



## Florida Department of Transportation

JEB BUSH  
GOVERNOR

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Tallahassee, FL 32399-0450

DENVER J. STUTLER, JR.  
SECRETARY

August 14, 2006

Mr. Greg Williams  
Program Operations Engineer  
Federal Highway Administration  
545 John Knox Road, Suite 200  
Tallahassee, Florida 32303

Re: Office of Design, Specifications  
Section 471  
Proposed Specification: 4710000-Plastic Fender System Components

Dear Mr. Williams:

We are submitting, for your approval, two copies of a proposed Supplemental Specification for Plastic Fender System Components.

This change was proposed by Jerry Hocking of the State Structures Office to propose that this Developmental Specification for structural plastic, become a Standard Specification. Initiated by the Maintenance Office approximately ten years ago, it has now been determined that the life expectancy of structural plastic is approximately four to five times that of timber. Therefore, this is now being proposed for use as a standard specification.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via Email to SP965DB or [duane.brautigam@dot.state.fl.us](mailto:duane.brautigam@dot.state.fl.us).

If you have any questions relating to this specification change, please call Duane F. Brautigam, State Specifications Engineer at 414-4110.

Sincerely,

Signature on file

Duane F. Brautigam, P.E.  
State Specifications Engineer

DFB/sh  
Attachment

cc: General Counsel  
Florida Transportation Builders' Assoc.  
State Construction Engineer

**PLASTIC FENDER SYSTEM COMPONENTS.****(REV ~~4-13-06~~ 6-15-06)**

PAGE 570. The following new Section is added after Section 470:

**SECTION 471**  
**PLASTIC FENDER SYSTEM COMPONENTS**

**471-1 Description.**

Construct fender systems *using plastic components* in accordance with the Contract Plans and Design Standards.

**471-2 Materials.**

Meet the following requirements:

Structural Plastics.....	Section 973
<del>Structural Timber.....</del>	<del>Section 952</del>
Concrete Piles.....	Section 455

**471-3 Construction Details.**

Protect materials at all times against exposure to extreme heat or impact.

Transport Structural Plastic (~~SP~~) in a manner that will minimize scratching or damage to the outer surfaces, stack on dunnage above ground so that it may be easily inspected and store in a manner that will avoid damage. Handle and lift *Structural Plastic* ~~SP~~ with nylon slings. Do not use sharp instruments in handling the product. ~~SP~~*Structural Plastic* damaged in shipping or handling will be rejected.

*Structural Plastic* ~~SP~~ sections containing cracks in the reinforcing rods or cracks, partial or full depth, across the section or splits will be rejected.

Cut, bevel, drill, countersink and otherwise install ~~SP~~*Structural Plastic* in accordance with the manufacturer's recommendations. Set all material accurately to required levels and lines, with members plumb and true and accurately cut and fitted. Securely attach all materials to substrate by anchoring and fastening as shown on the plans. Perform all cutting and drilling in a manner that allows for the collection of all debris and dispose of properly.

Install piles in accordance with Section 455. After driving, cut off piles at the elevation shown on the plans to a tolerance of +0.0"/-2.0" using sawing or other means as approved by the Engineer to provide a smooth level cut. ~~For Structural Timber construct as stated in Section 470.~~

**471-4 Method of Measurement.**

The quantity of dimensional fiberglass fiber reinforced lumber (~~NSCL~~), fiberglass structurally reinforced composite lumber (~~SCL~~) to be paid for will be the plan quantity, in feet board measure, computed based upon the dimensions shown in the plans. The quantity of fiberglass structurally reinforced composite piles (~~CP~~) to be paid will be the length in feet furnished and driven to the authorized lengths, as approved by the Engineer. ~~For wood components see Section 470.~~

**471-5 Basis of Payment.**

Prices and payment will be full compensation for the work specified in this Section including all material, storage costs, disposal of unused materials and waste, transportation costs, labor, equipment, fasteners and other necessary items required for completing the work. No separate payment will be made for plates, bolts, screws or other hardware necessary to complete the work.

Price and payment for *Plastic Fender System* ~~CP~~*Components including fiberglass structurally reinforced composite piles* will be full compensation for all labor, equipment and materials required to furnish and install the piles to the elevation shown in the plans. No separate payment will be made for pile cut-offs. *Plastic Fender System* ~~CP~~*Components including fiberglass structurally reinforced composite piles* to be paid for under Section 455.

Payment will be made under:

Item No. 471-1          Plastic Marine Lumber – MB.

**PLASTIC FENDER SYSTEM COMPONENTS.  
(REV 6-15-06)**

PAGE 570. The following new Section is added after Section 470:

**SECTION 471  
PLASTIC FENDER SYSTEM COMPONENTS**

**471-1 Description.**

Construct fender systems using plastic components in accordance with the Contract Plans and Design Standards.

**471-2 Materials.**

Meet the following requirements:

Structural Plastics.....Section 973

**471-3 Construction Details.**

Protect materials at all times against exposure to extreme heat or impact. Transport Structural Plastic in a manner that will minimize scratching or damage to the outer surfaces, stack on dunnage above ground so that it may be easily inspected and store in a manner that will avoid damage. Handle and lift Structural Plastic with nylon slings. Do not use sharp instruments in handling the product. Structural Plastic damaged in shipping or handling will be rejected.

Structural Plastic sections containing cracks in the reinforcing rods or cracks, partial or full depth, across the section or splits will be rejected.

Cut, bevel, drill, countersink and otherwise install Structural Plastic in accordance with the manufacturer's recommendations. Set all material accurately to required levels and lines, with members plumb and true and accurately cut and fitted. Securely attach all materials to substrate by anchoring and fastening as shown on the plans. Perform all cutting and drilling in a manner that allows for the collection of all debris and dispose of properly.

Install piles in accordance with Section 455. After driving, cut off piles at the elevation shown on the plans to a tolerance of +0.0"/-2.0" using sawing or other means as approved by the Engineer to provide a smooth level cut.

**471-4 Method of Measurement.**

The quantity of dimensional fiberglass fiber reinforced lumber, fiberglass structurally reinforced composite lumber to be paid for will be the plan quantity, in feet board measure, computed based upon the dimensions shown in the plans. The quantity of fiberglass structurally reinforced composite piles to be paid will be the length in feet furnished and driven to the authorized lengths, as approved by the Engineer.

**471-5 Basis of Payment.**

Price and payment will be full compensation for the work specified in this Section including all material, storage costs, disposal of unused material and waste, transportation costs, labor, equipment, fasteners and other necessary items required for completing the

work. No separate payment will be made for plates, bolts, screws or other hardware necessary to complete the work.

Price and payment for Plastic Fender System Components including fiberglass structurally reinforced composite piles will be full compensation for all labor, equipment and materials required to furnish and install the piles to the elevation shown in the plans. No separate payment will be made for pile cut-offs. Plastic Fender System Components including fiberglass structurally reinforced composite piles to be paid for under Section 455.

Payment will be made under:

Item No. 471-1          Plastic Marine Lumber – MB.