



Florida Department of Transportation

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Tallahassee, FL 32399-0450

KEVIN J. THIBAUT, P.E.
SECRETARY

July 21, 2021

Khoa Nguyen
Director, Office of Technical Services
Federal Highway Administration
3500 Financial Plaza, Suite 400
Tallahassee, Florida 32312

Re: State Specifications Office
Section: **527**
Proposed Specification: **5270100 DETECTABLE WARNINGS.**

Dear Mr. Nguyen:

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

The changes are proposed by Karen Byram to move material requirements to Division III. New language is added in acceptance criteria and product selection for newly constructed and existing surfaces. This proposed revision is associated with the proposed 9740000.

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

If you have any questions relating to this specification change, please call me at 850-414-4130.

Sincerely,

Signature on file

Daniel Strickland, P.E.
State Specifications Engineer

DS/dh

Attachment

cc: Florida Transportation Builders' Assoc.
State Construction Engineer

DETECTABLE WARNINGS.(REV ~~6-87-15~~-21)

SECTION 527 is deleted and the following substituted:

**SECTION 527
DETECTABLE WARNINGS****527-1 Description.**

~~Furnish and install d~~ Detectable warnings are products used for the visually impaired and installed on newly constructed and/or existing concrete or asphalt walking surfaces (sidewalk curb ramps, sidewalks, shared use paths, etc.). ~~constructed in accordance with Standard Plans, Index 522-002.~~

527-2 Materials.

~~527-2.1 Detectable Warnings: Provide detectable warnings in accordance with the Americans with Disabilities Act Standards for Transportation Facilities, Section 705. Use detectable warnings consisting of materials intended for exterior use subject to routine pedestrian traffic and occasional vehicular traffic. Use detectable warnings with size and pattern shown in the Plans comprised of truncated domes aligned in parallel rows in accordance with Standard Plans, Index 522-002. Do not use detectable warnings with a diagonal pattern. Use detectable warnings as approved for use on uncured concrete, existing concrete, and asphalt surfaces. Use only products and materials appropriate for the surface on which they will be applied.~~

~~527-2.1.1 Preformed Materials: Use detectable 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 warnings applied as a secondary application to the substrate.~~

~~527-2.2 Material Properties: Provide detectable warnings that meet the following minimum material property requirements when tested in accordance with the 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 ³
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 (SDS)	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 warnings on concrete walking surfaces. Use safety yellow colored detectable warnings on asphalt walking surfaces. ~~Acceptable detectable 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 Approved Product List:~~ Methods or products used to form detectable warnings in wet concrete will not be permitted. Use detectable warnings listed on the Department's Approved Product List (APL) meeting the requirements of Section 974. ~~Manufacturers seeking evaluation of products for inclusion on the APL 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 Standard Plans, Index 522-002 Acceptance Criteria and manufacturer's drawings, specifications and procedures for materials and installation, including touch-up and repair.~~ Methods used to form detectable warnings in wet concrete will not be permitted.

~~527-3 Installation Procedures~~ **Construction Requirements.**

~~527-3.1 Surface Preparation and Installation:~~ Prepare the surface and install detectable warnings in accordance with the manufacturer's ~~recommendations~~ installation instructions, using materials and equipment recommended and approved by the manufacturer. Construct in accordance with Standard Plans, Index 522-002. 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.

Open the walking surface to pedestrian traffic within 72 hours for uncured concrete surfaces. Immediately ~~install detectable warnings on newly constructed surfaces and open the walking surface to pedestrian traffic~~ for asphalt and existing concrete surfaces. ~~For installations on newly placed concrete, install detectable warnings during casting or immediately upon completing the concrete curing period specified in 520-8. Install surface applied tiles or mats using adhesives applied over the entire surface and mechanical fasteners.~~

Surface color and texture shall be complete and uniform. Detectable warnings will be securely installed as recommended by the manufacturer and free from lifting, cracking, missing or partial domes, and with no significant defects. Surfaces shall not deviate more than 0.10" from a true plane.

527-4 Method of Measurement.

Detectable warnings will be paid by plan quantity, per 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

Payment will be made under:

Item No. 527- 2- Detectable Warnings - per square foot.

DETECTABLE WARNINGS.**(REV 7-15-21)**

SECTION 527 is deleted and the following substituted:

**SECTION 527
DETECTABLE WARNINGS**

527-1 Description.

Detectable warnings are products used for the visually impaired and installed on newly constructed and/or existing concrete or asphalt walking surfaces (sidewalk curb ramps, sidewalks, shared use paths, etc.).

527-2 Materials.

Use detectable warnings as approved for use on uncured concrete, existing concrete, and asphalt surfaces. Use only products and materials appropriate for the surface on which they will be applied.

Use safety yellow, brick red, or black colored detectable warnings on concrete walking surfaces. Use safety yellow colored detectable warnings on asphalt walking surfaces.

Use detectable warnings listed on the Department's Approved Product List (APL) meeting the requirements of Section 974. Methods used to form detectable warnings in wet concrete will not be permitted.

527-3 Construction Requirements.

Prepare the surface and install detectable warnings in accordance with the manufacturer's installation instructions, using materials and equipment recommended and approved by the manufacturer. Construct in accordance with Standard Plans, Index 522-002.

Open the walking surface to pedestrian traffic within 72 hours for uncured concrete surfaces. Immediately open the walking surface to pedestrian traffic for asphalt and existing concrete surfaces.

Surface color and texture shall be complete and uniform. Detectable warnings will be securely installed as recommended by the manufacturer and free from lifting, cracking, missing or partial domes, and with no significant defects. Surfaces shall not deviate more than 0.10" from a true plane.

527-4 Method of Measurement.

Detectable warnings will be paid by plan quantity, per square foot, furnished, installed and accepted.

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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

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Item No. 527- 2- Detectable Warnings - per square foot.