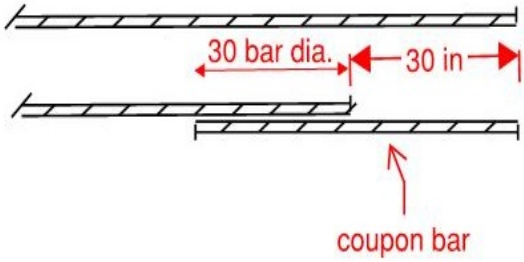
STRUCTURE BULLETIN

NCDOT Construction Unit

Website email



Current Issues: "Sample" Bars

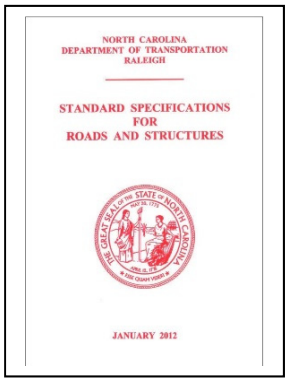
If you have built a bridge then you have likely received a bundle of "sample" bars, or coupon bars, with the reinforcing steel. There are two cases when samples of the reinforcing steel are required. See Section 1070 in the Construction Manual for a discussion of this.

A common misconception is that these coupon bars are the samples that are to be sent to M&T for testing. Actually, 30" samples are supposed to be cut from the full length bars and sent in as the sample. The coupon bars are supposed to be spliced back onto the bar that was cut to replace the sample. One of the common problems is that the reinforcing steel supplier sends bars that are 30" long, which is insufficient. If we cut 30" off the end of a straight bar we will need 30" plus the length of a splice to replace the cut sample. If we cut 30" from the middle of a bar we would need 30" plus two splice lengths. As a minimum these coupon bars should be 30" long plus 30 bar diameters, so for a #8 bar (1" diameter) you would need a 60" coupon bar.

Another issue is sampling bent bars. If the only bars of a certain size are bent, such as cap B bars with a hook on each end, then you should always discuss this with the engineer before taking a sample. These should not be cut unless it is absolutely necessary. Proper splice lengths for these bars can exceed **ten feet,** and the additional overlapping bars can cause congestion, preventing proper consolidation of the concrete around the bars.

OSHA Silica Rules:

On September 23rd, 2017, new rules regarding exposure to silica became enforceable by OSHA. It is the responsibility of the contractor to comply with these rules and to protect his employees accordingly. Similarly, we should keep ourselves safe and minimize our own exposure to hazards. It would be a good idea to discuss these rule changes with the contractor before concrete cutting operations and see what steps they have taken to protect their workers.


NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD SPECIFICATIONS
FOR
ROADS AND STRUCTURES

JANUARY 2012

Special Provision Questions:

Question: If a contractor installs less causeway than is shown on the plans can I pay part of the"Construction, Maintenance and Removal of Temporary Access" line item? Or if the contractor doesn't install the causeway shown on the plans do I still have to pay for the "Construction, Maintenance and Removal of Temporary Access" line item?

Answer: If the contractor installs all, part of, or even none of the causeway shown in the plans you still pay the full lump sum for the "Construction, Maintenance and Removal of Temporary Access" line item.

The item is not for "Causeway" or "Work Bridge." The item gives the contractor the freedom to be creative in how he accesses the work. A set of plans may show a causeway for the contractor to set a crane on and the project is permitted for the impact of the causeway. The contractor might bid $10,000.00 for the access item. Instead of spending the $10,000.00 on stone for causeway the contractor may elect to spend it on renting a larger crane. The larger crane may be able to do the work from the bank instead of setting on the causeway. This would still accomplish the goals of allowing the contractor to complete the work. It would also have the bonus of not having to install and remove fill in the channel, which would disturb the channel bottom and inherently cause erosion.

In short, we should always pay for the ""Construction, Maintenance and Removal of Temporary Access" line item in full.

If you have a topic you would like to see addressed in a future edition of the Structure Bulletin please email us at either acochran@ncdot.gov or aearwood@ncdot.gov

New Training

Several new videos have been added to the NCDOT Construction Unit Training YouTube playlist. These include:

Cored Slab and Box Beam:

1. Introduction
2. Tensioning
3. Grouting
4. Barrier and Wearing Surface

New Editable Drilled Shaft Forms

Ask your Area Construction Engineer for a copy