

1050808 Contractor Quality Control General Requirements  
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

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Comment: (3-28-11) In Subarticles 105-8.8.4.1, 105-8.8.4.3, 105-8.8.4.5 and 105-8.8.4.8, we should strengthen the language to read:

Ensure this individual is present at the site of construction, at all times while segmental box girder construction **or segment erection** is in progress.

This eliminates the ambiguity of “box girder construction”, which could be interpreted as meaning the actual construction of the box, i.e. casting yard operations only. It seems that this distinction is made in the added sentence in Subarticle 105-8.8.4.7:

Ensure this individual is present at the site of construction, at all times while cast-in-place segmental box girder construction is in progress or until casting yard operations are complete.

Here I think the added sentence should be modified to read:

Ensure this individual is present at the site of construction, at all times while cast-in-place segmental box girder construction is in progress or until casting yard operations **and segment erection is are** complete.

The Geometry Control Manager discussed in 105-8.8.4.7 is responsible for establishing geometry control during segment erection operations, as noted in 105-8.8.4.7, third paragraph, first sentence. Therefore, this person should be present for these operations as well.

Response: Changes Made.

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Rick Espino  
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Comments: (3-28-11) I believe that changes proposed are good but FDOT needs to realize that this will be a considerable added cost to the projects. Some of those positions could have been shared among a couple of projects as it was written before.

Response: The Department understands that there may be additional expense but the Department is of the opinion that these complex and challenging projects require the full time attention of key Contractor supervisors.

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Comments: (3-28-11) My issue, as before, is what happens if one of these people is sick, at a meeting, on vacation, etc?

I know many CEI personnel who would stop work on the project.

Response: If, in the opinion of the Contractor, an excessively strict interpretation of this specification is made by CEI personnel, the Contractor may always request involvement of higher level FDOT staff for an interpretation or mitigation.

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Comments: (4-7-11) I have reviewed the proposed changes to the above-mentioned specifications and have the following comments.

I applaud the requirement to have these personnel on site or at the casting yard during the casting/placing/erection operations as proposed. I have had major issues develop in the field during precast segment erection on projects where the Contractor's Project Engineer was not on site to adequately resolve the issue. This forced the issue to be dealt with by either myself and/or my inspection staff with or without input from the Contractor's construction engineer.

I have also had the experience where contractors have taken the specification literally or have challenged the intent of the wording. It is important to define exactly what the roles and responsibilities are for the Contractor. Of course responsibilities are defined in many places and if challenged in court, these specifications should hold up. However, if more information can be provided that is helpful to all on the project. This is a difficult thing to do as you always want to leave it to the contractor to provide the means and methods to construct the project and you do not want to over specify which could also lead to potential claims.

In conclusion, my suggestion would be to provide a cross-reference or sentence within this specification defining operations like "segment box girder construction", "segment erection" or "casting yard operations" to ensure that these personnel are present and in responsible charge when we need them there to be. If you need to provide a definition for "responsible charge", then by all means provide that also. For instance, I understand it appears obvious that the prescribed personnel should be on site and in responsible charge say during the physical lifting of precast segments and during all PT operations, but this may not be obvious to the contractor. Also, there is post-tensioning of segments performed during times other than during erection say for span, continuity, or even cantilever tendons after the temp. PT is in place. Also, there may be transverse, closure tendons and many other types of temp. and perm. PT operations. The point is that the contractor must understand that the intent is to have this personnel on site and in responsible charge during all of these activities.

The same holds true for their geometry control and survey staff. I have had the unfortunate experience of having to perform my own survey and geometry control utilizing CEI staff in the QC role (not QA) because the contractor did not believe he had to do it during the erection and post-tensioning of each segment. The Florida segmental spec addresses this well. During erection, the intent here is for their geometry control engineer to ensure that data is collected timely and properly by their surveyors, and to be able to recommend *timely* any adjustments that may need to be made (either in the casting yard or on site).

I'd be more than happy to discuss this or any other segmental bridge construction specifications further with you at your convenience.

**Response:** The Department is of the opinion that the revised specification as currently written provides a good balance of specificity while still allowing the Contractor some flexibility.

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Danon, Jose R  
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Comments: (4-8-11) I believe those changes can be summarized as below w/o changing all the different positions. The Geometric Control Engineer change differs but I believe is still included in this comment.

**105-8.8.4 Concrete Post-Tensioned Segmental Box Girder Construction:** Ensure the individuals filling the following positions *are present at the site of construction, at all times while segmental box girder construction or segment erection is in progress. and also* meet the minimum requirements as follows:

Response: Disagree. The current text provides the required guidance as is.

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**Keith R. Cole**  
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Comments: (4-25-11) The spec change says to ensure that the following segmental specialty personnel are present at the Site Of Construction at all time while construction or erection is in progress.

- Project Engineer
- Project Manager
- Project Superintendent
- Geometry Controller
- Surveyor
- Foreman

Clarification of Site Of Construction is needed. (Is this the actual location point of each construction stage? Or just the project job site in general?)

Project Superintendent & Foreman should be present at all time during construction & erection of segmental box girder.

All the other specialty personnel should be assigned full time to the project, occupying a field office, and is available at all time.

Response: Disagree; however, common understanding of the phrase “at the site of construction” means anywhere within the project limits and/or anywhere within the casing yard whichever is applicable.

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Comments: (5-6-11) D-4 has no comment on changes, however 105-8.8.4 should probably be reviewed. 105-8.8.4 only says the position below should have the experience shown; it doesn't say that such positions are required on a Segmental Bridge project.

Response: Agree, but another section does: 105-8.8.1 requires that the Contractor provide supervisory personnel that meet the requirements for bridge supervisors and segmental bridges is one of the bridge types specified.

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