



Mobile Window Thermal Test (MoWiTT) Facility

MoWiTT is a calorimetric measurement facility for measuring thermal and solar performance of windows. It allows for accurate measurement of the time-varying flow of energy through windows under realistic field conditions. The measurement facility consists of a pair of outdoor, room-sized calorimeters, which measure the net energy flow through window samples in side-by-side tests using ambient weather conditions. The two calorimeters are housed in a measurement trailer seen in a **Figure 1** below. MoWiTT characterizes the net energy flow as a function of time and also measures the temperatures, solar fluxes, and wind conditions to which the samples are exposed. In addition to the measurement trailer, there is also control room, currently housed in a second trailer located next to the measurement trailer. Schematic of this setup is also shown in **Figure 1**.

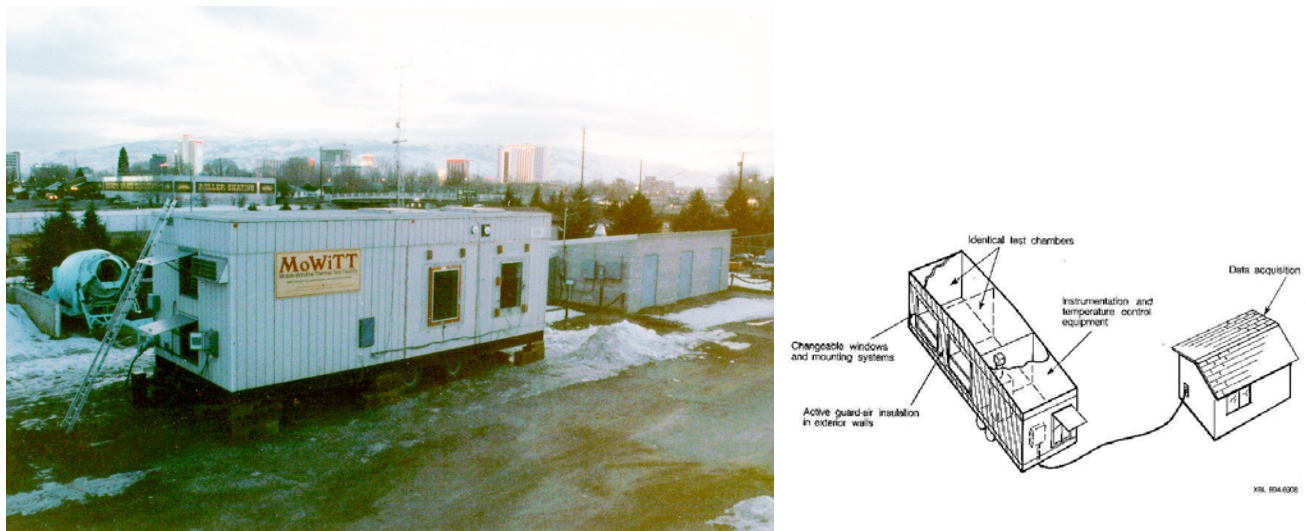


Figure 1. Picture and Schematic of the MoWiTT Measurement Facility

The goal of measurements is to assess the performance of energy-efficient windows currently available or under development; to identify opportunities for new development; and to create a knowledge base that will encourage the rational selection of optimal windows in the design process. In addition to its DOE-supported research, MoWiTT is also available for privately-funded studies of specific products or window improvement options. It can

- provide direct comparisons of alternative systems
- determine effective U-values and solar heat gain coefficients

- provide verification of energy-savings calculations
- measure the energy performance of windows for which calculations are unavailable or unreliable

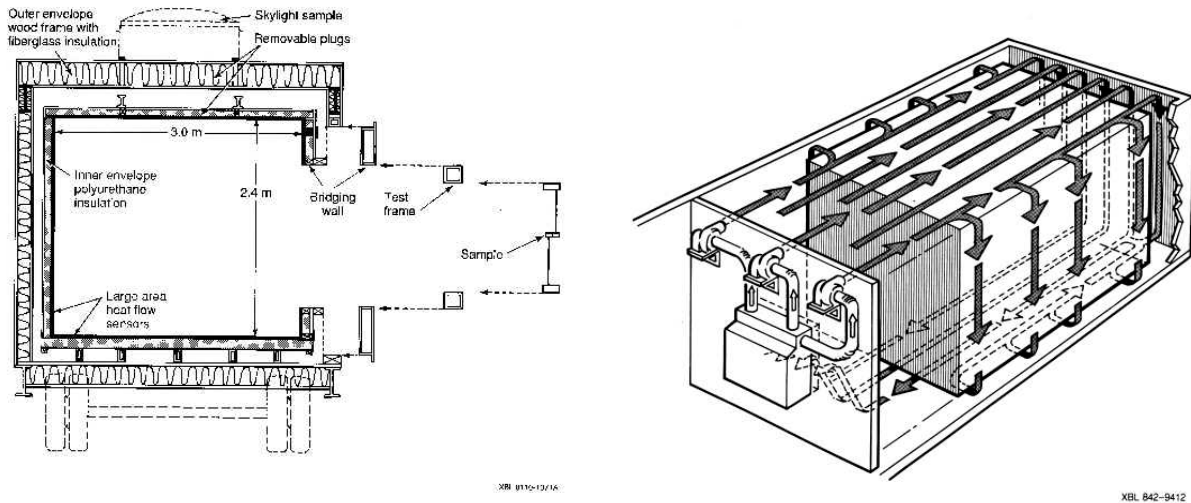


Figure 2. MoWITT Calorimetric Setup

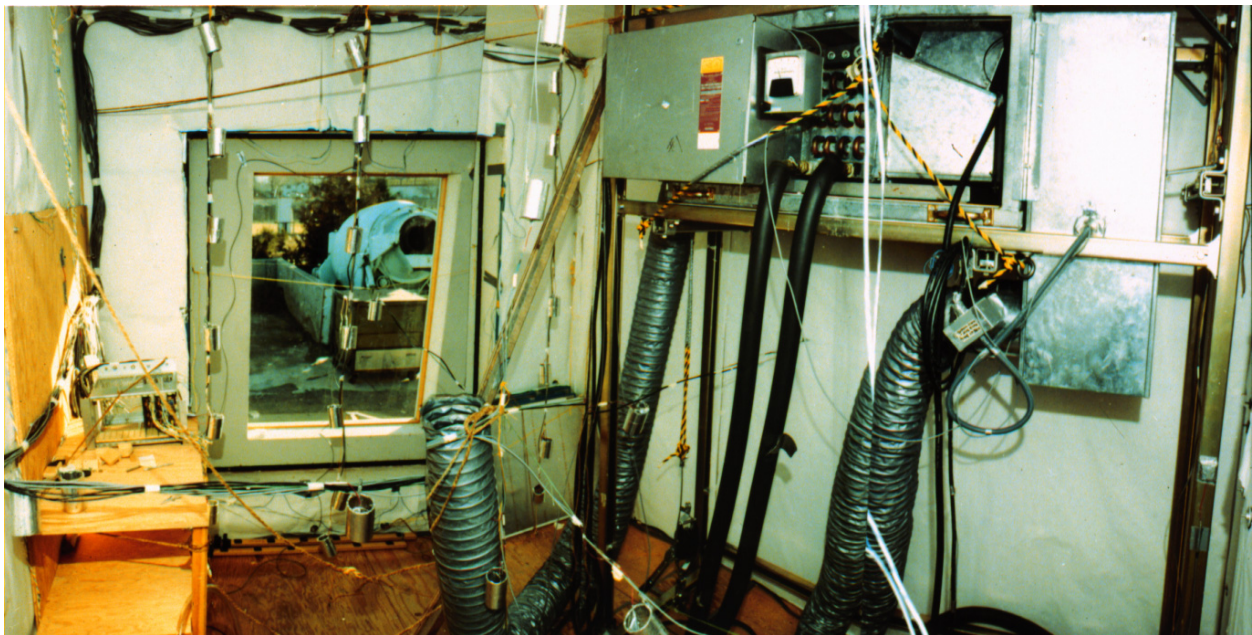


Figure 3. Inside One of MoWITT Measuring Rooms

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