

Application

This standard lists the location requirements for flammable-liquid or oil-filled transformers installed outdoors.

Transformer Location Requirements

Figure 1
Combustible
Building Surface

A transformer installed adjacent to a building/structure with any combustible surface may be located only in the shaded "Approved Transformer Area" shown in Figure 1.

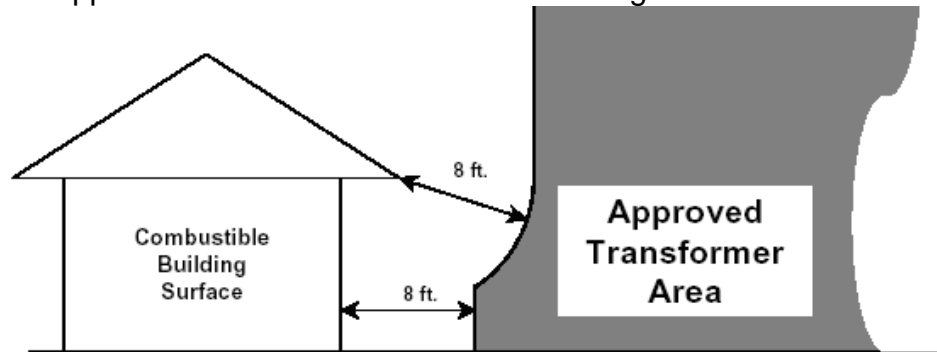
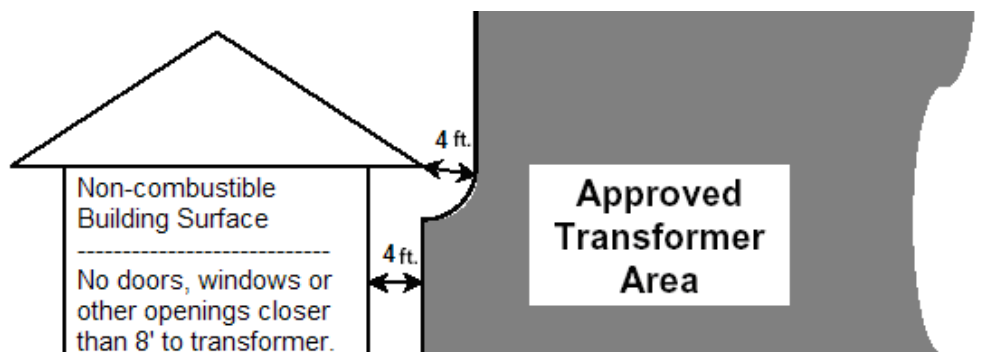


Figure 2
Non-Combustible
Building Surface

A transformer installed adjacent to a building/structure with no combustible surface(s) may be located only in the shaded "Approved Transformer Area" shown in Figure 2.



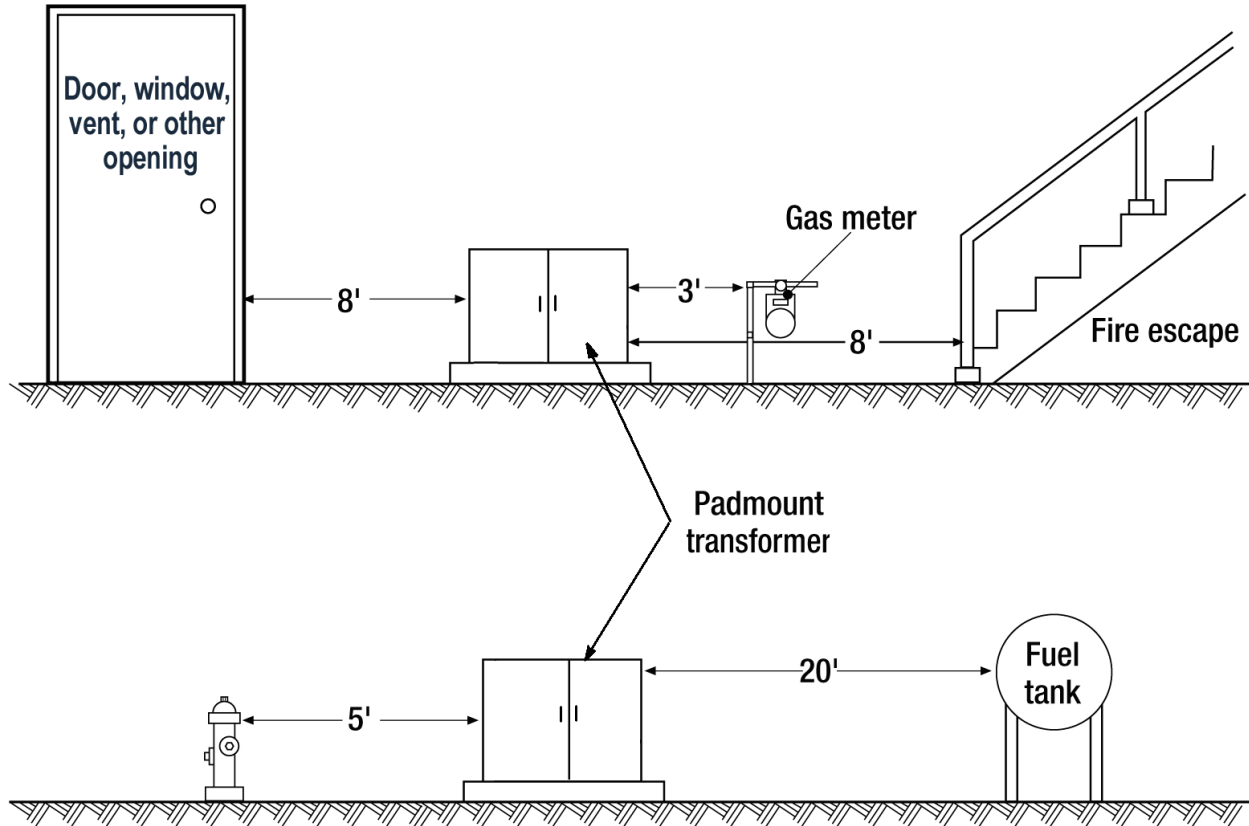
Note: "**Non-Combustible**" in regards to a building/structure surface shall be defined in the latest edition of the Uniform Building Code (UBC). Contact local building officials for interpretation and/or ruling for specific installations.

Padmounted Transformer, Location Requirements

A-UG-1200

Transformer Location Requirements *(continued)*

Figure 3 Other Clearances



Padmounted Transformer, Location Requirements

A-UG-1200

Transformer Location Requirements *(continued)*

- Requirements**
1. A transformer shall NOT be placed beneath any roof, regardless of height or clearance. Adequate space must be maintained above the enclosure so that a boom may be used to lift the transformer from the enclosure.
 2. Allow eight feet (8') clearance in front of transformer, with ground nearly level, to permit use of hot sticks.
 3. The finished grade at the location of the transformer must be such that any oil leaking from the transformer will flow away from the building/structure and will not pool.
 4. If transformers are installed in areas subject to traffic other than pedestrian traffic, they must be provided with adequate guarding. Refer to Standard C-UG-1400.
 5. A building/structure may have no doors, windows, stairways, or other openings closer than eight feet (8') to the transformer.
 6. In an area in which a transformer is to be installed next to a **non-inhabited** structure, the transformer may be no closer than two feet to the building/structure and must be outside a line extended vertically from the ends of the eaves or rooflines.
 7. Enclosures for **total underground** (sub-surface) flammable-liquid or oil-filled transformers must not be located within eight feet (8') of a doorway, operable window, stairways or fire escape, measured from the edge of the sub-surface vault. Adequate space must be maintained above the enclosure so that a boom may be used to lift the transformer from the enclosure.
 8. The use of "Natural Ester" or "FR3" transformer fluids do not reduce the clearances as defined in this standard. These fluids are to be used to reduce the flammability of the transformer and the risks of collateral damage to bridges, structures, or other challenging locations etc. These fluids are also recommended to use where transformers are installed near water ways.

References

- WAC 296-46B-450 "Equipment for General Use - Transformers and Transformer Vaults"
 - National Electric Code (NEC)
 - T&D Construction Standard
 - C-UG-1400 Padmount Equipment Guard Posts Installation
 - C-UG-8000 Vegetation Management for UG Systems
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