

STRUCTURE BULLETIN

NCDOT Construction Unit

[Website email](#)



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Current Issues: Forms Over or Adjacent to Traffic

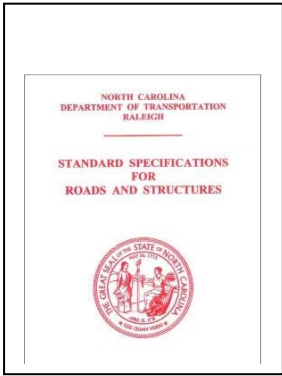
Section 420-3(E) of the Standard Specifications addresses protecting the travelling public from overhead or adjacent formwork and falsework. Basically, and form or falsework that could fall in an active travel way must be designed by a NC Professional Engineer and submitted for approval. This can include overhang forms, metal decking, deck panels, or even cap forms if they are close enough to the lane and high enough. An often overlooked aspect of this section is found in 420-3(E)3 Inspection. This requires the contractor to submit a written statement to the Resident certifying that the work in question is constructed in compliance with the submitted drawings. This is to be done for each "span, unit, or bridge component".

Discuss this requirement with the contractor in advance of superstructure work.



Fly Ash:

Fly ash is a pozzolan which can take the place of a portion of the cement in our concrete mixes. The small particle size of fly ash compared to cement particle size creates a more dense mix, which makes the mix less permeable. Reducing the permeability also reduces the chance of water to penetrate the member and carry chlorides with it. So, in a nutshell, the substitution of some cement with fly ash should keep the members in better condition for longer. Our specifications call for this substitution in certain areas of the state for cast in place decks, but the contractor may choose to use it in any member. As a recycled material we encourage them to do so.



Special Provision Questions:

Question: What is a backing bar?



Answer: Some steel materials, such as pipe piles, require a chill ring or backing bar when splicing. This is denoted on the weld symbol as a box. The Field Welding Procedures Manual defines it as “A material placed against the back side of the joint adjacent to the joint root

to support and shield molten weld metal.” There are prefabricated backing bars that are usually used for this application, as seen below. These are required and must be installed on every pipe pile splice.



Area Construction Engineers:

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1&2	Randy Hall	282-402-9957
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7	Aaron Griffith	336-215-9170
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10	Darin Waller	980-521-5176
11&12	Brian Skeens	828-803-1461
13&14	Aaron Powell	828-694-7971

Concrete testing videos Available:

Videos of the proper procedures for ASTM testing of concrete can be found at the following link:

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Training:

Thanks to all for your attendance of the 2018 Winter Inspector Training and for making it a success. If you have recommendations for future training email us with your ideas.

Structure Bulletins are now archived on the Construction Unit website under [Construction Resources](#).

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 aeerwood@ncdot.gov