

WACA/WSDOT Meeting

Minutes for Wednesday, June 8, 2011

Attendees:

Mike Polodna, WSDOT	Tom Weist, Oldcastle	Dave Germer, CalPortland
Tamson Omph, CalPortland	Dick Boss, Cadman	Scott DiLoreto, BASF
Kurt Williams, WSDOT	Craig Matteson, Central Pre-Mix	Louie Bayless, CalPortland
Rob Shogren, Lafarge-NA	Mark Gaines, WSDOT	Marlen Hansen, Comar, Ltd.
Eric Clark, Corliss	Robert Raynes, Cemex	Bruce Chattin, WACA

Location: WACA's Office in Des Moines

Day/Time: Wednesday, June 8, 2011, 9:30 AM – 12:00 Noon

Next WACA Meeting Date:

Wednesday, Sept 7, 2011 at WSDOT HQ Mats Lab, Main Conf Room, 9:30 AM – 12:00 Noon

Future WACA Meetings Dates:

Wednesday, December 7, 2011, at WACA's Office in Des Moines, 9:30 AM – 12:00 Noon

Wednesday, March 7, 2012 at WSDOT HQ Mats Lab, Main Conf Room, 9:30 AM – 12:00 Noon

Meeting Minutes are available at: <http://www.wsdot.wa.gov/biz/mats/>

Issue: Performance Specifications for Concrete Mix Designs - Mark Gaines

Develop performance specification parameters for concrete.

6/8/11 Mark Gaines handed out a performance special provision that will be used for the deck concrete on the US 395 SB Bridge over US 2. There was some discussion regarding ambient temperature and curing requirements. Dick Boss and Rob Shogren recommended using lab mixes instead of 3 cy batches for the freeze-thaw durability tests.

Action Plan: Continue to give updates to WACA at quarterly meetings.

Issue: Degradation for concrete Aggregate/Base Course – Kurt Williams

A research study is on-going to test the effect of using aggregate with low degradation values in concrete mixes.

6/8/11 –Mike Polodna reported that testing is still under way.

Action Plan: Continue to give updates at quarterly meetings.

Issue: Water for Concrete - Bob Raynes

WSDOT Standard Specification 9-25.1 Water for Concrete requires that in order to use recycled water the lab that tests their water must meet R-18. No one is currently using recycled water because of the R-18 requirement.

6/8/11 – There was no action on this today. WSDOT is still discussing the proposal.

Action Plan: Continue the discussion at the next meeting.

Issue: Standard Specification 9-23.8 Waterproofing –Jason Brewer

Are changes needed to this specification? Should WSDOT be specifying ASTM C 1585 instead of ASTM C 642?

6/8/11 - Jason was not in attendance today. Scott DiLoreto will talk to Jason about modifying the specification they previously submitted.

Action Plan: Review specification proposed by WACA at the next meeting.

Discussion Item: Aggregate Source Approvals for Sources to be Blended with Others –Dick Boss

An Aggregate Source Approval is required for each pit. Since WSDOT is now sampling and testing only processed material instead of pit run or blended material, source owners have issues supplying samples of processed, non-blended aggregates.

6/8/11 – Dick stated that they often need 2 sources to make the required gradations. On source approvals, since WSDOT is testing finished products the producers have to make special runs to supply samples from a single source. Dick proposed that WSDOT give source approval on blended products. Kurt agreed to check into this issue and get back to the group. There will need to be allowances to vary the percent of each source in the blend.

Action Plan: Discuss at next meeting.

New Discussion Item: Proposal for 15% Limestone Addition to Portland Cement – Allan Kramer

6/8/11 – Kurt reported that the AASHTO ballot allowing regarding this issue was received today at WSDOT and is going through the balloting process the outcome will be decided late next year.

Action Plan: Issue complete.

New Discussion Item: NMS of Coarse Aggregate for 4000P – Neil Guptill and Dick Boss
Neil and Dick pointed out that the NMS of coarse aggregate changed from 1/2” to 3/8” in the 2010 Specification. Kurt will refer this issue to Mark Gaines.

6/8/11 – Kurt pointed out that the specification was changed because the industry wanted the 3/8” aggregate in the 4000P mix. The mix is working well for WSDOT and he is willing to pay the extra cost to get a mix that works. Mark Gaines stated that the smaller aggregate helps prevent voids in the shafts and that he would consider allowing 1/2” or 3/8” aggregate for the 4000P mix.

Action Plan: Continue the discussion the next meeting.

New Item: Fly Ash and Slag Substitution per Email from Jeff Carpenter – Dick Boss
Discussion on some means of making this decision a permanent part of State policy or specifications so that, should this happen in the industry in the future, the path to acceptance is clear.

From: Carpenter, Jeff

To: Arnold, Cathy; Berg, Kirk; Foster, Marco; Gribner, Mike; Roark, Steve; Schneider, Glenn; Smith, Tim; Trepanier, Todd; White, Brian

Cc: Baker, Tom; Williams, Kurt R; Erickson, Dave; Gaines, Mark; McDaniel, Craig

Sent: Tue May 10 08:40:22 2011

Subject: FW: Fly ash shortage

Recently the Headquarters Construction Office became aware that there is a shortage of fly ash supplied from the Centralia facility. Our understanding is that the shortage is only from the Centralia fly ash source and this shortage may extend through the summer. The WSDOT QPL includes seven other fly ash suppliers; none of these suppliers appear to be experiencing shortages. Because a large number of concrete producers rely on Centralia fly ash, this shortage could have an effect on the ability of concrete producers to provide concrete that conforms to their approved mix designs. In an effort to provide our concrete producers with flexibility to address this shortage, we offer the following options:

Mix Designs where Fly Ash is Used for Alkali Silica Reactive (ASR) Mitigation -- Standard Specifications Section 9-03.1(1)

Concrete producers may substitute fly ash from one of the other QPL suppliers one-for-one to provide ASR mitigation. This substitution can be accepted without having to re-verify the mix design per ACI 211.1 and ACI 318 requirements, and without testing to verify the mitigation. Substitution of fly ash with blast furnace slag for ASR mitigation will not be allowed without testing in accordance with ASTM C 1567 to demonstrate the mitigation is successful. If a substitution is made, note the substitution on the existing concrete mix design.

Mix designs where Fly Ash is not Used for ASR Mitigation

Concrete producers may substitute fly ash from one of the other producers, or may substitute blast furnace slag. All substitutions should be made one-for-one. These substitutions can be

accepted without having to re-verify the mix design meets ACI 211.1 and ACI 318 requirements. If a substitution is made, note the substitution on the existing concrete mix design.

This general guidance can be provided to the contractors and concrete producers, but specific approval of these substitutions needs to be handled on a project-by-project basis. Any submittals that follow the guidelines described above can be approved by the Project Engineer. Submittals that don't follow these guidelines should be sent to the State Construction Office for review. The State Construction Office will continue to work closely with the concrete producers to find acceptable solutions to the current shortage and will keep you informed. If you have questions or need assistance with the process please contact the Assistant State Construction Engineer assigned to your Region.

Jeff Carpenter, PE
State Construction Engineer

6/8/11 – Dick stated that paper submittals for mix design changes are a problem and that he would like to be able to shift between slag and fly ash at his discretion. Rob and Craig reported no issues with the process. Kurt stated that he needs new mix designs as materials change and that when performance mixes are implemented it will be even more critical. He said that short notice changes will always cause issues.

Action Plan: Issue complete.

New Item: Trial Batches for Concrete Overlay Mixes in WSDOT 6-09.3(3)B & C – Craig Matteson

Discussion on prescriptive mixes in 6-09.3(3)B and C. Both these mixes are prescription designs right down to the coarse & fine aggregate ratios, cement contents and W/C ratios. Are we required to run a trial batch for 5- 28 day compressive results, as there is no compressive strength specified?

6/8/11 – Craig asked if trial batches are required for the Class M modified mixes in the specification. Mark clarified that trial batches are not required. WSDOT will work with industry to develop a slag-modified overlay mix.

Action Plan: Continue the discussion the next meeting.

New Discussion Item: GSP for Statistical Aggregate – Kurt

Kurt reported that the GSP for Statistical Aggregate is being moved to the 2012 Standard Specifications.

New Discussion Item: Slag Substitution – Kurt

Kurt reported that slag replacement is being increase to 50% in most concrete classes and also in blended cements. These changes will be included in the 2012 Standard Specifications.

New Discussion Item: Discharge Time Research – Mark

Mark reported that Oregon State University has been selected to conduct research on the topic of extending the discharge time of concrete. Professor Trejo will be asking producers for mix designs and aggregates.

New Discussion Item: Creep Testing of Self Compacting Concrete – Mark

Mark discussed that the SCC used in cross beams in a bridge in Seattle was accepted without going through the correct channels and that no creep testing was initially conducted on the mix. Since then, Professor Jansen at the University of Washington has been running creep tests on SCC and initial results show no differences in creep between the SCC and Class 4000 concrete. Mark will share the report when it is completed.

New Discussion Item: Lean Concrete – Bob Raynes

Bob requested clarification on the lean concrete specification and his questions were answered to his satisfaction.

New Discussion Item: Pervious Concrete – Bob Raynes

Bob reported that the pervious concrete placed on the Clark County SCIP project had voids of 16% - 23% and that he would share his data with WACA.