

## ORINATION FORM

**Date:** 5/16/13

**Originator:** Patrick Overton

**Contact Information:** Patrick.overton@dot.state.fl.us (850) 414-4348

**Specification Title:**520 -Concrete Gutter, Curb Elements, and Traffic Separator

522 -Concrete Sidewalk

527 -Detectable Warnings on Walking

Surfaces **Specification Section, Article, or Subarticle Number:** Multiple

**Why does the existing language need to be changed?** The method of measurement for all three specifications needs to be modified for clarity. The Basis of payment was modified for clarity as well. Also, some minor changes were made to the title of 522 and 527 as well as some verbiage changes throughout.

**Summary of the changes:** Methods of Measurements revised, Basis of payment revised, Title changes, and minor verbiage changes.

**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?** Melissa Hollis, Chester Henson, Mary Ann Koos, Ray Haverty, Stefanie Maxwell.

**What other offices will be impacted by these changes?** Estimates and Construction

**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.

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## *Florida Department of Transportation*

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ANANTH PRASAD, P.E.  
SECRETARY

### MEMORANDUM

**DATE:** June 3, 2013  
**TO:** Specification Review Distribution List  
**FROM:** Daniel Scheer, P.E., State Specifications Engineer  
**SUBJECT:** Proposed Specification: **5270000 Detectable Warnings.**

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

This change was proposed by Patrick Overton of the Roadway Design Office to clarify description and modify the Method of Measurement and Basis of Payment for clarity.

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](mailto:daniel.scheer@dot.state.fl.us). Comments received after **July 1, 2013**, may not be considered. Your input is encouraged.

DS/cah  
Attachment

**DETECTABLE WARNINGS.  
(REV 5-16-13)**

SECTION 527 (Page 688 -689) is deleted and the following substituted:

**SECTION 527  
DETECTABLE WARNINGS ~~ON WALKING SURFACES~~**

**527-1 Description.**

Furnish and install ~~Detectable-detectable Warning-warnings devices~~ on newly constructed and/or existing concrete or asphalt walking surfaces (~~sidewalk~~ curb ramps, sidewalks, shared -use paths, etc.) constructed in accordance with the Design Standards, Index No. 304.

**527-2 Materials.**

**527-2.1 Detectable Warnings:** Provide ~~Detectable-detectable Warnings-warnings~~ in accordance with the Americans with Disabilities Act Standards for Transportation Facilities, Section 705. Use ~~Detectable-detectable Warnings-warnings~~ consisting of materials intended for exterior use subject to routine pedestrian traffic and occasional vehicular traffic. Use ~~Detectable-detectable Warnings-warnings~~ with size and pattern shown in the Plans comprised of truncated domes aligned in parallel rows in accordance with the Design Standards, Index No. 304. Do not use detectable warnings with a diagonal pattern.

**527-2.1.1 Preformed Materials:** Use ~~Detectable-detectable Warnings-warnings~~ consisting of weather-resistant tiles or pavers that are cast into concrete, or tiles or mats that are surface-applied to concrete or asphalt surfaces with adhesives and mechanical fasteners or torch-applied preformed thermoplastic.

**527-2.1.2 Field-Formed Materials:** Use ~~Detectable-detectable Warnings-warnings~~ applied as a secondary application to the substrate.

**527-2.2 Material Properties:** Provide ~~Detectable-detectable Warnings-warnings~~ that meet the following minimum material property requirements when tested in accordance with the ~~indicated Standard appropriate to the material.~~following:

PROPERTY	STANDARD	TEST VALUE
Slip Resistance	FM 3-C1028	Dry Coefficient of Friction – 0.8 min. Wet Coefficient of Friction – 0.65 min. (include recessed areas between truncated domes)
Wear Resistance	FM 5-594	Average Volume Loss: no more than 0.06 cm <sup>3</sup>
Water Absorption*	ASTM D570	Not to exceed 5%.
Adhesion/Bond Strength**	FM 5-589	150 psi min. tensile adhesion strength
Non-Hazardous Classification	Submit Material Safety Data Sheet (MSDS)	Non-Hazardous, per RCRA Subtitle C

\* Applies only to plastic materials.

\*\* Applies only to surface-applied materials.

**527-2.3 Color/Contrast:** Use safety yellow, brick red or black colored ~~Detectable detectable~~ ~~Warnings-warnings~~ on concrete walking surfaces. Use safety yellow colored ~~Detectable detectable~~ ~~Warnings-warnings~~ on asphalt walking surfaces. Acceptable ~~Detectable detectable~~ ~~Warnings-warnings~~ shall meet the following criteria for a duration of three years.

COLOR	LIGHT REFLECTANCE VALUES (LRV) CAP Y*
Safety Yellow	25 – 45
Brick Red	5 – 15
Black	0 – 5

\*When measured with a spectrophotometer

**527-2.4 Qualified Products List:** Methods or products used to form ~~Detectable detectable~~ ~~Warnings-warnings~~ in wet concrete will not be permitted. Use ~~Detectable detectable~~ ~~Warnings-warnings~~ listed on the Department’s Qualified Products List (QPL). Manufacturers seeking evaluation of products for inclusion on the QPL shall submit an application in accordance with Section 6 and include certified test reports from an independent lab showing the product meets the requirements of this Section and the Design Standards, Index No. 304 Acceptance Criteria and manufacturer’s drawings, specifications and procedures for materials and installation, including touch-up and repair.

**527-3 Installation Procedures.**

**527-3.1 Surface Preparation and Installation:** Prepare the surface in accordance with the manufacturer’s recommendations. Use only products and materials appropriate for the surface on which they will be applied. Install in accordance with the manufacturer’s instructions, using materials and equipment recommended and approved by the manufacturer. For surface-applied tiles or mats, use adhesives applied over the entire surface and mechanical fasteners.

**527-4 Method of Measurement.**

Detectable ~~Warnings-warnings~~ applied to ~~newly constructed~~ *all* walking surfaces will be ~~included in the cost of the walking surface. Detectable Warnings applied to existing walking surfaces will be~~ paid per ~~each location where Detectable Warnings are~~ *square foot*, furnished, installed and accepted.

**527-5 Basis of Payment.**

Price and payment will be full compensation for all work specified in this Section, including all labor, surface preparation, materials and incidentals necessary to complete the work ~~for Detectable Warnings installed on existing walking surfaces.~~

Payment will be made under:

- ~~Item No. 527- 1- Detectable Warnings on Existing Walking Surfaces each.~~
- Item No. 527- 2- Detectable Warnings- square foot.*