

ORIGINATION FORM

Date: **May 20, 2014**

Originator: Cheryl Hudson

Contact Information: **Structures Design (CO) 850-414-5332**

Specification Title: **Precast Prestressed Concrete Construction**

Specification Section, Article, or Subarticle Number: **450-11.5 and 450-11.6**

Why does the existing language need to be changed? **To document and clarify current practice on cutting and protecting prestressing strands.**

Summary of the changes: **Changed “Trimming” to “Cutting”, and added subsections under cutting (450-11.5) and protecting (450-11.6) for Beams, Piles, and Poles; to clarify procedures for each.**

Are these changes applicable to all Department jobs? **Yes**

If not, what are the restrictions?

Will these changes result in an increase or decrease in project costs? **No**

If yes, what is the estimated change in costs?

With who have you discussed these changes? **Andre Pavlov, Gevin McDaniel, and Dan Hurtado and Ghulam Mujtaba**

What other offices will be impacted by these changes? **Construction, State Materials Office**

Are changes needed to the PPM, Design Standards, SDG, CPAM or other manual? **No**

Is a Design Bulletin, Construction Memo, or Estimates Bulletin needed? **No.**

Contact the State Specifications Office for assistance in completing this form.

Dan Scheer 850-414-4140 dan.scheer@dot.state.fl.us

Frances Thomas 850-414-4101 frances.thomas@dot.state.fl.us

Debbie Toole 850-414-4114 deborah.toole@dot.state.fl.us

Andy Harper 850-414-4127 clifton.harper@dot.state.fl.us



Florida Department of Transportation

RICK SCOTT
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

ANANTH PRASAD, P.E.
SECRETARY

MEMORANDUM

DATE: June 11, 2014

TO: Specification Review Distribution List

FROM: Daniel Scheer, P.E., State Specifications Engineer

SUBJECT: Proposed Specification: **4501105 Precast Prestressed Concrete Construction.**

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

This change was proposed by Cheryl Hudson of the State Structures Design Office to clarify the Department's current practice for cutting and protecting prestressing strands.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or online at <http://www2.dot.state.fl.us/SpecificationsEstimates/Development/IndustryReview.aspx> . Comments received after **July 9, 2014**, may not be considered. Your input is encouraged.

DS/dt
Attachment

PRECAST PRESTRESSED CONCRETE CONSTRUCTION.

(REV ~~5-236-3-14~~)

SUBARTICLE 450-11.5 is deleted and the following substituted:

450-11.5 ~~Trimming~~Cutting Strands and Bars: Upon completion of the detensioning operation, cut ~~the exposed~~ strands to required length, using an oxygen flame or mechanical cutting device. ~~On piles and other products requiring flush cutting of strands and bars, use only mechanical cutting, unless specifications require strand to be burned or ground below the pile surface.~~ Do not use electric arc welders *to cut bars or strands.*

450-11.5.1 Beams: ~~Unless otherwise specified, allow~~ *For beam ends that will be permanently encased in concrete diaphragms, cut* all strands to ~~protrude~~ 2.5 inches plus or minus 0.5 inch beyond the end of the product, ~~except cut strands for piling back to be flush with or below the concrete surface or as specified in the Plans.~~ For beams with ends *that will* not ~~to~~ be encased in permanent concrete diaphragms, *mechanically* cut strands a minimum of 1/8 inch below the concrete surface.

450-11.5.2 Piles: *Mechanically cut strands flush with the concrete surface.* ~~except~~ *For fender piles, then mechanically cut the top strands at least 1 inch below the concrete surface.*

450-11.5.3 Poles: *Mechanically cut strands to a minimum of 1/8 inch below the concrete surface.*

SUBARTICLE 450-11.6 is deleted and the following substituted:

450-11.6 Protecting Ends of Strands: *Prepare the concrete surfaces and apply Type F-1 epoxy in accordance with the manufacturer's recommendations.*

450-11.6.1 Beams: For beams ~~with~~ ends *that will* not ~~to~~ be *permanently* encased in ~~permanent~~ concrete diaphragms, *apply two layers of epoxy* ~~coat to~~ the exposed beam ends; (including clipped and chamfered surfaces) ~~with two layers of Type F-1 epoxy compound~~ within seven calendar days of detensioning and prior to development of any corrosion at the ends of strands. ~~Prepare the concrete surface and apply epoxy in accordance with the manufacturer's recommendations.~~ The finished thickness of the epoxy coating must be a minimum of 1/16 inch; *and forming* a vertical flat plane ~~at the end of the beam~~ without deviations ~~for~~ localized depressions ~~resulting~~ from recessing ~~of the~~ strands or other defects.

450-11.6.2 Piles: *Apply epoxy patches to the strands at the top of fender piles.*

450-11.6.3 Poles: *Coat entire face of tip (top) and butt (bottom) ends with epoxy.*