

Annie E. Fales Elementary School

Construction Begins on State of the Art, Net-Positive Energy Facility

WESTBOROUGH, MA

The new Annie E. Fales Elementary School, a K-3 grade school in Westborough, Massachusetts is projected to achieve net-positive energy use when it opens in Fall of 2021. Westborough's commitment to renewable energy significantly shaped the design of the new school, which is the first facility to support the Town's goal to be carbon-emissions free by 2035. The innovative facility achieves this ambitious target by reducing energy use and producing renewable energy on-site through a rooftop solar array capable of generating 10% more energy than required for the school itself. The light-filled interiors, warm natural materials, and thoughtful integration into the school's surrounding establishes Fales as a vibrant learning environment year-round.



Students:

400

Sustainability:

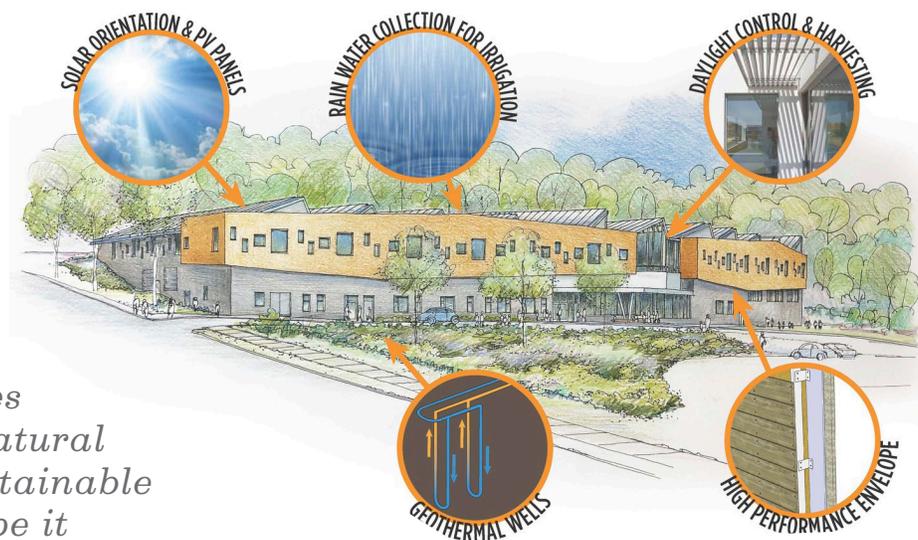
Net-Positive Energy
LEED Gold, LEED Zero

EUI:

24.9

Status:

Under Construction



The building educates students about the natural environment and sustainable practices, and we hope it inspires a life-long care for the world they live in.

AMBER BOCK, SUPERINTENDENT

SUSTAINABILITY – A NEW NET-POSITIVE ENERGY FACILITY FOR THE MASSACHUSETTS SCHOOL BUILDING AUTHORITY (MSBA)

The building runs entirely on electricity. The saw tooth roof houses a 25,000 square foot photovoltaic array that produces all the building's annual energy needs. Westborough is also working with National Grid to establish a net-metering contract. This will allow the school to off-load excess energy generated in the summer and draw electricity in the winter.

Experts in sustainability joined HMFH early on to establish the big moves that minimize energy use. The final design features triple-glazed windows; roof and wall insulation 40% above code requirements; forty, 600-foot deep geothermal wells for heating and cooling; high efficiency mechanical systems designed to improve air quality; LED lighting with daylight and occupancy sensors to lower electricity demand; a 508 kW solar photovoltaic array; and a building management system that monitors and controls mechanical systems and lighting for maximum efficiency. These elements combined, reduce energy use to one-third of what is used by typical school buildings.

The projected EUI for the school is 24.9 and the project is tracking towards earning LEED Gold and LEED Zero Certifications. Fales Elementary School is one of the first net-positive energy schools completed within the Commonwealth of Massachusetts' community partnership program under the MSBA.

Our design was encouraged by Westborough's longstanding leadership in sustainability. The architecture of Fales celebrates this intention with a sculptural roofscape of photovoltaics on the outside and the lofty, light-filled spaces on the inside.

JULIA NUGENT, AIA, LEED AP BD+C

