

ORIGINATION FORM

Date: June 11, 2013

Originator: Ezzeldin Benghuzzi

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Specification Title: Temporary Traffic Control Device Materials

Specification Section, Article, or Subarticle Number: 990-5

Why does the existing language need to be changed? Class D markers have project specific requirements which would require specific specifications and would preclude QPL qualification. ASTM also does not address Class D markers and no one is sure how the one Class D marker on the QPL was qualified. Class E markers are only required to have a service life of five days which restricts their use. Discussion with contractor's indicated they would prefer to stock only Class A and B markers.

Summary of the changes: Deleted Class D and E markers

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? Specifications, Construction and Industry

What other offices will be impacted by these changes? None

Are changes needed to the PPM, Design Standards, SDG, CPAM or other manual? Yes,
Design Standard 600, Sheet 13

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

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

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ANANTH PRASAD, P.E.
SECRETARY

MEMORANDUM

DATE: June 19, 2013

TO: Specification Review Distribution List

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

SUBJECT: Proposed Specification: **9900500 Temporary Traffic Control Device Materials.**

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

This change was proposed by Chester Henson of the Roadway Design Office to remove the Class D and E markers. Class D markers have project specific requirements which would require specific specifications and would preclude QPL qualification. Class E markers are only required to have a service life of five days which restricts their use. Contractor's indicated they would prefer to stock only Class A and B markers.

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 to my attention via e-mail at ST986DS, or daniel.scheer@dot.state.fl.us. Comments received after **July 17, 2013**, may not be considered. Your input is encouraged.

DS/cah
Attachment

**TEMPORARY TRAFFIC CONTROL DEVICE MATERIALS.
(REV 6-11-13)**

ARTICLE 990-5 (Pages 1128 – 1129) is deleted and the following substituted:

990-5 Temporary Retroreflective Pavement Markers.

Temporary retroreflective pavement markers (RPM's) shall meet the requirement of 970-1.2.1, be one of the products listed on the QPL and be certified as meeting the following:

(a) Composition: Use markers made of plastic, ceramic or other durable materials. Markers with studs or mechanical attachments will not be allowed.

(b) Dimensions: Marker minimum and maximum surface dimensions is based on an x and y axis where the y dimension is the axis parallel to the centerline and the x axis is 90 degrees to y. ~~Class E markers shall be 4 inches by 2 inches by 1 inches.~~

~~The x and y dimension of Class D markers shall be a maximum of 5 inches. The x dimension shall be a minimum of 4 inches and the minimum y dimension shall be 2.25 inches.~~

~~The maximum installed height of Class D markers shall be 1 inch. The maximum installed height of Class E markers shall be 2 inches. Use Class D markers having a minimum reflective face surface of 0.35 square inches. Use Class E markers having a minimum reflective surface area of 1 square inch.~~

The marker's reflective face shall be completely visible and above the pavement surface after installation, measured from a line even with the pavement perpendicular to the face of the marker.

(c) Optical Performance: Ensure that the specific intensity of each white reflecting surface at 0.2 degrees observation angle shall be at least the following when the incident light is parallel to the base of the marker:

Horizontal Entrance Angle	Specific Intensity (SI)
0 deg.	3
20 deg.	1.2

For yellow reflectors, the specific intensity shall be 60% of the value for white.

For red reflectors, the specific intensity shall be 25% of the value for white. Reflectivity of all RPM's shall not be less than 0.2 specific intensity any time after installation.

(d) Strength requirements: Markers shall support a load of 5,000 pounds. Three markers per lot or shipment will be randomly tested as follows:

Position the marker base down, between the flat, parallel 0.5 inch steel plates of a compression testing machine. Place on top of the marker, a flat piece of 60 (Shore A) durometer rubber, 6 inches by 6 inches by 0.37 inches, centered on the marker. Apply the compressive load through the rubber to the top of the marker at a rate of 0.1 inches per minute.

Either cracking or significant deformation of the marker at any load less than 5,000 pounds will constitute failure.

(e) Adhesion: Use bituminous adhesive materials for bonding the markers to the pavement that meet the requirements of Section 970 and are listed on the QPL.

(f) Removability: Ensure that the pavement marker is removable from asphalt pavement and portland cement concrete pavement intact or in substantially large pieces, either manually or by mechanical devices at temperatures above 40°F, and without the use of heat, grinding or blasting.