

## Design a Sustainable City Project

University of Minnesota – Duluth  
Bridge the Baccalaureate Degree Program

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A company wants to build a “Green” office building in your city. They are concerned not only about their own energy use, but also the implications of their new building on the energy use of the buildings around them. You have been given a mock urban domain where the building is to sit. Explore how to use the QUIC tool to find an urban design that minimizes energy use for two days: the approximate summer (June 21) and winter (December) solstices. You may choose the latitude of your city. You can use your understanding of the effects of different types of energy transport in urban areas to make your decision as well as QUIC Energy simulations for the two days you are simulating.

The only restriction is that your building must have a total volume of:  $18,000 \text{ m}^3$

In addition, come up with a good name for you new building and be prepared to discuss your results with entire group. Think about what aspects of the cities architecture are beneficial or detrimental to building energy use. How does Sky View Factor impact your design?

