

STAFF REPORT: 10/12/22 REGULAR MEETING

PREPARED BY: T. BOSCARINO AND J. ROSS

APPLICATION NUMBER: 22-8017

ADDRESS: 3956 W LAFAYETTE

HISTORIC DISTRICT: HUBBARD FARMS

APPLICANT: EAMON HARNOIS

PROPERTY OWNER: MILLER, JON A & HARNOIS, M C

DATE OF PROVISIONALLY COMPLETE APPLICATION: MAY 18, 2022

DATE OF STAFF SITE VISIT: SEPTEMBER 1, 2022 AND OCTOBER 6, 2022

SCOPE: INSTALL SOLAR PANEL ARRAY

EXISTING CONDITIONS

3956 W. Lafayette is a two-and-one-half story, hip-roof house in the Arts and Crafts style, with a nearly flat projecting front porch and a large, fenestrated attic, built in 1914. Like many houses in the Hubbard Farms Historic District, it sits several feet above street level due to a gentle slope in the terrain. It faces south towards Lafayette Avenue. It includes a detached, hip-roof garage.

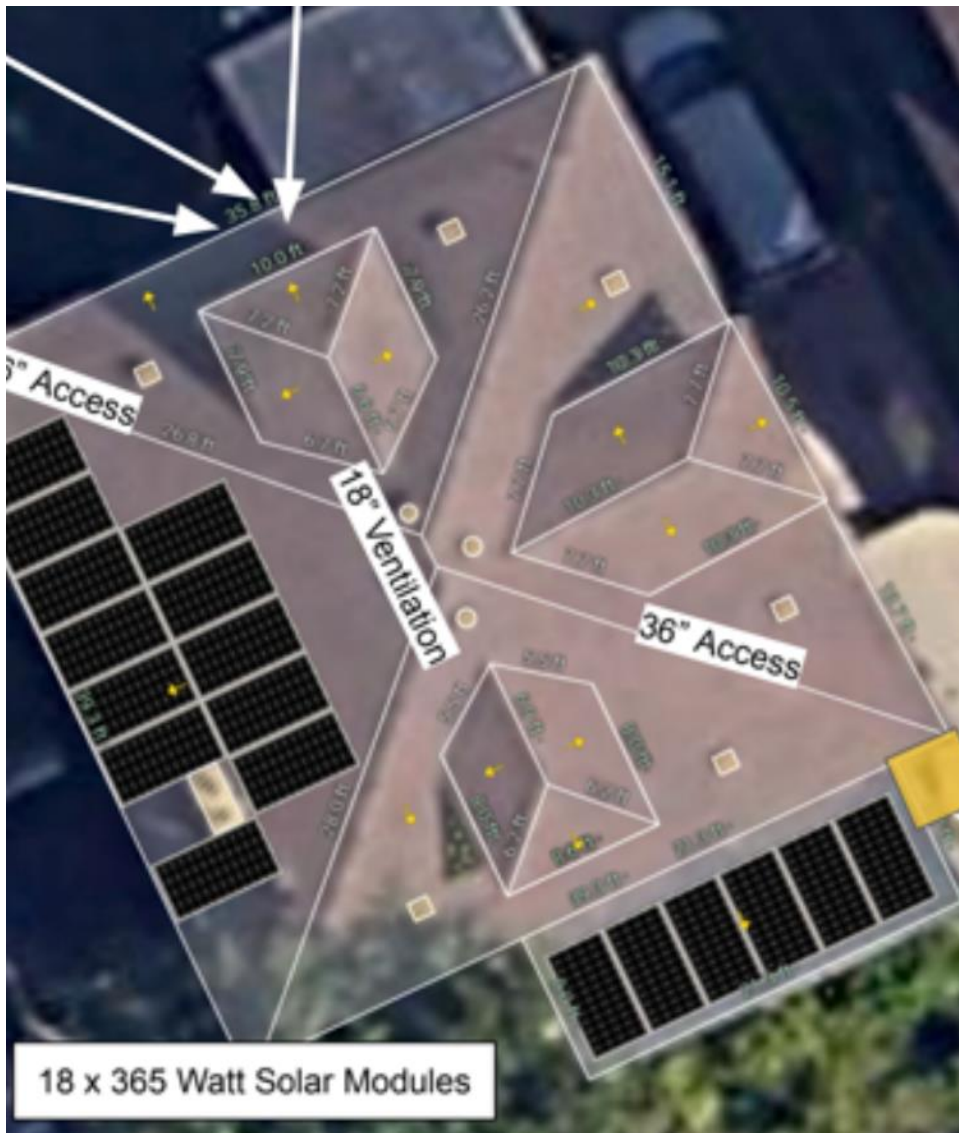


September 2022 photo by staff.

PROPOSAL

The applicant proposes to install a roof-mounted solar array, with twelve (12) panels located on the west plane of the main roof, and six (6) on the front porch roof. According to the application and attached specifications, each panel is 65" x 39". For each panel, the entire assembly consists of mounting brackets, rails, and the panel itself, the entire unit rising 5.5 inches in height above the roof. Each unit is proposed to sit at the same angle as the roof surface.

A service panel and meter are proposed to be mounted on the rear (north elevation) of the house. The application does not show any other components of the system to be visible on the exterior of the building.



Proposed solar array. Image from application.

STAFF OBSERVATIONS AND RESEARCH

- The Hubbard Farms Historic District was established by Ordinance 01-93 in 1993. Its Elements of Design (Sec. 21-2-157 [d]) highlight the importance of roof shapes in elements pertaining to *height* and *relationship of roof shapes*: “Most every roof type is represented in the district ... generally related to style.” This suggests that the roofline of each building is a defining feature that should be preserved. The Final Report provides a Period of Significance of 1870 through 1930.

Guidance on applying the Secretary of the Interior’s Standards to the installation of solar panels is provided by the National Park Service in three sources:

- *Technical Preservation Services: Solar Panels on Historic Properties* addresses “the gray area between out-of-sight and obviously obtrusive installations” and suggests that panels that are “visible but not conspicuous” are appropriate.

- *Technical Preservation Services: Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings* opines that solar panels on a historic building may be appropriate “after other locations have been investigated and determined infeasible” if they have a “low profile,” are “flat and parallel to the roof,” and are “only minimally visible from the public right-of-way.”
- *ITS Number 52: Incorporating Solar Panels in a Rehabilitation Project* begins by noting “the roofline ... is often a distinctive feature” and notes “properties with a hipped or gabled roof are generally not good candidates for a rooftop solar installation.” However, the document continues to suggest that installations may be acceptable on secondary elevations with “limited visibility” and provides an example of vegetation used as screening for a solar array on the side elevation of a historic building.
- As previously noted, the home is two stories in height and features a hipped roof. A one-story, flat-roof, projecting porch is located at the front elevation. Also, as the property is located midblock, homes flank 3956 W Lafayette to the east and west.
- Staff visited the site and determined that most prominent, “highly visible” portion of the roof, when viewed from the public right-of-way, is the south-facing surface at the front/primary elevation. The two-story height and street-facing slope/pitch of the roof surface at the front elevation contributes to its high visibility.
- The east and west/side-facing roof surfaces are located at secondary elevations. Also, the visibility of the roof surfaces on these elevations is minimized by the homes located to the east and west of 3956 W Lafayette. Mature birch and maple trees in the property’s front yard further obscure the visibility of the west elevation roof surface from the immediate public right-of-way. (The applicant should be cautioned that trimming or removing these trees would constitute “work” subject to review by the Historic District Commission [Sec. 21-2-2]).
- Staff has noted that the roof surface of the front elevation porch is not readily visible from the immediate public right-of-way because it is flat. The geometry of the front porch with respect to the viewer would fully or mostly conceal the panels from view, depending on the perspective of the observer.



Proposed panel locations viewed from sidewalk. Left: Hip roof location. Right: Porch roof location. Photos by staff.

- The application did not state if the garage roof was considered as a location for solar panels.



Detached garage in rear of property. September 2022 photo by staff.

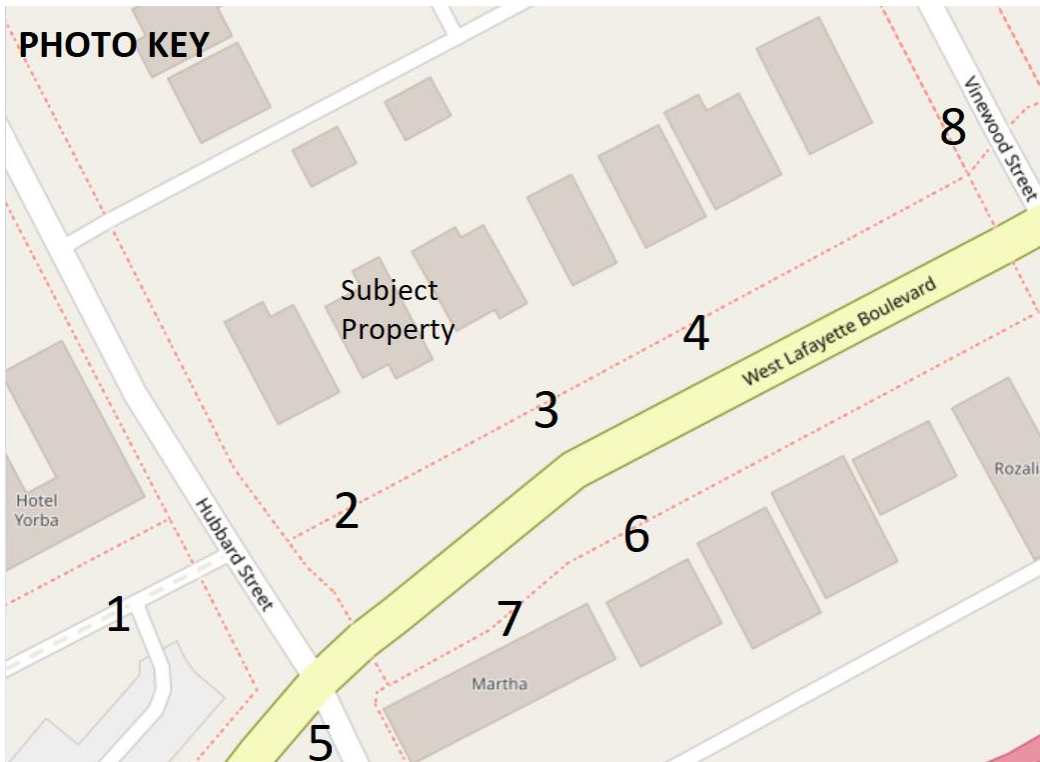
- The applicant’s contractor, Distributed Power, provided supplemental information in an email to staff dated September 9, 2022, providing specifications for the “X10” railing, indicating that “the total height” of the array at the front porch flat roof “should be no higher than 5.5 inches off the roof with the panel and attachments” and stating that the panels would be installed at the same angle as the rooftop (would not tilt upwards), and that panels are capable of being field painted.
- On October 6, 2022, the applicant submitted additional information depicting a mock-up of a typical solar panel. The mock-up employed a tabletop mounted on six-inch wood blocks, creating a structure approximately 8” tall and 74” deep (slightly longer and taller than the proposed panel and mounting hardware, which would be 5.5” tall and 65” deep). Staff visited the site on October 6, 2022 to confirm the placement of the mock-up and noted that it was not visible from some points of view, and “minimally visible” from others.



Locations from which mock-up is not visible. 1: Hotel Yorba parking lot. 2: Lafayette St. north sidewalk west of subject property. 3 and 4: Lafayette St. north sidewalk east of subject property. Photos by staff.



Locations from which mock-up is “minimally visible.” 5: Southwest corner of Lafayette and Hubbard. 6 and 7: Lafayette St. south sidewalk. 8: Vinewood St. Note: Photos used a 35mm camera with optical and digital zoom. Photos by staff.



- Per the above observations, the solar panel array proposed for installation at the front porch roof will have a “low profile,” will be “flat and parallel to the roof,” and therefore will be “only minimally visible from the public right-of-way” as recommended by the above National Park Service guidance.
- It is staff’s opinion that the side elevation and front porch roof surfaces present the most appropriate locations for the installation of solar panels at this home and the work would conform to the above-outlined National Park Service guidance. Staff therefore finds that the proposal generally meets the Standards.
- Installation of natural gas meters citywide on side or rear elevations has been given a Certificate of Appropriateness by resolution 13-03. Staff suggests that the same reasoning applies to the proposed service panel, which is proposed for the rear of the building, and therefore appropriate.

ISSUES

- Staff notes that the proposed solar panel system uses hardware available in silver and black only. The applicant has noted “the panels are capable of being field painted.” However, the current application does not propose to paint the system a color which more closely matches the existing brown asphalt roof. Staff suggests that field painting the hardware (including the sides of the panels themselves, when viewed in profile) a dark brown would assist in concealing the equipment.

RECOMMENDATION

Section 21-2-78: Determination of Historic District Commission

It is staff’s opinion that the proposed solar array is generally compatible with the massing, size, scale, and architectural features of its environment, and does not destroy historic materials that characterize the property. Staff therefore recommends that the Commission issue a Certificate of Appropriateness for this work as it conforms to

the district's Elements of Design and meets the Secretary of the Interior's Standards, with the following conditions:

- The equipment proposed for installation will be field painted an appropriate color, subject to approval by staff.

REFERENCES

United States Department of the Interior, National Park Service. *Technical Preservation Services: Solar Panels on Historic Properties*. <https://www.nps.gov/tps/sustainability/new-technology/solar-on-historic.htm>

United States Department of the Interior, National Park Service. *Technical Preservation Services: Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings*. <https://www.nps.gov/tps/standards/rehabilitation/guidelines/solar-technology.htm>

United States Department of the Interior, National Park Service. *Interpreting the Secretary of the Interior's Standards for Historic Preservation (ITS Number 52): Incorporating Solar Panels in a Rehabilitation Project*. August 2009.