

## **DETECTABLE WARNINGS TO RETROFIT EXISTING CURB RAMPS:**

### **Description**

Construct detectable warnings consisting of raised truncated domes to retrofit existing curb ramps in accordance with the plan details, Section 848.06 Sheet 3 of 5 of the *2018 Standard Drawing*, the requirements of the *28 CFR Part 36 ADA Standards for Accessible Design*, and these provisions.

### **Materials**

Detectable warning for retrofitting existing curb ramps shall consist of raised truncated domes. The description, size, and spacing shall conform to Section 848 of the *2018 Standard Specifications*.

Use material for detectable warning systems as shown herein. Material and coating specifications must be stated in the Manufacturers Type 3 Certification and all Detectable Warning systems must be on the NCDOT Approved Products List.

Install detectable warnings created from one of the following materials: engineered plastics, rubber, composite tile, or stamped concrete. Only one material type for detectable warning will be permitted per project, unless otherwise approved by the Engineer.

Detectable Warnings shall consist of a base with integrated raised truncated domes, and when constructed of precast concrete they shall conform to the material requirements.

- (A) Detectable Warnings shall consist of a base with integrated raised truncated domes, and may be comprised of other materials including, but not limited to, engineered plastics, rubber, composite tile, or stamped concrete which are applied directly to the curb ramps by incorporating **into the concrete of the curb ramps**. The material shall have an integral color throughout the thickness of the material. The detectable warning shall include fasteners or anchors for attachment into the existing ramp and shall be furnished as a system from the manufacturer. **Surface Mounted Rubber Mats, brick, steel and stamped concrete pavers will not be accepted.**

Prior to installation, the Contractor shall submit to the Engineer assembling instructions from the manufacturer for each type of system used in accordance with Article 105-2 of the *2018 Standard Specifications*. The system shall be furnished as a kit containing all consumable materials and consumable tools, required for the application. They shall be capable of being affixed to or anchored in the concrete curb ramp, including green concrete (concrete that has set but not appreciably hardened). The system shall be solvent free and contain no volatile organic compounds (VOC). The static coefficient of friction shall be 0.8 or greater when measured on top of the truncated domes and when measured between the domes in accordance with ASTM C1028 (dry and wet). The system shall be resistant to deterioration due to exposure to sunlight, water, salt, or adverse weather conditions and impervious to degradation by motor

fuels, lubricants, and antifreeze.

- (A) Install all detectable warning to retrofit existing curb ramps in accordance with the manufacturer's recommendations.

**Measurement and Payment**

*Retrofit Existing Curb Ramps* with detectable warnings constructed of any type material will be paid as the actual number of retrofitted curb ramps, completed and accepted. Such price and payment will be full compensation for excavating and backfilling; sawing, repairing, and replacing portions of the existing curb ramp within the pay limits for retrofit shown on the detail, pavement repairs, furnishing and placing detectable warnings, construction joints and removing and disposing of portions of the existing curb ramp when required and for all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

**Pay Item**

Retrofit Existing Curb Ramp

**Pay Unit**

Each