
GEORGE SCHELL ENGINEERING

3171 Route 9 North, #316

Old Bridge, NJ 08857

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April 21, 2023

Iron Ore Properties LLC
55 Bleeker Street, 2nd Floor
Millburn, NJ 07041

Attn: Mr. Joshua Sternberg
Co-Managing Member

Re: Solar Photovoltaic Feasibility Assessment
South Avenue and High Street, Subdistrict 1 of South Avenue and Chestnut
Rehabilitation Area
Cranford, NJ

Dear Mr. Sternberg:

It is our understanding that the Township of Cranford has requested an evaluation of the feasibility of adding photovoltaic (PV) solar panels to the building roof at the above noted project. As the Engineer of Record, we have been requested to perform a feasibility assessment of this system with regard to the intended electrical power generation and the resulting offset of the site's utility electrical load.

We approached the assessment from a perspective of system performance and overall safety to firefighters, first responders, maintenance personnel, and building occupants. The inclusion of a rapid shutdown system (204 NEC 690.12), while providing a level of safety for firefighters and first responders, largely increases the number of connectors and points of failure in the system, adding inherent fire risk to the system that was not previously there.

From a performance perspective, the potential benefit that could be provided is greatly reduced by the rooftop obstructions (mechanical equipment, bulkhead, etc), and required pathways for firefighters and foot traffic. When observing the overall roof layout with these considerations, the result is a small and inefficient solar PV layout that will not provide a substantial offset of the building's electrical demand load.

The PV industry is rapidly changing and while codes attempt to keep up, this is one example of how unintended consequences add more risk to these systems. Therefore, one must consider the risk/reward when performing a feasibility assessment. In this situation, it is our opinion that the potential electrical benefit of the PV system is outweighed by the potential risks and hazards of the system as outlined above, and we do not recommend a solar PV system for this project.

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If you have any questions, please feel free to contact me at (201) 546-0000.

Sincerely,



George Schell, PE
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