

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
DETECTABLE WARNING SURFACE

November 11, 2002

I. DESCRIPTION.

This work shall consist of providing all labor, tools, equipment, and materials required to construct sidewalk with detectable warning surfaces in the location(s) specified on the plans or in the proposal. The Contractor shall install and complete the work according to the details shown on the plans or in the proposal, Special Design Drawing, this special provision, Section 504 of the Specifications, and as directed by the Engineer.

II. MATERIALS.

Materials shall conform to the requirements of Section 504 of the Specifications except as follows:

In lieu of concrete, solid brick pavers, concrete pavers or other permanent, durable materials suitable for heavy traffic outdoor areas approved by the Department may be used to construct the detectable warning areas when shown and called for in the plans and other contract documents. Solid brick pavers and concrete paver units shall conform to the details and requirements shown in the plans. Other durable materials shall be in accordance with Department approved manufacturer's design and specifications.

There shall be a minimum of 70% contrast in light reflectance between the detectable warning area and adjoining surfaces. The detectable warning can optionally be "safety yellow". The material used to provide visual contrast shall be an integral part of the detectable warning surface. Both the truncated domes and the underlying surface must meet the contrast requirement. The contrast in percent shall be determined by:

$$\text{Contrast} = [(B1 - B2) / B1] \times 100$$

Where B1=light reflectance value (LRV) of the lighter area and B2=light reflectance value (LRV) of the darker area. Note that in any application both white and black are never absolute; thus, B1 never equals 100 and B2 is always greater than 0.

When visual contract other than "safety yellow" issued, provide verification of contrast. Verification of visual contrast is required.

III. CONSTRUCTION.

Construct sidewalk ramp according to Section 504 of the Specifications except for detectable warning/truncated domes that shall furnished or constructed in accordance with the details in this specification, the manufacturer's recommendations, the Special Design Drawing and the Plans.

IV. MEASUREMENT AND PAYMENT.

Detectable warning surface shall be measured in linear feet and paid for at the contract unit price per square foot, complete-in-place. This price shall be full compensation for furnishing and installing approved truncated dome finished materials including but not limited to concrete, brick or concrete pavers, other approved materials, integral visual contrast, dowels and all other labor, tools, equipment, materials and incidentals necessary to fully complete the work.

Payment will be made under:

Pay Item
Special Design Detectable Warning

Pay Unit
Square Foot