STAFF REPORT
Historic Preservation Commission

April 5, 2023

HPCA-23-00019

Agenda Item: **VI.D.4.**

Case Number: **HPCA-23-00019**

Property Address: **224 NW 33rd Street**

District: **Edgemere Park Historic District**

Applicant: EightTwenty
Cory Baitz
1825 N Walnut Ave, Ste G
Oklahoma City, OK 73105

Owner: Dwight Lawson
224 NW 33rd Street
Oklahoma City, OK 73118

A. CASE ITEMS FOR CONSIDERATION

1. Install solar panels and related mechanical equipment at primary structure (elective); and
2. Install solar panels and related mechanical equipment at accessory structure (elective).

B. BACKGROUND

1. Project Description

The applicant proposes the installation of solar panels on the east and west slopes of the roof at both the dwelling and the garage.

2. Location

Project site is located on the south side of NW 33rd Street, mid-block between Harvey Parkway and Robinson Avenue.

3. Site History

Date of Construction:

Zoned Historic Preservation/Historical Landmark: 1977

National Register Listing: 1980

Additional Information:

The 1932 edition of the Sanborn Fire Insurance maps illustrates a 1-story frame dwelling with brick veneer and centered 1-story entryway at the front (north) façade. A 1 ½ -story

frame "autohouse" is indicated on the easternmost property line toward the southeast corner. All structures have shingle roofs. The 1955 edition is unclear, but appears to indicate that all roofs had been replaced with composition materials.

4. Existing Conditions

The existing primary structure has a cross gable at the front running east/west with three front (north) facing gables. The slopes of the rear roof of the dwelling are on the east and west of the roof projection to the south beyond the cross gable. The roofs have steep slopes, typical of most bungalows with Tudor Revival design components. The rear roof is visible on the east and west as viewed from the public right of way at 33rd Street. Roofing material appears to be typical composition roofing shingles.

The garage structure is located at the rear of the site in the southeast corner. The garage structure appears to be 1.5 or 2-story, with the dormer along most of the east roof. The garage is visible from the public right of way at the east slope of the roof, via the driveway. Due to the east dormer, the slope of the roof is less steep than the west slope, which is not visible from the public rights of way at the street.

5. Previous Actions

None relevant.

C. ITEMS IN COMPLIANCE

*Unless noted below in Section D., Issues and Considerations, all other case items of this proposal comply with the Design and Sustainability Standards and Guidelines for Oklahoma City Historic Districts, and with all relevant sections of the Oklahoma City Municipal Code, 2020.**

None.

D. ISSUES AND CONSIDERATIONS

This proposal may not comply with the Design and Sustainability Standards and Guidelines for Oklahoma City Historic Districts, and with all relevant sections of the Oklahoma City Municipal Code, 2020 as referenced below:*

1. Item 1, Install solar panels and related mechanical equipment at primary structure (elective) and 2, Install solar panels and related mechancial equipment at accessory structure (elective).

a. Description: The applicant proposes the installation of solar panels on the east and west slopes of the primary dwelling and the accessory structure at the southeast corner of the site. A 20-degree tilt is indicated.

b. References: *Design and Sustainability Standards and Guidelines for Oklahoma City Historic Districts*

2.4 Service and Mechanical Areas

Policy: Mechanical equipment, such as HVAC units and satellite dishes, should be located out of public view. They should be screened with landscaping (best) or fencing (acceptable).

Design Justification: Most mechanical units and equipment are non-historic additions to buildings, and the effect of their visual impact on a property's or

district's historic character should be minimized.

- 2.4.2: Electrical, water, gas, security, telephone and cable equipment sometimes need to be upgraded. Replacement utility boxes and meters of various types, located in the back yard or mounted on the back wall of the primary building and less than six feet above the ground do not require reviewunless they will be visible from the public right-of-way.
- 2.4.3: Service and mechanical equipment are commonplace, but their presence must be minimized by appropriate placement and screening. A planted screen is preferred and a fence screen is also acceptable.
- 2.4.4: Service equipment (including ground mounted solar collectors), mechanical areas and trash receptacles, if proposed, must be screened from the street and other pedestrian areas. Loading areas should be located away from primary facades and be well maintained.
- 2.4.7: Roof-mounted equipment is not allowed on front- or corner side yard-facing roof planes and must be set back from the edges of roofs and screened,so that it is not visible to pedestrians in the public right-of-way and does not detract from the historic character of buildings and the district.

3.7 Roofs

Policy: Retain original roof shape, details, and materials when possible. When replacing roofing materials, consider the energy used in their manufacture and transportation, the reflectivity of the material and whether the material derives from a renewable or recyclable resource.

Design Justification: By their shape, features, materials and details, roofs contribute significantly to the historic character of residential and multi-family buildings. Historic roof materials are usually related to the architectural age and

style of the main building. Through variations in line, pitch and overhang, a historic roof can also reveal changes and additions to historic buildings over time. Chimneys, dormers and other roof features add to the diversity and character of historic buildings.

Sustainability Justification: Many aspects of sustainability should be considered when choosing a roof material, such as initial cost, lifetime cost, longevity or service life, reflectivity, energy savings, environmental impact of replacement, cost of manufacture and transportation, recycled content, ventilation, and thermal emittance of materials. Local weather extremes have resulted in the loss of most original roofing materials. Replacement materials should be appropriate to the style of the building and as long lasting as possible. Asphalt shingles are the most common choice for roofing across the country because of low initial cost.; however, they are petroleum based, not durable, require frequent replacement, and because they are not recyclable, they contribute significantly to landfill volume. As communities explore the potential of recycling asphalt shingles land fill impact may change.

Concrete and clay tiles require the most energy to manufacture. The weight of these products and natural slate, results in higher transportation costs. However, all three materials have very long life cycles, reducing their overall environmentalimpact. Fiber-cement composites include some amount of wood scrap or waste materials, reducing the amount of cement and concrete used. They are lighter weight than concrete tiles, reducing transportation energy requirements.

- 3.7.1: Preventative maintenance is the key to prevent roof damage. Inspect roofs regularly for normal wear and damage from storms or wind. Inspect flashing at roofing, gutters, and chimneys yearly. Repair leaks promptly in roofs to prevent wall and interior damage. Clean and repair gutters and downspouts to prevent water damage to fascia, soffits and walls.
- 3.7.2: Maintain roof and roof elements, thereby preserving the historic building.
- 3.7.3: Preserve the original shape, line, pitch and overhang of historic roofs, as well as architectural features such as dormers, chimneys and turrets.
- 3.7.7: Repairs to flashing must be copper or other metal with a finish to matchthe roof color. Unfinished, galvanized metal flashing shall not be used.
- 3.7.9: Replacement of non-historic composition roofing material with architectural grade composition shingles, regardless of color or pattern, is notsubject to review and does not require a Certificate of Appropriateness (for repair, replacement, or installation of historic roofing materials, see Administrative Review).
- 3.7.13: For ventilation of attic heat, roof vents should be located out of view on back sloping roofs. Vents are encouraged to help improve the energy efficiency of the building and may be more appropriately accommodated using compatible attic wall louvered vents. If the building roof does not havea back sloping roof and attic walls for ventilation louvers are not available, then side roof ventilation may be considered on the least visible side locationsfrom the public right-of-way. Low-profile ridge vents may be used.
- 3.7.14: New roof features such as roof ventilators, antennas, satellite dishes and skylights may be installed, but must be located on back slopes and not visible from the public right-of-way. Solar panels and solar shingles may alsobe installed on back roof slopes as long as they are not visible from the publicright-of-way.
- 3.7.23: Exposed galvanized metal or non-painted gutters and downspouts arenot permitted.
- 3.7.24: New gutters shall be painted or powder finished to match the fascia color of the building unless copper is used. New downspouts shall be

paintedor powder finished to match the building or the building trim unless copper isused.

- 3.7.25: Copper gutters and down spouts may be installed when appropriate for the style of the building. Historical gutter shapes shall only be used when consistent with historical physical or photographic evidence of their use at the specific building.
- 3.7.26: The original shape, line, pitch and overhang of historic roofs are significant to the overall character of the building and must be retained.
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4.7 Features for Improving Energy Efficiency in New Construction

Policy: The installation of new features to improve energy efficiency is appropriate as long as they do not detract from the historical appearance of the property or district.

Justification - Design: Contemporary or new energy and energy saving features should be placed out of public view and not detract from the historic character ofa building or district.

- 4.7.4: Solar panels and solar shingles must be installed on back facing roof slopes and lay flat on the roof slope. They must not be visible from the public right-of-way or from streets including side streets for corner or interior lots.
- 4.7.5: Southern exposures receive sunlight during the entire day, making them the ideal location for solar panels or shingles. However, solar panels and shingles are not permitted for the front (south) roof slope of south-facing buildings. Solar panels and solar shingles are better suited for north-facing buildings whose south-facing roof slope is only visible from the back yard.
- 4.7.7: Solar panels may be installed in back yards, as long as the height of the panel and the mounting system combined is less than six feet tall and they are not visible from the public right-of-way and adjacent properties.

c. Considerations: The Standards and Guidelines generally allow for historic roofing materials, architectural grade shingles, copper or painted metals where metals are appropriate, flashing, pipes, gutters, etc., while maintaining the historic roof shape and form. Most new accessories such as pipes or vents must be located on rear slopes where not visible from the public rights of way. The Guidelines also provide for mechanical equipment and require that it be screened and not visible from the street.

The Guidelines address solar panels directly in Section 4.7, requiring that if installed, solar panels must be located on back facing roof slopes and must not be visible from the public right-of-way or from streets, including side streets, for corner or interior lots. The Guidelines state that solarpanels must be located on back facing roof slopes and flat against the roof.

The proposed solar panels are located on the side-facing slopes of the roof at the dwelling and at the accessory structure. A 20-degree angle is stated. The rear, side-facing slopes of the roof on the primary dwelling are partially screened from the street

by the side-gable portion of the roof at the front of the dwelling, but the proposed solar panels are visible from the public right of way at the street on the east and west of the dwelling, toward the south end of the roof. Solar panels are visible from the north at the public right of way of the street on the east roof of the accessory structure. Due to roofs of abutting dwellings and the placement of the garage, the solar panels of the accessory structure may only be visible from the public right of way when looking directly south into the driveway and only on the east side of the roof.

As the distinguishing characteristic of Tudor architecture and design, roof forms of Tudor Revival bungalows are character-defining and should not be disrupted. The Standards and Guidelines support and allow for the use of solar panels where feasible to install without impacting the historic character of a property or district; the Guidelines further direct that this should be in locations that are not visible from the street.

The Commission has previously determined that solar panels on side-facing slopes of the roof of an accessory building, due to their placement and the building's location at the rear of the lot, were visually indistinguishable from the roof itself and therefore met the applicable Standards and Guidelines.

d. Recommended Specific Findings:

1. That solar panels are supported by the Standards and Guidelines only on rear sloping roofs and where not visible from the public rights of way;
2. That solar panels are allowed on back sloping roofs when installed flat along the slope of the roof;
3. That the shape, line, and pitch of the historic roofs are significant to the overall character of the buildings and the property;
4. That the proposed panels are visible from the street at the historic dwelling and the garage and are installed on side sloping roofs;
5. That the proposed panels at the accessory building may be visually indistinguishable from the roof due to their placement and the location of the garage;
6. That the proposed panels do not match the roof color and are not similar in reflectivity;
7. That new fabric should not damage or destroy historic fabric for the protection of the historic buildings;
8. That it is presumed that no changes to the roof or structure are required to support the combined weight of modern roofing and the solar panels.

E. HPCA-23-00019 STAFF RECOMMENDATION:

1. **Continue Items 1, install solar panels and related mechanical equipment at primary structure and 2, install solar panels and related mechanical equipment at accessory structure,** with the specific finding that additional information is required from the

applicant in order to determine whether the action requested is consistent with all relevant Standards and Guidelines and is in compliance with the relevant sections of the Municipal Code, 2020*, as referenced in the Staff Report.

Specific Findings:

1. That solar panels are supported by the Standards and Guidelines only on rear sloping roofs and where not visible from the public rights of way;
2. That solar panels are allowed on back sloping roofs when installed flat along the slope of the roof;
3. That the shape, line, and pitch of the historic roofs are significant to the overall character of the buildings and the property;
4. That the proposed panels are visible from the street at the historic dwelling and the garage and are installed on side sloping roofs;
5. That the proposed panels at the accessory building may be visually indistinguishable from the roof due to their placement and the location of the garage;
6. That the proposed panels do not match the roof color and are not similar in reflectivity;
7. That new fabric should not damage or destroy historic fabric for the protection of the historic buildings;
8. That it is presumed that no changes to the roof or structure are required to support the combined weight of modern roofing and the solar panels.

Additional information: documentation that the proposed solar panels on the primary and/or accessory structures will not be visible from the street, or will be visually indistinguishable from the roof as viewed from the street.

Note: Staff recommendation does not constitute Commission action.

**Relevant Sections of the Municipal Code governing HP/HL Districts are: §59.3300.1-5; §59.4150.4; §59.4250; §59.7250.1-4; §59.7300.1-7; §59.12200.1-4; §59.13300.1-6.*

Copies of the Standards/Guidelines and Relevant Sections of the Municipal Code, 2020 are available online at www.okc.gov/planning/hp/index.html ; at Planning Department offices located at 420 W. Main, 9th floor, and each HP Commission Meeting.

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