

# Quality in Construction (QIC)

Microsoft Teams Meeting

**August 18, 2021**

9:00 am - 12:00 pm

---

---

## Attendees:

- Ann McGauran, OSA
- Alan Robertson, OSA
- Chris Byerly, OSA
- John Hull, STREAM
- Ted Hayden, STREAM
- Brian Wilson, STREAM
- Jennifer Murphy, STREAM
- Michelle Crowder, UT
- Patti Miller, THEC
- Paul Marshall, THEC
- Laura Bailey, ETSU
- Chuck Milam, ETSU
- Bill Waits, MTSU
- Jim Cobb, TTU
- Toney Poteet, UM
- John Kenny, ACEC
- Jim Prillaman, ACEC
- Ashley Cates, AIA
- Greg Campbell, AIA
- Rich McNeil, AIA
- Grace Rodgers, AGC
- Jason Madeiros, AGC
- John Gromos, AGC
- Tony Lampe, AGC
- Bob Pitts, ABC
- Bryan Hay, ABC
- John Thayer, ABC
- Rob Mortensen, Hospitality TN
- Ryan Swindell, Government Relations
- Michael Schulz, TN Comm & Ins

## Discussion:

- I. All attending members were identified through each attendee's on-screen MS Teams attendee list.
- II. Energy Performance Contract Plan Update – John Hull, (STREAM)
  1. John Hull provided a summary of the current status of the energy performance contracting initiative.
  2. John noted the statute requires that the process be approved by the SBC and State Funding Board (SFB) and STREAM/DGS is working on draft polices for each as starting points for review by the SBC and SFB but those are still being drafted by STREAM.
  3. John identified that there are 6 categories listed in the statute that will influence energy performance contracting.
  4. John indicated that STREAM has the following expectations in relation to the energy performance contracting process.
    - Performance contracts will have to be 20 years or less and contracts will likely be based on a weighted average relating to project needs.
    - Performance contracting procurements will go before the SBC to request the issuance of a RFQ and pro-forma master contract which applies only to General Government, not Higher Education.
    - STREAM will issue a RFQ for energy service companies (ESCO's) resulting in a list of qualified companies with master agreements. Qualified companies will make up a pool of companies eligible to be contracted for projects determined to be appropriate for performance contracting.
    - ESCOs would respond to an RFP for projects determined to be appropriate for performance contracting.
    - Upon selecting an ESCO, the state would require an investment grade audit (IGA) to occur that defines scope, terms, payback, etc. of the contract.
    - The resulting contract would have to be approved by the SBC and State Funding Board.

5. John noted STREAM is working with Finance and Administration (F&A) to understand what may be acceptable regarding paybacks and financial terms.
  6. Industry representatives stated that they don't have any particular questions at this time but are very interested in seeing the proposed policy drafts because past ESCO procurements have not always worked out well.
- III. Commerce and Insurance – TN Board of Architectural and Engineer Examiners – Michael Schulz
1. Michael provided a presentation highlighting board history and composition, regulatory roles and responsibilities, the requiring of design professionals, building exemptions, professional seal requirements, standard of care, enforcement, common complaints, the compliance process and letters of assurance/clarification.
    - a. Alan Robertson asked if there is a reference list to identify A/E registrants that have had disciplinary actions and/or a license suspended or revoked.
    - b. Michael noted that is the function of the Verify website which will assist in the vetting of potential design professionals. Michael added that this verification should be done as part of the selection process prior to contracting.
    - c. Michael noted that TN is working to allow for a broader set of educational and practical professional experience domains that would allow for licensure in the practice of professional engineering.
- IV. HPBr, BIM and Project Team Evaluations – Chris Byerly (OSA)
1. Chris Byerly noted that OSA has received HPBr documents for approximately 95% of 2020 substantially completed projects. He also provided a summary of each SPA's current status.
  2. Chris noted that OSA has received project team evaluations for around 70% of the 2020 substantially completed projects.
  3. Chris reminded SPA's to provide either N/A or TBD on quarterly capital projects reports for designers and contractors when these situations apply in order to improve team evaluation tracking for OSA.
  4. Chris requested that SPA's provide a status update on any BIM-required projects.
- V. Construction Industry Market Update – Bryan Hay (ABC), John Gromos (AGC)
1. John Gromos noted that residential construction is a leading indicator of future commercial and public project construction which points to continued growth in these markets.
  2. John noted that there is still unpredictability for commodity and materials pricing and that the escalation ranges vary broadly by trade. John suggested that breaking down estimates by trade is likely more reliable than broad estimations.
  3. John indicated that the supply chain is still being impacted by port congestion; COVID; the recent Texas power outages; and overall demand.
  4. John mentioned that subcontractors are holding prices for shorter amounts of time citing one example for a steel partner that would only commit to a 7-day price guarantee.
  5. John indicated that a labor shortage is still an issue impacting labor-related costs.
  6. Bryan Hay began by noting there are lead time issues for electrical gear and structural steel (joists and decking) influenced by increases in industrial building construction. Bryan cited bar joist lead times of 40 weeks.
  7. Bryan indicated this past year has seen a 73% price increase for PVC piping, a 44% increase for steel piping and 51% increase for copper piping.
  8. Bryan noted increased costs and upwards of 26-week lead times for HVAC equipment due to a lack of semiconductor production and supply chain issues.
  9. Bryan noted that laboratory projects are seeing delays in fume hoods and resins for benchtop components.

10. Bryan indicated that effective strategies to mitigating the impacts of the current conditions include early release packages, early material purchases, alternative material specification and early equipment orders.
11. John Gromos summarized by encouraging early, pragmatic and transparent dialogue between owner and contractor regarding the allocation of escalation budgets and project planning.
12. Alan Robertson asked when pricing may begin to stabilize.
  - a. John Gromos stated that stabilization may come by the end of 2021 or but more likely in the first half of 2022.

VI. SPA Projects Update – Jim Cobb (TTU)

1. Jim Cobb noted that TTU contributed additional dollars to the Engineering Building. Jim stated that the budget is about \$62 million and that the infrastructure package is expected to be released in September.
2. Jim stated that the Innovation Center and Residence Hall is in SD phase. He noted that they are currently work through cost issues due to escalation. Jim indicated that TTU is reviewing alternatives to reduce cost and that the current estimated budget is between \$48-50 million.
3. Jim noted TTU had 5 capital maintenance projects with a total budget of \$7.8 million dollars ranging from \$900,000 to \$2.1 million and 1 disclosed project with a budget of \$2.3 million in the State budget.
4. Jim indicated that TTU has 5 additional disclosed projects to bring forward by October 2021 totaling \$2.7 million and ranging from \$150,000 to \$880,000.
5. Jim stated that the new master plan will be finalized with the Board of Trustees at the December meeting and followed by THEC and SBC for approval respectively.
6. Finally, Jim noted that TTU currently does not have any TN BIM-required projects in progress but that their designers are using BIM on the Engineering Building.
  - a. Chris Byerly asked if BIM will be required on the Innovation Center.
  - b. Jim responded that they are still working through the budget on the project and have not yet began consideration of this project being a TN-required BIM project.

VII. SPA Projects Update – TBR and APSU

1. There was not a representative available for projects update.

VIII. SPA Projects Update – Bill Waits (MTSU)

1. Bill Waits stated that MTSU has 8 capital maintenance projects in progress including utility, roof and HVAC upgrade projects.
2. Bill indicated that MTSU estimates the RFQ for CM/GC services to be issued in January 2022 for the Applied Engineering Building project.
3. Bill noted that the Applied Engineering Building may be a TN-required BIM project and would plan to discuss this with Chris Byerly and OSA.
4. Bill stated that MTSU will be seeking SBC approval in late 2021 for the Student Athlete Performance Center.
5. Bill noted that the estimated completion date for the School of Concrete will be late 2022.

IX. SPA Projects Update – Tony Poteet (UM)

1. Tony Poteet stated that they recently opened the \$30 million Student Wellness Center.
2. Tony noted that the \$40 million Music Center is close to being dried in and hasn't had any issues with pricing or deliveries.

3. Tony indicated that the \$3.5 million Conference Center Renovation for middle school space has opened.
4. Tony stated that Ball Hall Academic Building project has experienced delays on receiving fan coil units and that a temporary cooling system has been installed due to these delays.
5. Tony noted that the Browning Hall capital maintenance projects are complete, and that HVAC work has commenced at McCord Hall.
6. Tony stated that the STEM Building is in CD's and that project costs have been impacted specifically relating to curtain wall and HVAC systems.
7. Finally, Tony indicated that the master plan was approved by THEC and that it would be brought forward to the SBC for approval.
  - a. Chris Byerly asked Tony if there was a TN-required BIM initiative for the STEM building.
  - b. Tony responded that there is interest for BIM deliverables on this project for HVAC-related equipment and that he would be following up with Stewart Smith regarding identifying specific BIM deliverables that are desired.

X. SPA Projects Update – Laura Bailey (ETSU)

1. Laura Bailey noted that there are several construction projects in progress emphasizing the Lamb Hall Renovation which is in the process of micropile installation and that the VA Building 2 renovations project is under construction.
2. Laura indicated that the Memorial Center code corrections project is progressing.
3. Laura stated that ETSU is beginning design for the Academic Building and noted that this will be a CM/GC project and that the RFQ is forthcoming.
4. Laura stated that ETSU is proceeding on 4 maintenance projects. Laura stated that designer selection has been approved on 2 and designer selections for the remaining 2 are pending.

XI. SPA Projects Update – Patti Miller (THEC)

1. Patti Miller indicated that institutions are in the process of submitting disclosures and projects for capital maintenance for the upcoming budget year. Patti noted that the request included emphasis on identifying additional capital projects focusing on economic development and community outreach. Patti noted that numerous project submittals are expected.
2. Patti stated that a primary focus for THEC will be a multi-year initiative for a statewide instructional space utilization study including building condition assessments and a physical facilities inventory survey. This will inform capital maintenance and capital outlay into the future.

XII. SPA Projects Update – Michelle Crowder (UT)

1. Michelle Crowder noted that 2 new buildings opened including the Engineering Services Building and the new Dining hall.
2. Michelle stated that 9 projects had designer selections in July, 8 projects had designer selections in August and that 3 projects will seek designer selections in September. Michelle stated that over the next couple of months, 2 CM/GC RFPs will be released including the Carousel Theatre and the Nursing Building. Michelle noted that the Carousel Theatre will be a TN BIM-required project and that OSA will be engaged for the BIM kickoff.

XIII. SPA Projects Update – Brian Wilson (STREAM)

1. Brian Wilson stated that STREAM has 96 projects currently under construction noting the completion of the Library and Archives Building. Brian stated that the Cleveland Veterans Home, the Fall Creek Falls Inn, the Paris Landing Inn and the John Sevier Building were all nearing completion.
2. Brian stated that there are 80+ projects in the capital budget and that STREAM is moving forward seeking designer selection on these projects.

3. Brian noted that STREAM is expecting consultants to consider market volatility and escalation as part of the capital budget planning process and better anticipation of project budgets including additional contingencies added by the State.
4. Brian indicated that recent projects, that are currently being bid, have experienced a lack of participation from bidders and that assessments are being made to understand what is driving a lack of bidding interest so that contracts can be negotiated and awarded.
5. Brian stated that major forthcoming projects of note include the War Memorial Building Interior and Exterior Renovations, the Multi-Agency Law Enforcement Training Center, the State Museum Storage Building and the John Wilder Youth Development Center.
6. Chris Byerly asked if there are any discussions regarding using BIM for any projects.
  - a. Brian stated that BIM may be required on some projects and that STREAM will engage OSA once a determination is made.

XIV. Open Discussion

1. Alan Robertson noted that on November 17<sup>th</sup>, Chris Bainbridge from the State Fire Marshall's Office will be attending the QIC meeting.
2. Ashley Cates (AIA TN) noted that the AIA virtual conference will coming up in the following week and that registration information will be available soon.
3. Ashley Cates stated that the AIA TN Design and Honor awards is tentatively planned to be live on October 28<sup>th</sup>. Ashley noted that she will keep attendees posted in the coming weeks regarding the event.
4. Tom Lampe (AGC) stated that the AGC annual state conference is October 8<sup>th</sup> and 9<sup>th</sup>.

XV. Closing Remarks

1. Alan Robertson encouraged continued recommendations from QIC members on future addenda items and adjourned the meeting.

Action Items:

- John Gromos and Bryan Hay to provide Construction Market Update (See Attached)

Next Meeting: November 17, 2021  
Virtual

## Quality In Construction

Wednesday August 18, 2021

### Construction Industry Market Update - AGC and ABC representative companies

#### General:

1. The construction market remains busy across the state. Residential construction remains strong and is generally seen as a leading indicator to the strength of the commercial market.
2. Commodity and material pricing remain very unpredictable - escalation forecasts very widely across trades and should be looked at individually instead of a general aggregate escalation rate.
3. Availability of and lead times for many products and equipment are extended far beyond historical averages. The supply chain remains challenged due to several factors:
  - a. Covid-related impacts to output/capacity at manufacturing facilities;
  - b. Winter freeze and associated shutdowns to key plants in Texas and the Southeast;
  - c. Ocean freight congestions, port congestion and shortage of shipping containers associated with Covid and Suez Canal shutdown have impacted delivery times, and have caused sharp increases in shipping costs;
  - d. High demand is outweighing supply.
4. Subcontractors, vendors and suppliers are in some cases holding their pricing for shorter durations in several trades, in some cases as short as 7-10 days - this puts great pressure on lump sum bid day pricing and GMP proposals where awards/commitments won't happen that quickly.
5. Design phase budgeting (at SD, DD and CD milestones) is challenging due to subcontractor "pricing fatigue" - it is more challenging to get detailed estimates outside of bids that are used for subcontractor awards.
6. Labor shortages continue to impact most all trades, especially with skilled labor. No relief in sight - the industry is investing in workforce development and training programs, but these are longer-term strategies that won't provide results in near-term. Shortages directly impact pricing and schedule.
7. Smaller projects with traditionally short schedules are really feeling the impact of labor shortages and long lead time of products and equipment.
8. Material escalation specifics include:
  - a. Electrical gear – Strong demand for electrical gear continues to push out lead times for equipment to as much as 40 weeks. Commodity and manufacturing cost increases are driving five to ten percent price increases in July, with additional price increases expected in Q4 2021. Intelligent breakers remain on allocation due to semiconductor shortages. Lead time for low voltage switchgear (less than 5kV) has extended to between 30 and 40 weeks. In some cases, capacity to generate submittals is further extending procurement lead times. Busway lead times range from 15 to 20 weeks and medium voltage switchgear lead times are between 18 and 24 weeks. Strong demand is expected to continue through the end of the year with further price increases expected because of rising manufacturing costs, including workforce constraints and rising cost of steel, aluminum, and copper.

- b. Structural steel – largest impacts include steel joints and decking because of warehousing, distribution and data center project demands – joist lead times extend beyond 44 weeks, decking out 30 weeks – pricing up 200+% (we are hearing from supplier and fabricators that Amazon has pre-ordered 60% of Nucor’s capacity).
- c. Plumbing – PVC has escalated over 70% year over year, steel pipe 44% and copper pipe 51%.
- d. Wood – in July dimensional lumber was down 50% from its peak in May and we are beginning to see a price decline in plywood and OSB.
- e. HVAC - HVAC manufacturers are starting to see delays in the supply chain due to increased demand and workforce constraints in factories. In particular, Electronically Commutated Motor (ECM) fan manufacturers have extended lead times to 26 weeks; galvanized steel price and lead times have significantly increased; and flex conduit availability is becoming a concern.
- f. Roofing supply chains have been impacted by surging demand and the interruption in petrochemical processing along the Texas Gulf Coast. The most pronounced lead time impact is with polyiso insulation panels, which are out to 20 weeks in most regions and 24 weeks in some cases. Some manufacturers of multiple roofing product lines have elected to curtail certain ones in favor of meeting the demand of the higher volume products.
- g. Appliances - Demand for appliances continues to be very high. Some manufacturers are sold out for over five weeks. Relief is not expected until Q4 2021. Prices are expected to rise over the next 6-12 months by at least three to five percent. In addition to high demand, production is also being limited by the global semiconductor shortage.

Recommendations:

1. Consider an escalation strategy - alignment between owner and contractor regarding where escalation costs should be carried: owner budget (soft cost), construction budget (hard cost) or combination.
2. Consider advance purchase strategies - how can material/equipment pricing be locked-in as early as possible to relieve future escalation, and how can materials/equipment get committed to spots in production lines.
3. Engage in force majeure-related discussions earlier - unknown and unanticipated increases in supply chain costs and delivery times add risks to projects, and discussions about risk management strategies benefit all parties.
4. Phased GMP’s and Early Release Packages (ERP) can be effective escalation strategies – ex. structural steel designs can be completed first and can be procured through an ERP, securing a place in the fabrication queue.