TULSA PRESERVATION COMMISSION

STAFF REPORT
Tuesday, February 22, 2022
HP-0339-2022

HP PERMIT NUMBER: HP-0339-2022

PROPERTY ADDRESS: 1131 EAST 18TH STREET

DISTRICT: NORTH MAPLE RIDGE

APPLICANT: LESLI E. AUGSBURGER

REPRESENTATIVE: NONE

A. CASE ITEMS FOR CONSIDERATION
1. Installation of gate at entry to walkway
2. Installation of gate at entry to driveway
3. Replacement of doors in Sunroom*

*Project completed without an Historic Preservation Permit

B. BACKGROUND
DATE OF CONSTRUCTION: 1912
ZONED HISTORIC PRESERVATION: 1993: ORDINANCE AMENDMENT 2005
NATIONAL REGISTER LISTING: MAPLE RIDGE HISTORIC RESIDENTIAL DISTRICT: 1983
CONTRIBUTING STRUCTURE: NO

PREVIOUS ACTIONS:
HP-17-002 – FEBRUARY 9, 2017 – TPC APPROVAL
1. Remove driveway and construct new driveway according to documents submitted
2. Repurpose gate at entry to driveway and relocate at entry to new driveway
3. Remove columns at entry to driveway and reconstruct at entry to new driveway
4. Repurpose gate at porte-cochère and relocate at new entry to lawn

HP-17-016 – MARCH 9, 2017 – TPC APPROVAL
1. Construct pool in street yard according to documents submitted

HP-17-016 – MARCH 9, 2017 – STAFF APPROVAL
1. Replacement in kind of walkway and of porch floor

HP-17-033 – APRIL 13, 2017 – TPC APPROVAL
1. Replacement of forty windows with aluminum-clad wood windows

HP-0240-2020 – DECEMBER 10, 2020 – STAFF APPROVAL
1. Repair and replacement in kind of damaged elements of windows

HP-0284-2021 – JUNE 22, 2021 – TPC APPROVAL
1. Installation of fixtures on east side of residence
2. Installation of masonry on walls
3. Reconstruction of columns at entry to driveway
C. ISSUES AND CONSIDERATIONS

1. Installation of gate at entry to walkway
2. Installation of gate at entry to driveway
3. Replacement of doors in Sunroom
   i. Proposed are the installation of gates at the entries to the walkway and driveway and the replacement of the doors in the Sunroom. A custom-made gate would be installed at the top of the steps at the entry to the walkway and would be flanked by panels, whose design would match that of the adjacent fence. A custom-made gate would likewise be installed at the entry to the driveway. Both gates would be metal and would be painted black. The French Doors on the south side of the Sunroom and the French Doors which flank the doors in the center of the east side of the Sunroom have been replaced with custom-made windows whose appearance matched that of the French Doors. The French Doors in the center of the east side have been replaced with custom-made French Doors whose appearance matched that of the doors presently installed.

   During the review by the Historic Preservation Permit Subcommittee on February 18, the applicant disclosed that the design of the gates would be altered and that the windows and door in the Sunroom have already been replaced. The application has been forwarded with a recommendation for approval with the conditions that the design of the gates be provided and that images of the windows and door in the Sunroom be submitted.

   ii. Reference: Tulsa Zoning Code

      SECTION 70.070-F Standards and Review Criteria

      In its review of HP permit applications, the preservation commission must use the adopted design guidelines to evaluate the proposed work and must, to the greatest extent possible, strive to affect a fair balance between the purposes and intent of HP district regulations and the desires and need of the property owner. In addition, the preservation commission must consider the following specific factors:

      1. The degree to which the proposed work is consistent with the applicable design guidelines;
      2. The degree to which the proposed work would destroy or alter all or part of the historic resource;
      3. The degree to which the proposed work would serve to isolate the historic resource from its surroundings, or introduce visual elements that are out of character with the historic resource and its setting, or that would adversely affect the physical integrity of the resource;
      4. The degree to which the proposed work is compatible with the significant characteristics of the historic resource; and
      5. The purposes and intent of the HP district regulations and this zoning code.

      Reference: Unified Design Guidelines - Residential Structures

      SECTION A - GUIDELINES FOR REHABILITATION OF EXISTING STRUCTURES

      A.1 General Requirements

      Use the following guidelines as the basis for all exterior work:
      A.1.1 Retain and preserve the existing historic architectural elements of your home.
A.1.2 If replacement of historic architectural elements is necessary, match the size, shape, pattern, texture, and directional orientation of the original historic elements.

A.1.3 Ensure that work is consistent with the architectural style and period details of your home.

A.1.4 Return the structure to its original historic appearance using physical or pictorial evidence, rather than conjectural designs.

A.3 Doors and Door Surrounds
A.3.1 Retain and preserve original historic doors and door surrounds, including frames, glazing, panels, sidelights, fanlights, and transoms.

A.3.2 Do not remove, cover, or move existing door, sidelight, fanlight, and transom openings.

A.3.3 To return the home to its original historic appearance, remove non-historic doors and replace them using physical or pictorial evidence of the originals. If no evidence exists, select doors and surrounds which are consistent with the architectural style of your home.

A.3.4 To gain thermal efficiency, storm doors which maintain the appearance and allow maximum visibility of the original historic doors may be installed. Unfinished or clear-finished metals are not allowed. (Storm doors can be staff approved.)

A.3.5 If replacement of deteriorated doors is necessary, select doors and surrounds which are consistent with the architectural style of your home.

A.3.6 If replacement of deteriorated trim is necessary, match the appearance, size, shape, pattern, texture, and detailing of the original historic trim.

A.3.7 When adding new door openings, maintain the proportions of the façade. Match the dimensions and trim details of other doors and surrounds on your home. Select doors and surrounds which are consistent with the architectural style of your home.

A.3.8 Use clear glass in new or replacement doors and sidelights.

A.3.9 Exterior security bars and grilles are discouraged.

SECTION E – GUIDELINES FOR NON-CONTRIBUTING STRUCTURES
E.1 General Requirements
E.1.1 For the purposes of this chapter, non-contributing structures are those listed as not contributing to the historic character of the district due to age or architectural style in the National Register Nomination for the district.

E.1.2 Non-contributing structures will be considered products of their own time. Do not attempt to create a false appearance of the predominant character and architectural style of the rest of the district.

E.1.3 Follow Section A (Rehabilitation) and Section B (Additions) as they relate to the character-defining elements of the non-contributing structure.

E.1.4 Ensure that work on non-contributing structures does not detract from or diminish the historic character of the overall district.

SECTION G – GUIDELINES FOR LANDSCAPE FEATURES, PAVING, AND SIGNAGE
G.1 Landscape Features
G.1.1 Retain and preserve original historic walls, fencing, lighting, planters, and other landscape features through repair.

G.1.2 Removal of historic landscape features will be considered on a case-by-case basis. Removal of non-historic landscape features can be staff-approved.

G.1.3 Ensure that new landscape features are appropriate to the style of your home and consistent with the historic elements found along the same street and within the district.

G.1.4 Use fencing materials that are consistent with the historic fencing found along the same street and within the district. Chain-link fencing, wire fencing (12 gauge or less), vinyl fencing, or any fencing that blocks the view of structures is not allowed.
Previous Proposal – Gates for Driveway and Walkway

Proposal – Windows for Sunroom

Sunroom – East Facade
TULSA PRESERVATION COMMISSION
STAFF REPORT
Tuesday, February 22, 2022
HP-0340-2022

HP PERMIT NUMBER: HP-0340-2022

PROPERTY ADDRESS: 1510 EAST 17TH PLACE

DISTRICT: SWAN LAKE

APPLICANT: SAMANTHA MCDANIEL

REPRESENTATIVE: NONE

A. CASE ITEM FOR CONSIDERATION
   1. Installation of solar photovoltaic system

B. BACKGROUND
   DATE OF CONSTRUCTION: CA. 1935
   ZONED HISTORIC PRESERVATION: 1994
   NATIONAL REGISTER LISTING: SWAN LAKE 1998; ADDITIONAL DOCUMENTATION 2009
   CONTRIBUTING STRUCTURE: YES
   PREVIOUS ACTIONS:
   COA – APRIL 10, 2003 – TPC APPROVAL
   Replacement of driveway with increase in width
   Replacement of walkway with stepping-stones and pebbles

   COA – APRIL 8, 2010 – TPC APPROVAL
   Replacement of wooden windows

C. ISSUES AND CONSIDERATIONS
   1. Installation of solar photovoltaic system
      i. Proposed is the installation of a solar photovoltaic system on the north, south, and east
         sides of the roof of the residence and on the north and south sides of the roof of the
         detached garage. The installation on the north side of the roof of the residence would be
         visible from the right-of-way.

      During the review by the Historic Preservation Permit Subcommittee on February 15, dis-
      cussion focused on the visibility of the system. The application has been forwarded with
      a recommendation for approval with the condition that the system not be installed on the
      north side of the roof of the residence.
ii. Reference: *Tulsa Zoning Code*

**SECTION 70.070-F Standards and Review Criteria**

In its review of HP permit applications, the preservation commission must use the adopted design guidelines to evaluate the proposed work and must, to the greatest extent possible, strive to affect a fair balance between the purposes and intent of HP district regulations and the desires and need of the property owner. In addition, the preservation commission must consider the following specific factors:

1. The degree to which the proposed work is consistent with the applicable design guidelines;
2. The degree to which the proposed work would destroy or alter all or part of the historic resource;
3. The degree to which the proposed work would serve to isolate the historic resource from its surroundings, or introduce visual elements that are out of character with the historic resource and its setting, or that would adversely affect the physical integrity of the resource;
4. The degree to which the proposed work is compatible with the significant characteristics of the historic resource; and
5. The purposes and intent of the HP district regulations and this zoning code.

Reference: *Unified Design Guidelines - Residential Structures*

**SECTION A – GUIDELINES FOR REHABILITATION OF EXISTING STRUCTURES**

**A.1 General Requirements**

Use the following guidelines as the basis for all exterior work:

A.1.1 Retain and preserve the existing historic architectural elements of your home.

A.1.2 If replacement of historic architectural elements is necessary, match the size, shape, pattern, texture, and directional orientation of the original historic elements.

A.1.3 Ensure that work is consistent with the architectural style and period details of your home.

A.1.4 Return the structure to its original historic appearance using physical or pictorial evidence, rather than conjectural designs.

**A.7 Awnings, Shutters, Mailboxes, Mechanical Systems, Etc.**

A.7.6 Install systems requiring exterior components, such as solar panels or devices, where they will have minimal impact, preferably at the rear of your house or yard or on an outbuilding. Install exterior components on a historic building in a manner that does not damage the historic roofing material or negatively impact the building’s historic character and is reversible. These considerations will be made on a case-by-case basis.
RE: 1510 E 17th Pl, City of Tulsa, OK 74120, USA

To Whom It May Concern,

As per your request, we have conducted a structural assessment of the building at the above address.

PV solar panels are proposed to be installed on roof areas as shown in the submitted plans. The panels are clamped to rails which are attached to the roof with a lagged mounting system. The PV system (PV modules, racking, mounting hardware, etc.) shall be installed according to the manufacturer’s approved installation specifications. The Engineer of Record and Exactus Energy claim no responsibility for misuse or improper installation.

It was found that the roof structures satisfactorily meet the applicable standards included in the 2015 IBC/IRC, 2015 IEBC, and ASCE 7-10 as well as the design criteria shown below:

Design Criteria:
- Wind speed = 115 mph (Risk Cat. II, Exposure Cat. C)
- Ground snow load = 10 psf
- Roof dead load = 9 psf
- Solar system dead load = 3 psf

Overall, the roof area is structurally adequate to support the PV alteration per 2015 IEBC Sections 402.3 and 403.3.

This letter was completed in accordance to recognized structural analysis standards, professional engineering experience, and judgement. Prior to installation, the on-site contractor must notify Exactus Energy if there are any discrepancies, or damages to the structural members, that was not addressed in the plan set.

If you have any further questions, please do not hesitate to contact me.

Acknowledged by:
RESIDENTIAL SOLAR PHOTOVOLTAIC SYSTEM
1510 E 17TH PLACE
CITY OF TULSA, OK 74120
KATE ELLINGTON
11.250 kW DC-STC / 8.700 kW-AC
29/DEC/21

SYSTEM SPECIFICATIONS

SYSTEM SIZE: 11.250 kW
MODULE: LG375N1C-A6
NUMBER OF PANELS: 30
INVERTER: ENPHASE IQ7PLUS-72-2-US
RACKING SYSTEM: UNIRAC SOLARMOUNT RAIL

NEW (1) ENPHASE ENCHARGE 10
3.84kW, 10.5kWH

AHJ: CITY OF TULSA, OK
UTILITY: PSO

GOVERNING CODES:
IBC 2015
IRC 2015
IFC 2015
NEC 2014

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EXACTUS ENERGY
NEW AGE ENGINEERING
+1 833 392 2987
208-888 DUPONT STREET
TORONTO, ON
GENERAL NOTES:

THE INSTALLATION OF PV SYSTEM SHALL BE IN ACCORDANCE WITH THE MOST RECENT NATIONAL ELECTRIC AND BUILDING CODES AND STANDARDS, AS AMENDED BY JURISDICTION

- PV SYSTEMS SHALL BE PERMITTED TO SUPPLY A BUILDING OR OTHER STRUCTURE IN ADDITION TO ANY OTHER ELECTRICAL SUPPLY SYSTEM(S) [NEC 690.4(A)]
- THE INSTALLATION OF EQUIPMENT AND ALL ASSOCIATED WIRING AND INTERCONNECTION SHALL BE PERFORMED ONLY BY QUALIFIED PERSONS [NEC 690.4(C)]
- EXISTING PLUMBING VENTS, SKYLIGHTS, EXHAUST OUTLETS, VENTILATIONS INTAKE AIR OPENINGS SHALL NOT BE COVERED BY THE SOLAR PHOTOVOLTAIC SYSTEM
- INVERTERS, MOTOR GENERATORS, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AC PHOTOVOLTAIC MODULES, SOURCE-CIRCUIT COMBINERS, AND CHARGE CONTROLLERS INTENDED FOR USE IN PV SYSTEMS SHALL BE LISTED OR FIELD LABELED FOR THE PV APPLICATION [NEC 690.4 (B)]
- ALL OUTDOOR EQUIPMENT SHALL BE NEMA 3R RATED (OR BETTER), INCLUDING ALL ROOF MOUNTED TRANSITION BOXES AND SWITCHES
- ALL EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED IN ACCORDANCE WITH NEC ARTICLE 250.
- SYSTEM GROUNDING SHALL BE IN ACCORDANCE WITH NEC 690.41
- FOR PV MODULES, EQUIPMENT GROUNDING CONDUCTORS SMALLER THAN 6AWG SHALL COMPLY WITH NEC 250.120(C) [NEC 690.40]
- PV SOURCE CIRCUIT, PV OUTPUT CIRCUIT, INVERTER OUTPUT CIRCUIT, AND STORAGE BATTERY CIRCUIT CONDUCTORS AND EQUIPMENT SHALL BE PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 240 [NEC 690.9(A)]
- OVERCURRENT DEVICES RATINGS SHALL BE NOT LESS THAN 125 PERCENT OF THE MAXIMUM CURRENTS CALCULATED IN 690.9(A). [NEC 690.9(B)]
- PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION IN ACCORDANCE WITH NEC 690.12
- PV DISCONNECTING MEANS SHALL BE INSTALLED AT A READILY ACCESSIBLE LOCATION EITHER ON THE OUTSIDE OF A BUILDING OR STRUCTURE OR INSIDE NEAREST THE POINT OF ENTRANCE OF THE SYSTEM CONDUCTORS [NEC 690.13(A)]
- ALL WIRING METHODS SHALL BE IN ACCORDANCE WITH NEC 690.31
- CONNECTORS SHALL REQUIRE A TOOL TO OPEN AND BE MARKED "DO NOT DISCONNECT UNDER LOAD" OR "NOT FOR CURRENT INTERRUPTING" [NEC 690.33(E)(23)]
- ALL GROUNDED CONDUCTORS SHALL BE PROPERLY COLOR IDENTIFIED AS WHITE. [NEC 200.6]
- THE OUTPUT OF AN INTERCONNECTED ELECTRIC POWER SOURCE SHALL BE CONNECTED AS SPECIFIED IN NEC 705.12(A), (B), (C), OR (D).
- WHERE GROUND FAULT PROTECTION IS USED, THE OUTPUT OF AN INTERACTIVE SYSTEM SHALL BE CONNECTED TO THE SUPPLY SIDE OF THE GROUND FAULT PROTECTION [NEC 705.32]
- ALL PLAQUES AND SIGNAGE REQUIRED BY THE LATEST EDITION OF NATIONAL ELECTRICAL CODE. LABEL SHALL BE METALLIC OR PLASTIC, ENGRAVED OR MACHINE PRINTED IN A CONTRASTING COLOR TO THE PLAQUE. PLAQUE SHALL BE UV RESISTANT IF EXPOSED TO SUNLIGHT.
- ALL THE NEC REQUIRED WARNING SIGNS, MARKINGS, AND LABELS SHALL BE POSTED ON EQUIPMENT AND DISCONNECTS PRIOR TO ANY INSPECTIONS TO BE PERFORMED BY THE BUILDING DEPARTMENT.
- CONNECTORS SHALL BE OF LATCHING OR LOCKING TYPE. CONNECTORS THAT ARE READILY ACCESSIBLE AND OPERATING AT OVER 30 VOLTS, NOMINAL MAXIMUM SYSTEM VOLTAGE FOR DC CIRCUITS, OR 30 VOLTS FOR AC CIRCUITS, SHALL REQUIRE TOOL TO OPEN AND MARKED "DO NOT DISCONNECT UNDER LOAD" OR "NOT FOR CURRENT INTERRUPTING" [NEC 690.33(C) & (E)(2)].
- FLEXIBLE, FINE-STRANDED CABLES SHALL BE TERMINATED ONLY WITH TERMINALS, LUGS, DEVICES, OR CONNECTORS IN ACCORDANCE WITH NEC 110.14
- ALL EXTERIOR CONDUITS, FITTINGS AND BOXES SHALL BE RAIN-TIGHT AND APPROVED FOR USE IN WET LOCATIONS PER NEC 314.15.
- ROOFTOP MOUNTED PHOTOVOLTAIC PANELS AND MODULES SHALL BE TESTED, LISTED & IDENTIFIED IN ACCORDANCE WITH UL703.
- EACH MODULE TO BE GROUNDED USING THE SUPPLIED CONNECTION POINT PER MANUFACTURER'S REQUIREMENTS. ALL SOLAR MODULES, EQUIPMENT, AND METALLIC COMPONENTS ARE TO BE BONDED. IF THE EXISTING GROUNDING ELECTRODE SYSTEM CAN NOT BE VERIFIED OR IS ONLY METALLIC WATER PIPING, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE.
- DC CONDUCTORS SHALL BE RUN IN EMT AND SHALL BE LABELED, "CAUTION DC CIRCUIT" OR EQUIV. EVERY 5 FT.
- CONFIRM LINE SIDE VOLTAGE AT ELECTRIC UTILITY SERVICE PRIOR TO CONNECTING INVERTER. VERIFY SERVICE VOLTAGE IS WITHIN INVERTER VOLTAGE OPERATIONAL RANGE.
- SERVING UTILITY TO BE NOTIFIED BEFORE ACTIVATION OF PV SYSTEM.
- ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT EXPANSION JOINTS AND ANCHOR CONDUIT RUNS AS REQUIRED PER NEC.
- THE HOMEOWNER IS RESPONSIBLE FOR ENSURING ALL EQUIPMENT OUTSIDE THE SCOPE OF WORK IS NEC COMPLIANT.

NOTE:
THE ENCHARGE BATTERY AS PART OF THE ENSEMBLE SYSTEM DOES NOT EXPORT POWER TO THE GRID IN ANY STORAGE MODE.
Roof Pitch: 23°, 26°, 27° SLOPED SHINGLE ROOF
Azimuths: 1°, 90°, 180°, 181°, 360°
Racking Type: UNIRAC SOLARMount Rail
Mount Type: UNIRAC FlashLOC

Panel Type: LG375N1C-A6
Panel Size: 68.5" x 41"
Number of Panels: 30
System Size: 11,250 kW

Notes:
- Solar panel layout subject to change according to existing conditions
- Scale as shown
- All dimensions in feet unless otherwise stated

MAXIMUM MOUNT SPACING: 48"
Mount Pattern: Staggered

Roof 1 Area: 275.54 ft²
Array Area: 78.01 ft²
Array Percent Coverage: 28.01%

Roof 2 Area: 278.517 ft²
Array Area: 234.04 ft²
Array Percent Coverage: 84.03%

Roof 3 Area: 132.6 ft²
Array Area: 39.01 ft²
Array Percent Coverage: 29.42%

Roof 4 Area: 289.9 ft²
Array Area: 117.02 ft²
Array Percent Coverage: 40.37%

Roof 5 Area: 291.53 ft²
Array Area: 117.02 ft²
Array Percent Coverage: 40.14%

24" trenching required from southeast corner of dwelling to the garage

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Project: 1510 E 17TH PLACE
AHU: CITY OF TULSA, OK
ZIP CODE: 74120
CLIENT: KATE ELLINGTON
11,250 kW DC-STC/8,700 kW-AC

Author: EE
Date: 29/DEC/21
Rev: C
S2 - Panel Layout

Legend:
- METER
- 36' FIRE ACCESS PATH
- 36' FIRE VENTILATION
- PVC VENT
- METAL VENT
- VENT BOX
- STRUCTURAL DELIMITER
- SERVICE MAST
- SATELLITE
- ANTENNA
- SNOW GUARD
- DOWNSPOUT
- ELECTRICAL MOUNT
- RAIL
- TOP CHORD

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Roof 5 Area: 291.53 ft²
Array Area: 117.02 ft²
Array Percent Coverage: 40.14%
S3 - STRUCTURAL DETAIL

NOTES:
- SCALE AS SHOWN
- DIMENSIONS IN FEET UNLESS OTHERWISE STATED

MODULE
WOODEN STRUCTURAL MEMBER
LAG SCREWS SHALL BE S.S. 5/16" DIA W/ 2.5" MIN EMBED IN RAFTERS/TRUSS TOP CHORDS

UNIRAC SOLARMOUNT RAIL
UNIRAC FLASHLOC

SHINGLE
NOTE:
The Encharge battery as part of the ensemble system does not export power to the grid in any storage mode.
NOTES:

1) ALL LABELING USED OUTDOORS MUST BE ENGRAVED METAL, UV STABILIZED ENGRAVED PLASTIC OR OF A MATERIAL SUFFICIENTLY DURABLE TO WITHSTAND THE ENVIRONMENT INVOLVED. VALUES HAND WRITTEN OR IN WRITTEN IN MARKER ARE NOT ACCEPTABLE PER NEC 2014.

2) LABELS USED INDOORS MAY BE MADE OF DURABLE VINYL OR PAPER.

3) DO NOT COVER ANY EXISTING MANUFACTURER APPLIED LABELS WITH INSTALLATION SPECIFIC LABELS.
CAUTION

POWER TO THE BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH DISCONNECTS LOCATED AS SHOWN

- BACKUP LOADS PANEL
- AC COMBINER
- PV AC DISCONNECT 1
- ENPOWER SMART SWITCH
- ENCHARGE 10 BATTERY
- PV METER
- AC DISCONNECT w/ WARNING LABEL
- SERVICE PANEL
- & UTILITY METERING
- PV AC DISCONNECT 2
- PV SUBPANEL
The LG NeON® 2 is LG's best selling solar module and one of the most powerful and versatile modules on the market today. The cells are designed to appear all black at a distance, and the performance warranty guarantees 90.6% of labeled power output at 25 years.

### Features

- **Enhanced Performance Warranty**: LG NeON® 2 has an enhanced performance warranty. After 25 years, LG NeON® 2 is guaranteed at least 90.6% of initial performance.
- **Solid Performance on Hot Days**: LG NeON® 2 performs well on hot days due to its low temperature coefficient.
- **Roof Aesthetics**: LG NeON® 2 is designed with aesthetics in mind using thinner wires that appear almost black at a distance.

When you go solar, ask for the brand you can trust: LG Solar

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**About LG Electronics USA, Inc.**

LG Electronics is a global leader in electronics products by offering solar PV panels and energy storage systems. The company has committed to a world-class energy management program. By supporting a clean and efficient system, we promote renewable energy adoption. In 2018, LG have successfully installed 460,000 solar panels in 22 countries. The NeON® Series (NeON® R, NeON® 2, NeON® 3) all over the "Circle" with 2021 model year, while enhancing the performance and increasing the solar industry.

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**PROJECT: 1510 E 17TH PLACE**

- **AHU: CITY OF TULSA, OK**
- **ZIP CODE: 74120**
- **CLIENT: KATE ELLINGTON**
- **11.250 kW DC-STC/8.700 kW-AC**

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**A1 - PANEL SPECIFICATIONS**
**FLASH LOC**

**UNIRAC**

FLASH LOC is the ultimate attachment for composition shingle and rolled comp roofs. The all-in-one mount installs fast — no knurling on hot roofs to install flashing, no peening or cutting shingles, no pulling nails. Simply drive the lag bolt and inject sealant into the base. FLASH LOC’s patented TRIPLE SEAL technology preserves the roof and protects the penetration with a permanent pressure seal. Kitted with lag bolts, sealant, and hardware for maximum convenience. Don’t just divert water, LOC it out!

**PROJECT:** 1510 E 17TH PLACE

**AHJ:** CITY OF TULSA, OK

**CLIENT:** KATE ELLINGTON

11,250 kW DC-STC/8,700 kW-AC

**AUTHOR:** EE

**DATE:** 29/DEC/21

**REV:** C

**CITY OF TULSA, OK**

**ZIP CODE:** 74120

**A3 - MOUNTING SPECIFICATIONS**

**PRE-INSTALL**

Snap chalk lines for attachment rows. On shingle roofs, snap lines 1-3/4” below upsheen edge of shingle course. Locate rafters and mark attachment locations.

At each location, drill a 7/32” pilot hole. Clean roof surface of dirt, debris, snow, and ice. Next, BACKFILL ALL PILOT HOLES WITH SEALANT.

**NOTE:** Space mounts per racking system install specifications.

**STEP 1: SECURE**

Place FLASH LOC over pilot hole with lag on down-slope side. Align indicator marks on sides of mount with chalk line. Pass included lag bolt and sealing washer through FLASH LOC into pilot hole. Drive lag bolt until mount is held firmly in place.

**NOTE:** The EPDM in the sealing washer will expand beyond the edge of the metal washer when proper torque is applied.

**STEP 2: SEAL**

Insert tip of UNIRAC provided sealant into port. Inject until sealant exits both vents.

Continue array installation, attaching rails to mounts with provided T-bolts.

**NOTE:** When FLASH LOC is installed over gap between shingle tabs or vertical joints, fill gap/joint with sealant between mount and upsheen edge of shingle course.

**USE ONLY UNIRAC APPROVED SEALANTS:** Chelan & Quashnik SC, Chelan & M-1, Essential 4500, or Getta 5-4

**TESTED TO TAS 100 WIND DRIVEN RAIN TEST AND UL 440 MAIN TEST**

**PROTECT THE ROOF**

Install a high-strength waterproof attachment without fitting, peening or damaging shingles.

**LOC OUT WATER**

Attach 8-16” wide mercurial expansion gasket and pressurized sealant shaker. The Triple Seal technology delivers a 10/16” waterproof connection.

**HIGH-SPEED INSTALL**

Simply drive lag bolt and inject sealant into the port to create a permanent pressure seal.

**FASTER INSTALLATION. 25-YEAR WARRANTY.**

**FOR QUESTIONS OR CUSTOMER SERVICE VISIT UNIRAC.COM OR CALL (561) 248-2702**

**SUNPRO**

PHONE: 1-866-753-6978

WWW.GOSUNPRO.COM

**PROJECT:** 1510 E 17TH PLACE

**AHJ:** CITY OF TULSA, OK

**ZIP CODE:** 74120

**CLIENT:** KATE ELLINGTON

11,250 kW DC-STC/8,700 kW-AC

**AUTHOR:** EE

**DATE:** 29/DEC/21

**REV:** C

**A3 - MOUNTING SPECIFICATIONS**

**SUNPRO**

PHONE: 1-866-753-6978

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**PROJECT:** 1510 E 17TH PLACE

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**CLIENT:** KATE ELLINGTON

11,250 kW DC-STC/8,700 kW-AC

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**A3 - MOUNTING SPECIFICATIONS**

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PHONE: 1-866-753-6978

WWW.GOSUNPRO.COM

**PROJECT:** 1510 E 17TH PLACE

**AHJ:** CITY OF TULSA, OK

**ZIP CODE:** 74120

**CLIENT:** KATE ELLINGTON

11,250 kW DC-STC/8,700 kW-AC

**AUTHOR:** EE

**DATE:** 29/DEC/21

**REV:** C

**A3 - MOUNTING SPECIFICATIONS**

**SUNPRO**

PHONE: 1-866-753-6978

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**A3 - MOUNTING SPECIFICATIONS**
Enphase IQ 7 and IQ 7+ Microinverters

The high-powered smart grid-ready Enphase IQ 7 Micro™ and Enphase IQ 7+ Micro™ dramatically simplify the installation process while achieving the highest system efficiency.

Part of the Enphase IQ System, the IQ 7 and IQ 7+ Microinverters integrate with the Enphase IQ Envoy™, Enphase IQ Battery™, and the Enphase Enlighten™ monitoring and analytics software. IQ Series Microinverters extend the reliability standards set forth by previous generations and undergo over a million hours of power-on testing, enabling Enphase to provide an industry-leading warranty of up to 25 years.

Easy to install
- Lightweight and simple
- Faster installation with improved, lighter two-wire cabling
- Built-in rapid shutdown compliant (NEC 2016 & 2017)

Produced and Reliable
- Optimized for high powered 10-cell and 72-cell modules
- More than a million hours of testing
- Class II double-insulated enclosure
- UL listed

Smart Grid Ready
- Complies with advanced grid support, voltage and frequency ride-through requirements
- Remotely updates to respond to changing grid requirements
- Configurable for varying grid profiles
- Meets CA Rule 21 (Ex. TSN-5A)

To learn more about Enphase offerings, visit enphase.com

Enphase IQ 7 and IQ 7+ Microinverters

- Input voltage range: 220 V - 256 V
- Module compatibility: 60-cell PV modules only
- Maximum input DC voltage: 65 V
- Peak power tracking voltage: 37 V - 43 V
- Operating range: 19 V - 46 V
- Min/Max start voltage: 22 V - 48 V
- Max DC short-circuit current (module level): 15 A
- Overvoltage class DC port: II
- DC port backfeed current: 0.6 A
- PV array configuration: 1 x 1 grounded array; no additional DC side protection required
- AC side protection required max. 20 A per branch circuit

Output data (AC)
- IQ 7+ Micro Inverter
- Output power: 260 VA
- Maximum continuous output power: 260 VA
- Nominal (LL) voltage/range: 240 V
- Maximum continuous output current: 1.1 A (240 V)
- Frequency instability: 0.2 Hz
- Extended frequency range: 47 - 64 Hz
- AC short circuit fault current over 2 cycles: 5.8 Arms
- Maximum power per 20 A (L-L) branch circuit: 16 (240 VAC)
- Overvoltage class AC port: III
- AC port backfeed current: 0 A
- Power factor setting: 1.0
- Power factor (4 quadrants): 0.85 leading - 0.85 lagging

Efficiency
- @240 V: 98.9%
- @209 V: 98.4%
- CEC weighted efficiency: 97.0%

Mechanical data
- Ambient temperature range: -40°C to +60°C
- Relative humidity range: 4% to 100% (condensing)
- Weatherproof: Yes
- Enclosure: Class II double-insulated, corrosion resistant polymeric enclosure

Compliance
- CA Rule 21 (Ex. TSN-5A)
- UL 62108-1, UL61010-1, ETL Listed

To learn more about Enphase offerings, visit enphase.com

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A4 - INVERTER SPECIFICATIONS

Project: 1510 E 17TH PLACE
AHJ: CITY OF TULSA, OK
ZIP CODE: 74120
CLIENT: KATE ELLINGTON
11,250 kW DC-STC/8,700 kW-AC

Author: EE
Date: 29/DEC/21
Rev: C
The Enphase IQ Combiner 3-ES/3C-ES™ with IQ Envoy™ and integrated LTE-M1 cell modem (included only with IQ Combiner 3C-ES) consolidates interconnection equipment into a single enclosure and streamlines PV and storage installations by providing a consistent, pre-wired solution for residential applications. It offers up to four 2-pole input circuits and Eator BR series busbar assembly.

Smart
- Includes IQ Envoy for communication and control
- Includes LTE-M1 cell modem (included only with IQ Combiner 3C-ES)
- Includes solar shield to match Ensemble aesthetics and deflect heat
- Flexible networking supports Wi-Fi, Ethernet, or cellular
- Optional AC receptacle available for PLC bridge
- Provides production monitoring and consumption monitoring

Simple
- Reduced size from IQ Combiner X-K0 AMI-240-2
- Centered mounting brackets support single stud mounting
- Supports back and side conduit entry
- Up to four 2-pole branch circuits for 240 VAC plug-in breakers (not included)
- 80 A total PV or storage branch circuits

Reliable
- Durable NRTL-certified NEMA type 3R enclosure
- Five-year limited warranty
- Two-years labor reimbursement program coverage included
- UL listed

Enphase IQ Combiner 3-ES / 3C-ES

**MODEL NUMBER**

- IQ Combiner 3-ES (X-IQ-AMI-240-3-ES) IQ Combiner 3-ES with Enphase IQ Envoy printed circuit board for integrated revenue grade PV production monitoring (AMI CT 2.0 5 A + 0.5%) and consumption monitoring (< 0.5%). Includes a silver solar shield to match the Enphase storage system and Enpower smart switch and to deflect heat.
- IQ Combiner 3C-ES (X-IQ-AMI-240-3C-ES) IQ Combiner 3C-ES with Enphase IQ Envoy printed circuit board for integrated revenue grade PV production monitoring (AMI CT 2.0 5 A + 0.5%) and consumption monitoring (< 0.5%), includes Enphase Mobile Connect LTE-M1 ES, MODMEM-M1, ruling and play interconnection grade cell modem for systems up to 60 microinverters, (Available in the U.K., Canada, Mexico, Brazil, and the US Virgin Islands, where there is available cellular service in the installation area.) Includes a silver solar shield to match the Enphase storage system and Enpower smart switch to deflect heat.

**ACCESSORIES and REPLACEMENT PARTS**

- (Not included, order separately)

**ELECTRICAL SPECIFICATIONS**

- **Ratings**
  - Continuous duty
  - System voltage: 120/240 VAC, 60 Hz
  - Entron BR series breaker rating: 125 A
  - Max. continuous current rating: 60 A
  - Max. continuous current rating (input from photovoltaic): 64 A
  - Max. fuse circuit rating (output): 90 A
  - Branch circuits (solar and/or storage): Up to four 2-pole Eaton BR series Distributed Generation (DG) breakers only (not included)
  - Max. total branch circuit breaker rating (input): 85A of distributed generation (DG) with IQ Envoy breaker included
  - Production monitoring CT: 250 A solid core pre-installed and wired to IQ Envoy
  - Consumption monitoring CT (ET-203-SPLIT): A pair of 20A split core current transformers

**MECHANICAL DATA**

- **Dimensions (H x W x D)**
  - 37.5 in x 45.9 x 18.9 in (957 x 1164 x 478 mm)
  - Height is 21.9 in (553 mm) with mounting brackets.
- **Weight**
  - 7.5 kg (16.6 lbs)
- **Ambient temperature range**
  - -40°C to +40°C (-40°F to 104°F)
- **Coating**
  - Natural convection, plus heat shield
- **Enclosure environmental rating**
  - Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction
- **Wine axes**
  - 25 A to 50 A breaker inputs: Up to 4 AMR copper conductors
  - 50 A breaker branch input: 25 A to 50 A AMR copper conductors
  - Neutral and ground: 14 to 100 copper conductors
  - Always follow local code requirements for conductor sizing.
- **Altitude**
  - Up to 3000 meters (9840 feet)

**INTERNET CONNECTION OPTIONS**

- **Integrated Wi-Fi**
  - 802.11n/g/b
- **Cellular**
  - CELMODEM M1 4G (includes LTE-M1 cellular modem) (included only with IQ Combiner 3C-ES). Note that an Enphase Mobile Connect cellular modem is required for all remote installations.
- **Ethos**
  - Optional, E80-3, Castel (or Call) UTP Ethernet cable (not included)

**COMPLIANCE**

- **Compliance, Combiner**
  - UL 1741, CEC/CSA C22.2 No. 1011, A1-1270, Part 15, Class B, C22.2 NO. 1073 ES Production monitoring: AMI CT 2.0 accuracy class 0.5 (PV) production monitoring; AMI CT 2.0 accuracy class 0.5 (PV) production monitoring

**To learn more about Enphase offerings, visit enphase.com**

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AHL: CITY OF TULSA, OK
ZIP CODE: 74120
CLIENT: KATE ELLINGTON
11.250 kW DC-STC/8.700 kW-AC

AUTHOR: EE
DATE: 29/DEC/21
REV: C

A5 - AC COMBINER SPECIFICATIONS
The Enphase Empower™ smart switch connects the home to grid power, the Enphase storage system, and solar PV. It provides microgrid interconnection device (MID) functionality by automatically detecting and seamlessly transitioning the home energy system from grid power to backup power in the event of a grid failure. It consolidates interconnection equipment into a single enclosure and streamlines grid independent capabilities of PV and storage installations by providing a consistent, pre-wired solution for residential applications.

RELIABLE
- Durable NEMA type 3R enclosure
- Ten-year limited warranty

SMART
- Controls safe connectivity to the grid
- Automatically detects grid outages
- Provides seamless transition to backup

SIMPLE
- Connects to the load or service equipment side of the main load panel
- Center mounting brackets support single stud mounting
- Supports conduit entry from the bottom, bottom left side, and bottom right side
- Supports whole home and partial home backup and standalone backup
- Up to 200A main breaker support
- Includes neutral-fusing transformer for split phase 120/208V backup operation

ELECTRICAL SPECIFICATIONS
- Assembly rating: Continuous operation at 100% of its rating
- Normal voltage / range (L-L): 240 VAC / 100 – 310 VAC
- Voltage measurement accuracy: +/– 0.5 V at nominal (11.2 V and 12.4 VLL)
- Nominal frequency / range: 60 Hz / 56 – 63 Hz
- Frequency measurement accuracy: +/– 0.5 Hz
- Maximum continuous current rating: 160A
- Maximum output overcurrent protection device: 200A
- Maximum overcurrent protection device rating for storage branch circuits: 60A
- Maximum overcurrent protection device rating for PV combiner branch circuits: 60A
- Neutral Fusing Transformer (NFT):
  - Booster rating (pre-installed): 40A between L1 and Neutral, 40A between L2 and Neutral
  - Continuous current power: 300A
  - Maximum continuous current surge: 100A for 10 ms
  - 30A overload protection: 100A for 30 seconds

MECHANICAL DATA
- Dimensions (Width x Height x Depth): 505mm x 91.4mm x 216mm (19.7 x 3.6 x 8.5 in)
- Weight: 39.5 lb (18 kg)
- Ambient temperature range: -40°F to 115°F (-40°C to 46°C)
- Cooling method: Natural convection, plastic heat shield
- Enclosure environmental rating: Outdoor, NEMA type 3R, polycarbonate construction
- Altitude: Up to 2500 meters (8200 feet)

WIRE SIZES
- Connections:
  - Main lugs and backup load lugs
  - CB breakers
  - SR breakers (wire provided)
  - AC combine lugs, Enphase lugs, and generator (future) lugs
  - Neutral (future)
- Cu/Al: 1 AWG – 300 KCMM, Cu/Al: 2 AWG – 300 KCMM, 6 AWG
- Neutral and ground bar: Large holes (0.16 x 0.24 UNF), Small holes (0.03 – 0.22 UNF)

COMPLIANCE
- Compliance:
  - UL 1741, UL 1741 SA, UL1990, UL61010, UL61010-1, UL61010-2
  - CSA 22.2 #207, 207T, 47 CIC, Part 1, Class II, CE/CSA, C-Tick, ACST5

Enphase Empower

Model number
Enphase Empower smart switch with neutral-forming transformer (NFT), Microgrid Interconnect Device (MID), breakers, and screws. Streamlines grid independent capabilities of PV and storage installations.

ACCESSORIES and REPLACEMENT PARTS
- XA-33 PCBAM ENG: Replacement Empower controller printed circuit board
- BR-100A-2P-24V: Main breaker, 2 pole, 100A, 250VAC, CR92100
- BR-150A-2P-24V: Main breaker, 2 pole, 150A, 250VAC, CR92150
- BR-200A-2P-24V: Main breaker, 2 pole, 200A, 250VAC, CR92200
- BR-250A-2P-24V: Main breaker, 2 pole, 250A, 250VAC, CR92250
- BR-300A-2P-24V: Main breaker, 2 pole, 300A, 250VAC, BR300
- BR-400A-2P-24V: Main breaker, 2 pole, 400A, 250VAC, BR400
- BR-500A-2P-24V: Main breaker, 2 pole, 500A, 250VAC, BR500
- BR-600A-2P-24V: Main breaker, 2 pole, 600A, 250VAC, BR600
- BR-800A-2P-24V: Main breaker, 2 pole, 800A, 250VAC, BR800
- BR-1000A-2P-24V: Main breaker, 2 pole, 1000A, 250VAC, BR1000

ELECTRICAL SPECIFICATIONS
- Assembly rating: Continuous operation at 100% of its rating
- Normal voltage / range (L-L): 240 VAC / 100 – 310 VAC
- Voltage measurement accuracy: +/– 0.5 V at nominal (11.2 V and 12.4 VLL)
- Nominal frequency / range: 60 Hz / 56 – 63 Hz
- Frequency measurement accuracy: +/– 0.5 Hz
- Maximum continuous current rating: 160A
- Maximum output overcurrent protection device: 200A
- Maximum overcurrent protection device rating for storage branch circuits: 60A
- Maximum overcurrent protection device rating for PV combiner branch circuits: 60A
- Neutral Fusing Transformer (NFT):
  - Booster rating (pre-installed): 40A between L1 and Neutral, 40A between L2 and Neutral
  - Continuous current power: 300A
  - Maximum continuous current surge: 100A for 10 ms
  - 30A overload protection: 100A for 30 seconds

MECHANICAL DATA
- Dimensions (Width x Height x Depth): 505mm x 91.4mm x 216mm (19.7 x 3.6 x 8.5 in)
- Weight: 39.5 lb (18 kg)
- Ambient temperature range: -40°F to 115°F (-40°C to 46°C)
- Cooling method: Natural convection, plastic heat shield
- Enclosure environmental rating: Outdoor, NEMA type 3R, polycarbonate construction
- Altitude: Up to 2500 meters (8200 feet)

WIRE SIZES
- Connections:
  - Main lugs and backup load lugs
  - CB breakers
  - SR breakers (wire provided)
  - AC combine lugs, Enphase lugs, and generator (future) lugs
  - Neutral (future)
- Cu/Al: 1 AWG – 300 KCMM, Cu/Al: 2 AWG – 300 KCMM, 6 AWG
- Neutral and ground bar: Large holes (0.16 x 0.24 UNF), Small holes (0.03 – 0.22 UNF)

COMPLIANCE
- Compliance:
  - UL 1741, UL 1741 SA, UL1990, UL61010, UL61010-1, UL61010-2
  - CSA 22.2 #207, 207T, 47 CIC, Part 1, Class II, CE/CSA, C-Tick, ACST5

1. This switch is not suitable for use as service equipment in Canada.

To learn more about Enphase offerings, visit enphase.com
The Enphase Encharge 10™ all-in-one AC-coupled storage system is reliable, smart, simple, and safe. It is comprised of three base Encharge 10™ storage units, has a total usable energy capacity of 10.09 kWh and twelve embedded grid-forming microinverters with 3.84 kW power rating. It provides backup capability and installers can quickly design the right system size to meet the needs of both new and retrofit solar customers.

### Reliable
- Proven high-reliability IQ Series Microinverters
- Two-year limited warranty
- Three independent Encharge storage base units
- Twelve embedded IQ 8K-BAT Microinverters
- Passive cooling (no moving parts/fans)

### Smart
- Grid-forming capability for backup operation
- Remote software and firmware upgrade
- Mobile app-based monitoring and control
- Support for self-consumption
- Utility time of use (TOU) optimization

### Simple
- Fully integrated AC battery system
- Quick and easy plug-and-play installation
- Interconnects with standard household AC wiring

### Safe
- Cells safety tested
- Lithium iron phosphate (LFP) chemistry for maximum safety and longevity

## Enphase Encharge 10

**Model Number:** Encharge 10-PN X
- Battery storage system with integrated Enphase Microinverters and battery management unit (BMU) included.
- One Encharge 10 cover kit with cover, wall-mounting bracket, water-tight conduit hubs, and interconnect kit for wiring between batteries (B01-00001-10).

**Accessories:**
- Encharge Mini-R1
- One set of Encharge battery unit installation handles

### Output (AC)
- @ 240 VAC
- Rated (continuous) output power: 3.84 kW
- Peak output power: 5.7 kVA (10 seconds)
- Nominal voltage / range: 240 / 231 – 248 VAC
- Nominal frequency / range: 60 / 57 – 61 Hz
- Rated output current: 16.5 A
- Peak output current: 34.8 A (10 seconds)
- Power factor (adjustable): 0.95 leading – 0.95 lagging
- Maximum units per 20 A branch circuit: 1 unit (single-phase)
- Interconnection: Single-phase
- Maximum AC output circuit fault current over 2-seconds: 68.5 A rms

### Batteries
- Total capacity: 10.09 kWh
- Usable capacity: 10.08 kWh
- Round trip efficiency: 94%
- Nominal DC voltage: 67.2 V
- Maximum DC voltage: 73.5 V
- Ambient operating temperature range: -10°C to 55°C (50°F to 131°F) non-condensing
- Optimum operating temperature range: 0°C to 45°C (32°F to 113°F)
- Chemistry: Lithium iron phosphate (LFP)

### Mechanical Data
- Dimensions (W/H/D): 10.70 in x 6.68 in x 39 in (271.2 x 169.4 x 991.4 mm)
- Weight: 330 lbs (150 kg)
- Enclosure: Dustproof – NEMA type 4X
- IQ 8K-BAT microinverter enclosure: NEMA type 4
- Cooling: Natural convection – No fans
- Altitude: Up to 2000 meters (6560 feet)
- Mounting: Wall mount

### Features and Compliance
- Compatibility: Compatible with grid-tied PV systems, compatible with Enphase IQ Series Microinverters, Enphase Envoy, and Enphase IQ Envoy for backup operation.
- Communication: Wireless 2.4 GHz
- Monitoring: Enphase Manager and MyEnlighten monitoring options; API integration
- Compliance:
  - UL 9540A, UL 62109-1, IEC 62109-2, UL 1741, EN 50549
  - Enphase IQ, IQ 8K, IQ 8K-BAT, IQ 2S, IQ 2S-BAT, EN 50549, IEC 62109-1, IEC 62109-2, UL 1741, CAN/CSA C22.2 No. 1867-16

### Limited Warranty
- Limited Warranty: 10% capacity, up to 10 years or 4500 cycles

1. Supported in backup/standby operation
2. AC to battery at AC inverter power rating
3. Whenever during initial installation or repair

To learn more about Enphase offerings, visit enphase.com

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**AHU:** CITY OF TULSA, OK
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**11,250 kW DC-STC/8,700 kW-AC**

**Author:** EE
**Date:** 29/DEC/21
**Rev.:** C

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**A7 - ENPHASE BATTERY SPECIFICATIONS**

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**SUNPRO**
**PHONE:** 1-866-753-6978
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**Date:** 29/DEC/21
**Rev.:** C

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**A7 - ENPHASE BATTERY SPECIFICATIONS**

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LOCATION OF NEAREST URGENT CARE FACILITY
NAME:
ADDRESS:
PHONE NUMBER:

NOTES:
- INSTALLER SHALL DRAW IN DESIGNATED SAFETY AREA AROUND HOME
- INSTALLERS SHALL UPDATE NAME, ADDRESS, AND PHONE NUMBER OF NEAREST URGENT CARE FACILITY RELATIVE TO THE JOB SITE BEFORE STARTING WORK.

PERSONS COVERED BY THIS JOB SAFETY PLAN

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UNDERGROUND DIG REQUIRED?
YES _______ PERMIT # ____________
HP PERMIT NUMBER: HP-0341-2022

PROPERTY ADDRESS: 1701 SOUTH NEWPORT AVENUE

DISTRICT: NORTH MAPLE RIDGE

APPLICANT: BARRON AND MCCLARY GENERAL CONTRACTORS, INC.

REPRESENTATIVE: NONE

A. CASE ITEMS FOR CONSIDERATION
   1. Removal of windows on porch
   2. Replacement of floor on porch
   3. Installation of windows on west facade
   4. Installation of siding on west facade

B. BACKGROUND
   DATE OF CONSTRUCTION: 1925
   ZONED HISTORIC PRESERVATION: 1993: ORDINANCE AMENDMENT 2005
   NATIONAL REGISTER LISTING: MAPLE RIDGE HISTORIC DISTRICT: 1983
   CONTRIBUTING STRUCTURE: NO
   PREVIOUS ACTIONS:
   COA – JULY 9, 2009 – TPC APPROVAL
   Construction of addition

C. ISSUES AND CONSIDERATIONS
   1. Removal of windows on porch
   2. Replacement of floor on porch
   3. Installation of windows on west facade
   4. Installation of siding on west facade
      i. Proposed are the alteration of the appearance of the porch and the treatment of its floor. According to the applicant, the present enclosure of the porch was not an original feature, and the removal of the windows on the porch has been proposed. Those windows would be installed on the west facade of the residence, which is adjacent to the porch, and siding, which would match the siding elsewhere on the residence, would be installed on that facade as well. The floor of the porch would be replaced with wooden planks whose dimensions would be appropriate for the period of construction of the residence.

   During the review by the Historic Preservation Permit Subcommittee on February 15, discussion focused on the installation of the windows on the west facade and the removal of the masonry to reveal the porch. An elevation of the west facade was requested, and the application was forwarded with a recommendation for approval. Two proposals for the installation of the windows, including an elevation, have been submitted.
ii. Reference: *Tulsa Zoning Code*

**SECTION 70.070-F Standards and Review Criteria**

In its review of HP permit applications, the preservation commission must use the adopted design guidelines to evaluate the proposed work and must, to the greatest extent possible, strive to affect a fair balance between the purposes and intent of HP district regulations and the desires and need of the property owner. In addition, the preservation commission must consider the following specific factors:

1. The degree to which the proposed work is consistent with the applicable design guidelines;
2. The degree to which the proposed work would destroy or alter all or part of the historic resource;
3. The degree to which the proposed work would serve to isolate the historic resource from its surroundings, or introduce visual elements that are out of character with the historic resource and its setting, or that would adversely affect the physical integrity of the resource;
4. The degree to which the proposed work is compatible with the significant characteristics of the historic resource; and
5. The purposes and intent of the HP district regulations and this zoning code.

Reference: *Unified Design Guidelines – Residential Structures*

**SECTION A – GUIDELINES FOR REHABILITATION OF EXISTING STRUCTURES**

**A.1 General Requirements**

A.1.1 Retain and preserve the existing historic architectural elements of your home.

A.1.2 If replacement of historic architectural elements is necessary, match the size, shape, pattern, texture, and directional orientation of the original historic elements.

A.1.3 Ensure that work is consistent with the architectural style and period details of your home.

A.1.4 Return the structure to its original historic appearance using physical or pictorial evidence, rather than conjectural designs.

**A.6 Porches**

A.6.1 Retain and preserve the original historic porch and its character-defining architectural features through repair.

A.6.2 Do not remove character-defining architectural features of your porch, including, but not limited to, ceiling, floor, piers, columns, railings, handrails, steps, bulkheads, skirt/stem wall, and decorative details, such as crown molding, trim, eave brackets, and exposed rafter tails.

A.6.3 If replacement of deteriorated porch elements is necessary, use materials that maintain the character of the structure and the size, shape, pattern, texture, dimensions, and directional orientation of the original historic features.

A.6.4 To return the home to its original historic appearance, use physical or pictorial evidence. If no evidence exists, select porch features which are consistent with the architectural style of your home. Return enclosed porches to original historic open design (which can be staff approved).
SECTION E – GUIDELINES FOR NON-CONTRIBUTING STRUCTURES

E.1 General Requirements

E.1.1 For the purposes of this chapter, non-contributing structures are those listed as not contributing to the historic character of the district due to age or architectural style in the National Register Nomination for the district.

E.1.2 Non-contributing structures will be considered products of their own time. Do not attempt to create a false appearance of the predominant character and architectural style of the rest of the district.

E.1.3 Follow Section A (Rehabilitation) and Section B (Additions) as they relate to the character-defining elements of the non-contributing structure.

E.1.4 Ensure that work on non-contributing structures does not detract from or diminish the historic character of the overall district.
Proposal 1 – Installation of Windows

Proposal 2 – Installation of Windows
HP PERMIT NUMBER: HP-0342-2022
PROPERTY ADDRESS: 1808 EAST 16TH STREET
DISTRICT: YORKTOWN
APPLICANT: STEPHEN F. BECK
REPRESENTATIVE: NONE

A. CASE ITEMS FOR CONSIDERATION
   1. Replacement of door
   2. Replacement of columns
   3. Construction of beam

B. BACKGROUND
   DATE OF CONSTRUCTION: CA. 1922
   ZONED HISTORIC PRESERVATION: 1995
   NATIONAL REGISTER LISTING: YORKTOWN HISTORIC DISTRICT: 2002
   CONTRIBUTING STRUCTURE: YES
   PREVIOUS ACTIONS: NONE

C. ISSUES AND CONSIDERATIONS
   1. Replacement of door
   2. Replacement of columns
   3. Construction of beam
      i. Proposed are the replacement of the door and the columns on the porch and the construction of a beam on the porch. The door selected as the replacement is a Craftsman Style Door with sidelights, and the three columns would be replaced by two square wooden columns. Construction of the beam would increase the distance between the floor of the porch and the bottom of the gable and increase the visibility of the facade of the residence as well. Note that, although the elevation indicates other alterations—the addition of a rail, for example—only the items listed as Case Items have been submitted for review.

During the review by the Historic Preservation Permit Subcommittee on February 15, discussion focused on the proposal for the replacement of the door. The application has been forwarded with a recommendation for approval with the condition that Product Data for a Craftsman Style Door without leaded glass be submitted.
ii. Reference: *Tulsa Zoning Code*

**SECTION 70.070-F Standards and Review Criteria**

In its review of HP permit applications, the preservation commission must use the adopted design guidelines to evaluate the proposed work and must, to the greatest extent possible, strive to affect a fair balance between the purposes and intent of HP district regulations and the desires and need of the property owner. In addition, the preservation commission must consider the following specific factors:

1. The degree to which the proposed work is consistent with the applicable design guidelines;
2. The degree to which the proposed work would destroy or alter all or part of the historic resource;
3. The degree to which the proposed work would serve to isolate the historic resource from its surroundings, or introduce visual elements that are out of character with the historic resource and its setting, or that would adversely affect the physical integrity of the resource;
4. The degree to which the proposed work is compatible with the significant characteristics of the historic resource; and
5. The purposes and intent of the HP district regulations and this zoning code.

ii. Reference: *Unified Design Guidelines - Residential Structures*

**SECTION A – GUIDELINES FOR REHABILITATION OF EXISTING STRUCTURES**

**A.1 General Requirements**

A.1.1 Retain and preserve the existing historic architectural elements of your home.

A.1.2 If replacement of historic architectural elements is necessary, match the size, shape, pattern, texture, and directional orientation of the original historic elements.

A.1.3 Ensure that work is consistent with the architectural style and period details of your home.

A.1.4 Return the structure to its original historic appearance using physical or pictorial evidence, rather than conjectural designs.

**A.3 Doors and Door Surrounds**

A.3.1 Retain and preserve original historic doors and door surrounds, including frames, glazing, panels, sidelights, fanlights, and transoms.

A.3.2 Do not remove, cover, or move existing door, sidelight, fanlight, and transom openings.

A.3.3 To return the home to its original historic appearance, remove non-historic doors and replace them using physical or pictorial evidence of the originals. If no evidence exists, select doors and surrounds which are consistent with the architectural style of your home.

A.3.4 To gain thermal efficiency, storm doors which maintain the appearance and allow maximum visibility of the original historic doors may be installed. Unfinished or clear-finished metals are not allowed. (Storm doors can be staff approved.)

A.3.5 If replacement of deteriorated doors is necessary, select doors and surrounds which are consistent with the architectural style of your home.

A.3.6 If replacement of deteriorated trim is necessary, match the appearance, size, shape, pattern, texture, and detailing of the original historic trim.

A.3.7 When adding new door openings, maintain the proportions of the façade. Match the dimensions and trim details of other doors and surrounds on your home. Select doors and surrounds which are consistent with the architectural style of your home.

A.3.8 Use clear glass in new or replacement doors and sidelights.

A.3.9 Exterior security bars and grilles are discouraged.
A.6 Porches
A.6.1 Retain and preserve the original historic porch and its character-defining architectural features through repair.
A.6.2 Do not remove character-defining architectural features of your porch, including, but not limited to, ceiling, floor, piers, columns, railings, handrails, steps, bulkheads, skirt/stem wall, and decorative details, such as crown molding, trim, eave brackets, and exposed rafter tails.
A.6.3 If replacement of deteriorated porch elements is necessary, use materials that maintain the character of the structure and the size, shape, pattern, texture, dimensions, and directional orientation of the original historic features.
A.6.4 To return the home to its original historic appearance, use physical or pictorial evidence. If no evidence exists, select porch features which are consistent with the architectural style of your home. Return enclosed porches to original historic open design (which can be staff approved).
$2859.75

$477.00 /mo* suggested payments with 6 months' financing. Apply Now.

Add to Cart
New front door will install at the same location.
TULSA PRESERVATION COMMISSION

STAFF REPORT
Tuesday, February 22, 2022
HP-0344-2022

HP PERMIT NUMBER:  HP-0344-2022

PROPERTY ADDRESS:  1571 EAST 19th STREET

DISTRICT:  SWAN LAKE

APPLICANT:  ME DESIGN

REPRESENTATIVE:  NONE

A. CASE ITEMS FOR CONSIDERATION
   1. Replacement of roof on porch
   2. Construction of columns on porch

   Project initiated without an Historic Preservation Permit

B. BACKGROUND
   DATE OF CONSTRUCTION:  CA. 1929
   ZONED HISTORIC PRESERVATION:  1994
   NATIONAL REGISTER LISTING:  SWAN LAKE 1998; ADDITIONAL DOCUMENTATION 2009
   CONTRIBUTING STRUCTURE:  YES
   PREVIOUS ACTIONS:  NONE

C. ISSUES AND CONSIDERATIONS
   1. Replacement of roof on porch
   2. Construction of columns on porch
      i. In response to a report of activity on the site, the staff of the Tulsa Preservation Commission
         investigated and discovered construction of the roof and columns on the porch in progress.
         Because the project had proceeded without a Building Permit, a Stop Work Order was issued
         on December 29, 2021. The Applicant responded promptly to the notification of the require-
         ment for an Historic Preservation Permit and, after a Site Visit with the staff of the Tulsa Pres-
         ervation Commission, submitted an Application Form and documentation. Proposed are (1)
         the extension of the roof of the porch to provide shelter during the passage from the driveway
         to the entry to the residence and (2) the construction of columns to support the roof.

During the review by the Historic Preservation Permit Subcommittee on February 15, discus-

sion focused on the form of the roof proposed as the replacement and the proposal for the

addition of a rail on the porch. A plan of the porch was requested, and the application has

been forwarded with a recommendation for approval of the proposal without the rail.
ii. Reference: Tulsa Zoning Code

SECTION 70.070-F Standards and Review Criteria
In its review of HP permit applications, the preservation commission must use the adopted design guidelines to evaluate the proposed work and must, to the greatest extent possible, strive to affect a fair balance between the purposes and intent of HP district regulations and the desires and need of the property owner. In addition, the preservation commission must consider the following specific factors:
1. The degree to which the proposed work is consistent with the applicable design guidelines;
2. The degree to which the proposed work would destroy or alter all or part of the historic resource;
3. The degree to which the proposed work would serve to isolate the historic resource from its surroundings, or introduce visual elements that are out of character with the historic resource and its setting, or that would adversely affect the physical integrity of the resource;
4. The degree to which the proposed work is compatible with the significant characteristics of the historic resource; and
5. The purposes and intent of the HP district regulations and this zoning code.


SECTION A – GUIDELINES FOR REHABILITATION OF EXISTING STRUCTURES

A.1 General Requirements
A.1.1 Retain and preserve the existing historic architectural elements of your home.
A.1.2 If replacement of historic architectural elements is necessary, match the size, shape, pattern, texture, and directional orientation of the original historic elements.
A.1.3 Ensure that work is consistent with the architectural style and period details of your home.
A.1.4 Return the structure to its original historic appearance using physical or pictorial evidence, rather than conjectural designs.

A.6 Porches
A.6.1 Retain and preserve the original historic porch and its character-defining architectural features through repair.
A.6.2 Do not remove character-defining architectural features of your porch, including, but not limited to, ceiling, floor, piers, columns, railings, handrails, steps, bulkheads, skirt/stem wall, and decorative details, such as crown molding, trim, eave brackets, and exposed rafter tails.
A.6.3 If replacement of deteriorated porch elements is necessary, use materials that maintain the character of the structure and the size, shape, pattern, texture, dimensions, and directional orientation of the original historic features.
A.6.4 To return the home to its original historic appearance, use physical or pictorial evidence. If no evidence exists, select porch features which are consistent with the architectural style of your home. Return enclosed porches to original historic open design (which can be staff approved).
1571 East 19th Street – Survey 1995

1571 East 19th Street – December 2021
TULSA PRESERVATION COMMISSION

STAFF REPORT
Tuesday, February 22, 2022
HP-0345-2022

HP PERMIT NUMBER: HP-0345-2022

PROPERTY ADDRESS: 2211 EAST 20TH STREET

DISTRICT: YORKTOWN HISTORIC DISTRICT

APPLICANT: SHARI TIDWELL

REPRESENTATIVE: NONE

A. CASE ITEM FOR CONSIDERATION
1. Replacement of windows
   Project initiated without an Historic Preservation Permit

B. BACKGROUND
   DATE OF CONSTRUCTION: CA. 1930
   ZONED HISTORIC PRESERVATION: 1995
   NATIONAL REGISTER LISTING: YORKTOWN HISTORIC DISTRICT: 2002
   CONTRIBUTING STRUCTURE: YES
   PREVIOUS ACTIONS:
   HP-0296-2021 – AUGUST 12, 2021 – TPC REVIEW
   Extension of period of review to permit exploration of repair of windows

C. ISSUES AND CONSIDERATIONS
1. Replacement of windows
   i. Proposed is the replacement of the windows on the south and west facades of the residence (Windows 1 – 11 on Window Survey Form). During the review of a previous application, several types of windows—aluminum-clad wooden windows, for example—were considered, and the applicant assumed that these windows had been approved for installation. An extension of the period of review was granted to permit the exploration of the repair of the windows. After the repair of the windows on the east facade, the applicant determined that the windows on the south and west facades could not be repaired and proceeded with the installation of aluminum-clad wooden windows.
ii. Reference: *Tulsa Zoning Code*

SECTION 70.070-F Standards and Review Criteria

In its review of HP permit applications, the preservation commission must use the adopted design guidelines to evaluate the proposed work and must, to the greatest extent possible, strive to affect a fair balance between the purposes and intent of HP district regulations and the desires and need of the property owner. In addition, the preservation commission must consider the following specific factors:

1. The degree to which the proposed work is consistent with the applicable design guidelines;
2. The degree to which the proposed work would destroy or alter all or part of the historic resource;
3. The degree to which the proposed work would serve to isolate the historic resource from its surroundings, or introduce visual elements that are out of character with the historic resource and its setting, or that would adversely affect the physical integrity of the resource;
4. The degree to which the proposed work is compatible with the significant characteristics of the historic resource; and
5. The purposes and intent of the HP district regulations and this zoning code.

Reference: *Unified Design Guidelines - Residential Structures*

SECTION A – GUIDELINES FOR REHABILITATION OF EXISTING STRUCTURES

A.1 General Requirements

A.1.1 Retain and preserve the existing historic architectural elements of your home.

A.1.2 If replacement of historic architectural elements is necessary, match the size, shape, pattern, texture, and directional orientation of the original historic elements.

A.1.3 Ensure that work is consistent with the architectural style and period details of your home.

A.1.4 Return the structure to its original historic appearance using physical or pictorial evidence, rather than conjectural design.

A.4 Windows and Window Trim

A.4.1 Retain and preserve original historic windows, including glazing, trim, muntins, and character-defining details.

A.4.2 Do not remove, cover, or move existing window openings.

A.4.3 To return the home to its original historic appearance, remove non-historic windows and trim. When selecting replacements, use physical or pictorial evidence. If no evidence exists, select windows which are consistent with the architectural style of your home.

A.4.4 To gain thermal efficiency, storm windows which maintain the appearance and allow maximum visibility of the original historic windows may be installed. Unfinished and clear-finished metals are not allowed. (Storm windows can be staff approved.)

A.4.5 If replacement of deteriorated windows is necessary, match the original historic windows in sash design, size, shape, muntin pattern, location, glazing area, and tint. Insulated glass (double-pane) windows may be used. Exterior muntins are required on simulated-divided-light windows.

1. Brady Heights – Match the original historic window material.
2. Elmwood – Match the original historic window material

A.4.6 If replacement of deteriorated trim is necessary, match the appearance, size, shape, pattern, texture, and detailing of the original historic trim.
### BASIC REQUIREMENTS

1. Photographs or drawings of each elevation of the structure
2. Site plan of the structure with each window opening numbered
3. Exterior photographs of each window opening numbered corresponding to the site plan
4. Interior photographs of each window opening numbered corresponding to the site plan
5. Detail photographs of problem areas of each window as necessary (numbered corresponding to site plan)
6. Condition Evaluation of each window
7. Original window design (double-hung, casement, etc...), pattern (3/1, 6/6, etc...), materials (wood, clad, etc...). Specify if different for certain openings.
8. Proposed window design (double-hung, casement, etc...), pattern (3/1, 6/6, etc...), materials (wood, clad, etc...). Specify if different for certain openings.
9. Product brochure and a picture or drawing of proposed window(s)
10. Other

---

The Window Survey Form should be completed when requesting a Certification of Appropriateness (COA) for window replacement. The basic requirements are needed for each window replacement; however, Planning Department Staff may require further information for an application on a case-by-case basis. This form should be completed and submitted with COA Application.

Only windows proposed for replacement should be assigned a number and described under the same number for the rest of this form. TPC does not review windows on the rear of the property if not visible from an abutting street. Windows in pairs or groupings should be assigned separate numbers. Do not include sidelights or transoms associated with a door.

Describe the issues and condition of each window proposed for replacement in detail, referring to specific parts of the windows (see diagram). Photographs of the interior and exterior are required. Additional close-up photographs, showing evidence of the window condition, must be provided to better document problem areas. Note: painted shut, broken glass, and broken sash cords are not necessary grounds for approving replacement.

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Anatomy of a Double-Hung Window

---

September 2015
LEGAL DESCRIPTION:
LOT THIRTEEN (13), BLOCK SEVEN (7), WOODWARD PARK, AN ADDITION TO TULSA, TULSA COUNTY, STATE OF OKLAHOMA, ACCORDING TO THE RECC THEREOF.

ALSO KNOWN AS:
2211 EAST 20TH STREET, TULSA, OK 74104

PREPARED FOR APEX TITLE & CLOSING SERVICES, LLC. IT IS NOT A LAND OR BC IN FOR THE ENSLAVEMENT OR FENCE BUILDING, OR OTHER FUTURE IMPR.
<table>
<thead>
<tr>
<th>QUOTE</th>
<th>QUOTE DATE</th>
<th>PO NUMBER</th>
<th>CUSTOMER REF.</th>
<th>TERMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>63066</td>
<td>7/14/2021</td>
<td></td>
<td>Kenny Myers - 2211 E 20th</td>
<td>Due on Receipt</td>
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<table>
<thead>
<tr>
<th>NO</th>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>SIZE</th>
<th>PRICE</th>
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<tbody>
<tr>
<td>1</td>
<td>Single Hung (SH) UNIT SIZE, BRONZE WHITE, EQUAL SASH, LOWE ARGON FILLED, GRID BY SASH, CLASSIC SDL COLONIAL=[3H2VP], HALF SCREEN, NO NAIL FIN</td>
<td>10</td>
<td>29 3/4 W X 57 1/4 H</td>
<td></td>
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<tr>
<td>2</td>
<td>Single Hung (SH) UNIT SIZE, BRONZE WHITE, EQUAL SASH, LOWE ARGON FILLED, GRID BY SASH, CLASSIC SDL COLONIAL=[3H2VP], HALF SCREEN, NO NAIL FIN</td>
<td>2</td>
<td>31 3/4 W X 57 1/4 H</td>
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<td>3</td>
<td>Single Hung (SH) UNIT SIZE, BRONZE WHITE, EQUAL SASH, LOWE ARGON FILLED, GRID BY SASH, CLASSIC SDL COLONIAL=[3H2VP], HALF SCREEN, NO NAIL FIN</td>
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<td>24 W X 57 1/4 H</td>
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<td>4</td>
<td>Single Hung (SH) UNIT SIZE, BRONZE WHITE, EQUAL SASH, LOWE ARGON FILLED, GRID BY SASH, CLASSIC SDL COLONIAL=[3H2VP], HALF SCREEN, NO NAIL FIN</td>
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<td>5</td>
<td>Single Hung (SH) UNIT SIZE, BRONZE WHITE, EQUAL SASH, LOWE ARGON FILLED, GRID BY SASH, CLASSIC SDL COLONIAL=[3H2VP], HALF SCREEN, NO NAIL FIN</td>
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<td>29 3/4 W X 48 1/2 H</td>
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<td>6</td>
<td>Single Hung (SH) UNIT SIZE, BRONZE WHITE, EQUAL SASH, LOWE ARGON FILLED, GRID BY SASH, CLASSIC SDL COLONIAL=[3H2VP], HALF SCREEN, NO NAIL FIN</td>
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<td></td>
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<tr>
<td>NO</td>
<td>DESCRIPTION</td>
<td>QTY</td>
<td>SIZE</td>
<td>PRICE</td>
<td>TOTAL</td>
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<tr>
<td>7</td>
<td>Single Hung (SH)</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>UNIT SIZE, BRONZE WHITE, EQUAL SASH, LOWE ARGON FILLED, GRIDS BY SASH, CLASSIC SDL COLONIAL-[3H2VP], HALF SCREEN, NO NAIL FIN</td>
<td></td>
<td></td>
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</tbody>
</table>

**TOTALS:** 21  
**SUBTOTAL:**      
**TOTAL:**

**QUOTE COMMENT:**

Quotes are valid for thirty (30) days. Quotes produced by E-Quote are pricing based on user information. Changes in quantities and/or descriptions may result in price variations, up or down. Product prices may change between the time of quote generation and purchase order submission. EWT reserves the right to correct pricing, technical errors or omissions at anytime prior to accepting a purchase order. It is the user's responsibility to verify that products ordered meet local building code requirements.

Order Acceptance

Customer Signature ___________________________ Date ___________________________
<table>
<thead>
<tr>
<th>Contract/Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor and trim package to install windows on project: 2211 E. 20th St.:</td>
</tr>
<tr>
<td>Windows have been before the Tulsa Historical Society and have been accepted as a historically accepted window: voted unanimously by the board.</td>
</tr>
<tr>
<td><strong>Windows must be prepaid in advance.</strong></td>
</tr>
<tr>
<td><strong>Labor and trim package paid after installation.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total:</th>
</tr>
</thead>
<tbody>
<tr>
<td>$7,000.00</td>
</tr>
</tbody>
</table>

Notice to homeowner: You are hereby notified that any person performing on your property or furnishing materials for the construction, repair, or improvement of your property will be entitled to a lien against your property if he is not paid in full.
Line # 1

- DBLH-1: Black Alum Clad
  AAMA.2605; LoE-272
  Box Size: 33-3/8x56-1/2
  1 Full Black Screen(s) Applied
  BetterVue Mesh
  Preserve Glass (Top)
  Silver Spacer
  7/8" SDL (Top) (3W2H) Profiled
  Interior - With Black Internal Grids
  Preserve Glass (Bottom)
  Silver Spacer
  4-9/16" Jamb
  Coppertone Hardware
  Beige Jambliners
  Primed Interior
  Divided Lite Primed Interior
  Wide Rail Double Hung (Glass
  Size: 28x24)

  Sash 1
  U-Factor=0.32
  SHGC=0.27
  Visible Transmittance=0.46
  PG=LC-PG35-H
  Single Unit Rating Only

23 Each @ $903.20 $20,773.60

Quoted prices are good for 30 days (Expires: 3/17/2021)
and are subject to correction of computational errors.

TOTAL NET PRICE $20,773.60
TULSA CITY (Taxable Amt: $20,773.60) $1,769.29
TOTAL QUOTATION PRICE $22,542.89

* upon acceptance; exact size measured from inside
* Modification of sizes included in price
* for Bill Donohue
CLAD DOUBLE HUNG - CONCEALED JAMBLINER
HORIZONTAL SECTION
SCALE: 6" = 1' 0"

LINCOLN WOOD PRODUCTS, INC.
1400 W. TAYLOR ST.  Merrill, WI 54452  (715) 536-2461
CLAD DOUBLE HUNG - WIDE RAILS
VERTICAL SECTION
SCALE: 6" = 1' 0"

LINCOLN WOOD PRODUCTS, INC.
1400 W. TAYLOR ST. Merrill, WI 54452 (715) 536-2461