

Gordon Tyus

From: Niranjan Vescio [nvescio@stronggo.com]
Sent: Wednesday, June 02, 2010 11:33 AM
To: 'Jesse Gonzales'; 'Robert Herz - MCDOTX'
Cc: Gordon Tyus
Subject: MAG Detectable Warning Specification
Attachments: Edit to 09-13 - Niranjan Vescio (StrongGo).pdf

Dear Mr. Herz and Mr. Gonzales,

Detectable warnings (DW) have been discussed at recent MAG meetings in connection with Cases 09-13 and 09-14. We addressed the Access Board's allowance for setbacks and their strong preference for dome alignment wherever possible. A matter that has been raised, but never taken up formally is the development and adoption of a DW performance/quality specification by MAG.

StrongGo Industries manufactures TekWay Dome-Tiles, a supplier to MAG cites/municipalities. With that stated up front, we wish to formally propose that MAG develop non-proprietary DW standards that will provide its members reliable, cost-effective, maintainable products. These standards would complement the new ramp designs being developed and could also be incorporated into the On-Site book being developed independently.

Few local organizations have developed DW specifications. Most cities/municipalities only use an Approved Products List, but several have expressed that they would support development of a MAG DW specification. Cities could opt to follow their own standards, but having thoughtfully-conceived MAG standards (much like MAG's sidewalk concrete standards) would be valuable and useful.

Currently, only the Metro Valley Rail applies a DW performance specification. Like most, I believe their motivation was quality, reliability, and a basis for standards enforcement. They were well served recently by their specification when failing DW tiles were found not to meet the minimum strength parameters, providing clear basis for corrective action. Among cities and municipalities, only the City of Phoenix (COP) cites a DW performance measure which is noted in their DW detail P1232 (Compression strength >8000 psi). However, the COP has expressed interest in working with us to developing better, more comprehensive DW standards.

At a future MAG meeting, I would be happy to introduce the MVR specification or one drafted for MAG as a "strawman" that could then be modified to suit varied interests. In the interim, I suggest the 09-13 ramp detail currently out for comment be augmented (as attached) to allow for the development and adoption of a DW performance specification. I am sorry I cannot be present at today's meeting to introduce this matter in person. I trust that this e-mail to you, copying, Gordon Tyus will serve in my absence.

Best regards,

Niranjan Vescio
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From: Jesse Gonzales [mailto:Jesse.Gonzales@peoriaaz.gov]
Sent: Friday, March 19, 2010 12:58 PM
To: 'Niranjan Vescio'; 'Robert Herz - MCDOTX'

Cc: Brandon Forrey
Subject: RE: Detectable Warning Setback & Alignment

Good Afternoon Gentlemen,

I have the entire slide show if you would like to see it, with Lois's writing on it no less.

The point I've been trying to make is that at least one corner of the tile must touch or almost touch one back of curb. The concrete "landing" must be relatively flat something along the same .015' per ft that our sidewalks are. This is so the chair front wheels do not "torque", this is important and most ADA videos will show that the wheels should hit simultaneously.

Although Lois states that the domes are not valid or recognized way-finding features I am of the opinion that they should align as best you can with the direction of travel so wheel chair users with spinal injury do not get beat to death by the "rumble strip effect" that you get from running over the domes. This opinion is based on my experiences being wheeled out the St. Joseph's a few years back, there was no way to avoid it.

One of the biggest challenges I've had is that returns and streets are not flat, the cross slope, running slope and breakover angle at the curb line all have to be taken into account. Add in that a typical curb return has fall around the return so you have thrown in another conflicting slope to contend with.

Jesse

From: Niranjn Vescio [mailto:nvescio@stronggo.com]
Sent: Friday, March 19, 2010 12:41 PM
To: Jesse Gonzales; 'Robert Herz - MCDOTX'
Subject: Detectable Warning Setback & Alignment

Hi Jesse and Bob,

I missed the last MAG Standard Specifications & Details Committee meeting so I was not able to bring this information forward at that time.

Below is an exchange one of our staff had with Lois Thibault of the Access Board. There are points made about placement and alignment that are relevant to the on-going MAG discussion:

1. The DW should be placed at the "back of the curb-line", except on perpendicular curb ramps.
 - a. Setbacks are allowed, but a specific distance is no longer mentioned to avoid confusion.
 - b. The 6" setback in the PROWAC, July 2007, Section 5, page 67 (which is advisory material anyway) does not apply any longer.
2. On a perpendicular curb ramp, the DW should be placed at the grade break which may be <5ft behind the curb line (see slides).
3. Dome alignment is important, should be perpendicular to the grade break and the street, and will be required in PROWAG.

Hope this helps. See you at the next meeting in early April.

Regards,

Niranjn Vescio
TekWay® Dome-Tiles
by StrongGo Industries

From: Thibault, Lois [mailto:thibault@Access-Board.gov]
Sent: Tuesday, February 16, 2010 2:22 AM
To: JoAnn Lichty
Subject: RE: Setback question

Hi, JoAnn:

In responding to comment to the 2005 draft PROWAG, the version on our website, we have made a few changes that will soon appear in a Notice of Proposed Rulemaking, the next step towards a final rule. This is one of them. The 6-8 inches was intended to locate the DWs at the back of curblines, but it was poorly stated and seemed unclear to most readers.

The document you refer to as PROWAC is advisory material -- a manual for alterations.

DWs may certainly be an inch or two off the BOC; some products apparently need a band of concrete to restrain them.

Aligning the domes is particularly important on ramps, and will be required in PROWAG. On lower slope connections, it's not important. Indeed, it may not be possible to determine a single travel direction.

We'd be happy to review any material you develop for clients.

Best, Lois

-----Oorspronkelijk bericht-----

Van: JoAnn Lichty [mailto:jlichty@StrongGo.com]

Verzonden: ma 15-2-2010 18:41

Aan: Thibault, Lois

Onderwerp: RE: Setback question

Thanks Lois,

Just a couple more things to make sure I am clear.

1. If I am reading you correctly, there is no "required" number of inches for setback, rather it is "allowed" as long as the detectable warning remains at the "back of the curb", except on a directional ramp (slide 3). If this is correct, then PROWAC, July 2007, Section 5, page 67 which reads the detectable warning feature should be six inches back from the curb line, at least 24" deep and extend over the entire face of the ramp or blended transition" is a recommendation not a requirement? So if an agency choose to move it back a little further to avoid the spalling issue, they would be considered compliant?

2. With regard to dome alignment; dome alignment with the crosswalk is preferred and encouraged but it not required, correct? We are gathering this based on the illustrations in numerous PROWAC curb ramp examples, Section 6. The only dome alignment required is perpendicular to the ramp grade breaks and the street (R304.2.3), presumably to facilitate wheelchair accessibility?

Thank you in advance for your help, we really appreciate it.

My best,

JoAnn Lichty

National Accounts Manager

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From: Thibault, Lois

Sent: Friday, February 05, 2010 12:35 PM

To: JoAnn Lichty

Subject: RE: Setback question

The allowance for a setback (it was in the 2002 draft) was intended to permit agencies to locate the DW behind the back-of-curb line. It turned out to be confusing: jurisdictions thought it was required. In 2005, we issued a second draft without this information. I excerpt the DW provisions below; you can see them online at <http://www.access-board.gov/prowac/draft.htm#304>.

I am attaching a 3-slide excerpt from our 'Designing Curb Ramps' presentation that focus on where DWs go. Lois

R304 Detectable Warning Surfaces

R304.1 General. Detectable warnings shall consist of a surface of truncated domes aligned in a square or radial grid pattern and shall comply with R304.

R304.1.1 Dome Size. Truncated domes in a detectable warning surface shall have a base diameter of 23 mm (0.9 in) minimum to 36 mm (1.4 in) maximum, a top diameter of 50 percent of the base diameter minimum to 65 percent of the base diameter maximum, and a height of 5 mm (0.2 in).

Advisory R304.1.1 Dome Size. Where domes are arrayed radially, they may differ in diameter within the ranges specified.

R304.1.2 Dome Spacing. Truncated domes in a detectable warning surface shall have a center-to-center spacing of 41 mm (1.6 in) minimum and 61 mm (2.4 in) maximum, and a base-to-base spacing of 17 mm (0.65 in) minimum, measured between the most adjacent domes.

Advisory R304.1.2 Dome Spacing. Where domes are arrayed radially, they may differ in center-to-center spacing within the range specified.

R304.1.3 Contrast. Detectable warning surfaces shall contrast visually with adjacent gutter, street or highway, or walkway surfaces, either light-on-dark or dark-on-light.

Advisory R304.1.3 Contrast. Contrast may be provided on the full ramp surface but should not extend to the flared sides. Many pedestrians use the visual contrast at the toe of the ramp to locate the curb ramp opening from the other side of the street.

R304.1.4 Size. Detectable warning surfaces shall extend 610 mm (24 in) minimum in the direction of travel and the full width of the curb ramp (exclusive of flares), the landing, or the blended transition.

R304.2 Location and Alignment

R304.2.1 Perpendicular Curb Ramps. Where both ends of the bottom grade break complying with R303.3.4 are 1.5 m (5.0 ft) or less from the back of curb, the detectable warning shall be located on the ramp surface at the bottom grade break. Where either end of the bottom grade break is more than 1.5 m (5.0 ft) from the back of curb, the detectable warning shall be located on the lower landing.

Advisory R304.2.1 Perpendicular Curb Ramps. Detectable warnings are intended to provide a tactile equivalent underfoot of the visible curbline; those placed too far from the street edge because of a large curb radius may compromise effective crossing analysis.

R304.2.2 Landings and Blended Transitions. The detectable warning shall be located on the landing or blended transition at the back of curb.

R304.2.3 Alignment. The rows of truncated domes in a detectable warning surface shall be aligned to be perpendicular or radial to the grade break between the ramp, landing, or blended transition and the street.

Advisory R304.2.3 Alignment. Where a ramp, landing, or blended transition provides access to the street continuously around a corner, the vertical rows of truncated domes in a detectable warning surface should be aligned to be perpendicular or radial to the grade break between the ramp and the street for a 1.2 meter-wide (4.0 ft) width for each crosswalk served.

R304.2.3 Rail Crossings. The detectable warning surface shall be located so that the edge nearest the rail crossing is 1.8 m (6 ft) minimum and 4.6 m (15 ft) maximum from the centerline of the nearest rail. The rows of truncated domes in a detectable warning surface shall be aligned to be parallel with the direction of wheelchair travel.

From: JoAnn Lichy [<mailto:jlichty@StrongGo.com>]
Sent: Friday, February 05, 2010 2:18 PM
To: Thibault, Lois
Subject: FW: Setback question

Hello Lois,

It's been a while since we've talked and I trust you are doing well. We hope to see you out in sunny Arizona again sometime soon.

Lois, about 2 months ago I had a conversation with Dennis Cannon regarding the current recommended setback for detectable warnings. Currently it is 8" from face of curb, which leaves a small area of concrete at the face edge of the inside curb edge, which typically spalls out.

Dennis explained this was one of the areas that have been recognized to need improvement and that is being addressed in an upcoming NPRM (I believe that was the term).

Could you please give me additional information on that, particularly how far back the new recommendation would allow and when it might possibly be adopted? Also, if at all possible, the agency or link to the study would be very helpful.

As you may imagine, there are several municipalities that have maintenance issues due to this particular design. Is there anything currently available in PROWAC or elsewhere that could give them the discretion to move the detectable warning surface back without risking a compliance issue?

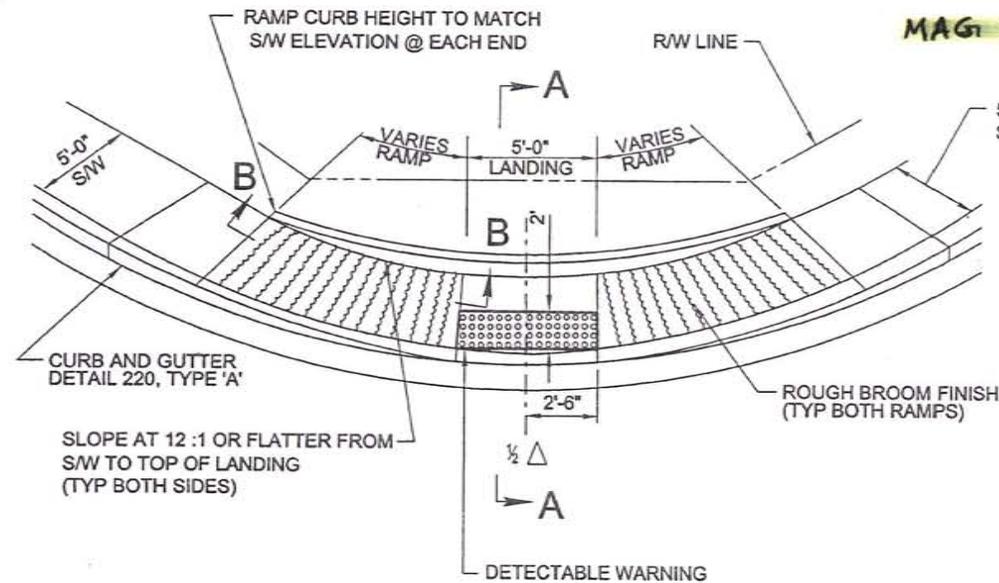
I look forward to hearing from you Lois and as always remain with best personal regards.

JoAnn Lichy

National Accounts Manager

TekWayR Dome - Tiles

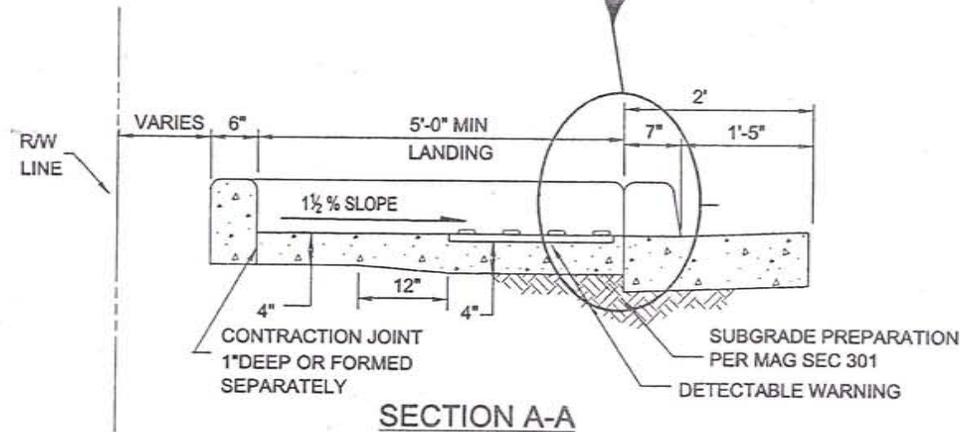
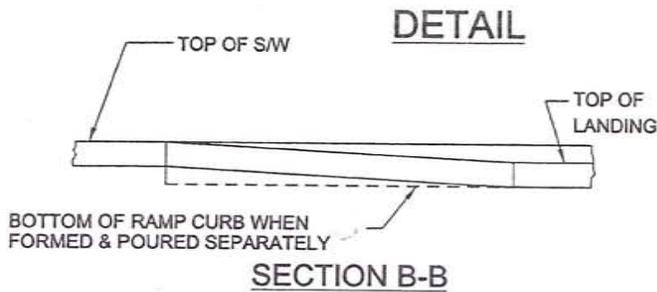
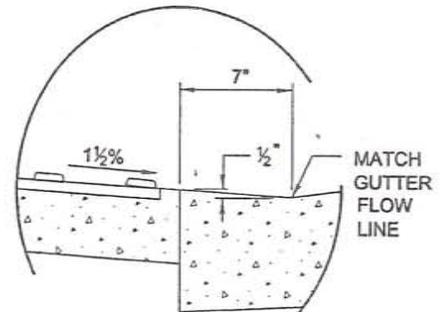
by StrongGo Industries



MAG DW SPECIFICATION OR

NOTES:

1. CLASS 'B' CONCRETE CONSTRUCTION PER SECTION 725.
2. DETECTABLE WARNING IS TO COMPLY WITH THE JURISDICTIONAL AGENCY'S REQUIREMENT.
3. RAMP LONGITUDINAL SLOPE SHALL BE 12:1 OR FLATTER.
4. RAMP CROSS SLOPE SHALL BE 1½%.



CASE 09-14

DETAIL NO. 232	MARICOPA ASSOCIATION of GOVERNMENTS	STANDARD DETAIL ENGLISH	CURB RAMP -TYPE 'B'	CASE 09-14 REV 4/07/2010	REVISED 01-01-2011	DETAIL NO. 232
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