

ENERGY STAR Design Profile

Hovatter Elementary School
41135 Collaboration Drive
Aldie, VA 20105



Loudoun County Public Schools held a strategic vision to achieve something that had not yet been accomplished within the County Schools – a perfect 100 score as part of the Department of Energy’s “Deigned to Earn ENERGY STAR” challenge.

It was important as a baseline that Hovatter Elementary achieve Designed to Earn ENERGY STAR because it signals to the market that the project is intended to perform in the top 25% of the nation’s most energy efficient buildings. Additionally, LCPS was an Energy Star Partner of the Year in 2019, further demonstrating the commitment to Energy Star, both as a valuable tool for industry benchmarking as well as design guidance.

The life span of facilities and related MEP systems within the County Schools drove a robust, long-life cycle building and building systems. A strong desire for efficiency and mindful payback were critical components of succeeding with such a design. To achieve the aforementioned goals, the following design features were incorporated:

- Building and envelope optimization, including enhanced thermal envelope and site layout for increased daylight and less glare in learning spaces.
- A 561 kW roof-mounted photovoltaic solar array, used to produce an estimated 690 MWh/yr.
- An HVAC design that incorporated VAV air handling units with advanced control strategies and a high-efficiency, variable speed chiller and high-efficiency condensing boilers.
- All LED lighting and lighting controls.

With a total energy reduction of 67.8% and total GHG reduction of 213 metric tons of CO₂ (when compared to the median building), Loudoun County Public Schools has demonstrated their commitment to sustainable and efficient operation, reduced energy costs, carbon reduction, and the ENERGY STAR program.



Architect of Record:

Paul Klee, AIA, LEED, AP
Grimm+Parker

Engineering Firm:

CMTA

Building Owner:

Loudoun County Public Schools

ENERGY STAR Design Score:

100

Percent Energy and CO₂ Reduction*:

67.8%

Design Year/ Estimated Occupancy Date:

08/2021

Space Type:

K-12 School

Floor Space:

110,400 Sq. Ft.

Estimated Energy Use Intensity:

39 kBtu/ft²/yr

Estimated Total Annual Energy Use:

4,482,501 kBtu/yr

Estimated Annual Energy Cost:

\$15,077

Technologies Specified:

561 kW Photovoltaic System

High Efficiency Lighting & HVAC

For More Information

Grimm+Parker: (703)839-7514

LCPS: (571)252-1161

CMTA: (703)525-6268

*Percent Energy and CO₂ Reductions are based on comparison to a median building of similar type.