

2008 Fall MEO Meeting Minutes
October 16 – 17, 2008
Mn/DOT D3 - St.Cloud, MN

Day 1 Attendees: Jim Povich, Craig Collison, Kevin Kosobud, Erland Lukanen, Mats Wendell, Dave Van Deusen, Keith Shannon, Curt Turgeon, Jerry Geib, Dave Janisch, John Garrity, Perry Collins, Terry Beaudry, Tony Kempenich, Ben Timerson, John Hager, Maria Masten, Jim Bittman, Tom Meath, Mike Robinson, Art Bolland, Rod Garver, Gary Person, Glenn Engstrom, Mike Leegard. Dina Buchen

John Garrity called the meeting to order at 12:30 p.m.

District Management Welcome, Jim Povich and Tony Kempenich

Alternate Bids, Curt Turgeon and Art Bolland

- Use pavement selection in process for maintenance costs – will determine actual cost on day of project not from estimating office
- D8 plans to let 2 alternate bid projects end of February 2009
 - TH 23 N of Marshall, 4 lane extension for 2 miles
 - Equal subgrades for fairness, Bit Agg Base 30”
 - North of 1st project – 7 miles, mill BFD and whitetop, alternate bid on shoulders
- D1 – in and out deciding on letting an Alt Bid project
- D2 considering TH 11 but the concrete industry said they were not interested in that project D7 considering 3 alternate bid projects
- Curt commented on Legislative bill from C
- PAM, don't want alternate bid used just to give asphalt a chance on automatic concrete jobs
- Keith Shannon expressed the need to clarify the process, polish up the specs, and deal with incentives to make bidding fair
- Also work with designers to show them two sets of plans are not needed, have 1 profile, earthwork same except for additional work for plan
- Itemize quantities – put maintenance costs in plans which will be added to bid
- Tom Meath requested that a final package from Art's D8 job be sent to everyone after letting
- Rod Garver wants guidance on the best approach for alternate bid projects
- Curt feels an Alternate Bid Committee needs to be formed to consider some of the following issues
 - Concrete and Bituminous Widths don't match as standard design
 - D1 plans to use 27' width for alternate bid for both surface types
 - Rumble Strips/Stripes need to be considered
- Keith Shannon discussed the following related issues
 - When Pavement Selection was redone 5 or 6 years ago, both industries were not fully satisfied with the outcome, concerns have included not comparing the same designs, design lives, staging, materials,
 - Another issue is the New MPEDG is not ready for use yet
 - Doesn't think it is right to decide things ahead of time, best value is the fairest

- Keith has to committed to Bernie Arsenau and Mike Barnes to use Pavement Selection and ask for exceptions
- Bob Winter – feels Alternate Bid makes sense, pavement selection doesn't
- Bernie Arsenau wants to involve the Risk Assessment Group in re-doing Pavement Selection
- One alternate bid fix would be to adjust for the time lag for prices and include time and traffic prices
- Size, informal vs. formal, pavement preservation projects, would want profiles to match up – design is tough need to build 2 plans
- Jerry Geib – Spending money in Districts to save construction money
- Tom Meath – D6 hasn't bought into Alternate Bid
- Art Bolland – Pavement Selection used to be about a 2 year out process and now it is 4-5 years out
- Jim Bittman – Won't coincide with STIP, used initial cost, need to build in maintenance and incentives for scooping
- Keith and Craig will meet with Design Engineers, PCMG, CMG
- Maintenance Costs are standardized and available from Pavement Design
- Craig Collison expressed that Alternate Bid needs to be consistent across the state
- Both industries are pushing alternate bid and Keith Shannon is in agreement
- One County in District 8 did an alternate bid and had 8 bidders (5 concrete and 3 bituminous) – lots of time counties only have 1 bituminous bidder
- In Missouri, they have found that alternate bid has brought more bidders and lower prices
- Keith Shannon said we will support the Districts if they want to try a Preservation Project

Grading and Base/Intelligent Compaction (IC) Update, Glenn Engstrom (See Presentation)

- Geotech Investigations
- Promoted the use of IC on HMA pavements, money is available for IC in the Districts
- IC Pooled Fund – George Chang
 - Discussed IC website – intelligentcompaction.com
 - One aspect of pooled fund is to compare if CAT has compatible equipment to Dukai, Dynapac, Bomeg
 - Meeting on 10/20/08 with Professor David White to eliminate IC test strips – hope to have an IC spec by spring for Grading and Base
- LWD Working Group led by Rebecca Embacher has planned meeting with users on 12/3/08
 - There are 25 LWD devices – any additional devices will need to be purchased by the Districts @ \$10,000 each
 - Calibration is something that is still trying to be addressed since they need to be sent to Europe at this time
- Augers
 - Committee started 1 ½ years ago
 - PSSI has \$9 million dollars available for innovation – one of the thoughts is purchasing new Geoprobes for the Districts
 - Rod Garver is concerned about Districts giving up all of their augers

- Keith Shannon wants consensus from the MEO group in regards to what they are willing to give up to get new Geoprobes before he goes to CMG with recommendation
- Glenn also proposed creating a central database (reinvent “Soils Automation”)
- Augers are currently primary tool for roadway investigation
- Wisconsin has 6 augers for entire state – but there is a group that drills and nothing else, Mn/DOT has 12-15 and much of the time they sit unused
- Gary Person expressed concerns with how Mn/DOT uses our equipment. The Foundations Office wants to look at the entire system – discuss the potential drilling sites before boring occurs and the resources could be used better
- Craig Collison said some augers trucks will have to be given up
- Keith Shannon expressed the need to move into the 21st century
- John Hager fully supports moving forward believes that Geoprobe track machines will extend the investigation season since employees do many other jobs also – he also felt there would be less demand for the Foundations equipment if Districts had their own CPT
- Art Bolland wants to centralize the auger equipment
- Perry Collins shared the following:
 - Need to be smarter in investigations
 - Use new technology
 - Use by the hours not the miles
 - Determine staff to do work – then get equipment
 - At this point the proposals are close – 10 vs. 6
 - Concerns about how equipment would be shared under Glenn’s proposal and that we should ask for more and see what we get

Concrete Engineering Update – Maria Masten (See Presentation)

- Discussed revised spec. for spall on concrete superstructure (3137.2D2)
- Reviewed the new slurry containment specs as well as introduced the discussion of the new MPCA Concrete Washout Guidance
- Discussed plans for new joint sealing specs – most will be single cut hot pour or unsealed

Bituminous Engineering Update – John Garrity (See Presentation)

- Craig Collison said Contractor on one project looked for RAP everywhere
- Discussed new language that is being added to spec even though MAPA didn’t agree with it

Pavement Design Update – Jerry Geib

- Discussion held at MEO Pre-meeting
- Steve Adamsky will handle GPR – if he can’t handle all of the projects a consultant could still be hired

Pavement Management Update – Dave Janisch (See Presentation)

- Discussed Districts Planning for additional transportation funding
 - Alternate 1 – only addresses ½ of the roads, non-principal arterial roads

- Alternate 2 – Assume less pavement work done (Districts want 65/35 or 60/40 split)
- In Table xxx of presentation – need to compare first 2 columns and last 2 columns, Column 4 – addresses what needs to be done to keep what we have from getting worse
- Discussed priorities within Districts
- Column 3 includes all roadways
- By 10/17/08 District needs to have Alternate 1 and 2 back
- In 2 weeks Bridge and Materials will have 5 minutes for rebuttal
- Only 2 districts will stay at the level they are or improve their system, the other 6 will all get significantly worse
- OEM – likely more scenarios will occur
 - Minnesota is 2nd lowest in fatalities
 - 5th best in bridge ratings
 - 41st or 42nd in interstate pavement condition
 - 49th worst in congestion
- Discussed Gasby 34
 - Set bar really low, won't let system get below a certain point, otherwise would affect the State of Minnesota's entire bond rating
 - Commissions will decide

Statistical Methods for Materials Testing (Report on U of M Research Project) – Curt Turgeon (See Presentation)

- Used Bituminous Densities as a guinea pig for the study – found out the thought was we could reduce the amount of tests we were taking when actually many more tests were needed for acceptance.

Day 2 Attendees: Erland Lukanen, Mats Wendell, Dave Van Deusen, Ben Timerson, Curt Turgeon, Jerry Geib, Dave Janisch, Roger Olson, John Garrity, Perry Collins, Terry Beaudry, Tony Kempenich, Shongtao Dai, John Hager, Maria Masten, Jim Bittman, Craig Collison, Tom Meath, Art Bolland, Rod Garver, Keith Shannon, Ben Worel

John Garrity called the meeting to order at 7:33 am

Pavement Engineering Update – Curt Turgeon

- Steve Henrichs is a new employee in Pavement Design Section
- Maria Masten is Acting Concrete Engineer since Doug Schwartz has retired
- Steve Adamsky is now in the Bituminous Office, he is working on Ground Penetrating Radar (GPR). He will be working with Research and Gary Wallner to get up to speed on the GPR equipment.

Out of State Travel Report, CIR Conference – Jim Bittman

- Distributed a 1 page summary of the First Western States Regional In-place Recycling Conference in Nevada and an Project Information Fact Sheet for the field visit to I-80 at Pequop
- Cold In-place Recycling
 - Felt Mn/DOT was ahead of the game in terms of CIR
 - Suggested use of Public Affairs to promote Mn/DOT's increased use of recycled materials
 - Discussed CIR placed in 1980's in Colorado which has had 2 chip seals and is still in place today
 - Noted that project was doing re-rolling between CIR and overlay – commented D2 has seen rutting in both the CIR and HMA layers
 - Jim would like to try a 3" CIR in D2 similar to what he saw on I-80 – utilizing IC
- Reclaim Discussion
 - Most other states use some type of stabilization
 - Jim felt that a full paving train provided a better product
 - Jerry Geib mentioned a couple papers that discussed stabilization, GE's and R-Values
- Hot In-Place Recycling was not impressive.
- RAP Discussion
 - Oregon and MN use highest %RAP at 30%
 - Higher oil costs may increase State DOT's interest in using RAP
 - Discuss fractionalizing RAP piles – suggested split at 3/8" or 1/4"
 - Tony Kempenich discussed meeting in D3 with Contractor who was critical of burying RAP and taking milling for lesser uses
 - Considering requiring the Contractor to re-use in-place RAP from millings for shouldering or stockpile for maintenance purposes
 - D2 said they have tried a 10% RAP with 90% Gravel. If a 2" grade raise limit – use 70/30 split
 - Discussed shuffling projects to have milling done before overlays
 - Using WMA can increase the use of RAP
 - Foamed Asphalt is becoming popular

Materials Office Update - Keith Shannon

- Name changed back to Materials and Road Research
- M&RR is now in a new division – Policy Safety and Strategic Initiatives Division
- Industry wants to know who to talk to about issues – Keith said Policies and Rules decisions will be handled by Engineering Services and New Innovations will be handled by PSSI
- Upper Staff is focusing on Risk Assessment/Partnering for Pavement Selection Decisions
- District needs are all different – hope not to force everyone to follow the same plan
- Discussed a bill that was on the floor this summer that would have provided \$200,000,000 that had to be encumbered in 90 days – didn't happen, but Keith said that a big bill might fall out the sky in the next couple months that hopes to focus on the infrastructure and create more jobs
- Beginning of October – upper staff will make decisions on the 10 year plan
- Terra Update – Keith, Maureen Jensen and Julie Skallman met with WisDOT and Mathy in hopes of encouraging more people to become members of Terra
- WMA may come down in price and be used instead of HMA
- Continued Day 1 discussion on Drill Rigs – Felt the focus was to provide the Districts with more tools to do the jobs better and more efficiently. Keith felt that giving up 2 rigs for 1 newer one would be something that Upper Staff would support in order to purchase all of this new equipment. Wanted Materials Engineers to get together and decide by 9/22/08 with their decision. Suggested equipment didn't need to be turned in right away – but to at least have a plan for turn in.

Swedish Experience, Mats Wendell

- Swedish chip seals us ¾" - rock, they see lots of windshield breaks and have lower speeds...?
- They have bought and supplied binder to Contractors since prices have become so outrageous – currently supply about 1/3 of the projects
- The goal was to incur some competition – at time they had 1 supply, now 2 and plan to quite buying binder when they have 3 competitors

Mechanistic Design Research Updates, Shongtao Dai

- At Spring 2009 MEO meeting, Dai will give preliminary results of Husbandry of Farm Implements, Treads are tough on pavements – Firestone designs tires for fields not roads
- Porous Pavements, mix design problems with 64-34 – failed lottman, so mix was switched to 70-28 – lottman was 94%, Put down 7.5" to get 5" compacted, large mat kept heat so longer to compact
- FHWA gave U of M \$100,000 to try a Russian Device that could estimate air voids in place – it could replace coring, detect rebar corrosion, delamination
- Mn/DOT implementation GPA into GPR – would be able to map into ARCVIEW
- SHRP 2 project – use NDT tools to evaluate delamination in asphalt layers, roller device works by 12 antennas in a row – driving on road at regular speed. Problem is frequency is banned by FCC in US

MnROAD Activities, Ben Worel

- **Research** - MnROAD pooled fund, industry, and state research studies are active and are being worked on supporting the construction in 2007 and 2008. Visit <http://www.dot.state.mn.us/mnroad/projects/> for more information or to get involved.
- **Construction** - PCI and Harddrives should be done before November 1, 2008. Here is some highlights.
 - MnROAD Cell Maps Attached
 - Pervious PCC will be done Monday 20th (one lane) and Friday 25th for the other lane.
 - 4.75 Superpave (composite) and HMA shoulders scheduled October 27.
 - 5 warm, 3 RAP, Novachip, Pervious HMA have been completed
 - Warm mix contractor liked, compacted well - gained density, rolled faster without vibration, little to no fumes.
 - SemiMaterials FDR with NovaChip went down well - Possible rehab for full depth HMA
 - Pervious HMA very sticky - rolled 4 hours after paving at 94F (5" HMA one lift)
 - Concrete on mainline complete - Thin, Whitetopping, Unbonded Overlay, Composite - no problems
 - Traffic back on I-94 come November 15.
- **MEO Member Request** - Sample nominations are needed for the Unbound Recycled Base Study for both HMA and PCC unbound base materials. Let Ben know if you have any samples/ideas for this research effort. Right now we are looking for nominations and if selected we will need (15) 5-gallon buckets of material.

Bituminous Research Updates, Roger Olson

- Metro District is fogging rumble stripes
- Joint Bond – typically used for longitudinal joint sealing
 - Trying product on rumble stripes
 - Clear product that is placed right over stripe
 - Cost is unknown, Roger will get the price for MEO
- Tom Wood is back in his old position
- Mats Wendell is working on Pavement Preservation Issues currently

Committee Updates

- Drainage, John Hager
 - Have been dealing with OGAB and PASB specs being in two locations, one spec has changed while the other stayed the same, Tim Anderson is done with his version of the specification
 - John Garrity – combined PASB and PASSRC specs will need new pay items. Questioned whether we need PASB anymore? He will send an email out to determine if there is any interest in PASB – D2 was the only District that had been using PASB
 - Jerry Geib – waiting on new spec numbers from Betty Buckley
- Auger Trucks, Perry Collins
 - Materials Engineers will meet at the end of the meeting today to come to a conclusion and get a decision on equipment to Keith Shannon

- BFD, Art Bolland and Roger Olson
 - Roger discussed construction of BFD on I-94 mainline at Mn/ROAD – SEM Materials paid for the construction
 - Fly Ash stabilization was also used
 - Art mentioned 2 concrete OL projects for 2009 (mill some of BFD and whitetop)
- FDR Stabilized – John Hager
 - Bruce Holdhusen from Research Services provided \$220,000 for stabilization
 - Steve Adamsky will be calling Districts about getting these foamed asphalt, asphalt emulsion, and control section test sections into a reclaim job, SDDOT did a test section in 2008
 - Blue Earth and Goodhue Counties have documented test sections to John Hager
- LCCA, Jerry Geib
 - Issues were thoroughly discussed in MEO pre-meeting
- Railroad Crossing, Tony Kempenich (See Presentation)
 - Committee was put together to discuss high traffic and RR crossing at Clear Lake
 - RR do what Iowa does, do their own work

Lab Issues, Terry Beaudry

- NRRI
- Deicing Study – 6 to 8 months into testing deicing chemicals for the deicing systems in the bridges. Obtained plastic concrete from both 35W and Crosstown projects.
 - Magnesium chloride has shown poor performance
 - Potassium acetate is starting to fail after 6 months

WebLIMS and IAI Reporting Programs, Dina Buchen

- Demonstrated some aspects of the billing program
- Showed how reports can be saved as PDF's
- www.mrrapps.dot.state.mn.us/weblimsreports is web address, need to create an account and then can view the data. Only lab supervisors and testers can access current testing data
- Data query tool is available on the Materials IHUB page – question as to whether this tool should be on the external website
- MEO Group suggested Dina share this program with Resident Engineer Group, Inspectors Group and Project Engineers Group meetings over the winter

Different Types of Impacts to Our Contracts, Mike Leegard

- Loss of Life (LOL) Calculations - discussed considering that even poor materials and construction may have some value – looking into using LOL calcs – first really looked at on softcut saw issues in 2006, presented example from D2 that had over 800 pine cones in the bituminous roadway, thinking about whether inflation should be factored into to LOL calcs
- Discussed use of Unauthorized vs. Unacceptable Work and how to administer
- Electronic Categorizing of SA's into 4 categories – Damages, Work, Margins, Planned Contingencies, essentially categorizing money and determining what is worth an extra effort up front and what is worth going with the flow

Liasons Updates

- Lab Chiefs
 - New D2 Lab Chief Tim Donaghue
 - No Fall MEO meeting – Lab Chiefs will be meeting at end of October at Maplewood Lab for LIMS demo and meeting
- Resident Engineers – nothing
- Construction Managers Group
 - Cost Estimating Directive meeting next week
 - Get Design Engineers and Alternate Bid Committee in the same group
- Soils Engineers – nothing
- Design Engineers – nothing
- Independent Assurance – nothing
- FHWA – nothing

Round Robin

- Tony Kempenich – problems matching 1 AC Contractor Mix
 - Chemical testing at Braun, Centrifuge at Contractor Lab
 - 4 way split – AC Varied 0.6 – 0.7 take average and move forward
 - Shoulder – D3 4.6, Contractor 5.2, D8 – 5.2, determined that centrifuger was run under different method than lab manual, new filter still need celite??
 - Sensitivity of celite – 0.4 – 0.6% different
 - AMRL requires ashing, Mn/DOT typically uses celite to recover ash, Materials Trial Mix Lab has bought high speed centrifuge
- Erland Lukanen
 - Roughness Profile Write-Up
 - Control Sections – condition, section, history
 - Working on Distress Determination Guide

Housekeeping, John Garrity

- MEO Trip – Reminder we need to take advantage of the trip or we may lose it, Perry Collins has put in for a trip to the CMG
- MEO Executive Committee – Get together to set next agenda
- MEO Election of Officers – Terry Beaudry will be new Vice Chair
- Spring 2009 MEO Meeting will be in Rochester, April 23 and 24th
- Fall 2009 MEO Meeting will be in St. Cloud, John and Perry will set up soon since rooms in St. Cloud are booking up far in advance