

**Florida Department of Transportation/Concrete Coalition of Florida
FC & PA Headquarters, Orlando, Florida
February 27, 2013 Minutes**

10 April 2013
Revised: 29 May 2013

COLOR CODE:

Black	-- Agenda Item
Red	-- Agenda Item Author/Presenter
Blue	-- Agenda Item Discussion

Welcome

- Opening comments (Bergin/Tu) – Introduction of attendees

Action Item from the February Meeting

- Drilled Shaft temperature, Slump Loss Test (Markert) – Leigh gave an update of the committee finds and recommendations. Possibly one more meeting and the internal review then out for District review and comments back (4-8 weeks). June to industry for comments.
- Review Fiber issue (Bergin/Masters) – Plan is to have fibers placed on the Qualified Products List (QPL). Leave specification as a TSP, develop data then move to develop a standard specification then move fibers to the QPL. Look at using fibers in the slab replacement construction (specification 353). How will fibers be specified (O’Leary)? Structures section will help determine what is required. Develop data based on the recommendation used. Fibers were used on Turn Pike projects with an average residual strength was working well (Markert). Mixing the fiber properly seems to be the big issue (Price). To add fibers into a contract you must use a “Cost Savings Issue” (CSI). There was much discussion about the savings vs finished product savings. Industry may propose as a demonstration for use on a new project. Can you get a design mix approved with fibers (Malerk)? Yes, if it meets the contract documents. Any application where FDOT would not want fibers to be used (O’Leary)? Problems with flexure strength in some cases. Fibers are still being used.
- Truck Card Removal (Bergin) – What is the value of pulling the card (Westcott)? Review and rework the pulling of the card in the specification. Time frame for removal and return of the card. Can we anitate the problem on the card in the field and not pull the card? Problem comes and goes, do a better job of explaining the issues with the card in the specification class.
- Minimum of 752 cementitious for mass concrete has been removed for January 2013 lettings (Bergin) – This requirement has been removed in the 2013 version of the 346. Look at curing and acceptance strength at a later age.
- Tiered Aggregate Study Update (DeLorenzo) – Study is complete, non-structural application. Aggregate section is looking at data to revise section 901 of the specifications. Additional work to be done for use in pavements. No approved source for non-structural application. Looking at stiffer material. How much 347 work will be done using this type of material (O’Leary)? Why use the best quality

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aggregate for concrete (Malerk)? Do we want to maintain two stockpiles of material at the plants, would the producers use it?

Recycled Concrete Aggregate (RCA)

- Use for Concrete Pavement (Bergin) – Storage space, including the over head bins, at the plants. Projects not using 100% RCA currently, using a blend with virgin material, RCA used as an option. There is an issue with getting sources approved. Allowed in non-structural, looking at possible use in pavement. Delvo and Recover, one day reclamation(Westcott has historical data). Look at possible use in 347, for a performance specification. Green initiative.

Research Issues

- Research slated for concrete statewide (Bergin/DeFord) – Most are just getting started: long life cracking, magnesium phosphate for coating steel, accelerated durability for fiber steel, particle size of Portland cement for heat of hydration. Virtual Test Laboratory (VVCTL) with NIST, NIST has demo software, this could replace trial batching. This is the link to connect with NIST for the software demo: http://www.nist.gov/el/building_materials/evcctl.cfm. Use of light weight aggregate for curing, improves microstructure, reduces cracking, and helps with corrosion control. Much discussion on the substitution of light weight aggregate, must have a high absorption rate. Discussed light weight deck panels manufactured for extremely aggressive environments.
- Maturity method for 353 (DeFord) – On going research, 14 months into the project. ASTM C 1074 is for high early concrete. Used for opening to traffic. What is the best method, going to the field with a complete mix design to work with the ongoing research. Match Curing – temperature in place vs concrete in water bath. Discussed match curing advantages and disadvantages. How much deviation in delivered concrete with match cure? Maturity meter has advantage in that there is no destructive testing.
- RAP in Concrete (Bergin) – Mike discussed at the Construction Conference. Helps to reduce the MOE and reduces initial strength. Research is on the State Materials Office(SMO) website. Discussed the research and what it included. Another stock pile at the plant.
- Ternary Mixes/Surface Resistivity (Bergin) – 346 specification currently authorizes its use. Research is ongoing in the Corrosion Lab at the SMO. Navy study to be forwarded from Greg Wallace to Mike who will share it with the Mario. Looking at accelerated curing.
- Mass concrete Research (Lawrence) – See appendix A for the presentation given by Adrian. Tom has some other state specification for later day strengths, will get with Mike.

Committee Update

- Rigid Pavement Committee (Malerk) – See appendix B for the presentation given by Tom.

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- 350 Specification Committee (**Malerk**) – See appendix B for the presentation given by Tom.
- 301 Research Construction Project (**Malerk**) – See appendix B for the presentation given by Tom.

NRMCA

- NRMCA Plant Certification (**Miller**) – Dr Collin Lobo gave summary comparison between NRMCA and materials manual section 9.2 volume II. Topic for internal discussion with the District Concrete Engineers.

Off-spec coarse aggregate

- Vertically integrated mines and concrete production facilities (**Bergin**) – Mike outlined the proposal for using this aggregate. What input does the aggregate section of the SMO have? Much discussion on the title of the materials. Take issue back and work with Tim and aggregate folks.
- Aggregates used by concrete production facilities not associated with the mine or terminal providing aggregate (**Bergin**) -- Mike outlined the proposal for using this aggregate. What input does the aggregate section of the SMO have? Much discussion on the title of the materials. Take issue back and work with Tim and aggregate folks.

Summary of Meeting

- Accomplishments and where do we want to go (**Bergin/Tu**)
Dave Wescott
 - Revolution counts – is there any value in 300 revolutions. Look at ballot with ASTM
 - Annual Quality Control Plan updates. Why do we do this, is there is value?
 - District consistency between Districts (Email to Bagwell) -- Boiler plate info is not need, MAC will help with these issues.

Jeff O'Leary

- Ammonia in fly ash – limits in 929 (100 ppm)
- Reports in MAC – can producers print or look at reports
- Ground tire rubber in concrete

Donnie Bagwell

- Send draft minutes to Diep for review and comment

Adjourn!!!!

Appendix: A – Mass Concrete Research Presentation (Lawrence)
B – Committee Update Presentation (Malerk)