

MINUTES OF AGC-DOT JOINT BRIDGE SUBCOMMITTEE MEETING
(Approved October 12, 2022)

The AGC-DOT Joint Bridge Subcommittee met on June 8th, 2022. Those in attendance were:

Brian Hanks	State Structures Engineer (Co-Chairman)
Victor Barbour	Carolinas AGC – Highway Division Director (Co-Chairman)
Boyd Tharrington	State Construction Engineer
John Pilipchuk	State Geotechnical Engineer
David Hering	Assistant State Geotechnical Engineer
Todd Whittington	State Materials Engineer
Wiley Jones	Assistant State Construction Engineer
Brian Skeens*	Assistant State Construction Engineer
Brian Hunter	State Laboratory Operations Manager
Gichuru Muchane	Assistant State Structures Engineer
Andrew Fulkerson	Buckeye Bridge, LLC
Kerry Kennedy	Conti Enterprises, Inc.
Adam Holcomb	Dane Construction, Inc
Chas Hummel	Flatiron Construction Corporation
David Yates	Fred Smith Company
Chris Brown	Sanford Contractors, Inc.
Tom Meador	Lane Construction Company
Mark Newman	NHM Constructors, LLC
Erick Frazier	S. T. Wooten Corporation
Larry Cagle	Thompson-Arthur Div., APAC-Atlantic, Inc.
Damien Hollifield	Young & McQueen Grading Company
Darren Colby	Zachry Construction Corporation
Aaron Earwood	Construction Unit – Regional Bridge Construction Engineer
Joshua Johnson	Construction Unit
Scott Hidden	Geotechnical Unit – Support Services Supervisor
Cabell Garbee	Materials & Tests Unit – Manufactured Products Engineer
Jason Civils	Materials & Tests Unit – Concrete Products Specialist
James Bolden	Structures Management Unit – Project Engineer
Trey Carroll	Structures Management Unit – Project Engineer
Nicholas Pierce	Structures Management Unit – Team Leader
Beth Quinn	Structures Management Unit – Team Leader

*Joined Via Microsoft Teams

During the review of the February 9th, 2022 meeting minutes, the following items were discussed:

1. Material Delivery and Lead Times

Materials & Tests Unit is providing material lead times to Contract Standards and Development Unit for consideration when establishing contract times for new projects.

2. Tight Reinforcing in End Bent Diaphragms

Mr. Carroll noted SMU has draft details under review.

3. Safety Concerns during Bridge Preservation Work

Mr. Barbour stated that a meeting was held to share concerns with the State Traffic Engineer, Mr. Kevin Lacy. Mr. Lacy committed to contacting the State Highway Patrol to discuss enforcement of speed within work zones. Several Contractors noted that action was taken, because there was a notable increase in State Highway Patrol presence within their work zones.

4. Pre-cast Concrete Panel Acceptance

Mr. Garbee stated that M&T is reviewing other States' and industry practices and will develop a policy based on their findings.

5. Other

Mr. Garbee announced that Mr. Mike Pulley has accepted the position of M&T – Welding Engineer.

The minutes of the February 9th, 2022, meeting were approved.

The following items of new business were discussed:

1. Proving Pile Bearing

Mr. Brown shared a very unusual situation where a component of pile driving equipment broke off and caused a fatality. Mr. Brown stated that the accident triggered a review of the location of personnel during pile driving operations. He inquired from other Contractors the technique they used for monitoring pile penetration and proving bearing. Many Contractors stated they used a similar process, which has been a industry standard for more than 30 years. Mr. Earwood noted that the Department promotes safety and is receptive to changing processes to minimize risk. He discussed potential alternatives to the 10-blow requirement, such as providing a drive criteria in blows per inch, pre-marking piles, and measuring penetration from a distance with a laser. Mr. Cagle mentioned that over the years he has noticed a significant increase in required driving resistance resulting in larger cranes and hammers being necessary.

Action Item:

Construction and Geotechnical Unit will form a workgroup to review projects where there were driving resistance issues and develop allowable method(s) for proving pile bearing. Geotech requested that AGC provide example projects where proving bearing was an issue.

2. Project Lettings

Mr. Hanks stated that more projects are now being released with the availability of more funding. Mr. Barbour inquired about cash flowing the available money to increase the number of anticipated projects. He also noted that express design-build projects that bundle 3-4 bridges was also attractive to Contractors. Mr. Hanks noted that NCDOT currently fully funds construction prior to letting and that cash flowing is being discussed. Mr. Hanks also

mentioned that some projects that were slated for State funds may be shifted to use Federal funds, which will allow for additional State funded projects.

Action Item: None

3. Material Availability – Box Beams

Mr. Holcomb stated that a prestressed box beam manufacturer, with a large share of the Department's orders, is only casting 2 days per week after recently losing most of their employees. Several Contractors mentioned that they are experiencing the same issue due to component suppliers, e.g. void material, being backordered 4-6 months. Mr. Garbee noted that box beam void material is in short supply. Mr. Barbour inquired about the process for removing a vendor from the approved producer list. Mr. Garbee stated that Materials & Tests Unit will remove a producer for quality related issues, but not for product delays.

Action Item:

Materials & Tests Unit to discuss the concern at the next PCI meeting.

4. Deck Drain Slope Protection Detail

Mr. Earwood shared photos of a bridge in Division 4 where the deck drains near the end bent caused erosion under the rip rap slope protection, which started to undermine the end bent cap. He shared a detail developed to repair the damage which consisted of placing #57 stone in a geotextile lined trench under the Class II rip rap. Mr. Earwood requested feedback from subcommittee members about performing this type of slope work while constructing the front slopes. He also mentioned that if Contractors see deck drains close to the end bents on the plans, they should notify the Area Construction Engineer. General feedback from Contractors was that constructing the detail is feasible, but suggested an alternative of filling in the Class II rip rap voids with Class B stone.

Action Item:

Construction Unit to monitor the performance of the rip rap slope protection repair.

5. Maximum Superelevation, Profiles and Skews for Bridges

Mr. Earwood discussed the need for Roadway Design Engineers to consider bridge superelevations and profiles during the design phase to minimize construction challenges. Mr. Hanks noted that for box beam and cored slab bridges the maximum superelevation and grade is 4%, while for girder bridges the maximum is 6%. He noted that steep superelevations and/or grades can also pose a hazard for the traveling public when there is snow and ice conditions.

Action Item:

Structures Management Unit to work with Roadway Unit on implementing superelevation and grade criteria in the Roadway Design Manual.

6. Asbestos Program Update

Mr. Hanks stated that the internal group has meet on this topic. NCDOT is developing a process to have the assessments completed internally, prior to letting. If asbestos is present, the contract would include a pay item for asbestos removal, along with documentation of

what was identified during the assessment process. Mr. Earwood noted that he would follow up with DHHS about the possibility of changing the process for notification and resubmittal.

Action Item:

Internal group to follow up with DHHS and determine Department's process for assessments, along with pay items and special provisions.

7. Partial Tensioning of Cored Slabs/Uplift at Bearing

Mr. Earwood shared photos of cored slabs that started to uplift during the transverse post-tensioning process. He noted that in this case, the Construction Unit had the Contractor release tension in the strand until the units returned to full contact with the bearing pads, and then grout the shear keys. Once the grout reached strength the Contractor continued tensioning the transverse strands to full tension. Mr. Frazier asked if the uplift was only happening in certain situations and Mr. Earwood responded no.

Mr. Earwood asked subcommittee members if there are concerns with partially tensioning and then grouting. Mr. Frazier responded that one concern would be having to wait for the 3 day and 5000 psi requirements to be met and having jacks available. Subcommittee members discussed grouting first and then tensioning. Mr. Earwood discussed concerns about gaps between units and that larger gaps would require foam or other material to prevent the grout from falling through.

Action Item:

Mr. Holcomb volunteered to test partial or full grouting before final tensioning and document if this process created any challenges and delays.

8. Approach Slabs

Mr. Earwood shared draft details for approach fills based on feedback received at the AGC workshops. He noted the previous draft detail would have resulted in significant additional costs with the large amounts of stone required. Newly proposed requirements will involve overbuilding and cutting back of the edge of the approach fill, using trench rollers with 6 to 8 inch lifts, and 95% to 98% compaction for every 2 feet of fill within 50 to 100 feet of the bridge above and below the bottom of cap, respectively. Details still include placing the geotextile material 1 foot below the slab and a 30-day waiting period before pouring the approach slabs. General comment from Contractors was that the 30-day waiting period would need to be included in construction time, because it will impact schedules.

Action Item:

Mr. Earwood to provide AGC the latest approach fill details for comments.

9. Other

Mr. Hanks shared that Dr. Beth Quinn has accepted a promotion with Division 5.

Mr. Hanks noted that SMU has been discussing contract times with the Division Bridge Program Managers and asked if there continues to be issues to let him know.

Post Meeting Note

Due to scheduling conflicts and limited agenda, the August 10th, 2022 meeting was cancelled. The next meeting is scheduled for October 12th, 2022.

**** Upcoming 2022 Meeting Dates:**

October 12th

December 14th