

ARC FLASH AND WORKPLACE ELECTRICAL SAFETY

BACKGROUND

The intent of this bulletin is to inform Property Managers of changes to the Canadian Electrical Code (CEC) and a new CSA Standard Z462-08 titled “Workplace Electrical Safety”.

CANADIAN ELECTRICAL CODE, PART 1,
C22.1-09

In clause 2-306, “Electrical equipment such as switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centres that are installed in other than dwelling units and are likely to require examination, adjustment, servicing or maintenance while energized shall be field marked to warn persons of potential electrical shock and arc flash hazards.” The warning labels must be clearly visible.

CSA STANDARD Z462-08 “WORKPLACE ELECTRICAL SAFETY”

The purpose of this standard is to specify requirements and provide guidance on safety management and safe work practices. It also includes the type and amount of personal protective equipment and work practices for persons working on energized equipment.

IMPACT OF CODE CHANGES

As a result of the CEC and the new CSA Standard Z462-08, the following is recommended:

1. Install “Warning Labels” on all existing electrical equipment such as switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centres.
2. Ensure that single line diagrams are available to all personnel working on electrical equipment.
3. Equipment should be de-energized, if possible, when work is being performed.
4. “All facility managers should have a copy of CSA Standard Z462-08 and ensure persons working on electrical equipment follow this standard.

5. A detailed arc flash hazard analysis does not need to be done if the following tables of the standard are used:

- Table 1 “Approach Boundaries to Energized Electrical Conductors or Circuit Parts for Shock Protection (Distance from Energized Electrical Conductors or Circuit Port to Worker”.
- Table 4 “Hazard Risk Category Classifications and Use of Rubber Insulating Gloves and Insulated and Insulating Hand Tools”.
- Table 5 “Protective Clothing and Personal Protective Equipment” of the standard are used.

The purpose of doing the analysis would be to reduce the Hazard/Risk category and level of personal protective equipment required.

6. If the facility has a system voltage greater than 750 volts or has draw-out equipment and work has to be performed while energized, an arc flash analysis is recommended. Technical Services Branch (TSB) will issue a further Technical Bulletin recommending when an arc flash analysis should be performed. Contact Ken Glowinski or Dave Robinson in the interim.

CONTACT

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