

ACEC/NCDOT
STRUCTURES SUBCOMMITTEE

Structures Conference Room C
February 10, 2025, 10:30 AM

MEETING MINUTES

1) Attendees

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|--------------------|-----------------------------|
| a) David Snoke | f) Liz Lawes – WSP |
| b) Gichuru Muchane | g) Greg Cols – AECOM |
| c) Trey Carroll | h) Jeff Loftus – McAdams |
| d) David Stutts | i) Patrick Holder – Volkert |
| e) Hoang Dieu | j) Tony Laws – RS&H |
| | k) Joshua Gentry – RK&K |

2) Meeting Kick-off

- a) Previously approved minute were published and available on ACEC website
- b) Subcommittee updates
 - Welcome David Snoke as Unit Head
 - Jeff Loftus now at McAdams
 - Tierre Peterson now at PMU

3) Bridge Design Workshop Series

- a) Review Bridge Design Workshop tracking spreadsheet. Notes for the discussions added to the spreadsheet.
- b) Update current potential topics and add new potential topics
- c) Identify next workshop to schedule
 - Scheduled March 6, 2025 – CMGC (Division 14 with Benesch). Content of the lecture is acceptable by NCDOT/committee.
 - May 12, 2025 – Corrosion Policy Refresher/Updates. NCDOT may give introduction and give background to the research.
 - September 2025: Helene Updates for bridge repair and replacement – proposed as next topic

4) Training/Professional Development Opportunities

- a) Steel Bridge Forum - February 27, 2025 @ McKimmon
 - Duncan Paterson & Brandon Chavel of AISC organizing
- b) Other training opportunities
 - WTS – SE Rail Forum March 10 –12th
 - NCDOT Preconstruction Workshop – March 18th
 - NCLUG – August 20 is summer conference
 - NC State Research Symposium 2/11 & 2/12

5) **Anticipated PEF Opportunities**

a) Updates from SMU

- SMU still involved in selecting firms for bridge program projects that are managed by PMU.
- SMU may work with PMU to break-up multi-bridge STIP projects.
- SMU will extend on-call by 1 year
- SMU will be doing reviews for express design-build projects' bridges.

b) Other opportunities

- Express Design Build and Progressive Design Build projects for Helene will still continue to be advertised.
- Division 11, 13, 14 will be doing more advertising.

6) **Technical Topics**

a) Recent revisions to manuals, standards, etc.

- Updates to form letters coming on SMU website (incorporates new unit head)
- Revised SP Submittal of Working Drawings (updated contact info)

b) Upcoming revisions to manuals, standards, etc.

- LRFR Standard Drawing is being updated for steel rating – Fatigue LL factor increased from 0.75 to 0.8 to align with AASHTO.
- Design manual updates for OBD are ongoing.

c) Digital Delivery, OBD/Open X, and ProjectWise implementation

- Larger NCDOT Digital Delivery effort underway, separate committees have been established for this through Technical Services and other units. The aim of the committees is toward digital Asset Management.
- OpenBridge challenges include frequent version updates.

d) Research project updates – not discussed

e) Prestressed girders: NCDOT preferred method for elastic gains

- Current SMU policy: if Transformed Section properties are used, need to state on LRFR sheet.
- If transformed section properties are used, elastic gains are included implicitly (least conservative). If gross section properties are used, many neighboring states neglect elastic gains (most conservative). Service III rating factor difference is generally 10%, depending on various parameters.
- NCDOT's in-house program includes elastic gains for dead load, not live load, in conjunction with 0.8 LL factor.
- SMU notes that neglecting elastic gains allows for deterioration reduction in capacity and future rating load increase. Note on LRFR sheet assumption made. Suggest including version of AASHTO LRFD

used for design.

- Similarly, for continuous for live load designs, this must be noted on the LRFR sheet. This design approach is discouraged.
- f) Rating of Timber decks on timber bridge replacements
- Noted that deck is not generally rated.
 - Skewed timber bridges are still being considered, no updates.

7) **Open Discussion/Other Topics**

- Utility Attachments on bridges: SMU is working with Utilities Unit to allow for utilities attached to bridges in certain cases. New process will be released soon. If a firm has a project with utilities attached to existing bridges, reach out to SMU.
- Please submit SMU Scoping Template worksheet with PDN text when scoping projects.

8) **Next Subcommittee Meeting:**

- a) May 12th – coordinate with ACEC to hold committee meeting right after bridge workshop at McKimmon Center.