

Docket Item # 2
BAR CASE # 2010-0310

BAR Meeting
November 17, 2010

ISSUE: Alterations (Solar Panel Installation)

APPLICANT: Donald Walsh by Astrum Solar

LOCATION: 323 Buchanan Street

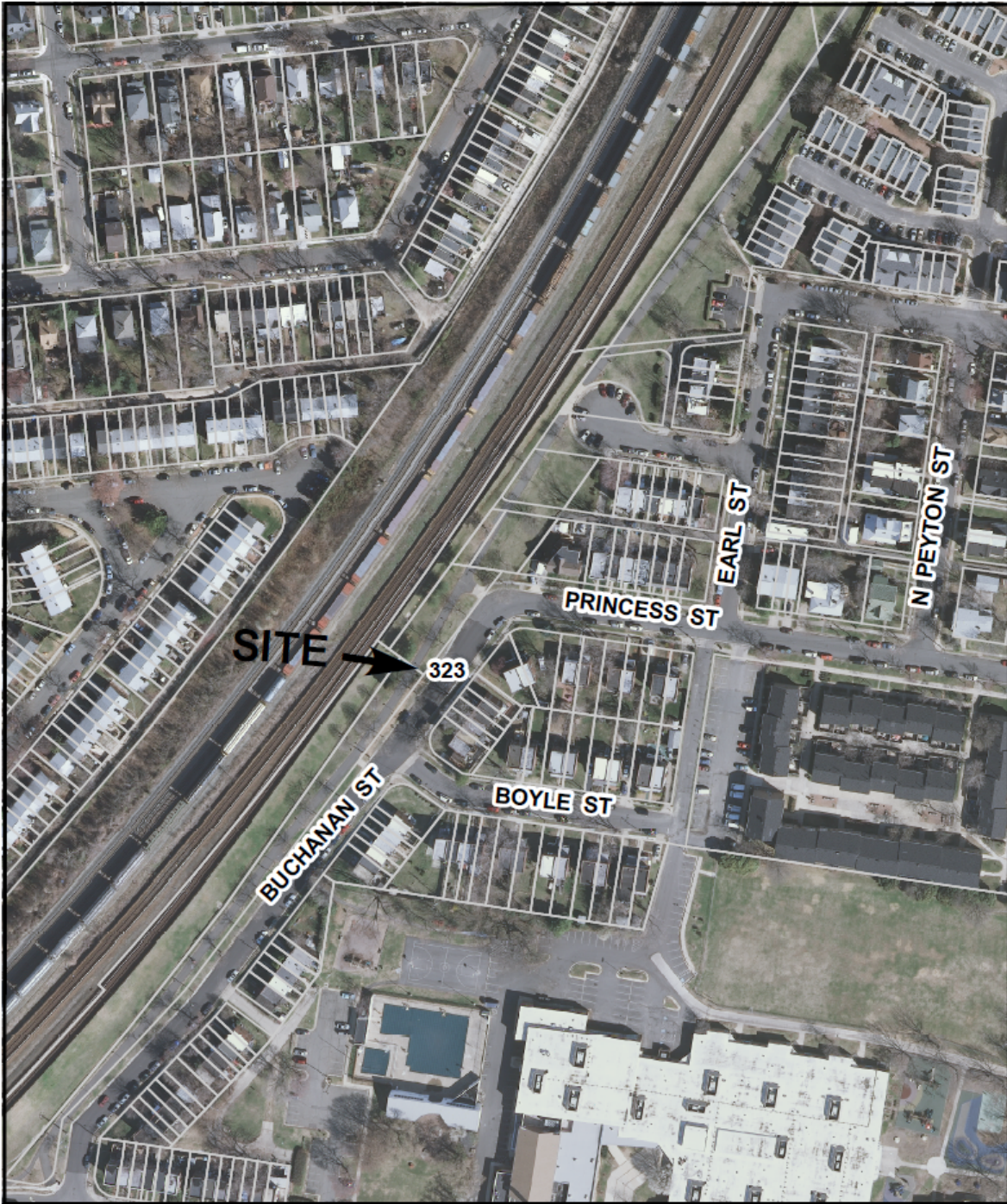
ZONE: RB / Residential

STAFF RECOMMENDATION: Staff recommends approval of the application with the condition that:

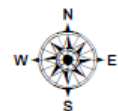
The surface mounted hardware and conduit are painted to match the predominant color of the material to which they are being mounted, to limit visibility.

****EXPIRATION OF APPROVALS NOTE:** In accordance with Sections 10-106(B) and 10-206(B) of the Zoning Ordinance, any official Board of Architectural Review approval will expire 12 months from the date of final approval if the work is not commenced and diligently and substantially pursued by the end of that 12-month period.

****BUILDING PERMIT NOTE:** Most projects approved by the Board of Architectural Review require the issuance of one or more construction permits by Building and Fire Code Administration (including siding or roofing over 100 square feet, windows and signs). The applicant is responsible for obtaining all necessary construction permits after receiving Board of Architectural Review approval. Contact Code Administration, Room 4200, City Hall, 703-746-4200 for further information.



BAR CASE #2010-0310



I. ISSUE

The applicant is requesting approval of a Certificate of Appropriateness for the installation an array of photovoltaic solar panels on the existing flat roof at 323 Buchanan Street. The system will consist of twelve (12), 230 watt panels, affixed at a four degree pitch bolted directly to the roof trusses and offset from the front wall of the building 6'6". A ¾" conduit will run from the solar panels, half the vertical length of the rear east elevation and around to the utility meter located on the rear of the south elevation. The proposed work is located on a flat roof behind an existing brick parapet and only partially visible on the rear elevation when viewing from Boyle Street.

Immediately adjacent to the property is the CSX and Metro tracks.

II. HISTORY

This two-story, two-bay American bond-brick, semi-detached, circa 1940s townhouse is set upon on a raised foundation. According to the City Tax Assessment records, the house was constructed by 1948, as one of a pair of brick townhouses. The building's exterior detailing include a parapet with terra cotta coping at the roof, cast stone lintels and rowlock sills, double-hung 6/6 non-historic replacement windows, non-operable metal shutters and a gabled portico.

The National Register Uptown/Parker-Gray Historic District nomination identifies this building as a contributing resource.

III. ANALYSIS

The proposed installation complies with the Zoning Ordinance, as the proposed height of the solar panels will not exceed the height requirements of this zone.

Although this semi-detached townhouse was constructed in 1948 and identified as a contributing resource within the district, staff believes there are opportunities in any historic building to integrate green building practices. To quote the green building movement's common saying "The greenest building is one that is already built" Sometimes it is relatively easy to integrate green components, while sometimes the design of the projects need to be creative in order to incorporate them into the historic buildings without compromising the historic integrity of the structure or negatively impacting its historic fabric.

The practice of integrating green building practices is a relatively new topic for the Boards, and one which will be explored more formally in the coming months. However, the Boards did have forethought when developing the Design Guidelines in 1993 to provide direction for installation of solar panels within the historic districts. The Design Guidelines encourage solar panels to be "located on the most visually inconspicuous area of the structure consistent with the requirements of maximum access to the sun" and "mounted on an angle which is as close to the adjacent roof slope as possible" and require that "the frame, hardware and pipes are painted to match the predominant color of the surface material to which they are being mounted to limit visibility."

Additionally, as with any alteration to a historic resource, it is also standard preservation practice to evaluate a proposal to ensure that the alterations do not harm the structure or feature, do not compromise its or the surrounding historic district's integrity and if affixed to the structure,

designed to be easily removed in the future when the technology becomes obsolete without any negative impacts to the original historic fabric.

Solar panels and green building technology can provide significant benefits to the modern historic property with minimal alterations to the resource while being compatible with adjacent historic resources and the overall district. The solar panels, as proposed, are being mounted directly to the home's existing flat roof framing which is surrounded by a parapet, set back 6'6" from the front wall of the building and at their highest point will not exceed the height of parapet as viewed from the front or side elevations (See Figure 1). Additionally, the panels will be minimally visible from the rear elevation as viewed from Boyle Street. Also, to accept the energy from the panels, a 3/4" conduit will run half the vertical length along the rear elevation and around to the utility meter on the side elevation.

It is staff's finding that the configuration of the panels is consistent with the Design Guidelines and preservation guiding practices as they will not be visible from the property's principle elevations and only minimally visible from the secondary elevation in the rear. Furthermore, the installation, as proposed, will not remove or damage any historic fabric. However, it is recommended that the location of the conduit on the side elevation be relocated from the masonry wall of the primary building block to the frame wall of the shed roof addition, with the standard condition that the surface mounted hardware and conduit are painted to match the predominant color of the material to which they are being mounted.

While integrating alternative energy infrastructure into historic buildings can be challenging, staff believes that this building is almost ideal for this particular application and the proposal has been very sensitively designed. The project demonstrates that it is possible to successfully install green building components without negatively impacting either the historic resource or the surrounding streetscape and recommends approval with the above recommended condition.

STAFF

Michele Oaks, Historic Preservation Planner, Planning & Zoning
Al Cox, FAIA, Historic Preservation Manager, Planning & Zoning

IV. CITY DEPARTMENT COMMENTS

Legend: C - code requirement R - recommendation S - suggestion F- finding

Code Administration:

- C-1 Construction permits are required for this project. Plans shall accompany the permit application that fully details the construction.
- C-2 Alterations to the existing structure must comply with the current edition of the Uniform Statewide Building Code (USBC).
- C-3 Alterations to the existing structure and/or installation and/or altering of equipment therein requires a building permit. Five sets of plans, bearing the signature and seal of a design professional registered in the Commonwealth of Virginia, must accompany the

written application. The plans must include all dimensions, construction alterations details, kitchen equipment, electrical, plumbing, and mechanical layouts and schematics.

Transportation and Environmental Services (T&ES):

RECOMMENDATIONS

- R1. Applicant shall be responsible for repairs to the adjacent city right-of-way if damaged during construction activity. (T&ES)

CODE REQUIREMENTS

- C-1 The applicant shall comply with the City of Alexandria's Solid Waste Control, Title 5, Chapter 1, which sets forth the requirements for the recycling of materials (Sec. 5-1-99).
- C-2 The applicant shall comply with the City of Alexandria's Noise Control Code, Title 11, Chapter 5, which sets the maximum permissible noise level as measured at the property line.
- C-3 Any work within the right-of-way requires a separate permit from T&ES. (Sec. 5-3-61)

Historic Alexandria:

No comments received.

V. IMAGES

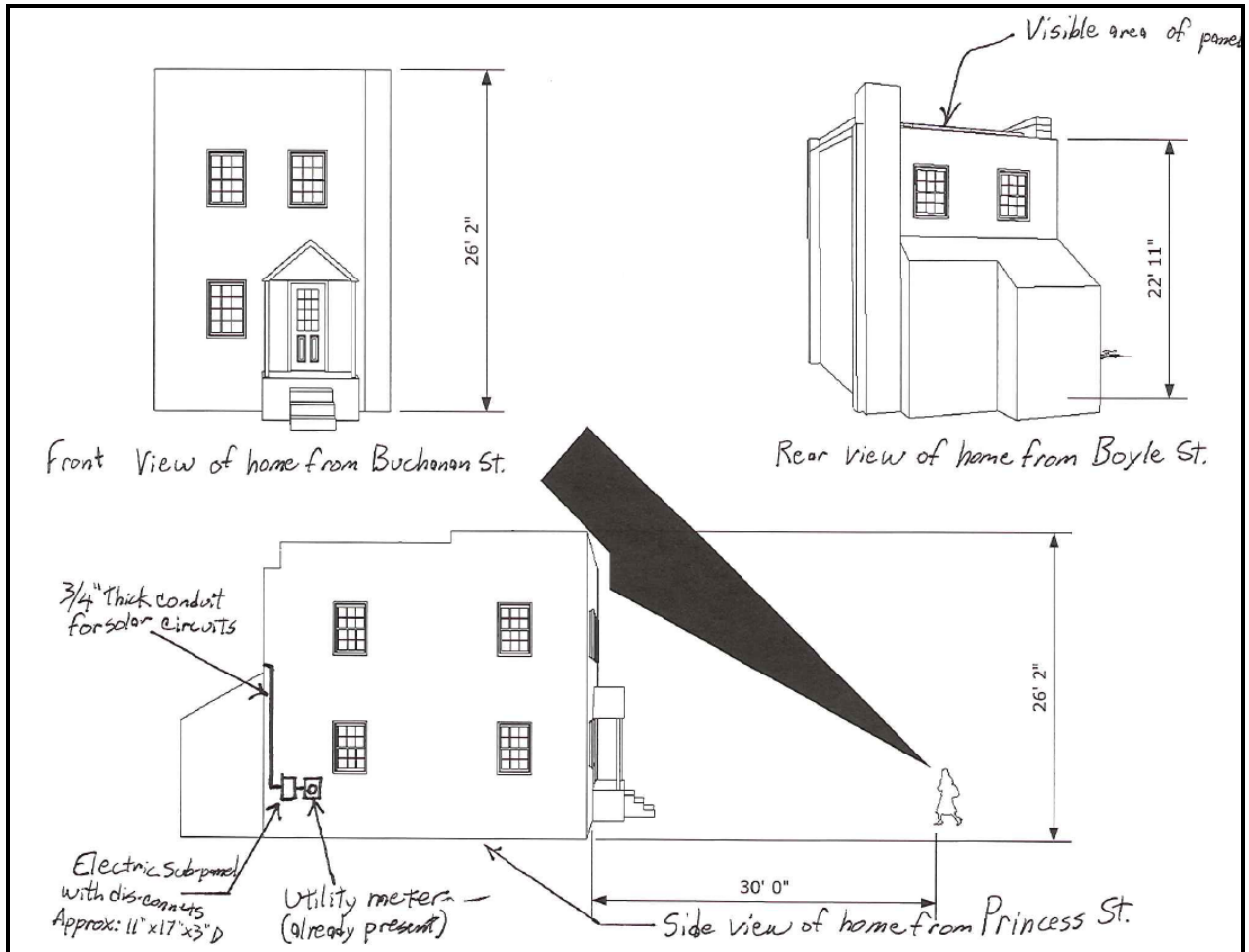


Figure 1. Proposed Elevations

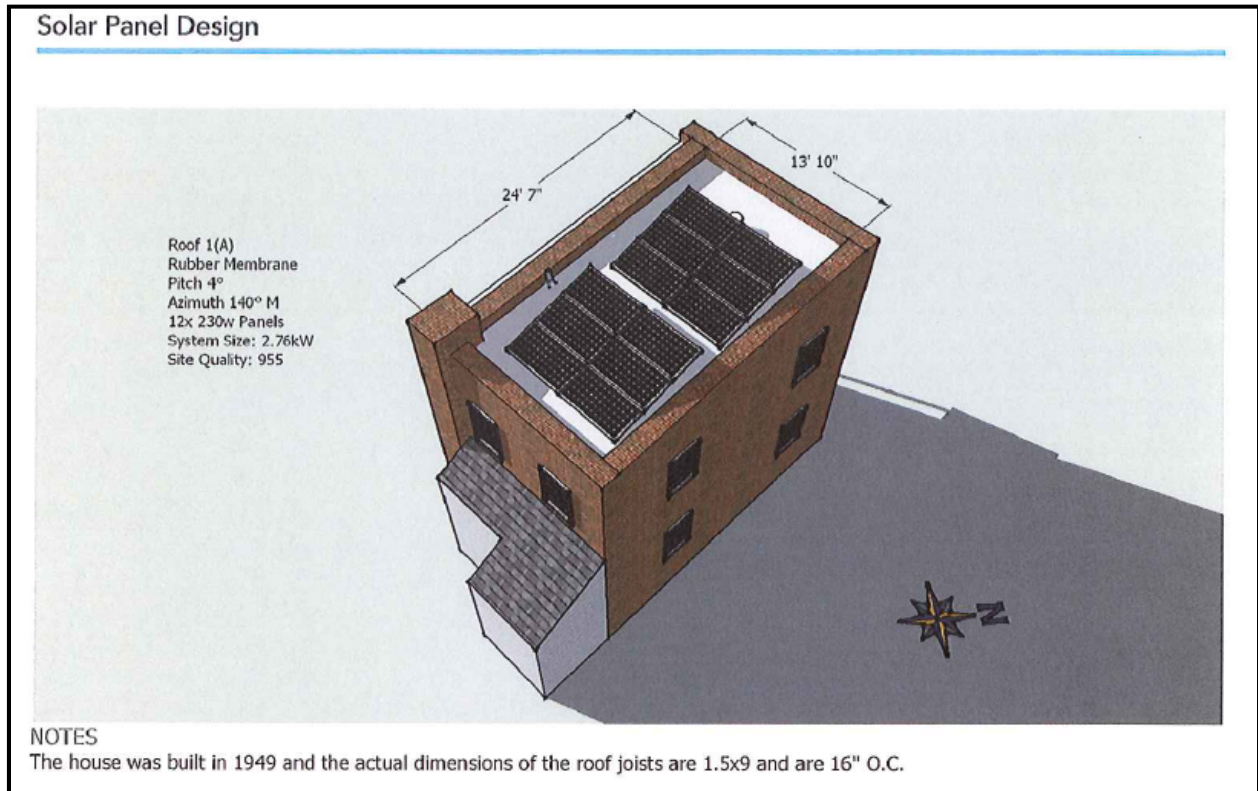


Figure 2. Ariel View of proposed Panels on Rooftop



Front View of Home from Buchanan
Measuring tape at 36" Top of array is
approx. 26" and will be set back from
front of building 6'6".

Figure 3. View of Front Elevation From Buchanan Street



Side View of Building from Princess St.
Tape measure at 24"

Figure 4. View of Side Elevation from Princess Street