

# STRUCTURE BULLETIN

## NCDOT Construction Unit

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### Current Issues: Leave In Place Concrete Forms

Recently several contractors have installed Stay-Form® concrete forms or their equivalent on NCDOT projects (pictured above). The Standard Specifications state:

*“Design falsework and forms to carry the full loads upon them, including a dead load of 150 lb/cf for concrete, loads caused by equipment and personnel, and for lateral pressures resulting from rate of pours, setting times and effects of vibration on the concrete, so the finished concrete surface conforms to the proper dimensions and contours and has an even appearance.” Section 420-3(A)*

It is very unlikely that these forms can perform as required by this specification. We are currently evaluating their use for limited applications. These will be where:

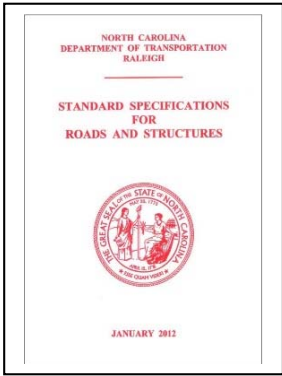
- 1) The member cast will be permanently in contact with earth fill,
- 2) The formed line is an exterior border of the unit cast.

Under no circumstances should this form type be used for construction joints or areas that will be exposed in their final condition.

If used the forms should be installed as directed by the manufacturer, with the proper lap and support spacing. Common sense needs to be applied when deciding where to allow these forms. Environmentally sensitive areas may not be a good location.

### Welcome

Dear Reader, There have been numerous changes in the Department over the last several years. One of those changes has been the reduction in the number of Area Construction Engineers and reorganization of the assigned areas. In an attempt to adjust to these changes we are looking at new ways of performing training and keeping employees informed on current issues. This newsletter is one of those new tools. We plan to issue one about every month covering topics such as current construction issues, specification questions, upcoming training, and best practices. If you have any questions or recommendations click the email link above and submit it.



## Specification Questions:

### Question:

Can the contractor get nonshrink grout batched at a concrete plant and delivered to the site in a truck?

### Answer:

Quick answer: No.

Long answer: Sections 430-6(B) and (C) both state "After tensioning the 0.6" diameter

transverse strand in a span and before placing any equipment, material or barrier rail on the span, fill the shear key, dowel holes and recesses at the ends of transverse strands with an approved non-metallic, nonshrink grout and cure for 3 days minimum and until the grout reaches a compressive strength of 3,000 psi." Traditionally the contractor has used pre-packaged mixes which are batched on site. Any mix coming from a ready mix plant must have an approved mix design for the class of concrete being used. There are currently no approved mix designs for a nonshrink grout, nor is there a record of one in the past.

## Upcoming Training

No training is currently scheduled. Check back soon.

### State Construction Engineer Lamar Sylvester

Eastern Region		Western Region	
ASCE	Cadmus Capehart	ASCE	Mark Freeman
RBCE	Aaron Earwood	ASCE	Cameron Cochran
Division	Area Engineer	Division	Area Engineer
1&2	Randy Hall	7	Aaron Griffith
3&4	David Candela	9	Vickie Davis
5	Aaron Earwood	10	Darin Waller
6&8	John Partin	11&12	Brian Skeens
		13&14	Cameron Cochran