



Using Sun-Tempered Prescriptive Options

This pamphlet is one in a series that describes residential energy conservation requirements of the Oregon Residential Specialty Code and the Structural Specialty Code for Group R buildings three stories and less in height. Other pamphlets in this series may be obtained from Oregon Dept of Energy at www.oregon.gov/energy/ or local building departments or from Oregon Building Codes Division.

Sunlight is an energy conservation measure

The Oregon energy code recognizes that homes may reduce their need for conventional forms of space heat by effectively using sunlight.

Table 13-A, Prescriptive Compliance Paths for Residential Buildings, lists four prescriptive paths (2, 4, 6, and 7) that include “sun-tempering” as a conservation measure. Sun-tempered paths trade solar gains for insulation in other building components.

If a prescriptive path is used for code compliance, only R- and U-factors in that prescriptive path may be used. R- and U-factors in one path may not be mixed with R- and U-factors in other paths. R- and U-factor standards may be exceeded.

Prescriptive requirements for sun-tempered homes

If a lot fronts a street that runs within 30 degrees of true east/west *and* if 50 percent of the home’s total window area faces south, sun-tempered prescriptive paths may be used to comply with the energy code.

The street orientation requirement is a simple way of determining if a home has access to the sun. Solar access studies in Oregon indicate that lots on east/west streets

have good solar access and that lots on north/ south streets have poor solar access. An approved alternate to street orientation may be used if at least 50 percent of the home’s total window area faces south **and** there’s adequate solar access as defined in the pamphlet *Determining Solar Access for the Oregon Residential Energy Code* (available from the Oregon Dept of Energy) **and** the adjacent properties to the south are already developed or long-term solar access is protected in some other way.

To determine how much window area must face south, calculate total window area (total rough opening area) and divide by two. For example, a home with 350 square feet of windows needs 175 square feet of windows on the south side to qualify under a sun tempered prescriptive option. Glazing in unheated spaces - - garage windows, for instance - - don’t count as part of the total.

Showing sun-tempered details on the plan

Street orientation is commonly shown on the plat for each subdivision in degrees, minutes, and seconds. This information must be noted on the site plan submitted with blueprints. A north arrow on the site plan indicates orientation.

Window locations must be shown on the plan view or elevation drawings. Breaking out south window area from total window area expedites review.

Figure 1 shows examples of lots that qualify under sun-tempered prescriptive options. Figure 2 shows examples of lots that don’t qualify.

Figure 1:
Lots that qualify under sun-tempered prescriptive options

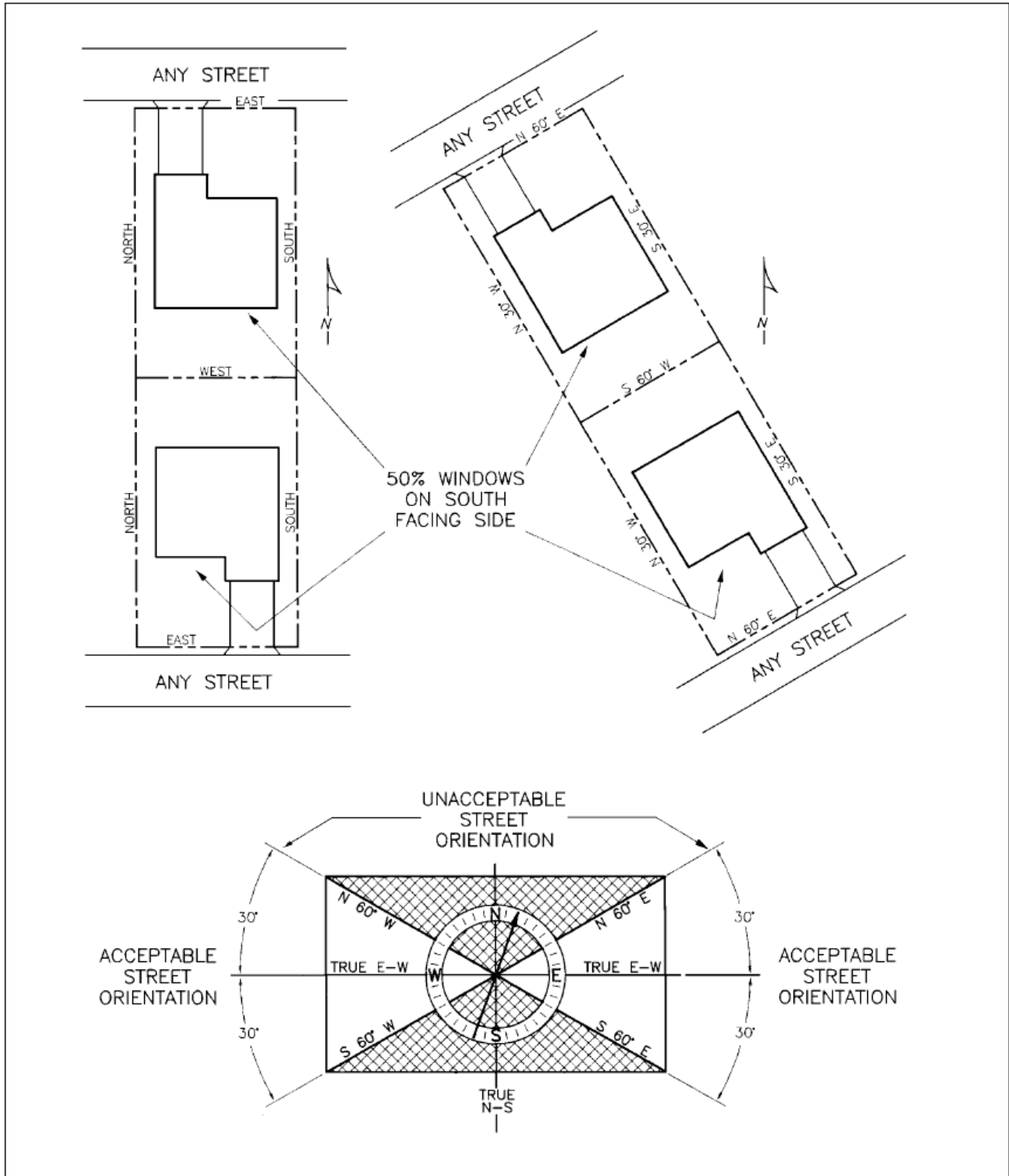
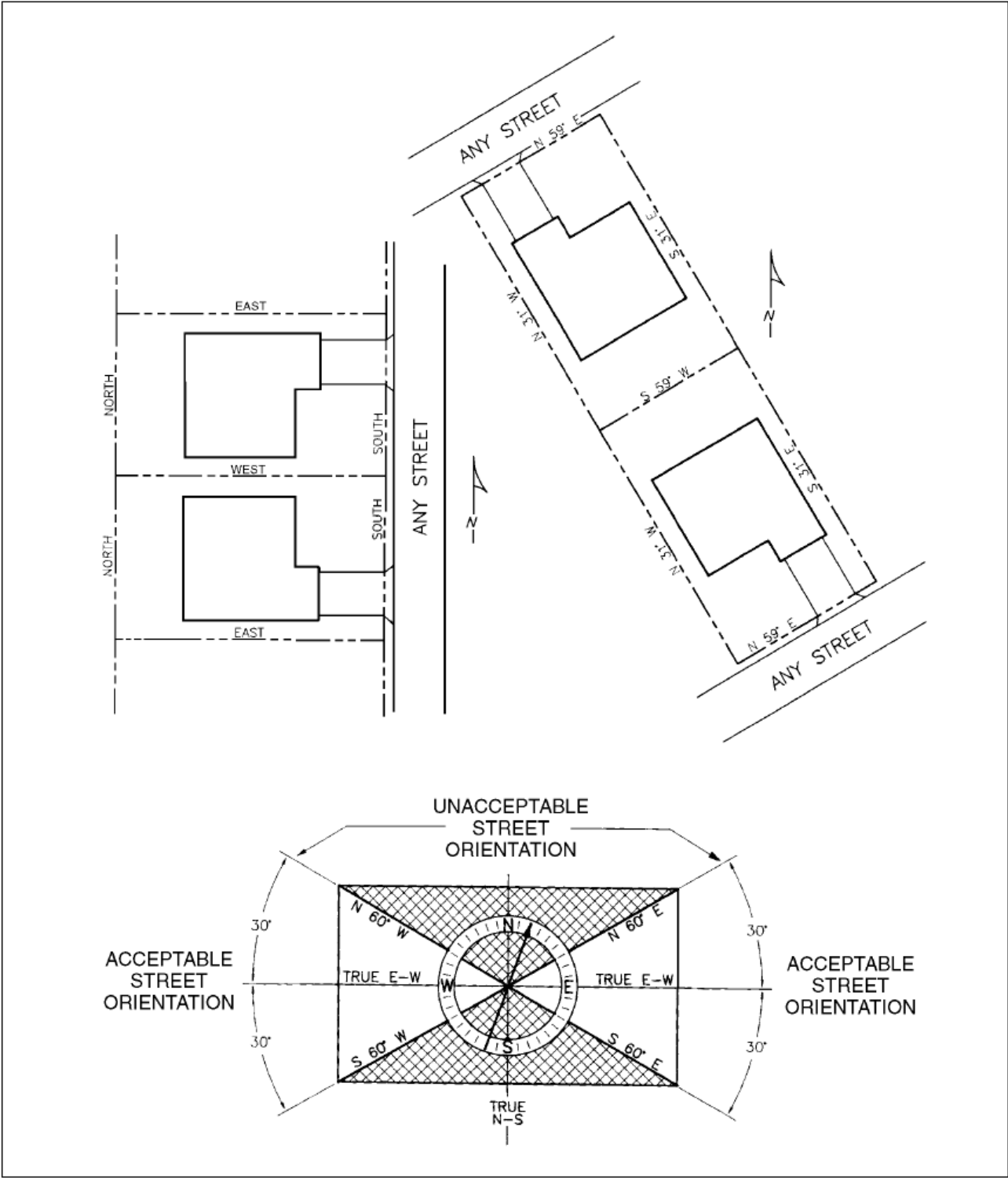


Figure 2:
Lots that do not qualify under sun-tempered prescriptive options



Information presented in this publication supports the Oregon Residential Specialty Code, or Chapter 13 of the Oregon Structural Specialty Code. This publication does not include all code requirements. Refer to the code and check with your code official for additional requirements. If information in this publication conflicts with code or your local officials, follow requirements of code and your local officials.

For more information about the residential energy code, call the Building Codes Division at (503)378-4133 or the Oregon Dept of Energy (503)378-4040 in Salem or toll-free, 1-800-221-8035.

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