

NC DOT / PCI Joint Technical Committee Meeting

Structures Design Conference Room C
February 16, 2005 10:00 AM

Submitted by
Reid Castrodale, Chair

Attendees:

NCDOT: David Greene, Tom Koch, Tim Sherrill
NCDOT Guests: Ron Hancock, Brian Hanks, Gichuru Muchane
G/C PCI: John Beck, Reid Castrodale, Peter Finsen, Richard Potts, Chad Saunders, Jeff White

1. Minutes from January 6, 2005 Meeting

Minutes were distributed from the previous meeting. They were accepted as submitted.

2. Deck Bulb Tees

The focus of this meeting was on the deck bulb tee project being designed by NCDOT. Other issues that have been on the Technical Committee agenda were not discussed, except as noted.

Tom Koch distributed details prepared by NCDOT. The following issues were discussed:

- It was noted that the 2 in. build-up was not required if the deck and girder concrete are placed separately. However, NCDOT indicated that the build-up was needed for the section properties.
- 1 in. dia. holes in the deck were provided as vents for the end diaphragms.
- It was suggested that some strands could be released when the forms for the girder were removed to avoid shrinkage cracking while the deck is being formed and cast. It was also suggested that beam forms could be removed at a reduced concrete strength of 2,500 psi.
- The top surface of the deck would receive a broom finish.
- Procedures and details for jacking the differential camber out of the deck bulb tees were discussed. Tolerances for camber were also discussed.
- Steel diaphragms are detailed. The use of slotted or oversized holes was discussed to provide tolerance for installation of the diaphragms. It was suggested that the diaphragm steel be hot dip galvanized. The galvanizing process should not delay fabrication of the diaphragms or be on the critical path for completion of the project. The connection angles could be attached to the beams before shipping.
- The producers would rather have the exterior overhang tapered than flat.
- The schedule for fabrication of the beams was discussed. Ron Hancock thought that the project should be fabricated by the time that the end bents are completed. He expects that this may be about July 1, following the letting in May. This allows one month for the construction of the end bents. Fabricators felt that this schedule was possible.

- Multipliers for estimating long-term deflection and camber were discussed. It was recommended that only erection multipliers be used, rather than the final multipliers that are included in many design programs.
- Shipping of the deck bulb tees was discussed. It was noted that the girders as shown on the preliminary plans would weigh 142 kips, which is approximately the same as the beams which were fabricated and shipped by Prestress of the Carolinas.
- Plans should note that the lifting loops should be cut off flush with the surface of the top flange.

The innovative bridge project funding will be used to engage researchers, probably from NCSU, to document construction of this deck bulb tee project.

The Department agreed to send the final plans for this project to the G/C PCI members for comment.

3. Box Beams

Ron Hancock indicated that seven box beam projects are on the 12 month letting list. The projects, which are listed on the NCDOT web site, include:

B3866	Greene County	April letting	1 span @ 75'
B2824	Burke County	June letting	1 span @ 24m
B3664	Henderson County	July letting	3 spans: 80'-85'-55'
B3857	Henderson County	August letting	1 span @ 90'
B1303	Northampton County	September letting	3 spans @ 60'
B4047	Burke County	September letting	2 spans @ 70'
B4007	Alleghany County	December letting	2 span: 95'-70'

INFORMATIONAL / DISCUSSION ITEMS

4. NCDOT Budget Issues

Ron Hancock reported that NCDOT was scaling back their construction projects over the next several years.

5. Next Meeting

The Technical Committee agreed not to meet until after the next Joint Meeting on May 17, 2005.

6. Adjourn

The meeting was adjourned at approximately 11:30 AM.