

**AASHTO HIGHWAY
SUBCOMMITTEE ON CONSTRUCTION
2006 MEETING
SAN JUAN, PUERTO RICO
JULY 30 - AUGUST 3, 2006**

**Len Sanderson, North Carolina – Chairman
Thomas Bohuslav, Texas – Vice Chairman**

MONDAY, JULY 31, 2006

Opening Session

Welcome Address and General Announcements

Len Sanderson, NCDOT and AASHTO Subcommittee Chairman, opened the meeting by welcoming the Subcommittee on Construction (SOC) delegates to San Juan, Puerto Rico, and acknowledging the presence of federal, state, local and industry representatives. Mr. Sanderson then introduced Dr. Gabriel Alcaraz, Secretary of Puerto Rico Department of Transportation and Public Works for his opening remarks.

Dr. Gabriel Alcaraz, Secretary, Puerto Rico Department of Transportation and Public Works, provided a warm welcome to all the SOC attendees to Puerto Rico and briefly discussed some of the challenges that Puerto Rico faces with its construction program. Issues concerning construction quality, workforce qualifications and skills, and the acquisition of construction materials were emphasized. Dr. Gabriel mentioned that materials such as aggregates and steel need to be shipped 1,000 miles from Miami, Florida, and presented a unique challenge for the island, affecting construction costs and schedules. Dr. Gabriel detailed Puerto Rico's commitment to its construction program and gave an overview of several current roadway projects.

Mr. Sanderson extended a special welcome to new participants that were attending the SOC summer meeting for the first time and briefly discussed the SOC program activities for the week ahead. Mr. Sanderson explained that each Technical Section would develop a new Work Plan for the coming year to be included as part of the overall SOC Work Plan, which in turn would become part of the AASHTO Strategic Plan. Mr. Sanderson then introduced the SOC Vice-Chairman, the Technical Section Chairs, the FHWA Secretary and the AASHTO liaison as the SOC team members responsible for leading the program and developing the section work plans and SOC Work Plan.

Mr. Sanderson provided additional remarks that reflected on the 50th anniversary of the Interstate Highway System and the achievement of its construction. He discussed how the interstate system connected and changed the look of America, and how it improved our quality of life. Mr. Sanderson also noted current and future challenges that face the highway industry in improving the Nation's roads and maintaining America's mobility. Concerns with growth and development, congestion, energy and the environment, national security,

highway funding, and human capital were mentioned as issues that challenge the Nation's transportation systems and the highway community. It was discussed that these challenges now offer the highway community the opportunity to find new innovative ways and develop new technologies to address the problems that face our Nation's highways.

José Fernández Ruiz, Chief, Contract Management Office, Puerto Rico Highway and Transportation Authority, welcomed the attendees to Puerto Rico and briefly discussed housekeeping issues related to the conference's weeklong events and the meeting facilities.

Mr. Sanderson asked all the meeting participants to introduce themselves.

Thomas Bohuslav, TxDOT and AASHTO Subcommittee Vice-Chairman, greeted the AASHTO members at the summer meeting and discussed several meeting items. He mentioned that (1) a copy of the SOC research program procedures was included in everyone's meeting information folder and it was requested that discussion take place during the Technical Section breakout sessions to generate ideas for research, synthesis projects, and the International Scanning Program proposals, (2) a copy of the SOC's Operating Guidelines was included in the meeting information folder for everyone's review and information, (3) a Request for Questions was sent out to members for the Questions and Answers Session and it was encouraged that questions be submitted for the upcoming session, and (4) an AASHTO SOC members list for all States including D.C. and Puerto Rico would be circulated during the meeting to verify member contact information and update the website.

General Session Presentations

Thomas Bohuslav (Texas DOT): Subcommittee Vice-Chairman

General Discussion of FHWA Issues - Tommy Beatty, FHWA Director, Office of Pavement Technology, Subcommittee on Construction Secretary: In light of the 50th anniversary of the Interstate System, Mr. Beatty reminded the participants of the opportunity that the meeting presents to everyone for interaction and exchange of ideas with one another, so we may ensure that the interstate system remains strong and safe for the next 50 years. He also mentioned the recent leadership changes within the USDOT and FHWA. Further, Mr. Beatty discussed several of FHWA's ongoing initiatives and activities of interest to the Subcommittee. His discussion touched on FHWA SAFETEA-LU issues; stewardship and oversight initiatives involving the USDOT and Industry Work Groups, Major Projects, the Program Delivery Improvement Tool, Quality Assurance Stewardship Reviews; and other FHWA initiatives that included the Pavement Technology Programs, the Construction Management Expert Task Group and Performance Specifications Technical Working Group, the National Highway Specifications Website and Training Opportunities.

The Highways for LIFE Program - Byron Lord, FHWA Highways for LIFE Team Leader: Before Mr. Lord began his presentation, he acknowledged and thanked Tommy Beatty for his 35 years of dedication and service to the FHWA and announced to the general assembly that Mr. Beatty will be retiring from Federal service at the end of August 2006.

In Mr. Lord's overview and status update of the Highways for LIFE (HfL) Program, he noted that improved safety, reduced construction-related congestion and improved quality are three goals that support the HfL vision. Mr. Lord explained that the pilot program would involve incentives for construction projects, partnerships with industry, and extensive technology transfer, education, training and communication initiatives. In combining these program elements together, the objective is to accelerate the advancement of proven innovations into highway construction practices. Performance goals will be a key element of the HfL approach and reflect a continuation in the shift over the past several decades away from specifying how to do things, towards specifying desired end-results.

In addition, Mr. Lord discussed the funding strategies presented in SAFETEA-LU for proposed HfL projects, the project application process, and a monitoring and evaluation process to be established for gathering performance information on program and project elements.

DBE Program, Frederick D. Isler, FHWA Associate Administrator - Office of Civil Rights: Mr. Isler's presentation drew a comparison between the ideas of an "old" DBE program based on goals, quotas, and business opportunities and a new philosophy grounded in non-discrimination and business development. Mr. Isler stated that FHWA now focuses on this new DBE program. The old DBE program, implemented in 1980, targeted minority-owned and women-owned businesses, and contained specific goals. Mr. Isler explained the meaning of non-discrimination in terms of opportunities for all to participate in Federal-aid projects and is based on the concept of a level playing field with fairness of competition in the marketplace.

Mr. Isler introduced Charles Klemstine, Director of Program Operations in the Office of Civil Rights, who spoke on challenges that State DOTs face in administering a DBE program. Mr. Klemstine stated that the FHWA has a sound working partnership with the construction industry and by working together a DBE tool kit would be developed to provide information and clear guidance on DBE issues, as well as offer DBE training materials.

Ms. Teresa Banks, Civil Rights Director of the FHWA Resource Center, summarized Mr. Isler's talking points on the new DBE program. She emphasized that the new program is to help all businesses become better and focus on the business development of under-utilized DBEs to raise their capabilities and create more competition at the national and global level. This national initiative will be piloted as the "Business Opportunity and Workforce Development" program and is designed to assist businesses and their workforces grow and develop, and to help prime contractors willing to work with DBEs.

Construction Cost Escalation...The Washington State Story - Kevin Dayton, State Construction Engineer, WSDOT: Mr. Dayton provided an overview of Washington State's efforts in monitoring and addressing price escalation, and competition. Discussed were the recent trends in higher prices for construction materials and fuel, and the increased demand for equipment and labor to deliver growing construction programs. Mr. Dayton talked about WSDOT's use of CEVP[®] risk-based analysis to better estimate the project's cost and schedule.

Issues regarding the consolidation of construction firms in the Pacific Northwest, the decreased number of contractors bidding on WSDOT construction projects, and specialty areas with construction involving subcontracting and supply were summarized. In addition, Mr. Dayton discussed several market and economic factors that have influence on the construction of the industry, and which are out of the control of the DOT.

Mr. Dayton offered several ideas and recommendations that may reduce construction costs through increased competition and include better communication and timing of bid advertisements, a more flexible contract structure, reduce scope of work, and establishing oneself (DOT) as the owner of choice and preferred work by contractors.

AASHTO / FHWA Survey on Construction Cost Increases and Competition - Summary of Responses – Gerry Yakowenko, FHWA: Mr. Yakowenko shared with the attendees the summary of responses from "AASHTO's Survey on Recent Construction Cost Increases and Competition in Construction Contracts" conducted in spring 2006. The survey results from 44 States, the District of Columbia, and two Canadian Provinces indicate that State DOTs have experienced significant increases in construction bid prices while some agencies have experienced a decrease in competition and an increase in the number of single bids. Mr. Yakowenko pointed out the impact that these cost and competition issues may have on a State construction program and those at a national level. Mr. Yakowenko emphasized that FHWA will continue to work with the States to ensure competition and provided several preliminary recommendation to address the issues including (1) the rejection of non-competitive bids, (2) reconsideration of risk allocation through project scoping, contract size, price adjustment clauses, bundling contracts and balancing lettings, (3) reconsideration of "bidders-list" publication policies, (4) supporting the US DOJ's Antitrust Division collection of data, (5) supporting fraud detection, awareness and prevention activities, and (6) performing market analysis for evidence of collusion / anti-trust issues.

Section Meetings

Monday afternoon was spent in individual Section meetings to discuss 2005-2006 accomplishments, and to begin developing the annual Work Plan. The meetings were followed by Section Chair's Reports to the assembled group. The information from these sessions is included in the individual Section minutes file.

Section Chairman's Reports

Roadway and Structures Section, Kevin Dayton, WSDOT: Mr. Dayton discussed the accomplishments of 2005-2006, which included (1) the continued progress on cataloguing best practice examples for improving project delivery in areas of constructability, VE, contractor solicited input, and post construction feedback to improving the quality and effectiveness of plan sets, (2) the continued advancement on Inspection of Specialty Work (ITS, bridge painting, building construction, moveable bridge construction, R/W procurement, haz/mat, environmental inspections) addressing cost effectiveness and certification issues, (3) the completed and published first edition of the Construction "Tid Bits" newsletter for DOT's, and (4) the coordination of the Section's presentations for the 2006 SOC Summer Meeting.

Contract Administration Section, Cal Gendreau, North Dakota DOT: Mr. Gendreau introduced and welcomed Jeff Benefield from Alabama DOT as the Section's new Vice-Chairman and proceeded to share the Section's accomplishments for 2005-2006. These included (1) the completion of the *Fifth Edition of the Primer on Contracting for the 21st* update that can be found at web site "Primer on Contracting for the 21st Century" (<http://www.transportation.org/sites/construction/docs/Primer%20on%20Contracting%202006.pdf>), and has many hot links to contract administration research reports, State DOT web sites and State DOT state of the practice reports, (2) the completion of guidelines for the use lump sum bidding on construction contracts and can be at Florida DOT's web site "Lump Sum Project Guidelines" (<http://www.dot.state.fl.us/rddesign/updates/files/ls010402.pdf>), (3) the establishment of the US DOT Office of the Inspector General website that provides links to suspension, debarment and precluded from bidding web sites from various transportation contracting agencies. The "suspension, debarment, administrative and judicial action link" on the OIG "Topnet" web site (<http://www.topnet.gov/sdc.jsp>) provides a convenient web-based source for contracting agencies to view the current administrative actions of other states, and (4) the completed a national survey of State DOTs and summarized responses addressing issues and practices related to construction cost increases and competition in construction contracts.

Computers and Technology Section, Tucker Ferguson, Penn DOT: Mr. Ferguson talked about the 2005-2006 accomplishments of the Section. These activities included (1) the final draft of Guidelines for Construction Management System Automation and its distribution, and a recommendation to demonstrate a fully automated system through a pilot project, (2) continued support of the AASHTO web site in providing membership information, and served on the selection committee for the National Highway Specifications Website update contract, (3) continued leadership and support for the enhancements of AASHTO Trns*port software and the VDOT pilot project migrating Trns*port to a web based application, (4) continued progress in developing a guide specification and contract language on stakeless construction, and (5) providing Section representation on several committees including the Guide Specification Task Force, the NICET steering committee and the Civil Rights module for the Trns*port Task Force. Mr. Ferguson announced that George Raymond, OKDOT, will serve as the Section's new Chairman and Jeff Gower, Oregon DOT, will takeover the duties of Section Vice-Chairman.

Environmental and Human Resources Section, Bob Watson, Maine DOT: Mr. Watson discussed the Section's 2005-2006 accomplishments in the areas of Environmental Stewardship, Work Zone Safety and Human Resources. Under Environmental Stewardship, a survey of states was conducted to determine the cost in dollars and time of construction delays after contract award caused by environmental issues. The findings were presented to the E&HR attendees. A second survey of states to compare tracking systems for environmental commitments and what payment methods are being used was completed. Findings were presented to the SOC. Work Zone Safety surveys of states to determine (1) practices for certifying or prequalifying construction staff of both the state and contractor for implementing Work Zone Traffic Control, (2) practices for the use of law enforcement to enhance safety in construction zones, and (3) responsibility for Traffic Control Plans (owner or contractor) and how traffic control is paid for (lump sum, contingent sum, unit price) were completed. Findings were presented to E&HR attendees. Ongoing Human Resources initiatives include TCCC coordination, the NICET's Technician Certification Program and a survey of states to find out current practices used to overcome cultural and language differences that affect the establishment of an adequately staffed and trained work force.

Conclusion of General Session

At the completion of the Section Chairman Reports, Mr. Bohuslav adjourned the session for the day.

TUESDAY, AUGUST 1, 2006

Contract Administration Section Presentations

Cal Gendreau, North Dakota DOT: Section Chairman

VDOT's PPTA Program, I-495 Hot Lanes Project – Thomas Pelnik, VDOT: Mr. Pelnik discussed the Public Private Transportation Act (PPTA) of 1995, which serves as the basis for Public-Private Partnerships in Virginia. The PPTA authorizes private entities to construct and/or operate qualifying transportation facilities, and provides for solicited and unsolicited proposals.

Mr. Pelnik described the Capital Beltway Bus Rapid Transit/ High Occupancy Toll (BRT/HOT) Lanes project, which extends around the west side of Washington, DC, in northern Virginia. Expansion of the beltway was determined necessary because of daily traffic exceeding the highway's design capacity and the problem of growing congestion in the area. A public-private partnership was chosen for this project because construction was not funded, and tolls would provide needed revenue. The 2002 project estimate was \$800 million, and although the original PPTA proposal was submitted in 2002, the environmental clearances were not obtained until 2006. In the future, VDOT will complete environmental clearances before soliciting a project.

The goal of this PPTA project is to improve urban mobility by moving more vehicles through the corridor with faster delivery, while revenue helps finance the project. It was noted that project financing and long-term operations are the key components to a successful project. Additional information on this project can be found at <http://www.virginiadot.org/business/bu-ipd.asp>.

CalTrans Time-Related Overhead Specification – Robert Pieplow, CalTrans: Mr. Pieplow summarized two types of overhead, time-related (TRO) and cost-related (CRO), that CalTrans factors into the cost of its construction projects. CalTrans reports the general distribution of costs to be 13 percent for TRO, 8 percent for CRO (that includes a profit factor of 3%) and 79 percent for direct project costs.

Reviewed were the findings of NCHRP Synthesis 315 published in 2003, which presents an overview of home office overhead compensation, and summarizes the approaches in three models:

1. Avoidance model – never allow claims
2. Compliance model – respond to contractor’s claims in accordance with precedents set by state courts or boards.
3. Proactive model - Recognizes home office costs as a legitimate business expense. This model leads to reduced personnel for claims administration. Often, claims are resolved at the field level.

Mr. Pieplow shared some of the challenges of traditional overhead compensation. He noted that overhead costs are primarily a function of time, not the cost of a construction item, and that the traditional methods have led to many claims. It was mentioned that CalTrans had 100 active arbitration claims in the year 2000 and it sought an innovative approach to deal with the claims issue. Projects in urban areas, claim savvy contractors, and project size were factors in the need to establish a better process for addressing overhead compensation.

As a result, CalTrans developed and now uses a bid item approach to obtain a daily field and home OH amount (the cost per working day) in which a contractor segregates all of its time-related overhead from the various contract items and places those OH costs in a separate contract item. By bidding TRO, all parties know what the costs of delays will be – and less overhead claims result. Contractors are now bidding in the 6% to 8% range. More information is available on the Caltrans website, or the National Highway Specifications Website.

Guidelines for Pavement Warranties/Synthesis of Warranty Use – Megan Syrnick, Trauner Consulting: This presentation was on the topic of warranties on highway projects for two current research projects: NCHRP 20-07(201) and NCHRP 10-68. As a lead in to her discussion, Ms. Syrnick mentioned there are pressures to institute warranties: some are internal DOT decisions, legislative mandates, and pressure from industry.

Ms. Syrnick discussed the Synthesis of Warranty Use research, NCHRP 20-07(201). There was a comprehensive survey on the number of warranty projects by each State DOT, the

motivation for instituting warranties, and other factors. Results indicate that 20 percent of States had significant experience with warranties, 48 percent had some experience and 32 percent had no experience. Warranties are most common on HMA pavements, followed by PCC pavement. Geotechnical and ITS were the most rarely used warranty items. She discussed the following warranty types during her presentation: bridge painting (200+ projects), pavement marking (60+ projects), traffic signal/lighting/ITS (30+ projects), and other component warranties such as dowel bar retrofits, drainage, pavement settlement and cracking, and more. For microsurfacing and other pavement repair warranties, the synthesis reviewed 140 different projects.

Ms. Syrnick continued her presentation and discussed NCHRP Project 10-68, Pavement Warranty Definitions. The research has identified three types of warranties based on the term or duration of the warranty: less than 5 years, 5 to 10 years, and more than 10 years. The long-term warranties use performance specifications, and likely much more contractor involvement. 22 States have used HMA warranties on over 700 projects. 17 States have used PCC pavement warranties on over 370 projects.

It was noted that warranties could be used to increase competition and to help State agencies when inspection personnel are limited. Many other factors can influence a State's decision to implement a warranty project. No State reported a decline in quality or contractor performance because of instituting a warranty, and several States reported improvements in these areas. Several States also reported agency resource savings as a result of their warranty programs. There were few States that reported increased bid prices because of the warranties, but generally, there were no increases in prices. Innovation in the use of various materials has been enhanced by the use of warranties.

Ms. Syrnick listed several common concerns with warranties including industry concerns, bonding issues, potential disputes, and the ultimate benefits that accrue for the agency as a result of the warranty projects. She discussed several contracting alternatives that can be used to mitigate the bonding issues and concerns. She also said that it is rare to have contractors called back to perform remedial work on warranty projects.

Highway Fraud Awareness – Mark Peters, USDOT Office of the Inspector General: Mr. Peters first reviewed the organization and operations of the Office of the Inspector General (OIG). Last year the OIG worked in the following modal agencies of the USDOT: FAA 31%, FHWA 27%, FMCSA 17%, OST 14%, FTA 4% and FRA 3%. Mr. Peters showed that 37% of OIG cases are related to Contract/Grant Fraud and this area is the number one priority for the OIG. Mr. Peters mentioned that the OIG conducts various types of investigations including Criminal, Civil, Parallel Proceedings and Administrative Action.

Mr. Peters discussed the difference between fraud and a mistake; fraud being a misrepresentation for financial gain. He stated that a mistake is often a single instance, where fraud is a pattern of events/ illegal activities. Examples of fraud types that were described in detail by Mr. Peters include bid rigging and collusion, materials overcharging, time overcharging, product substitution, minority-owned business fraud (DBE fraud), quality-control testing fraud, kickbacks and bribery. If you suspect fraud, please call the OIG

Hotline at 1-800-424-9071. More information is available at www.oig.dot.gov or www.topnet.gov.

Construction Management Scan, Implementation Program – Steve DeWitt, NCDOT: As background to his presentation, Mr. DeWitt gave a refresher on the international scanning tour completed in 2004. The Scan included locations in Canada and Europe. A report has been written and published, and a number of ideas resulting from the Scan have been recommended for implementation in the United States. The Construction Management Expert Technical Group (ETG), which involves State DOTs, FHWA, industry, and academia is responsible for implementing the findings from the International Scan. The ETG is producing reports, recommending research, and coordinating training and marketing efforts. There are a number of implementation tasks currently underway.

Mr. DeWitt pointed out that the entire project delivery process has been refocused from a view of “just getting the project into the hands of the contractor” to “getting projects open to the public.” He described a new definition of contract management, which is more comprehensive than that used in the past, and focuses on long-term project performance. “Construction Management is still about the traditional responsibilities, such as quality control, but some of the responsibilities for project delivery may need to be shifted in order to assure more successful projects,” stated Mr. DeWitt. He discussed expanding partnerships to facilitate broader implementation of the new Construction Management concepts. As the construction industry shifts to more public-private partnerships and toll roads, these concepts have to be successfully transferred for the benefit of the traveling public and taxpayers.

Mr. DeWitt introduced a resolution to the AASHTO SOC for consideration that redefines and re-titles the Construction Management Expert Task Group. In addition, he introduced a change to the AASHTO SOC assignment to broaden the scope to include innovative construction project delivery, contracting, and procurement techniques. Mr. Bohuslav joined Mr. DeWitt in advocating a change in the AASHTO SOC assignment to include the recommended changes. He encouraged SOC members to provide any suggested changes to the draft documents as soon as possible.

Questions and Answers Session

Mr. Bohuslav asked the attendees how many States are using a paint coating over galvanized steel mast arms. The States of NH, VA, RI, and MS acknowledged that they were using such a method. It was added that powder coating does not work well in a salt environment where Florida was experiencing problems with rust inside the poles. Florida and Vermont are using an anodized process with success.

Mr. Bohuslav asked the States if they were having problems in Court defending liquidated damages (LDs) charge rates. West Virginia indicated it was moving to incentive/disincentive clauses using actual charges. Oklahoma and Kansas include overhead rates in calculating LDs. New Jersey calculates the amount of LDs for each project using construction engineering costs based on a project staffing program and road-user delay costs with a cap limit as per the State’s procedures manual. Mr. Bohuslav added that Texas has a

schedule for LDs based on contract size.

Roadways and Structures Section Presentations

Kevin Dayton, WSDOT: Section Chairman

Virginia Self-Consolidating Concrete Bridge Projects – Dan Liston, VDOT: Mr. Liston began his presentation by explaining the properties and applications of self-consolidating concrete (SCC). SCC has a high workability with a slump-flow of 23 to 29 inches, it demonstrates good consolidation where it is able to compact around rebar in large pours, and has good anti-corrosive properties. Some of the benefits of SCC include good consolidation, faster construction, less equipment, reduced noise (no vibrators), less labor required, less cost, and good surface finish right out of the forms. Mr. Liston mentioned several concerns with SCC that include the possible loss of stability, segregation, air-void systems, increased shrinkage due to small aggregate and high water/ cement ratios, and tightness of forms. Then discussed were some specific materials properties and mix design differences between conventional concrete mixtures and SCC.

Mr. Liston reviewed several bridge applications of SCC in Virginia including the 2001 SCC Arch Bridge project, the 2003 SCC Bulb-T Beams research project and the 2005 Pamunkey River crossing of Route 33. He mentioned that Research on SCC is continuing, and the Virginia Transportation Research Council (VTRC) is looking at fiber reinforcing and lightweight aggregate usage.

In conclusion, the applications used by VDOT with respect to SCC have been very successful to date, and is promising for the future. There are briefs on SCC posted on the VTRC website.

SPMTs: Raising the Speed of Bridge Construction in the U.S. – Use of Self-Propelled Modular Transporters (SPMT) – David Sadler, Florida DOT: SPMT is a new technology that helps to reduce construction time, improve safety, and reduce impacts on traffic. Mr. Sadler's presentation demonstrated FDOT's experience and success with the use of SPMTs. On a FDOT bridge replacement project that spanned Interstate 4 in the Orlando area, SPMTs saved 57 nights of construction, 4 months of construction time, and generated positive feedback from both the public and media.

For this FDOT Highways for LIFE demonstration project, the removal of the existing bridge span took only 22 minutes with the use of SPMTs. The span was demolished out of traffic, which greatly reduced the impact to motorists. The new superstructure was constructed to the side of the roadway, and then the bridge was elevated to the proper height using the modular transporters. The new bridge was 143 feet long and twice as wide as the old bridge at 59 feet. In addition, it was 5 times heavier. The first span took 5 hours to install, the second span 3 hours. The bridge rails and signage were installed on the side of the road prior to transport. Mr. Sadler commented that traditional bridge construction would have required closing the existing bridge, demolition, reconstruction, and finally, repaving.

There were approximately \$500,000 in extra costs on this \$27.4 million dollar project. The additional cost was attributed to the perceived extra risk to the contractor in using the new construction methods and techniques.

Economic Forecast of Highway Construction – Ken Simonson, Associated General Contractors of America (AGC): Mr. Simonson, AGC Chief Economist, distributes regular publications on construction costs, pricing and availability in electronic and print formats, including “The Data Digest.” He also produces a weekly podcast on the subject.

Mr. Simonson reviewed the components and increases of the various price indices including the CPI that increased 4.3% in 12 months, the PPI up 4.9% in 12 months, the Construction Products Price index +16%, Cement PPI +14%, Asphalt PPI +33%, Diesel Fuel PPI +31% and Refinery +71%.

It was projected that crude oil and diesel fuel prices will remain high. There appears to be a permanent shift in the supply of asphalt in some markets. It was discussed that the EPA requirements for ultra-low sulfur diesel fuel have driven some of the major changes. It was mentioned that the Sinclair refinery in Rawlins, Wyoming, has shifted to a light sweet crude that is low in sulfur, but has little to no asphalt at the end of the refining process. Shortages have been reported in WY, CO, HI, and FL. The low-sulfur impacts will likely be short-term.

In the metals market, copper was \$4 per pound in mid May, three times greater than 3 years ago. Copper prices are being driven by India and China demands. A slow down in the US housing market will lower the US demand. For aluminum, there has been labor unrest in other parts of the world, driving higher prices. Steel has widespread international demand, but production is also increasing. It is projected that prices will demonstrate an upward trend, but not at the rate experienced in 2004. There have been no reports of Portland cement shortages during its sustained demand because of a large internationally available supply.

Mr. Simonson discussed the increased price of gasoline and the affects on driving. He reported that gas tax receipts have shown slight declines, and as a result, he does not expect highway agency budgets to show much of an increase in 2007 or 2008. Mr. Simonson projects for the next 2 years that there will be continued high PPI’s for highway construction in the 8-10% range, possibly up to 15% with high crude oil prices.

Agency/Contractor Training Programs – Michael Ayers, American Concrete Paving Association (ACPA): Mr. Ayers emphasized the importance of training in the highway industry as a means for raising the bar in construction quality and training new entrants into the job market. He gave a historical perspective of training offerings and mentioned that NHI course “Construction of Portland Cement Concrete Pavements” was taught over 70 times, but no sessions taught for 2 years. ACPA’s “How to” seminars, and Concrete Pavements 101 and 210 (M-E design) were briefly discussed.

ACPA is working to meet the needs of its customers for training. It has conducted a member survey to try to determine needs, and it has reviewed a number of other data sources to help target the training. There will be a series of core training modules including concrete

fundamentals, QC/QA, and paving operations training. The survey helped to prioritize an additional 10 modules for 2007 of 26 ideas submitted and considered.

An ACPA Task Force on Training has been created with 5 DOT representatives, 5 contractors, 1 FHWA representative and 1 ACPA executive. There will be a pilot training course in late 2006, and there will be a web-based training course developed.

For more information on the ACPA Training, please contact Mr. Ayers at 217-621-3438 or mayers@pavement.com.

“Making the Most of What You’ve Got +” – Kent Hansen, National Asphalt Pavement Association (NAPA): Mr. Hansen spoke to the issue of escalating asphalt prices, and presented a list of suggestions on how to combat the increasing prices. The list included the use of large stone mixes, thinner surface course mixes, the use of recycled shingles (up to 5% of the mix) and RAP, Reclaimed Asphalt Pavement.

NAPA did a survey on RAP of 100 contractors in 46 States. Responses indicate that many States allow up to 15% RAP, but contractors are not using RAP to the allowable limits. Mr. Hansen said that with the use of 15% RAP no change in the asphalt mix design is needed. He added that contractors informally set the limit of RAP at 15% to avoid making a change in the mix design, or creating a new one. As a result, RAP is not being fully utilized, especially in base course mixes for the lower pavement. Survey results show that there are 4 States that do not allow the use of RAP, and 10 States do not allow RAP with a polymer modified mix.

Mr. Hansen suggested that there are several issues limiting the usage of RAP including the Specification limits in Superpave, specification limits in surfacing mixes, lack of knowledge by specifiers, limits on PMA and binder issues. He then offered several ideas to increase the use of RAP by the States. Mr. Hansen suggested that the RAP stockpiles be covered to keep the moisture content of the RAP down. It was noted that a one percent reduction in moisture increases plant productivity by 13%.

Mr. Hansen then identified some of the key components of QC testing and the impacts of increasing RAP. The two biggest obstacles are the binder characteristics and the percentage of fines in RAP. NAPA is producing a number of publications and hosting a number of activities related to increasing the use of RAP in mixes.

Computers and Technology Section Presentations

Tucker Ferguson, Penn DOT: Section Chairman

Next Generation Trns*port (NGT) – Jim Johnson, FDOT: Mr. Johnson reviewed the Trns*port Strategic Goals. Trns*port offers unified data and security models and business rules. With the software, there is easier deployment, support, training, integration and use which can lead to a lower total cost of ownership for the user agency. The new software will provide an architecture that meets the need of current and future customers, provide more

flexibility to the user agency and will enable easier integration with other systems. All of the goals are available on the software's website.

Mr. Johnson then proceeded to discuss the NGT, which will be a web-based application. It is a complete rework from the ground up, and can be accessed from any computer that has a web-browser. A roadmap has been developed to provide the features that have been requested by the State users. Phase 1 is currently being implemented. Mr. Johnson showed a series of screenshots from the software, and discussed the impacts that the changes will have on construction personnel. He noted that most of the impacts would be transparent to the end-users.

There are several new initiatives underway including the Civil Rights & Labor Management System (CRLMS) that is a \$3.7 million project with an 18-month development plan, and NGT Materials being led by Michigan. Mr. Johnson provided a list of how agencies can help with the development of the Trns*port software. Please visit www.cloverleaf.net/ngt for more information.

AASHTO Technology Implementation Group (TIG) – Tucker Ferguson, PennDOT: Mr. Ferguson briefly explained that AASHTO has a formalized process for implementing technology into construction projects through the TIG. He shared the vision and mission statements of the TIG and mentioned that a webpage could be visited at the AASHTO website, www.transportation.org for more information. Mr. Ferguson mentioned that there are three technologies per year that are focused on by the TIG, and detailed implementation plans of each of technologies are available.

Conclusion of Section Presentations

After Mr. Ferguson's presentation, the session was adjourned.

WEDNESDAY, AUGUST 2, 2006

Computers and Technology Section Presentations

Tucker Ferguson, Penn DOT: Section Chairman

Environmental Management & Environmental Information Management Systems – Wayne Kober, AASHTO Consultant: Mr. Kober spoke on the topic of Technology in Environmental Monitoring and discussed Construction Environmental Monitoring Systems. He listed a number of potential construction EMS focus areas, and made a number of suggestions about addressing environmental concerns and aspects in construction projects.

Mr. Kober then spoke on NCHRP 25-23(2) – Software for an Environmental Information Management & Decision Support System (EIM & DSS). It is built around the framework of ISO 14001 in order for its use worldwide. The system is not only an environmental database, but also a search engine to enable users to access base information wherever it is located. The EIM & DSS system is web-based with a flexible data structure. There is a useful mapping feature and document links. Mr. Kober showed several screenshots from the

software, and reviewed the status of the software development. A pooled-fund project solicitation will be advertised in early 2007.

FDOT Automation of Pile Driving Data Collection – Jim Johnson, FDOT: Mr. Johnson presented a number of reasons for automating the collection of pile driving data. He explained that traditional data collection methods are labor intensive and that the manual process uses a large number of paper forms. Inherently, there is the risk of lost or missing data. Mr. Johnson said that having the data available electronically saves steps in several current State processes, including payment to the drillers. The automated program is currently being used in lieu of the old paper process, and will become mandatory in the summer of 2007.

The first project made use of handheld computers (a PDA), but a switch to laptops was made because of their ease of use. It was said that eventually the handheld devices would be entered back into the data collection process. It was mentioned that there is a central depository located at the University of Florida for all pile data statewide, and in the future, there will be an interface to SiteManager for payment quantity. Mr. David Sadler of FDOT also pointed out that there will be an automated tie to the contractor's payment for the pile driving, and will be an added feature in the coming months.

The Marquette Interchange Project, Delivering a Mega Project Using Today's Available Technology – Nathan Czech, WisDOT: Mr. Czech spoke on the \$810 million Marquette Interchange Project. The history of the interchange was reviewed. It was originally located in 1952, and the existing configuration was constructed in 1968. The current 300,000 VPD exceeded design capacity, and necessitated this major widening/capacity enhancement project. Mr. Czech reviewed the project priorities that included safety, timely construction, public and DBE involvement, and the budget.

Mr. Czech listed a number of unique WisDOT implementations that have been used to facilitate construction. Primavera Project Planner, Expedition, and Field Manager are software packages that are being utilized on the project. The schedule is managed carefully and milestone goals are monitored. The cost to complete the project is calculated forward using the Primavera Expedition software. Issue management and resolutions are enhanced through the document controls in the software.

Mr. Czech said that 18% of the project costs have been awarded to DBE firms and 95% of the personnel involved with the project are from Wisconsin. Public information is readily available on the www.mchange.org Website, and a number of screenshots were shown. In addition, several printed guides being used for public information dissemination were illustrated. It was pointed out that WisDOT and its project partners have made a concerted effort in establishing and maintaining good public and media relations.

The project employs the first owner-controlled insurance program (OCIP) in the State. The project is in its third year, and is on schedule and on budget.

Research Steering Committee Presentations

Byron Coburn, VDOT: Section Chairman

Overview of the National Cooperative Highway Research Program (NCHRP) – Crawford Jencks, Transportation Research Board (TRB): Mr. Jencks gave an update of the program. He began by reviewing the organizational structure of the National Academies, the Transportation Research Board, and the National Cooperative Highway Research Programs, and the other cooperative research programs in Aviation, Transit, and other.

Mr. Jencks described how SAFETEA-LU created a new task for TRB; the Strategic Highway Research Program II (SHRP II). It is funded at \$35 million per year for 6 years, after originally being designated for \$51.25 Million per year. Mr. Jencks discussed the themes for SHRP II, which are Safety, Renewal, Reliability and Capacity. The major issue is to re-prioritize research programs to match the reduced funding levels.

The NCHRP Program is managed by TRB, but funded by AASHTO in cooperation with FHWA. The State Planning and Research Funds are 2% of every State's capital improvement program, and 5.5% of those funds are recommended by AASHTO to support NCHRP. There is an applied research focus instead of a fundamental research focus. Mr. Jencks reviewed the historical funding levels of NCHRP, and some of the products of the research. He then reviewed a number of projects that were selected in March 2006 that may be of interest to the SOC.

There are a number of "Sub-Programs" in NCHRP, including:

1. Synthesis Program (20-5)
2. Legal Studies (20-6)
3. AASHTO Standing Committee on Highways (20-7)
4. Addressing State DOT Leadership (20-24) – policy recommendations
5. NCHRP-IDEA Program (20-39) – note Pavement Quality Indicator product
6. International Scans (20-36)
7. Domestic Scan Program (20-68) – Transportation Asset Mgt.

Problem submittals for FY2008, and the programming for FY2007 were reviewed by Mr. Jencks. More information is available by visiting www.trb.org.

Design Guidance for Construction Work Zones on High-Speed Highways – Kevin Mahoney, Pennsylvania State University: Dr. Mahoney discussed NCHRP 3-69, a hard-copy research report. It is intended to compliment the AASHTO Green Book, MUTCD, the AASHTO Roadside Design Guide (Chapter 9), and the Design Decision Guidance for Work Zones on High-Speed Roadways. The study covers both temporary traffic controls, and more permanent construction traffic controls.

Dr. Mahoney reviewed each of the six chapters that make up the draft report. He discussed a number of "hot-button" issues covered in the guide documents including night work, contracting issues for traffic control, sight distance, work-zone alignment, super-elevation,

interchange ramps and barrier placement. Dr. Mahoney said the document reviews six common types of barrier placement scenarios, and a cost/benefit analysis model for each scenario is presented in the research report.

Their study provides six recommendations for design guidance as outcome of a States survey that yielded 32 responses. Dr. Mahoney said the NCHRP Report comment period has been extended to allow for comments by the various AASHTO committees. For this project, there is a normal NCHRP panel and a committee of agency reviewers. Comments may be submitted to Dr. Mahoney at khahoney@psu.edu.

Findings from NCHRP Projects on Surface Texturing and Pavement Friction – Jim Hall, ARA, Inc.: Dr. Hall reviewed NCHRP 1-43 “Guide for Pavement Friction.” The objective of this project is to develop a guide for consideration and adoption by AASHTO. The report contains an overview of pavement friction, how it is measured, and policy recommendations.

Dr. Hall discussed the importance of friction, its impact on crash rates, and the cost to society because of friction loss. The basis of friction testing is covered in the report, and there is an accompanying technical report that includes a good “primer” on friction. Microtexture and Macrottexture are presented, as is the International Friction Index (IFI.)

Friction management was described as a systematic approach to measuring and monitoring friction quality and wet crash rates. There are two levels of management, which include investigatory and intervention. Dr. Hall explained that intervention should require some sort of action on the DOT’s part. Because friction changes over time, agencies are able to develop deterioration curves for various pavement types at the network level, thus providing the necessary data to manage the system.

Dr. Hall then reviewed NCHRP 10-67 – Texturing of Concrete Pavements. He explained that this report is behind schedule, and the publication date has been delayed. The purpose of the report is to recommend methods for concrete texturing to provide adequate friction and to reduce noise. The report is recommending 10 construction methods that will move forward to the field with the construction of test sections. Dr. Hall requested the assistance of the committee to locate potential projects that could be used as test sections.

Conclusion of Section Presentations

After adjourning at midday, the group spent the afternoon participating in the Puerto Rico Technical Tour, which included a site visit to the La Plata River Bridge Project, the first cable-stayed bridge constructed in Puerto Rico.

THURSDAY, AUGUST 3, 2006

Environment and Human Resources Section Presentations

Bob Watson, MaineDOT: Section Chairman

FHWA Work Zone Safety and Mobility Rule (WZ Rule) – Michael Davies, FHWA: Mr. Davies started his presentation in noting that an average of 3 people per day are killed in work zones. He reviewed a number of implementation guides that have been developed by FHWA and referenced the FHWA website, www.ops.fhwa.dot.gov, click on Work Zones. It was noted that the WZ Rule is published and available on the AASHTO SOC website.

Since the WZ Rule was published, FHWA has conducted a series of workshops to assist the States in implementing the Rule. Mr. Davies said that “significant project” definitions are varying from State to State. He observed that process reviews and data collection need to be enhanced in many States, and impacts assessments and training are varying widely among the States. Many States formed a workgroup to implement the WZ Rule, and most States will meet the intent of the rule in 2006 or 2007.

Mr. Davies reviewed a variety of best practices from various States Work Zone policies. States that were highlighted included Maine, North Dakota, New York, Maryland, Caltrans, Indiana, and Ohio. Further, he reviewed the goals and objectives that were developed by the States that attended a Northwest Regional workshop. The examples he provided are also on the FHWA Work Zone Rule website. Finally, he reviewed the additional guidance and support efforts that FHWA has taken to help States implement the Rule.

Staying Out of Trouble Meets Doing the Right Thing: DOT Methods for Systematic Environmental Compliance in Construction – Marie Venner, Venner Consultants: Ms. Venner’s presentation addressed environmental compliance in construction and focused on erosion and sediment control best practices. Ms. Venner provided a list of States with Consent Decrees for water quality violations from the EPA. Regulators found an assortment of problems related to erosion control prevention and storm water management. States were asked for immediate solutions to the problems identified. Ms. Venner emphasized that regulatory actions can affect the DOT in a number of ways including project delays, cost increases and poor publicity.

The efforts in Washington State to achieve compliance with the EPA regulations using its construction Environmental Management System (EMS) were discussed. Other State DOT EMS programs that were mentioned in Ms. Venner’s presentation included Maryland, North Carolina, Virginia, Pennsylvania, Utah, Colorado, and Texas. Also, briefly discussed was the AASHTO “Evaluation of Commitment Tracking Systems.”

It was mentioned that NHI is working to develop a new class on Environment Compliance in Construction, and volunteers from the States to serve on a technical panel will be sought.

Transportation Curriculum Coordination Council (TCCC) Update – Lee Onstott, NMDOT: Mr. Onstott provided some background on the TCCC, mentioning that it is a 6-year-old partnership between AASHTO, State DOTs, FHWA, LTAP Centers and industry aimed to improve training for the development of a high quality workforce. The TCCC has delivered 23 courses, 5 are currently under development, and 9 more are being considered. It was mentioned that Pete Rahn, Director of MODOT, is working with the Executive Leadership of AASHTO and that a 5-year work plan has been developed by the TCCC.

Mr. Onstott reviewed some of the new training that is now available through the TCCC and NHI:

1. Construction Inspection, Workmanship and Quality
2. Bridge Construction Inspection
3. Inspection of MSE Walls
4. Subsurface Investigation
5. Partnering for Improved Quality
6. Pavement Preservation: Design & Construction of Quality Preventive Maintenance Treatments

In addition, there are 5 classes under development through NHI. Mr. Onstott then discussed the Sandbox Project. This demonstration project involves converting existing PowerPoint presentations to web-based training. FL, LA, KS, and IA participated in the Phase 1 demonstration. Phase 2 will involve more states, and will start in August 2006.

The TCCC can be used by the State DOTs to help develop an organized system of training courses for their agencies and to help fill gaps in training. There is a pooled-fund to provide support for the TCCC with \$800,000 currently available for course development. The TCCC's website is <http://www.nhi.fhwa.dot.gov/tccc>.

Environmental Management Systems, 2006 Implementation Survey – Robert Pieplow, CalTrans: This 2006 survey was a follow-up of the 2003 AASHTO Survey. Mr. Pieplow presented the AASHTO definition of an Environmental Management Systems (EMS), and discussed the scope of the EMS. He then discussed some survey results contained in the 2006 AASHTO survey report. In 2006, 46 States responded that they are aware of EMS. This was an increase from 3 States listed in the initial 2003 survey. 45 States thought that an EMS is an effective tool. 12 States have implemented an EMS, while 15 States have one under development.

The report makes a number of comparisons between the 2003 and 2006 survey, and it is apparent that good progress is being made in this initiative.

Automated Speed Control in Work Zones – William Tente, Nestor Traffic Systems: Mr. Tente began his presentation by noting several alarming statistics regarding work zones. There are 3 fatalities per day, an injury occurs every 9 minutes in a work zone and the cost of speed related crashes is \$40.4 billion per year.

Mr. Tente discussed a work zone speed study in Maine on I-95. An officer's presence in a work zone has a huge impact on vehicular speed in the work zone. Because police officers cannot always be present, several technologies can be used to address speed in the work zone including loops, photo radar, LiDAR and ViDAR (video distance and recognition.) LiDAR was explained as a laser system that is a multi-beam, time of flight measurement. It can extend across 4 lanes of traffic, and is highly accurate. Mr. Tente reviewed the benefits of using this technology. He used studies from Massachusetts (I-195) and Akron, Ohio.

Mr. Tente then discussed the certification of the various technologies in both Germany and the USA. He noted that the use of automated enforcement often requires legislative action. 10 states currently have automated enforcement.

“We’re in this Together”: Current ARTBA Issues – Edward Nyland, George Harms Construction Co.: Mr. Nyland is the Contract Administration Committee Chairman of the American Road & Transportation Builders Association (ARTBA), which has a membership of 5,000 nationwide. Mr. Nyland presented a list of issues that are of importance to ARTBA members at the national level. He discussed 1) short and long-term funding at the State and Federal levels, 2) price escalations, 3) the Industry’s image, and 4) ethics and integrity in the industry.

Mr. Nyland discussed several contracting issues of interest to ARTBA. These included 1) highway material cost increases, up 30% between 2004-2006, 2) the need to improve the accuracy of engineer’s estimates because of historical data not reflecting true prices in a current economy experiencing rapid price increases and other issues, 3) competition and risk, noting that single bids are an issue nationwide, and worsen by the long-term funding issues for projects of longer duration, 4) safety unit bid pricing, where SAFETEA-LU has a unit-bid price provision that can help safety conscious companies compete against companies that are not so safety inclined, 5) innovative contracting, and 6) public-private ventures, where ARTBA would like the assurance that toll revenues are directed back into the transportation infrastructure, and not taken to fill budget gaps in other areas.

Business Items/ Questions and Answers Session

Thomas Bohuslav, TxDOT: Vice-Chairman

Mr. Bohuslav discussed the afternoon schedule for the Technical Sections. He asked that the members review their Section assignments, and reminded the members to participate in at least one Section or serve as a liaison to another Subcommittee. He mentioned that Research is a key area because of TRB’s SHRP II assignments.

Mr. Bohuslav asked the State members if any of their programs would continue with the use of Metric units. Every State present said they were moving back to English units, except for Puerto Rico.

Mr. Bohuslav recognized Mr. Jim Sorenson of the FHWA. Mr. Sorenson stated that there was a need to do more to improve the consistency of stewardship by the FHWA, since there are 52 division offices. Mr. Sorenson noted that his office has performed 20 reviews as a

part of the Pavement Preservation Technical Review and Evaluation program. Preliminary findings have indicated the need for some additional reviews, and Mr. Sorenson suggested that a similar "Construction Program Management Process Evaluation" should be implemented. He said there is a need to put together a construction evaluation guidelines document and a database for benchmarking. In addition, good case studies are called for to help the States improve their programs.

Mr. Sorenson said that he has put together a team to help with the new review. This would be a no-risk evaluation similar to the pavement preservation reviews. He asked how many States would like to participate in this effort, of which approximately one-half of the States raised their hands.

Mr. Onstott of NMDOT noted that the 52 different division offices will take different approaches, and some could be negative. Mr. Dayton of WSDOT asked how this new program review would be different from the construction reviews under the existing PDIT process. Mr. Sorenson noted that there are some issues with current oversight efforts, and not every State would fare well in a formal audit. This process would help the States by developing a uniform process in an informal way. Mr. Bohuslav expressed concern that this might be a superficial review at too high of a level to provide value to the States. Mr. DeWitt of NCDOT noted that the detailed reviews are very specific topic areas, and that they are not global enough to help direct the programs.

Mr. Sorenson discussed a preliminary plan and schedule to begin the task. Based on the feedback received, he suggested that it would be approximately June 2007 before the first review could occur.

Mr. Graham of GADOT voiced that he did not want to participate in this new program because the existing process reviews are sufficient. He expressed concern about the staff time the new review would require. Mr. Sorenson said that a survey would provide 104 different perspectives – and there is a consistency need for these types of reviews.

The Arizona DOT said its relationship with the FHWA Division Office is very positive, but the office is overworked and it has a difficult time in getting all the reviews done.

Mr. Sorenson said that the deliverables of Construction Program Management Process Evaluation would be 1) a verbal closeout, 2) a written report and 3) a national database that can be used for benchmarking. Mr. Sadler of FDOT volunteered his State to participate in the program. Mr. Bohuslav will work to provide additional names.

The Subcommittee's Technical Sections convened to develop their Final Work Plans. The information from these sessions is included in the individual Section Reports provided in Attachments B through F of this document.

Final Business and Wrap-up Session

Len Sanderson, NCDOT: Chairman

The session was called to order by Mr. Bohuslav, Vice-Chairman of the SOC. He asked each of the Technical Sections to present their 2006/ 2007 Work Plans for the coming year. The Work Plans presented by the Section Chairman can be found in Attachments B through F of this document.

Chairman Len Sanderson called Tommy Beatty to the podium. Mr. Sanderson read a resolution recognizing Mr. Beatty's service as the Secretary to the SOC since 2002. Mr. Beatty received the applause of the members present.

Mr. Bohuslav recognized Steve DeWitt of NCDOT who presented a resolution on the Construction Management Expert Task Group, since renamed the Construction Management Integration Technical Group, or CMITG. Mr. DeWitt said the intent of the resolution is to recognize that construction management is a broader term and encompasses more than just construction; it also involves pre-design activities, planning, environmental clearances and more. Mr. Sanderson said this resolution was important in order to establish which group would take the lead in dealing with the issues contained in the resolution, particularly design-build. Mr. DeWitt added that this would be an inclusive group. Mr. Jim McDonnell of ASSHTO noted that the Design Subcommittee would need to concur with this assignment. Mr. Bohuslav also noted that this would require a minor change in assignment for the SOC from the Subcommittee on Highways. There was discussion that the resolution could force DOT organizational change, but it was explained that the resolution would actually define where AASHTO assigned these issues for consideration. Mr. Bohuslav counted 29 States present, which is lacking a quorum, so no official vote could be taken. The SOC members present held a straw vote, and it was overwhelmingly recommended to move to a full vote of the SOC. More information on the proposed policy Resolution on Construction Management can be found at https://websurveyor.net/wsb.dll/30839/CN-06-02_PPR_SOC_Functions.htm.

Mr. Bohuslav presented an Illinois video to the Subcommittee promoting Chicago for the 2009 summer meeting location. The Subcommittee approved this location.

Mr. Bohuslav then presented several questions to the SOC:

1. Owner Controlled Insurance Programs used in lieu of bonds? Byron Coburn, VDOT, said they had received a request from the commission to make this change. No one does this.
2. Issues with the delivery of materials by train rail and truck? Kansas said that supply by trucking is an issue. Texas said the small suppliers were having a problem with both trucks and rail in the eastern part of the State. Florida has had problems with trucking and availability with aggregates. Several States said they were having issues with mines for aggregates.

3. Have other States changed inspector certifications for the use of GPS Technology? Bob Watson, MEDOT, said this has been an issue in Maine, since contractors are using the base station, and the State inspectors have no means for independently checking the work. David Graham, GADOT, said this is becoming an issue in Georgia and Mr. Bohuslav said it was an issue in Texas. Others said it was an issue in Oklahoma and Rhode Island.
4. Are there any States that do not allow longitudinal tining in standard specifications? The States of WA, MN, TX, FL, AL, WY, MD, WV, OR, MS, OK, ID responded. MN is constructing PCC pavements without tining.
5. Are dowel bars required to be in transverse joints with mechanical insertion? Kansas has a new computerized radar system that measures the location of the bars.

The Mississippi DOT extended its invitation to the SOC members to come to Biloxi, MS, for the 2007 meeting. It was noted that the hotel selected for the meeting is being rebuilt with a large amount of money being reinvested into the facility.

Mr. Sanderson recognized Mr. Lee Onstott, from NMDOT, and Mr. David Graham from GADOT, who are both retiring from their respective agencies. In closing, Mr. Sanderson thanked all of the members for attending the meeting in San Juan, the leadership of the SOC for their work throughout the year, and the Puerto Rico Highway and Transportation Authority staff for their work in hosting the summer meeting.

ATTACHMENTS

Attachment A – AASHTO SOC Officers and Meeting Attendance List

Attachment B – Contract Administration Section Report

Attachment C – Roadway and Structures Section Report

Attachment D – Computers and Technology Section Report

Attachment E – Environment and Human Resources Section Report

Attachment F – Research Steering Committee Report

Attachment G – FHWA Meeting Minutes

Attachment A

AASHTO SOC Officers and Meeting Attendance List

AASHTO Subcommittee on Construction Officers

Chair: Len Sanderson (NCDOT)
Vice Chair: Thomas R. Bohuslav (TxDOT)
Secretary: Tommy Beatty (FHWA)

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Revised: August 7, 2006

**AASHTO Highway Subcommittee on Construction
2006 Summer Meeting, San Juan, Puerto Rico
Attendance List**

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Attachment B

Contract Administration Section Report

**Contract Administration Section
Meeting Minutes
AASHTO Subcommittee on Construction
July 31 and August 3, 2006 – San Juan, Puerto Rico**

2006-2007 Section Leadership

*Chairman - Cal Gendreau, North Dakota DOT
Vice-Chairman - Jeff Benefield, Alabama DOT
Secretary - Jerry Yakowenko, FHWA*

Minutes

Mr. Gendreau welcomed the Subcommittee members and guests to the 2006 Contract Administration Section meeting. Forty-three representatives including sixteen State DOTs attended the meeting.

2005-2006 Work Plan Accomplishments

The first order of business was a review of the status of the 2005-2006 Section work plan. The following is a brief summary of the status and accomplishments of the work plan items:

1) *Complete the update of the Fifth Edition of the “Primer on Contracting for the 21st Century” (Yakowenko)*

The fifth edition of the "[Primer on Contracting for the 21st Century](http://www.transportation.org/sites/construction/docs/Primer%20on%20Contracting%202006.pdf)" (<http://www.transportation.org/sites/construction/docs/Primer%20on%20Contracting%202006.pdf>) was completed in early 2006 and posted on the AASHTO Subcommittee on Construction web site in PDF format. The Fifth Edition has many hot links to contract administration research reports, State DOT web sites and State DOT state of the practice reports.

2) *Develop an AASHTO position paper in response to the US DOT OIG report on Errors and Omissions (expected to be published in 2005).*

The OIG cancelled its review of errors and omissions in early 2006; therefore, this work plan item is also cancelled.

3) *Best practices for capturing unit cost information on lump sum contracts (assigned to Ananth Prasad, FDOT).*

Florida DOT developed guidelines for the use of lump sum bidding on construction contracts. Florida DOT's "[Lump Sum Project Guidelines](http://www.dot.state.fl.us/rddesign/updates/files/ls010402.pdf)" (<http://www.dot.state.fl.us/rddesign/updates/files/ls010402.pdf>) accomplish the intent of this work plan item. The Contract Administration Section may want to revisit this subject when FDOT or other states gain more experience with lump sum bidding.

4) Survey the states regarding the availability of State “precluded from bidding” or State “Suspension/Debarment” lists. Provide this information to FHWA for posting on their Suspension / Debarment web site. (Ananth Prasad – Florida DOT, Steve DeWitt- North Carolina, Julie Trunk – FHWA, Jerry Yakowenko – FHWA, John McAvoy – FHWA RI)

The US DOT Office of the Inspector General has established a web site that provides links to suspension, debarment and precluded from bidding web sites from various transportation contracting agencies. The “suspension, debarment, administrative and judicial action link” on the [OIG “Topnet” web site \(http://www.topnet.gov/sdc.jsp\)](http://www.topnet.gov/sdc.jsp) satisfies the intent of this work plan item and should provide a convenient web-based source for contracting agencies to view the current administrative actions of other states.

5) Survey the states on issues and practices related to single-bid construction contracts and State DOT efforts to ensure competition. (David Donoho-Tennessee, Steve DeWitt – North Carolina, Steve Mills – FHWA AL, Gene Hoelker – FHWA – MWRC).

This work plan item was combined with another issue regarding price increases and competition. On March 9, 2006 AASHTO issued a web-based national questionnaire titled: “Survey on Recent Construction Cost Increases and Competition in Construction Contracts.” Several Contract Administration Section members assisted in the development of the questionnaire. A narrative paper summarizing the responses to the questionnaire and a PowerPoint presentation are available from Mr. Yakowenko, FHWA.

6) Upon request, provide guidance on the update of the AASHTO Guide Specifications for Highway Construction (Section 500 – Brenda O’Brian – Michigan DOT, Section 100 Jerry Yakowenko- FHWA).

It was noted, however, that there were no specific requests for assistance on these specifications.

2006-2007 Work Plan

- 1) Develop a report on “Current Strategies to Address Increased Highway Construction Costs and Reduced Competition”. The report will be based on the March 2006 AASHTO survey responses. Mr. Sanderson needs this report in time for the October 25th Subcommittee on Highways meeting; therefore, it is imperative that the Contract Administration Section complete its work by October 1. The report will:
 - a. Identify and define strategies to reduce costs / increase competition,
 - b. List states using the strategy, and
 - c. List state contacts (ie. the person who responded to the March 2006 AASHTO survey).

Mr. Yakowenko will prepare a draft report and E-mail this draft report to the entire Contract Administration Section for review and comment. He will also coordinate with the following SOC Contact Administration Section members who volunteered to

serve as final reviewers for this effort - Cal Gendreau, Jeff Benefield, Jerry Yakowenko, Steve DeWitt, Chris Schneider, Jim McDonell and Byron Lord.

- 2) *Maintain the ["Primer on Contracting for the 21st Century"](#). This document was revised in 2006. The Section should plan to update this every three years; next update planned for 2009).*

 - a. Team Members: Jerry Yakowenko, Jerry Blanding
 - b. Other Section members may provide recommendations / editorial suggestions to Mr. Yakowenko at any time during the year.

- 3) *Update information on State use of price adjustment clauses*
 - a. Mr. Yakowenko will circulate a spreadsheet summarizing the current use of price adjustment clauses to all State DOTs with a copy to all FHWA Division Office Contract Administration specialists.
 - b. FHWA will collect State DOT provided special provisions and/ or provide web links on the FHWA's web page for "price / competition issues."- 4) *Liaison with the FHWA / AAHSTO / Industry DBE Work Group* – Mr. Eisenhart (Wyoming) volunteered to have a member of his staff participate in review activities to the extent personnel resources and time permits.
- 5) *Develop program for the 2007 SOC meeting.* The group discussed potential topics for consideration for next year's Contract Administration Section portion of the Subcommittee meeting. These topics include:
 - a. Fraud indicators, with an emphasis on cases studies identifying the methods and procedures that were used to detect and document fraud,
 - b. Alabama DOT's research concerning liquidated damages,
 - c. An update on Construction Management Expert Task Group activities,
 - d. Construction performance measures for benchmarking (statistics on overruns, contract modifications, schedule compliance, etc. (Washington State DOT suggested as an example),
 - e. Performance contracting framework and its use in the Highways for Life program,
 - f. Missouri's "Practical Design" program and other programs to reduce costs, and
 - g. Mandatory use of critical path method scheduling (North Dakota).
 - h. Non-traditional contracting for emergency relief projects (Mississippi).

Construction Contract Administration Related Research Needs

Mr. Benefield led a discussion of construction management / contract administration research needs. Potential research topics included:

1. Cost / Benefit analysis for innovative contracting techniques
2. Effectiveness of alternate pavement bidding procedures
3. The effects of time-related incentive/disincentive provisions on quality and long term performance
4. Issues relating to single-bid contracts

5. Legal issues associated with the use of liquidated damages
6. Innovative ways to use road user costs to provide increased contractual incentives
7. Quality of consultant work
8. Bonding/ surety requirements for warranties
9. Comparison of bid prices versus engineers estimates related to the time of the year and State DOT letting cycle
10. Green highways / recyclable products
11. Innovative cost cutting techniques (practical design)
12. Synthesis on the definition of “substantial completion”
13. Synthesis on inefficiency claims
14. Synthesis on pavement markings and applications
15. Synthesis on proprietary issues for materials
16. Cradle to Grave Project management
17. Life Cycle Cost Determination beyond pavements
18. Cost Estimating for DB Project
19. Value Engineering for DB
20. Scope Development for DB
21. Materials Acceptance
22. Mitigating Barriers to Bonding/Insurance of Small Businesses
23. Methodologies for Post Construction/Maintenance Feedback
24. Risk Allocation (underway by ETG)
25. Synthesis of Innovative Cost Cutting Tech
26. Innovative Construction Techniques Regarding Safety
27. Costs Associated w/ Awarding Contracts
28. Weather Delays on Cal Day/Completion Date Projects
29. Reduced construction windows/ traffic best practices

After some discussion, the CA Section members voted on their top research needs. The SOC Research Committee members recommended the following subjects for further consideration:

1. Methods of Handling Traffic when the construction window is limited (what are the best practices when the time of allowable lane closures is very limited) (7 votes)
2. Weather Delays on Cal Day/Completion Date Projects (5 votes)
3. (tie) Methodologies for Post Construction/Maintenance Feedback (how does the end user get comments back to the designer, project manager, etc) (4 votes)
3. (tie) Innovative cost cutting techniques (practical design) (4 votes)

During the Thursday afternoon Contract Administration Section Meeting, Mr. Benefield reported that “Methods for Post Construction/Maintenance Feedback” and “Methods of Handling Traffic when “Construction Window” is Limited” will be advanced for NCHRP 20-7 consideration.

In addition, Mr. Benefield mentioned that the SOC Research Steering Committee would revise and resubmit the following two topics for consideration:

- 1) From the Roadway and Structures Section (Dave Sadler):
“Analysis of Nighttime Construction Activities on Safety, Quality,”

2) From the Contract Administration Section (Steve DeWitt):
“Bid Alternates Using Life Cycle Cost Determination.”

Other Issues

The Contract Administration Section members also discussed potential topics for the International SCAN program. Potential topics include:

1. Lessons learned from the procurement of concessions or public-private-partnerships through the operational experience of countries that years of experience
2. Project delivery methods
3. Cost considerations in project development (Life cycle cost, cost / benefit analysis, engineering economy, etc.),
4. Performance Contracting
5. Innovative construction technology

Attachment C

Roadway and Structures Section Report

**Roadway and Structures Section
Meeting Minutes
AASHTO Subcommittee on Construction
July 31 and August 3, 2006 – San Juan, Puerto Rico**

2006-2007 Section Leadership

*Chairman – Kevin Dayton, Washington State DOT
Vice-Chairman, Structures - Mark Elicegui, Nevada DOT
Vice-Chairman, Roadways – David Sadler, Florida DOT
Secretary – Gus Shanine, FHWA*

July 31, 2006 Breakout Session

After Kevin Dayton welcomed the Subcommittee members and self introductions of the attendees, the Section discussed the previous year work plan. The following work items were completed from the 2005/2006 Work Plan:

2005/ 2006 Work Plan Accomplishments

1. Completed the Development of research topics for roadway and structures.
2. Continue to work on cataloguing the various practices of reviews (constructability, VE, contractor solicited input, and post construction feedback) to improving the quality and effectiveness of plan sets. This will continue as part of the 2006/2007 Work Plan. Julio has done lots of work on VE and post construction reviews. Julio has collected information on CM@Risk. TxDOT, FDOT, Oregon DOT allows contractors to review plans prior to bid as constructability review. ODOT starts reviews at 30% and goes through its AGC to select a contractor to review the plans. TxDOT does thorough review of select projects. Post construction reviews. Survey. Greg Doyle suggested that just solicit ideas from the states on their best practices – suggested question in Tidbits to solicit this in an issue. Rob Elliott volunteered to help Julio with this.
3. Inspection of Specialty Work (ITS, bridge painting, building construction, moveable bridge construction, R/W procurement, haz/mat, environmental inspections). Dan Liston has got a good start on completing this task and will continue the effort to complete the development of the survey to query the states in the 2006/2007 Work Plan. He will define what is a specialty type service (ask states and let them identify (from pull down menu) which of the listed items are specialty works. How these inspections are being accomplished. Summarize the results and report the best practices. It could be useful in gaps in inspection certifications/training. How do states make the decision on what will expend funds to train in-house staff or to outsource the services. It was suggested that Chris Newman should review the survey prior to submitting to member states. Rob Elliott volunteered to assist Dan in the development of the questions.
4. Completed the “Tid Bits” newsletter for DOT’s task. “Tid Bits” is being done now with the different SASHTO, etc groups and information is being provided each quarter. Our Section will continue providing input and “Tid Bits” coordination in the 2006/2007 work plan

5. Completed the task in coordinating the communication within section to accomplish the current work plan, create future work plans and develop presentations for the 2006 Meeting.

Research Projects:

Several areas were discussed to research this year. The topics presented for consideration this year by the members of our Section were as follows:

Research topics –

1. Bridge deck expansion joints – what are the best practices being used in the different states and different environments? What are states having success with and what types are not working well? Some states are having problems finding bridge joints that hold up to traffic, freeze/thaw conditions, road salts, etc. – are there any that outlast the overlays? Seem to crumble within 2 feet of joint. Lengthening of the studs helps. Finger joints, armor joints, modular joints, etc. Asphalt plug joints – Vermont. What are states having success with? DOMESTIC SCAN TOUR POSSIBILITY. DEFER TO AASHTO STRUCTURES COMMITTEE FOR THEIR FOLLOW UP.
2. Low permeability concretes in areas where snows are salted. Balance needed between admixtures, workability, low water/cement ratios. What have other states done with this? What other impacts on long term durability have states seen with admixtures? VDOT has done research on this. Low w/c, high cementitious materials. Admixtures and their affect on shrinkage cracks and workability. Synthesizing the available information on this. REVIEW CURRENT INFORMATION ON THIS AS THERE HAS BEEN A LOT OF WORK ALREADY DONE ON THIS.
3. Warm mix asphalt – synthesis of this technology and performance of these mixes. Challenges demonstrated so far with the WMA. Temperatures focused around 250 degrees, some have been used at below water boiling point. ALREADY MUCH WORK BEING DONE ON THIS.
4. Synthesis on practice of asphalt mix designs –
5. How comfortable are states with their inspection programs? John Benson, FHWA, Synthesis on this was done a few years on the materials testing. Feels that research would be of value as a complement to that synthesis. OkDOT has not had formal training in 20 years. Veterans are retiring, not able to “take under the wing” new hires for mentoring. Facing lots of transitions. Managing Construction Workmanship course is developed and ready for delivery. A synthesis on this in not in the scope of TCCC efforts on this. This is independent of Contracts administration and independent of Materials testing. What are states doing with their inspection staff development? DOMESTIC SCAN TOUR POSSIBILITY. Group thinks this needs to be kicked back to TCCC.
6. Condition assessment of roadway and structures would be a good topic for synthesis for best practices – provide ideas useful to the states to help them make assessment and set service levels for themselves – how are states allocating resources to the assets. Have consultant take a look at data collection methodology, data analysis tools, rating methods, marketing plans – letting public know we’re being good stewards of taxpayer money.

Steve. THINKS THIS BETTER FOR AASHTO MAINTENANCE COMMITTEE.

a) Synthesis: Best Practices for Roadway and Structures Condition Assessment

Assessment Services

In-House vs. Contracted

Data Collection Methodologies

Measures of Conditions

Data Requirements

Analysis Tools

Remaining Service Life Analysis

Customer Satisfaction Rating Methodologies

Assessment Reporting

Use of GIS

Marketing Plans

Use of Condition Assessment Data

Resource Allocation/Asset Management Decision Making

Planning for Future Reconstruction/Rehabilitation/System

Preservation

Benchmarking

Multi-year Plan Preparation

Financial Reporting

Make sure submittals have that proposal comes from AASHTO SOC.

Will carry forward last year's list of potential research topics to this year's list if still pertinent.

Review of these carryover topics led to a few being deleted.

- Building complete bridge structures(superstructures/substructures) away from job site (South Dakota have tried it, Florida is considering applying this idea for superstructures)
- Perpetual pavement, unbonded concrete overlay
- Smoothness specifications
- Safety in work zone, use of ITS
- Minimum cement values/use of fly ash in concrete mix on pavement
- Bridge deck expansion joint emergency repair, bridge coating (Use of powder coating or protective coating)
- Surface texture on PCCP
- Use of GPS in construction (What is working and what are the disadvantages)
- Staging of construction projects to reduce impacts to traveling public (Innovative ways to expedite the completion of projects)
- Innovative Contracting techniques
- Impact associated with night work (Safety, quality, staffing, noise)

Vice Chair David Sadler was selected from our Section to present the research topics the second day, taking into consideration the following 17 research problem statement titles in the order of the recommended implementation plan in project NCHRP 1058(1):

1. Evaluation of the use of incentives/disincentives I/Ds to reduce time to complete highway projects
2. Analysis of nighttime construction activities and impacts on safety, quality, and productivity
3. Expanded use of contractor-performed QC processes for acceptance of highway projects
4. Implementation of the use of new materials into highway construction practice
5. Innovative rapid construction/reconstruction methods
6. Improve safety of public and workers during highway reconstruction and maintenance
7. Alternative contracting methods and delivery systems to facilitate faster construction/reconstruction
8. Impact of strategies to manage traffic during highway projects on construction methods, productivity, schedule, and quality.
9. Recruiting, promoting, and retaining of qualified personnel in highway construction
10. Implementation and evaluation of performance-related specifications (PRS) for highway construction
11. Identification, evaluation, and implementation of rapid test methods and non-destructive testing (NDT) to assess quality in the construction process
12. Training and workforce development of SHA personnel
13. Constructability review process implementation plan
14. Determination of strategies to manage the reduced staff size and increased workload of SHA personnel
15. Identification, evaluation, and implementation of performance-related acceptance tests
16. Best practices for community outreach during construction
17. Best practices for managing environmental restrictions and requirements

The recommended research program is expected to span approximately 10 years.

The research team is currently awaiting the NCHRP 10-58 panel's review and comments.

Domestic scanning tour topics:

- MSE Walls installation
- Percent within limits and use of contractor's QC test results for payment. Possibly better as a survey. As a domestic scan, would go to those states that are currently using PWL.

Kevin Dayton discussed the 2006/2007 Work Plan with the group. We decided to carry 3 items from last year and we established several new ones.

August 3, 2006 Meeting Summary

Mark Elicigeu was not present. Chair Kevin Dayton and Vice Chair David Sadler began the meeting by stating the need for our group to finalize the work plan for next year and seek ideas for presentations next year. The subcommittee submitted the following 2006/2007 Work plan.

2006/ 2007 Work Plan

1. Amount of time inspectors spending time not inspecting –Emphasis of this is to review the amounts of time inspectors are spending doing work other than inspecting to determine if there are areas that can be improved upon by determining if there is value in the non-inspection work being done. Are there opportunities to reduce paperwork or data collection? What parts add value? **Joint effort Dan Liston and Steve Mueller.**
2. Construction workmanship and QA program. Obtain and summarize current best practices for inspection and measurement of workmanship. Prepare recommendation QA program guide (which includes workmanship) for SOC. **Joint Effort Greg Doyle, Arizona DOT**
3. Pavement markings – Scope of effort entails a white paper describing the best practices being used around the country. Will look at removals of existing striping, transition areas, and installations of new stripes. **Joint effort with Terry McDuffie and Mike Pope.**
4. Develop a catalogue of various practices of reviews (constructability, VE, Contractor solicited input, and post construction feedback) to improving the quality and effectiveness of plan sets. Market the result of this effort to DOT's. **Julio Alvarado, Assist from Rob Elliott.**
5. Conduct a survey to determine how DOT's are accomplishing specialty construction inspection (ITS, Bridge Painting). Specifically determine if it is through outsourced means or State resource, the type of certification process used (if any), and the relative cost difference in outsourced services compared to agency staff. **Dan Liston, Assist from Rob Elliott.**
6. Continue to on building the usefulness and content of the "Tid Bits" newsletter for DOT's. **Cathy Nicholas**

Potential Presentation Topics for Next Year:

- Web applications for plan review comments
- CM @ risk
- Certification of Inspectors/Training
- Perpetual pavement in Illinois/Arkansas
- Use of prefab/precast overnight construction on bridges to expedite delivery of projects (Vancouver Portland bridge)
- Warranty on Pavement
- Performance base specification
- Deck Failure (Cracking, delamination)
- Bob Rea (Fly ash/cracking of concrete)
- Concrete issues (Admixtures, performance, problems, risks)
- Hoover Dam composite Steel/concrete bridge
- 12' diameter drill shaft (Mono shaft foundation)
- Bridge deck joint replacement
- Historic bridge restoration context sensitive vs. replacement
- RE walls blow out, compaction issues, claim
- Pavement surface Characteristics (Larry Scofeld, Arizona)
- Use of high early concrete mixture in making repair on concrete pavement and bridge decks
- MSE Wall installation issues
- Generic pwl spec (Matt Corrigan)
- Woodrow Wilson Bridge, bonus achievement, innovations type used
- Smoothness specifications in Colorado (Profile software)

Attachment D

Computers and Technology Section Report

**Computers and Technology Section
Meeting Minutes
AASHTO Subcommittee on Construction
July 31 and August 3, 2006 – San Juan, Puerto Rico**

2006-2007 Section Leadership

*Chairman – George Raymond, Oklahoma DOT
Vice-Chairman – Jeff Gower, Oregon DOT
Secretary – David Hawk, FHWA*

2005-2006 Work Plan Accomplishments

1. Review and comment on draft “Guidelines for Construction Management System Automation”, and prepare document in guide spec format. Initial review and comments due to Tucker Ferguson by December 31, 2005. (All)
 - The Automated Construction Management System document was changed to reflect comments.
 - Final product distributed. Section members were asked to review.
 - Recommendation to fully automate and demonstrate a system. (Jim Sorenson – possible funding)
2. Continue to provide information to AASHTO website. (Tucker Ferguson)
 - Submitted updated membership information to be included on website.
 - Participated on the selection committee for a vendor for the National Highway Specification Website. Awarded year long contract to SAIC/Trauner to look at existing specifications and other areas like construction and design manuals, standards, and innovative specifications (warranties, design build, etc.). Kick-off meeting in mid to late August. Concern about updating specifications. Technical Advisory will be developed to update website. Oklahoma will be pilot state to put all information on website. Ask AASHTO to update and develop an online construction manual. Ensure compatibility with Site Manager. See what other construction management systems states are using.
3. Continue to provide leadership, extension, and guidance for the enhancements of the AASHTO Trns*port software, and incorporate the VDOT pilot project of migrating Trns*port to a web based application. (Don Miller/Jerry Zogg, Brad Parks, Byron Coburn)
 - Moving from client server to web based to save cost in upgrades. VDOT funded Trns*port tools, database, establishment of naming convention, and documenting current system business rules. Initiated “agile” development (monthly delivery of production software including automated tests). Implement a beta production environment to see how it will look feel and act. This is available now and will be updated monthly. Users can provide input during the developmental process. Link will be provided in tomorrow’s presentation. Trns*port users in states should be aware and accessing now.

Communicating to large customer base is a challenge. Web based will allow states to change business rules without changing code. Discussed the capabilities and use of the automated tools. We need tools to identify issues before we know they exist. Need funding for construction and materials phases.

4. Develop a guide specification and contract language on stakeless construction utilizing survey conducted in 2005, data gathered in the NCHRP Synthesis Project 37-06, and any other state of the practice information. Develop a problem statement for standardization of survey data between survey, design, and construction. (Dennis Kuchler, Jeff Gower, Brad Parks, Tucker Ferguson, Douglas Townes)
 - Ongoing. Synthesis Project identifies the development of specifications as a barrier for implementation. TCCC developing a training course on GPS spring 2007.
5. Provide representation to the following committees:
 - a. Guide Specification Task Force (George Raymond)
 - Specification complete. Email was sent to all states. Could hold a vote this week.
 - b. NICET steering committee (Jeff Gower, Tucker Ferguson, Douglas Townes)
 - On hold. Douglas Townes will seek update from NICET.
 - c. Civil Rights module for Trns*port Task Force (Mary Lou Masko, George Raymond, Brad Parks)
 - Solicitation for agencies to fund development of module in Trns*port is expected to be issued shortly. The effort will expand currently capabilities of Site Manager to be fully Civil Rights compliant. Developmental effort is expected to take 12 months. Requirements are on AASHTO's website. FHWA policy memo regarding Federal-aid participation needs to be discussed. Coordinate with FHWA IT to ensure participation. Make sure the necessary users get notification of the solicitation (include SCOC and FHWA Division Administrators).

Potential Presentations*

1. Follow-up on status of GPS issues in construction and other issues identified in item #4.
2. Tablet data collection of field data based on Florida's experience (potential as-built info)
3. *Update on Trns*port development (NGT, Civil Rights) – Jim Johnson, FL*
4. *Pile driving data collection (Florida) – Jim Johnson, FL*
5. *Technology available for environmental monitoring – Wayne Kober, AASHTO*
6. *Presentation from AASHTO TIG - Tucker Ferguson, PA*

7. *Technology for PR and informing public of traffic conditions – Smart Work Zones (Marquette Interchange in Milwaukee, Tennessee ITS SmartWay, Georgia Navigator), Nate Czech, WI*

* Presentations in bold/italics were included in 2006 Agenda

2006-2007 Work Plan

1. Finalize and publish “Guidelines for Construction Management System Automation.” (George Raymond)
2. Continue to provide information to AASHTO website.
 - Continue to provide updates to national website and the National Highway Specification Website. Establish a roster of responsible individuals in each state to update Specification Website
 - Participate in FHWA effort to enhance National Highway Specification Website (George Raymond, Kevin Dayton, Mark Strickland)
3. Continue to provide leadership, extension, and guidance for the enhancements of the AASHTO Trns*port software, and review existing TMR list for priorities and identify gaps. Utilize “Guidelines for Construction Management System Automation” to prioritize and identify those gaps. (Jim Johnson, Brad Parks, Ken Jacoby, Pete Melas)
4. Develop a guidance document for standardization. Develop a guide specification and contract language on stakeless construction utilizing survey conducted in 2005, data gathered in the NCHRP Synthesis Project 37-06, and any other state of the practice information. (Dennis Kuchler, Jeff Gower, Douglas Townes)
5. Provide representation to the following committees:
 - a. NICET steering committee (Jeff Gower, Douglas Townes)
 - b. Civil Rights module for Trns*port Task Force (Brian Blanchard, George Raymond, Brad Parks)
 - c. AASHTO TIG (Brian Blanchard)
6. Survey state of the practice in electronic project documentation, as-built documentation, and archiving. (Jim Johnson, Brian Blanchard, Douglas Townes, Ken Jacoby, B.B. House)
7. Monitor traffic modeling efforts for work zones in Washington and California (Jeff Gower, Kathy Petros)

8. Participate in teleconference for NCHRP 20-5 Topic 37-06 “Technologies for Construction Delivery.” (Douglas Townes)

Potential Presentations

- Project Documentation, as-built, archiving (FL)
- Work zone traffic modeling (CA, WA)
- NCHRP Technology for Construction Delivery
- AASHTO Civil Rights Module for Trns*port
- NGT Trns*port – redrafting of work plan
- Concrete Monitoring (OR)
- AASHTO TIG Update (Brian Blanchard)
- Research project radio frequency identification tags in HMA (Kathy Petros)

Attachment E

Environment and Human Resources Section Report

**Environment and Human Resources Section
Meeting Minutes
AASHTO Subcommittee on Construction
July 31 and August 3, 2006 – San Juan, Puerto Rico**

2006-2007 Section Leadership

*Chairman – Bob Watson, Maine DOT
Vice-Chairman – Ellis Powell, North Carolina DOT
Secretary – Jeff Lewis, FHWA*

Minutes from July 31, 2006

ENVIRONMENTAL STEWARDSHIP

1. Domestic Scan on Erosion & Pollution Control.

Lead - Bob Watson (ME)

Organize a Team for a domestic scan to travel to X number of States to determine BMP's for erosion and pollution control.

Include a question on certifying soil erosion control staff.

See NICET discussion.

Status: Not chosen to be done by SOC.

2. Cost of construction delay after award, caused by environmental issues.

Lead – Jeff Lewis (FHWA-CA) & Lee Onstott (NM)

Survey of states to determine cost (dollars/time) of construction delay after award (post-award) caused by environmental issues?

Status: Completed. PowerPoint presented to E&HR attendees.

3. Mitigation commitment tracking systems and payment methods. Complete

Lead – Bob Pieplow (CA)

Survey of states to compare tracking systems for environmental commitments and what payment methods are being used.

Status: Completed. Presentation made to SOC attendees.

WORK ZONE SAFETY

1. Comment on proposed rulemaking “Workers Visibility” for requirement on highly visible clothing by workers? Lewis to find and email to all attendees. June 23, 2006 due date for comments. Goal of end of August for comments to DC so comments to Lewis by August 24th. Status **Survey of State Work Zone Safety Programs.**

Lead: Jeff Lewis (FHWA-CA) & Bill Wilson (MS)

Survey of states to determine practices for certifying or prequalifying construction staff, both state and contractor, for implementing Work Zone Traffic Control.

Status: Completed. PowerPoint presented to E&HR attendees provided.

2. **Practices for Using Law Enforcement in Construction Zones.**

Lead: Jeff Lewis (FHWA-CA) & Bill Wilson (MS)

Survey the states to determine practices for the use of law enforcement to enhance safety in construction zones.

Status: Completed. PowerPoint presented to E&HR attendees provided.

3. **Practices for Administering Traffic Control Items.**

Lead: Jeff Lewis (FHWA-CA) & Bill Wilson (MS)

Survey the states to determine who is responsible for Traffic Control Plans (owner or contractor) and how traffic control is paid for (lump sum, contingent sum, unit price). Use of temporary markers for centerline during construction? Removing markings to reduce confusion? Reducing delays and/or accidents? I/D used? Guidance?

Status: Completed. PowerPoint presented to E&HR attendees provided.

HUMAN RESOURCES

1. **Transportation Curriculum Coordination Council (TCCC).** Liaison: Julio XXXt (New

Mexico) & Chris Newman (FHWA)

Attend TCCC meeting and coordinate issues of interest with this Section.

Status: Ongoing.

2. **Status of NICET's Effort to Update the Highway Technician Certification Program.**

Lead: Bud Darby (NICET)

Report to the Section on the update of NICET's program. Other 3 sections have shown support. Development committee meeting this fall and winter for competencies. Bud to send out draft list to E&HR resources for comments/blessing. ESC training needs to be updated for its certification. 6 States, to date, have certification. NM, TN have a cert program.

Status: Ongoing.

3. **Cultural differences in construction in adapting work force to the industry.**

Lead - John Steele (FHWA-TN)

The diversity in the construction industry's workforce is changing. Survey of the state's to see what they are presently doing to overcome cultural/language/ etc. differences in establishing being adequately staffed and trained.

Status: Bob to follow-up with John for status.

Robert Watson – 1 job with 1 worker who could not speak English. Speak French, competent speak English to read plans

Lee - NM – not a big problem.

VI – traffic control must speak English. Flagger certification.

Still need to do a survey.

No experience to do the work needed.

FLDOT – why they are not selecting construction industry

Has AGC undertaken?

AGC – several initiatives Career academy in a couple of State’s. A curriculum n St. Louis with focus on construction.

ACM (Associated constructors of Minae) in Maine for outreach.

FL – Dept of Corrections, AGC & ? work with prison to train. 10% goal

**AGC – Called “Build-up” at grade school level to use math skills
Similar high school training.**

E&HR SECTION PRESENTATIONS

- Environmental

July 31, 2006 – Open Discussion

Bob W - Human and Natural Resources (includes work zones)

Speed zones presentation this week.

Cultural differences in work force was to be discussed in our Section but Lead is not present.

Research steering committee breakfast tomorrow morning. 6:30 AM START..... Chuck Correa – AK to sit in for section. Need to develop a proposal.

Evaluating effectiveness of training ...was 2 years ago.

National work zone grant of \$5 million.

To examine effectiveness of TCC in the mainline was last year.

Need a little more complete data for response.

Where are we in project management? To bring everyone to project table.

Commitments by one unit effecting later phases.

Maine 5 reorgs in past 5 years. Design/construction/ R-W member Teams. Seems to be working. Did not pull env staff into TEAM.

Getting better but it is where you want to be. Maintenance involved? Price?

National Center for Env Excellence has a program to develop some pilot environmental mitigation systems (EMS) Technical Assistance Program. Share costs for 50% based on participation. Orientation training of environmental management needed and development of a EMS workplan

Try and find a couple of members to help track this NCEE. Recruit a State and then track it. Time/cost and what it produced.

How to take control of env destiny. What can you do to bring in the env steps? Construction & Maintenance have the best opportunity to make env changes. EMS has to begin BEFORE PS&E.

IDEA’s – most effective models for workflow?

Just where did env fit in?

Which state has most effective model? Time /cost savings?

Repeat NCHRP report “25-25” from Venner to refresh everyone’s memory.

New Mexico – Robert Garcia is using the report flowcharts. Go to NM and see how things are working?

Cost of good flow diagram. What is cost of political intervention? Costs of not following BMP’s?

Look at BMP business models

External influences on project cost/time?

Total cost of short-cutting a standard design/bid/build process.

Short cutting BMP’s vs. accelerating BMP’s

Ideas for international scan’s?

Develop upcoming work plan for 2007.

Work intrusion alarm demonstration to be discussed by Bernie K.

Innovative products / methods used in construction for work zones (vehicles, bikes/pedestrians), env mitigation?

Policing the contractors work outside the work area?

What is the increased cost associated with outside influences that force deviations from the standard practice of project delivery,

August 3, 2006

Research - Chuck C

Did not pick up our sections suggestion as it could not really draw any conclusions. They accepted statement to survey what the states are doing to train the inspection staff.

Chris N – training; what sorts of programs currently exist for training and inspection TBD by TCCC. TCCC or Human Resource section?

Marie V – opportunity to ask a more open survey.

Bob W – Difference of certifying vs. qualified? Need to satisfy 637 – Chris.

Lee O – NM has State research group to do the survey to follow-up to ensure better complete survey as they have more time to chase answers down.

Idea - **Cultural differences in construction in adapting work force to the industry.**

Lead - John Steele (FHWA-TN), Bob to bump up John for status!

The diversity in the construction industry’s workforce is changing. Survey of the state’s to see what they are presently doing to overcome cultural/language/ etc. differences in establishing being adequately staffed and trained.

What are state's / industry doing to attract new workers to the field? Doyt Bolling in Utah has some info started. FHWA PDP has been trying to tackle issue.

ME – industry / community college tailored training to what they wanted. Working reasonably well but enrollment is not the best. Approx 50% staying on.

FL – David Stadler – State Dept Corrections working with inmates being released to train for equipment operators. Age / OSHA requirements stagnated the attempts to move ahead.

Career days seem to add value. Seeing use of equipment by students at birds eye view gives better perspective. Work with Doyt / Douglas / Chris for possible presentation next year.

WORK ZONE SAFETY

Proposed rulemaking “Workers Visibility” on requirement on highly visible clothing by workers? Lewis to find and email to all attendees. June 23, 2006 due date for comments. Goal of end of August for comments to DC so comments to Lewis by August 24th.

Use of intrusion alarm status presentation by Bernie K. Degree of improving safety? Perception good or bad?

ME – Judges overruling enforcement tickets? Overtime funded by tickets. NM - Double fines only “when workers present.” VA – Double fines when flashers on and covered when not in use. Unsure of validity of fines being enforced.

NEW SURVEY

Effectiveness / enforcement value of fines (including double) in WZ's. Lewis to do the survey.

Area available to pull vehicles over?

Check magistrate records?

MVD – Motor Vehicle Division have a point system?

Paying for officers on site or part of normal patrol?

Speed enforcement vs. traffic control?

NM – truckers let traffic know if officer is dummy, i.e.: not pulling traffic over, giving tickets, etc.

ENVIRONMENTAL STEWARDSHIP

NCHRP 25-25 update. Bob W. to be on panel. Add website to notes.

Chris N. – Volunteers to be on Pilot panel for new NHI class on “Environmental Factors in Construction.”

NM – Robert Garcia, Lewis – FHWA. Some states maintenance interested?

106 sites are not to be shown/fenced on plans. NM - contractor blazed the 106 area though he was informed of it.

NM – reconstruction jobs ENV. only clearing edge of pavement to edge of pavement to get jobs out quicker. Contractor having to clear their own area.

Lee O. & Jeff L

NEW SURVEY - To what level do you police the contractors operations outside of the R/W – project limits?

Env clearing disposal/waste/borrow sites that are optional and/or mandatory? Any contractor sitesare their responsibility. NM – ask where are you hauling material? Wetland being filled in. Contractor required to show where they have a permit/clearance. Same for erosion control.

Time to obtain permit?

Who is responsible for obtaining the permit?

Send out Caltrans DSB – disposal/storage/borrow report to Group.

Marie V & Thomas B & Lee O & Chuck C & Byron ? Jeff L

cc: Chris N & Ellis P & Bob P

Detail survey for SWPPP payment? Lump sum and/or bid items?

Incentive/disincentive?

Penalty of \$x based on x criteria?

Quality Control Plan?

Minimum price?

How to determine satisfactory progress?

Limit area of grading? Opening of grade dirt work?

Has a project been shut down for not complying?

Types of fines?

Withhold payment?

GOAL – BMP's for sharing

Payment for monitoring and evaluation (M/E) of mitigation AFTER project is constructed?

How? Keep specific project open for X years? Set up separate pot of funds for M/E?

2006/ 2007 Work Plan

ENVIRONMENTAL STEWARDSHIP

1. Detail survey for SWPPP payment. (Lump sum and/or bid items)

Lead: Marie V & Thomas B & Lee O & Chuck C & Byron & Jeff L

cc: Chris N & Ellis P & Bob P

2. Environmental Stewardship

NCHRP 25-25 update. Bob W. to be on panel. Add website to notes.

WORK ZONE SAFETY

1. **Effectiveness / enforcement value of fines (including double) in WZ's.**
Lead: Jeff Lewis (FHWA-CA)

HUMAN RESOURCES

1. **Transportation Curriculum Coordination Council (TCCC).**
Lead: Julio XXX (New Mexico) & Chris Newman (FHWA)
Attend TCCC meeting and coordinate issues of interest with this Section.
2. **Cultural differences in construction in adapting work force to the industry.**
Lead - John Steele (FHWA-TN), Bob W. to bump up John for status!
The diversity in the construction industry's workforce is changing. Survey of the state's to see what they are presently doing to overcome cultural/language/ etc. differences in establishing being adequately staffed and trained.
3. **Volunteers for Pilot panel for new NHI class on "Environmental Factors in Construction."**
Lead: Chris N.
NM – Robert Garcia, Lewis – FHWA. Some states maintenance interested?

Attachment F

Research Steering Committee Report

**Research Steering Committee
Meeting Minutes
AASHTO Subcommittee on Construction
August 1, 2006 – San Juan, Puerto Rico**

2006-2007 Section Leadership

*Chairman – Byron Coburn, Virginia DOT
Secretary – Katherine Petros, FHWA*

ACTION ITEMS are indicated in **bold**.

The 2006 meeting of the AASHTO Subcommittee on Construction (SOC) Research Steering Committee was convened at 6:35am on August 1, 2006 in San Juan, Puerto Rico. Those in attendance are listed at the end of the minutes. The Chair, Byron Coburn (Virginia DOT), began the meeting by announcing changes in representation on the Steering Committee and introducing the members.

The Chair mentioned that this upcoming year will be his fourth year as Chair and that his tenure is coming to an end. Tom Pelnik (VDOT) is attending this year's meeting as a "Chair-in Training" to take over the Committee.

Crawford Jencks (TRB/NCHRP) updated the group on TRB and NCHRP activities. Tim Hess, who was NCHRP's liaison to the SOC, has not yet been replaced. TRB is starting new cooperative programs in other fields such as airports and freight. Fred Hejl's participation in this year's meeting has been curtailed due to funding issues. TRB is also gearing up to start SHRP II.

Crawford discussed the status of the following projects from the 2005-2006 SOC Research Steering Committee workplan:

1. Record definitions, process and deadlines for submitting problem statements, (Synthesis of practice, 20-7 projects, NCHRP projects by SOC sections for distribution to new members. This has been completed. Copies have been distributed and an electronic copy linked for continued future use.
2. Redistribute to membership the previously completed NCHRP 10-58 strategic study plan, which included a priority list of statements. www.trb.org search on 10-58 second topic. **Work with AASHTO staff (Jim McDonnell) to see if the link is still viable. Some of the projects may need to be updated.**
3. From the Roadway and Structures Section -David Sadler (Florida DOT) submitted two problem statements, 1) from the NCHRP 10-58- statement #7, "Alternative contracting methods and delivery systems to facilitate faster construction/reconstruction". NCHRP does have it in their program this year. It was picked as a synthesis and will focus on the benefit/costs. Steve DeWitt has also pitched this to SHRP II Renewal for funding. NCHRP will do the synthesis and then turn it over to SHRP II if there is a need for further study. And 2) from the NCHRP 10-58- statement #2, "Analysis of nighttime construction activities and impacts on safety, quality, and productivity." It was recommended last year that this statement be resubmitted at \$250,000. Crawford said

that this study did not appear to have been funded. He thought that there was already a related, but bigger ongoing project that had been seeking additional funds. SCOR decided to fully fund that project to get a good product rather than to fund this one.

4. From the Contract Administration Task Force- Steve DeWitt (North Carolina DOT) submitted a problem statement concerning –“Bid Alternates Using Life-Cycle Determinations” This was submitted, but did not rise high enough on the list for funding. While the discussion on this project was mostly positive, one individual did state that data, rather new methodologies, are needed. Just didn’t surface high enough. It was decided that we should relook at the statement and revise it for resubmittal as a full research project. **Byron will get information from Steve with the intention of revising the scope to see what data is needed and how to gather it. A task to work with pilot States to obtain the data will also be added.**
5. From Computers and Technology Section – George Raymond (Oklahoma DOT) identified a synthesis proposal: “The use of electronic documents and data, such as survey data, by State DOTs for bidding and other purposes.” Although it may not have been submitted via the SOC, there was a project with a similar title that was submitted and picked for funding. It is Synthesis Topic #38-02.
6. From Environment and Human Resources Section – Chuck Correa (Alaska DOT) submitted a problem statement “To examine the effectiveness of TCCC with recommendations to modify business plan” This did not get funded and it was believed that the TCCC has taken this on themselves.

Updates on other actions from the 2005-2006 workplan were discussed as follows:

1. NCHRP 20-07 project on the AASHTO Guide Spec extension was funded by SCOH. Trauner had the project to update the Guide Spec and it is currently being balloted.
2. Develop a list of ideas from previous minutes of possible research topics. Fred Hejl had volunteered to work with the Chair to develop this, however this did not occur in time for the relevant deadlines.

The Chair then asked to vice chairs representing the various SOC technical sections to report on the research topics identified in their section meetings.

Technical Section Research Topics

Contract Administration Section - Jeff Benefield (Alabama DOT)

Their technical section came up with four possible topics:

- 1) Innovative Cost Cutting Techniques for Basic Construction
 - What are the latest measures being taken to keep costs at a minimum?
- 2) Method for Post Construction/Maintenance Feedback
 - How does the builder/designer know if they did a good job
 - How does the end user get comments back to the designer, project manager, etc?
- 3) Methods to Analyze Weather Delays on Calendar Day / Completion Date Projects
 - What methods can be used to determine if the weather was “severe” or “unusual” when the contractor claims weather as the cause of delay?
- 4) Methods of Handling Traffic when “Construction Window” is Limited

- What are the best practices when the time of allowable lane closures is very limited
- This was suggested by Caltrans.

Roadways and Structures Section – David Sadler (Florida DOT)

The Roadways and Structures section had some discussion on five topics

- 1) Bridge Deck Expansion Joints.
 - What are proper construction techniques? There is considerable variety and difficulty in coming up with a good product. What are States doing? This could possibly be a domestic scan tour.
- 2) Low Permeability Concretes in Areas of Snow and Salt
 - This would probably be a synthesis to help States on the right blends with admixtures
- 3) Warm Mix Asphalt
 - How is it performing? NCHRP funded a significant project on warm mix this year.
- 4) Construction Inspection Programs in States
 - Focus on workmanship inspections, mentoring programs that may exist, how to train on what is acceptable.
- 5) Condition Assessment Programs of Roadways and Structures
 - How are agencies measuring and analyzing data to allocate resources to their assets? How to manage their assets? There may be something going on in the Maintenance Subcommittee.

Environment and Human Resources Section – Chuck Correa (Alaska DOT)

In their technical section meeting, they came up with one topic:

- Increased project costs when outside forces influence the development of the project – Outside forces include stakeholders, political influences, trying to shortcut normal processes to beat upcoming events such as the Olympics.

The group agreed that this would probably vary case by case. In some cases you have normal scope creep, but some are one time events. Florida has records of individual impacts for past projects.

Computers and Technology Section – George Raymond (Oklahoma DOT)

The Computers and Technology Section has suggested resubmitting the project they suggested last year, not knowing that it or a related project did get funded as Synthesis #38-02. **George plans to find out about #38-02 and see if he can get on panel. He will inform the Computers and Technology Section about this project.**

The discussion then centered on the various avenues to fund the ideas just presented by the section vice chairs. Many of the topics put forth are best practice requests. The question is whether they should they be surveys, synthesis topics, or 20-07 projects. 20-07 projects are controlled by SCOH and are less than \$100,000 in size. A Subcommittee could do a survey and then follow up with a consultant through 20-07 to get more depth. SCOH 20-07 projects are to help the standing committee to conduct its business. The NCHRP Synthesis program is to document the state of the practice. The Environmental Committee also has a pot of money to help conduct its business. The Center for Environmental Excellence has funds available to assist the Subcommittee with training, webcasts, etc.

The floor was then opened for discussion:

The question was asked about how many 17 topics from NCHRP 10-58 have moved forward. Some are rather broad. Some topics submitted last year (#3 from the workplan) were directly from 10-58. **Crawford Jencks will go back and look into what projects had been submitted and get back to the group next year. Crawford will coordinate this with Fred Hejl.**

The Chair asked the group which of the ideas presented came to the top and the discussion centered on how to proceed.

Methods for post construction/maintenance feedback - Looking for feedback from contractors as well as in-house to provide to designers. Maybe this should be a survey with follow up.

Weather delays – to pin down what is severe and what is not so that they don't need to look at weather on every project. This too should be a survey with possible follow up.

Bridge deck expansion joints and low permeability concrete topics seem interesting. Crawford thinks a lot has already been done. The expansion joint topic should be coordinated with the Structures Subcommittee. **Jim McDonnell volunteered to do this.** The domestic scan is a possibility, but it's a very competitive program.

The life cycle cost project from last year should be revised and resubmitted.

Workmanship inspectors training – The Roadways and Structures Section had a lot of discussion on this. It needs to go through the TCCC rather than move forward with a research project. **Chuck Correa will check with Lee Onstott on where it is in the TCCC business plan.**

Last year's submittal of NCHRP 10-58 statement #2, "Analysis of nighttime construction activities and impacts on safety, quality, and productivity." will be revised by David Sadler and resubmitted through the SOC as a full research project. David will send the revised project statement to the Chair.

Revisit the 10-58 topics for currency.

Are there any potential 20-07 projects? Panels are more informal, mostly from the Subcommittee. 20-07 projects are more quick hitting but they need a definite outcome to help the States. The post construction feedback project, as well as the project on handling traffic in limited construction windows are both good candidates for 20-07. **Jeff Benefield will write up these two projects.**

Research projects need to be written up by 9/15/06. 20-07 projects need to be written up by early October in time for the AASHTO annual meeting.

The meeting was adjourned at 7:35 am.

Attachment G

FHWA Meeting Minutes

**AASHTO HIGHWAY
SUBCOMMITTEE ON CONSTRUCTION
2006 MEETING
SAN JUAN, PUERTO RICO
Friday, August 4, 2006**

FHWA Meeting Minutes

Opening Remarks & Introductions

The meeting was called to order at 8:00 am by Danny Camacho, FHWA Area Engineer in Puerto Rico. He welcomed the group, and gave a brief presentation about the Federal-aid Highway Program in PR. There are 11 division office staff who administer a \$150 million per year program.

Lubin Quinones, the PR Division Administrator welcomed the group. He has been on assignment in Kuwait. He discussed the issues that are facing the island, and noted that the bonding program has had some long-term tough impacts on the financing of roads on the island. Mr. Quinones also noted that when he came to PR four years ago he said there would not be a hurricane on the island during his tenure, and so far, his prediction has come true – although tropical storm Chris, which came through the area this week during the AASHTO SOC meeting, worried him. Fortunately, Chris fizzled out. Mr. Quinones thanked everyone for coming to PR.

The group then performed self-introductions around the table. There were 45 FHWA staff in attendance and several State DOT representatives.

FHWA HQ Perspective: Mr. Jim Sorenson, Team Leader of the Construction and System Preservation Team in the Office of Asset Management provided a HQ perspective on the State of Affairs. Mr. Sorenson noted that it is in the Division Offices and the State DOTs where the “rubber hits the road” and that we need to nurture those relationships. He asked the FHWA people present to work with Ken Jacoby to keep the listing of construction engineers up to date.

FHWA NRC Perspective: Mr. Rob Elliot, Team Leader of the Construction and Program Administration Team addressed the group. He has been asked to report to the DFSs on how the Construction program discipline is working, and what needs to be done to nurture the discipline. He gave a PowerPoint presentation that showed the locations of his TST members, and the areas where the team can provide assistance to the DOs. He reviewed the DO requests which were submitted for 2007, which represent about 30% of the workload of his TST. He noted that we are trying to network the Divisions, and used the Western P&M and C&PA as an example of this effort. Mr. Elliot then showed a map of the states where the ACTT Workshops have been held and invited more participation. A map of the CPM Inspection Guide Workshops was shown, and there are only a couple of states left to complete the goal of having one workshop in each state

by November 2006. Upon discussion, it was mentioned that both the new FHWA employees and State DOT representatives should be encouraged to attend this entry level CPM workshop.

FHWA Division Office Perspective: Mr. Jeff Lewis of the California Division Office provided a perspective from the DOs. He asked how many of the FHWA DO staff had called HQ and the RC Center for assistance – and nearly every hand stayed up for both. Mr. Lewis had a list of issues and activities which were briefly discussed. Each DO staff member present was asked to raise their hand if they had participated, and Mr. Lewis queried several of the respondents' for details. The issues were:

- Rewriting Stewardship
- Inactive Obligations
- OIG Audit on Financial Integrity Review Evaluation (FIRE) order
- FHWA HQ's Local Agency Review
- FHWA HQ's Materials Quality Review
- OIG Audit on Emergency Relief Program
- Risk Assessments
- Adequate staffing in the DO
- Funding for travel to do Oversight; do you get out once/mo or every 2-3 months?
- Management Support
- State doing their part of delegation
- Should Division Offices create a local agency engineer position? Local agency administration is a collateral duty in all DO's.
- How to handle Major Projects? (> \$500 Million) (Financial Plan > \$100 M)
- In the "Cradle to Grave" concept, are the Engineering aspects driving the environmental commitments? Mr. Lewis said that Area Engineers need to assure this

Regarding local agency projects, Mr. Lewis stated that the local agencies need to be included in the program and database whenever Federal-aid is involved. They are not "exempt" from financial oversight and Federal requirements. The State is in responsible charge to hold the locals responsible for following the Federal regulations. Mr. Corrigan pointed out that findings from the materials reviews are showing the same issues. Mr. Lewis said that there have been many issues in CA related to this.

Mr. Bohuslav asked if any state had a certification program for local agencies or consultants. None did. Mr. Bohuslav noted that TX is considering that type of a program. WsDOT and AZ both have strong programs that have good guides, per Mr. Sorenson. TX also has a guide, and also Caltrans.

Contract Administration Issues

Mr. Jerry Yakowenko of the HQ Office of Program Administration moderated the discussion. He distributed a handout of the issues that are of current interest to the DOs. At the end of his discussion Mr. Yakowenko asked for the DO's to call him if he can be of service. A summary of some of the discussions is presented next.

Policy updates: Mr. Yakowenko requested that the DOs carefully review and comment on the final rule making documents for the NEPA process and plastic pipe/culvert pipe selection policies (Sections 1503 and 5514 of SAFETEA-LU.) As part of SAFETEA-LU S. 5514 – FHWA proposes to remove table in regulation in reaction to proposed rule making. Therefore a State will not be able to use the CFR, Table to justify not using plastic pipe and will need some other program and justification to prevent plastic pipe use if the State doesn't want to use plastic pipe for culvert materials. Recent policy memos: Patented and Proprietary Products; Retro-reflective Sign Sheeting; Electronic Contracting Issues. There was considerable discussion on Public Interest Findings: they can be set on a project or program level, district or statewide, and Caltrans/CA DO has worked on a good guide document. Mr. Kuta said that he is developing a national database on PIF's which will include the State, product, date of PIF, the sunset date of the PIF, and a contact. The goal is to help provide consistency across the nation. Mr. Hawk noted that there are lots of PIF's in NJ at the project level, but Mr. Kuta said the database will only deal with statewide PIF's initially. Safety hardware, retro-reflectivity, and other safety hardware are key items. Mr. Sorenson suggested that FHWA needs to integrate this effort with new product testing. Mr. Doyle suggested that the effective date be set so that it won't require digging through files. Mr. Montag suggested that a letter accompany the request, and that the Federal regulations on the materials and PIF processes are included in the letter. He also recommended that the database be sortable by Safety, Pavement, and other program areas.

Can division delegate public interest finding to State? Jerry Yakowenko stated that this should be defined in your stewardship program. It may be okay to delegate project level approvals but statewide programmatic approvals may not be a good idea to delegate.

Mr. Mueller asked if generic specifications for thin-bonded HMA overlays are impacted by the proprietary products memo. Mr. Yakowenko said that as long as specification is generic and that competition is possible, then the memo doesn't necessitate any change in current State practice or specifications.

Buy America Issues: Division offices need to have a system in place to notify Edwin Okonkwo on Buy American Provision waivers.

Alternative Contracting: whatever happened between SEP-14?
The 635.203(b) question – sole-source contracting

Suspension/Debarment Issues: Mr. Ken Jacoby reminded everyone that www.topnet.gov is up and running. Mr. Yakowenko said that there is a 45 day timeframe once the division is aware of an OIG civil case to make a recommendation on suspension/debarment. The division needs to keep good communications with the regional OIG to be aware of indictments they have filed.

DBE Program: There is much work underway on DBE issues/enforcement.

Construction, Pavement and Structures Issues

Mr. Gene Hoelker, Construction & Program Administration TST moderated this session.

ACTT Workshop in Hawaii: Mr. Clifford Chew of the HI DO discussed the ACTT workshop in Hawaii. H1, H2, and H3 on Oahu connect the military bases in HI, so they are significant roadways for our country. Mr. Chew reviewed the purposes of the ACTT workshop, the project limits of the improvements on H1, and some of the project details. There are 217,000 AADT currently, and it is expected to increase to 240,000 AADT in the next 20 years. There are “zipper” movable barriers which help to provide more capacity in the peak-hour directions on the current 10-lane facility and HOV lanes are also part of the lanes on the facility. An additional line was recently added to the outside of the outbound direction, but congestion issues remain on the project. The existing viaducts, although structurally sound, have insufficient cover over the top layer of rebar – as little as ½ inch. The original project was to overlay the surface for \$55 million. The recommendations from the workshop included complete removal and reconstruction of the decks, per Mr. Sorenson. Mr. Chew reported that the workshop made many valuable recommendations for the State and DO to improve and accelerate the project. Mr. Blanding said that the workshop was one of the best engineering experiences of his career, and it brought excellent innovative individuals to the table. Mr. Hoelker noted that the ACTT workshop helped to reduce the planned construction timeframe from 5 years until 2 ½ years. FHWA Construction Engineers were asked to send their requests to participate in future workshops to Mr. Elliot. Mr. Sorenson noted that the websites is: <http://www.fhwa.dot.gov/construction/accelerated/index.cfm>

National Quality Assurance Reviews: Mr. Hoelker recognized Mr. Ken Jacoby. He discussed the National Quality Assurance Reviews which have been conducted for the past 4 years and the National Materials reviews which began this year (HIPT QA Stewardship Reviews out of Office of Pavement Technology and National FHWA review out of Corporate Management) The first review provides a detailed focus on the State QC/QA program; the second is a high-level review of the FHWA DO offices of 6 locations. HIPT review focus on State DOT systems while Corp. Management is focused on FHWA program review and stewardship. Mr. Jacoby discussed the Utah DO review in some detail: local government stewardship, level of guidance provided, networking of individuals involved in the process, and better definition of responsibilities on the construction teams in the RC and HQ. Divisions want more guidance on what a complete QA system involves and what needs to be in place. Changes to CFR637 should have QA requirement on all Fed Aid. Projects and not just NHS and should cover inspection and construction also in addition to only materials

Mr. Matt Corrigan noted that Maine and Nevada are the only 2 states not using contractor test results as a part of their QC/QA programs, and recommended that FHWA staff carefully follow the memo on this subject.

New Training, NHI, others: Mr. Newman discussed the NHI Construction Course offerings, and referred attendees to the AASHTO SOC presentation by Mr. Lee Onstott on the TCCC. Mr. Newman asked that if FHWA employees are aware of any construction courses in their state, please let him know. Also, please make use of one of the 4 seats that are available whenever an NHI class comes to your state.

SonoBlaster II work zone intrusion alarm Demonstration Program: Mr. Kuta briefed the group on new work zone safety devices: the Balsi Beam from CA; mobile barriers; and work zone

intrusion alarms. The SonoBlaster II is a work zone intrusion alarm that attaches to a traffic cone or barrel, and issues an alarm when the cone is tipped over or impacted. There is a CO2 canister that issues a 125-130dB audible sound for 15 seconds when the cone is tipped. Mr. Kuta is working with Mr. Sorenson's office in HIAM to furnish 25 alarm sets to have them tested by the States, The State that participates would write an evaluation report on their performance. Ms. Kapitanov from PR DO suggested that the device be included on the MUTCD website for experimental devices. Mr. Sorenson said that the Integrated Product Development Team is aware of the device and the FHWA effort in this area. They have been used in CA, HI, OH, and other states.

Highways for Life: Mr. Byron Lord discussed the Highways for Life Program. The solicitation is currently on the street for both 2006 and 2007. He discussed the deadlines for the applications, and the process for solicitations and approvals. There are 10 probable projects which will be submitted in 2006 and 17 in 2007 – and more are welcome. Mr. Lord drew special attention to the www.grants.gov process, which is described on the web at <http://www.fhwa.dot.gov/hfl/index.cfm>

PS&E errors and omissions: Mr. Montag from DE discussed the tracking of errors and omissions issues, and requested additional guidance from HQ on this issue. Mr. Quinones said that FHWA needs to recover its funds if errors or omissions have occurred, and that the FHWA effort should be to declare that the FHWA will NOT PARTICIPATE in the change order. Mr. Montag followed up that this involves overhead, contract time, and many other issues. Mr. Yakewenko will coordinate getting this information to the DOs. Mr. Sorenson said that this topic is covered in the Construction Guide, and the individual DO has the responsibility to determine what a reasonably complete set of plans is. Mr. Lewis said this has been an issue in CA.

Update of CPMIG: Mr. Lewis asked who has not take the Construction Management and Program Inspection Guide class. Several people had not. He listed the Con's and Pro's of "cradle to grave" responsibility, and presented a chart that related the ability to influence project cost to the phase of the project. The NEPA process, CSS, and other issues can make or break a project. The construction management processes are changing from the traditional design-bid-build model. There is a need for the CPM guide to help staff through the processes. Please visit <http://www.fhwa.dot.gov/construction/> for more information.

Update on HQ's Memos for the past year: Mr. Sorenson noted that SAFETEA-LU Section 5204(e) allows the use of federal funds without State match to develop staff and provide training. Mr. Joe Toole recently issued a memo on this issue. Mr. Sorenson encouraged the FHWA engineers to share this information with their State, to help assure a well-trained workforce.

Mr. Sorenson introduced Joe Gregory who will be working to develop a Maintenance and Preservation Guide for FHWA employees. We must work to protect the investment that we have made in our public infrastructure. Mr. Newman highlighted the TSP memo issued by King Gee on 10/8/04. There is also a definition by David Geiger on this subject. Please visit the <http://www.fhwa.dot.gov/preservation/> website.

Mr. Danny Camacho adjourned the meeting at 12:10 pm.

