchlewitz                   | ADS                    | <a href="mailto:jim.merchlewitz@ads-pipe.com">jim.merchlewitz@ads-pipe.com</a>     | x       |         |   |
| Woody Rigdon                      | ACPA                   | <a href="mailto:wrigdon@concrete-pipe.org">wrigdon@concrete-pipe.org</a>           | x       | x       |   |
| Anita Simpson                     | Piranha Pipe & Precast | <a href="mailto:pirhanapipes@sbcglobal.net">pirhanapipes@sbcglobal.net</a>         | x       |         |   |
| Eddie Simpson                     | Piranha Pipe & Precast | <a href="mailto:eddie@pirhanapipes.com">eddie@pirhanapipes.com</a>                 | x       |         |   |

\*M denotes self identified member