AGENDA
ACI Committee 345
Bridge Construction, Maintenance, and Repair
Spring 2013 Convention
Minneapolis, MN
C-200 H
Sunday, April 14, 2013, 1:30 pm to 3:30 pm

1. Introduction
2. Approval of Fall 2012 (Toronto) minutes
3. Membership status
   The committee currently has 2 officers and 13 other voting members, 6 consulting members, and 28 associate members.

   Membership changes: None
   New Associate members: Luis Estenssoro and Shahlaa Al Wakeel

4. Technical Sessions/Special Publication:

   “Advanced Materials and Sensors towards Smart Concrete Bridges: Concept, Performance, Evaluation, and Repair” moderated by Jimmy Kim (Three sessions for 16 presentations)

   “SCC in Repair Applications” moderated by Celik Ozyildirim and Lloyd Keller (ACI 237 Self-consolidating concrete and ACI 345) (5 presentations)

5. Liaison reports from other committees (TAC, 342, 343, others)

6. Status of Documents
      Ad-hoc committee (Kim, Silfwerbrand, Williams, and St John) reviewed the document and proposed revisions. A ballot has been issued and further details will be discussed in Minneapolis.

   b. 345.XR – Guide for Concrete Bridge Deck Repair and Rehabilitation
      Chapter 1 – Brown to draft after other chapters
      Chapter 2 – Brown to draft after other chapters
      Chapter 3 – send to 342 as the basis for their new document on Bridge Superstructure Condition Assessment. Overview (brief synopsis) from Jeff Smith/Larry Olson – by April 15, 2012: to check progress
      Chapter 4 – Weyers to draft – Brown to check status by Oct 31, 2011: sent a doc of ACI-546 to Weyers
Chapter 5 – Balloted in March 2012 – approved

Ballot comments:

1) 5.2.7 Suggest removing comment "Hydrodemolition is not recommended for the removal of sound concrete"

We have used this method for removal of sound concrete to allow application of new overlays and as alternative to jackhammering. Also recommend a statement that methods that produce bruising or microcracking be followed by a method such as short-blasting, hydromilling, or abrasive blasting to remove bruised concrete prior to application of overlay.

2) The outline is great but the body of the text is a little light.

Chapter 6 – Needs additional sections drafted (St. John/Kim/Williams): to check progress

(Williams and Kim completed)

Chapter 7 – Sprinkel and Silfwerbrand: new contents proposed (See Appendix A): to check progress

Chapter 8 – Brown to draft: to check progress

Chapter 9 – to check progress

9.1 – Sidewalks – Akbari/Andy Foden: to check progress

9.2 – Parapets – Andy Foden: to check progress

9.3 – Joints – Chris Carroll: completed

9.4 – Approach slabs – Mark Williams/Devin Harris: to check progress


Everything has been approved except for pictures. A final request was submitted to ACI for TAC approval with current pictures (Jan 4, 2013)

7. Other Business
Appendix A

Membership as of April 2013: 49 members

Officers: 2
Kim, Yail Jimmy (Chair) Oglesby, Rita K (Secretary)

TAC Contact
Sprinkel, Michael M

Voting members: 13
Beaver, Jesse Brown, Michael C Carroll, Chris Foden, Andrew J Gepraegs, Oliver K Matejowsky, Alan B Sandberg, Harold R Silfwerbrand, Johan L Sprinkel, Michael M St John, Paul J Vaughn, Ronald E Weyers, Richard E Williams, Mark Erik

Consulting members: 6
Anderson, James C Danley, Byron Fouad, Fouad H Harwood, Allan Virmani, Yash Wouters, Jeffrey

Associate members: 28
Appendix B
New proposal (additions in green):

Chapter 7 – Overlays *(Sprinkel & Silfwerbrand)*

7.1 Scope

7.2 Need for Overlays

7.2.1 Restored or Strengthened Load-Carrying Capacity
7.2.2 Waterproof Barrier
7.2.3 Skid Resistance
7.2.4 Wearing Course
7.2.5 Reduction of Wheel Load Effect

7.3 Required Properties of Overlays

7.3.1 Properties required of all overlays

7.3.1.1 Adhesion to concrete
7.3.1.2 Cohesion
7.3.1.3 Skid Resistance
7.3.1.4 Durability

7.3.2 Properties required of waterproof barriers

7.3.2.1 Impermeability
7.3.2.2 Crack Resistance
7.3.2.3 Temperature Compatibility

7.4 Types of Overlays

7.4.1 Plain Concrete Overlays
7.4.2 Reinforced Concrete Overlays
7.4.3 Fibre Concrete Overlays
7.4.4 Latex Modified Concrete Overlays
7.4.5 Hydraulic Cement Concrete Overlays
7.4.6 Polymer Overlays
7.4.7 Membrane and AC Overlays

7.5 Design Considerations

7.6 Construction Considerations

7.6.1 Scarification and Removal of Unsound Concrete
7.6.2 Cleaning
7.6.3 Substrate Preparation
7.6.4 Placement and Consolidation
7.6.5 Curing
7.6.6 Skid Resistance

7.6.7 Traffic Vibrations

7.7 Other Considerations

7.7.1 Material Performance Specifications

7.7.1.1 Cement Type
7.7.1.2 w/cm
7.7.1.3 Aggregate Size
7.7.1.4 Air Content
7.7.1.5 Slump
7.7.1.6 Compressive Strength
7.7.1.7 Shrinkage
7.7.1.8 Ductility

7.7.2 Environmental Considerations
Chapter 7 – Overlays (*Sprinkel & Silfwerbrand*)

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7.4 Types of Overlays

7.4.1 Latex Modified Concrete Overlays
7.4.2 Hydraulic Cement Concrete Overlays
7.4.3 Polymer Overlays
7.4.4 Membrane and AC Overlays

7.5 Design Considerations

7.6 Construction Considerations

7.6.1 Constructing the Overlay
7.6.1.1 Scarification and Removal of Unsound Concrete
7.6.1.2 Substrate Preparation
7.6.1.3 Placement and Consolidation
7.6.1.4 Curing
7.6.1.5 Skid Resistance

7.7 Other Considerations

7.7.1 Material Performance Specifications
7.7.1.1 Cement Type
7.7.1.2 Maximum w/cm
7.7.1.3 Maximum Aggregate Size
7.7.1.4 Maximum Air Content
7.7.1.5 Slump
7.7.1.6 Minimum Compressive Strength