

R.D. & Euzelle P. Smith Middle School

The inclusion of daylighting is the centerpiece of the sustainable design strategies. The classrooms, media center, multi-purpose room, music rooms, cafeteria, and gymnasium incorporate daylighting strategies that provide for natural lighting two-thirds of the daylit hours.

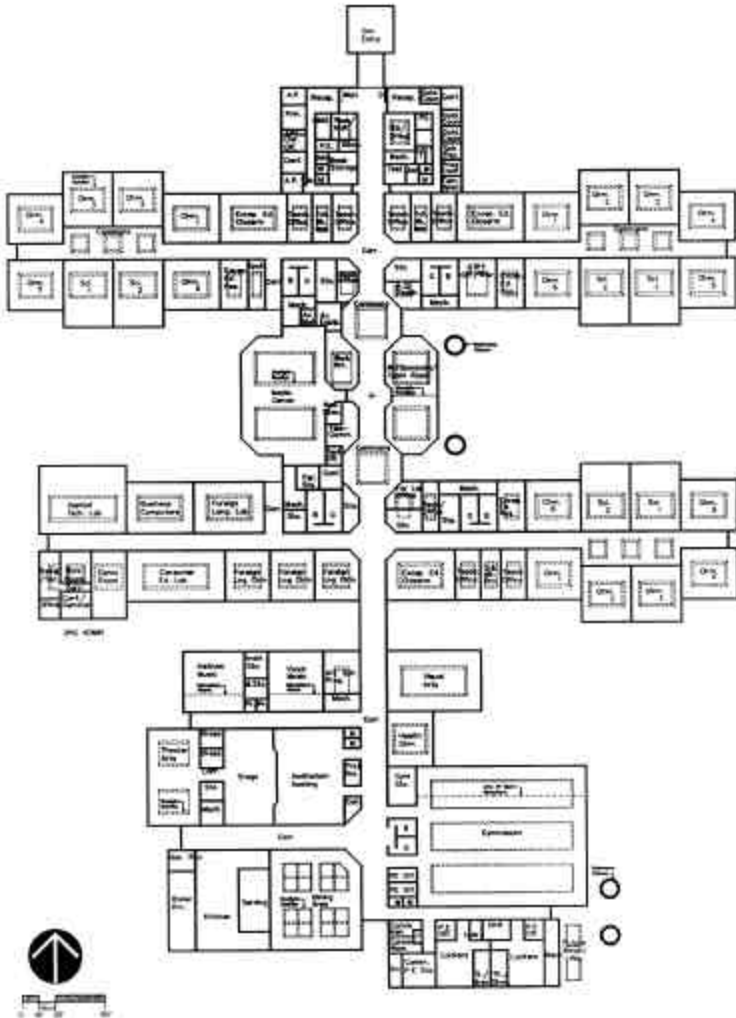
The south face of the roof on one of the cafeteria's daylighting monitors supports eight, 4'x8' solar hot water collectors. The 256 square foot of flat plate copper collectors will provide solar energy for over one third of the hot water needs of the school.

Owner / Contact

William J. Mullin, Director of Facilities Management
Chapel Hill - Carrboro City Schools
Lincoln Center, Merritt Mill Road
Chapel Hill, NC 27516-2881
919-967-8211

Design Team

Innovative Design	Schematic Design, Design Development
Corley, Redfoot, Zack, Inc	Construction Documents, Construction Administration
Padia Consulting	PME



The covered entrance canopy from the bus drop area includes sixteen, 120W integrated photovoltaic panels. The 2 kiloWatt PV array provides electricity to power the bus drop canopy lights and adjacent site lighting.

Rainwater is collected from the roof of the school and is stored in a 100,000 gallons underground cistern. Under normal yearly rainfall conditions, the 2.6 million gallon of harvested rainwater will provide enough water for all the toilets in the school as well as the irrigation of an adjacent athletic field. The reduced runoff also saved \$50,000 in deferred retention pond costs.

The energy consumption is projected to be under half that of typical middle schools. The daylighting strategy reduced the installed cooling equipment by over 100 tons.