Florida Department of Transportation

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ANANTH PRASAD, P.E.
SECRETARY

July 21, 2014

Khoa Nguyen
Director, Office of Technical Services
Federal Highway Administration
545 John Knox Road, Suite 200
Tallahassee, Florida 32303

Re: State Specifications and Estimates Office
Section **450**
Proposed Specification: **4501105 Precast Prestressed Concrete Construction.**

Dear Mr. Nguyen:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

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

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to SP965DS or daniel.scheer@dot.state.fl.us.

If you have any questions relating to this specification change, please call me at 414-4130.

Sincerely,

Signature on file

Daniel Scheer, P.E.
State Specifications Engineer

DS/dt
Attachment
cc: Florida Transportation Builders' Assoc.
State Construction Engineer

PRECAST PRESTRESSED CONCRETE CONSTRUCTION.
(REV ~~5-23~~*6-31*~~2~~*7-21*-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 f*~~*For top (head) of fender piles and pile ends not embedded under final conditions,* ~~*then mechanically*~~*burn* ~~*cut*~~ *the strands* ~~*at least*~~ *a minimum of 1 inch below the concrete surface and clearly mark the pile to identify the top (head) end.*

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 beam~~s~~ ~~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 finish*ed* thickness of the epoxy coating must be a minimum of 1/16 inch~~,~~ *and* form~~ing~~ a vertical flat plane ~~at the end of the beam~~ without deviations ~~f~~or localized depressions ~~resulting~~ from recess~~ing~~*ed* ~~of the~~ strands or other defects.

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

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

PRECAST PRESTRESSED CONCRETE CONSTRUCTION.
(REV 7-21-14)

SUBARTICLE 450-11.5 is deleted and the following substituted:

450-11.5 Cutting Strands and Bars: Upon completion of the detensioning operation, cut strands to required length, using an oxygen flame or mechanical cutting device. Do not use electric arc welders to cut bars or strands.

450-11.5.1 Beams: For beam ends that will be permanently encased in concrete diaphragms, cut strands to 2.5 inches plus or minus 0.5 inch beyond the end of the product or as specified in the Plans. For beams with ends that will not 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. For top (head) of fender piles and pile ends not embedded under final conditions, burn the strands a minimum of 1 inch below the concrete surface and clearly mark the pile to identify the top (head) end.

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 beam ends that will not be permanently encased in concrete diaphragms, apply two layers of epoxy to the exposed beam ends (including clipped and chamfered surfaces) within seven calendar days of detensioning and prior to development of any corrosion at the ends of strands. The finished thickness of the epoxy coating must be a minimum of 1/16 inch and form a vertical flat plane without deviations or localized depressions from recessed strands or other defects.

450-11.6.2 Piles: Apply epoxy patches to all recessed strands.

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