

ACEC/NCDOT
STRUCTURES SUBCOMMITTEE

Structures Conference Room C
August 12, 2024, 10:30 AM

MEETING MINUTES

1) Attendees

- | | |
|---------------------------|---------------------------|
| a) Brian Hanks | g) Liz Lawes - WSP |
| b) Gicharu Muchane | h) Greg Cols - AECOM |
| c) Trey Carroll | i) Jeff Loftus – M&N |
| d) David Stutts | j) Emily Murray - Volkert |
| e) Hoang Dieu | k) Tony Laws – RS&H |
| f) Terre Peterson | l) Joshua Gentry – RK&K |

2) Meeting Kick-off

- a) Welcome new PEF members Tony Laws (RS&H) and Joshua Gentry (RK&K)

3) Bridge Design Workshop Series

- a) Review Bridge Design Workshop tracking spreadsheet
- i) Perquimans Movable Bridge (T-064)
 - (1) Having difficulty finding volunteers from Division 1 to co-present on Perquimans. Aaron Earwood has offered to participate, but he wasn't directly involved with the project.
 - (2) Could engage Aaron in providing a general construction update for the first 15 minutes and then utilize the next 30 mins for Perquimans.
 - (3) Lawes & Cols to follow up with Davad Ragan (H&H), Trey Carroll, and Aaron Earwood.
 - ii) Potential presentation opportunity (T-067): NC State research on methodology to maximize return on investment and treatments to apply in preservation projects. A tool is in development that would be used for bridges that are not good preservation candidates but are not programmed for replacement. Research is about a year out.
 - iii) OpenBridge/ProjectWise (T-051) – General discussion on OpenBridge integration
 - (1) 2D vs. 3D Seed Files – SMU provided guidance that 3D seed files can be used for current 2D plan drawings. Using a 3D seed file should not be confused with needing to create a 3D bridge model.
 - (2) Firms have been creating 3D models primarily for use in the roadway models so there isn't a gap in the modeling.
 - (3) PDN specifies providing a 3D shell, but SMU noted that a 3D shell model/digital twin is not a required deliverable at this time.

- (4) Draft updated OBD Manual is in progress- will be coming out once approved.
 - (5) Discussions on the different versions of OpenBridge: previously was 10.10, then 10.12, and now 23. Roadway just switched to 23, some firms having issues running 10.10 and 23 at the same time.
 - (6) There were discussions that Matt Clark may have been working on a NCDOT-wide OpenX work group. This could be a contender for ACEC to get involved to help facilitate coordination between NCDOT and Consultants. Lawes to circle back with ACEC.
- b) Identify next workshop to schedule
 - i) Perquimans & Construction Update – targeting November ‘24
 - ii) CMGC Project Delivery – January/February ‘25
 - iii) Corrosion Policy Refresher/Updates – May ‘25

4) **Training/Professional Development Opportunities**

- a) Discussed topics for NSBA Raleigh Steel Bridge Forum spring of 2025 – no comments to ongoing list. Lawes & Cols will coordinate with NSBA for Spring presentations.
- b) Latest Structure Bulletin (Volume 8 Issue 2) – Staged Construction, girder stirrups, grooving transverse joints & training videos. Bulletin is stored on the Construction Website.
- c) Other training opportunities.
 - i) NCLUG Summer Conference | Raleigh, NC | August 20 – 22nd
 - (1) Bentley presenting on Day 3 on SMU’s behalf; creating 3d models and generating 2D sheet models from SMU’s workspace
 - ii) NCDOT Preconstruction Conference | September 30th & October 1st
 - iii) Paul Zia Lecture | NC State | October 7th on the Frederick Douglass Memorial Bridge in D.C.
 - iv) ACEC/NC/NCDOT Joint Transportation Conference | Raleigh, NC | October 10 - 11th
 - v) WTS Luncheon | Sept (date TBD)

5) **Anticipated PEF Opportunities**

- a) Updates from SMU
 - i) Bridge Program Projects have been moved to PMU for management. Generally, there is no rush to get new projects started due to the bridge program being over-programmed and currently scheduled Let dates being adjusted further out. SMU is assisting PMU in determining firm selection; pushing to use Structures LSC for planning & design. After current SMU LSC expires, SMU is not sure if Bridge Program planning & design will be included in the SMU LSC or will be contracted under PMU or other units. SMU is working with PMU to make firm selections and spread the work out between firms.
- b) Other Opportunities
 - i) Discussion on coordination with Divisions and GESC on latest policies

- (1) Firms are getting different comments from GESC reviewers
- (2) When projects are Division Managed-Raleigh Let, SMU may only have the opportunity to identify design issues on the PS&E set. Firms should coordinate with SMU early for any items that do not fall within SMU design manual policies and guidelines.
- (3) Typically, Division picks who does the reviews, whether GESC or DOT. Recent discussion within NCDOT about using prequalification codes for GESCs. Firms would be qualified based on keeping up with standard policies, word of mouth policies, and would be trusted to check other firms' work. No timeline set for this prequalification.
- (4) Regarding comments from GESC reviews, design firms should contact SMU if getting preferential or overbearing / nonconsequential comments or having issues.

6) **Technical Topics**

- a) Recent revisions to manuals, standards, etc.
 - i) SMU has removed standard drawings and design plans from OBD workspace to save space. Access the standard drawings through the website instead of the workspace.
 - ii) OBD Manual updated this morning- when manuals updated with a recent date without a notice, usually it's minor such as a tweak/correction.
 - (1) Update for the manual online isn't the latest OBD Draft manual circulating internally.
 - iii) Special Provisions – updated 3 Special Provisions that include Painting Existing Structure, Painting Existing Weather Steel Structures, Foam Joint Seals for Preservation. A memo went out for all three and they are posted on the website.
- b) Upcoming revisions to manuals, standards, etc.
 - i) Cored Slab Standard drawings to adjust hold down details are being updated. Incorporates feedback from AGC, reach out to SMU to request the latest details.
 - ii) FIB Standards – has not been released yet, is still in progress.
 - (1) SMU noted that there have been issues with the wide top flanges on skews. Utilize a top flange clip to reduce end bent cap width and locate the deck edge beam closer to the joint. Ensure that the deck “A” bars are supported beyond the end of the beam.
 - (2) Camber - one concern for FIBs is ensuring a net positive camber on the girders once they get to site. At a previous Subcommittee meeting, it was discussed to maintain at least 1/2” camber (after dead load applied) and it should be calculated per AASHTO.
 - (3) Link slabs - Link slab table will be released with FIB Policy.
 - (4) General guidance on draped strands vs. adding more straight strands: If you can avoid draping, then add extra straight strands.
- c) Digital Delivery, OBD/Open X, and ProjectWise implementation
 - i) Policy group is working on revising OBD user manual to include Current 2023 OpenX Workspace

- (1) Versions of OpenBridge: everything is forward compatible, but Consultants noted there are issues that can result in migrating projects.
- (2) What is the expectation from Consultants for OBD? If using OpenBridge, SMU is not actively checking which version firms are using.
- (3) Reminder to firms to upload final DGNs to ProjectWise. There was a memo circulated from the Chief Engineer's office in October 2023 regarding placing final DGNs on ProjectWise, make sure to re-associate project links.
- ii) SMU is looking at use of AI across the industry, most firms aren't using AI yet.
- d) Research project updates
 - i) Prioritizing bridge preservation using bridge data is currently in the works
 - ii) NC State is testing channel beams from a few Sampson County bridges that were reinforced with FRP Bands to determine how much strength/capacity was restored. Research is ongoing.
 - iii) FRP Strut & Tie will kick off this fall
 - iv) Integral abutment research - project didn't produce results NCDOT was hoping for, and they are doing additional research and investigation.

7) **Open Discussion/Other Topics**

- a) Discussion on incorporation of Bridge Inspection topics in future meetings
 - i) Historically there is a separate meeting held to kickoff inspections at the beginning of the year. SMU will revisit if frequency is adequate or if additional meetings warranted.
- b) SMU asked if there are enough updates to policy memos/manuals and if information is getting passed along effectively.
 - i) Consultants noted that there are several items that appear to be in-progress and unless you read the Subcommittee Minutes, it's difficult to be aware of the updates. It's also not official policy until NCDOT puts out a memo or additional guidance. SMU to potentially discuss putting the Subcommittee meeting minutes on their website.
- c) SMU / NCDOT is looking to sell off 24 72" FIB Girders that are already fabricated and sitting in a yard. They were to be used at the Vinfast project but are no longer needed. If firms are working with another DOT or client that could use the girders, reach out to SMU. The girder lengths are provided below:
 - i) 72'-10 7/8" – 8 girders each
 - ii) 142'-8" – 8 girders each
 - iii) 141' -4 7/8" length – 8 girders each.

8) **Upcoming Subcommittee Meetings:**

- a) November 11th
- b) February 10th
- c) May 12th