

Editorial | Structural Engineering Business as Unusual

By John A. Mercer, Jr., P.E., SECB



The CASE Winter meeting held in Jacksonville, FL is now in the books. It was held just prior to the NCSEA Winter Institute. Hats off to Mike Tylk and the NCSEA Continuing Education Committee.

CASE Committee meetings culminated in watching the final Space Shuttle Launch from Cape Kennedy late on Thursday afternoon. Flaming orange fire 117 miles to the south was visible through a slight haze in the atmosphere as the Shuttle Launch made its way streaking out of our atmosphere. A reflecting flash of light was all we could see as the Shuttle must have been making its roll over, and then it was gone from sight. About 10 minutes later, a thundering sound made its way past our location on the beach of the Amelia Island Plantation Resort drowning out the sound of the Atlantic's waves splashing on the beach. Reflections of the 1950's television series of Flash Gordon came to mind, proving once again that man can achieve what he can conceive.

The theme of the Winter Institute was *Deferred Submittals: What the EOR Needs to Know and Show from Design to Construction*, which at first seemed to be not too daunting a subject, but as we got into the presentations there was an apparent picture of a problem developing. A lot of presentations centered around coordination of information between the Engineer of Record (EOR) and the Specialty Structural Engineer (SSE).

My first job experience out of the university was working for a prestressed concrete company as a SSE. It was there that I learned the submittal process for shop and placement drawings with the General Contractor and the A/E for the project. I spent a lot of time educating the EORs on how to specify loading information needed by the precast (P/C) industry SSE to properly design P/C members. Many EORs were intimidated by prestressed design, as this was back when the Prestressed Concrete Institute's Handbook was in its Version 1.0.

Issues that continued to present themselves were mostly concerned with the mechanical system loads-to and openings-in the P/C. Getting the GC, mechanical contractor, and A/E to understand that once the member was cast, all bets are off on strengthening a member for an opening or for an additional load. That all had to happen prior to placing the concrete that would achieve a compressive strength of 5000 psi plus. Receipt of information and changes also had to meet a plant casting schedule to insure delivery to a project at a specified time.

One of the highlights of the Institute was the visit to the CANAM steel joist fabrication plant and GATE Precast Plant in Jacksonville, FL. The most exciting part of the plant visits was the loading of a 73-foot, 32-inch DT



section to failure. The member held approximately 135,000 lbs. prior to excessive deflection and flexural failure.

It is apparent that the ongoing challenge for the EOR in the marketplace is the proliferation of new building and construction technologies that require a SSE's experience and oversight. More and more projects are being constructed with an assemblage of industry SSEs supplying a specific product for a project, thereby displacing the apparent importance of the EOR. As a result, the decline in the EOR's market share and importance is becoming a concern.

Continuation of this trend to shift market share due to new construction systems is going to require additional coordination by someone to insure that the project requirements are met and not misinterpreted, or misrepresented by the gaggle of SSEs.

Ultimately, I believe Risk Management will surface as the champion for the need of an EOR at the helm of a project. "Attention to detail", an inherent trait of a good SSE, is going to become more important for the EOR going forward. Many EOR's do pay attention to the details, while a few may not. The insurance industry will continue to be the barometer for these trends, measured with our Liability Insurance Rates.

CASE to the rescue! The CASE documents and Risk Management Toolkit committees have successfully focused on these problems, recently supported by a 2011 CASE survey. The mission of CASE has been successful in helping mitigate the Risk that CASE structural firms have faced in the past. Firms concerned about the viability of their structural engineering practices should consider CASE membership to receive free CASE documents and tools.

Is it "Business As Usual" in your firm to use contracts with "scope of services" and systems that "document the coordination" of RFIs and submittals in-and-out of your office? One goal of CASE is to get all engineering firms to adopt a culture of risk management and best business practices to achieve lower insurance rates for all structural engineering firms.

Is it "Business As Unusual" in your firm?■

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