

## IHSA's Guideline for Working Near Overhead Electrical Powerlines and Equipment

Recently the Infrastructure Health and Safety Association (IHSA) in partnership with IHSA's Labour-Management Network published the IHSA Guideline for Working Near Overhead Electrical Wires and Equipment on Construction Projects, which provides powerline safety information to protect workers from electrical hazards. The Electrical Safety Authority was also included in the development of the guideline

The guideline targets non-electrical construction workers (including roofers, painters, carpenters and other trades) that work outdoors near overhead powerlines. The objective of providing non-electrical workers with this guideline is to help eliminate or reduce the potential for accidental powerline contacts and near misses. The guideline informs construction workers on the safe limits of approach to overhead powerlines, as required in Ont. Reg. 213/91 Construction Projects subsection 188(2), and recommends a safe minimum distance of 1 metre (3.3 feet) below 750 volts.

[Guideline for Working near Overhead Electrical Powerlines and Equipment on Construction Projects \(ihsa.ca\)](https://www.ihsa.ca/guideline-for-working-near-overhead-electrical-powerlines-and-equipment-on-construction-projects)

**Guideline for  
Working near Overhead Electrical Powerlines & Equipment  
on Construction Projects**



Work Safe For Life

*Working near overhead powerlines can be dangerous—even deadly—if proper safety precautions are not taken. Being aware of the hazards and keeping a safe distance from electrical powerlines and equipment are the best means of protection.*

Powerline Technicians need specialized training and equipment to protect themselves when working on or near powerlines. Construction workers may also have to work near powerlines. However, they may not know the hazards of working around powerlines or have the knowledge, training, and experience to protect themselves.

**This guideline can help construction workers protect themselves and their co-workers from electrical hazards when working near powerlines.**

**STEP 1 Identify Electrical Hazards**

The first step is to recognize where electrical hazards exist and identify the precautions that need to be taken to avoid contact. Ideally, this should be done at the planning stage before work begins. Look around the work area to see if powerlines are close by. Then, consider whether the type of work being done or the type of equipment being used may come close enough to powerlines to present an electrical hazard.

Table 1 shows the minimum safe distances to powerlines based on their voltage. The distance for 750 volts and above is taken from the Construction Projects regulation (O. Reg. 213/91), s. 188(2) under the CHSA. A distance of 1 metre (3.3 ft) is recommended for less than 750 volts.

Voltage Rating	Minimum Distance
Less than 750 volts	1 metre (3.3 feet)*
750 to 150,000 volts	3 metres (10 feet)†
More than 150,000 volts, but no more than 250,000 volts	4.5 metres (15 feet)‡
More than 250,000 volts	6 metres (20 feet)‡

\*As recommended from the Working Group  
†Source: O. Reg. 213/91, s. 188 (2)  
‡As recommended from the Working Group

Employers must take every reasonable precaution to prevent hazards to workers from energized electrical equipment, installations, and conductors (O. Reg. 213/91, s. 183). This means keeping the minimum distance as required by Table 1.

Powerlines or electrical equipment rated at less than 750 volts are considered **low voltage**, while those rated at 750 volts or above are considered **high voltage**. Workers must keep a safe distance of at least 1 metre (3.3 feet) from low-voltage powerlines to be protected from exposure to electrical shock or arc flash burn. For high-voltage powerlines, the distance is 3 metres (10 feet) or more, depending on the voltage (Figure 1).

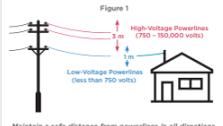


Figure 1  
High Voltage Powerlines (750 – 150,000 volts)  
Low Voltage Powerlines (less than 750 volts)

Maintain a safe distance from powerlines in all directions



Figure 2  
High Voltage  
Low Voltage

High-voltage powerlines are usually located higher on a pole than low-voltage powerlines (Figure 2). However, some high-voltage lines can look like low-voltage lines and can be located below low-voltage lines on a pole.

Misidentifying the voltage of powerlines can cause workers to go beyond the minimum safe distance and lead to an electrical incident. In addition, workers have been known to focus on maintaining their distance from low-voltage lines, only to make contact with high-voltage lines.

If you are uncertain of the voltage, get help from an electrically qualified person or contact the owner.

**Respect Electricity!**  
Every area that carries ELECTRICITY to a business, home, or area CAN KILL YOU. No matter the voltage, keep a safe distance from powerlines to avoid electrical contact, shock, and burns.