



Southwest
New Brunswick
Service Commission

Guards and guard heights

What height does a guard have to be?

Let's start at the basics. A guard is a horizontal object – usually wood, sometimes steel – that is intended to prevent someone from falling from a height when there's an open space. So you'll see guards around decks, or on stairs when one or both sides are open.

Most people call guards "railings."

In general, **guards are required when there is a height difference of 60 cm or more** between one level and a surface below. In a home, exterior and interior guards have to be 90 cm in height, minimum. That's 35.4 inches, although most contractors will build to 36 inches, or three feet.



One of our inspectors verifies the height of an exterior guard. It's 96 cm high: is that

good? Read the full article to find out!

However, there are some situations where greater guard heights are required. For example, a guard on an exterior platform (deck) has to be 107 cm high (42 inches) if the height to finished grade is 1.8 metres or more.

Guards must be 107 cm high in all non-residential situations, both interior and exterior.

Summary:

- **Commercial: 107 cm**
- **Interior, residential: 90 cm**
- **Exterior, residential, <1.8m: 90 cm**
- **Exterior, residential, >1.8m: 107 cm**

Now, what about handrails? These serve a different function: they're for grasping as one goes up and down stairs. Height of handrails should be 86.5 to 96.5 cm (34-38 inches) high, except where guards are required. In that case, they can also range up to 107 cm in height. What that means, in simple language, is that in most cases, handrails are incorporated into the guard.

In general, guards should be closed with either balusters separated by gaps no more 10 cm gaps, or tempered glass.

Wire guards under NBC 2015

Under the 2015 edition of the National Building Code, it's possible to have horizontal wire guards - a trend popular in the United States. However, there are some cautions to consider.

1. Horizontal wires are allowed - but only up to heights of 4.2 metres (13'8").
2. **The wires must still prevent passage of a 10 cm sphere.** This is critical. The wires must still be spaced at least 10 cm apart, and probably less. Why less? Unless the wires are torqued to a great tension, they will part under pressure. Our office has failed wire guards where the wires were insufficiently rigid to prevent spreading under pressure. This means the guards do not meet the requirements of 9.8.8.5(1), which sets the 10cm sphere test.