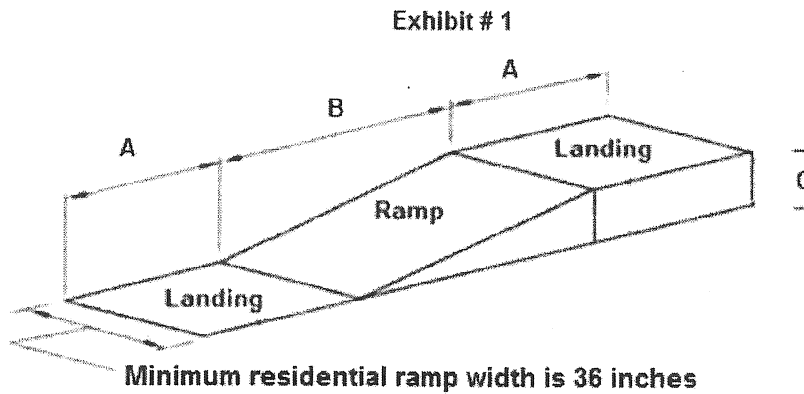


Ramps, Landings, Handrails and Guards



Maximum slope:

Per the **California Residential Code (CRC) Section R311.8** a residential ramp must have a maximum slope of **1 unit vertical** (height) in **12 units horizontal** (length) also known as a **1:12 slope**. **Exhibit # 1-A** shows an example of landings, **1-B** indicates the ramp length and **1-C** indicates the height of the ramp. Refer to the chart below and you will see that a ramp that is 30 inches high will require a ramp that is 30 feet long. However if site conditions do not make a 1:12 slope possible, then a slope between a 1:12 and 1:8 may be used. Refer to the chart below and you will see that this ramp at 1:8 will be 20 feet in length.

Height of ramp in inches. Exhibit # 1 - C	Minimum length of ramp at 1 in 12 slope. Exhibit # 1 - B	Minimum length of ramp at 1 in 10 slope. Exhibit # 1 - B	Minimum length of ramp at 1 in 8 slope. Exhibit # 1 - B
12"	12'	10'	8'
18"	18'	15'	12'
24"	24'	20'	16'
30"	30'	25'	20'
36"	36'	30'	24'

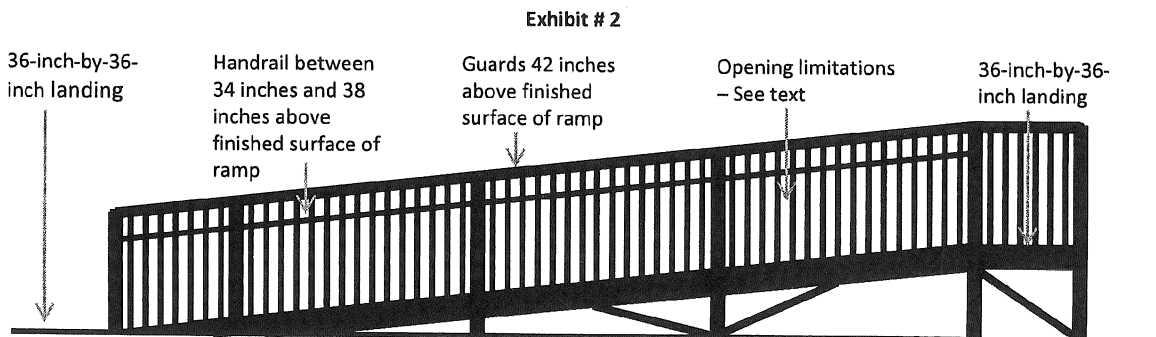
Landings required:

Exhibit # 1 - A shows minimum landing areas of **36-inch-by-36-inch** which must be provided at the top and bottom of ramps, where doors open onto ramps and where ramps change direction.

Note: These provisions are for a private residential ramp and not applicable to public ramps or public access.

Handrails and Guards required:

Exhibit # 2: Handrails and guards must be provided on at least one side of all ramps exceeding a slope of **1 unit vertical** (height) to **12 units horizontal** (length) or ramps over 30 inches in height. If the ramp does not run along the side (parallel) of the manufactured home, handrails and guards must be installed on both sides of the ramp.



Ramps, Landings, Handrails and Guards

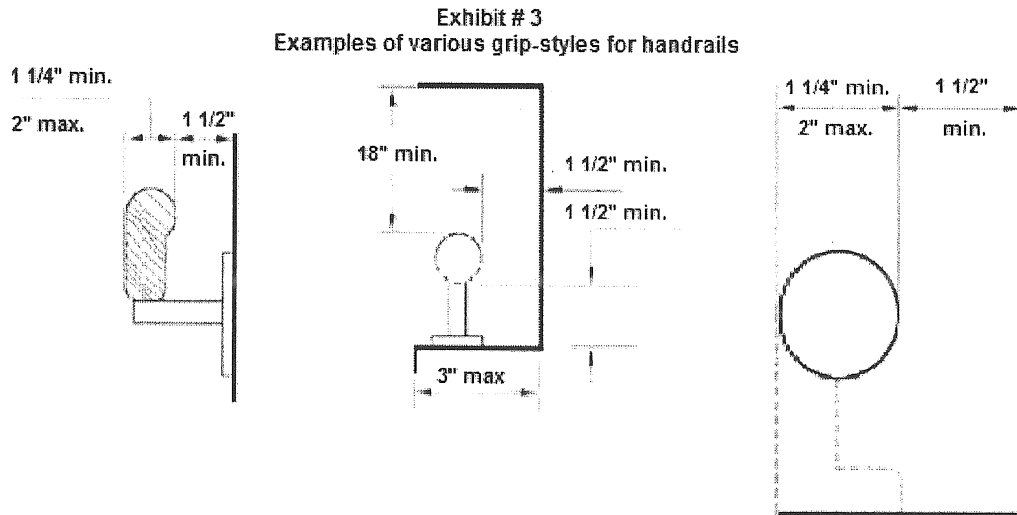
Height:

Exhibit # 2: Handrail height must be not less than **34 inches** and not more than **38 inches** measured from the finished surface of the ramp to the top of the handrail.

Ramps that are over 30 inches in height must have a guard and the height must not be less than **42 inches** measured from the finished surface of the ramp to the top of the guard.

Grip size:

Handrails on ramps shall comply with CRC. Refer to handrail exhibit #3.



Handrail Termination:

Where handrails are required on ramps they must be continuous for the full length of the ramp. Handrail ends shall be returned or shall terminate in newel posts or rounded safety terminals. Handrails adjacent to a wall shall have a space of not less than 1-1/2 inches (38 mm) between the wall and the handrails.

Opening limitations: Required guards must not have openings between the walking surface and the required height that would allow the passage of a sphere 4 inches in diameter.