

Fire Station #1

By: Enzo Lundy

Muncie's Fire Station #1 sits to the southeast at the intersection of East Jackson St and South Madison Ave. It was constructed in 1913 at the cost of \$22,540 to the city. The fire station is architecturally significant because of its classical revival style. It is also historically significant as a cultural and government asset. In 1989, it was published in the National Register for Historic Places, officially designating it a historic building.

Currently, the building has two stories and a flat roof with a few AC units, ventilation, and other exterior systems. Due to the flat roof and government ownership, the prospects and installation of solar panels are favorable. The roof can accommodate approximately 133 solar panels, according to estimates from the Skelion plugin of the modeling software, SketchUp. This solar installation will produce around 34,260.3 kWh, annually, with July being the most productive month at 3,917.5 kWh. The areas without solar panels in the Solar Roof Plan graphic are either shaded/inefficient or have existing rooftop systems, such as AC units.

Bibliography:

The National Register of Historic Places can be found through the National Park Service website at www.nps.gov.

Energy estimates made using the PVWatts calculator from the National Renewable Energy Lab (NREL) at pvwatts.nrel.gov.

Proposal and Site Overview:

- + Can accommodate 133 solar panels that will generate 34,360.3 kWh/year. Most productive in July.
- + Ownership | Acreage
 - + City of Muncie | 0.2 acres
- + Suggested PV System Specifications
 - + 15 degree tilt
 - + Fixed roof mount
- + Sized for an off-grid solar installment

