

October 2003

Historic "Bridges"

The article entitled "Historic Structures" which starts on page 10 of your October 2003 issue prompts me to write a letter to the editor, which I rarely have done.

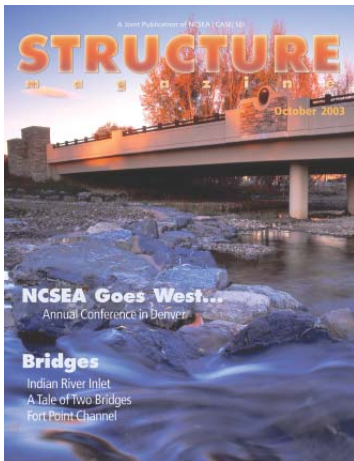
In the first paragraph the author uses the term "turntable drawbridge". This is incorrect; the correct description is "swing bridge".

The Congress Street Bridge is referred to as a "bascule type". There are three general types of bascule bridges, "single leaf bascule", "double leaf bascule", and "Scherzer Rolling Lift" - which is a single leaf bascule which retracts from the span opening as it opens (one end of this type of structure has curved girders or trusses, which provide translation as opening rotation occurs).

The Summer Street Bridge is referred to as a "horizontal slider", the description of its operation is correct, but the correct name for this type of bridge is "retractile".

I do think the title should have been "Historic Bridges", and not "Historic Structures".

Neal H. Bettigole, PE, FASCE



November 2003

Simplify the Building Codes

The November 2003 edition of Structure magazine presented an article written by John Tawresey entitled "Simplify the Building Codes". We concur with the statements in the article and wonder how, as practicing engineers, we might be able to unite our voices in making the building code less complex and implementing more rational changes to the code on a less frequent basis.

Doug Weber, SE

December 2003/January 2004

A Matter of Degrees

I just finished reading Mr. Hung's article and I can tell you that he is 100% correct in his assessment of the educational background of the typical structural engineer.

I graduated with a Civil Engineering degree in 1995, and immediately struggled with very basic issues. This was due to the fact that there was no time in my "4 year" degree for faculty to teach me anything about practical, "real world" engineering issues.

I had every intention of becoming a structural engineer, yet I spent more time in college learning about wastewater treatment and hydrology than I did structural design.

I took classes on structural analysis, steel design, concrete design, and was fortunate enough to work in a graduate level course concerning structural loadings. I did not even have the opportunity to take a class on masonry or timber design.

I am licensed in several states, and have learned much during my career thus far. However, I am now trying to pass the SE II and have taken it multiple times. I find myself having to go back and learn things that I probably should have been exposed to long ago while in college.

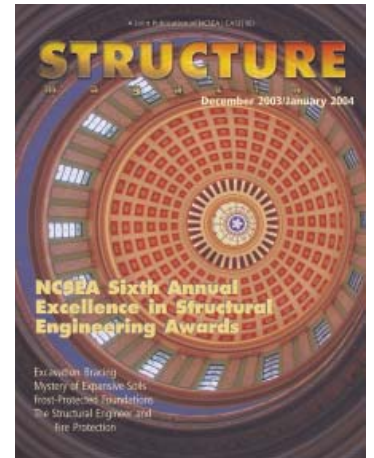
I appreciate the opportunity to comment on this issue,

Aaron D. Smith, P.E.

I found Mr. Hung's article to be very interesting and thought provoking. I am a long-time member of ASCE, and similar discussions have been publicized in their "Civil Engineering" magazine, focusing particular attention on the future adoption of a Masters degree as the fundamental educational requirement for professional registration.

I have been a structural engineer for over 20 years, and I have seen a slow but steady change in my profession. As you have likely already guessed, this change pertains to more and more structural engineers getting graduate degrees to be competitive in the marketplace. (personally, I have an MBA instead) It almost now seems as though a Masters degree in the structural engineering field is mandatory, or at least it is heading in that direction.

What about the other related engineering disciplines such as civil, mechanical, electrical, etc? I have not



seen this type of change in my co-workers' fields. My question is: Does this imply that an MS for structural engineers is the equivalent of a BS for other engineers? In addition, I have not seen the market value for structural engineers reflect this additional education. Based on what I have seen, electrical, mechanical, and computer engineers with undergraduate degrees typically are rewarded with higher salaries than their structural counterparts with graduate degrees. I feel this may simply be a function of increased competition. Any comments?

Mr. Jamie L. Archie, P.E.
Zapata Engineering, Charlotte, NC

Professional Liability

I read Joseph Gehlen's editorial on professional liability insurance in the December/January issue. I am also an owner of a company that was previously insured by DPIC. I have been decrying the state of insurance premiums of all types for several years, to no avail. I disagree in part with Mr. Gehlen's conclusions and solution. I believe that the main reason for the increase in premiums is the stock market's decline and the resulting loss of income by the insurance industry. Unfortunately, the industry was not unlike many people who thought the boom markets of the early and mid 90's would last forever.

In addition, the rising cost and frequency of litigation in our society has driven up insurance claims and defense costs. My

firm has had some loss claims recently, but none of those were due to any error or action that could have been avoided by peer reviews or the steps recommended at loss prevention seminars. On the other hand, we have worked on many condominium projects but have never had a claim from one of them.

All insurance premiums have gone up. Last year, we spent 25% of our gross income on insurance premiums (up from less than 12% just three years ago). Everyone knows how medical premiums continue to climb. Every company's and individuals' payout-versus-premium-collected ratio is reviewed in a vacuum and rates are adjusted accordingly. The old "sharing of losses by the group concept", that DPIC, SERMC, and group medical insurance were founded on, no longer exists.

I am not sure what the solution is, but I submit that there may be too many lawyers. I count 80 pages of listings of lawyers in the local (New Orleans) yellow pages. Engineers of all types take only 2 1/2 pages, with structural comprising 1/8 page. Unfortunately, we can't take Shakespeare's advice and "shoot the lawyers".

Somehow, we have to try to recover the power of numbers and re-establish some kind of group concept. This won't be easy. I think that insurance companies need to realize that, in many cases, we have very little power to prevent lawsuits. I wish I could force an owner to have me design a building, whether they want one or not.

*Ashton B. Avegno, Jr. P.E.
Jeffrey, Thomas, Avegno, Inc.
New Orleans, LA*

"Off-Shore" Engineering

"Is this the future for professional design services?" Mr. Biggs asked this very timely question in the January issue of Structure. On January 10, 2004, the Rocky Mountains News printed a short excerpt from a report by the Computer Systems Policy Project. This excerpt, which offers a disquieting reply to Mr. David Biggs's query, is a statement by Craig Barrett, CEO of Intel:

"The United States now has to compete for every job, going forward. That has not been on the table before. It had been assumed we had a lock on white-collar jobs and high-tech jobs. That is no longer the case."


In the same context, the Associated Press quotes the CEO of Hewlett-Packard, Carly Fiorina, as saying: *"There is no job that is America's God-given right anymore. We have to compete for jobs."*

According to press reports, internal costs for software development at IBM are \$66 per hour in the U.S., and only \$18 in Brazil, China and India. With such cost differentials, no wonder that, after moving much manufacturing overseas, many companies are now exporting white-collar jobs.

Mr. Biggs asks, "What lies ahead for structural engineers?" What's occurring




with computer engineers and software programmers is not very encouraging. Could it happen to us? Certainly. International design-build firms are already using overseas structural design services, again at a fraction of U.S.-based costs. Structural engineering services will not be exempt from the global market forces that are driving job emigration. Whether the U.S. can meet this competition without substantially lowering its living standards remains to be seen.

Pierre Dumonteil, M.ASCE




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Structural Drawings

I am interested in purchasing a copy of the CASE Document 962 D. Can you tell me where I can get a copy? I appreciate the article by Mr. Clifford Schwinger, P.E., and agree with the quality issues he presents.

Thank you in advance for pointing me in the right direction.

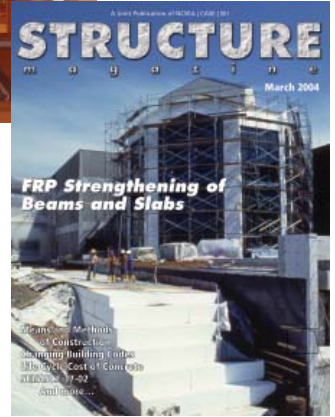
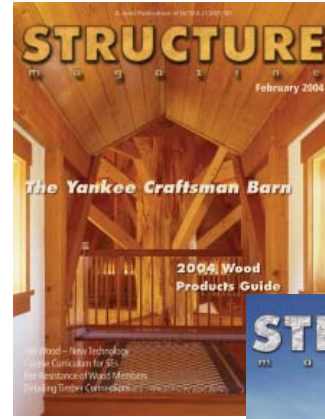
*Rolando R. Rubiano, P.E.
Green, Rubiano and Associates
Harlingen, TX*

Thank you for your comments and inquiry, Mr. Rubiano. CASE Document 962 D, and other CASE publications, can be obtained at www.acec.org/publications. And, read the CASE In Point column in this issue, pages 48 and 49, for a listing of other publications available at the site.

My compliments to Cliff... he's hit the nail on the head with all his comments. I too have witnessed the same degradation of drawing quality that he describes. The problem starts at the Universities. Forcing everyone to obtain a masters degree will only shrink the structural engineering workforce and cause the final destruction of our profession.

The problem is that there is not enough time to run the fast paced business we're in, and try to train young engineers who may come to you without ever having taken a steel or concrete design course. How I long for the days before computers, faxes etc.!

*Donald Thorstad, P.E.
Johnson Laschober & Assoc., P.C.
Augusta, GA*



The response to the Structural Drawings article in the March issue has been great! We receive lists of errors found in the fictitious drawing on a daily basis. We are collecting and collating the responses, and will look for an opportunity to present the findings, along with the original solution. Watch future issues of STRUCTURE for the results. Thank you all for responding. We look forward to hearing from more of you.

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