

March 2013

This is a summary of the basis for the provision of double accessible handrails at K-5 and K-8 schools for facilities primarily for use by children.

The basis for the double handrail at K-5 and K-8 schools is to accommodate both adult sizes and reach range, and children’s sizes and reach range. The 27” height for top the children’s handrail was a PPS standard prior to the 2009 ADA assessment. The 27” height was based on the draft form of ADA standards for children in circulation in the late 1990’s during the time the PPS standards were being modified to incorporate children’s smaller size and reach range. The 2010 ADA Standards for Accessible Design include dimensions for both adults and children’s reach ranges. The 27” top of children’s handrail height still works to meet current 2010 ADA, and previous appeal clarification B-19 #2 with City of Portland to apply the children’s reach range for the 9-12 age group consistently to elementary schools.

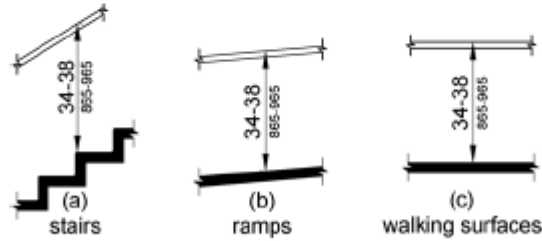
The excerpts below from the 2010 ADA Standards for Accessible Design illustrate the children’s handrail height. The handrail maximum height is an advisory recommendation rather than a requirement such as the grab bar height. However, providing a double handrail in K-5 and K-8 schools where it will be used regularly by children without assistance by family or other adult is in the spirit of the law.

<p><b>102 Dimensions for Adults and Children</b></p> <p>The technical requirements are based on adult dimensions and anthropometrics. In addition, this document includes technical requirements based on children’s dimensions and anthropometrics for drinking fountains, water closets, toilet compartments, lavatories and sinks, dining surfaces, and work surfaces.</p>			
<p><b>Children’s Use.</b> Describes spaces and elements specifically designed for use primarily by people 12 years old and younger.</p>			
<p><b>308 Reach Ranges</b></p> <p><b>308.1 General.</b> Reach ranges shall comply with 308.</p>			
<p><b>Advisory 308.1 General.</b> The following table provides guidance on reach ranges for children according to age where building elements such as coat hooks, lockers, or operable parts are designed for use primarily by children. These dimensions apply to either forward or side reaches. Accessible elements and operable parts designed for adult use or children over age 12 can be located outside these ranges but must be within the adult reach ranges required by 308.</p>			
<p><b>Children’s Reach Ranges</b></p>			
<p><b>Forward or Side Reach</b></p>	<p><b>Ages 3 and 4</b></p>	<p><b>Ages 5 through 8</b></p>	<p><b>Ages 9 through 12</b></p>
<p>High (maximum)</p>	<p>36 in (915 mm)</p>	<p>40 in (1015 mm)</p>	<p>44 in (1120 mm)</p>
<p>Low (minimum)</p>	<p>20 in (510 mm)</p>	<p>18 in (455 mm)</p>	<p>16 in (405 mm)</p>

Department of Justice 2010 Standards: Titles II and III - 113

**505.4 Height.** Top of gripping surfaces of handrails shall be 34 inches (865 mm) minimum and 38 inches (965 mm) maximum vertically above walking surfaces, stair nosings, and ramp surfaces. Handrails shall be at a consistent height above walking surfaces, stair nosings, and ramp surfaces.

**Advisory 505.4 Height.** The requirements for stair and ramp handrails in this document are for adults. When children are the principal users in a building or facility (e.g., elementary schools), a second set of handrails at an appropriate height can assist them and aid in preventing accidents. A maximum height of 28 inches (710 mm) measured to the top of the gripping surface from the ramp surface or stair nosing is recommended for handrails designed for children. Sufficient vertical clearance between upper and lower handrails, 9 inches (230 mm) minimum, should be provided to help prevent entrapment.



**Figure 505.4  
 Handrail Height**

Advisory Specifications for Water Closets Serving Children Ages 3 through 12			
	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
Water Closet Centerline	12 inches (305 mm)	12 to 15 inches (305 to 380 mm)	15 to 18 inches (380 to 455 mm)
Toilet Seat Height	11 to 12 inches (280 to 305 mm)	12 to 15 inches (305 to 380 mm)	15 to 17 inches (380 to 430 mm)
Grab Bar Height	18 to 20 inches (455 to 510 mm)	20 to 25 inches (510 to 635 mm)	25 to 27 inches (635 to 685 mm)
Dispenser Height	14 inches (355 mm)	14 to 17 inches (355 to 430 mm)	17 to 19 inches (430 to 485 mm)