
Standard Specification for Detectable Warning Surfaces

AASHTO Designation: M 333-16 (2024)¹

Technically Revised: 2016

Reviewed but Not Updated: 2024

Technical Subcommittee: 4d, Safety Devices



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AASHTO

1. SCOPE
- 1.1.

Detectable warnings provide a distinctive surface of truncated domes detectable by cane or underfoot to alert people with vision impairments of the transition to vehicular ways. These warnings compensate for the sloped surfaces of curb ramps that remove a tactile cue provided by curb faces.
- 1.2.

It is not the intent of this specification to relieve the supplier from the final responsibility to provide an appropriate product for the intended function, nor is it intended to specify all the design details. The objective is to provide a sufficiently detailed specification such that the function establishes a standard geometry of the detectable warning surface.
2. REFERENCED DOCUMENT
- 2.1.

U.S. Access Board. Guidelines and Standards, Streets and Sidewalks, Public Rights-of-Way. U.S. Access Board, Washington, DC. Available from <https://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way>
3. TERMINOLOGY
- 3.1.

detectable warning—a surface feature built in or applied to walking surfaces or other elements to warn of hazards on a circulation path.
4. DETECTABLE WARNING SURFACES
- 4.1.

General—Detectable warnings shall consist of a surface of truncated domes aligned in a square or radial grid pattern and shall comply with the following requirements:
- 4.1.1.

Dome Size—Truncated domes in a detectable warning surface shall have a base diameter of 0.9 in. (23 mm) minimum to 1.4 in. (36 mm) maximum, a top diameter of 50 percent of the base diameter minimum to 65 percent of the base diameter maximum, and a height of 0.2 in. (5 mm).
- 4.1.2.

Dome Spacing—Truncated domes in a detectable warning surface shall have a center-to-center spacing of 1.6 in. (41 mm) minimum and 2.4 in. (61 mm) maximum, and a base-to-base spacing of 0.65 in. (16 mm) minimum, measured between the most adjacent domes.
- 4.1.3.

Contrast—Detectable warning surfaces shall contrast visually with adjacent walking surfaces either light-on-dark or dark-on-light.