

# NC DOT / PCI Meeting Minutes

November 14<sup>th</sup>, 2007

Attendees – See Attached List

**Presentation - None**

**Technical Committee Meeting** – A Technical Committee meeting was held on September 27<sup>th</sup>, 2007. The minutes are attached.

- a) Project Special Provision for girder web splitting. - A proposed project special provision was distributed. An electronic copy will be sent to Reid Castrodale for distribution to all GC PCI members. Members will make comments, Reid will consolidate them and forward them to NC DOT.
- b) Precast barrier rail design. – Plans were distributed for two bridges with cored slabs and precast barrier rails. They call for the exterior voids in the exterior slabs to be eliminated and the slabs drilled so barrier rail anchors can be inserted. It was agreed that the details looked good.
- c) Box Beam shear key details. – It was agreed that a full-depth shear key at the transverse tendon locations is preferred. It was also discussed that it would be a good idea to enlarge the transverse tendon holes to 3-inches as well as enlarging the vertical holes at the slab ends to 3-inches. It was also asked that the Department consider using 0.6-inch strand in longer cored slabs. This would cause fewer conflicts with the strand and the vertical holes. The Department agreed to consider these comments.
- d) Precast Full Depth Concrete Deck Bridge – The project in Martin County (B-4188) is complete and was successful. If the Department does a similar bridge there will probably be a grout bed required between the panel and the girders. However, there are no immediate plans for another precast full depth deck slab bridge.
- e) Design Standardization of splice girders. – It was decided to drop this item. There are not enough bridges of this design in the TIP to make a special girder section worth while.
- f) Bridge Material Selection – There is still some concern in the industry that steel girders are being used in situations where prestressed girders could have been used. It was urged that the Department consider life-cycle costs when selecting materials. The Department will address this issue at the next full meeting.

**Bridge Material Selection** – The full committee discussed the criteria used to select what girder material is used on a particular bridge. The Department discussed several factors: site conditions, geometry, girder depth, and life cycle costs. The railroad always requires steel. Material substitutions can be submitted as part of a Value Engineering Proposal. The new “tiered” approach to bridge designs may result in shorter spans, which would favor concrete girders

**Prestressed Concrete Economical Fabrication (PCEF)** – South Carolina and Georgia have both expressed interest in setting up such a committee. As stated at the last meeting, NC DOT is also interested. Lou Triandafilou with FHWA, who helped with the Central Atlantic PCEF Committee, is willing to help facilitate this committee. The industry will poll the states for key issues. The Department is interested in a standard design for deck bulb-tees.

**PCI Convention and National Bridge Conference** – The conference was held in Phoenix AZ on October 22-24. The Department thanked the industry for helping with the attendance of Department employees. The conference was excellent and allowed the Department to interact will other State DOT’s.

**Future Projects –**

Sunset Beach – On hold pending a hearing in federal court.

Oak Island – Girders to be cast beginning February.

Bonner Bridge – A rehab project is to be let early next year. There is still no decision on replacement.

I-85 Yadkin River – Will probably be let by the Turnpike Authority as a design/build project.

The Turnpike Authority has no immediate construction plans but is still pushing ahead.

**Foundation Research** – South Carolina is doing a research project on cylinder pile foundations versus drilled shafts. The cylinder piles will be wet cast with fully bonded strand. They will be cast full-length with no joints.

**Standard Cored Slab Designs** – It was suggested that the Department consider standardizing its cored slab designs. Start at 25’ spans and up to 50’ or 55’. The idea is to “pre-engineer” the superstructure design. It was felt this might fit in well with the proposed tiered approach (sub-regional tier) to bridge design. However it is not the Department’s intent to have pre-made slabs in stock for future bridges.

**Future Meetings** - March 12<sup>th</sup>, 2008 in the M&T Conference Room.

July 16<sup>th</sup>, 2008

November

12<sup>th</sup>,

2008

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