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Check out the second installment of Engineering-in-a-Box on www.brianmoskow.com. Last month, slabs were highlighted. This month: columns. Or click on the bottom of this newsletter on the YouTube icon and go directly to the videos.

Steve Luxton

City of Raleigh Inspections

Getting plans permitted through a municipal review is part of the process for architects and engineers. Most of all, we want these reviews to go smoothly so we can better serve our clients. Red Engineering & Design had an opportunity to speak with Steve Luxton, Building Code/Plans Coordinator with the City of Raleigh, about their plan review process.

Steve has been with the City of Raleigh for 24 years and has witnessed much building and development as Raleigh has grown. During his time with the City, he has had varying responsibilities ranging from managing plan reviewers to performing inspections. Because he has been a plan reviewer, we wanted to know the things Steve keyed in on during a review.

"We start with the City's Code Summary Sheet," said Steve. "Our format is very similar to the State's Appendix B building code summary, but tailored to the City of Raleigh's needs. So, you need to make sure you use our Code Summary to avoid having the plans denied." Steve explained that Raleigh's Code Summary Sheet must be completed fully and accurately. "The guidelines are spelled out. The pre-requisites are listed, as are the requirements. If something doesn't apply to your project, simply N/A that item," he said.

When asked about the Express Review process, Steve explained that for a fee, "you get to go to the front of the line." He followed up by saying, "We recognize the costs involved, so we make every effort to stay focused and on schedule. Once the City has completed their review, the individual plans examiners will go over the results of their review with the design professional, which is advantageous to all. You not only have an opportunity to make minor corrections to the plans, but if more detailed corrections are required the design professional knows exactly what he must do to pass the subsequent re-review."

One of the first things Steve said the City looks for on the Code Summary Sheet is the contact information for the project team. "We want to have the name and contact information for all those responsible for the project," he said. There are times when plans are returned to the project team because contact information is not correct.

"On the day of the Express Review, it is very important to have all designers of record present," said Steve. "We know that it is hard to get everyone together with varying schedules, so there is some flexibility allowed. For example, if the engineer of record can't make it to the review, they can send someone in their place as long as they have a professional seal with them and work under the same title block as the designer-of-record. The substitute professional would then be allowed to make minor changes to the plans as long as they sealed the change."

We had to ask the most obvious question: What is missed most often on plans? "It's hard to say one thing in particular," said Steve. "One item that out-of-town engineers often miss is our design wind load. Wake County is in the 100-mph wind zone but some designers incorrectly assign a 90-mph wind load, which will certainly result in a failed review, unless your project is actually located in Durham County, but still in Raleigh jurisdiction," Steve explained. "Unfortunately, I once reviewed a project and denied it for the incorrect wind load design. When the engineer responded to my review comment he asked me to recheck the location of his project, which happened to be just across the Wake-Durham County line. It was embarrassing, but a lesson was learned."

In addition, occupancy classification, building construction type, occupant load counts, fire protection systems, and means of egress are extremely critical elements for a proper plan review. "We really want to understand how a building is going to be used and make sure that its construction will ensure the life, safety, health, and welfare of its occupants. That is our ultimate goal," said Steve.

Lastly, we Steve what were his top take-away points for project teams with respect to a successful Express plan review:

1. To get started, go to the City's website: <http://www.raleighnc.gov/business/content/PlanDev/Articles/DevServ/CommercialExpressReview.html>.
2. On the website, the pre-requisites and requirements are spelled out.
3. Make sure the Code Summary sheet is completed.
4. Follow directions.
5. For the Express Review: All design professionals whose seals are on the plans need to be there and be there on time.

What's up at Red?

People and projects

Stephen Wise has joined Red Engineering and Design as a summer intern. Stephen is currently completing his Master's degree in civil engineering at North Carolina State University.



This Month's Feature Articles

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Steve Luxton & City of Raleigh Inspections

What's up at Red?

Dates & Events

June 10, 2014

9:00 AM

North Carolina Building Code Council Meeting - Public Hearing
1101 Gorman Street
Raleigh, NC 27606

About the space shuttle image

Structural engineering can take many forms. Designing cranes, hoists, lifts, and booms, as pictured above, are some of them.

Terex Cranes was selected to provide the primary crane for the "lift" of the Enterprise on its way to the Intrepid Sea, Air, and Space Museum in New York City.

While the average space shuttle weighs about 98 tons, the Enterprise weighed slightly less, and crane design had to be exact. The moving equipment for the Enterprise included a Superlift crane capable of lifting 96-plus tons with a 196-ft. main boom accompanied by a variable-length attachment that extends 100 feet. The counterweight for the Superlift was designed to NASA specifications at 137 tons because workers were traversing beneath the shuttle during the lift.