

Meeting Minutes
SCDOT/ACEC/AGC Alternative Delivery Sub-Committee Meeting
1/18/2023 @ 9:30 AM

I. Welcome/Introductions
Meeting Attendees

SCDOT	ACEC	AGC
<ul style="list-style-type: none"> • Jae Mattox • Ben McKinney • Maddy Barbian • Will McGoldrick • Brian Gambrell • Carmen Wright • Tyler Clark • David Rister 	<ul style="list-style-type: none"> • Andrew Smith (HDR) • David Taylor (Stantec) • David Russell (JMT) • Matt DeWitt (Robbins & DeWitt) 	<ul style="list-style-type: none"> • Chris Boyd (Crowder)

II. Annual Goals/Discussion

- Open conversation, document anything going on in the industry & bring to this committee, level playing field, consistent message across the industry
- AGC – C. Boyd Crowder & industry – trying to spread pursuits out some more for resume availability/teaming. Website is run well, but the schedule is stacked
- ACEC –D. Russell - other entities are picking up on design-build approach & DOT considering those schedules as well. Staffing is not the issue, it’s the resume availability. General consideration for other government entities using design-build approach.
- Dorchester County currently doing a bridge package using design-build. We want to identify those projects so we can capture it. Main Road, Ashley River Ped bridge. GSP Airport autonomous vehicle (bridges, roadway design, construction), they are getting information out to contractors (*Will incorporate these projects in future project updates*) **[ACTION]**
- ACEC – D. Taylor - risk of design-build requires going far up the corporate ladder & going through risk committee, pursuit requires internal coordination that takes time. Risk. Compensation for designers in the upfront work to ease risk in design community.
- What is costing the most money during pursuit for design firms? Designer’s download of data – would help to know what the priority design issues are going to be, reliability of information provided by SCDOT, high seismic zones are huge risks during pursuits. Bottom line is people & hours. Can designers get lessons learned on surrounding projects to help lessen those people/hour requirements from contractors? ACEC - D. Russell – limiting liability in schedule delays, etc. Design consultant sees all of the risk up front.

- Limits of liability reiterated
- Final design prices on preliminary design on top of being competitive
- Specs being ambiguous when comparing design guidelines being preferred by the owner & the RFP not being specific about that preference
- SCDOT - B. Gambrell – SCDOT is drawing lines as far as liability goes. DOT cannot give preference to design versus contractor when it comes to design-build pursuit.
- Action Items – DOT prioritizing of data & sharing information as early as possible (during pre-procurement meeting/presentation), several months in advance would be the goal to assist in teaming agreements. **[ACTION]**
- BDM & RDM – allowances from the owner, catalog all of those in the RFP. Ex. Requirements of seismic design manual being specified in RFP
- SCDOT - B. McKinney – encouragement of questions being asked during Confidential Questions & NCQs for any clarity. May add language if there is any vague language in the design manuals, it must be asked to receive approval for derivation.
- Clarity of Confidential Questions vs. ATCs, DOT's preference is to address CQs & not burn ATCs.
- Low Volume Bridge design leaves a lot of non-clarity.
- DOT wants to make sure the contractor & designer understand what the goal of the project is. Want to work these items out at the CQs stage.

III. **Project Updates**

In Construction

- Carolina Crossroads Phases 1 & 2 – Under Construction.
- Closed and Load Restricted Bridges 2021-1 – District 4 with eight bridges. Under construction with progress.
- Cross Island Parkway Toll Conversion – Substantial completion reached.
- US 301 over Four-Hole Swamp – Under Construction
- Bridge Package 14 – Project awarded to Lee Construction on December 29, 2022.
 - AGC asking for grading (will be posted after contract is signed, within 30 days)
 - Extending the protest period for the other teams to see holes the evaluation team doesn't see. Carmen says DOT is reviewing/considering how we can do this without delaying the construction period.

In Procurement

- I-20 over Wateree, River and Overflow Bridges – Public Announcement March 29th, 2023.
- Carolina Crossroads Phase 3
- Bridge Package 15 – Bridges in Florence, Anderson, and Chester. Public Announcement March 7, 2023.
- Bridge Package 16- Five primary load restricted bridges in Pickens. RFQ released January 3, 2023
- I-26/I-95 Interchange Improvements – In procurement, RFQ released 12/21/2022

- 2023 Anticipated Procurements
 - Bridge Package 17, 20 and 19 in that order.
 - Dates are on the website & were updated yesterday (1/17/23)
 - I-95 over Santee (Lake Marion) bridge replacement – DB prep work is underway.
 - Long Point Road/Wando Port Interchange – DB Prep work underway. Procurement is anticipated to begin in 1st quarter of this year.
 - 2/24 RFQ date depending on stakeholder meeting upcoming in the coming weeks. DOT should know by the end of January if that date is going to happen.
 - Contractor prefers 60 days before RFQ to allow the selection of a design firm.
- *2023 Updates Revised Post-Meeting:*
 - *I-95 over Santee (Lake Marion) bridge replacement – DB prep work is underway.*
 - *Project has been delayed due to grant application timeline, anticipate procurement to begin in 2024.*
 - *Long Point Road/Wando Port Interchange – SCDOT and Consultant are working towards finalizing the project's Environmental Assessment and seeking a FONSI by Summer 2023.*
 - *Procurement is anticipated to begin in Q2 2023, no firm RFQ date has been decided; details forthcoming. We are anticipating award and execution of contract in Q2 2024.*
- 2024 and beyond
 - Mark Clark Extension – Pursuing Final EIS and related documentation/permits. RFQ anticipated in 2025+. Currently seeking matching funds from SIB.
 - Low Country Corridor East – Currently in project development and NEPA. Procurement timeframe TBD. Public involvement meetings held in October 2021.
 - I-26 Widening – MM 165 to 176, RFQ anticipated in late 2026.
 - I-26 Widening – MM 176 to 187, RFQ anticipated in late 2024. Currently working through firms for on-call prep work.
 - I-95 Widening – MM 8 to 21. Anticipated DB prep work starting soon – currently working through approvals to select firm from the On-Call. Procurement anticipated in 2025.
 - I-95 Over Great Pee Dee River – Bridge project. Received planning grant (~\$700k). HNTB to execute work associated with the grant. Decision will be made during that work for the design-build construction grant.
 - Low Country Corridor West and I-26/I-526 Interchange – EJ mitigation in 2023; first phase RFQ in 2028.
 - Five phases are currently being evaluated for project delivery type.
- Note: Additional project information has been posted to the website: [SCDOT Design-Build Overview](#).

IV. Action Items from 11/16/2022 Meeting SCDOT

- **SCDOT/ACEC/AGC** to discuss potential new RFQ language suggestions and/or scoring techniques for SOQ evaluations with stakeholders. **[OPEN]**
 - Ongoing discussion through recent procurements.
 - Discussion regarding key individuals below.
 - DOT has to discuss with policy committee
- **ACEC/AGC** to poll and involve members in order to look for examples across industry in order to establish positive potential adoption of PDB, CM/GC, and other methods. **[OPEN]**
 - Additional Feedback not provided but will continue to be solicited. Early 2023 we may be able to schedule a separate committee or group discussion regarding recent industry moves and examples in other parts of the country.
 - Significant information received from various sources, DOT asking for any countrywide information the community hears about.
- **ACEC** will review latest Hydraulic information provided by SCDOT and reach out to those on Bridge Package 14 to determine if additional hydraulic data is able to be provided, without issue, at technical proposal/conceptual plan stage. **[CLOSED]**
 - ACEC reached out to additional industry partners.
 - Request official statement that the existing conditions model is reliable.
 - Generalize statement.
 - No additional information provided
 - Package 15 was better, not as dialed in but improved
 - Speed of prep work is the main cause of issues. Overall receiving positive feedback. DOT wants engineering judgement to be used by each team, but will do a deeper dive into the hydraulic models in the future
 - DOT will be specific in the future if a 2D model is going to be required.
- **AGC** to review, discuss, and provide particular erosion control items that have been problematic and could benefit from Unit pricing. **[OPEN]**
 - Big players have not been reached out to (Lane, Blythe, etc.)
 - Feedback from smaller bridge builders did not think this would be beneficial.
 - Will reach out to the more linear contractors to get their feedback

V. Complex Bridge Peer Review Requirements - Update SCDOT

- Comments from industry incorporated into peer review document and language and sent back out for industry feedback.
 - The policy will have one more industry review, but it's ready for implementation on upcoming projects.
 - Going to be done during the RFP stage, after ATCs are completed.
 - Pass/Fail, not qualifications based
 - New form, so DOT can review & give feedback quickly
 - Trying to get in CCR Phase 3, I-26/I-95

- ACEC – be clear when a revision will require a peer review or just an internal back check.

VI. Exhibit 4z Updates

SCDOT

- Digital signatures required for RFC documents, no more paper/wet signatures
- Roadway Plans, preliminary & final, cross sections to ensure tie back to existing roadway footprint.
- Language clean up for the digital plans
- Shop plans & working drawings update
 - Supplemental specification from January 2023
 - Reevaluated what requires signature & seal (structural steel girders no longer require seal)

VII. Discipline Specific Discussion: Environmental

Goal for this year is to provide discipline specific discussion at each meeting, starting with environmental & have talked about geotech.

Environmental

- Agencies are hesitant to provide feedback or become fully engaged before plans are provided to them. (We do have Agency Coordination Engagement (ACE) meetings to update them on projects periodically in order to garner big picture feedback so that is an avenue but getting specific feedback without plans is more challenging.)
- DOT views the NCQs or CQs as helpful in alerting to any issues and concerns & DOT will engage with the agencies & be a partner in giving the teams guidance.
- Any guidance that can be given in scoping mitigation (DOT has in the past provided mitigation up to an amount based on the design level that has been completed)
- DOT is trying to reduce costs upfront on our end. There's more risk for upfront work (cost/risk) on DOT's side when designers can do a better job designing around & avoiding impacts once they know the constraints and have ATCs approved.
- Can DOT translate that work into quality points? DOT is working on that.
- DOT is less willing to buy credits upfront when the designers are able to avoid impacts. DOT willing to work on RFP language.
- US 301 over Four Hole example – there was a huge opportunity for quality credits with reducing the need for using Black River credits. (Not sure enough quality points were assigned to this though.)
- DOT has tried to give credits for project risk & it has not worked in the past.
- Minimization of required mitigation credits is something DOT can consider in the added value & innovation points.
- Regulatory changes happening right now are out of the normal.
- Industry asking for a standard understanding for the delineating that has been completed prior to pursuit. Specifically for streams ditches, etc. that fall into a more grey area.

- Have to include something in NEPA to avoid full JD. (I think this was in relation to the CLRB packages)
- DOT has to determine what type of permit will be required during NEPA phase, and we don't just guess or do desktop review. Information for upcoming CLRB packages will be much clearer than what's been provided in the past.
- Two big concerns are bats & noise. New noise policy coming out that will affect the larger DB projects that DB teams don't know what to plan for. (The policy should be approved this month.)
- Noise Policy Discussion
 - Walls are typically scope items that cannot be removed, but if the new noise policy would allow it can be de-scoped.
 - New policy will be out in the coming weeks. (To be signed in Feb)
 - DOT will provide the criteria information needed to meet the new policy. Main policy change is going to be the number benefited & the feasibility.
 - Working on eliminating retroactive analysis. DOT is expecting more noise walls & increased construction cost.
- Bat Policy Discussion
 - Fish & Wildlife will be limiting clearing to specific months.
Also anticipate having to perform acoustic surveys in certain counties based on recent conversations with FWS.
- Commitments in RFP Environmental Footprint don't seem conservative enough & are restrictive from a Design-Build perspective. Need more buffer & assistance with mitigation.
- Individual permits versus general permits up front. – not sure what this was about
- Roadway & hydro footprints have a signification role in driving environmental impacts.
- Concern about going back to agencies with an improved design can be admitting the original design wasn't the least impactful. DOT feels this is the price of doing business & accepting that additional cost of mitigation is part of the business.
- Concern about environmental subcommittee not being as active with design-build issues, NAEP has an environmental committee but Will McGoldrick is not engaged in that.
- NAEP needs to help filter through design-build for this group so that the conversation can come to this group

VIII. Open Discussion

- Discuss Geotech next meeting
 - Engage Trapp Harris & ACEC Geotech subcommittee
- Utilities for the following meeting
- Future meetings will be held in person, no virtual meeting to be offered going forward
- ATCs – Can a denied ATC be replaced with a new ATC
 - DOT is looking into this issue
 - Better Confidential Questions can answer a lot of “ATC or not” questions
 - Schedule component is a factor in determining the number of ATCs

- DOT is trying to address repetitive ATCs within the RFP
- AGC is a fan of the “last minute” ATC. DOT evaluating if that will be a permanent part of procurement
- Conceptual ATC/Risk Discussion timing under consideration
- Utilization of design-build prep list for review of ATCs
 - DOT to find official response from 2 years ago & review and discuss at the next meeting. **[ACTION]**
 - DOT wants to revisit the use of consultants with ATC reviews due to resource limitations (concerns voiced by ACEC).

IX. Action Items

- **SCDOT/ACEC/AGC** to discuss potential new RFQ language suggestions and/or scoring techniques for SOQ evaluations with stakeholders.
- **ACEC/AGC** to poll and involve members in order to look for examples across industry in order to establish positive potential adoption of PDB, CM/GC, and other methods.
- **AGC** to review, discuss, and provide particular erosion control items that have been problematic and could benefit from Unit pricing.
- **SCDOT** to issue memorandum regarding the proposed process for complex bridge peer review requirements. See attached working draft of requirements.
- **SCDOT** will identify and include other industry design-build projects in future meeting project updates.
- **SCDOT** will prioritize the sharing of data and information as early as possible during pre-procurement meeting/presentation.

X. Next Meeting Date: 3/22/2023 @ 9:30 AM

COMPLEX BRIDGE PEER REVIEW REQUIREMENTS

Independent Peer Reviews are used to independently confirm that the design of complex bridges or complex bridge components meet the requirements of the specified design criteria. Independent Peer Review is intended to be a thorough, independent verification of the original work. A Peer Review is not simply a check of the Engineer of Record's (EOR's) plans and calculations. It is an independent verification of the design using different programs where applicable and independent processes than what was used by the EOR.

Independent Peer Review does not relieve the EOR of the design Quality Control and Quality Assurance requirements contained in the RFP or any other submittal requirements in Exhibit 4z. Independent Peer Review does not relieve the EOR of their liability for errors and omissions in their work.

The Peer Review will be performed by an independent engineering firm, other than the firm responsible for the initial work, and will be designated and contracted by the Proposer to conduct the review. The designated Independent Peer Review firm will have no other involvement with the project for either the Proposer or SCDOT other than conducting peer review. The Independent Peer Review firm shall employ a minimum of two Professional Engineers assigned to perform the work associated with the Independent Peer Review, each with at least five years' experience in the design of the type of complex structure/element being reviewed. Both assigned Professional Engineers shall also have a minimum of ten years' experience in the design of highway bridge projects.

1. QUALIFYING COMPLEX BRIDGE TYPES AND COMPONENTS

Peer Reviews are required on the following bridges and bridge components:

- Spans where either 2D or 3D refined analysis is required by either AASHTO LRFD Bridge Design Specifications or SCDOT Bridge Design Manual
- Horizontally curved steel girder bridges, with or without skews (including constructability designs/checks)
- Seismic design of bridges with Operational Classification (OC) I, requiring a detailed seismic analysis. Seismic design of bridges that utilize isolation bearings or dampers. Seismic design of bridges with irregular geometry that are designed using a time-history analysis.
- Movable bridge spans (Independent Peer Review is required for the mechanical, electrical, and structural components)
- Bridges/spans with specified vessel collision requirements that include a collision vessel in excess of the AASHTO standard hopper barge [LRFD article 3.14.11] travelling at a speed greater than 2 feet per second
- Straddle bents (Concrete or Steel, integral and non-integral)
- Integral interior bents
- Single-column bents
- Post-tensioned concrete components
- Precast columns and/or bent caps
- Bridge spans with less than 3 girders in the cross-section, including pedestrian bridges

- Superstructure spans which exceed 200 feet in length
- Braided underpass structures where the beams or slab superstructure element is not oriented parallel to traffic of the overlying roadway
- Superstructures constructed off-alignment and subsequently moved into place
- Components of bridge spans in which the superstructure is subject to wave loading
- Design concepts, components, elements, details, or construction techniques not typically used in South Carolina and deemed complex by SCDOT through the ATC process or through the design-build teams change in the conceptual design (i.e. the addition of a complex element not anticipated through conceptual design).

For bridges where only certain spans have complex spans or components listed above, Independent Peer Review is only required for those complex spans or components, with the following exception. The Independent Peer Review for the seismic design is required for the entire bridge.

For projects where multiple curved steel girder bridges are utilized on the same project, one representative bridge may be selected for peer review and it shall contain the most severe curvature and/or skew. The same design and analysis procedures shall subsequently be applied to the remaining curved steel girder superstructures on the project. The representative steel girder superstructure selected for Independent Peer Review is subject to SCDOT approval. Additional bridges with curved steel girder superstructure may be designated for Independent Peer Review at the discretion of SCDOT due to differences in geometry or complexity.

2. SCOPE OF PEER REVIEW WORK

Independent Peer Reviews shall include but are not limited to the independent confirmation of the following when applicable:

- Compatibility of bridge geometry with roadway geometrics including typical section, horizontal alignment, vertical alignment, minimum lateral offset requirements, and minimum vertical clearance requirements.
- Compatibility of construction staging with Traffic Control Plans.
- Conflicts with underground and overhead utilities.
- Compliance with AASHTO, SCDOT, and FHWA design requirements.
- Use of structural analysis methodologies appropriate to the nature and complexity of the given structure.*
- Correctness of design assumptions.
- Correctness of design results appearing on the plans, including review of the design during all stages of construction.*
- Adequate strength of structural elements in accordance with specified design criteria.
- Adequate serviceability of structural elements and appurtenances in accordance with specified design criteria (including deflection, vibration, stiffness criteria, durability criteria, accommodation of anticipated thermal movements, etc.).
- Global and local analyses including nodal forces, considering structural members, connections/nodes and boundary conditions consistent with the structure type.*
- Specific areas of concern include post-tensioning anchorages, situations where constraint of structure displacements cause redistribution of load (secondary moments

and shears), voids in areas of high stress, and relative displacements between stages of construction.*

- Correct representation of structural design values in the plans (does not replace the EOR design QA/QC requirements of the contract).
- Technical Special Provisions or modified Special Provisions where necessary (including Special Provisions provided by the EOR and not-included in the plans, or modifications to Special Provisions contained in Exhibit 5 of the RFP).
- Constructability of the structure (this assessment is limited to looking for “fatal flaws,” and is not intended to identify a single, “most constructible” design).
- Proposed materials and details are in accordance with industry standard construction practices, and which would be expected to meet the intended structure design life with routine maintenance.

*When complex spans or components are designed with software using refined analysis (e.g. 2D grid analysis, 2D plate-and-eccentric beam analysis, 3D finite element analysis, or similar), the Independent Peer Review consultant shall verify the design results using a different program/method unless specifically allowed otherwise by SCDOT. One exception is the Multimodal Spectral Analysis for seismic design, in which case the same software program may be used but the Independent Peer Review consultant will perform input calculations independently and must conduct an independent interpretation of their model’s output results.

3. INDEPENDENT PEER REVIEW LETTER

Provide a report documenting the Independent Peer Review (the “Independent Peer Review Letter”) with the Final Bridge Plan Submittal. The Independent Peer Review Letter shall be signed and sealed by the responsible Independent Peer Review Professional Engineer, who shall be licensed as a Professional Engineer in South Carolina. Include with the letter:

- A statement that Independent Peer Review has been performed in accordance with the requirements of the RFP.
- A statement that confirms the Independent Peer Review consultant was allotted the appropriate amount of hours to complete the full Independent Peer Review for all complex bridge components of the project. Identify the total number of man-hours utilized to complete the Independent Peer Review.
- A description of Independent Peer Review work performed, including a list of the bridges or components addressed by the Independent Peer Review.
- A comment log (either Word document comment matrix or Bluebeam session comment log is acceptable) with responses and resolutions documenting the interaction between EOR and Independent Peer Review consultant, and indicating that each comment was resolved to the mutual satisfaction of both the EOR and the Independent Peer Review consultant.
- SCDOT reserves the right to request design calculations, models, and supporting documentation utilized by the Independent Peer Review consultant.

Design or plan changes to complex bridges or components made during Final Bridge Plan review shall require a new Independent Peer Review Letter from the Independent Peer Review

consultant, stating that the changes have been incorporated into the Independent Peer Review. Submit the new Independent Peer Review Letter with the Release-For-Construction (RFC) plans.

After plans have been released for construction, subsequent construction plan revisions to complex bridges or components may require further Independent Peer Review and a new Independent Peer Review Letter, at the discretion of SCDOT.

Addition to the RFP Instructions:

Proposers shall submit a Peer Review Package to SCDOT in accordance with the milestone schedule and the Complex Bridge Peer Review Requirements in Attachment B – Bridge. The Peer Review Package shall consist of:

- List of bridges and components requiring Independent Peer Review (IPR), including any introduced through the ATC process.
- Qualifications of selected IPR firm (résumé's showing past experience)
- Proposed man-hour effort (duration) for completion of IPR
- Proposed IPR process. Describe how peer review work will be integrated into the design schedule for the project and interaction with lead design firm during peer review.