

Taken to Access

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Question of the month:

Q. We have installed a new ramp in general compliance with required slopes. Slopes were checked with a 4' level during the concrete pour and were compliant. The access specialist performing monitoring, is spot checking every 24" in both directions and using a 2' level. Furthermore, he's measuring running slope at the edges of the ramp, which seems illogical as one would be walking down the center. There is nothing in the code that establishes this measuring method. Why do they feel compelled to check at some many locations?

R. Variation in slope can be a substantial risk for wheelchair users and people with limited mobility. A small dip within a walkway may create a stumbling or tripping hazard. Hence, access specialists follow US Access Board recommendations for how compliance is to be verified in the field. These recommendations include using a 2' digital inclinometer as well as specifying measurement increments. Taking measurements at 6" from edge of curb is one of the recommendations based on findings that indicate that it is approximately where the inside wheel of a wheelchair would be if the hand-rail is used.

Announcements:

Congratulations to **Doug McElwee** and **HGA** on receiving zero comments during the Accessibility Plan Review of the Sutter Amador Patient Lift Project. This is the first of 258 projects to receive zero comments!! Great job team!!

WE MAY BE ABLE TO TOLERATE THIS!

One of the most popular questions FPS PAC receives is related to construction tolerances. Often times we're faced with conditions where a specific required dimension has been missed by a fraction of an inch. In new construction, the expectation is that through proper design, quality control and excellent workmanship, all dimensions will comply. Yet, under certain circumstances some have missed the mark.

In providing guidance, we often start by reviewing code language related to general conventions. **Section 11B-104.1.1** of the 2013 CBC states: "All dimension are subject to conventional tolerances except where the requirement is stated as a range with specific minimum and maximum end points." Under the **ADAS Advisory 104.1.1**, it's further elaborated that "It is good practice when specifying dimensions to avoid specifying a tolerance where dimensions are absolute." And that "Where the requirement states a specified range, such as in Section 609.4 where grab bars must be installed between 33" to 36" above the floor, the range provides an adequate tolerance and therefore no tolerance outside of the range at either end point is permitted." Under these circumstances, if a grab bar is installed at 36-1/8" AFF, it would have to be relocated even if it's only off by 1/8 of an inch.

In the past, some have considered maximum and minimum dimensions as a range. For example, 2% cross slope could be considered a range from 0% to 2%. However, because a minimum percentage has not been specified, it would not be considered a range and tolerances may apply. Still, it would be good practice to specify a percentage below the required maximum by the amount of the expected conventional tolerance.

This leads to how one would define or identify acceptable conventional tolerances. The US Access Board, in response to numerous inquiries on this matter, and with the understanding that few trades include tolerances related to accessibility coordinated a project to encourage and support the construction industry to set specific tolerances and measure protocols. A two part report was issued in January 2011, suggesting best practices for design and summarizing tolerances developed by the Tile Council of North America (ICPA) and by the Interlocking Concrete Pavement Institute (ACI).

Some of the most relevant aspects of the report are the measurement protocols established for exterior surfaces. Since neither the CBC or the ADAS provide guidance on measuring procedures, access specialists follow the US Access Board recommendations outlined in this report. For a more detailed review of the report, follow the link below:

<http://www.access-board.gov/research/completed-research/dimensional-tolerances>

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