

## MINUTES OF AGC-DOT JOINT BRIDGE SUBCOMMITTEE MEETING

(Approved July 25, 2024)

The AGC-DOT Joint Bridge Subcommittee met on June 12, 2024. Those in attendance were:

Brian Hanks*	State Structures Engineer (Co-Chairman)
Victor Barbour	Carolinas AGC – Highway Division Director (Co-Chairman)
Troy Brooks	State Construction Engineer
Liam Shannon	Assistant State Construction Engineer – Eastern Region
Brian Skeens*	Assistant State Construction Engineer – Western Region
Michelle Gaddy	State Construction Operations Engineer
Gichuru Muchane	Assistant State Structures Engineer
Trey Carroll	Assistant State Structures Engineer
Mark Newman	NHM Constructors, LLC
Jerrad Stewart	Conti Civil
Erick Frazier	S. T. Wooten Corporation
Adrian Price	Flatiron Constructors Inc.
Larry Cagle	Thompson-Arthur-APAC
Brian Weathersby	Reeves Construction
Damien Hollifield*	Young & McQueen Grading Company
Adam Holcomb*	Dane Construction, Inc.
Pete Distefano*	Balfour Beatty
Ethan Brown*	Wright Brothers Construction
Nathan Thomas*	Smith-Rowe
Natalie Bravo	M&T Unit
Cabel Garbee	M&T Unit – Manufactured Products Engineer
Michael Batten	Geotechnical Unit - Eastern Regional Operations Engineer
Aaron Earwood	Construction Unit – Regional Bridge Construction Engineer
Aaron Griffith	Construction Unit – Regional Bridge Construction Engineer
James Bolden, Jr.	Structures Management Unit – Project Engineer
Nicholas Pierce	Structures Management Unit – Project Engineer
Doug Cantrell	Structures Management Unit – PRR Team Leader
Asa Godfrey	Structures Management Unit

\* Joined Via Microsoft Teams

During the review of the April 10, 2024, meeting minutes, the following items were discussed:

1. *Bat Moratoriums*

Aaron Griffith stated that bat moratoriums are considered when determining contract times. He reminded Contractors if their project schedule is affected by a bat moratorium to talk with the Resident Engineer and Area Construction Engineer about any flexibility in contract times.

2. *Anchor Bolts for Exterior Cored Slabs*

SMU is developing standard anchor bolt details for low-water cored slab bridges.

3. Construction Elevations

NCDOT is working with NCDIT to automate the process in the SharePoint system to migrate the construction elevation documents from the Preconstruction site to the Construction site so they are accessible to the Contractors.

4. Railroad Flaggers

Mark Newman mentioned the third-party railroad flagger assigned on a project is not able to get any response or updates from CSX or Norfolk Southern for track time, even though there are no trains scheduled to pass through the work zone.

Troy Brooks noted that railroad flaggers continue to be an issue for NCDOT. Construction recommends Contractors continue to coordinate with the Resident Engineers and the Construction Unit for resolution.

5. Intermediate Diaphragms on Skews

Gichuru Muchane noted that steel fabricators are responsible for determining intermediate diaphragm member dimensions to ensure proper fit-up in the field. He added that most fabricators have specialized software tools for this purpose, that consultants and SMU do not typically use. It was recommended that Contractors coordinate with the steel fabricator when fit-up issues come up.

6. Work Zone Safety

Victor Barbour provided updates on work zone safety. He noted there are conversations in the legislature to increase work zone fines, require additional driver education and provide work zone safety training.

Troy Brooks stated that there are now approximately 50 blue light radar trailers (BLRT) available for use in work zones. He noted that BLRTs are currently deployed on 11 projects and he encouraged Contractors who are interested in utilizing a BLRT to coordinate with the Resident Engineer or Division Construction Engineer. The BLRTs also collect data, such as the speed of traffic adjacent to the work zone.

The minutes of the April 10, 2024, meeting were approved.

The following items of new business were discussed:

1. Profilographs of Bridge Decks

Brian Weathersby asked if NCDOT was considering expanding the use of profilographs from just those stated in the Structures Design Manual of 1500ft or greater to all bridges in the future. Aaron Earwood noted that NCDOT has been requiring the International Roughness Index (IRI) tests in place of profilographs on larger bridges. Construction stated NCDOT has had success in using the IRI and would like to see it extended to more bridges in the future, but there is no plan to expand its use at this time.

Brian Weathersby stated he was familiar with the IRI testing and suggested that if NCDOT was to make it a requirement on more bridges, the Department should consider incentives for

Contractors that perform well on the IRI test. Aaron Earwood mentioned that could be a consideration when a policy is put in place for extending the IRI testing to more bridges.

**Action Item:**  
**None.**

2. *Davis Bacon Wage Survey*

Victor Barbour reminded Contractors there is a current U.S. Department of Labor wage survey for the NC Highway Construction Industry going on from May 20 - August 20. The survey will affect the established prevailing wage rate. The last wage survey occurred in 2011 and not many Contractors responded, resulting in a higher industry prevailing wage being established. This resulted in many Contractors having to raise their employee wages.

Michelle Gaddy encouraged all Contractors and Subcontractors to respond to the wage survey. She noted that NCDOT is sending emails with direct links to the survey to all Contractors identified as having done work for NCDOT in the past few years. Frequently asked questions (FAQs) are being developed to assist with survey responses.

**Action Item:**  
**None.**

3. *Grouting/Tensioning Note on Cored Slabs/Box Beams*

Aaron Earwood shared a cored slab typical section drawing from a project which showed an old note that was not updated with the 2024 *Standard Specification* release. He stated that the Construction office has notified the Resident Engineers to ignore the note and to follow the practice stated in the 2024 *Standard Specifications*.

**Action Item:**  
**SMU will update the standard notes and standard plans for Cored Slabs/Box Beams.**

4. *Hold-Down Detail with Expansion Ends*

Aaron Earwood shared a hold-down detail on an expansion end of a cored slab bridge. He noted that typical details of expansion ends of cored slab bridges show dowel holes that are filled with silicone most of the way up to support the concrete or asphalt overlay. However, the top section of the hold-down assembly is grouted, which appears to restrain expansion. He inquired if any of the Contractors recall utilizing the hold-down detail on the expansion end of a cored slab bridge.

Pete Distefano mentioned that the old Harker's Island bridge which was recently demolished had an expansion end where silicone was utilized to just above the dowel and grout was utilized above the silicone. This hold-down detail made the demolition process easier.

Adrian Price mentioned a cored slab project in Rodanthe with expansion ends using the hold-down detail with silicone and grout above it. Construction plans to visit this bridge site or find inspection report information to check the performance of the detail.

**Action Item:**

**Construction to investigate the Rodanthe bridge performance and hold-down details.**

5. Strip Seal P-Joint

Aaron Earwood provided an update on the availability of ‘P’ shaped rails for the strip seal joints. He reminded the subcommittee that the only steel mill that manufactured the ‘rails’ has closed. He noted one vendor purchased all the surplus stock from the closed mill which has led to a limited supply in the market.

Erick Frazier noted an issue with his normal joint supplier being unable to get the strip seal materials at the usual cost. He inquired how Contractors should handle joint suppliers that are unable to fulfill orders. Gichuru Muchane mentioned that SMU has investigated the Expansion Joint Seal (EJS) and found it was similar in cost and can handle the same joint expansion as the strip seal, therefore if Contractors were running into supply issues, they can request a joint substitution. Construction noted that if Contractors are unable to procure strip seal joint materials at a reasonable cost, they have the option to notify the Resident Engineer and request to substitute the strip seal joint with an EJS. There are differences in how a strip seal and an EJS are connected to the bridge deck, which may require modifications to the deck design and rebar placement.

Mark Newman mentioned a current situation where he asked the Engineer of Record (EOR) to investigate the EJS as an alternative to the strip seal. The EOR stated this change will require revised plans to update the joint details. Aaron Earwood asked about the need for the EOR to revise the plans in these instances. Brian Hanks suggested Construction make the change in joint type as part of the “As-built” plans.

SMU shared the EJS standard drawing from their website with the group for discussion. The group discussed the process for replacing the strip seal with an EJS, and it was decided that after working with the Resident Engineer, the Contractor could submit the joint type changes through the working drawings review process. James Bolden requested that if the Contractor is making this joint type change due to a supply issue, to indicate that change in the Working Drawing submittal to streamline the review. Standard details for the EJS are available on NCDOT’s website.

**Action Item:**

**None.**

6. Integral End Bent Approach Slab

Aaron Earwood shared a detail that he is proposing for trial on a bridge with integral end bents. To allow the integral end bent to move independently to the approach slab, the proposed detail provides fixed dowels into the end bent that fits into a PVC sleeve in the approach slab. This allows the end bent and dowel to move within the PVC sleeve, which

restricts the approach slab from moving off of the end bent. The detail places an expanded polystyrene (EPS) block between the integral end bent backwall and the approach fill to accommodate thermal movements. The approach slab and approach fill material are isolated from thermal movements and stay fixed.

Pete Distefano asked if the detail shown would require the “wire-basket” wall to still be behind the EPS block. Aaron Earwood confirmed the “wire-basket” wall, which functions as the bridge approach fill, would need to be behind the EPS block.

**Action Item:**

**Construction to share proposed integral end bent detail and investigate upcoming projects to utilize the proposed detail.**

7. Blocking Out under MBT and FIB Flanges

Aaron Earwood shared some photos of the edge beam/diaphragm for bridge with FIB girders. He noted that typically the edge beam spans between the webs of girders in each bay. However, for wide top flange concrete girders (MBTs and FIBs) a narrow section of unreinforced concrete is formed underneath the flanges, which has the potential to spall off over time. He encouraged Contractors block out the area underneath the wide top flanges to prevent concrete flowing into those areas. Construction requested that details and notes need to be placed on the plans to remind Contractors to block out areas under wide top flanges and formwork.

**Action Item:**

**SMU to update Design Manual details to note the block outs to prevent concrete from getting below the top flange and formwork on wide flange girders.**

8. Other

Link Slab Clarifications

Larry Cagle stated that on a recent project he noticed a few bridges could have utilized link slabs to eliminate expansion joints. When he alerted the Resident Engineer the response was the cost to change the joints to link slabs and to revise the plans by the EOR would all be at the Contractors expense.

Brian Hanks asked if the projects where link slabs could be utilized were Divisions let or Central Let. Larry Cagle mentioned some were Central Let projects.

Aaron Earwood used the discussion about link slabs to mention that NCDOT prefers one saw cut at the center of the link slab, instead of 3 saw cuts that were previously shown in some plans. He stated grooving needs to treat link slabs as normal expansion joints and groove to within 2” on each side of the saw cut in the link slab.

Erick Frazier asked about the pour sequences for link slab bridges. Trey Carroll mentioned that the two pour sequence options should be shown on the plans.

**Action Item:**

**None.**

Long Span Box Beams

Larry Cagle stated that there was only one producer of box beam unit lengths over 80 feet. He asked if NCDOT has approached other precasters about any plans to produce the longer span units. Cabell Garbee mentioned that other vendors are working on adding beds to make longer box beams in the future.

Aaron Griffith mentioned there are a few projects that need to be finalized out of Eastern Vault. MST Precast and Prestress plant was purchased by Knight's Companies and NCDOT projects have been cleared from their inventory. Cabell Garbee mentioned it will take some time for Knight to re-staff to get up and running.

**Action Item:**  
**None.**

**\*\* Upcoming 2024 Meeting Dates:**

August 14<sup>th</sup>

October 9<sup>th</sup>

December 11<sup>th</sup>