CLEARANCE AREA AROUND A PAD MOUNT TRANSFORMER OR VAULT

Many buildings are located in developments, or on sites with underground electrical utilities. While the underground services eliminate unattractive overhead pole lines, cabling and transformers, the installation of utility company transformers presents challenges of a different sort.

Utility company transformers are large, generally green in color, and can range from a small box (3'W X 3'D X 2'H) in a residential neighborhood, to a large enclosure with the oil-filled cooling fins (7'W X 7'D X 6'H) on a large pre-concrete base. Often for aesthetic reasons the transformers are located remote from the building, but due to the costs associated with the secondary conductors, a transformer may be mounted close to a building.

This article will define some of the requirements for clearances around a transformer, as well requirements for protecting a transformer from vehicular traffic.

Adjacent to buildings, transformers must generally be located in accordance with the following requirements. First, a transformer must be installed with the front (doors) facing away from buildings, with no balconies or overhangs above. The transformer must be accessible to line trucks (size and weight similar to a cement truck), for maintenance or replacement. Generally, a transformer located near a building requires a 4ft clearance from the building vertical surfaces, assuming no windows from grade to 18'. The sides of the transformer must be clear of all objects (including landscaping) for 4ft, and the transformer should be located 10ft horizontally from doors, windows or fire hydrants. The front (door side) of the transformer shall have a clearance of 10ft so that line crews can safely perform maintenance or repairs on the equipment. This required clearances includes landscaping. When encountering landscaping during emergency repairs, the utility can remove the landscaping (not very gently) or leave and await notification that the offending vegetation has been removed. During routine maintenance, the utility will not attempt to work on the transformer until the landscaping has been removed.

