Wade Hall for the Sciences

Sustainable Design

In addition to providing a warm, fun, and engaging space for the study of the sciences, Wade Hall is itself an on-going experiment and learning tool.

The building's green design elements include:

- Solar orientation: Wade Hall is located and oriented to take advantage of the sun as a source of free lighting. Because the long axis of the building is in an east-west direction, daylight easily and carefully enters the classrooms. This provides natural light to the occupants, and helps to reduce the need for artificial lighting during the school day.

- Thermal envelope: Advanced framing and insulating techniques, heat reflective roofing, and high-performance glass minimizes thermal energy transfer through the envelope of the building. This helps keep students comfortable without over utilizing mechanical air conditioning.

- Embodied energy: Materials and systems with high recycled content and that are easily recycled and regionally-sourced keep the embodied energies* of the building low.

- High efficiency HVAC: Natural ventilation and a high efficiency mechanical system combine to handle the heating, ventilating and air conditioning (HVAC). This variable refrigerant volume (VRV) system provides a high level of individual control while using a fraction of the energy of a traditional system. Operable windows both at occupant level and near the ceiling where hot air can be exhausted provide natural ventilation.

- Indoor environment quality: Low-to-no VOC materials and finishes in the building reduce off-gassing and maintain a high level of indoor air quality. Visual and physical access to the outdoors is available from most spaces within the building.

*Embodied energy refers to the energy bound up in a material as a result of factors such as growth, extraction, processing, manufacturing, packaging, transport and disposal.