LEED ND: Built Project | v3 - LEED 2009

Solar orientation

GIBc10 | Possible 1 point

Glossary

Intent

To encourage energy efficiency by creating optimum conditions for the use of passive and active solar strategies.

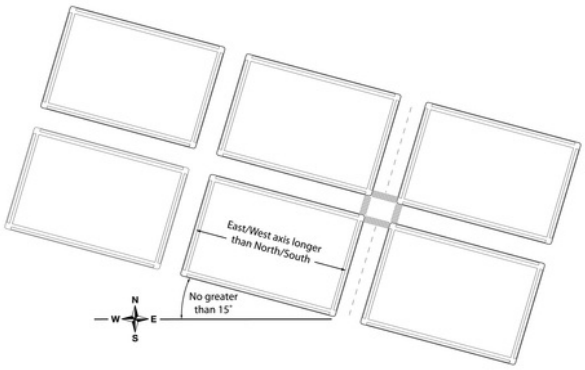
Requirements

Option 1. Block orientation (for projects earning at least 2 points under NPD Credit 2, Compact development)

Locate the project on existing blocks or design and orient the project such that 75% or more of the blocks have one axis within plus or minus 15 degrees of geographical east-west, and the east-west lengths of those blocks are at least as long as the north-south lengths of the blocks.

Earn at least 2 points under NPD Credit 2, Compact Development.

Figure 1. Solar-oriented blocks with east-west lengths equal to or greater than north-south lengths, and east-west axis within 15 degrees of geographic east-west



OR

Option 2. Building orientation (available for all projects)

Design and orient 75% or more of the project's total building floor area (excluding existing buildings) such that one axis of each qualifying building is at least 1.5 times longer than the other, and the longer axis is within 15 degrees of geographical east-west. The length-to-width ratio applies only to walls enclosing conditioned spaces; walls enclosing unconditioned spaces, such as garages, arcades, or porches, cannot contribute to credit achievement. The surface area of equator-facing vertical surfaces and slopes of roofs of buildings counting toward credit achievement must not be more than 25% shaded at the time of initial occupancy, measured at noon on the winter solstice.

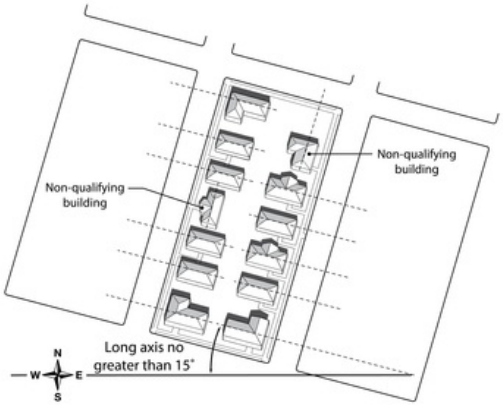



Figure 2. Solar-oriented buildings with longer axis (at least 1.5 times length of other axis) within 15 degrees of geographic east-west