



MEETING MINUTES

**AASHTO Subcommittee on Construction
Annual Meeting
August 10, 2014 – August 15, 2014
Sheraton Portsmouth Harborside Hotel
Portsmouth, New Hampshire**

Monday August 11, 2014

8:00 AM – 9:30 AM Opening Session

Moderator – Malcolm Dougherty, Subcommittee Chair, CalTrans

Mr. Malcolm Dougherty, Director of CalTrans and Chair of the AASHTO Subcommittee on Construction welcomed members and special guests to the annual SOC Meeting. He thanked the NHDOT and Mr. Ted Kitsis and his staff for hosting the meeting acknowledging the efforts needed in planning and conducting the meeting. There are 42 State DOTs, 1 Canadian Province, as well as a number of industry and other public sector organizations represented. He reminded all of the SOC strategic plan and vision and mission. He then introduced Mr. Christopher Clement, Commissioner of NHDOT.

New Hampshire DOT Welcome – Christopher Clement, Commissioner

Mr. Clement welcomed members and thanked key NHDOT staff for their efforts in hosting the meeting. What was true yesterday remains true today. He recited text from a speech by President Ronald Reagan on November 27, 1982 on the need for increased highway funding (raising the federal gasoline tax by 5 cents per gallon). NASTO conference call last week, each State is taking a different approach to their construction program in light of the current Highway Trust Fund status. How much risk are we willing to take? NH has implemented a road toll increase. NH is working on a VMT-based program (URide) that will seek 7,500 NH residents to participate. The program will collect data using bar-coding at gas pumps to understand how a VMT program will work. They will then present this to the legislature for feedback.

AASHTO Welcome – Jim McDonnell, Program Director

Mr. Dougherty then introduced Mr. Jim McDonnell, AASHTO Program Director for Engineering. Mr. McDonnell provided an overview presentation on the following AASHTO topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Centennial Year** – AASHTO is celebrating 100 years in 2014.
- **AASHTO News & Strategic Plan** – AASHTO is moving to e-publishing format for “top 10” documents that are published. The Strategic Planning for AASHTO as an organization. There are 4 strategic goals, which will guide review of the existing AASHTO committees. It will also guide the Technical Service Programs.

- **MAP-21** – This legislation is in its second year. There are a number of Performance Rulemakings that are in progress. Highway Trust Fund insolvency was avoided by the stopgap measure passed by Congress on July 31st providing short term extension until May 2015. Outlays outpace revenues by \$15 billion. Unless Congress figures out how to fix the Trust Fund permanently, there will be one year where there are no Federal Funds (See <http://invest.transportation.org>).
- **SHRP2** – 27 SHRP2 products are on the street now. This includes new tools related to construction (R09, R10, R15B, and R16). Round 4 was just announced with funding and technical assistance opportunities.
- **Construction Issues** – Highway bridge age and condition presents many challenges. Innovative construction techniques are key to replacing deficient bridges.
- **Connected and Autonomous Vehicles** – Recent demonstration of the “Google” car has heightened interest and issues associated with making the technology a reality.
- **Your Ideas Needed** – AASHTO-ARTBA-AGC Joint Committee formed to identify key construction-related issues/needs.

FHWA Welcome – Patrick Bauer, FHWA NH Division Administrator

Mr. Dougherty then introduced Mr. Patrick Bauer, Division Administrator for the FHWA New Hampshire Division Office. Mr. Bauer took the floor to welcome delegates to NH and the meeting on behalf of FHWA. FHWA and AASHTO are working in partnership together. He noted the collaborative relationship between AASHTO, the State DOTs and FHWA. He thanked and noted the efforts of Mr. Ted Kitsis and his staff in putting together the SOC Meeting. He also noted FHWA staff present at the meeting.

SOC Chair Welcome – Malcolm Dougherty, Director, CalTrans

Mr. Dougherty again thanked everyone for their role in the meeting. At this time, he has no further information to present to the group.

SOC Self Introductions – Subcommittee Members

At this point, the Mr. Dougherty invited delegates provided self-introductions. Forty-two State DOTs and one Canadian Province (ON) were represented at the meeting, as well as representatives from AASHTO, FHWA, AGC, ARTBA, ACPA, NICET, Academia, and the consulting industry. Representatives from the following States were present:

AK, AL, AR, AZ, CA, CO, CT, DC, DE, FL, GA, IA, IL, KS, KY, LA, MA, ME, MI, MN, MS, MT, NC, ND, NE, NH, NV, OH, OK, OR, PA, RI, SC, TN, TX, UT, VA, VT, WA, WI, WV, WY.

General Announcements

Mr. Ted Kitsis, New Hampshire DOT (NH DOT) announced that lunch will be held in two rooms (Prescott Room and Harbor’s Edge Room). Staff will guide attendees to the rooms. There will be a lunchtime presentation in the Harbor’s Edge Room.

9:30 AM – 9:45 AM Break

At this point, a 15 minute break was taken.

9:45 AM – 11:55 AM General Session

Moderator – David Hoyne, Subcommittee Vice Chair, VAOT

Mr. David Hoyne, Vermont AOT and Vice Chair of the Subcommittee opened the General Session. He introduced the keynote speaker for the meeting, Ms. Jennifer Zorn, Public Outreach Coordinator, McFarland Johnson.

Key Note Address – Jennifer Zorn, Public Outreach Coordinator, McFarland Johnson

Ms. Zorn, Public Outreach Coordinator for McFarland Johnson provided an entertaining presentation titled: *Connecting Generations & Bridging Communities; The story of the Memorial Bridge River crossing between Portsmouth, NH and Kittery ME*. Kittery, ME began (1780) as a port with many shipbuilders. The 1st trestle bridge was built in 1822 with railroad restle added in 1841. Many submarines were built in Kittery during WWI. In 1921 during WWI, many shipyard workers lived in Portsmouth. A new Lift Span bridge (the Memorial Bridge) was constructed in 1920-1923, providing a continuous link for Rte US-1 from FL to ME. A short video with vintage photos of the original Memorial Bridge construction was played. 90 years later (2012) a project to construct a replacement Memorial Bridge began. A substantial public outreach program was implemented, which yielded many stories of the original bridge by members of the community. A number of memorabilia items/souvenirs related to the old bridge and new bridge were produced. A short video with photos of the new Memorial Bridge construction was played accompanied by narrative by Ms. Zorn.

AGC-ARTBA-NAPA; Work Zone Safety - Joint Efforts to Protect Workers from 3rd Party

Intrusions – Lee Cole, Oldcastle Materials; John Obr, Director, Construction Division, Texas DOT.

Mr. Hoyne, introduced Mr. Lee Cole, Oldcastle Materials and Mr. John Obr, Director, Construction Division, Texas DOT. Mr. Cole presented on “Preventing Work Zone Intrusions” (See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation):

- **Fatalities in Construction Zones** – Around 2009-2010, the trend of work zone crashes and fatalities in construction zones began to increase. We need to address this trend. It’s about people and families affected.
- **The Challenge** – Maintain safe and efficient traffic flow and reduce the number and severity of accidents in work zones. We need to educate the public and stakeholders.
- **Work together** – Need combined effort of Trade Associations, DOTs, Labor Unions, and others to address the issue comprehensively.

Mr. Obr presented on “Use of Safety Contingencies to Improve Traffic Control and other Safety Features” (See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation):

- **Safety Contingency** – TX DOT is including a “contingency” amount in the construction budget to address safety. This came about following several fatalities on I-35 Expansion Projects in Waco District. The Safety Contingency is included on all contracts in Engineers Estimate (2-5% amount) as a force account item. It has been used in two Districts. It has included adding uniformed police officers and additional traffic control devices, when determined needed to increase project work zone safety.
- **Pilot Special Provision** – Includes Incident and Injury reporting through electronic system. It also requires a Safety Point of Contact and a pre-construction Safety Meeting and regularly scheduled safety meetings.

Questions and comments from the delegates included:

- Q.** AR; Any issues with use of temporary rumble strips and advance warning?
- A.** TX DOT puts up advance warning signs for the rumble strips. Using on most projects except for chip seals.
- Q.** How do you address motorcyclists?
- A.** TX DOT does not know of any special treatment. Not aware of any negative feedback.
- Q.** Anything being done to address traffic queues?
- A.** Yes, TX DOT is rewriting Special Provision.
- Q.** MI; Contractors asking how to meter out safety contingency so not all funds used at the beginning of project?
- A.** TX DOT erring on side of spending freely for safety to be creative and have not metered the contingency.
- Q.** UT; Have you looked more at ways to give advantage to Contractors with a good safety record?
- A.** TX DOT is looking more at OSHA safety rates as a prequalification measure versus insurance data. Believe this provides a better picture..
- Q.** AL; Are there any extra costs with Pilot Special Provision?
- A.** TX DOT is still evaluating this on different size projects.

General Comment – TX DOT using temporary rumble strips for 18 months with no tort lawsuits.

FHWA Construction Update – Butch Wlaschin, Director, Office of Asset Management, Pavements and Construction, Federal Highway Administration

Mr. Wlaschin announced he is retiring after 44 years. He provided an overview presentation on the following FHWA topics/activities related to construction (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Contract Administration** – Rulemaking underway for Buy America requirements in 23CFR635.410 to implement MAP-21 and to implement CM/GC
- **Major Projects** – Incorporating MAP-21 changes for Financial Plan guidance. Goal to post final guidance by Fall 2014. There will be joint DOT/FHWA webinar on 11/04/14.
- **3D Engineered Models** – There is a lot of focus on this topic under EDC. There is a national website (search FHWA 3D). There is a webinar series and training workshops, as well as web-based training. An Implementation Manual is planned to be issued in Winter 2015.
- **Slide in Bridge Construction** – There is a national website (search FHWA sibc). Bi-monthly webinars, web-based training and instructor-led training are underway. A Cost Estimation Guide is in development.
- **Intelligent Compaction** – There is a national website. Training workshops are underway. There is an IC Retrofit Study with a report due late 2014.
- **Alternative Contracting Methods (ACMs)** – Increasing the use of ACMs, including CM/GC, Design-Build, and Alternative Technical Concepts (ATCs). See ACM library.

- **Worker Fatigue and Situational Awareness** – This is a supplement to SHRP2 R03, a best practices toolbox to help reduce worker fatigue. TXDOT is the project lead.
- **Other Items** – Const Peer Network (CPN) Synthesis Report is being published on AASHTO and FHWA websites. A Partnering Workshop was held in NV and looking to issue Best Practices guide. E-Construction “How to Guide” being developed with FL. A CIM Domestic Scan and research project is underway.
- **Research** – Several key areas (e.g. Contractor Prequalification, Index-Based Cost Estimation).
- **Every Day Counts 3 (EDC3)** – There are some continued and new initiatives.
- **MAP21 - Asset and Performance Management** – What are construction implications and what do we need to be doing to keep pavements and bridges in state of good repair? Comment period in Fall 2014.
- **Extreme Weather and Transportation System** – Key construction implications include: culverts & drainage structures; materials & equipment; debris removal; contingency plans; back-up power; back-up communications; early warning systems. There are some studies from past events (Gulf Coast, Hurricane Sandy – NJ/NY/CT).

11:55 AM – 12:00 PM State Discussion Topics

Moderator – David Hoyne, Subcommittee Vice Chair, Vermont AOT

At this point, there was no time for the State Discussion Topics. However, Mr. Hoyne pointed out that there is a Draft Scope of Work document for the AASHTO Guide Specifications for Highway Construction in each attendee registration packet. Attendees are asked to discuss this topic further in each Section Breakout meeting. For the benefit of new SOC Meeting attendees, he introduced each of the four Section Chairs.: Jeff Shapiro, Emanuel Banks, Marc Mastronardi, Brenda O’Brien. The committee then adjourned for lunch.

12:00 PM – 1:15 PM Lunch

Lunchtime Presentation:

Finding Relevant Climate Data: Exploring Two New Informational Resources – Ellen Mecray, NOAA Regional Climate Services Director; Marina Schaffler, Climate Network Coordinator for the Gulf of Maine Council on the Marine Environment

1:15 PM – 4:00 PM Section Group Meetings

After lunch, Section meetings were held as follows:

- Environmental & Human Resources *Thaxter Room*
- Computers & Technology *Gardner Room*
- Roadways & Structures *Lear Room*
- Contract Administration *Amphitheater*

4:00 PM – 5:00 PM Section Chair Reports

NOTE: Section Meeting minutes are contained in Appendices C, D, E, and F of these minutes. Mr. Hoyne called the meeting to order at 4:00 pm. Each of the Section Chairs provided a summary report for their respective Section.

Environment and Human Resources (E&HR): Jeff Shapiro (Nevada DOT)

Mr. Shapiro reported that Environment and Human Resources (E&HR) Section worked with the AASHTO Center for Environmental Excellence, particularly on their pocket guide for stormwater management (Draft available in September 2014). Work Plan items the Section worked on:

- OSHA work zone requirements – No new mandate from OSHA
- Work zone clearinghouse – Several states planning to take advantage of free training
- Inspector Training and Certification (joint E&HR + R&S Section presentation by AMRL)
- Safety and safety culture

Computers and Technology (C&T): Emanuel Banks (Arkansas HTD)

Mr. Banks reported that the Computers and Technology (C&T) Section had a productive session. The C&T Section is looking for a transition in chair position in the next year or so. They reviewed the responsibilities of the C&T Section. They discussed the update effort for the AASHTO Guide Specifications and the need and use by State DOTs of the Guide Specifications. The possible need for specifications associated with alternative delivery methods and emerging issues was discussed. C&T presentations this week were discussed. They also discussed the structure of the SOC Meeting and the ability to ensure time for State Discussion Topics on the Agenda. Last year's Work Plan activities were reviewed, including:

- 3D Modeling and CIM
- AASHTO Civil Rights labor modules- Modules fully implemented by MNDOT
- Electronic Data Collection (e.g. electronic signatures, passing documents from design to Contractor)

The C&T Section has also been maintaining their Work Plan activities on the AASHTO SOC website.

Roadways and Structures (R&S): Marc Mastronardi (Georgia DOT)

Mr. Mastronardi reported that the R&S Section discussed the AASHTO Guide Specifications. Section members believe the Guide Specifications are possibly underutilized but still valuable. Last year's Work Plan activities were reviewed, including:

- Prefabricated Bridge Elements
- Surveys on: Bridge Deck Cracking, Concrete Pavement, and Bridge Deck Grinding

The E&HR and R&S Sections held a joint meeting and presentation by Mr. Robert Lutz on the AMRL Accreditation Program for Inspection Bodies that is currently under development. They also had discussion on contracting for CEI.

Contract Administration (CA): Brenda O'Brien (Michigan DOT)

Ms. O'Brien reported on Work Plan activities, including:

- Partnering Survey
- Force Account Survey

The Section also discussed the Guide Specification update effort. Is there still a need for the Guide Specification? Members felt that it provides a standard and a place to start. There are a number of things that are not currently included in the Guide Spec. (e.g. D-B, CM/GC, new materials). They discussed new Work Plan items, including:

- Guidance on Design-Build
- Partnering Guide Spec
- 3d Modeling Administration
- P3 Contract Administration & Issues
- Setting Contract Time

The Section also discussed potential new presentation topics for the 2015 Meeting, including: Contractors' CM/GC case study or successes and lessons learned, Tappan Zee bridge, Incentive/Disincentive provisions, DBE practices, Buy America, Liquidated damages (AL statistical method), Stakeless construction, index-based cost estimation, benefits of using Alternative Contracting Methods (ACMs), and avoiding underground utilities. These will be further discussed at Thursday's CA Section Meeting.

4:45 PM ADJOURN

The meeting was adjourned for the day by Mr. Hoyne at 4:45 pm.

Tuesday August 12, 2014

8:00 AM – 9:30 AM Contract Administration Session

Moderator – Brenda O’Brien, Section Chair, Michigan DOT

The session was called to order by Ms. O’Brien. She introduced Mr. Ted Doherty, Special Agent in Charge – Region 1, U.S. DOT, Office of Inspector General.

Fraud Awareness – Theodore L. Doherty, III, Special Agent in Charge - Region 1, U.S.

Department of Transportation, Office of Inspector General - Investigations

Mr. Doherty’s presentation and handouts addressed the following topics related to Fraud Awareness (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **OIG Organization, Authority, Process** – OIG is authorized and trained to conduct criminal investigations across the country. They have 7 Regional Offices.
- **Investigations** – If allegations are received they will conduct a preliminary assessment to determine if it warrants investigation. They have expertise in fraud investigation.
- **If You Suspect Fraud** – Fraud involves an intent to deceive. It is often characterized by altered or false documents. An isolated mistake is not a Fraud. Some fraud indicators may include missing documents.
- **Common Types of Fraud** – Bribery & Kickbacks, Bid Rigging, Collusion/Price Fixing, Embezzlement, False Claims, etc. (See presentation). Sample indicators are included on the Fraud Card provided as a handout. An example Collusion case was presented.

Q. How did Contractors get caught in collusion case?

A. OIG received a call on their fraud hotline.

- **Product Substitution Cases** – One example: The Contractor provided certification statements for catch basins that did not comply with the specifications. It was noted that the casting date was too early. Using destructive testing, it was found that there was no reinforcing steel in the catch basins. Company was suspended and debarred and fined. Other example: Non-specification concrete was delivered to Big Dig project. The Contractor plead guilty to conspiracy with respect to false claims and paid \$50 million fine.
- **Bribery** – When a public official takes something of value to steer a Contractor to a contract. Several examples were presented where DOT employees accepted money to provide Contractor an advantage.
- **Overcharging and Mischarging** – Contractor misrepresents costs. As an example, MA Contractor overrode weight scales by 10% for Asphalt and Stone. OIG obtained search warrant to investigate and examine scales. An employee of the Contractor left the company and confessed the truth of how the scales were manipulated. The employee provided additional information. The President, Owner, and Vice-president were all convicted for False Claims on Federal contracts for inflated Asphalt delivery tickets. Other case examples were presented.
- **Davis-Bacon Prevailing Wages** – Some schemes include: Two sets of books.
- **DBE Fraud** – Front company schemes where company exists on paper and the work is done by the Prime Contractor. Pass-through schemes may also be used.

- Q.** Do you prosecute a lot of DBE Fraud cases?
A. DBE cases are not easy to investigate and establish a case to take to prosecution.
- Q.** UT; Does OIG prosecute fraud in DBE certification?
A. Not much. Generally this is less significant than other cases so far, but it should be reported.
- **First Line of Defense** – Project management staff need to scrutinize all documentation received.
 - **If You Suspect Fraud** – Document the activity. Contact OIG.
- Q.** If you are catching “X” amount of fraud, do you speculate what percent is missed?
A. Some assessments suggest there could be at least 5% loss per year.
- Q.** We often receive claim that looks inflated; how big should the cost be and what type of documents are needed?
A. If you don’t think it’s accurate and it’s over \$100,000, then pursue it.
- Q.** At what level before you consider prosecution?
A. It varies by location; \$50k in small states, \$1M in NY City. Civil false claims are also pursued and won.
- Q.** Do you think industry know that a small fraud case won’t be pursued?
A. I don’t think Contractor’s care.
- Q.** Do you have a standard package of training that can be provided?
A. Training is usually regionally based, since flavor of cases is typically regional. We can provide training anywhere from 1 to 3 hours.
- Q.** If Contractor and Owner agree on lump sum price up front and the costs later don’t appear supported, do I have fraud?
A. Probably not. I would look at a potential gratuity investigation. It is difficult to prosecute. Possible bribery/kickback case.
A. CA; May have administrative action even if not a crime because poor negotiating caused excessive payment.
- Q.** Do you have a recommendation on use of Escrowed Bid Documents (EBD)?
A. I am not familiar with EBD so cannot really provide a recommendation.
A. CA; Contractor asked to pay \$67M because he said no night work planned, but escrow documents showed otherwise.

Performance Based Construction Prequalification Project – Richard Duval, Construction Research Engineer, FHWA

Mr. Duval’s presentation covered the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Study Purpose** – Evaluate effectiveness and validity of expanding use of Performance-based prequalification of Contractors.

- **Methodology** – Included a literature review, outreach effort and DOT Case Studies.
- **Performance Bonds** – Used as a method of Contractor prequalification, but does not evaluate the quality of the Contractor. 29 States prequalify Contractors, of which 90% use performance bonds.
- **Administrative Prequalification** – Only evaluates Contractor’s financial capacity.
- **Benefits of Performance Bonds** – Avoid cost of default and cost to re-bid project. A benefit is the threat to call the surety due to poor performance.
- **Recommendation** – Raise the minimum project size to between \$1 million to \$10 million.
- **Benefits** – More comprehensive approach. Reward better performing Contractors. It is a “Qualitative” process and rewards good performers and encourages marginal performers to improve.
- **Three-Tier Model** – 1) Administrative, 2) Performance based, 3) Project-Specific. Contractors can be disqualified if they do not meet the criteria for a specific tier. Flow charts illustrating each model were presented.
- **New Mexico Example** – Contractor performance criteria included: liquidated damage, claims, non-conformances, safety, disincentives, and Subcontractor evaluation. Performance factors (PF) are calculated for each of the 6 areas and then totaled up to maximum of 100%. It uses a rolling average of PFs over 5 year period.
- **Conclusions** – Industry default rate is less than 1%. DOTs can adopt all or parts of the 3-Tiered performance-based model for a more robust prequalification process.

Q. It seems FHWA FLH tried to do a Contractor prequalification, but it did not provide opportunity for Contractor input. This is less than 1% of time, is this really an issue?

A. At Central Federal Lands, there is now a process for Contractor feedback to assess.

Q. I question the underlying assumption that Performance Bonding Sureties only assess financial capacity?

A. It varies with surety.

Q. Was any research done on States becoming self-insured?

A. I don’t believe that was looked at in the Study.

Comment We have actually implemented this in MA and Contractor has ability to request a meeting to discuss their performance during the project (50% stage and 100% stage) and it has worked pretty well for us.

Response That’s great. It is beneficial to have a more robust system. Ontario has also been using a similar process for many years.

Q. How do claims factor into this process?

A. You have to be careful how a State DOT sets up their criteria for the process. The process should be agreed upon with your State AGC and it has to be objective.

Comment Ontario; we have used our own system for a long time and it allows us to put our money back into the highway program. There are other benefits as well.

9:30 AM – 10:00 AM Break

At this point, a 30 minute break was taken.

10:00 AM – 12:00 PM Contract Administration Session**Moderator – Brenda O’Brien, Section Chair, Michigan DOT**

The session was called to order by Ms. O’Brien. She introduced the speakers for the presentation and subsequent panel discussion on Contractor Liability.

Contractor Liability; “Who is Best Able to Absorb Risk?” – Don Gillis, Walsh Construction; Bill Ernstrom, Walsh Construction

The presentation addressed the following topics related to Contractor Liability (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Alternative Project Delivery** – The presentation focused on risk associated more with ACMs such as D-B, CM/GC, P3, and D-B-Finance, where higher risks exist.
- **Risk** – Walsh underwrites 100% of their contracts. They have mantra: RTC – “Read the Contract”. They use process of asking questions of DOT to identify and reduce Risk. Another approach may be to transfer (subcontract) some work out. They will also look at some type of an insurance product to assist in mitigating risk. They ask: “Can we bid this project or are their too many unknowns to put a price on all items?” ..They have to understand, allocate, and price all of the Risks. Often it is better for the DOT to own the risk vs. Contractor trying to mitigate the risk.
- **Prescriptive Design** – D-B Projects tend to have prescriptive designs (75-100% designed) with very little opportunity for ATCs. This does not allow benefit of Contractor to possibly come up with different design ideas.
- **Damages (Liquidated, Actual, Consequential)** – Liquidated damages (LDs) are set at beginning of project and must reflect best estimate of cost to the DOT. Contractors prefer LDs because they can best determine the risk profile. On bigger projects with ACMs, LDs are included, but with multiple exceptions to the LD cap. It is important to limit the number of exceptions or caps. Actual damages represent what you anticipate paying vs. what you actually pay. These are not preferred. Consequential damages are secondary costs that may be incurred by the DOT as a result of work not being done reliably by the Contractor. Making Contractors liable for Consequential damages increases risk and thus price.
- **Permitting Process** – Making the Contractor solely at risk for obtaining permits is increasingly done with ACMs. Putting this risk on the Contractor is not well placed and difficult for the Contractor to manage.
- **Right-of-Way** – The issue is who should take the risk of not being able to obtain the R/W, or not obtain it in a timely manner. The Contractor is not in best position to manage this risk. They recommend a sharing of this risk after a certain point of time, after which it becomes the responsibility/risk of the Owner/DOT. They advocate fairly assigning risk.
- **Subsurface Conditions** – Often geotechnical borings are provided to the Contractor, but only for “information” or reference. They recommend sharing all information available so that the Contractor is in better position to bid project and manage risk. Differing site conditions: Type 1 – Subsurface conditions are found to differ materially; Type 2 – A unique phenomenon is encountered.

- **Indemnification** – If there is a problem, Owner/DOT wants to be indemnified from all liability. This is an area Contractors look at closely. It may indicate how the Owner will manage the project.
- **Builders Risk Insurance** – It primarily insures the permanent project that is still under construction. Recommend only requiring insurance level to cover only that part of the work that is in progress, not insurance for all of the work. Project specific Professional liability insurance is very expensive and most insurance companies don't like providing it.
- **Hazardous Materials** – Once you touch hazardous material, it is yours forever (100% responsibility). Contractors do not want to take responsibility for known pre-existing hazardous materials.
- **Aesthetics** – It is important that commitments made for environmental/aesthetic reasons are clearly stated in the Contract and understood.

Panel Discussion Facilitator – Lewis Cannon, Section Vice-Chair, Connecticut DOT

Mr. Cannon introduced the speakers for the panel session on Contractor Liability.

The panel members were: Don Gillis, Walsh Construction; Bill Ernstrom, Walsh Construction; Peter Getchell, PKF MarkIII; and Derrick Hills, Pike Industries.

Q. CA; Any thoughts on transfer of risk with CM/GC?

A. Risk is no different than under D-B, other than Design issues.

Q. CT; We are just getting into D-B. How do we anticipate what we will need for permitting and R/W?

A. If you have complete Environmental process, DOT will know what is needed. Contractor may be able to offer ideas to reduce R/W. Principles of risk sharing will be the same as discussed in the above presentation. DOT needs to know what the project footprint will be before procuring Contractor.

Q. Have you seen examples that share risk better? Do you receive a Risk Matrix or what do you typically see from DOTs to identify risks?

A. It is not difficult to identify where the key risks are. It may be helpful for AGC to provide a paper to assist Contractors on this. AGC national has worked with FHWA to develop a manual that is on FHWA website. MAP21 requires FHWA to develop "model contract documents" for P3 projects. FDOT; Has CAR contract as a good example for handling hazardous materials.

Q. CT; We use incentive/disincentive clauses. How do these affect project risk profile?

A. I believe these are generally a good thing. We like to have incentive/disincentives with cap on over/under.

Substantial Completion; "The Haze at the End of the Tunnel" – Scott Lowe, Principal, Trauner Consulting Services, Inc.

Mr. Lowe's presentation addressed the following topics related to Substantial Completion (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Client Case Study** – A project has a warranty that begins upon substantial project completion. There is also a requirement for commissioning certain items before the work is accepted. How can the warranty begin if the project has not been accepted?
- **Liquidated Damages (LD)** – They make completion more complicated. They are often thought of as the Owner’s sword and their shield. Typically, your real damages cannot exceed the Liquidated damages amount. Recently, beginning to see contract language assessing LD or Actual damages; whichever is the higher amount. LDs cannot be assessed as a penalty.
- **Substantial Completion is not Completion** – What is “Substantial completion”? For purposes of LD, Completion can be defined as “Substantial Completion”. Substantial completion is often equated with concept of “beneficial occupancy” or “beneficial use”. “Open to traffic” may be equated or defined as Substantial completion.
- **AASHTO Guide Spec Terms** – The term “Contract Completion Date” is not defined in the AASHTO Guide Specifications. The Guide Spec does define “Contract Time” as date by which work is to be completed. It also defines “Completion” and “Project Acceptance” and “Final Acceptance”. Sometimes specifications are circular in using these different terms. “Partial Acceptance” is defined as a unit of portion of work that is completed and ready for inspection for acceptance.
- **Conclusions** – It is important to define all terms. Contract must establish two tiers of LD (one tiered for Substantial Completion, one for Completion).

- Q.** AL; How are varying LD rates established based on milestone completion dates?
- A.** DOT can tie LD to one phase and a separate set of LDs associated with Final Acceptance. You are not limited to assessing LD at only one point. If separate LDs, they need to be calculated that way when established by the DOT.
- Q.** FHWA; There seems to be another completion point; when the Contracting Office determines that the project is complete. Have you helped figure out when project is really considered complete?
- A.** When the Contractor has completed all work, they are done. There may still be time for the DOT to issue their “final” Acceptance or closeout of the contract.
- A.** MI (Brenda O’Brien); Takeaway here is to be clear with Specification and Contract terms to avoid confusion and ambiguity.

AASHTOWARE Project Construction & Materials Software Update – Jim Johnson, AASHTO Mr. Hoyne introduced Mr. Johnson. Mr. Johnson’s presentation addressed the following information (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Brief History** – 14 State participated in development of the current product. AASHTOWare Project 3.00 Beta release on 05/28/14. Scheduled completion of Beta testing is 09/19/14. Four states performing the Beta testing.
- **Expanded Functionality** – Multiple Daily Work Reports can be opened by Inspector. The Daily Diary info can be obtained from any report. Rules for Change Orders have been modified and can be defined by user. Contractor Pay Estimates can have a number of exceptions or Estimate adjustments. Attachments and links can be placed with any record. Contract Dates are collected under one process. Agency email system is used for

notifications. Agency Views allows greater flexibility. Contractor access can be provided external access.

- **New Features** – Notifications can be issued when record is changed or ready for action. Attention Flags are available to flag certain activities or items. Triggered Events allows for routine processes to be inserted in system.
- **Configuration & Customization** – Software allows Agency to make the page/field look any way they want it to look. Field labels, validation rules, and reports can be customized.
- **AASHTOWare Project 3.00 Update 1** – Scheduled for Fall 2015. Pre-release of 3.0 Software available as of August 1, 2014.
- **AASHTOWare Project 3.01 Release** – Solicitation will be late Summer 2014 followed by release in Fall 2016.

12:00 PM – 12:10 PM SOC Chair Discussion Topics

Moderator – Malcolm Dougherty, Subcommittee Chair, CalTrans

At this point, Mr. Dougherty opened up the meeting for some Chair Discussion Topics. The following topics and questions were discussed:

- **Safety** – CalTrans recently experienced several fatalities (both CalTrans & Industry) on their projects. CalTrans rolled out a campaign using billboards and radio spots with little children asking drivers to be alert and slow down. They have also double up on presence of law enforcement.
- **Funding** – We have a current extension of the Federal highway bill through May 2015. The gas tax has served us well for a long time, but is a model dying of old age. CalTrans is looking at VMT or similar road user fees as a better method to collect revenue.
- **State DOT Evolutions** – Every State must be in a good place and be more transparent to ask for additional revenue. Performance metrics are necessary tools to show progress.
- **Community Outreach/Communication** – This is more and more important for all phases of project delivery, especially with use of ACMs.

12:10 PM – 1:30 PM Lunch

12:45 PM – 1:30 PM Portsmouth Historic Guided Walk Tour *Downtown*
A walking tour was available for attendees during lunch time.

1:30 PM – 3:00 PM Roadways & Structures Session

Moderator – Mark Mastronardi, Section Chair, Georgia DOT

The session was called to order by Mr. Mastronardi. He introduced Mr. Jeff Carpenter, Director, Construction Division, Washington DOT.

I-5 Emergency Bridge Reconstruction – Jeff Carpenter, Director, Construction Division, Washington DOT

Mr. Carpenter's presentation covered the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Bridge Collapse** – I-5 Bridge over Skagit River was constructed in 1955. In 2013, an overheight truck impacted a truss section on the bridge and triggered collapse of a 160 ft. truss span. Fortunately no fatalities occurred.
- **First 72 Hours** – Team was assembled to evaluate options to restore traffic. In 24 hours a Contractor was selected for 30 Days to remove debris and make repairs. Options for restoring collapsed span were evaluated and recommendations made to the Governor.
- **NTSB Coordination** – Removal of debris was coordinated with NTSB investigation.
- **Temporary Span** – Placed two temporary bridge sections side by side using Acrow system in June 2013.
- **Phase 2 Permanent Span** – Decided to use Design-Build contract with accelerated RFP process. Awarded using A+B+C = Best Value Approach. Used a two week proposal period with a Best value award for \$6.9 million. New replacement spans were constructed adjacent to the existing structure and placed using roll-in/slide-in method. The replacement spans provided increased vertical clearance.
- **Lessons Learned** – Self-issue permit process doesn't motivate carriers to conduct route surveys. Bridge Low clearance signs in advance should be posted.
- **Recommendations** – Revision of the bridge list. Update requirements for lead and trailing pilot vehicles. Provide geospatial application for route-specific bridge clearance data.

SR530 Slide: Oso Mudslide Disaster – Jeff Carpenter, Director, Construction Division, Washington DOT

- **What Happened?** – High rainfall with large clay content in slopes created mass slope failure 1 mile away from SR530. Washington DOT not the lead Agency in response effort.
- **Emergency Response Actions** – WSDOT coordinated with Local, State, and Federal authorities. Emergency Contract #1 provided single lane access. Emergency Contract #2 used a competitively bid contract to clear and restore existing SR530 to provide single lane traffic. Emergency Contract #3 used a two-step procurement process with RFQ/RFP. Awarded \$206 million contract to complete restoration of roadway. There were severe restrictions throughout each phase to be sensitive to the community emotions and to implement appropriate procedures when human remains were identified.

Q. On the I-5 Emergency contract, did Contractor earn the incentive?

A. Yes, the Contractor earned the full incentive (\$660,000).

Q. Did the selected Contractor have the lowest bid and best qualifications?

A. Yes, Contractor selected had both.

Colorado Flooding Experience (Operations Manual) – Miranda Lange, Area Engineer, Colorado DOT

Ms. Lange's presentation addressed the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Flood Event** – Flood occurred on September 11, 2013. Roads washed out and communities were cut off. Houses washed down river and stuck on bridges. An Incident Command Center was established. 242 miles of roadways were damaged/destroyed.

- **Loss of CDOT and Contractor Facilities** – Several CDOT buildings/facilities were flooded and severely damaged and resulted in complete loss of facilities. Contractors in area also suffered significant damage or loss.
- **Recovery Scope & Impacts** - \$535 million estimated cost of work. FEMA noted that the CO incident was a policy changing event. US-36 Lyons to Estes Park had significant damage with sections of roadway completely washed out. US-34 Loveland to Estes Park was also a heavily damaged corridor. Riprap and retaining walls were washed out. SH7 Lyons to Raymond had a lot of historic features that were lost. SH119 Boulder to Nederland was heavily damaged and was also very historic (1st corridor to re-open). A number of other facilities, including local Federal-Aid roads were heavily damaged. Many utilities in some locations created complicated situation to address. Over 120,000 cu. yds. of debris was collected; much of it vegetative debris.
- **Schedule** – By September 23, 2013 Incident Command Center stood up. 100% of corridors were re-opened on November 26, 2013. From Nov 2013 to Mar 2014, Emergency payments were processed via Force Account. Permanent repairs scheduled from Mar 2014 to 2018.
- **FHWA ER Program** – Temporary vs. Permanent repairs had to be determined per FHWA requirements. Most of ER work done was not permanent. More than \$82 million in Force Account completed and paid to date.
- **Process Improvements** – Damage Assessment reporting was defined and completed. FHWA Central Federal Lands Division was designated as the Contractor for work. Risk and Resiliency evaluation process has been applied. A lot of the new road is being lowered down to bedrock to improve resilience. Hydrologic modeling and watershed modeling was revised based on experience. An ICC GIS Platform has been established at <http://cdotfloods.org>. Data management and document control procedures also established. A transition plan is underway transferring oversight of Flood related activities to CDOT Regions.

State Discussion Topics:

At this point, Mr. Hoyne opened up the meeting for the following State Discussion Topics:

Pipe Construction and Inspection

(Brenda O’Brian - Michigan DOT)

- Q.** MDOT would like to know what other states are doing related to waiting for placement of paving surfaces (HMA and Concrete) over pipe installation areas. Do they have a time frame before paving can take place? If so, how long? Is there any basis for the established time?
- A.** NH; Our spec calls for patching using bituminous materials. New pavement has to be in place within 72 hours. Also have a spec (36” or greater) for video inspection 30 Days. PA; Have a pretty extreme compaction requirement so usually don’t have settlement. MN; we try to advertise projects so that pipe is placed before winter and allowed to settle over Winter. IA; uses a lot of flooded backfill using water.
- Q.** MDOT; Are any states using recycled concrete as aggregate?
- A.** VT; No one has done the work to meet our aggregate specification.

- Q.** Steel ribbed high density pipe (SRHDP) – Is anyone using this as an alternative? If so, what are people doing for acceptance, including water tight joint testing?
- A.** IA; We use a lot of recycled material and have fewer problems since we changed our sub-base gradation.

3:00 PM – 3:15 PM Break

At this point, a 15 minute break was taken.

3:15 PM – 5:00 PM Roadways & Structures Session (Continued)

Recycled Materials in Highway Applications – Kent Hansen, National Asphalt Paving Association

Mr. Hansen's presentation covered the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Why Recycle in Construction?** – For Engineering, economic, and environmental reasons.
- **NCHRP Synthesis 435** – Contains a lot of information on recycling.
- **Recycled Concrete Aggregate (RCA)** – Can be obtained from concrete plant end of day waste or reclaimed (crushed and washed) concrete materials.
- **Recycle Concrete Materials (RCM)** – The definition varies. Often used for embankments or drainage applications. Material preparation requires good Contractor QC. It is recommended to keep sources separate and maintain constant moisture in stockpiles. Barriers to RCM use include: variability, fines content, availability, economics, increased QA. There are gaps in lack of consistent terminology and information on material variability.
- **Reclaimed Asphalt Pavement (RAP)** – RAP is being used primarily in Asphalt pavements (HMA or WMA). Based on survey of States; some States use zero RAP in Surface courses, SMA, or PMA. Some States increase RAP with WMA. RAP % limits increase in lower pavement layers. 24 States indicate satisfactory or excellent performance with RAP. Some barriers to using RAP include: concerns with meeting specs; how to pay for RAP binder in HMA; lack of Agency experience, Contractor experience, or stockpile homogeneity; tendency of RAP mixes to prematurely crack; unknown influence of RAP on binder properties at high RAP contents.
- **RAP Summary** – Material preparation and good byproduct QC is needed. Good stockpiling practices are needed. Need to look at other mitigation at higher RAP contents (marginal materials). There are problems with too much RAP without adjusting binder contents. WMA decrease energy consumption by 4%. Using 50% RAP in HAM reduced energy consumption as much as cold mix applications. There are still a number of gaps in knowledge on use of RAP.
- **Evaluating RAP Performance** – LTPP study results indicate that RAP mixes perform as well as or better than virgin mixes in over 70% of cases evaluated. 2006 NCAT Test Track High RAP Sections performed very well. 2009 NCAT High RAP Sections in MS with two structural sections (50% RAP) had rutting less than 5mm and no cracking. Because high RAP mixes are stiffer, there is less strain in lower layers.
- **Balanced RAP Mix Design** – TX Transportation Institute has developed procedure for mix design that includes performance testing. They are implementing several field test sections.

Performance of some sections show low rutting, but some cracking. Using the Balanced Mix Design can help reduce cracking.

- **Summary** – High RAP mixes can be designed with better performance results using Balanced Mix Design procedure.
- **Publications** – FHWA and NAPA have a few publications addressing increased use of RAP.

Comment. NH; NHDOT Materials and Research Bureau performed testing with shingles (RAS) and have now banned shingles based on results.

Response. TX; There is an additive you can use to eliminate clumping of RAS in mixes. They limit RAS to Superpave mixes.

Q. IL; What performance testing is NAPA promoting?

A. We're not promoting any, but are using TX Overlay tester and a few other tests. We need to keep the testing simple for Contractors.

Rap Usage in Recycled Pavements – Recent Research at UNH – Jo Sias Daniel. Ph.D., P.E., Associate Professor of Civil Engineering, UNH

Dr. Sias Daniel's presentation covered the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Pooled Fund Study TPF-5(230)** – Project came from the Northeast User Producer Group (NEAUPG). Objective is to evaluate performance of plant-produced RAP mix in terms of low temperature cracking and fatigue cracking. Want better performing mixes while using higher RAP contents. Testing virgin and recovered binder and mixture. Used 18 mixtures from 3 plants in NH, NY, and VT. Also conducted controlled laboratory study with 20% and 40% RAP with two binder grades and additional virgin binder content.
- **Published Results Summary** – Increased RAP results in increased stiffness. Increased RAP results in decreased crack resistance. Softer binder grade, in some cases, helped mitigate increased stiffness and cracking. There is an effect with RAP and/or silo storage time.
- **Fatigue Simulation** – NC State University has a software program to evaluate the pavement structure for fatigue. The best performing mixes were the ones with the softer PG binders.
- **Controlled Laboratory Study** – With thin pavement structures at optimum asphalt content, there is little difference between different RAP percentages. A combination of binder content and PG Grade has an impact on fatigue resistance. Softer binder is helping improve fatigue resistance.
- **Silo Storage Study** – Samples obtained at plant and compacted right away. We see an increase in high end PG grade as storage time increases. Low temperature end PG grade is decreasing as storage time increases. With virgin mixes, the binder was getting softer as storage time increased (this was due to plant operator bleeding a higher grade binder into the mix as it was at end of paving season).
- **Forensic Analysis of 22-Year Old Pavement** – This study obtained core samples from I-89 and I-91 to evaluate High RAP vs. Low/No RAP sections. Binder testing results showed shoulder mixes were stiffer than travel lanes. More uniform properties exhibited between layers and lanes in high RAP pavements.
- **New Studies** – For NH DOT, looking at development of specifications allowing higher RAP and RAS Percentages. New study will look at contents above 20-25% RAP levels. Also

developing performance based specifications for RI DOT. Also have a Study to address how climate change should be considered in design.

- Q.** UT; How are you relating testing now to fatigue life?
- A.** We are looking at a couple of different ways of using software to do this (e.g. MEPDG, NC State software). They are also looking at historic performance of some mixtures.

5:00 PM ADJOURN

Mr. Kitsis provided some announcements for activities during the remainder of the week due to forecasted rain. The meeting was adjourned for the day just after 5:00 pm.

Wednesday August 13, 2014

8:00 AM – 9:00 AM Research Subcommittee Session

Moderator – Jeff Carpenter, Section Chair, Washington DOT

The session was called to order by Mr. Carpenter. He introduced Mr. David Reynaud, Senior Program Officer, NCHRP.

SHRP2 Implementation Update – David Reynaud, Senior Program Officer, NCHRP

Mr. Reynaud's presentation addressed the following topics related to SHRP2 Implementation (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **SHRP2 Four Focus Areas** – The focus areas are Renewal, Reliability, Capacity, and Safety. This presentation is focused on the Renewal area.
- **Implementation Assistance Program (IAP)** – FHWA and AASTO are managing the IAP as a sort of demonstration program for SHRP2 products. This includes: Proof of Concept Pilot; Lead Adopter Incentive; and User Incentive. The level of assistance to DOTs varies by the status of the product. The IAP began in 2013 and has progressed through Rounds 1 thru 4, which has advanced 24 SHRP2 solutions. Rounds 5 and 6 are scheduled to be launched in 2015. There are brochures on the tables outside the room.

NCHRP and TRB Studies Update – David Reynaud, Senior Program Officer, NCHRP

Mr. Reynaud's presentation addressed the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **NCHRP/TRB** – TRB is a private, nonprofit organization. NCHRP is managed by TRB.
- **New and Active HSOC Projects** – Panels are being formed for several projects of interest to the SOC. Active projects include: Automated Machine Guidance; Modulus-Based Construction Specifications for Earthwork; Alternate Bidding of Pipe; Best Practices for Optimal Construction Inspection; and Guidebook for Sustainable Highway Practices.
- **Completed Projects** – Alternative Quality Systems for Highway Construction; Guidebook for Construction Manager-at-Risk Contracting for Highway Projects.
- **Recent Reports and Syntheses** – Reports include Nighttime Construction Impact on Safety and others (See NCHRP Brochure). Syntheses include Alternative Technical Concepts and others (See NCHRP Brochure).

UNH Engineering Research Program – Charles Goodspeed, Ph.D., P.E., Associate Professor of Civil Engineering, UNH

Mr. Goodspeed's presentation addressed the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **UNH Civil Engineering Program** – They have 7 faculty, 365 Undergraduates, and 66 Graduate students. Program has \$3 million funded research expenditures in 2014.
- **Facilities & Recent Research** – Testing facilities include a Shaker Table and Instron 200 Kips Load Tester. They have tested polymers on PCC panel joints for Accelerated Bridge Construction. They are testing spent nuclear fuel rods to evaluate transportation requirements for the rods. Pre-fabricated Concrete Slabs have been evaluated to determine proper length and placement of leveling screws. Scale model slabs with prestressing have been cast and tested. Carbon fiber grids (from Japan) have been

evaluated and were placed in an in-service NH bridge deck. The bridge deck has performed very well and has exhibited no cracking to date. They anticipate obtaining carbon fiber grids from a US manufacturer in the near future for evaluation. Major benefits of the carbon fiber grids for construction are reduced/eliminated cost of heavy equipment (cranes).

- **Software** – UNH has a number of software systems they are using, including: Autodesk, CSI Bridge, SAP2000, RISA-3D, Visual Analysis, SeismonSignal, BENTLY, StreetPave, ArcGIS, and HydroCAD. NHDOT requested assistance from UNH in developing an asset inventory system (e.g. culverts). They have over 30,000 culverts in the State.
- **Memorial Bridge** – UNH has installed a number of instruments and sensors to monitor the long-term performance of different bridge elements.

Accelerated Bridge Construction; “Bunker Creek Bridge” – Elizabeth Kinney, UNH Graduate Student

Ms. Kinney’s presentation was on her Master’s Thesis study of the bridge and addressed the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Bridge Background** – It is on Rte 4 and carries 10% trucks and is a major travel corridor. Original bridge was built in early 1930’s and consists of concrete deck supported by granite blocks and timber piles. It was later widened and had some concrete added. Some original drawings were available.
- **Review Meetings** – Meetings were held with NH Resource Agencies, NH Division of Historical Resources, and US Army Corp of Engineers.
- **Site Considerations & Goals** – Minimize environmental impacts and minimize construction delays due to heavy traffic volume. Goals included: Keep new construction in current R/W; Restore shellfish and eel grass; focus on ABC construction alternatives; provide 6 ft shoulders.
- **Proposed Construction Steps** – Build drilling platforms; Place Drilled shafts and columns; Install sheet piles; Begin demolition; Place fill along sheet piles; Place forms; Place concrete for pile; Install NEXT D Beams; Install approach slabs; Slip-form concrete barriers; Place pavement courses.
- **New Bridge Details** – Ms. Kinney presented the planned details of each of the bridge elements. NEXT D Beams were selected because it does not require cast-in-place concrete. The Beams will use tongue and groove design. The design was analyzed as a rigid frame. Future research will be done on column to column capital and other features.

9:00 AM – 10:00 AM Computers & Technology Session

Moderator – Emanuel Banks, Section Chair, Arkansas HTD

The session was called to order by Mr. Banks. He asked attendees about their understanding of patented products and proprietary products. He introduced the FHWA speakers below for the presentation on Patented and Proprietary Products.

FHWA Policies on Patented and Proprietary Products – John Huyer, Contract Administration Engineer, FHWA; Christopher Tilley, Area Engineer, FHWA-NH Division

The presentation addressed the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **References** – See FHWA website for several references on this topic.
- **Competition** – 23USC112 states: “...construction... shall be performed by contract awarded by competitive bidding”. FHWA requires a justification to deviate from competitive bidding. Allowable deviations to competitive bidding include: Other Methods (with FHWA Approval); Emergencies; 23CFR635.411 (Proprietary Products).
- **23CFR635.411** – Allows Federal participation when proprietary products are competitively bid with equally suitable non-proprietary products or State must certify item is essential for synchronization or that no suitable alternative exists; or Public Interest Finding (PIF).
- **Certifications vs. PIFS** – Under old process, Certification = Public Interest Finding. This did not conform with the language of regulation. Industry complained that the process was too restrictive and kept innovative products from use. Under new process, Certification ≠ Public Interest Finding.
- **Certification Requirements** – Certifications require State DOT to certify the item is essential for synchronization or no suitable alternative exists – there is no FHWA approval required. For PIF, FHWA approval is required. Approval authority cannot be delegated to Direct Recipients. DRs can issue Certifications though.

Q. Who is the appropriate designated official for Certification?

A. That is up to the State DOT.

- **PIF Requirements** – Must be request from State DOT. FHWA must approve based on evaluation of equally acceptable products. FHWA posts all PIFS on a website. FHWA only posts approvals by FHWA. FHWA recommend that State DOTs post their proprietary products on the AASHTO APEL website (voluntary basis).
- **Experimental Use** – Proprietary products used experimentally do not require either Certification or a PIF.
- **NH Process** – There is a need for transparency. Previously, the FHWA NH Division and NHDOT were addressing proprietary products on a project by project basis. NHDOT Design Bureau agreed to work with FHWA to address this. FHWA NH Division and NHDOT now use a standard PIF form, obtained from another FHWA Division. All PIF requests are maintained by NHDOT Specification Section, Bureau of Highway Design. LPAs and Direct Recipients must still submit PIF requests to FHWA Division for approval.
- **Construction Changes** – Proprietary product requests during construction should follow the same procedures described above. Past examples include: Pavement testing; Ornamental Lights; High Strength Pavement; and Deicing systems.

Q. Do you have any information on the 194 State Certified products?

A. Some States are better than others at posting their information (about 8 States with websites). FHWA has not heard of any items being contested.

Q. Is it intended for all PIFs on FHWA site to be applicable to any State?

A. No; they must be approved on State by State basis.

Q. What if a certified item is contested?

A. If something comes out that doesn't make sense, FHWA suggests considering whether a certification is really needed for an item. FHWA Divisions are now focusing on Projects of Division Interest (PoDI), so they may not be seeing as many Certifications in

10:00 AM – 10:20 AM Break

At this point, a 15 minute break was taken.

10:20 AM – 12:30 PM Computers & Technology Session

(Continued)

Initial Post Travel Report: Domestic Scan 13-02 - Advances in Civil Integrated Management (CIM) – Charles Jahren, Ph.D., P.E., MBA, Assistant Chair of the Department of Civil, Construction & Environmental Engineering, Iowa State University

Mr. Jahren's presentation addressed the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Civil Integrated Management (CIM)** – The goal of CIM is to help State DOTs make better decisions throughout the workflow through planning, design, construction, operations, and asset management. You can have data, information, and knowledge through better IT systems. CIM will provide single digital data portal to assist various users with agency projects and programs. Contractors will also be able to use data provided through CIM. CIM includes 3D modeling, Data, Information, and Knowledge Collaboration & Management. Different applications can be launched and used through a system.
- **Scan Host States** – Include: UT, TX, IA, WI, MI, NY, and VA. Utah and Michigan are implementing overall Enterprise systems that apply CIM concept, as examples.
- **Successful Applications** – Examples include: Endangered plants; Cost estimate for rehabilitation; Slide remediation survey; Public information during freeway reconstruction. Expected benefits include: more effective decisions; open data access; and improved communication.
- **Topics of Interest** – The Scan Team members documented topic categories to document Scan findings.
- **Technical Considerations** – A short list of "Technical Considerations" was developed including: Interoperability, Data format, Data governance, Accessibility, CIM data geospatially located, LIDA data, and Data storage and management.
- **Organizational Considerations** – These were also identified, including: Communication and information sharing culture; Management that encourages innovation; and Passionate people.
- **Successful Implementation** – This will require: Initial success; CIM with model-centric data; Cut the millennial generation loose to prove value of CIM; States share ideas with each other. Need to engage partners such as Contractors and Utilities. Business needs should drive IT activities. Agencies need to be in the "driver's seat". The devil is in the details.
- **Next Steps** – Scan results will provide input to a new research project (NCHP 10-96), Guide for CIM in Transportation Departments.

Intelligent Compaction; Current Status – Antonio Nieves, Construction Engineer, FHWA
Mr. Nieves's presentation addressed the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Intelligent Compaction (IC) Overview** –IC uses regular vibratory roller with; Accelerometers, On-board computers to display color-coded maps in real time; and a High Precision Positioning System (HPPS). There are several vendors with IC equipment available for soils (single drum) and for HMA paving (double drum).
- **Lessons Learned** – OEM continuous training and communication are needed. Organizing and setup of filing system to create maps is important to get data the way you want it. IC Equipment setup for temperature sensors in extreme temperatures is critical. Use your appropriate GPS coordinate system (i.e. State Plane or other system). DOTs and Contractors love the IC color coded mapping and the pass counts. A number of states require coverage and pass count data to be documented and provided to the State. Importing data to VEDA software is different with each IC vendor – work with vendor and Contractor to ensure VEDA is able to read the data. When using GPS as your HPPS, setup in advance is important (i.e. daily checks). IC Retrofit kits are a viable solution and are now available from equipment vendors.
- **IC FHWA Support** – FHWA has established a IC Technical Services Support Center (TSSC). The TSSC provides email and phone support, specification review, IC ICDM workshops, an IC website, technical documents, VEDA software download, Local Agency assistance.
- **Milestones** – AASHTO IC Provisional Specification was balloted and approved Dec 2013 and published in July 2014. There are 22 State Specifications. 15 ICDM workshops were held. 15 IC overview workshops have been conducted. In 2013, there were 29 IC pilot projects and projects. In 2014, there are at least 45 projects. 37 States are implementing IC.
- **What's Next?** – New VEDA 3.0 software is coming out soon. There will be 15 additional ICDM one-day workshops with 7 additional ½ Day Demos. There is an IC Retrofit Study. Support will continue after EDC2, but not under the EDC program.

Q. It is understood that there is a poor correlation between the ICMV versus traditional compaction testing data?

A. IC is not intended to be a tool for Acceptance. It is only a QC tool. FHWA has a research study underway to define whether ICMV can be used for Acceptance. On some projects, ICMV has correlated very closely with deflection testing data. There is a huge hurdle to cross before moving to IC as an Acceptance tool based on stiffness (modulus).

3D Engineered Models for Construction, A Panel Discussion – Emanuel Banks, Arkansas HTD; Joe Squire, State Construction & Materials Engineer, Oregon DOT; David Unkefer, Construction and Project Management Engineer, FHWA

Mr. Banks introduced the speakers for the presentations and panel session on 3D Engineered Models. Mr. Unkefer's presentation addressed the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **MAP-21** – Requires USDOT to ensure that Advanced Modeling Technologies will be used in all phases of projects.
- **3D Modeling Benefits** – The model can be used throughout the project life-cycle. Can be used for planning complex activities such as crane staging, as well as Automated Machine Guidance (AMG). Safety benefits with operators having data on screen vs. man in the hole.

3D can be applied for Quality Assurance (QA) and quantity measurement. Cost and time savings can be realized.

- **Workshops** – FHWA has conducted many workshops and have allowed perspectives of Owner Agency, Designer, Contractor, and Surveyor.
- **Common Challenges & Solutions** – Gathering appropriate data accuracy; Standardizing a 3D model format; Training in hardware, software, and applications; Updating specifications to address 3D models.
- **FHWA Funding** – Accelerated Innovation Deployment (AID) funding is available.

Mr. Banks's presentation addressed the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Advantages of 3D** – Examples include: Improved speed and accuracy; Better models for communication with public on projects.
- **3D Disadvantages** – Include: Initial investment; training of staff; Equipment sensitivity.
- **Preliminary Uses of 3D** – Survey data to develop alignments. 3D design model can be developed from digital terrain data. LiDAR scan was used on a historic bridge. AHTD has gathered data to develop models and compare to conventional methods of gathering data.
- **Lessons Learned** – Need to establish policies and procedures.

Mr. Squire's presentation addressed the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Oregon DOT Use of 3D** – They provide 3D data to Contractors for bid preparation and for machine control. ODOT is planning to ask Utilities to provide their data in a specific 3D format. They are focusing on stake-less construction using GPS, Total Stations, and GPS w/Lasers. ODOT allows digital seal and signature by Designer of Record. In 2014, use of 3D is voluntary. In 2015, use of 3D will be mandatory. ODOT provides a Construction Survey Handoff Package. They use Projectwise for Version Control. For additional information see <http://designtopaver.org>.

Panel Discussion – 3D Engineered Models

A Panel Discussion with Questions and Answers ensued with Emanuel Banks, Arkansas HTD; Joe Squire, Oregon DOT; and David Unkefer, FHWA:

Comment From Contractor's perspective, we support 3D and AMG, but believe there is still a need for control points and stakes.

12:30 PM – 1:30 PM Lunch

1:30 PM – 3:10 PM Technical Tour: Memorial Bridge Reconstruction

Designer/Contractor/Owner Presentation & Discussion

Moderator: Nickie Hunter, District Construction Engineer, NHDOT

Stephen DelGrosso, Sr. Project Manager, Archer Western Contractors

Ted Zoli, National Chief Bridge Engineer, HNTB

David Rogowski, Principal, Genesis Structures

A video and slide presentation was provided by Ms. Hunter and Mr. DelGrosso highlighting the 2012-2013 construction of the new Memorial Bridge (US-1) over the Piscataqua River (See Meeting Agenda posted on the AASHTO SOC Meetings web page to view video & presentation). The session was then opened up for questions from attendees to the Panel members. NOTE: due to heavy rain, the Bridge field tour was cancelled.

3:10 PM – 3:20 PM Break

At this point, a 10 minute break was taken.

3:20 PM – 4:30 PM State Discussion Topics

Moderator – David Hoyne, Subcommittee Vice Chair, Vermont AOT

At this point, Mr. Hoyne opened up the meeting for some State Discussion Topics. The topics and questions discussed are as follows:

Project Scheduling and Staging

(Scott Lowe - Trauner)

- Q.** It is not a best practice to automatically reject schedules because a contractor shows the scheduled work finishing earlier than the contract completion date. There need to be more compelling reasons (the schedule is unreasonable, the schedule does not comply with the contract phasing or staging plan, the schedule does not comply with applicable permit restrictions, etc.). Do you agree or disagree with this statement and why? A project schedule update that shows the project finishing later than the contract date should be rejected immediately. Do you agree or disagree and why?
- A.** FL; We don't reject the schedule outright. We inform Contractor they must meet the completion date. Scott Lowe; It's not just the Contractor's schedule, it's everybody's schedule. MI; We traditionally don't allow an early schedule completion date, but require schedule to show completion date in the Contract. D. Unkefer; Time is important to the driving public, so schedule is an important tool.
- Q.** How do you handle early completion schedule?
- A.** CO; Change order is issued to reduce schedule.
- A.** MI; The completion date is required to be the contract date.

Pipe Construction and Inspection

(Paul Metcalf – NHDOT)

- Q.** Are other states performing video inspection of drainage pipes to verify the quality of pipe installation? How long after the pipe has been backfilled before the video inspection can take place? Is the height of the fill limited until after video inspection can be performed? What kind of repairs are being allowed vs. replacing damaged pipe?
- A.** FL, UT; Yes, we video inspect the joints and ovality. KY; Yes, we require laser check of pipe and have put out RFP to put video inspection company under contract to inspect for DOT, but subsequently went back to having the Contractor hire the inspector. FL purchased their own laser inspection van to perform the Agency Acceptance inspection. Roadways & Structures Section prepared a good document on this topic and it is on the SOC website.

Pavement Construction/Rehabilitation

(Brenda O'Brian - Michigan DOT)

- Q.** Do other states perform project level asphalt binder acceptance or do they use a certification process. If project level, what is the rate of testing?
- A.** UT; We obtain samples from the plant and require a Quality Mgmt Plan. TX and OR pull samples from the HMA plant randomly. FL; we have a 3 year warranty performance requirement of the HMA mix after final acceptance. UT; 1 year performance requirements.

(David Hoyne – VAOT)

- Q.** Re-refined engine oil bottoms in asphalt; they are used to modify the low temperature range of performance graded binders. Do states allow REOB, prohibit REOB or do you know if you are getting REOB in your asphalts. If you allow it, is there a restriction on the percent used?
- A.** Ontario and PA are aware of ROB. Most of the States are not aware of REOB. Ontario; The Binder Suppliers agree that over-modification of binder with REOB is not good. REOB should be limited to maximum of 10% in binder. Ontario implemented an ash test requirement and other supplementary tests to limit the percent of REOB and is doing further research into REOB. Industry is pushing the MSCR test to help address. FHWA is conducting research at Turner-Fairbank on REOB with tire rubber (contact Terry Arnold).
- Q.** What would be the short term consequences and long term effects on performance of concrete pavements when the pavement structure was used as a construction haul road prior to paving? This is with respect to potential breakdown of the base layer and also rutting of the subgrade, which would inhibit lateral drainage of water at the subbase/subgrade interface. Do states require the entire pavement structure to be reconstructed in the event of rutting?
- A.** Michigan requires it be rebuilt.

- Q.** Regarding Alternate Pavement Bidding (APB):
- How many states are regularly using APB?
 - Do they use an adjustment factor to account for different expected life of the pavement structure?
 - How do they ensure the life-cycle cost comparison is equal between the pavement alternatives; design, payment of initiatives, equal maintenance of traffic, etc.?
- A.** Ontario, MI, SC, VA, and several other States are using APB (it is about a 50/50 split of States). MI; Legislation requires LCA for pavement over \$1 million and must be based on actual maintenance costs. PA; Using same approach as MI, but now asking asphalt and concrete industries to work it out and propose a solution.

(Scott Bickford – Maine DOT)

- Q.** Are there common paving issues within the state? Common issues between states? What HMA recycling practices are being used? How successful?
- A.** OR; We have massive damage due to studded tires.

(Jonathan Ledger – Del DOT)

- Q.** Are other States having any issues with longitudinal pavement joints on warm mix projects “opening up” requiring extensive joint sealing within a year or two of paving operations? We typically have been requiring our Contractors to seal the joints at their expense if the project has not yet been accepted. However, Contractors are beginning to make an argument that the problem is due to the nature of the warm mix material.
- A.** UT; We have been having joint issues for several years, but believe it is essentially a compaction issue and not specific to WMA. NH; We were also having problems with joints, so they now require that the 2nd lift be placed a little higher and pinched. NH also now requires a joint sealer to be applied to the joint. VT; Has a spec similar to UT.

Asphalt Rubber Gap Graded (ARGG) Hot Bituminous Pavement

(Jim Bowles – NHDOT)

- Q.** Has anyone had complaints of excessive fumes and associated illness? In addition to minimum temperatures for compaction, do any states have maximum temperatures associated with reducing the fumes? What, if any, Warm Mix Asphalt additives have been used to lower temperatures in ARGG pavements?
- A.** NH and MA use ARGG for Surface Course. You have to keep the temperature down at about 290F.

Concrete Scaling

(Jonathan Ledger – Del DOT)

- Q.** We have experienced recent widespread concrete scaling and are requiring Contractors to either make repairs, or take a reduction in payment for the sidewalk product. DelDOT is stating that this is due to the Contractors’ means and methods, while the Contractors are arguing that the widespread scaling is due to a combination of the extreme winter experienced in 2013-2014, the large number of freeze/thaw cycles experienced, and the Department’s placement of salt product. Are other States

experiencing concrete surface scaling problems with new sidewalk construction after one or two winters?

A. NH; We have scaling problems with sidewalks. You have to seal the concrete. NHDOT has a research report available on this.

Q. Any State having problems with concrete pavement low air entrainment?

A. TX is moving away from air entrainment in their concrete.

Contract Letting/Prequalification

(John Obr – Tex DOT)

Q. Bid Tabs software by Oman, for Project Engineer's Estimate. What states are utilizing this software? Have you seen a benefit in engineer's estimates prior to letting? Are you utilizing the software for pricing justifications for change orders to the contract?

A. AL; We do use this software, but would have to discuss with another office. NV; Also use the software, but not sure if getting any benefits. ME; Has a copy of the software, but you still need to look at historic data. FHWA is completing some research on cost estimating that should be available in Spring 2015. KY; Has been using it for about 12 years and feels it is a useful tool.

Q. Are any states utilizing safety record of the Contractor in their prequal. process? Are any states utilizing "quality of work" in their prequal. process?

A. ME, NC, Ontario are using Safety in their prequalification process (FL & TX use it for D-B projects). Other states consider Safety, but not as a specific prequalification factor. MI requires Contractors to self-report Safety during contract.

Q. Are any states covering Contractors with Owner insurance coverage? We have been informed by the Hispanic Contractors Association of Texas that there are some DOTs that self-insure small contracts in order to make prequalification easier for smaller companies.

A. UT, WI, CO; Yes on large projects.

Field Computers and Electronic File Storage

(Tom Ravn – Minn DOT)

Q. Is anyone using off the shelf collaborative Contract Administration software such as E-Builder or Pro-cure for their projects? I know that Michigan is going 100% paperless in October using Projectwise. What are other states using to handle their project correspondence, contract changes, project submittals, etc.?

A. AR; Has a set of connected projects that are requiring collaborative software. IA; Is using DocExpress and using electronic Change Orders with electronic signatures. Several States are using SharePoint. GA; Specified E-Builder on NW Corridor project, however, GDOT management has determined they will use Projectwise. Ontario has engaged for web-based system. OR has used Projectwise. FL recently completed procurement of collaborative software and selected Projectsoft and will be going completely paperless with digital signatures. Jimmy Johnson; DocExpress is part of BidExpress (Not an AASHTO product). IA bought a statewide license for DocExpress.

(David Hoyne – VAOT)

- Q.** Trying to find States with key performance indicators for Construction.
- A.** CalTrans; Provided a presentation on this last year and it is available on SOC website.
GA; Is measuring on-time and on-budget.

4:30 PM ADJOURN

The meeting was adjourned for the day just after 4:30 pm.

Thursday August 14, 2014

8:00 AM – 9:30 AM Environmental & Human Resources Session

Moderator – Jeff Shapiro, Section Chair, Nevada DOT

The session was called to order by Mr. Shapiro. He introduced the speakers for the first presentation; Mr. Jerral Wyer, Texas DOT and Mr. John Obr, Texas DOT.

TxDOT Safety Culture: Mission Zero – Jerral Wyer, Director, Occupational Safety Division, Texas DOT; John Obr, Director, Construction Division, Texas DOT

Mr. Wyer and Mr. Obr provided a presentation addressing the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Mission Zero** – TxDOT Goal beginning in 2010 was to reduce job fatalities to zero. Over 90% reduction in personal injuries since 1984. Number of vehicle incidents also reduced over this time period.
- **Plan for Success** – Includes: 0.39 Lost Time Rate; Leadership; Employee Involvement; Improved Accountability; Play of the Day (game plan, then recap); Recognition for Safety; Doctor's Visit with Supervisor present; Return to Work Program for injured employees; Lost Production Days Goal.
- **Scenarios** – A number of scenarios illustrating poor practices that led to employees being seriously injured or killed were presented. Proper practices were shown and described. For example, on HMA paving operation, inspector should pick up delivery tickets from passenger side of the haul truck, not on the driver side.
- **FOCUS on Safety** – Acronym developed by employees to place proper emphasis on safety.
- **Driver Training** – All driving employees must take Defensive Driving training every 3 years.
- **Safety Professional** – Must get in the field to see and help review/manage safety.
- **NAATSHO** – National organization focused on safety. Have your safety managers participate in NAATSHO meetings.
- **External Program** – Specifications: Special Provisions issued requiring Contractors to report incidents and injuries on electronic system.
- **Construction Industry Safety Initiative Group (CISI)** – This is a 12 member group. CISI issued a Joint Initiative White Sheet addressing: Model Safety Plan, Safety Performance Metrics, and Communications.
- **New Special Provision** – Provides for incident and injury reporting by 20th day of each month (incident is damage greater than \$250). Incidents include 3rd party accidents. A Safety Point of Contact is required on each project and includes 10-hour OSHA training. Safety Meeting is required at start of project and then monthly. A Safety Contingency with funding is provided on projects. The Special Provision has been piloted on four projects beginning in April 2014.
- **Workzone Intrusions** – High focus area due to high number of incidents (about 100 fatalities each year). Using positive barrier, mobile barriers, vehicle arresting systems, rumble strips, automated flaggers, speed management, and intrusion alarms.
- **AGC/TxDOT Joint Safety Task Force** – Hold Executive Safety Seminar and Regional Safety
- **External Providers** – They can be used to keep track of prequalification data and related safety data for the DOT.

Designing and Implementing a Safer Work Zone - Robert Wight, Director of Construction and Materials, Utah DOT

Mr. Wight's presentation addressed the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Work Zone Fatalities** – UT has also set a goal of zero fatalities in work zones. They have a program to speak to teenagers at schools about driving through work zones. UT reports on work zone safety monthly.
- **23CFR630.1106** – Policies & procedure for work zone safety management to be developed in partnership with FHWA.
- **Making Work Zones Safer** – Need: Culture, Policy/Process, Technology, Implementation, Safer Work Zone. Is policy or process leading to implementation problems regarding safety items in work zones? Is safety culture leading to lack of implementation of process/policy?
- **Policy/Guidance in Place** – AL, CO and VA each have good examples of procedures for positive protection for work zones.
- **Technology** – See www.Workzonesafety.org
- **Implementation** – If Designer prepares Traffic Control (TC) plan, are Construction staff and Contractor also required to review TC plan? PA requires an incident management plan in addition to TC plan. What methods are used to include positive protection (hard bid item, criteria based on risk factors, DOT provided positive protection, contingency amount for some TC items)? UT has a standard drawing that uses a matrix to rate different items, providing a point score that will determine if positive protection is warranted.
- **Contractor's Perspective** – Cianbro Corp. has implemented a work zone policy requiring positive protection. DOTs need to require positive barrier; it is the morally right thing to do. AGC feels it is very difficult for Contractors if the DOT doesn't level the playing field by requiring positive barrier as the method of 1st choice for work zones. Oldcastle believes that speed is the primary cause of work zone incidents and items to address speed would make a big difference.

Q. What could owners do to help provide a safer work zone?

A. Including a Safety Contingency item in a contract helps reduce "bidding safety" by Contractors.

9:30 AM – 9:45 AM Break

At this point, a 15 minute break was taken.

9:45 AM – 11:45 AM Environmental & Human Resources Session (Continued)

Transportation Curriculum Coordination Council (TC3) Update – Mark Chaput, Deputy Director, Field Services Bureau, Michigan DOT

Mr. Chaput's presentation on the TC3 addressed the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **TC3 Transition** – TC3 transitioned to becoming an AASHTO Technical Service supported program in 2013. Established a new Executive Board, new Council members, and a new Committee structure.
- **Committees** – New committee structure includes the following committees: Course Development, Competency Matrix, Communications & Marketing, Partner Outreach, Technology Advancement, and Performance Measures.
- **2014-2015 Goals** – Include: Increasing State participation from 23 to 33 States by 2015; Curriculum expansion; Increase SMEs and State volunteers; Partner outreach to 4 new national groups; Develop at least 20 course hours annually; Investigate web-based training.
- **Courses** – Return on Investment = 1,400%. Courses are 100% online and are free. Looking to establish a fee structure to reduce annual contribution by the States. 80 on-line courses are available. Goal is to update course content every 24 months. Primary target is front line Technical Work Force.
- **TC3 Mobile App** – The new mobile App was demonstrated. The App provides access to much information on TC3.
- **TC3 Needs Help** – Need DOTs to: Endorse TC3; Consider using TC3 courses; Recommend new course needs; Provide course reference material; Recruit SMEs; Volunteer on TC3 Committees.

Knowledge Transfer; HQ-District - Mark Chaput, Deputy Director, Field Services Bureau, Michigan DOT; John Obr, Director, Construction Division, Texas DOT

Mr. Chaput and Mr. Obr provided a presentation addressing the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **Knowledge Management** – The process of capturing, distributing, and effectively using knowledge. It is important to help address workforce that is aging, smaller, more transient, and using new technologies and innovations.
- **Workforce Development** – MI is using the following: Traditional Training (job shadowing & cross training, foundational curriculum, targeted training, Construction Quality Partnership (CQP) Program). MI is using a number of TC3 courses in the CQP program. Annual Conference are held (discipline based, best sharing practices, new policies & procedures, new innovations, network with peers).
- **Internal Alignment Teams** – MI DOT has monthly meetings; statewide representation; new procedures; develop effective way to communicate changes out to staff. Teams established for: Construction Operations; Pavement Markings; Design; Traffic & Safety.
- **External Operations Committees** – MI has Joint membership with Industry. They provide a forum for problem solving and address both good and bad activities on projects. Committees include: HMA Operations; Concrete Pavement Operations; Bridge Operations; Pavement Marking Operations; MDOT/ACEC Bridge Committee.

- **Leveraging Technology** – MI DOT using a number of web-access based applications, including Wikipedia format Construction Manual (for guidance to field staff) with some training videos embedded. Also make use of YouTube. There is a business content owner for each section of the Construction Manual.
- **TxDOT Inspector Development Program (IDP)** – TxDOT has 25 Districts with over 700 Construction employees. IDP Manual is provided to each Inspector that provides for Mentors to sign off that Inspector has demonstrated proper knowledge and experience on specific inspection topics. They launched an iPad Pilot program and equipped Inspectors interested in using an iPad for inspection. Videos used on the iPads to instruct TxDOT and Contractor staff on proper construction procedures (e.g. Precast Concrete Panels). Topics for videos are selected based on common questions from different offices. The videos are good introduction for new Inspectors.

- Q.** Was the MI Construction Manual developed internally or by Consultant?
A. MI DOT staff prepared the Wiki manual. MI has had some support from their IT staff. MI is having problems with iPad compatibility with their Microsoft based systems.
- Q.** Were the TxDOT videos prepared in-house or by Consultant?
A. TxDOT Construction staff prepared these.

I-93 Water Quality and Storm Water Management – Ron Crickard, Chief, Project Management Section, NHDOT; Jay Levine, I-93 Corridor Supervisor, NHDOT

Mr. Crickard and Mr. Levine provided a presentation addressing the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **I-93 Corridor Widening** – Project involves widening to 4 lanes over 20 miles. This has been a controversial project with some resistance by environmental groups at local, state, and federal levels. Storm Water Management (SWM) has been a major part of the design and construction. NHDOT was required to hire a full-time position from the Dept. of Environmental Services (DES) to assist in implementing regulation requirements.
- **Sensitive Water Bodies** – Cobbets Pond (Class B); Canobie Lake (Class A) is a public drinking water supply. Water Quality Basins being constructed to ensure Class B and Class A requirements are met. Required to reduce nutrients in stormwater runoff.
- **Temporary Erosion Control & SWM** – Permits required include: EPA Construction General Permit; Wetlands Permit (NHDES); Alteration of Terrain Rules; ACOE Permit; and Water Quality Certification.
- **Changes Due to Major Storm Events** – Dec 2008 ice storm changed DOT SWM approach. Increased oversight was required by regulatory agencies and better communication began with lake associations. These entities have been included in regular meetings. New Requirements were put into effect including: Water diversion, Stabilization; Sediment capture; and Stormwater detention. A March 2010 heavy rain event brought further challenges and led to new Tools for Sediment Control on I-93, including: Polyacrylamide (PAM) used as a soil stabilizer; Stormwater treatment flocculants; and Mixing Zones. Based on cost experience on early contracts, DOT has increased funding in contract for SWM from around 1.6% to 10% or higher.
- **Lessons Learned** – Water diversion is critical - keep clean water out of construction zone. PAMs are effective in reducing turbidity in construction runoff and are safe for the

environment when used properly. PAMs will be required on all projects in future where 10 acres or more will be disturbed.

Q. Were the costs for erosion control for temporary or permanent?

A. Most of that is for the temporary stabilization.

AASHTO Center for Environmental Excellence; “Extreme Weather Events and Construction” –

Michael Meyer, Parsons Brinkerhoff

Mr. Myer’s presentation addressed the following topics (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*):

- **AASHTO Symposium** – Best Practices for Extreme Weather Management.
- **National Climate Assessment (2014)** – Changing climatic conditions are affecting reliability and capacity of US transportation network. Impacts can be reduced through a wide range of adaptive actions.
- **NCHRP 750, Vol. 2** – Is the only guide we have until further information is issued by FHWA and TRB. A number of key questions are addressed in this document.
- Michigan DOT – Has identified a number of measures that can be implemented.
- **FHWA** – Key documents/activities include: Gulf Coast 2 Project (one of first detailed designs considering severe events); NJ/NY/CT Study; 19 Pilot Adaptation Studies; Engineering Study. There are number of websites on this topic (*See Meeting Agenda posted on the AASHTO SOC Meetings web page to view presentation*).
- **What Does This Mean for Construction?** – Back up Communications; Work Zone Safety.

11:45 PM – 12:30 PM Lunch

12:30PM – 1:30PM Memorial Bridge Site Tour (*Memorial Bridge*)

A walking tour to see the new bridge was available for attendees during lunch time.

1:30 PM – 3:00 PM Section Group Meetings

After lunch, Section meetings were held as follows:

- Environmental & Human Resources *Thaxter Room*
- Computers & Technology *Gardner Room*
- Roadways & Structures *Lear Room*
- Contract Administration *Amphitheater*

3:00 PM – 3:25 PM Break

At this point, a 15 minute break was taken.

3:25 PM – 5:00 PM Closing Session

Section Chair Reports

Mr. Hoyne called the meeting to order at 3:25 pm. Each of the Section Chairs provided a summary report for their respective Section as described below. NOTE: Section Meeting minutes are contained in Appendices C, D, E, and F of these minutes.

Environment and Human Resources (E&HR): Jeff Shapiro (Nevada DOT)

Mr. Shapiro reported that the Environment and Human Resources (E&HR) Section Work Plan items will focus on the following:

- Continue to coordinate with AASHTO Center for Environmental Excellence.
- Inspector Training, Certification and Accreditation (NICET/AMRL).
- Safety – Conduct a survey, Synthesis, and presentation (work with AGC and Contractors)
- Some new products.

The E&HR Section will continue its monthly Conference Calls in November 2014.

Computers and Technology (C&T): Emanuel Banks (Arkansas HTD)

Mr. Banks reported that the Computers and Technology (C&T) Section opened up their meeting by talking about the SOC Meeting Agenda. The Section likes and appreciates the State Discussion Topics and wants to see at least 1 hour set aside next year for this discussion. The Section established Work Plan items for next year, in the following three focus areas:

- Advancing CIM systems & 3D Modeling.
- Asset Mgmt/Operations.
- Construction Performance Measures.

Presentation topics were discussed. The C&T Section will take a brief break and resume their monthly Conference Calls in January 2015.

Roadways and Structures (R&S): Marc Mastronardi (Georgia DOT)

Mr. Mastronardi reported that the R&S Section discussed some additional Research ideas.

Work Plan items for next year include:

- AASHTO Guide Specifications Update.
- Pipe post-installation inspection survey.
- Involvement in pre-construction activity.
- Update the 2003 AASHTO SOC Guide to Major Types of Transp. Const. Specifications.

The Section identified about 13 different presentation topics. The balance of time was used to discuss other items that may be of concern. Monthly R&S Section Conference Calls will resume in January 2015.

Contract Administration (CA): Brenda O'Brien (Michigan DOT)

Ms. O'Brien reported that Gary Angles reported out on the Research Subcommittee items.

New Work Plan activities for the CA Section include:

- AASHTO Guide Specifications Division I review.
- Peer Review of DBE Contract Administration practices.
- Handling Non-compliance for different items (incentives/disincentives)

Presentation topics for next year were discussed, including: Risks of Alternative Contracting Methods; Tappan Zee Bridge; Statistically developed Liquidated Damages Chart; Buy America; Paperless Construction Administration; and Stakeless Contracting.
The CA Section will resume its Monthly Conference Calls in October 2014.

State Discussion Topics

Moderator – David Hoyne, Subcommittee Vice Chair, Vermont AOT

At this point, Mr. Hoyne opened up the meeting for the following State Discussion Topics:

Ride quality

(John Obr – Tex DOT)

- Q.** Use of Contractors QC test results; 23 CFR 637 Subpart B allows the use of Contractor's QC test results for acceptance if, and only if, the Contractor's test results are validated by random independent sampling and testing by the owner. (Colorado validates 25% of projects, Illinois validates 10% of projects, Iowa & Nebraska validates all projects but only 10% of each project, Missouri validates all projects but only 10% of each lane, Louisiana & Minnesota unspecified validation frequency "as needed", Wisconsin validates at unspecified percentage but assures that each profiler is validated every year.
- A.** MI; The DOT cannot accept Contractor QC testing data. MDOT has to perform the Acceptance testing. PA is now doing 10% Acceptance testing on projects. MN requires Contractor to have QC testing equipment calibrated at a Center. MA; The Contractor is required to perform QC testing on each project subject to ride quality testing. MassDOT performs a minimum of 25% Acceptance testing on each project subject to ride quality testing.

DBE Requirements/Payrolls/FHWA Oversight

(George Raymond – Oklahoma DOT)

- Q.** Would like to hear from FHWA what the intentions are for the changes to their monitoring of oversight projects to the Projects of Division Interest (PoDI) and Compliance Assessment Program (CAP) reviews. There is confusion here about the implementation of that new system.
- A.** FHWA; As a whole, FHWA is moving to Risk Based Stewardship and Oversight (RBSO) and moving away from selecting only the large projects for review. Projects that are identified as having higher risks are selected as PoDI. Compliance Assessment Program (CAP) reviews are performed on randomly selected projects from FMIS system. CAP reviews use a standard checklist created by FHWA HQ. Each Division can supplement the core CAP forms with additional review items. GA; DOT is setting up a process to track specific items that FHWA will be reviewing on PoDI Projects.

- Q.** How do states address compliance with Davis Bacon requirements; specifically, the level of review of the certified payrolls and the frequency of interviews conducted on workers at the project site?
- A.** GA; The DOT perform 3 per quarter. CO; requires every Subcontractor to certify they have reviewed the payrolls before they are submitted. WI; Check every payroll almost every week through their electronic system and conduct interviews. FL; DOT is taking a look at their process at this time. MI; DOT reviews certified payrolls and interviews at least one person per Contractor.

(Andy Long – Wyoming DOT)

- Q.** How are other states handling PEO's (Professional Employer Organizations) when it comes to payroll submittals, wage grievances, etc.?
- A.** No States have experience with this.

Design- Build Contracts

(David Hoyne – VAOT)

- Q.** With respect to Design-Build Contracts, what language do states have in their contracts dealing with changes to key personnel of the design build team? Is it allowed under extraordinary circumstances? Are their incentive and corresponding disincentives to keep the team together? Are States seeing a lot of turnover of key personnel?
- A.** UT; DOT requires equal or better person as a substitute. VA; DOT is seeing a lot of “Bait and Switch”. They keep track of all key personnel on D-B projects and have found that Project Managers are being switched about 70% of the time. Similarly, D-B QC Manager is identified in Proposal, but then another person is provided. MA; On one D-B project, two Proposers were proposing the same personnel for key positions. MN; DOT provides a monetary deduction if key personnel are changed.

(Shailendra Patel – VDOT)

- Q.** Would like to know what tools or processes are used by other states for estimating Design-Build projects?
- A.** MI; DOT estimates D-B projects by applying a more detailed estimate for the major items and using a percentage for lower dollar items. MA; Has a Project Controls Section that performs a bottom up Estimate. FL; D-B Teams are in a similar position as they must also price project typically using 30% Design.

(Andy Long – Wyoming DOT)

- Q.** How do states pay for railroad flagging on construction contracts (Design Bid Build)? Is it a bid item; if so is the hourly price fixed?
- A.** VT; DOT pays dearly. WI; If less than 30 days it is incidental; If over 30 days it is split 50/50. ND; DOT pays the direct flagging bill submitted. OK; Puts a fixed rate in the Contract to help ensure Contractor motivation to schedule the work.

Materials and Material Shortages

(John Obr – Tex DOT)

Q. Are other states experiencing shortages (aggregate, concrete) and trucking availability? Energy sector work is overshadowing our program with purchase of raw materials and need for haulers, other states experiences and what are they doing to work with contractors experiencing these shortages?

A. OR; Facing shortages of specialty steel. MA; Seeing shortages of flyash due to ASR issue. NE; Was told type C flyash would be difficult to obtain this year. MN; Also having trouble obtaining flyash.

Contract Administration

(David Hoyne – VAOT)

Q. What do states consider in the calculation of LD's? Is it only the cost of construction inspection or do you add in user costs or other items. This is for design bid build project and separate from A +B bidding or incentive/disincentive. I am only speaking about the table in the 100 section of the specification book.

A. Several States are including User Costs.

Emanuel Banks (AR HTD)

Q. Do any States prohibit Contractors that are currently assessed LDs to bid on new contracts?

A. No States responded that they have a similar requirement.

Guard Rail

(Jeff Benefield ALDOT)

Q. Alabama would like to know how many states specify a maximum length of cable run (i.e., max anchor spacing) for their cable barrier projects? For states that do not specify this length, do they leave the anchor spacing up to the Contractor or manufacturer?

A. OK; DOT specifies the locations of the anchors.

SOC Business Meeting

Discussion then turned to the business portion of the meeting. A quorum was present.

The first issue raised was selection of a host state for the 2017 meeting. This year there is a unique situation as only one State has volunteered to host (OH).

Mr. Gary Angles of Ohio DOT presented a promotional video for Ohio. There are three cities under consideration (Cleveland, Cincinnati, and Columbus). Cleveland has Lake Erie and the Rock and Roll Hall of Fame. Columbus is the State Capital; there is a great Zoo, Ohio State is there, and Honda has a manufacturing facility nearby. Cincinnati has a lot going on along the Ohio River. Mr. Angles had anticipated there would be other States vying to host in 2017, so in this case the vote will have to be to select one of the three cities proposed.

The votes of SOC members were tallied by Mr. Hoyne and it was decided to host the 2017 meeting in Cleveland (20 votes for Cleveland; 6 votes for Columbus; 2 votes for Cincinnati).

Next Arkansas HTD representatives played a promotional video for Little Rock, AR; the location of the 2015 AASHTO SOC Meeting. Mr. Mike Sebren described a list of sites and features around Little Rock. There is high heat and humidity in AR during the Summer months, so delegates should prepare accordingly. Mr. Sebren presented an AASHTO "Standard Method for Calling the Hogs" followed by a short video on the "Hog Call".

Next, Mr. Ted Kitsis announced the arrangements for the evening's Closing Business Meeting and Dinner Banquet. Buses will leave at 5:30pm. The Reception will be from 6:00-7:00pm, followed by Dinner. Mr. Kitsis passed the SOC Bell on to Mr. Sebren.

5:00 PM ADJOURN

The meeting was adjourned at 5:00pm.

Friday, August 15, 2014

8:00 AM – 12:00 PM Research Steering Committee Meeting

NOTE: The Research Steering Committee Minutes are contained in Appendix G of these minutes.

APPENDICES

Appendix A – AASHTO SOC Officers, 2013-2014 and 2014-2015

Appendix B – Meeting Attendees List

Appendix C – Contract Administration Section Report

Appendix D – Roadways and Structures Section Report

Appendix E – Computers and Technology Section Report

Appendix F – Environment and Human Resources Section Report

Appendix G – Research Steering Committee Report

Appendix H – SOC Resolutions

- AASHTO Subcommittee On Construction Recognizing the New Hampshire Department of Transportation, Host of the 2014 AASHTO SOC Summer Meeting in Portsmouth, NH

Appendix A

AASHTO SOC Officers 2013-2014 and 2014-2015

AASHTO Subcommittee on Construction Officers 2013 - 2014

Administration	Chair	Vice Chair	Vice Chair-Elect	Secretary
Administration	Malcolm Dougherty, CalTrans malcolm.dougherty@dot.ca.gov 916-654-6130	David Hoyne, VTRANS David.Hoyne@state.vt.us 802-828-2593		Julius (Butch) Wlaschin, FHWA Butch.Wlaschin@dot.gov 202-366-9486 Greg Doyle, FHWA (Asst.) Gregory.J.Doyle@dot.gov 617-494-3279

Sections	Chair	Vice Chair(s)		Secretary
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Contract Administration	Brenda O'Brien, MIDOT obrienb2@michigan.gov 517-322-1085	Andy Long, WY DOT andy.long@wyo.gov (307) 777-4425	Lewis Cannon, ConnDOT lewis.cannon@ct.gov (860) 594-2680	Jerry Yakowenko, FHWA Gerald.Yakowenko@dot.gov 202-366-1562
Environment & Human Resources	Jeff Shapiro, Nevada DOT jshapiro@dot.state.nv.us 775-888-7065	Rob Wight, Utah DOT rwight@utah.gov 801-633-6252		Jeff Lewis, FHWA Jeff.Lewis@dot.gov 916-498-5035
Roadways & Structures	Marc Mastronardi, GADOT mmastronardi@dot.ga.gov 404-631-1971	Kevin Christensen, MT DOT kechristensen@mt.gov 406-444-6008		Anthony Sarhan, FHWA Anthony.Sarhan@dot.gov 360-753-9412
Research Steering Committee	Jeff Carpenter, WSDOT carpenj@wsdot.wa.gov (360) 705-7821	Gary Angles, Ohio DOT Gary.angles@dot.state.oh.us 614-466-7057		Katherine Petros, FHWA Katherine.Petros@dot.gov 202-493-3154

AASHTO Liaison: Greta Smith (202) 624-5815 gsmith@ashto.org

New Hampshire DOT Contact - 2014 Annual Meeting: Ted Kitsis, Administrator, Bureau of Construction, 603-271-2571

AASHTO Subcommittee on Construction Officers 2014 - 2015

Administration	Chair	Vice Chair	Vice Chair-Elect	Secretary
Administration	Malcolm Dougherty, CalTrans malcolm.dougherty@dot.ca.gov 916-654-6130	David Hoyne, VTRANS David.Hoyne@state.vt.us 802-828-2593		VACANT (TBD), FHWA Email Address 202-366-XXXX Greg Doyle, FHWA (Asst.) Gregory.J.Doyle@dot.gov 617-494-3279

Sections	Chair	Vice Chair(s)		Secretary
Computers & Technology	Emanuel Banks, Arkansas HTD emanuel.banks@arkansashighways.com 501-569-2221	Donald Greuel, WisDOT donald.greuel@dot.state.wi.us 608-267-7774		VACANT (TBD), FHWA Email Address 202-366-XXXX
Contract Administration	Brenda O'Brien, MIDOT obrienb2@michigan.gov 517-322-1085	Andy Long, WY DOT andy.long@wyo.gov (307) 777-4425	Lewis Cannon, ConnDOT lewis.cannon@ct.gov (860) 594-2680	Jerry Yakowenko, FHWA Gerald.Yakowenko@dot.gov 202-366-1562
Environment & Human Resources	Jeff Shapiro, Nevada DOT jshapiro@dot.state.nv.us 775-888-7065	Rob Wight, Utah DOT rwight@utah.gov 801-633-6252		Jeff Lewis, FHWA Jeff.Lewis@dot.gov 916-498-5035
Roadways & Structures	Marc Mastronardi, GADOT mmastronardi@dot.ga.gov 404-631-1971	Kevin Christensen, MT DOT kechristensen@mt.gov 406-444-6008		Anthony Sarhan, FHWA Anthony.Sarhan@dot.gov 360-753-9412
Research Steering Committee	Jeff Carpenter, WSDOT carpenj@wsdot.wa.gov (360) 705-7821	Gary Angles, Ohio DOT Gary.angles@dot.state.oh.us 614-466-7057		Katherine Petros, FHWA Katherine.Petros@dot.gov 202-493-3154

AASHTO Liaison: Greta Smith; (202) 624-5815; gsmith@ashto.org

Arkansas HTD Contact - 2015 Annual Meeting: Mike Sebren, State Construction Engineer, (501) 569-2251; mike.sebren@ahtd.ar.gov

Appendix B

Meeting Attendees List

2014 AASHTO SOC Annual Meeting Meeting Attendees List

Last Name	First Name	Company	Job Title	Email	Work Phone
Adams	Bill	Hancock Concrete Products	Owner	bill.adams@hancockconcrete.com	(712) 212-3344
Anderson	Jim	Parsons Brinckerhoff	Vice President / NE Construction Service Manager	andersonja@pbworl.com	(617) 501-7066
Angles	Gary	Ohio Department of Transportation	Construction Administrator	gary.angles@dot.state.oh.us	(614) 466-7057
Arnold	Gene	Ergon	Vice President	gene.arnold@ergon.com	(901) 277-1700
Banks	Emanuel	Arkansas Highway Department	Asst. Chief Engineer - Operations	emanuel.banks@ahtd.ar.gov	(50) 156-2221
Bates	Kerry	Virginia Department of Transportation	Assistant State Construction Engineer	kerry.bates@vdot.virginia.gov	(804) 371-4312
Bean	Christopher	CLD Consulting Engineers, Inc.	President	chrisb@cldengineers.com	(603) 668-8223
Beer	Michael	MnDOT	District Construction Engineer	michael.beer@state.mn.us	(651) 366-5104
Bellfi	Brian	CH2M Hill	Vice President	brian.bellfi@ch2m.com	(720) 286-5328
Benefield	Jeff	Alabama DOT	Road Construction Engineer	benefieldj@dot.state.al.us	(334) 242-6213
Bertoulin	Michael	Parsons Brinckerhoff	Vice President - Principal Project Manager	bertoullin@pbworld.com	(617) 426-7330
Bickford	Scott	Maine DOT	Assistant Program Director	scott.bickford@maine.gov	(207) 215-3857
Blankenship	Jason	TDOT	CE Manager 2	Jason.Blankenship@tn.gov	(615) 741-7976
Bowles	James	NH Department of Transportation	District Construction Engineer	jbowles@dot.state.nh.us	(603) 271-2571
Brenner	Joyce	AASHTO	Engineering Management Fellow	jbrenner@ashto.org	(202) 624-8562
Burns	Rebecca	PennDOT	Hwy Admin Prgm Mgr 3	reburns@pa.gov	(717) 787-6989
Campo	Alan	Vermont Agency of Transportation	Northwest Regional Construction Engineer	alan.campo@state.vt.us	802-522-4263

Last Name	First Name	Company	Job Title	Email	Work Phone
Cannon	Lew	Connecticut Department of Transportation	Construction Administrator	lewis.cannon@ct.gov	(860) 594-2680
Carpenter	Edward J	WSDOT	Director Construction Division, State Construction	carpenj@wsdot.wa.gov	360-705-7821
Cass	Bill	NH Department of Transportation	Director of Project Development	bcass@dote.state.nh.us	603-271-1584
Chaput	Mark	Michigan Department of Transportation	Deputy Director Bureau Field Services	chaputm@michigan.gov	
Chisolm	Richard	MS Department of Transportation	State Construction Engineer	rchisolm@mdot.ms.gov	601-359-7301
Christensen	Kevin	Montana Dept. of Transportation	State Construction Engineer	kechristensen@mt.gov	406-444-6008
Christman	Jennifer	Advanced Drainage Systems, Inc.	Zone Engineer	jennifer.christman@ads-pipe.com	678-427-1712
Clark	Michael	NICET	Chief Operating Executive	Mclark@nicet.org	703-548-1518
Clark	Todd	Hoyle Tanner	vice president	tclark@hoyletanner.com	603-669-5555
Clayton	Darby	WVDOH	Regional Engineer	J.Darby.Clayton@wv.gov	304-558-3304
Clement	Christopher	NH Department of Transportation	Commissioner	ccllement@dot.state.nh.us	603-271-1584
Cochran	Ernie	Housman & Associates	Vice President	ernie@housmanandassociates.com	512-413-5969
Coffee	Daniel	Program Director	Luster National, Inc.	ichurch@luster.com	404-922-8188
Cole	Lee	Oldcastle Materials Inc.	Vice President, EH&S	lee.cole@oldcastlematerials.com	
Coleman	Donald	NH Department of Transportation	District Construction Engineer, Emeritus	dcoleman@dot.state.nh.us	(603) 271-2571
Costello	Chris	DELDOT	NORTH II CONSTRUCTION ENGINEER	Chris.Costello@state.de.us	302- 760-2420
Crickard	Ronald	NHDOT	Chief of Project Management	rcrickard@dot.state.nh.us	603-271-3226
Darling	Sue	Kansas DOT	Assistant Bureau Chief of Construction	sdarling@ksdot.org	785-296-7138
Dean	Wes	MDOT	Assistant Chief Engineer - Field Operations	wdean@mdot.com	601-359-7007
Dearmont	Andrew	Nebraska Department of Transportation	Asst. Engineer	andrew.dearmont@nebraska.gov	402-479-4451

Last Name	First Name	Company	Job Title	Email	Work Phone
		Roads			
Deery	Brian	AGC of America	Senior Director - Highways & Transportation	deeryb@agc.org	703-674-6420
Del Grosso	Stephen	Archer Western Contractors	Sr. Project Manager	sdelgrosso@walshgroup.com	617-592-0184
Densford	Tom	Fay, Spofford, & Torndike		tdensford@fstinc.com	781-221-1142
Donoho	David	Smith, Seckman, Reid, Inc.	Senior Project Manager	ddonoho@ssr-inc.com	901-260-9893
Dougherty	Malcolm	Caltrans	Director	malcolm.dougherty@dot.ca.gov	916-654-5267
Doughty	Loretta Gigard	HDR	Structural Section Manager	loretta.doughty@hdrinc.com	(617) 357-7754
Dowd	Christopher	UNH Technology Transfer Center	SADES Project Manager	cdowd24@verizon.net	774-217-4021
Doyle	Greg	FHWA	Construction Quality Engineer	gregory.j.doyle@dot.gov	508-962-4938
Duval	Richard	FHWA	Construction Research Engineer	richard.duval@dot.gov	202-493-3154
Edwards	Greg	Stantec Consulting Services, Inc.	Principal	gregory.edwards@stantec.com	603-669-8672
Eisenhart	Mark	Wyoming DOT		mark.eisenhart@wyo.gov	307-777-4425
Emery	Todd	Arizona Department of Transportation	Deputy State Engineer	temery@azdot.gov	(602) 712-8274
Ericsson	Christer	Greenman-Pedersen, Inc. (GPI)	Vice President	lcouillard01@gpinet.com	978-570-2999
Evans	Bill	Ergon	Technical Marketing Manager	bill.evans@ergon.com	(706) 975-9339
Faggard	Gabe	MS DOT	District Construction Engineer	gaggard@mdot.ms.gov	228-236-4036
Figola	Daniel	Advanced Drainage Systems, Inc.	National Engineering Program Manager	daniel.figola@ads-pipe.com	(614) 658-0265
Flack	Michael	Volkert, Inc.	Vice President	mike.flack@volkert.com	717-645-2290
Flynn	Shaun	NH Department of Transportation	District Construction Engineer	sflynn@dot.state.nh.us	(603) 271-2571
Fortin	Jerry	Stantec Consulting Services, Inc.	Principal	gerard.fortin@stantec.com	603-669-8672
Garris	Randy	NCDOT	State Contract Officer	rgarris@ncdot.gov	919-707-6900
Gendreau	Cal J	North Dakota DOT	Construction Services Engineer	cgendrea@nd.gov	701-220-6308
Getchell	Peter	PKF MarkIII / ARTBA	CEO	peg@pkfm.com	(215) 815-1935
Gillis	Donald	Walsh Construction	President	dggillis@walshgroup.com	312-563-5400

Last Name	First Name	Company	Job Title	Email	Work Phone
		Company			
Glenn, Jr.	Earl	MS Department of Transportation	Assistant State Construction Engineer	eglenn@mdot.ms.gov	601-359-7301
Goodbarn	Thomas	Nebraska Dept. Of Roads	District Engineer	thomas.goodbarn@nebraska.gov	402-471-0850
Goodspeed	Charles	UNH	Professor	chgj@unh.edu	603-862-1443
Gransberg	Douglas	Iowa State University	Professor	dgran@iastate.edu	515-294-4148
Gray	Ron	Vermont Agency of Transportation	Northeast Regional Construction Engineer	ron.gray@state.vt.us	802-751-3295
Green	Jim	State of Alaska DOT&PF	Statewide Construction Standards Engineer	jim.green@alaska.gov	907-465-1222
Greuel	Donald	WisDOT	Chief Project Service Engineer	donald.greuel@dot.wi.gov	608-516-1793
Griffith	Ryan	Kentucky Transportation Cabinet	State Construction Engineer	ryan.griffith@ky.gov	
Hancock	Ron	NCDOT	State Construction Engineer	rhancock@ncdot.gov	(919) 707-2400
Hansen	Kent	National Asphalt Pavement Association	Director, Engineering	khansen@asphalt pavement.org	301-731-4748
Harper	Christofer	University of Colorado	Research Assistant	harperc@colorado.edu	303-492-3706
Hernandez	Wilfred	DOT	MANAGING ENGINEER	wilfred.hernandez@dot.ri.gov	401-641-6936
Herrick	Dennis	NH Department of Transportation	Chief of Engineering Audit	dherrick@dot.state.nh.us	(603) 271-2571
Hill	Derrick	Construction VP	Pike Industries, Inc.	dhill@pikeindustries.com	
Hinchey	Maurice	NEBRASKA DEPT OF ROADS	ASST. DISTRICT CONSTRUCTION ENGINEER	maurice.hinchey@nebraska.gov	402-595-2534
Hite	Jeffery	Rinker Materials Concrete Pipe Division - CEMEX	Director Technical Promotions	jefferya.hite@cemex.com	(813) 220-4076
Hoff	Trygve	American Concrete Pipe Association	Northeast Regional Engineer	thoff@concrete-pipe.org	
Hoffman	Paul	DDOT	Program Mananger	paul.hoffman@dc.gov	202-671-4575
Hogan	Alex	American Concrete Pipe Association	Southeast Region Engineer	ahogan@concrete-pipe.org	615-351-3017

Last Name	First Name	Company	Job Title	Email	Work Phone
Hollis	Chip	Director, Communications	NICET	chollis@nicet.org	703-548-1518 x107
Hoyne	David	Vermont Agency of Transportation	State Construction Engineer	david.hoyne@state.vt.us	802-786-0023
Hunter	Nickie	NH Department of Transportation	District Construction Engineer	nhunter@dot.state.nh.us	
Huyer	John	FHWA	Contract Administration Engineer	john.hyer@dot.gov	651-291-6111
Jahren	Chuck	Iowa State University	Professor	cjahren@iastate.edu	515-450-8358
Johnson	Jim	AASHTO	AASHTOWare Project Business Manager	jjohnson@ashto.org	850-570-4935
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Katara	Si	Pavia Systems, Inc.	President	si@paviasystems.com	
Kell	Tim	Illinois Department of Transportation	Engineer of Construction	Tim.Kell@illinois.gov	(217)782-6667
Kerness	Eric	The Dispute Resolution Board Foundation	Director	eric@kerness.com	518-928-9433
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Kruger	Jason	Kruger Consulting		jkruger@jkrugerconsulting.com	
Lange	Miranda	Colorado Department of Transportation	PE I	miranda.lange@state.co.us	(303) 757-9855
Lawrence	Steve	Arkansas Hwy. & Trans. Dept.	District Engineer	steve.lawrence@ahtd.ar.gov	870-743-2100
Ledger	Jonathan	DELDOT	CIVIL ENGINEER PROGRAM MANAGER II	Jonathan.Ledger@state.de.us	302- 760-2420
Leja	Mark	Caltrans	Division of Construction, Chief	mark.leja@dot.ca.gov	
Lenz	Russel	Sr. Vice President	Raba Kistner Infrastructure, Inc.	rlenz@rkci.com	512-904-9177

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Lewis	Jeff	FHWA - Resource Center	Construction and Contract Administration - Team	jeff.lewis@dot.gov	916-498-5035
Long	Andy	Wyoming DOT	State Construction Engineer	andy.long@wyo.gov	307-777-4425
Lowe	Scott	Trauner Consulting Services, Inc.	Principal	scott.lowe@traunerconsulting.com	215-814-6400
Lutz	Robert	AASHTO Materials Reference Laboratory	AMRL Manager	rlutz@amrl.net	
Mackintosh	Mark	Vermont Agency of Transportation	Southwest Regional Construction Engineer	mark.mackintosh@state.vt.us	802-786-0023
Mandel	Brigette	FHWA -NH	Engineering & Operations Team Leader	brigiite.mandel@dot.gov	603-410-4842
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Matocha	David	Hanson Pipe & Precast	Technical Resource Manager	david.matocha@hanson.com	512-914-0674
Matteson	Ron	Ergon	Technical Marketing Manager	ron.matteson@ergon.com	(785) 577-6990
McDaniel	Craig	WSDOT	Deputy State Construction Engineer	mcdanic@wsdot.wa.gov	360-705-7823
McDonnell	Jim	AASHTO	Program Director, Engineering	jmcdonnell@ashto.org	(202) 624-5448
McGrath	Michael	MassDOT	Deputy Chief Engineer for Construction	michael.a.mcgrath@state.ma.us	857-368-9540
McMillan	Walter	Arkansas Highway Department		walter.mcmillan@ahtd.ar.gov	501-569-2221
Mecray	Ellen	NOAA	Regional Climate Services Director - ER	ellen.l.mecray@noaa.gov	508-824-5116
Metcalf	Paul	NH Department of Transportation	District Construction Engineer	pmetcalf@dot.state.nh.us	603-271-2571
Moore	Bill	Fay, Spofford, & Torndike	Sr Vice President	wmoore@fstinc.com	781-221-1142

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Naji	Karim	FHWA	Division Bridge Engineer	karim.naji@dot.gov	603-410-4856
Nieves Torres	Antonio	USDOT/FHWA	Construction Engineer	anieves@dot.gov	202-366-4597
Nutter	Perry	Greenman-Pederson, Inc.	Senior Vice President	pnutter@gpinet.com	(410) 880-3055
Oakes	Jonathan	VP PLants	Pike Industries, Inc.	joakes@pikeindustries.com	
Obr	John	Texas Department of Transportation	Director, Construction Division	john.obr@txdot.gov	
O'Brien	Brenda	Michigan Department of Transportation	Engineer of Construction Field Services	obrienb2@michigan.gov	517-322-1085
Owens	Brian	LA DOTD	Project Engineer	Brian.Owens@la.gov	225-231-4306
Patel	Shailendra	Virginia Department of Transportation	Architect Engineer Manager II	shailendra.Patel@vdot.virginia.gov	(804) 692-0476
Pawlowski	Gregory	Delaware River & Bay Authority	Senior Project Engineer	gregory.pawlowski@drba.net	302-932-8212
Perron	Lynne	NH Department of Transportation	Secretary	lperron@dot.state.nh.us	603-271-2571
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Powell	Rudy	Florida DOT		Rudy.Powell@dot.state.fl.us	
Ravn	Tom	MnDOT	State Construction Engineer	tom.ravn@state.mn.us	651-366-4228
Ray	Alex	Smith, Seckman, Reid, Inc.	Senior Project Manager	aray@ssr-inc.com	901-260-9893
Raymond	Chris	Ministry of Transportation	Head, Construction Contracts	chris.raymond@ontario.ca	905-704-2197
Raymond	George	Oklahoma DOT	State Construction Engineer	graymond@odot.org	405-521-2561
Reid	Will	TDOT	Director	Will.Reid@tn.gov	615-741-0784
Reynaud	David	NCHRP	Senior Program Officer	dreynaud@nas.edu	
Rigdin	Woody	American Concrete Pipe Association	Central Region Engineer	wrigdon@concrete-pipe.org	501-551-1355
Robinson	Joseph	PennDOT	Section Chief	josrobinso@pa.gov	717-787-4794
Rogowski	David	Principal	Genesis Structures		

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Rolfe	Mark	Connecticut Department of Transportation	District Engineer	mark.rolfe@ct.gov	(203) 389-3100
Rumbaugh	Stephen	Deputy State Highway Engineer - Construction and D	West Virginia Department of Transportation, Division of Highways	stephen.t.rumbaugh@wv.gov	(304) 558-6266
Sadler	David	Florida DOT		David.Sadler@dot.state.fl.us	
Sanderson	Len	Parsons Brinckerhoff	Vice President	sandersonL@pbworld.com	(909) 836-4044
Sarhan	Anthony	FHWA	Major Project Oversight Manager	anthony.sarhan@dot.gov	360-753-9487
Schauffler	Marina	Gulf of Maine Council on the Marine Environment	Climate Network Coordinator	marina@gulfofmaine.org	207-236-8191
Schexnayder	Cliff	Arizona State University	Professor	cliff.s@asu.edu	202-997-7246
Schmitt	Brian	Oklahoma Department of Transportation	Office Engineer	bschmitt@odot.org	(405)420-4819
Sebren	Mike	AHTD	State Construction Engineer	mike.sebren@ahtd.ar.gov	501-569-2251
Shapiro	Jeff	Nevada Dept. of Transportation	Chief Construction Engineer	jshapiro@dot.state.nv.us	775-888-7460
Sirianni	Jonathan	AASHTO Materials Reference Laboratory	Assistant Program Supervisor	jsirianni@amrl.net	240-436-4862
Smith	Greta	AASHTO	Associate Program Director	gsmith@aaashto.org	(202) 624-5815
Sprague	Anthony	Alaska Department of Transportation & Public Facilities	Group Cheif	anthony.sprague@alaska.gov	907-269-0450
Squire	Joe	ODOT	State Construction and Materials Engineer	joe.squire@odot.state.or.us	503-986-3123
Stanevich	Ron	WVDOH	Specification Engineer	ron.l.stanevich@wv.gov	304-558-9556
Stayton	John	Division of Construction, Assistant Chief	Caltrans	kimberley.olson@dot.ca.gov	
Steagall	Todd	Director of Construction	South Carolina Department of Transportation	steagallrt@scdot.org	803-315-2493
Switzer	Denis	NH Department of Transportation	Contract Administrator	dswitzer@dot.state.nh.us	603-271-2571

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Tackett	Andy	Arkansas State Highway and Transportation Department	Assistant Systems Administrator	andrew.tackett@ahtd.ar.gov	
Tilley	Chris	FHWA	Area Engineer	christopher.tilley@dot.gov	603-410-4866
Tomkins	Larry	Ergon	Regional Manager	larry.tomkins@ergon.com	(601) 933-3000
Tommer	Sandra	Kansas DOT	Chief of Bureau of Construction and Materials	sandrat@ksdot.org	
Unkefer	David	FHWA - Resource Center	Construction & Project Management Engineer	david.unkefer@dot.gov	404-562-3669
Volz	Jason	Nebraska Department of Roads	Asst. Engineer	jason.volz@nebraska.gov	402-479-4452
Vosburg	Mike	Louisiana - DOTD	Chief, Construction Division	Mike.Vosburg@LA.Gov	225-379-1503
White	George	Pavia Systems, Inc.	CEO	george@paviasystems.com	
White	Pat	NH Department of Transportation	Administrative Secretary	pawhite@dot.state.nh.us	603-271-2571
Wight	Rob	Utah Department of Transportation	Director of Construction and Materials	rwight@utah.gov	801-633-6252
Wilhite	Lester	AHTD, Construction Division	Assistant Systems Administrator	lester.wilhite@ahtd.ar.gov	501-569-2109
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Zoller	Jerry	NH Department of Transportation		jzoller@dot.state.nh.us	(603) 271-2731
Zorn	Jennifer	McFarland Johnson	Senior Planner	jzorn@mjincc.com	(603) 225-2978

Appendix C

Contract Administration Section Report

Minutes
 2014 AASHTO SOC Annual Meeting
Contract Administration Section Meetings
 Portsmouth, New Hampshire
 August 11 and 14, 2014

Monday, August 11, 2014, 1:15 – 4:00 pm

1. **Welcome / Introductions - Brenda O'Brien, Engineer of Construction Field Services, Michigan Department of Transportation** - Brenda opened the meeting at 1:15 pm. Introduced Co-Chairs Andy Long and Lew Cannon as well as Research Liaison Gary Angles. She also introduced John Huyer of FHWA, who is the Acting Section Secretary for this meeting, replacing Jerry Yakowenko.
2. **Administrative Issues (O'Brien)**. Brenda distributed a sign-in sheet to the group. She requested that the list be revised and/or updated as necessary. The revised list is included in **Attachment A**.
3. **Summary overview of 2013-2014 work plan items** -
 - a. **Partnering Best Practices – Survey complete. Need discussion on developing a Guide Spec.** Brenda gave overview of Partnering effort. There were a total of 33 states who responded; however these responses are from the 24 states who answered yes to having formal partnering: 92% use consultant facilitators. Executive level personnel typically participate in initial sessions; while project staff attends both initial and periodic sessions. Many States could not provide specific measures related to partnering; however, mentioned were: reduction in claims, reduction in change orders, on-time completion, completion within budget; scoring of project surveys;. This survey is on the SOC web site at [AASHTO Subcommittee on Construction Partnering Survey 2014](#)
 - b. **Survey on “Eliminated Work/Restocking Fees” – Complete.** Lew Cannon summarized the survey results. 31 State DOTs responded to the survey; 90% of these have Standard Provisions (or a policy) that addresses eliminated work. 97% allows for the reimbursement of costs related to the elimination of the work (74% - reimbursement of labor costs, 93% -material costs; 81% - equipment costs). 87% reimbursed costs based on receipts. 93% of State DOTs took ownership of materials deemed to be reimbursable; 100% reimbursed for restocking costs. 68% of State DOTs do not consider indirect costs as reimbursable. 87% requested Federal participation in these costs. The survey results are posted to the SOC website at: [Eliminated Work Survey - Summary of Responses 2014](#).
 - c. **Survey on Force Account Additives – Complete.** Brenda gave a brief summary. Results were included from 50 State DOTs (only the District of Columbia and Puerto Rico were not included). Markups included: Labor, Bonds, Insurance, and Taxed; Materials, Equipment, Subcontracting, and Other. There were also columns for related issues such as s paying for pick-up trucks or small tools on force account, paying for commute time, or paying for Contractor trucks

used to haul material. The results of this survey are on the SOC website at [Force Account Mark Up Summary - 2014](#)

- 4. Update of the AASHTO 2008 Guide Specifications for Highway Construction.** See **Attachment B** for additional information. The AASHTO Guide Specifications are usually updated every five years; the last update was in 2008. The 2008 Guide Specification is 431 pages in length. Scott Lowe of Trauner Consultants was involved in the 2008 update. Due to limits in budget and time, the update scope was limited to only select sections. These included: payment clauses, changes for delays, payment for delays, payment for post award modifications to the contract, and some technical specs updated. Trauner was also involved in the 1993 update.

The Group discussed the need for an AASHTO Guide Specification. Some offered that the document was obsolete, as each State DOT has its own specification that can be used as a guide, as well as numerous supplemental specifications. Others maintained that it is useful as a basic resource document. As a whole the group was ambivalent about the document's necessity. Data that may assist the group in making a decision include: demographics on document purchasers, as well as annual sales. This data should be readily available from the AASHTO Bookstore.

David Hoynes said that the Guide would have two foci

- What Specs do we need but don't have now?
- What specs do states have issues with that we can resolve with a guide spec?

When asked if he would recommend that the Guide Spec be discontinued, David said that one other Section was leaning that way.

The group discussed the addition of new specifications on:

- 3D Modeling
- Carbon Fiber Reinforcement
- CM/GC,
- DBE
- Design-Build,
- Dispute Review Boards,
- EDC items (intelligent compaction)
- Emergency Procurement
- P3s,
- Partnering,
- Performance-based Specifications'
- Polymeric piles for fender systems?
- Safety Provisions
- Scheduling
- Stainless Steel Reinforcement

- 5. Proposed 2014-2015 work plan.** Brenda reviewed the work plan from 2009 – 2013. There is also a list of items of candidate Work Plan items that were not chosen. The group discussed the following possibilities for 2014-2015:

- Contract Administration issues and problems unique to Public-Private Partnerships (P3)

- Contract Time Determination Issues
 - When should a State DOT specify a Working Day contract? A Calendar Day contract? A Contract Completion Date (PennDOT model)?
 - Are Production Rates used? When and how are rates updated?
- Contracting Methods to promote timely contract completion
- Design Build: guidance/template/contract administration.
 - SCDOT Best Practices Guide online
 - WSDOT Templates
 - Research project to develop a synthesis of Design Build information
- Partnering Guide Specification
 - Use Nevada DOT document as a starting point. Butch Wlaschin will provide information to Brenda. This document may be the 09/27/2010 “Guide to Partnering on NDOT Projects”? http://www.nevadadot.com/uploadedFiles/NDOT/Doing_Business/Partnering_Guide10_18_10v3b.pdf
- Practices for administration inspection, and acceptance of 3D Modeling
- Validity of Highway Performance Data

6. Recommendations for 2015 SOC Meeting Contract Administration Section presentations

- Arkansas Project with very high LDs. Contractor Perspective on bidding. CM/GC
- ARTBA – Has contractors willing to present on various issues. (CM/GC)?
- Buy America
- DBE Peer Review practices. Include a contractor perspective.
- Feasibility of Mapping & Marking Underground Utilities (Richard Duval – FHWA)
- I-15 CORE Revisited (Utah – Originally presented at the SOC in 2011) CM/GC
- Incentive/Disincentives panel discussion? Practices?
- Index-based cost estimating (Richard Duval – FHWA)
- Liquidated Damages Chart – Statistically established, see 2007 Biloxi presentation on LDs. Contact: Jeff Benefield ALDOT
- Risks, cost, & benefits of using alternative contracting methods (Richard Duval – FHWA)
- Stakeless Construction project example (Craig McDaniel Oregon DOT)
- Tappan Zee Bridge (NY) \$5 Billion D/B project

7. New research recommendations

Gary Angles proposed “Design Build Contract Administration.”

Eric Kerness proposed “The Extent To Which Bridge Plans Can Be Protected From Public Disclosure.”

The Meeting was adjourned at 4:00 pm

Minutes
 2014 AASHTO SOC Annual Meeting
Contract Administration Section Meetings
 Portsmouth, New Hampshire
 August 11 and 14, 2014

Thursday, August 14, 2014, 1:30 – 3:15 pm

1. **New issues / new business / issues assigned by SOC Chairs (carried forward from 08/11/2014) and Organization Issues.** Commenced meeting at 1:30 pm. Brenda announced that this will be her last year as Section Chair, and that 2015 will likely be her last year to attend SOC. Lew Cannon had also said that this will be his last year as Co-Chair. She proposed that Gary Angles and Andy Long take over the vacant positions left by Brenda and Lew. The formal request for new leadership will be made next year.
2. **Research Liaison Report (Gary Angles).** Gary attended RSC Breakfast Tuesday morning and provided the following report:

NCHRP Update: David Reynaud. David provided a handout of SOC problem statements submitted in 2014. [D-06](#) (*Quantifying the Costs and Benefits of Partnering on Projects Delivered Using Traditional and Alternative Contracting Methods*) was combined with [D-03](#) (*Validating the Outcome of Partnering on Major Capital Projects*). Of the three projects selected for funding, one ([D-06](#)) was the SOC's top priority on partnering and another ([C-13](#) - *System Performance of Accelerated Bridge Construction Connections for Prefabricated Structural Elements Used in Moderate-to-High Seismic Regions*) was co-sponsored by the SOC with the Subcommittee on Bridges and Structures. It was agreed that the SOC should seek to add a panel member to C-13 to ensure inclusion of a construction perspective within the project. Mark Mastronardi (GDOT) will submit a list of candidates, one from each region. The SOC does have representation on D-06.

Roadways & Structures Section: (Mark Mastronardi (Georgia DOT)). Issues discussed were:

- Claims arising from geotechnical failures (may already be addressed as a synthesis topic)
- Defining comparable pavement cracking data
- Performance of ABC Bridge elements for Seismic areas (C-13: \$500 K)
- Construction Engineering & Inspection (CEI) and certification. A great deal of discussion on this topic.

Environment & Human Resources Section: (Rob Wight (Utah DOT)). Issues discussed were

- Construction Engineering & Inspection (CEI). The group spent considerable time discussing certification and accreditation of construction inspectors. A scanning tour was suggested to gather information on construction inspection, certification, and workmanship assessment. There is a similar need being identified for Maintenance as well. Many State DOTs see that possible benefits to having national or regional standards, as [NCHRP 10-83](#) found that there were no

standards for CEI. AASHTO's TCCC may also be headed in this direction. The Transportation Construction Management pooled fund is looking at workmanship and how do we quantify quality. In addition to a scan, the SOC may also want to submit a synthesis statement. Also, it may be beneficial to perform a legal synthesis on the topic of certifying State inspectors.

Contract Administration Section: Gary Angles (Ohio DOT). Issues discussed were:

- Guidance on the Administration of Design Build and Alternative Contracts
- Contract Time Determination Issues

See elsewhere in these minutes for detailed discussion of these topics

Computers & Technology Section: No representative present

- Chair – suggested discussion of chain of custody concerns. Use Core/pattern recognition as opposed to QR codes.

3. **2014-2015 Work Plan – Finalize elements.** After some discussion, the group decided on the following work plan elements for 2015-2016:

1) ***DBE Peer Review practices for conventional and alternative contracting.***

Include a contractor perspective. Define terms and identify current practices for items such as: Good Faith Estimate (GFE), Commercially Useful Function (CUF), and Project Goal Setting. Recommendations include development of good support services to allow DBEs to bond. Discuss USDOT DBE Program. Develop a Guidebook. Include Case Studies. Does not Include Small Business:

Team: Craig McDaniel (WSDOT)(lead), Richard Duval (FHWA), Rudy Powell (FDOT), Shailendra Patel (VDOT), Douglas Gransberg (Iowa State) (Tentative)

2) ***Incentive/Disincentive clauses for purposes other than timely Contract***

Completion. Administration of clauses relating to Stormwater; Erosion Control; Environmental (air quality, noise, etc.); Timely Documentation; Maintenance of Traffic; Safety; Prompt Payment; and others. How are I/D amounts determined? How is non-compliance determined? Where are disincentive funds deposited upon contractor payment (State General Fund, Project account, etc.)? Is the State DOT process legally defensible? Do disincentives affect the contractors' bonding/bidding capacity?

Team: Michigan DOT (lead) Jeff Benefield (ALDOT), Sue Darling (KDOT), Anthony Sprague (ADOT&PF), John Huyer (FHWA), Douglas Gransberg (Iowa State) (T)

3) ***Review & Update Division 1 Guide Specifications.***

Team: Brenda O'Brien (MDOT)(lead), Lew Cannon (ConnDOT), Andy Long (WYDOT), Norm Marzano (RIDOT), Douglas Gransberg (Iowa State)(T)

Other candidate Work Plan elements discussed were:

- Guidance on the Administration of Design Build and Alternative Contracts (to Research)
 - Includes, Design Bid Build, Design Build, Public-Private Partnerships (P3), and CM/GC
 - See [NCHRP 10-85](#)

- Potential Contact for CM/GC – Greg Pawlowski, Delaware River & Bay Authority
- Guidance/Template/Contract Administration
- SCDOT Best Practices Guide online
- WSDOT Templates
- Contract Time Determination Issues (to Research –Doug Gransberg will help to write research proposal)
 - When should a State DOT specify a Working Day contract? A Calendar Day contract? A Contract Completion Date (PennDOT model)?
 - Are Production Rates used? When and how are rates updated?
 - Contracting Methods to promote timely contract completion
- Partnering Guide Specification (into Guide Spec Revision)
 - Use Nevada DOT document (contact Lisa Schettler or Jeff Shapiro) as a starting point. Butch Wlaschin will provide information to Brenda. This document may be the 09/27/2010 “Guide to Partnering on NDOT Projects” at http://www.nevadadot.com/uploadedFiles/NDOT/Doing_Business/Partnering_Guide10_18_10v3b.pdf
- Administration/Enforcement of Stormwater Pollution Control requirements (To E&HR)
- Practices for administration inspection, and acceptance of 3D Modeling

4. 2015 Annual Meeting in Little Rock, AR – CA Section Presentations – Select possible presentations and presenters.

The group selected the following four possible presentations for Little Rock in 2015::

- 1) **CM/GC Panel** – Presenters: ARTBA Contractors (via Rich Juliano) from the two projects below:
 - a) Arkansas Project with very high Liquidated Damages. This would provide a Contractor perspective on bidding a CM/GC project.
 - b) I-15 CORE (Utah – Originally presented by UDOT at the SOC Annual Meeting in Virginia Beach in 2011)
- 2) **Tappan Zee Bridge (NY)** \$5? Billion D/B project. Possible presenters: John Burns (FHWA), Dan D’Angelo (NYSDOT), HNTB. Gary Angles will provide more information.
- 3) **Calculating Liquidated Damages Rates: ALDOT’s Current Review Procedure** Statistically justifiable Liquidated Damages Chart – See 2007 Biloxi presentation on LDs. Presenter: Wesley Zech, Auburn University, Contact: Jeff Benefield (ALDOT).
- 4) **DBE Peer Review Practices for Conventional and Alternative Contracting.** See Work Plan Item #1) above for description. Possible presenters would be team members: Craig McDaniel (WSDOT)(lead), Richard Duval (FHWA), Rudy Powell (FDOT), Shailendra Patel (VDOT), Douglas Gransberg (Iowa State) (T)
- 5) **Risks, Costs, & Benefits of Using Alternative Contracting Methods.** Presenters: Keith Molenaar, Principal Investigator. May convert to a panel discussion by adding a contractor’s perspective

Other potential presentations are

- Buy America (NPRM, Court Case, Emerging issues) May be a good back up if another presentation falls out.
- Feasibility of Mapping & Marking Underground Utilities (Richard Duval – FHWA)
- Incentive/Disincentive panel discussion? Practices?
- Index-based cost estimating (Richard Duval – FHWA)
- Paperless Construction Administration
- Stakeless Construction project example (Craig McDaniel - Oregon DOT)

5. Guide Specification Update.

Preliminary work will be done on Division 1 in 2014-2015. The decision on whether to update the Guide Specification, as well as any actual updating, will be moved into the 2015-2016 Work Plan.

6. Closeout

Attachment A- AASHTO SOC Contract Administration Section Attendance

Attachment B – DRAFT Scope of Work - Update of the 2008 Guide Specifications for Highway Construction

AASHTO SOC Contract Administration Section Attendance

Last Name	First Name	Email	Company	Work Phone	Initial/Comments
Angles	Gary	gary.angles@dot.state.oh.us	Ohio Department of Transportation (ODOT)	614-466-7087	Section Research Liaison
Benefield	Jeff	benefieldj@dot.state.al.us	Alabama Department of Transportation (ALDOT)	334-242-6213	
Blankenship	Jason	Jason.Blankenship@tn.gov	Tennessee Department of Transportation (TDOT)	615-741-7476	
Cannon	Lewis	lewis.cannon@ct.gov	Connecticut Department of Transportation (ConnDOT)	860-594-2680	Section Co-Chair
Chisolm	Richard	rchisolm@mdot.ms.gov	Mississippi Department of Transportation (MDOT)	601-359-7301	
Coffee	Dan	dcoffee@luster.com	Luster National	404-922-8188	
Costello	Chris	Chris.Costello@state.de.us	Delaware Department of Transportation (DeIDOT)	302-326-4401	
Darling	Susan	sdarling@ksdot.org	Kansas Department of Transportation (KDOT)	785-296-7138	
Duval	Richard	richard.duval@dot.gov	FHWA-TFHRC	202-493-3365	
Eisenhart	Mark	Mark.Eisenhart@wyo.gov	Wyoming Department of Transportation (WYDOT)	307-777-4459	
Faggard	Gabe	gfaggard@mdot.ms.gov	Mississippi Department of Transportation (MSDOT)	601-544-6511	
Gendreau	Cal	cgendrea@nd.gov	North Dakota Department of Transportation (NDDOT)	701-220-6308	
Glenn	Earl	eglenn@mdot.ms.gov	Mississippi Department of Transportation (MDOT)	601-359-7325	
Goodbarn	Thomas	thomas.goodbarn@nebraska.gov	Nebraska Department of Roads (NDOR)	402-471-0850	
Gransberg	Douglas	dgran@iastate.edu	Iowa State University	515-294-4148	
Gray	Ron	ron.gray@state.vt.us	Vermont Agency of Transportation (Vtrans)	802-751-3295	
Griffith	Ryan	ryan.griffith@ky.gov	Kentucky Transportation Cabinet (KYTC)	502 564-4780	

AASHTO SOC Contract Administration Section Attendance

Last Name	First Name	Email	Company	Work Phone	Initial/Comments
Harper	Chris	harperc@colorado.edu	University of Colorado	303-887-3055	
Huyer	John	John.Huyer@dot.gov	FHWA – HQ	651-291-6111	Acting Section Secretary
Juliano	Richard	rjuliano@artba.org	American Road & Transportation Builders Assoc. (ARTBA)	202-289-4434	
Kerness	Eric	eric@kerness.com	DRBF	518 347 2778	
Lange	Miranda	miranda.lange@state.co.us	Colorado Department of Transportation (CDOT)	970-962-4017	
Ledger	Jonathan	Jonathan.Ledger@state.de.us	Delaware Department of Transportation (DeIDOT)	302-760-2420	
Lepley	Donald	donald.lepley@hanson.com	Hanson Pipe	216-225-1241	
Long	Andy	andy.long@wyo.gov	Wyoming Department of Transportation (WYDOT)	307-777-4425	Section Co-Chair
Lowe	Scott	scott.lowe@traunerconsulting.com	Trauner Consulting	215-814-6414	
Mandel	Brigitte	Brigitte.Mandel@dot.gov	FHWA - NH Division	603-410-4842	
Marzano	Norman	norman.marzano@dot.ri.gov	Rhode Island Department of Transportation (RIDOT)	401-641-8296	
McDaniel	Craig	mcdanic@wsdot.wa.gov	Washington State Department of Transportation (WSDOT)	360-705-7823	
McGrath	Mike	michael.a.mcgrath@state.ma.us	Massachusetts Department of Transportation (MassDOT)	857-368-9540	
O'Brien	Brenda	obrienb2@michigan.gov	Michigan Department of Transportation (MDOT)	517-322-1085	Section Chair
Patel	Shailendra	shailendra.patel@vdot.virginia.gov	Virginia Department of Transportation (VDOT)	804-692-0476	
Pawlowski	Greg	gregory.pawlowski@drba.net	Delaware River and Bay Authority	302-571-6380	
Powell	Rudy	rudy.powell@dot.state.fl.us	Florida Department of Transportation (FDOT)	850-414-4280	

AASHTO SOC Contract Administration Section Attendance

Last Name	First Name	Email	Company	Work Phone	Initial/Comments
Ray	Alex	aray@ssr-inc.com	Smith, Seckman, Reid, Inc.	901-683-3900	
Raymond	Chris	Chris.Raymond@ontario.ca	Ministry of Transportation	905-704-2197	
Reid	Will	will.reid@tn.gov	Tennessee Department of Transportation (TDOT)	615-741-2414	
Rolfe	Mark	mark.rolfe@ct.gov	Connecticut Department of Transportation (ConnDOT)	203-389-3100	
Schmitt	Brian	bschmitt@odot.org	Oklahoma Department of Transportation (ODOT)	405-521-2625	
Sebren	Mike	Mike.Sebren@ahd.ar.gov	Arkansas State Highway and Transportation Department (AHTD)	501-569-2117	
Sprague	Anthony	anthony.sprague@alaska.gov	Alaska Department of Transportation & Public Facilities (ADOT&PF)	907-269-0446	
Steagall	Todd	Steagallrt@scdot.org	South Carolina Department of Transportation (SCDOT)	803-737-1308	
Volz	Jason	jason.volz@nebraska.gov	Nebraska Department of Roads (NDOR)	402-479-4452	
Vosburg	Mike	mike.vosburg@La.gov	Louisiana Department of Transportation & Development (LaDOTD)	225-379-1503	
Winters	Victor	vic.winters@alaska.gov	Alaska Department of Transportation & Public Facilities (ADOT&PF)	907-465-8884	
Yakowenko	Jerry	gerald.yakowenko@dot.gov	FHWA-HQ	202-366-1562	Section Secretary

Attachment B

DRAFT

Scope of Work

Update of the 2008 Guide Specifications for Highway Construction

Purpose

The AASHTO Subcommittee on Construction (SOC) is responsible for managing the Guide Specifications for Highway Construction. In accordance with the Operating Procedures for the Standing Committee on Highways (2005) Section 4, Publications, the committees are responsible to review publications at least every five years. In 2012 the SOC identified the Guide Specifications as an important resource for state and local highway agencies and supported moving forward with the task of updating the guide. This scope of work sets forth the direction for updating the guide.

Approach

It is critically important to the success of the effort to develop a constrained scope of work. Scope creep, cost overruns and delays are very real possibilities given the complexity of updating the expansive guide specifications. The project will require the support of the membership of the SOC, potentially the use of consultant services and likely a publishing firm. One step will be to identify a team leader for this initiative and members from the committee that will provide support throughout the process. The project will be defined by two phases.

Phase I will explore the extent of a complete overhaul of the guide. This phase will capture the unconstrained needs to make the guide current in every respect. From this menu of possible actions, a final scope of work will be developed that is constrained by cost and schedule.

Phase 1 Actions:

- Evaluate the contents of the guide to determine if any sections of the guide can be deleted because they no longer apply.
- Evaluate the contents of the guide to determine if there needs to be new sections added to reflect new technology, materials and specifications.
- Evaluate each of the remaining sections and score them based on how current they are and the level of effort to bring the section current.
- Evaluate the current format for retention or revision.
- Prioritize the sections for update based on the needs of the AASHTO SOC membership, the level of effort and the fiscal constraints.

- Evaluate the options and costs for publishing the guide electronically using technology to make the document user friendly.
- Determine if the printed format should be continued.

Phase 2 consists of delivering the finished product. There are several actions required outside of the prioritized section updates that must occur to provide the finished product.

Phase 2 Actions

- Identify resources for phase 2 work. Funding and staffing options.
- Develop the final scope of work based on funding as resources.
- Develop the schedule for the work.
- Develop a tracking and approval protocol to ensure timely and complete reviews of the draft changes.
- Develop a narrative outlining the scope of the changes to the guide for inclusion with the guide to better inform the reader of what has changed.
- Review the guide to ensure the correct material specification are referenced (ie AASHTO, ASTM)
- Review the guide to ensure all documents and sections referenced are correct.
- Retain final markups electronically of all changes using a track changes tool or equivalent.
- Develop and implement the printing and distribution protocol if necessary.
- Posting of the document to the AASHTO SOC website or other location.

Appendix D

Roadways and Structures Section Report

Roadways and Structures

Meeting Minutes

AASHTO Subcommittee on Construction

August 10 – 15, 2014
Portsmouth, New Hampshire

2014 Section Leadership

Chairman – Marc Mastronardi, Georgia DOT
 Vice Chairman (Roadways) – Kevin Christensen, Montana DOT
 Vice Chairman (Structures) - Vacant
 Secretary – Anthony Sarhan, FHWA
 August 11, 2014

Monday – August 11th (1:15 – 4:00 PM)

Meeting is brought to order by Mr. Mastronardi at 1:18 PM. Attendees include representatives from State DOT's, FHWA, academia, and industry. An attendance list is attached for reference.

Introductions:

Attendees briefly introduce themselves and new attendees are welcomed. A sign-in sheet is distributed.

After introductions Mr. Mastronardi reviewed the agenda with the group and then proceeded to begin the discussion of the AASHTO Guide Specification.

AASHTO Guide Specification:

Mr. Mastronardi and Mr. Hoyne led a discussion about updating the AASHTO Guide Specification (Guide Spec). The draft statement of work provided (attached) by Mr. Hoyne in June 2014 provided the focal point of the discussion, and was presented as a way that had been identified for updating the Guide Spec.

Mr. Sadler mentioned that he had been involved in the previous update to the Guide Spec in 2008 and that it was fairly limited in scope.

A general discussion of the Guide Spec ensued, with some concern that sections of the Guide Spec are over 10 years old being expressed. Even though all states have a set of Standard Specifications, the AASHTO Guide Spec does get used by other agencies as a starting point when writing specifications for roadway and bridge projects.

Mr. Hoyne pointed out that most states go through a similar effort fairly regularly with the update of their State Standard Specifications by making frequent small changes, and that that could also be a way to approach the update.

2013/2014 Work Plan:

Attendees discussed the 2013/2014 Work Plan items as follows:

1. Prefabricated Bridge Elements - Utah DOT and Michigan DOT to share ABC work products with group for posting.

Mr. Mastronardi indicated that the items from the Utah DOT are available, but he is still waiting on one more item from the Michigan DOT. In general the work products from both DOT's are available, but there still appears to be a lack of documentation for inspection criteria.

Dr. Goodspeed commented that NH is looking at trying to replace decks with prefabricated slabs that span the entire width, including built in crown and cross slope. One of the big concerns is shipping, and Dr. Goodspeed asked if anyone had any experience shipping and placing a prefabricated item that long and thin.

Mr. Mastronardi indicated that GDOT hadn't moved anything as large as what was being described, and most placements were done with simple picks.

Dr. Goodspeed explained that the design they are pursuing includes leveling screws installed in the panel that also serve as an attachment point for a picking eye and they are analyzing 4- and 8-point picks.

The University of New Hampshire is putting together a computer program to analyze the placement conditions to determine the proper leveling of the panels. The girders will be surveyed after the original deck is removed.

Dr. Goodspeed also indicated they are looking at a tongue and groove joint system using a polymer rather than epoxy. The polymer has shown better performance at low temperature than epoxy.

Cracking in the thin sections has been a concern. Bids on a test job had come in too high due in part to concerns from the fabricator who built in fabrication of 13 panels instead of the required 9.

Mr. Mastronardi and Mr. Sadler discussed how their respective DOT's address cracking in decks, and Mr. Sadler pointed Dr. Goodspeed to FDOT specification 400-21.

Mr. Sadler asked if there is a correlation between interest in PBES and construction season. Responses generally acknowledged that construction season is a reality, but typically impacts on road users and factors such as detour lengths appeared to be more influential than construction season.

ACTION ITEM: Mr. Mastronardi to get final information from Michigan DOT and distribute to group.

This work item is complete with final distribution of products.

2. Risk Based Inspection – Identify specifications and best practices. Missouri DOT to provide summary at 2014 meeting.

Mr. Ahlvers was unable to attend meeting this year. Mr. Mastronardi and Mr. Sarhan will contact MODOT to see if they have a presentation or data they can share with the group and will e-mail it if available. Otherwise this item will remain on the work plan to be presented at next year's meeting in Little Rock, AR.

Mr. Sadler mentioned that FDOT is currently building risk based models for P3 projects. These projects will have 35-40 years of O&M by either the developer or concessionaire, so FDOT is trying to quantify/define how much risk they actually have. FDOT expects to see some scaling back of inspection on an upcoming P3 on I-4.

This work item will roll over to the 2014-2015 work plan.

3. 3. Porous Pavements – Inspection and Design. Provide summary of porous pavement language in Senate bill to R&S members. Conduct survey of state of practice among DOT’s on Inspection and Design of porous pavements.

This item is incomplete. Mr. Sarhan provided a summary to the group, and the group will reassess after summary of the Senate Bill language. Mr. Sarhan requested assistance from anyone that brought this topic up at the 2013 meeting in Detroit.

Mr. Hansen remarked that NAPA is tasked with providing a TechBrief on this topic, and that a similar discussion on the performance of OGFC had been occurring at the Subcommittee on Maintenance.

Dr. Goodspeed stated that they have had issues with plugging in New Hampshire and they suspect freeze-thaw action could have resulted in poor performance.

This work item will roll over to the 2014-2015 work plan.

4. 4. Bridge Deck Grinding - Conduct survey of State DOT’s on state of practice of bridge deck grinding.

Mr. Mastronardi presented results of the bridge deck grinding survey to the group. A copy of the presentation will be posted on the AASHTO website.

Dr. Goodspeed asked what strength concrete DOT’s are using for their deck mixes. Several attendees responded with all responses ranging between 3500 and 4500 psi. Dr. Goodspeed commented that NH was shooting for 8000 psi for its deck mixes and conducts post-construction permeability testing on decks.

In general all other attendees that have permeability requirements remarked that permeability is evaluated for approval of the mix, but not a post-construction requirement.

ACTION ITEM: Mr. Sarhan will distribute the results of the survey, and summary of the data to the State DOT’s.

This work item is complete.

5. 5. Best Practices in controlling bridge deck and PCC cracking - Conduct survey of State DOT’s on best practices in controlling bridge deck and PCC cracking.

Mr. Sarhan presented the results of the PCCP and Bridge Deck cracking survey. A copy of the presentations will be posted on the AASHTO website.

Dr. Goodspeed commented that cracking in decks is usually a curing problem. For example when a contractor does not have a large enough crew. Many attendees agreed, but similar to the

results of the survey, others indicated there was a new problem and it wasn't just an issue with curing. Mr. Stayton indicated Caltrans is seeing increased deck cracking all over the state.

ACTION ITEM: Mr. Sarhan will distribute the results of the survey and a summary of the data to the State DOT's.

This work item is complete.

6. Problems and Best Practices for MSE Walls - Conduct survey of State DOT's on problems and best practices with MSE Wall construction.

Mr. Stayton will present results of this work item on Thursday.

AMRL Construction Inspection Accreditation

Mr. Bob Lutz of the AASHTO Materials Reference Laboratory (AMRL) gave a presentation on AMRL's upcoming entry into construction inspection accreditation. A copy of the presentation will be posted on the AASHTO website. The presentation was given to a joint session of the Roadways & Structures Section and the Environment & Human Resources Section.

Adjourn: The section meeting adjourned at 4:00 PM.

Thursday - August 14 (1:15 – 3:00 PM)

Meeting is brought to order by Mr. Mastronardi at 1:15 PM. Attendees include representatives from State DOT's, FHWA, academia, and industry. An attendance list is attached for reference.

Introductions: Group briefly reintroduced themselves and signed attendance sheet.

Recap of Monday's Section Meeting:

Mr. Mastronardi provided a recap of the section meeting on Monday afternoon.

2013 – 2014 Work Plan:

Item 6 from Monday: Problems and Best Practices for MSE Walls - Conduct survey of State DOT's on problems and best practices with MSE Wall construction.

Mr. Stayton presented summary of NCHRP Synthesis 437 *Assessing the Long Term Performance of Mechanically Stabilized Earth Walls*

Research Update:

The Research section met on Monday evening. Mr. Mastronardi provided a summary of the meeting to the group then solicited items for further discussion with the Research section during the Friday meeting.

Topics discussed by the Research section on Monday evening that were of interest to the R&S section included:

- a. Certifications for inspectors
- b. Project Completion Dates – I/D contracts
- c. Synthesis or domestic scan on CEI
 - i. The group discussed whether backing by a body such as NICET be a factor for a research topic on CEI?

Solicitations for research – The group discussed the following items:

- a. Emergency contract procedures/incident command - formalizing emergency contracting document. Support effort from Contract Admin section if they are still pursuing this. If not, should Roadways and Structures ask them to continue to look into it? Mr. Mastronardi will discuss with Contract Administration Section chair.
- b. Picking of large cages – tying and proper procedures.
- c. Certification of labs – qualification of the lab.
- d. Plastic tearing in PCCP – this request is in response to a specific issue being observed by NDOR.
- e. Post Installation Inspection on pipe installation
 - o What states are implementing it?
 - o How are they implementing it?
 - Group discussed whether this is a research topic or a work product for 2014-2015. Will pursue as a work product.
- f. Partnering research
 - o Are owners and contractors getting what they signed up for?
 - o NCHRP is putting together a panel. Section membership will look into the NCHRP panel and see if a more refined research statement needs to be produced or if the current NCHRP effort meets the current desire of the group.

Presentation Topics

The group brainstormed possible presentation topics (listed below). Roadways and Structures members will use the following list to start discussions on presentations for the 2015 Subcommittee on Construction meeting next year.

- a. AHTD presentation(s) – Anthony will discuss with Emmanuel Banks.
- b. Post-tension grout issues – FDOT is migrating to wax rather than grout. Both GDOT and FDOT have found ungrouted tendons in pristine condition. FDOT presentation on history and implementation of the change in Florida.
- c. Carbon fiber for post-tensioning and pre-stressing. – Possible presentations include Michigan DOT beam presentation and VDOT use of carbon fiber in piles for marine applications.
- d. NDT testing on large shafts
- e. Accelerated Bridge Construction
 1. What other products besides bridge slides are agencies using?
 2. PBES as a whole
- f. Tappan Zee Bridge
- g. Possible panel discussion covering risk matrices for inspection (FDOT, PennDOT)
 1. Possible connection to P3 contracts
- h. Use of rubber in HMA
- i. Alaskan Way Viaduct Bored Tunnel project – update from WSDOT
- j. SR 520 Floating Bridge – update from WSDOT
- k. Pavement Preservation techniques
 1. Keeping an HMA route as an HMA route or letting it go.
 2. Rehabbing of concrete pavements
- l. ADA improvements triggered by resurfacing or improvements

2014-2015 Work Plan

Attendees discussed the 2014-2015 Work Plan as follows:

1. Risk Based Inspection – Identify specifications and best practices. Missouri DOT will provide a summary at the 2015 meeting. ***This is a carry-over item from the 2013-2014 Work Plan.*** Possible presentation topic.
2. Porous Pavements – Inspection and Design – Provide a summary of porous pavement language in Senate bill to R&S members. Conduct survey of state of practice among DOT's on Inspection and Design of Porous Pavements. ***This is a carry-over item from the 2013-2014 Work Plan.***
3. AASHTO Guide Spec – Develop Roadways and Structures position paper on the AASHTO Guide Specification.
4. Post Installation Inspection (PII) on Pipe Installation – Conduct a survey of the DOT's. What type of PII are they conducting and how.
5. Establishing Contract Time – Possible survey. Effect of environmental work windows on establishment of contract time.
6. 2003 Guide to Major Types of Transportation Construction Specifications – Roadways and Structures section will evaluate whether the guide needs to be updated.

Vice Chair: Structures

Mr. Mastronardi solicited volunteers to become new vice chair for structures.

Open Forum

- a. RIDOT asked how other DOT's address claims for accidents that happen in work zones. General response from the group was varied. Georgia DOT uses an accident claim form which can be found here.
- b. NDOR has developed a MSE Wall inventory system. The inventory was part of NDOR's response to concerns about shear values in backfill.
- c. GDOT is starting an expansion of its asset management program so that as-builts and shop drawings are more readily available across the agency.

Adjourn

The meeting adjourned at 3:00

**2014 AASHTO Subcommittee on Construction
Roadways and Structures Section Meeting Attendance**

Name	Affiliation	e-mail address	8/11/14	8/14/14
<i>State DOT and FHWA Attendees</i>				
Kerry Bates	VDOT	kerry.bates@vdot.virginia.gov	X	
Scott Bickford	MaineDOT	scott.bickford@maine.gov	X	
Kevin Christensen	MDT	kechristensen@mt.gov	X	
Wilfred Hernandez	RIDOT	wilfred.hernandez@dot.ri.gov	X	
Aziz Khan	CDOT	aziz.khan@state.co.us	X	
Steve Lawrence	AHTD	steve.lawrence@ahtd.ar.gov	X	
Marc Mastronardi	GADOT	mmastronardi@dot.ga.gov	X	
Walter McMillan	AHTD	walter.mcmillan@ahtd.ar.gov	X	
Joe Robinson	PennDOT	josrobinso@pa.gov	X	
David Sadler	FDOT	david.sadler@dot.state.fl.us	X	
John Stayton	Caltrans	John.stayton@dot.ca.gov	X	
Greg Doyle	FHWA – RC/MA	gregory.j.doyle@dot.gov	X	
Karim Naji	FHWA – NH	karim.naji@dot.gov	X	
Anthony Sarhan	FHWA – HQ/WA	anthony.sarhan@dot.gov	X	
Chris Tilley	FHWA – NH	christopher.tilley@dot.gov	X	
<i>Industry Attendees</i>				
Kent Hansen	NAPA	khansen@asphaltpavement.org	X	
Al Hogan	ACPA	ahogan@concrete-pipe.org	X	
Woody Rigdon	ACPA	wrigdon@concrete-pipe.org	X	
George White	Davia Systems	george@paviasystems.com	X	
<i>Academia Attendees</i>				
Chris Dowd	UNH	chy22@unh.edu	X	
Charles Goodspeed	UNH	chgi@unh.edu	X	

Appendix E

Computers and Technology Section Report

AASHTO Subcommittee on Construction – Computers and Technology Section

(Emanuel Banks, Chair, Arkansas State Highway & Transportation Dept.; Don Greuel, Vice Chair, Wisconsin DOT)

AASHTO SOC – Computers and Technology Section

Section Group Meeting - 8/11/14

Sign-up sheet passed around.

- Emanuel introduced first time attenders
- Went over the activities and responsibilities of this section for this week, as well as over the year
- Emanuel will be transitioning out of being chairman and invited nominees. Ron Stanevich is considering. Don Gruel is vice chair.

- Discussion regarding update of Guide Spec
 - Several mentioned possibly not needing a guide spec because each state's specs are easy to access on the internet.
 - Original purpose was to share good specs but also a way of organizing them that could be an example.
 - National Highway specifications website also developed by SOC and is searchable. May make the guide spec less important at this point.
 - New purposes might be:
 - highlight best practices in specs
 - emerging specifications
 - feedback from contractors
 - determine where claims occurred
 - assisting with a partial/soft rewrite?
 -
 - AASHTO spec does not have benefit of regular updates due to field issues as it is used
 - Poll to see how many have used the Guide spec in last 2 years
 - When rewriting specs
 - Looking for historical references
 - PA has electronic system for updating specs rapidly (every 3 months) and wonders if an AASHTO product could support this
- Potential topics for future discussion/presentation
 - 3D modeling – number of states transitioning to 3D design and lessons learned
 - Legal issues – e.g. with use of contractors equipment
 - Perspectives of contractors
 - Lidar data collection and processing, Oregon and other states have standards for different types lidar collection and accuracies
 - E-construction and delivery system and document management
 - EDC3 will address this – Antonio Nieves
 - Electronic signatures
 - Proprietary software and custom made softwares
 - As-built documents – data management, as-builts that are 'smart', asset management, accuracy of geospatially referenced data and when best to collect
 - Electronic shop drawing submittal and approval
 - Legal issues, consultant liability

- Cloud service issues
 - Perspectives of contractors
- Scheduling
- Mobile inspection and tools inspectors can use to make jobs better and more efficient
 - UNH is doing pilot project to standardize a method to collect asset information and condition information
- What is the benefit of AASHTOware versus private software? Does size of state program make a difference?
 - CRL – Civil Rights Labor, MNDOT has fully implemented
- Utility location using SPAR – WisDOT considering
- State discussion topics – please review so that you can contribute what your state is doing or concerns
- Should there be a different format for the AASHTO SOC annual meeting
 - Regional meetings?
 - More time for state discussion topics and Q&A after all presentations
 - Commitment to quality time for state discussion topics
 - Adding more structure to which topics are selected for state topics (reference Construction Peer Network approach)
 - Digital clock for presenters

Section Group Meeting – 8/14/14

- Section roster passed around for attendance and updating of information
- Feedback on this year's C&T presentations
 - Two presenters were not able to come.
 - Proprietary products presentation was engaging with the audience. Cleared up some policy and procedure, but not what happens when regs not met. Gave the states an opportunity to share issues. Went a bit long and cascaded into later presentations going too long.
 - Need to be more mindful of time and allow more time for questions.
 - Flow after break went well. Topics built on each other.
 - Feedback from others generally good.
 - Emanuel did good job of moderating.
- Overall feedback on this year's SOC meeting
 - Attendees would probably like more time to network at breaks. Logistics of refreshments during break could save some time.
 - More time for state discussions and questions. Possibly set as dedicated time instead of 15 minute segments. Suggest about 1.5-2 hours. Possibly ask for answers back ahead of the meeting and publish this.
 - Monday or Tuesday breakfast or other opportunity to orient new members.
- Meetings this year will be on the second Thursday each month starting in January.
- Research projects – Tom Ravn will present our research ideas to the Research Committee on 8/15/14.

2014 – 2015 Work Plan

- Advance Civil Integrated Management (related to FHWA’s Intelligent Construction Systems and Technologies initiative with AASHTO/AGC/ARTBA):
 - 3D/4D/5D modeling,
 - Automated Machine Control/Automated Machine Guidance (AMC/AMG)
 - Intelligent Compaction (IC)
 - e-Construction – document management, digital/e-signatures
 - mobile applications/deployment – tablets
 - asset/data management and lifecycle, as-builts

- Promote asset management/operations – physical features, customer contact software, tracking complaints repairs and costs, inventory.
 - programming projects
 - as-builts
 - systems/software being used and how well they work

- Evaluate construction performance measures
 - Time, cost and quality
 - Public relations
 - Contractor evaluation/prequalification

Potential Survey:

- 3D modeling or CIM survey. David send to Katherine to compare with NCHRP 10-96
 - NCHRP 10-96 soon will do survey
 - Check for other recent surveys on this topic
 - Have survey go to right person and to clarify how widely used is the technology within each state DOT
 - Why and how products have been selected (e.g. selection criteria)

Attachment F

Environment and Human Resources Section Report

Environment and Human Resources Section

Meeting Minutes

AASHTO Subcommittee on Construction

August 11 - August 14, 2014 Portsmouth, New Hampshire

2014 - 2015 Section Leadership

Chairman – Jeff Shapiro, Nevada DOT

Vice-Chairman – Rob Wight, Utah DOT

Secretary – Jeff Lewis, FHWA

- Mr. Shapiro welcomed the Subcommittee members and guests to the 2014 Environment and Human Resources Section (EHR) meeting. The attendees included 22 representatives, including 16 State DOT representatives, 5 private industry/consultant representatives and 1 FHWA representative. An attendance list is attached for reference. We then reviewed the status of the 13/14 Work Plan items, highlighted the accomplishments and updated them as appropriate. We then discussed the SOC Draft Strategic Plan by reviewing the Goals and identifying what possible actions we should be taking in our 13/14 Work Plan that would be in support of these goals.

ACCOMPLISHMENTS 2012/2013

- Reported efforts with Center for Environmental Excellence on development of Storm Water Management pocket guide for construction field crews.
- Reported on contacts and conversations with OSHA (Washington DC) on work zone inspection. No changes in policies / procedures. No new "mandate".
- Endorsed Work Zone Safety Clearinghouse (workzonesafety.org). Reported that CALTRANS, Utah and Texas are using the online training.

2014 - 2015 WORK PLAN

ENVIRONMENT

- Continue outreach/contacts with center for Environmental Excellence
 - Assist in final edits of Storm Water Management pocket guide. Possible presentation next year.
- Continue outreach/contacts with OSHA (Washington DC)
- Establish outreach / contact with SCOE

RESEARCH

HUMAN RESOURCES

- Continue contact with NICET & AMRL
 - Inspector Training Program Accreditation (AMRL)
 - Inspector training
 - Qualification / Certification
 - Possible surveys / presentations for 2015
- Coordinate with Roadways & Structures Section Gs

WORK ZONE SAFETY (TRAVELING PUBLIC and WORKERS)

- Continue work on work zone safety / safety culture
 - Possible surveys / domestic scan
 - Synthesis on best practices
 - Report on new products
 - Maintain contractor/AGC/ARTBA involvement

Possible PRESENTATIONS for SOC Conference in 2015

- 1) Storm Water Management Pocket Guide
- 2) Inspector Training Program Accreditation – NICET/AMRL
- 3) Inspector Training (Qualification / Certification)
- 4) TC3 update – Mark Chaput (MI)

Dates and Locations of Future Committee Meetings:

Monthly Status Teleconference Meetings are being initiated.

EHR Section Monthly CONFERENCE CALL schedule:

Once a month (week before officers mtg) (IE, 2nd Wednesday of each month – start in NOV, as the following week (3rd Wednesday of each month) the larger AASHTO-SOC has their CALL. Invite appointment to be sent out by Lewis.

OPTION: If you have a presentation, make it a webinar (IE, draft presentation with the group) but let Lewis know.

Call-in info (and URL) for next AASHTO-SOC EHR Section mtg to be held on 2nd Wednesday of every month. Call in number: 888-363-4749 Access Code for participants: 2737683

URL<https://connectdot.connectsolutions.com/aashtoehr/>

Start time is 8:00AM – (PST).....aka - 11:00AM (EST), roughly 1 to 1 ½ hours depending on discussion.

NEXT MEETING: Nov 12th, 2014

Thursday August 14, 2014 - E&HR Section Chair Report (Closing Sessions)

- Thanked the group for support and new membership in E&HR
- Discussed (tentative?) 2014 work plan
 - Resume conference calls in November (I think I actually did say October... No Biggie)
 - Continue outreach/contacts with center for Environmental Excellence
 - Assist in final edits of Storm Water Management pocket guide. Possible presentation next year.
 - Continue outreach/contacts with OSHA (Washington DC)
 - Establish outreach / contact with SCOE
 - Continue contact with NICET & AMRL
 - Inspector Training Program Accreditation (AMRL)
 - Inspector training
 - Qualification / Certification
 - Possible surveys / presentations for 2015
 - Coordinate with Roadways & Structures Section
 - Continue work on work zone safety / safety culture
 - Possible surveys / domestic scan
 - Synthesis on best practices
 - Report on new products
 - Maintain contractor/AGC/ARTBA involvement

**2014 AASHTO Subcommittee on Construction
Environment and Human Resources Section Meeting Attendance**

State	Name	Title	Address	Phone	E-mail	SOC Special Assignments
CA SOC Member	Mark Leja	State Construction Engineer, Chief, Division of Construction	1120 N Street, MS 44 P.O. Box 942874 Sacramento, CA 95814	WK 916-654-2157 Fax 916-654-6345	MARK.LEJA@DOT.CA.GOV	Chair EHR
ID SOC Member	Fran Hood	Design/Materials/C onstruction Engineer	PO Box 7129 Boise, ID 83707	WK 208-334-8426	frances.hood@itd.idaho.gov	Vice Chair EHR Advisory Board – Center for Environmental Excellence
NV SOC Member	Jeff Shapiro	Chief Construction Engineer	1263 S. Stewart Carson City, NV 89712	WK 775-888-7065	JSHAPIRO@DOT.STATE.NV.US	
WA SOC Member	Jeff Carpenter	Director, Director Construction and Materials Division	310 Maple Park Ave SE Olympia, WA 98506	WK 360-705-7821	carpenj@wsdot.wa.gov	Vice Chair Research Steering Committee
WV SOC Member	Stephen “Todd” Rumbaugh	Director, Contract Administration	1900 Kanawha Blvd E Building 5 Rm A 722 Charleston, WV 25305	WK 304-558-9569	Stephen.t.rumbaugh@wv.gov	
TX SOC Member	John Obr	Director, Construction Division	200 E. Riverside Dr. Austin, TX 78704	WK 512-416-2501	john.obr@txdot.gov	
UT SOC Member	Rob Wight	State Construction Engr		WK 801-633-6252	rwight@utah.gov	
KS SOC Member	Sandy Tommer	Chief, Bureau of Construction & Materials		WK 785-296-7129	sandrat@KSdot.org	

State	Name	Title	Address	Phone	E-mail	SOC Special Assignments
MI SOC Member	Mark Chaput	Bureau Deputy Director		WK 517-322-3331	chaputm@michigan.gov	
AASHTO	Greta Smith	Assoc. Director Project Delivery		WK 202-626-5815	gsmith@AASHTO.ORG	
VA SOC Guest	Mark Cacamis	State Construction Engineer		WK 804-371-2531 Cell 804-229-1854	Mark.Cacamis@VDOT.Virginia.gov	
AL SOC Guest	Skip Powe	Asst. Sate Construction Engr	1409 Coliseum Blvd Montgomery, AL 36110	WK 334-242-6209	powes@dot.state.al.us	
WV SOC Guest	Jason Boyd	Regional Construction Engr		WK 304-558-9548	JASON.M.BOYD@WV.GOV	
MI SOC Guest	Leo Evans	Project Engineer		WK 231-777-3451	EvansL3@MI.GOV	
VT SOC Vice- Chariman	David Hoyne	State Construction Engr		WK 802-828-2593	DAVID.HOYNE@STATE.VT.US	SOC Vice- Chairman
NCHRP Consultant	Marie Venner	President/Principal Venner Consulting		WK 303 748-5333	Marie.venner@vennerconsulting.com	NCHRP Consultant
FHWA Resource Center	Jeff Lewis	Construction and Contract Administration – Team Leader	650 Capitol Mall Ste 4-100 Sacramento, CA 95814	WK 916-498-5035	Jeff.lewis@dot.gov	FHWA Liason - Secretary

Appendix G

Research Steering Committee Report

**AASHTO Subcommittee on Construction
Research Steering Committee
2014 Meeting Minutes
Portsmouth, New Hampshire**

The 2014 meeting of the AASHTO Subcommittee on Construction (SOC) Research Steering Committee (RSC) was convened at 6:35am on August 12, 2014 in Portsmouth, NH. Those in attendance are listed at the end of the minutes as Attachment 1. The Chair, Jeff Carpenter (Washington DOT), began the meeting by welcoming everyone to the meeting and explained the plans to have a follow up meeting on Friday. It was proposed to move the meeting start time for Friday to 7:30am to facilitate an earlier departure.

NCHRP Update – David Reynaud

David provided a handout on the results of SOC problem statements submitted in 2014. Of the three projects selected for funding, one (D-06) was the SOC's top priority on partnering and another (C-13) was one that the SOC co-sponsored with the Subcommittee on Bridges and Structures. D-03 was combined with D-06. It was agreed that the SOC should seek to add a panel member to C-13 in order to make sure there is a construction perspective included within the project. Mark Mastronardi (GDOT) will send in some names, one from each region. The SOC does have representation on D-06. The selection of panel members is ongoing.

The technical section vice chairs/representatives reported on the research topics identified during the various SOC technical sections meetings that were held the afternoon of 8/11/13.

Roadways and Structures Section – Marc Mastronardi (Georgia DOT)

The group did not get very far in discussing research. There was some discussion on the topic of claims coming from geotechnical failures. This just came out as a synthesis topic, and it may already be addressed. There was a lot of interest in CEI and certification.

Environment and Human Resources Section – Rob Wight (Utah Department of Transportation)

They spent a lot of time discussing certification and accreditation of construction inspectors. The group suggested possibly doing a scanning tour, either with or without travel, to see what States are doing with construction inspection, certification and workmanship assessment. There is a similar need being identified for maintenance. Many States felt like they were in the same boat and there could be an advantage to having national or regional standards. AASHTO's TC3 may be headed in this direction. The Transportation Construction Management pooled fund is looking at workmanship and how do we quantify quality. NCHRP 10-83 found that there were no standards for construction engineering and inspection, CEI. Doug Gransberg is working with Missouri DOT to translate their D-B requirements to D-B-B. Check with Dave Ahlvers. In addition to a scan, the SOC may also want to submit a synthesis statement. In addition, it may be worth doing a legal synthesis on the topic of certifying State inspectors.

Contract Administration Section – Gary Angles (Ohio DOT)

D-B contract administration was a topic suggested last year. There is still a need to develop a guidance document and gather best practices for different types (including P3) of project delivery methods. Doug Gransberg offered to help in writing the problem statement. The focus of this effort would be on post award. The Chair asked whether the SOC should take ownership of the various guidance documents that get produced by NCHRP or incorporate them into the SOC guide specification.

Another topic that was discussed is the use of incentive completion dates. It would include gathering best practices, how much risk should be built in, setting completion dates, and establishing incentives/disincentives. This could possibly be a synthesis.

Computers and Technology Section

The tech section didn't get a chance to discuss research and they were not represented.

One other topic suggested by the Chair is how chain of custody concerns are handled. There is technology available to use core recognition software as opposed to using QR codes. Pattern recognition work has been done for New Zealand.

It was agreed that the Research Steering Committee will reconvene at 7:30am on Friday, 8/15/14.

The meeting of the Research Steering Committee was adjourned at 7:10 am.

On Friday, August 15, 2015 the Research Steering Committee reconvened. Those in attendance are marked with an asterisk in Attachment 1.

The chair summarized the discussion from the previous meeting and asked the technical section representatives whether subsequent discussions have led to any preferences.

Contract Administration (Gary Angles): They would like to carry over the topic proposed last year on the contract administration for design-build and other alternate procurement types. The intent would be to result in a guide book

They would also like to pursue the topic of methods of setting completion dates and how it impacts the projects. What are States doing? Auburn has done some work. Ohio has also done some work. It was suggested that this could start with a synthesis.

Roadways & Structures (Marc Mastronardi): The presentations made by Colorado and Washington DOTs on how they handled emergency situations highlighted the need to develop an Emergency contracting guidebook. It was thought that TRB has already drafted one (AFH-15), but the need is to look more broadly in terms of emergency management. It's more than just the contracting aspect of it, and it should address what agencies need to plan for in terms of incident/emergency management issues. As an example, during last winter's snow event in Georgia, contractors requested some limits in liability for emergency situations (snow in GA).

The deadline to submit Research Needs Statements to NCHRP is 9/15/15 and the due date for proposed domestic scans to AASHTO is 10/15/15. The chair asked the technical section representatives for their priorities and whether they would like to take the lead in writing up either the research needs statement or scan proposal. The discussion resulted in the following decisions:

- Submit two research needs statements with the following priority ranking from the SOC:
 1. Contract administration for design-build and other alternate delivery types – Gary Angles will take the lead in preparing the research needs statement. Doug Gransberg offered to help. This is AASHTO SOC's top priority
 2. Emergency contracting guidebook – Jeff Carpenter will take the lead in developing the research needs statement. This is AASHTO SOC's second priority.

- Submit a proposed synthesis topic on Methods of Setting Completion Dates. – Jeff Carpenter will take the lead.
- Submit a proposed domestic scan on inspector certification. This is AASHTO SOC's top priority for Domestic Scans. – Rob Wight will take the lead in preparing.

It was noted that each write-up should include a few sentences on why the project is important to the AASHTO Subcommittee on Construction.

Appendix H

SOC Resolutions

TITLE:

**AASHTO SUBCOMMITTEE ON CONSTRUCTION
RECOGNIZING THE
NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION,
HOST OF THE 2014 AASHTO SOC
SUMMER MEETING IN PORTSMOUTH, NH**

AASHTO SUBCOMMITTEE ON CONSTRUCTION (SOC)
RECOGNIZING THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
HOST OF THE 2014 AASHTO SOC SUMMER MEETING IN PORTSMOUTH, NEW HAMPSHIRE

WHEREAS, The AASHTO SOC met in Portsmouth, New Hampshire, August 10 through August 15, 2014; and

WHEREAS, SOC members from the states and FHWA were greeted with hospitality by New Hampshire Transportation Commissioner Christopher Clement, State Construction Engineer Ted Kitsis and members of his extremely competent and friendly staff...; and

WHEREAS, the SOC met and successfully discussed highway construction business and technical issues so as to sustain and advance the high quality and level of service we all provide...; and

WHEREAS, the conference started with a superb key note address about the Memorial Bridge, the greatest bridge in the world (just ask anyone from New Hampshire)....; and

WHEREAS, the SOC members were shown presentations on many timely and pertinent topics that can be used to advance our own State's efforts....; and

WHEREAS, the SOC members were treated to a wonderful dinner cruise of lobster, clams, and mussels or chicken aboard the Isle of Shoals on the Piscataqua River....; and

WHEREAS, the SOC and New Hampshire DOT demonstrated its flexibility by adjusting its agenda during the rainy Wednesday afternoon to allow for an abbreviated technical tour Thursday afternoon....; and

WHEREAS, the SOC was treated to a magnificent evening at the Wentworth by the Sea where many delicious samplings were offered and rounded out with decadent deserts...; and

THEREFORE BE IT RESOLVED, that the participants of the 2014 SOC have thoroughly enjoyed their stay, appreciated the commitment and dedication of the New Hampshire DOT staff, and offer its thanks for a successful conference..., and

BE IT FURTHER RESOLVED, that the AASHTO SOC members have established an effective date of this resolution of August 14, 2014 at the SOC summer meeting in Portsmouth, New Hampshire.