



## New Year, New Opportunities

William N. Nickas, *Precast/Prestressed Concrete Institute*, and Gregg Freeby, *American Segmental Bridge Institute*

Most people reflect on their past work accomplishments during their “routine” annual performance review, at the end of a project, or when there’s a change to their operational environment. Such is the case for me now: my tenure as chair of the National Concrete Bridge Council (NCBC) is rapidly coming to a close, my operational environment is changing, and naturally I want to leave this posting in the best possible state for my successor. I’d like to think I’ve done a decent job of setting the scene for the next chair of NCBC.

A benefit of our organizational approach at the NCBC is that you usually have an idea of who your successor will be and, in all likelihood, you previously worked with that person. That is definitely the case here. Gregg Freeby is the incoming chair. He is one of the finest bridge engineers I’ve had the pleasure of working with, and I’m excited to announce his arrival in this role.

NCBC describes itself on its website (<https://nationalconcretebridge.org>) as a council of allied industry organizations dedicated to the following goals:

- Promote quality in concrete bridge construction.
- Gather and disseminate information on design, construction, condition, and repair of concrete bridges.
- Establish communication with federal and state departments of transportation, city and county public works departments, and consulting engineers.
- Provide information on behalf of the concrete industries to codes and standards groups.

NCBC is all about moving the industry forward, keeping concrete bridging solutions at the forefront. There is indisputably a variety of solutions to meet facility requirements, but no option is better than a structure built of concrete.

We’ve worked through several complex topics during these three fast-paced years: best practices for long spans using post-tensioned concrete; sharing resources related to technical concerns, professional engineer training, and construction jobsite personnel (among other issues);

and advancing “open access” in an effort to share and demystify engineering concepts to achieve uniformity in knowledge dissemination and continuous improvement. (Notably, our achievements in knowledge dissemination and continuous improvement are rooted in knowledge development based on in-depth and exhaustive research.)

We focused energy on accelerated bridge construction, ultra-high-performance concrete, and durability. We collaborated with the Federal Highway Administration (FHWA) on the deployment of electrically isolated tendon technology and shared and incorporated innovative approaches to planning, design, and materials, along with unique construction processes, in an effort to stay one or two steps ahead of our industry. The challenge, as is the case for most things involving technological advancement, is to outpace the pace. In our profession, technological acceleration is often slowed, and rightfully so, by the most critical characteristic of our efforts—safety. In our eagerness to accelerate pace, we can never allow ourselves to undercut the serious nature of an engineer’s inherent responsibility to deploy assets that serve the traveling public safely, minimizing risk while maximizing performance.

So today, Gregg and I want to share what’s down the road, around the bend, or over the horizon for NCBC: Given today’s tempo, what strategies and forward-looking approaches are required to leverage our engineering traditions and protocols?

We at NCBC would submit that the key is to focus our energies on three to five areas our members believe will most directly influence the success of their individual organizations as well as the success of NCBC and the concrete bridge industry as a whole. Additionally, our strategies need to be attainable by establishing goals not further out than five years. If we look beyond the five-year mark, we’ll lose our stride and begin to wander, sputter, and fail to meet our members’ needs. We won’t lay out all areas on which we should focus, but here are some ideas.

One area of focus to consider is concrete bridge maintenance. Too often, our conversations shift to

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C. W. Matthews Contracting Co. Inc. used prestressed concrete beams to span the Metropolitan Atlanta Rapid Transit Authority and CSX railroad tracks for the Courtland Street project in downtown Atlanta.

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American Segmental Bridge Institute



Epoxy Interest Group



Expanded Shale Clay and Slate Institute



NRMCA  
NATIONAL READY MIXED  
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Post-Tensioning Institute

spicier topics. Life extension, strengthening, and stabilization often become sound bites in our discussions, but, honestly, they need our attention. Condition assessment and preservation are more important today than ever before.

Similarly, sustainability is a growing challenge for the transportation industry. However, solutions are already being deployed in the form of portland-limestone cements, which you will read about in this issue. Future conversations on sustainability will lead to discussions on life-cycle strategies, life-cycle assessments, and what makes up an environmental product declaration. This is yet another opportunity for our industry to lead.

Our organizational strength can, at times, weaken our core. We develop and provide a myriad of expertise, data, proven concepts, and techniques to our members, but sharing this information is too restricted in some cases. The idea of open access needs our attention—providing broader access to this important information will pay off in the long run.

Yes, we are absolutely suggesting openly sharing information, embracing multidisciplinary approaches, and being inclusive of a much wider audience. The idea is to bring the power of the entire bridge community together to dynamically influence the market. As a group of several engineering-focused nonprofit organizations, we must learn how to expand our work with other nonprofits for our mutual future successes.

NCBC's affiliated organizations already embrace a multidisciplinary approach of openly sharing solutions to improve the construction environment. We suggest that NCBC exponentially expand this concept: what's good for some is much, much better for all.

Another critical component—some might argue that it is the single most important component—of our future success is to “get younger.” The next time you attend a convention or meeting, take a moment to look around the room—I'm not the only one with stark white hair. Collectively, we are rapidly approaching the senior circuit. Our up-and-coming engineers often use data we've gathered, tested, checked, and published over the years with little thought as to how the pieces all came together. They have also changed everyone's expectations regarding access to information. For many young engineers, if information cannot be found via a quick internet search, that's often where the inquiry will end. We need to help and encourage our next generation of workers to develop an intentional focus on work habits, career growth, and creating a culture that encourages “safe dialogue,” as you will read in this issue (see Perspective article, page 12).

We desperately need future engineers to step in now and become involved. They will bring new ideas, drive innovative approaches, and generate new energy. If they don't understand the importance of this, or the positive impact we have made and continue to make in the industry, they will remain unengaged and

uninvolved, and our existence as engineering solution providers will cease.

Fortunately, there is excitement on the horizon. We eagerly await the arrival of the collaborative launch (by FHWA, Texas Department of Transportation, and the Cockrell School of Engineering) of the Concrete Bridge Engineering Institute (CBEI) at the University of Texas at Austin in the near future. This will no doubt energize concrete bridge engineers in the beginning stages of their careers and provide a direct and positive service to the entire concrete bridge community.

In addition to the CBEI coming online, NCBC is aligning with new knowledge-delivery systems to enhance processes for professional development hours, technical institute-based quality and personal competencies, and immersive, focused, hands-on training.

I want to thank you all for the support you've given me during these past several years at NCBC and for the support you'll undoubtedly give Gregg going forward. We'd both like to ask you to consider encouraging younger engineers to get actively involved in our organizations. They don't know what they don't know, and who knows, they might just get motivated and develop a new delivery technique or system—and you will have facilitated this achievement.

Pick a nonprofit that benefits the concrete community holistically and get involved.

Happy New Year! 

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