

Are The Inspections On Your Job Really "Special"?

John Joyce, NCSEA President, 2003-2004

Not so long ago, it was a common perception that structural design practice varied considerably from one area of the country to the next. The various regions of the country operated under unique model building codes which stipulated the design loads. More recently, however, we are finding that our regions are not as unique as we once thought. Engineers from across the country are using the same building code with the same reference standards.

In addition to design requirements, these same building codes are addressing the construction quality. Therefore, shouldn't we also be looking at how the building projects that pass through our offices are constructed? Specifically, how closely are our design drawings and specifications being followed in the field? Is that slab-on-grade reinforcing 2 inches from the top, as I specified, or is it in the dirt? Are those concrete block walls reinforced horizontally every 6th course? How about the vertical reinforcing? What about those moment connections in the steel frames?

Through my association with NCSEA, CASE and SEI, I have had the opportunity to visit with engineers from various parts of the country and have gained some insight into how the practice of structural engineering differs throughout the regions of the country. You may have seen the special inspection provisions in the new NFPA Code, which imply that special inspections be conducted by or under the authority of the engineer of record. It is my understanding that this chapter was greatly influenced by engineers from New England. I personally have heard, on four separate occasions, four different individuals from this area speak in favor of this method. In my mind, these engineers are "supermen" when it comes to field inspection. They change from their office clothes in a phone booth and fly out to their jobsites, to personally coordinate the inspection efforts in the field. I understand that they are well-compensated for this work, which is great because, in my own practice, I don't own a cape and am going to need a Lear jet to travel to all my jobsites across Oklahoma. Guymon is 270 miles to the northwest, Altus is 150 miles to the southwest, Idabel is 250 miles to the southwest and Afton is 180 miles to the northeast. So even though

the engineers from New England have found a method that I believe surely produces the best possible inspections, I am not sure that it is practical in other areas.

The engineers I have visited with from western states are more accustomed to dealing with the distance and logistical problems I have just mentioned. I have been told that special inspections in their areas are generally conducted by testing laboratories. It is hard to believe, however, that the employees of these testing laboratories are as qualified as the engineers in New England; but I understand many of them are certified to perform the various required inspection tasks.

In Oklahoma, I have received field observation reports from a few testing laboratories. At best, I receive a single line report saying that, before the inspector left the site, everything was in compliance with all of my drawings and specifications. I find myself thinking "That's great, but how many errors were found before everything was okay?" On one project, I received a masonry inspection report containing a single sentence. There was no mention of how the mortar was mixed in the field or how the reinforcing was installed. When I called the State Board of Registration to check on the testing agency, I found they had not bothered to renew their license several years earlier. Yes, the field inspection on that job was truly "Special".

My purpose in writing this editorial is to request your help in setting a national baseline for current practice in conducting these inspections. The NCSEA Code Advisory Committee on Quality Assurance has been reviewing the quality assurance requirements contained in both the IBC and NFPA codes and is working to suggest improvements to both codes. A brief survey has been prepared in the hopes of gathering information for all of the major cities in the U.S. on current methods of practice. What level of inspection is desirable? Is the NFPA model too extreme? Hopefully, this information about "where we are" will help us provide the answers to those questions.

To complete this survey, please go to the STRUCTURE website homepage, www.structuremag.org. The results will be compiled in a future edition of STRUCTURE magazine. ■



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