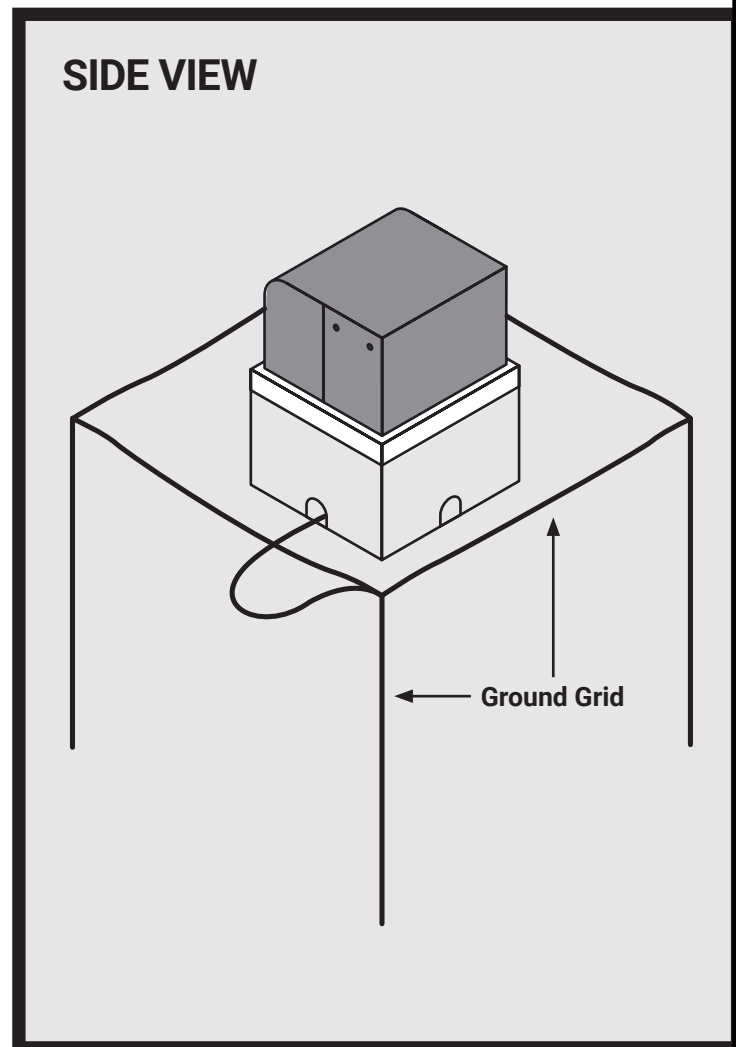
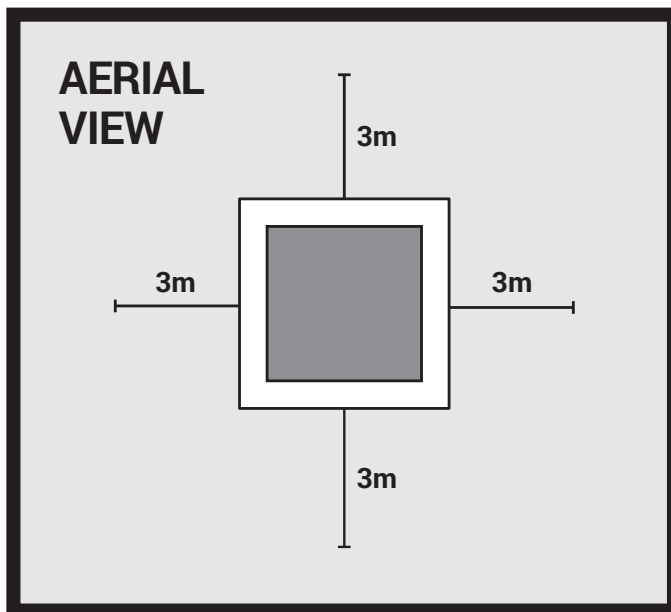


# EXCAVATING NEAR TRANSFORMERS AND CUBICLES: GROUND GRIDS



The University of Alberta requires non-mechanical digging (e.g. hydrovac or hand digging) when excavating within 3 meters of a transformer.

Transformers and cubicles have a ground grid (metal rods in the ground near each of the four corners) around the perimeter of the transformer. The ground grid can be as shallow as a few inches below the landscaping/sod. Contact or damage to these rods is comparable to a power line contact putting you and your crew at risk of injury or death.



## LEGISLATIVE WORK REQUIREMENTS

Minimum requirements for equipment operating near underground cables. Before you finalize your work plans ensure they meet Alberta Occupational Health and Safety Code and the Alberta Electrical Utility Code's excavation requirements. Alberta Occupational Health and Safety Code, Part 32 Excavating and Tunneling, in particular:

1. Disturbing the ground (Section 441)
2. Locating buried facilities (Section 447)
3. Exposing buried facilities (Section 448) Alberta Electrical and Utility Code (AEUC). Excavation work in the vicinity of underground power lines (Section 2-020)

# CLEARANCE REQUIREMENTS AROUND TRANSFORMERS AND CUBICLES



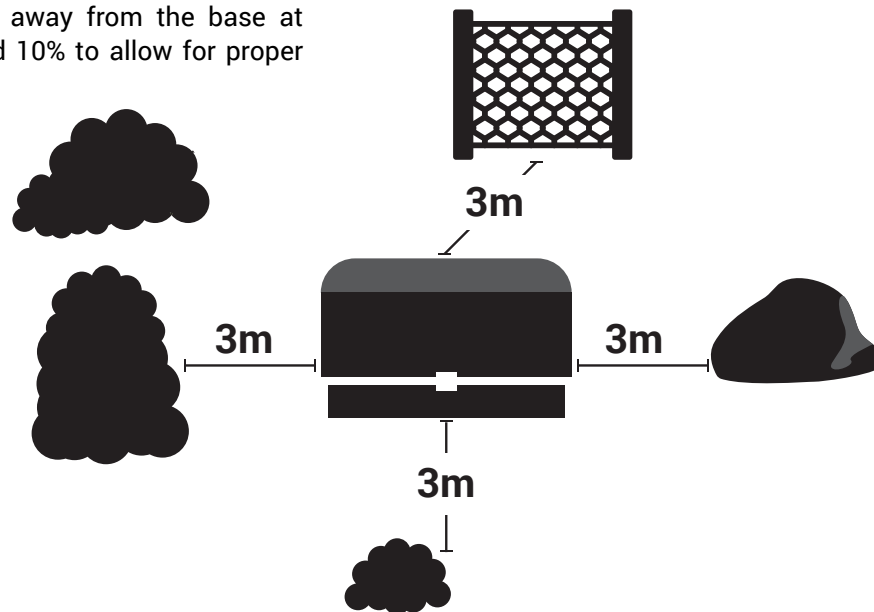
UNIVERSITY  
OF ALBERTA

Landscaping and fencing around transformers and cubicles can pose a safety risk to our crews and impede their ability to complete emergency repairs. Electrical utility crews need to be able to quickly and safely access this equipment at all times. We recommend the following within 3 metres of a transformer or cubicle to ensure safe access:

- The height of the top of the concrete base must be between 250 mm and 300 mm above finished grade.
- Final grade must slope away from the base at a grade between 3% and 10% to allow for proper

drainage and safe operational switching.

- To create a stable work area for our crews, decorative rock should be 20 mm (3/4") or smaller three-face fractured rock. Smooth, rounded rock will not be permitted as it is easier for our crews to slip on.
- Wood chips should be smaller than 4" as larger chips can create uneven footing.
- No decorative boulders, trees, or fences as they can block access and reduce the work area.
- Curbs are not permitted within 3 metres of transformer and cubicle doors.
- Concrete and asphalt surface finishing is not permitted within 1 metre of a transformer/cubicle pad or power pole.



**University of Alberta Utilities requires a 3 metre clearance around all sides of our transformers and cubicles**

This document provides information regarding safe work practices in relation to University of Alberta power facilities. Employers and contractors have responsibilities under the Alberta Occupational Health and Safety (Alberta OHS) Act, Code, and Regulation. When there is a conflict between this document and any bylaws, legislation, or regulation, the relevant law prevails. Any reliance placed on this information is strictly at your own risk. The University of Alberta does not assume any responsibility or liability for any action, loss or damage that arises out of, or is in connection, with the information contained in this document.