

4620704 POST-TENSIONING  
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

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Comments: (3-28-13)

In reviewing this specification I have read a few things that don't make sense to me.

**1. 462-7.4.4(d):** This states that work will be done within a set time frame than it states the if this is not done, the Contractor shall do it within a set time. I think this tells the Contractor we are not requiring the original time frame to be adhered to.

**Response:** I discussed the comment with the commenter by phone after which he requested the comment to be withdrawn.  
No change made.

**2. 462-7.4.4.3:** The wording in (3) and (4) do-not seem to be consistent. The reference to the minimum of one full bag of grout may be the cause of my concern.

**Response:** I discussed the comment with the commenter by phone after which he requested the comment to be withdrawn.  
No change made.

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Comments: (3-28-13)

I was reading through the proposed changes (have not looked through it all in detail, basically this is not a design issue) but the following sub sections were not clear at all to me, so I figured there were others out there, like me, who are not that familiar with the procedure; therefore, we don't understand what you think you wanted to say. In other words, it is not clear what the purpose of the change is, or what the requirement will be to someone not intimately involved with process and issues.

**1. 462-7.4.4 (d):** Is the point to not have the operator standing by prior to a 24 hour window of the grouting work? There must be a better way to clarify this. Here is my attempt to clarify and keep all the details:

*(d) ~~Have vacuum grouting equipment (i.e., volumetric measuring type) and experienced operators available not less than 48 hours~~ If the installation of steel bars or tendons within the ducts takes place prior to the maximum number of calendar days allowed in 462-7.2.4, ~~between first installation of prestressing steel within the duct and completion of the stressing and grouting operation for P~~Have an experienced operator and vacuum grouting equipment available within 48 hours of the PT operation to perform the grouting operation. If the PT and grouting is not complete by the maximum number of calendar days allowed in 462-7.2.4, ~~have been exceeded,~~Have available vacuum grouting equipment (i.e., volumetric measuring type) and experienced operators ~~and vacuum grouting equipment available~~ within 48 hours ~~notice.~~*

Response: I disagree with the alternative text since the proposed text is understandable to experienced construction personnel based on person to person discussions with them.  
No change made.

**2. 462-8.3.2 (f):** I think this wording would work for 462-7.4.4 (d) and 462-8.3.2 (f). (If I interpreted the intent correctly):

*(f) Fill voids using volumetric measuring vacuum grouting process. ~~within not less than 48 hours if voids are detected in tendon ducts or anchorages during inspection~~ If the installation of PT steel bars or tendons takes place prior to the maximum number of calendar days in ~~462-7.2.4~~ allowed between first installation of prestressing steel within duct and completion of the stressing and grouting operation for PT in 462-7.2.4.; have vacuum grouting equipment and experienced operators available within 48 hours of the PT operation to perform the grouting operation. If the PT and grouting is not complete prior to the maximum number of days in 462-7.2.4 ~~have been exceeded~~, have vacuum grouting equipment and experienced operators available within 48 hours notice.*

(Could be wrong-maybe we need all the time indicators, is there is a problem with the Dept being charged for a person and the equipment hanging around before they are ready for grouting? Or is the problem not getting them there within the 48 hour window?)

Response: Please see response to previous comment.

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#### D5 Construction

Comments: (4-22-13)

In 462-7.4.4(d), it states to provide experienced operators. Does “experienced operators” need to be defined? For example, 3 years relevant experience, 1 year relevant experience or completed 1 job using the equipment. There could be a significant difference between the Contractor’s and DOT’s definition of experienced operators.

*(d) Have vacuum grouting equipment (i.e., volumetric measuring type) and **experienced operators** available not less than 48 hours prior to the maximum number of calendar days allowed in 462-7.2.4, between first installation of prestressing steel within the duct and completion of the stressing and grouting operation for PT. If the maximum number of days in 462-7.2.4 have been exceeded, ~~H~~have available vacuum grouting equipment (i.e., volumetric measuring type) and **experienced operators** available within 48 hours notice.*

Response: Disagree - The Department does not have a formal qualification program for personnel that perform vacuum grouting which would be needed if we require defined qualifications. We are confident that the Contractor and CEI Consultant are capable of determining if the vacuum grouting crew is qualified since this is unique equipment and only experienced workers are capable of operating it properly.  
No change made.

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