

ENERGY STAR Design Profile

Elaine E. Thompson Elementary School

24200 Pissarro Drive
Sterling, VA 20166



Why We Chose ENERGY STAR:

- Elaine. E Thompson Elementary School achieved Designed to Earn the ENERGY STAR certification by meeting EPA criteria for reducing energy and CO₂ emissions.
- It was important that Elaine. E Thompson Elementary School achieved Designed to Earn the 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.
- Stantec Architecture is also helping the environment by delivering an energy efficient design to our client because ENERGY STAR buildings have a proven track record and yield an average of 30 percent annual energy savings and CO₂ reductions.
- Elaine. E Thompson Elementary School is recognized for achieving Designed to Earn the ENERGY STAR for potential future financial benefits from reduced energy costs and CO₂ emissions over the life of the building.
- Stantec Architecture found Target Finder/Portfolio Manager tool was helpful in evaluating how various design strategies will affect the energy estimates for the project.

Energy Efficient Design Strategies:

- The projected annual energy and CO₂ savings of the design is 65.5% as compared to the median building.
- The estimated total annual energy savings for this project is 6,174,788 kBtu/yr with an estimated cost savings of \$65,553/yr.
- This project is intended to have a 65.5% reduced carbon footprint because of energy conscious decisions made during the design process and renewable energy.
- Sustainable strategies include solar photovoltaic array that offsets utility costs, increased natural daylighting and views to the outside through additional windows, a high efficiency HVAC system with enhanced air filtration to provide excellent indoor air quality and LED lighting throughout the school.



Architect of Record:

Stantec Architecture

Engineering Firm:

Interface Engineering

Building Owner:

Loudoun County Public Schools

ENERGY STAR Design Score:

99

Percent Energy and CO₂ Reduction*:

65.5%

Design Year/ Estimated Occupancy Date:

December 2021

Space Type:

K-12 School

Floor Space:

113,583 Square Feet

Estimated Energy Use Intensity:

28 kBtu/ft/yr

Estimated Total Annual Energy Use:

3,256,923 kBtu/yr

Estimated Annual Energy Cost:

\$34,576

Technologies Specified:

Solar photovoltaic array, increased natural daylighting and views, high efficiency HVAC system, reduction in water usage, and LED lighting

For More Information

Stantec: (571) 291-5828

LCPS: (571) 252-1161

Interface Eng: (202) 370-9532

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