

**RESPONSE 2 COMMENTS RECEIVED FROM INDUSTRY REVIEW**

\*\*\*\*\*

**Jennifer Taylor**

File: 9710800 - Traffic Marking Materials  
Username: Jennifer Taylor  
UserEmail: jennifer.taylor@dot.state.fl.us

**COMMENTS:**

971-108.12 Standard Markings: The preformed materials for pavement stripes and markings shall have a service life of three years (or should say three year service life). The materials shall attain an initial retroreflectance of not less than 300 mcd/lx·m2 for white and contrast markings and not less than 250 mcd/lx·m2 for yellow markings. The retroreflectance of the white, yellow and contrast pavement markings at the end of the three year service life shall not be less than 150 mcd/lx·m2.

971-119.6.3 Retroreflectivity: The white and yellow pavement markings shall attain an initial retroreflectance of not less than 45300 mcd/lx·m2 and not less than 350 mcd/lx·m2, respectively. The retroreflectance of the white and yellow pavement markings at the end of the one year service life shall not be less than 150 mcd/lx·m2.

Should there be a difference between the mcd/lx m2 in 971-8.12 Standard Markings and 971-9.6.3 Retroreflectivity?

**RESPONSE: The initial reflectivity values for each of these materials is different.**

\*\*\*\*\*

**Alan Lafferty**

January 13, 2006  
9710800 Traffic Marking Materials  
Mr. Duane Brautigam  
State Specifications Engineer  
Florida Department of Transportation  
605 Suwannee Street  
Tallahassee, FL 32399-0450

Dear Mr. Brautigam,  
Thank you for the opportunity to comment on the Departments proposed specification change for section 971. GulfLine Corporation is a subsidiary company of Gulf Industries, Inc. which developed products S702-0001 and S702-0100 on the Qualified Products List. The GulfLine Corp is a leader in the field of wet weather pavement markings with installations in 6 States including Florida and wants to remain proactive in

these regards.

We feel it is important to provide the most effective retroreflective system available to the motoring public traveling the roads of America. The GulfLine material has proven to be a cost effective system for wet weather conditions. Permanent tape materials for pavement stripes and markings, two reactive component materials for traffic stripes and markings as well as wet weather traffic stripes are used as supplemental markings to enhance retroreflectivity for conditions where paint and flat line thermoplastic is not adequate. Section 971-9 was developed by the thermoplastic industry and should remain in the standard specifications for thermoplastic material requirements while a generic application specification for wet weather traffic stripes is implemented. The attached draft specification allows all products to qualify for wet weather status on the qualified products list. A material specification can be developed around other products when they are documented to meet the wet weather requirements.

A vast amount of research and collaboration among material suppliers, State and Federal personnel and equipment suppliers have addressed the issue of wet weather performance including materials, systems and test equipment and developed ASTM's which provides a level playing field as with all the Federal standards the Florida Department of Transportation has adopted for consistency in the testing and acceptance of materials. Please consider keeping section 971-9 in the current specifications and accept the attached generic specification for wet weather traffic stripes for implementation as a special provision.

Gulf Industries, Inc is available to discuss further the issue of wet weather pavement markings and our comments.

Sincerely,

Alan L. Lafferty



## SECTION WET WEATHER TRAFFIC STRIPES

### **-1 Description.**

Apply permanent traffic stripes, in accordance with the Contract Documents.

### **-2 Materials.**

Use only permanent striping materials listed on the Qualified Products List (QPL) current at the time of use, meeting the requirements of 971-1 and the appropriate sub-section. The Engineer will take the random samples of the materials in accordance with the Department's Sampling, Testing and Reporting Guide Schedule.

### **-3 Application.**

**General:** Apply all final pavement traffic stripes prior to opening the road to traffic.

Before applying traffic stripes, remove any material that would adversely affect the bond of the traffic stripes by a method approved by the Engineer.

Apply a primer, sealer or surface preparation adhesive if required as recommended by the manufacturer.

Apply striping material to the pavement by methods recommended by the manufacturer. Remove and replace traffic stripes not meeting the requirements of this Section at no additional cost to the Department.

Remove existing traffic stripes such that scars or traces of removed markings will

not conflict with new traffic stripes by a method approved by the Engineer.

Follow the manufacturer's recommendations for application Temperature (ambient air, surface, and material).

Apply striping to the same tolerance in dimensions and in alignment specified in Section 710-5. When applying traffic stripes over existing markings, ensure that not more than 2 inches [50 mm] on either end and not more than 1 inch [25 mm] on either side of the existing line is visible. Offset traffic stripes a minimum of 2 inches [50 mm] from any longitudinal joints.

The Engineer will conduct field tests in accordance with Florida Test Method FM 5-541.

**Thickness:** Apply traffic stripes such that, after application of drop-on glass spheres, when measured in accordance with Florida Test Method FM 5-541, the maximum thickness of the stripes will have a thickness above the pavement surface as designated on the Qualified Products List for the particular product used.

**Retroreflectivity:** Apply Traffic Stripes meeting the following:

30 meter Geometry	White		Yellow	
Retroreflectance	Dry	Wet	Dry	Wet
Initial	300 mcd/lx·m <sup>2</sup>	150 mcd/lx·m <sup>2</sup>	250 mcd/lx·m <sup>2</sup>	125 mcd/lx·m <sup>2</sup>
* Final	150 mcd/lx·m <sup>2</sup>	75 mcd/lx·m <sup>2</sup>	150 mcd/lx·m <sup>2</sup>	75 mcd/lx·m <sup>2</sup>

\* Final measurements taken at the discretion of the Department 3 years ± 2 weeks.

**Color:** Use materials meeting the requirements of 971-1.

#### **-4 Contractor's Responsibility for Notification.**

Notify the Engineer prior to the placement of the striping materials. Furnish the Engineer with the manufacturer's name and LOT numbers of the striping materials and glass spheres to be used. Ensure the approved LOT numbers appear on the striping materials and glass spheres packages. Submit a certified test report to the Engineer indicating the striping materials meet all requirements specified.

#### **-5 Protection of Newly Applied Stripes.**

Do not allow traffic onto or permit vehicles to cross onto newly applied traffic stripes until they are sufficiently bonded. Remove and replace any portion of the traffic stripes damaged by passing traffic or from any other cause, at no additional cost to the Department.

#### **-6 Observation period.**

Pavement markings are subject to a 180 day observation period under normal traffic. The observation period shall begin with satisfactory completion and acceptance of the work.

The pavement markings shall show no signs of failure due to blistering, excessive cracking, chipping, discoloration, poor adhesion to the pavement, loss of reflectivity or normal vehicular damage. The Department reserves the right to check the color and retroreflectivity within 30 days prior to the end of the observation period.

Replace, at no additional cost to the Department, any pavement markings that do not perform satisfactorily under traffic during the 180 day observation period.

**-7 Correction for Deficiencies.**

Remove and reapply a 320 foot [97.5 m] LOT centered around any deficiency, as determined by the Engineer, at no additional cost to the Department.

**-8 Method of Measurement.**

The quantities to be paid for under this Section will be as follows:  
The net length, in feet [meters], of each of the various types of lines and stripes, authorized and acceptably applied.  
The total traversed distance in gross miles [kilometers] of 10-30 skip line. The actual applied line is 25% of the traverse distance for a 1:3 ratio. This equates to 1,320 feet [240 m] of marking per mile [kilometer] of single line.  
The area, in square feet [square meters], of Remove Existing Markings acceptably removed.  
The length, in net miles [net kilometers], of Solid Traffic Stripe, authorized and acceptably applied.

**-9 Basis of Payment.**

Prices and payments will be full compensation for all work specified in this Section, including, all cleaning and preparing of surfaces, furnishing of all materials, application, curing and protection of all items, protection of traffic, furnishing of all tools, machines and equipment, and all incidentals necessary to complete the work. Final payment will be withheld until all deficiencies are corrected.

Payment will be made under:

\*\*\*\*\*

**RESPONSE:** Thank you for your comments and your suggestions on how the specification can be rewritten. We will consider your suggestions as we draft a developmental specification for wet weather pavement marking.

We will maintain a developmental specification, which can be used by the Districts if they desire to specify an inverted rib profile marking.