



Iowa Department of Transportation

SPECIAL PROVISIONS

FOR

DETECTABLE WARNING PANELS

Linn County

Project Numbers

NHSX-100-1(59)--3H-57 and

ESP-100-1(61)--2S-57

Effective Date
October 20, 2009

THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, SERIES 2009, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS AND GENERAL SUPPLEMENTAL SPECIFICATIONS.

02511.01 DESCRIPTION.

This work includes supplying and installing preformed detectable/tactile warning panels in pedestrian curb ramps as described below.

02511.02 MATERIALS.

Detectable warning panels shall be red fiberglass truncated dome inserts in prefabricated panels of vitrified polymer. The panels shall include integral embedment flanges for securing the panels to the concrete. The embedment flange cells shall include vent holes for a cast in place installation.

The panels shall meet the following specifications:

- Warpage of Edge - 0.5% Max.
- Water Absorption - ASTM d 570-98 less than 0.05%.
- Slip Resistance - ASTM C 1028-96 greater than 0.80.
- Compressive Strength - ASTM D 695-02a greater than 28,000 psi.
- Tensile Strength - ASTM D 638-03 greater than 19,000 psi.
- Flexural Strength - ASTM D 790-03 greater than 25,000 psi.
- Chemical Stain Resistance - ASTM D 543-95 no discoloration or staining.
- Abrasive Wear - ASTM D 2486-00 less than 0.060 after 1000 cycles.
- Wear Resistance - ASTM C 501-84 greater than 500.
- Fire Resistance - ASTM E 84-05 flame spread less than 15.
- Impact Resistance - ASTM D 5420-04 greater than 550 in. lbf/in.
- Accelerated Weathering - ASTM G 155-05a for 3000 hrs. $\Delta_E < 4.5$ tile color 33538, no fading or chalking.
- Freeze Thaw - ASTM D 1037-99 no cracking, delamination, or other defects.
- Salt Spray - ASTM B 117-03 for 200 hours or deterioration.
- AASHTO HB-17 single wheel HS20-44 loading no failure @ 10,400/lbs.
- Truncated dome dimensions shall be in accordance with Standard Road Plan RB-6.

DELIVERY, STORAGE AND HANDLING

- Detectable/Tactile Warning Surfaces shall be suitably packaged or created to prevent damage in shipment or handling.
- Detectable/Tactile Warning Surfaces shall be delivered to location at building site for storage prior to installation.

SITE CONDITIONS

- Environmental Conditions and Protection: Maintain minimum temperature of 40°F in spaces to receive Detectable/Tactile Warning Surfaces for at least 24 hours prior to installation, during installation, and for not less than 24 hours after installation.

- The use of water for cleaning and dust control shall be contained, not to come into contact with the general public.

02511.03 CONSTRUCTION.

Construction of curb ramps shall require detectable warnings. Pour and float concrete, set tile panel by tamping down into concrete until all air voids are removed, edge around the perimeter with an edging tool, and cut off protective plastic sheet.

All detectable warnings shall be cast in place style panels, installed according to the manufacturer's recommendations. The detectable warnings shall contrast visibly with the adjoining surfaces, either light-on-dark or dark-on-light. Refer to Americans with Disabilities Act Accessibility Guidelines (ADAAG) for contrast requirements at <http://www.access-board.gov/adaag/html/adaag.htm#4.29.2>.

If crossings are marked; the ramp, exclusive of flares, shall be located entirely within the crosswalk markings.

02511.04 METHOD OF MEASUREMENT.

The quantity of detectable warnings for curb ramps, in square feet (square meters) will be the quantity shown in the contract documents.

02511.05 BASIS OF PAYMENT.

The Contractor will be paid the contract unit price for Detectable Warnings for Curb Ramps, per square foot (square meter). This payment shall be full compensation for furnishing all material, equipment, and labor to construct the detectable warnings for curb ramps in accordance with the contract documents.