

CITY OF WEST CHICAGO

WHERE HISTORY & PROGRESS MEET

**Historical Preservation Commission
Tuesday, April 18, 2023 - 6:00 p.m.**

RESCHEDULED FROM TUESDAY, APRIL 25, 2023

**West Chicago City Hall – Council Chambers
475 Main Street
West Chicago, IL 60185**

A G E N D A

1. **Call to Order, Roll Call and Establishment of a Quorum**
2. **Public Comment**
3. **Certificate of Appropriateness Review**
 - A. C.O.A. 23-05 – 312 E Washington Street – Solar Panels – Continued from March 28, 2023
 - B. C.O.A. 23-07 – 129 Fremont Street – Concrete Steps
4. **Preliminary Review**
5. **Historic District/Landmark Updates**
6. **Other Business**
7. **Adjournment**

CC: Mayor
City Council
Michael Guttman, City Administrator
Historical Preservation Commission Members
Tom Dabareiner, Community Development Director
Mehul Patel, Public Works Director
John Sterrett, City Planner
Sara Phalen, City Museum Director
News Media

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West Chicago, Illinois
60185

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www.westchicago.org

Ruben Pineda
MAYOR
Nancy M. Smith
CITY CLERK

Michael L. Guttman
CITY ADMINISTRATOR

CITY OF WEST CHICAGO

HISTORICAL PRESERVATION COMMISSION AGENDA ITEM SUMMARY

ITEM TITLE:

Solar Panels
312 E Washington Street
Roof-Mounted Solar Panels

C.O.A. # 23-05

AGENDA ITEM NUMBER: 3 A.**COMMISSION AGENDA DATE:** 04-18-23**STAFF REVIEW:** John Sterrett, City Planner**SIGNATURE** _____**ITEM SUMMARY:**

Cherissa Marzano-Gabriel of Revolution Solar has applied for approval of a Certificate of Appropriateness on behalf of Holly Perez, owner of 312 East Washington Street in the East Washington Street Historic District, to install 10 roof-mounted solar panels on an existing detached garage on the property. Seven of these panels will be installed on the rear of the structure and will not be visible from public view along East Washington Street. The remaining three panels will be installed on the roof facing East Washington Street and will be visible from public view. No panels will be installed on the existing single-family home. Please see the attached narrative, plans, and photos for more information.

The Commission voted to continue the review of this application to the next meeting pending an explanation from the solar company as to the why panels are necessary on the street side of the garage. The solar company indicated that the placement is to maximize solar production.

According to the property survey for the East Washington Street Historic District, the home is a bungalow with Dutch colonial features constructed in the 1920s and identified as contributing, though not a candidate for local landmark status.

ACTION PROPOSED:

Consideration of solar panels on an existing detached garage at 312 E Washington Street.



Scott E. Wyssling, PE
Coleman D. Larsen, SE, PE
Gregory T. Elvestad, PE

76 North Meadowbrook Drive
Alpine, UT 84004
office (201) 874-3483
swyssling@wysslingconsulting.com

March 9, 2023

Revolution Solar
9981 West 190th Street Unit K
Mokena, IL

Re: Engineering Services
Perez Residence
312 East Washington Street, West Chicago, IL
4.500 kW System

To Whom It May Concern:

We have received information regarding solar panel installation on the roof of the above referenced structure. Our evaluation of the structure is to verify the existing capacity of the roof system and its ability to support the additional loads imposed by the proposed solar system.

A. Site Assessment Information

1. Site visit documentation identifying attic information including size and spacing of framing for the existing roof structure.
2. Design drawings of the proposed system including a site plan, roof plan and connection details for the solar panels. This information will be utilized for approval and construction of the proposed system.

B. Description of Structure:

Roof Framing: 2x6 dimensional lumber at 16" on center.
Roof Material: Comp Shingles
Roof Slopes: 24 degrees
Attic Access: Accessible
Foundation: Permanent

C. Loading Criteria Used

- **Dead Load**
 - Existing Roofing and framing = 7 psf
 - New Solar Panels and Racking = 3 psf
 - TOTAL = 10 PSF
- **Live Load** = 20 psf (reducible) – 0 psf at locations of solar panels
- **Ground Snow Load** = 25 psf
- **Wind Load** based on ASCE 7-16
 - Ultimate Wind Speed = 107 mph (based on Risk Category II)
 - Exposure Category B

Analysis performed of the existing roof structure utilizing the above loading criteria is in accordance with the 2018 International Building Code, including provisions allowing existing structures to not require strengthening if the new loads do not exceed existing design loads by 105% for gravity elements and 110% for seismic elements. This analysis indicates that the existing framing will support the additional panel loading without damage, if installed correctly.

D. Solar Panel Anchorage

1. The solar panels shall be mounted in accordance with the most recent Sunmodo installation manual. If during solar panel installation, the roof framing members appear unstable or deflect non-uniformly, our office should be notified before proceeding with the installation.
2. The maximum allowable withdrawal for a 1/4" wood screw in 1/2" plywood/OSB board is 55 lbs per screw (per APA technical note E830d). Connection on the roof is utilizing four (4) 1/4" wood screws into the existing decking to resist uplift forces. Contractor to verify installation to be performed in accordance with the manufacturer's recommendations. Based on four (4) 1/4" wood screws into 1/2" sheathing, 220 lbs of uplift resistance is provided per attachment.
3. Considering the wind speed, roof slopes, size and spacing of framing members, and condition of the roof, the panel supports shall be placed no greater than 48" on center (24" o/c @ specified corners).

Based on the above evaluation, this office certifies that with the racking and mounting specified, the existing roof system will adequately support the additional loading imposed by the solar system. This evaluation is in conformance with the 2018 IBC, current industry standards and practice, and is based on information supplied to us at the time of this report.

Should you have any questions regarding the above or if you require further information do not hesitate to contact me.

Very truly yours,



Coleman D. Larsen
Illinois License No. 081008431



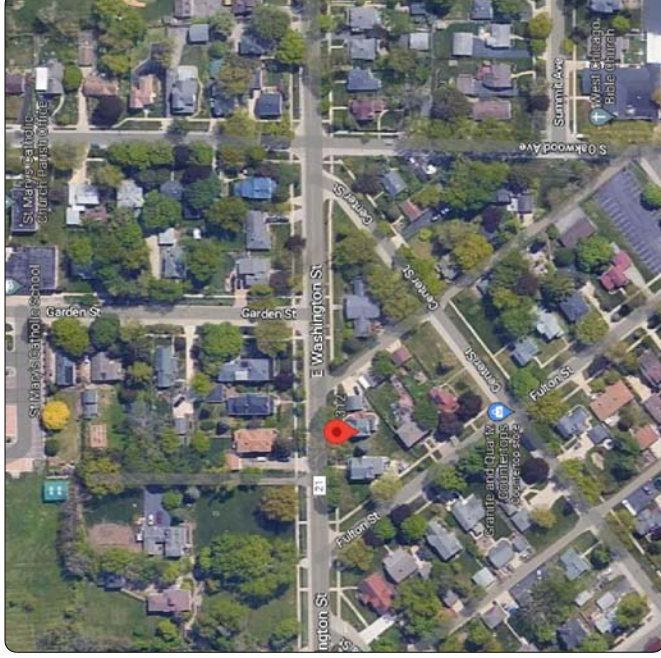
3.9.23

Expires: 11-30-2024

AERIAL VIEW:



MAP VIEW:



Revolution Energy Systems Inc.
9981 West 190th St
Unit K Mokena IL 60448
T: 708-995-1643

SITE INFORMATION

HOLLY & BRANDON PEREZ
312 E WASHINGTON ST
WEST CHICAGO, IL 60185
AC System Size: 3.25 kW AC / 3.25 kVA
DC System Size: 4.50 kW DC
Lat: 41.88486
Long: -88.20095
PV Modules
(10) CANADIAN SOLAR CS3W-450MS (450W)
(10) ENPHASE IQ8M-72-2-US (240V)
Inverter(s)

COMMONWEALTH EDISON

SHEET INDEX:

- PV01 COVER PAGE
- PV02 SITE PLAN
- PV03 ROOF ATTACHMENTS
- PV04 MOUNTING DETAIL
- PV05 LINE DIAGRAM
- PV06 ELECTRICAL CALCS
- PV07 LABELS
- PV08 PLACARD
- PV09 SITE PHOTOS

DRAWN BY: K. DEL MAR

DATE:
3/8/2023

COVER PAGE - PV01

PHOTOVOLTAIC (PV) SYSTEM SPECIFICATIONS

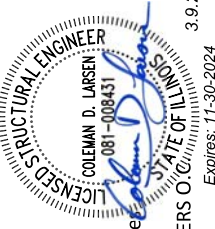
EQUIPMENT:
AC System Size: 3.25 kW AC / 3.25 kVA
DC SYSTEM SIZE: 4.50 kW DC
(10) CANADIAN SOLAR CS3W-450MS (450W) PV Modules
(10) ENPHASE IQ8M-72-2-US (240V) Inverters
RACKING: NANOMOUNT - 48" / 24" O/C AT MARKED CORNERS O.C.

APPLICABLE GOVERNING CODES

- 2014 NEC
- 2018 IBC
- 2018 IFC

SITE SPECIFICATIONS

OCCUPANCY: R-3
ZONING: RESIDENTIAL

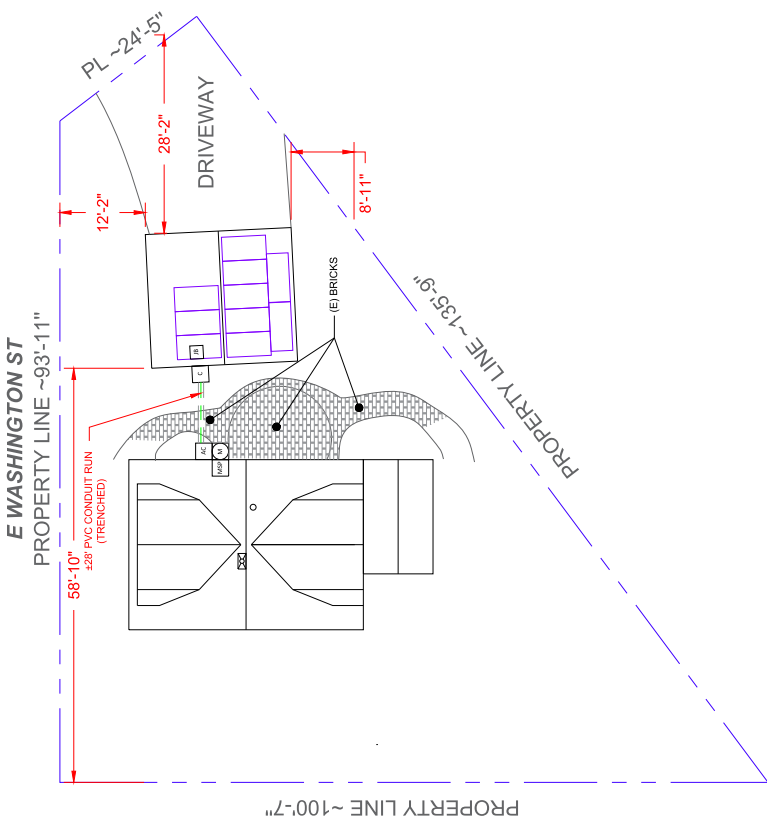
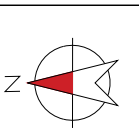


3.9.23
Expires: 11-30-2024

GENERAL NOTES

1. INSTALLATION OF SOLAR PHOTOVOLTAIC SYSTEM SHALL BE IN ACCORDANCE WITH NEC ARTICLE 690, AND ALL OTHER APPLICABLE NEC CODES WHERE NOTED OR EXISTING
2. PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL COMPLY WITH NEC ARTICLE 110
3. ALL WIRES, INCLUDING THE GROUNDING ELECTRODE CONDUCTOR SHALL BE PROTECTED FROM PHYSICAL DAMAGE IN ACCORDANCE WITH NEC ARTICLE 250
4. THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE; THIS SYSTEM IS UTILITY INTERACTIVE PER UL 1741 AND DOES NOT INCLUDE STORAGE BATTERIES OR OTHER ALTERNATIVE STORAGE SOURCES
5. ALL DC WIRES SHALL BE SIZED ACCORDING TO [NEC 690.8]
6. DC CONDUCTORS SHALL BE WITHIN PROTECTED RACEWAYS IN ACCORDANCE WITH [NEC 690.31]
7. ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL JURISDICTIONAL BUILDING CODE

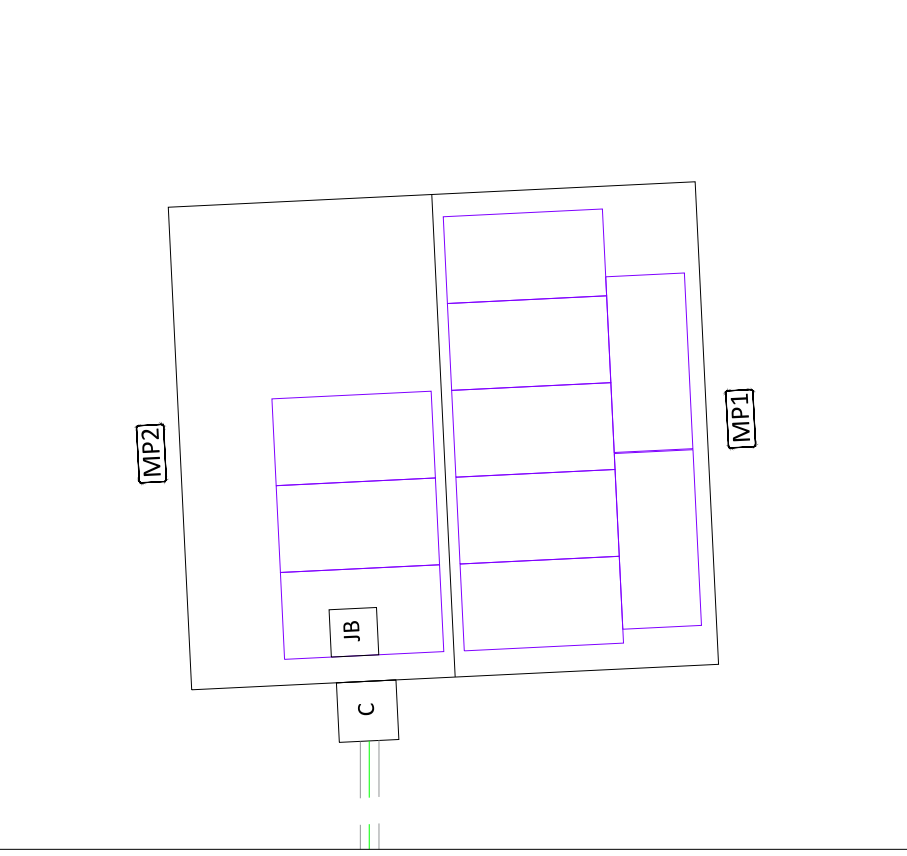
R324.6 (EXCEPTION 1): DETACHED NON HABITABLE STRUCTURES ARE NOT SUBJECT TO FIRE SETBACKS



ARRAY DETAILS:

MOUNTING PLANE:	AZIMUTH:	TILT:
MP1	173°	24°
MP2	357°	24°

CLOSE UP OF GARAGE



Revolution Energy Systems Inc.
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WEST CHICAGO, IL 60185

AC System Size: 3.25 kW AC / 3.25 kVA

DC System Size: 4.50 kW DC

Lat: 41.88486

Long: -88.20095

(10) CANADIAN SOLAR CS3W-450MS (450W)
PV Modules

(10) ENPHASE IQ8M-72-2-US (240V)
Inverter(s)

COMMONWEALTH EDISON



Signed 3/10/2023

DRAWN BY: K. DEL MAR

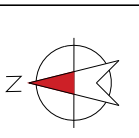
DATE:
3/9/2023

SITE PLAN - PV02

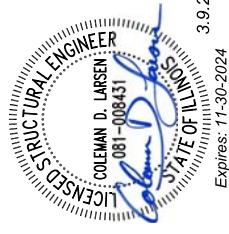
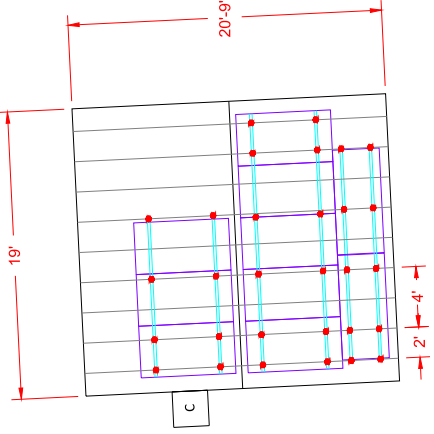
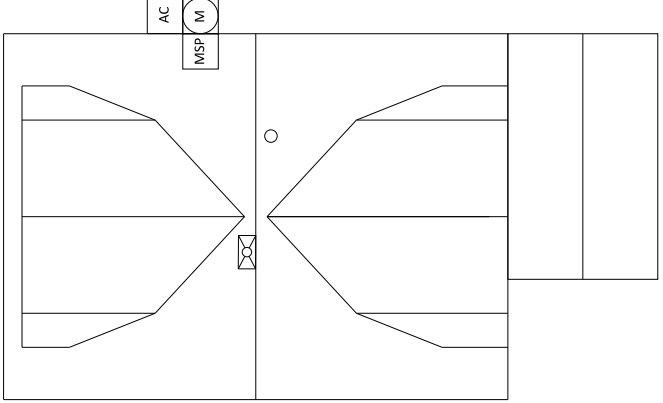
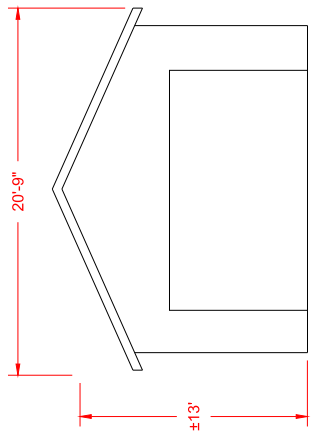
EQUIPMENT LEGEND:

- UTILITY METER
- MAIN SERVICE METER SOCKET
- MAIN SERVICE PANEL
- AC DISCONNECT
- METER SOCKET (For utility PV meter)
- PV
- VISIBLE, LOCKABLE, LABELED AC DISCONNECT
- MAIN SERVICE DISCONNECT
- SUB PANEL
- SUB
- LOAD CENTER
- LC
- COMBINER BOX
- C
- INVERTER
- INV
- SMART SWITCH (IQ System Controller)
- SS
- JUNCTION BOX
- JB
- PV MODULES
- AUTOMATIC TRANSFER SWITCH
- ATST
- FIRE ACCESS PATHWAY (3' TYP)
- PROPERTY LINE
- PROPERTY LINE
- VISIBLE, LOCKABLE, LABELED AC DISCONNECT LOCATED WITHIN 10' OF UTILITY METER

R324.6 (EXCEPTION 1): DETACHED NON HABITABLE STRUCTURES ARE NOT SUBJECT TO FIRE SETBACKS



GARAGE ELEVATION



Revolution Energy Systems Inc.
9981 West 190th St
Unit K Mokena IL 60448
T: 708-995-1643

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WEST CHICAGO, IL 60185
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DC System Size: 4.50 kW DC
Lat. 41.88486
Long. -88.20095
(10) CANADIAN SOLAR CS3W-450M5 (450W)
PV Modules
(10) ENPHASE IQ8M-72-2-US (240V)
Inverter(s)

COMMONWEALTH EDISON

EQUIPMENT INFORMATION:		ROOF INFORMATION		PHOTOVOLTAIC ARRAY STRUCTURAL CRITERIA:	
RAIL MANUFACTURER:	SUNMODO	ROOF TYPE:	COMP SHINGLE	PV MODULE COUNT:	10
RAIL PART NUMBER:	SMR	ROOF FRAMING:	RAFTER	ARRAY AREA:	MODULE COUNT * 23.63 ft ² = 236.30
ATTACHMENTS	NANOMOUNT	RAFTER/TOP CHORD SIZE:	2" X 6"	ROOF AREA:	394.11 ft ²
ATTACHMENT QTY:	24	RAFTER/TOP CHORD SPACING:	16"	PERCENT OF ROOF COVERED:	60%
SPLICE QTY:	2	ATTACHMENT SPACING:	48" / 24" O/C AT MARKED CORNERS	ARRAY WEIGHT:	MODULE COUNT * 54.9 lbs = 549.00 lbs
MIDCLAMP QTY:	14			POINT LOAD:	ARRAY LBS/ATTACHMENTS = 22.88
ENDCLAMP QTY:	12			DISTRIBUTED LOAD:	(ARRAY) WEIGHT/AREA = 2.3 lbs/ft ²

DRAWN BY: K. DEL MAR
DATE: 3/9/2023
ROOF ATTACHMENTS - PV03



Revolution Energy Systems Inc.
 9981 West 190th St
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 T: 708-995-1643

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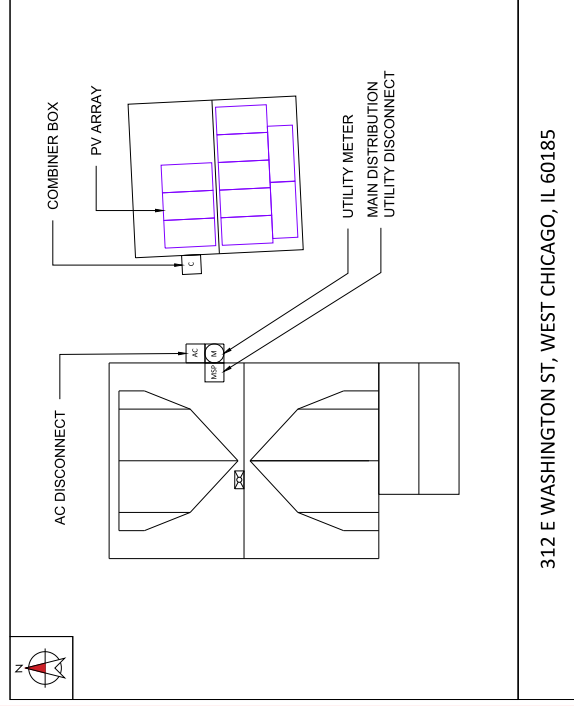
DRAWN BY: K. DEL MAR

DATE:
 3/8/2023

PLACARD - PV08

CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM ROOF MOUNTED SOLAR ARRAYS WITH SAFETY DISCONNECTS AS SHOWN:



312 E WASHINGTON ST, WEST CHICAGO, IL 60185

DIRECTORY
 PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM.

(ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS OUTLINED WITHIN:
 NEC 690.56(B)&(C), [NEC 705.10])



HiKu

SUPER HIGH POWER MONO PERC MODULE

430 W ~ 455 W

CS3W-430 | 435 | 440 | 445 | 450 | 455MS

MORE POWER

- 26% more power than conventional modules
- Up to 4.5% lower LCOE
- Up to 2.7% lower system cost
- Low NIMOT: $42 \pm 3^\circ\text{C}$
- Low temperature coefficient (Pmax): $-0.35\% / ^\circ\text{C}$

Better shading tolerance

MORE RELIABLE

- Lower internal current, lower hot-spot temperature
- Minimizes micro-crack impacts
- Heavy snow load up to 5400 Pa, wind load up to 3600 Pa*

- 25** year linear power output warranty*
- 12** years enhanced product warranty on materials and workmanship*

*According to the applicable Canadian Solar Limited Warranty Statement.

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2015 / Quality management system
 ISO 14001:2015 / Standards for environmental management system
 OHSAS 18001:2007 / International Standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730: VDE / CE / MCS / IINMETRO
 UL 1703: CSA / IEC 61701 ED2: VDE / IEC 62716: VDE / IEC 60068-2-68: 605
 UNI 9177 Reaction to Fire Class 1 / JIS C 8454



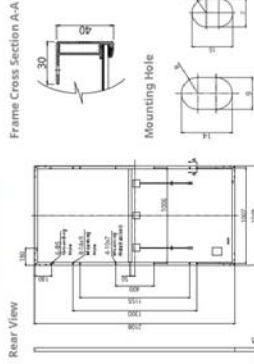
*As there are different certification requirements in different markets, please contact your local Canadian Solar sales representative for the specific certificates applicable to the products in the regions which the products are to be used.

CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. No. 1 module supplier for quality and performance/price ratio in IHS Module Customer Insight Survey. As a leading PV project developer and manufacturer of solar modules with over 40 GW deployed around the world since 2001.

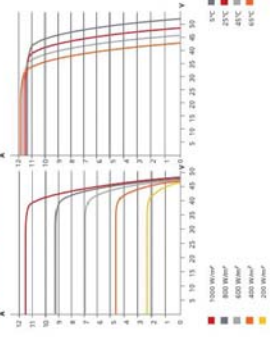
* For detail information, please refer to Installation Manual.

CANADIAN SOLAR INC.
 545 Speedvale Avenue West, Guelph, Ontario N1K 1E6, Canada, www.canadiansolar.com, support@canadiansolar.com

ENGINEERING DRAWING (mm)



CS3W-435MS / PV CURVES



MECHANICAL DATA

Specification	Data
Cell Type	Mono-crystalline
Cell Arrangement	144 [2 X (12 X 6)]
Dimensions	2108 X 1048 X 40 mm (83.0 X 41.3 X 1.57 in)
Weight	24.9 kg (54.9 lbs)
Front Cover	3.2 mm tempered glass
Frame	Anodized aluminium alloy, crossbar enhanced
J-Box	IP68, 3 bypass diodes
Cable	4 mm² (IEC), 12 AWG (UL)
Cable Length (Including Connector)	1350 mm (53.1 in), lead-frog connection: 1670 mm (65.7 in)
Connector	14 series or H4 UTX or MC4-EVO2
Per Pallet	27 pieces

Per Container (40' HQ) 594 pieces
 * For detailed information, please contact your local Canadian Solar sales and technical representatives.

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	$-0.35\% / ^\circ\text{C}$
Temperature Coefficient (Voc)	$-0.27\% / ^\circ\text{C}$
Temperature Coefficient (Isc)	$0.05\% / ^\circ\text{C}$
Nominal Module Operating Temperature	$42 \pm 3^\circ\text{C}$

PARTNER SECTION



* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the ongoing innovation and product enhancement. Canadian Solar Inc. reserves the right to make necessary adjustment to the information described herein at any time without further notice. Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills, and please carefully read the safety and installation instructions before using our PV modules.

CANADIAN SOLAR INC.
 545 Speedvale Avenue West, Guelph, Ontario N1K 1E6, Canada, www.canadiansolar.com, support@canadiansolar.com

CITY OF WEST CHICAGO

HISTORICAL PRESERVATION COMMISSION AGENDA ITEM SUMMARY

ITEM TITLE:

Concrete Step Repair/Replacement
129 Fremont Street
Anona West, Inc.

C.O.A. # 23-07

AGENDA ITEM NUMBER: 3 B.**COMMISSION AGENDA DATE:** 04-18-23**STAFF REVIEW:** John Sterrett, City Planner**SIGNATURE** _____**ITEM SUMMARY:**

Anona West, Inc., owner of 129 Fremont Street in the Turner Junction Historic District, is requesting approval to remove and replace two existing concrete steps on the entrance to the building along Fremont Street. The replacement steps will also be concrete. The existing concrete steps are cracking and in need of repair. The steps will not be altered in size. The existing tile on the top step directly in front of the entrance door is proposed to be removed and replaced entirely with concrete. When the Commission performed a preliminary review of the proposal, there was a consensus that the tile should be saved and reinstalled on the top step. Please see scope of work photos for more details.

The Vernacular commercial building was constructed in 1929. According to the Historical Districts Property Survey, the building is contributing to the Turner Junction Historic District but is not a candidate for local landmark status.

ACTION PROPOSED:

Consideration of replacement of concrete steps at the building entrance of 129 Fremont Street.

Anoua West

Able Construction
Jesus Ortiz

PROPOSAL

42 W. Streamwood Blvd.
Streamwood, Illinois 60107
Tel.
Fax. (630) 855-8543

PROPOSAL NO. 1
PAGE NO. _____
DATE 3-3-23

PROPOSAL SUBMITTED TO	WORK TO BE PERFORMED AT
NAME <u>Dean</u>	ADDRESS <u>129 Fremont St.</u>
ADDRESS <u>Dean@comcast.net</u>	CITY, STATE, ZIP <u>West Chicago IL</u>
CITY, STATE, ZIP _____	DATE OF PLANS _____
HOME PH <u>630-673-9034</u>	ARCHITECT _____

WE HEREBY PROPOSE TO FURNISH ALL THE MATERIALS AND PERFORM ALL LABOR NECESSARY FOR THE COMPLETION OF

- #1 DRIVE
- #2 PATIO
- #3 RM ADDITION
- #4 CITY/WK
- #5 WALK
- #6 APPROACH

Replace front entrance stoop 5'-5" x 4' with 2 steps (5'-5")

<input checked="" type="checkbox"/> CONCRETE 4" / 5" / 6" THICK	<input type="checkbox"/> OTHER _____	<input checked="" type="checkbox"/> 6 BAG Mix (4000 PSI)	<input type="checkbox"/> 5 1/2 BAG Mix (3000 PSI)	<input type="checkbox"/> SPECIAL Mix
<input checked="" type="checkbox"/> GRAVEL BASE 3" TO 4"	<input type="checkbox"/> COMPACTED	<input checked="" type="checkbox"/> 1/2" REINFORCED ROD (RE-BAR)	<input type="checkbox"/> OTHER	
<input type="checkbox"/> SUPPORT POST HOLES	<input type="checkbox"/> 6" x 42"	<input type="checkbox"/> 8" x 42"	ON THREE FOOT CENTERS <i>or needed</i>	
<input type="checkbox"/> 10 GAUGE WIRE MESH	<input type="checkbox"/> VISQUEEN			
<input type="checkbox"/> ANCHOR BOLTS	<input type="checkbox"/> 1/2" EXPANSION JOINT			
<input type="checkbox"/> SCORING LINES (WHERE NECESSARY)	<input type="checkbox"/> SEALER (CHEMICAL MEMBRANE TYPE)			
<input checked="" type="checkbox"/> LIGHT BROOM FINISH	<input type="checkbox"/> SMOOTH FINISH	<input checked="" type="checkbox"/> CLEAN UP JOB SITE		
<input type="checkbox"/> GRASS AND DIRT TO REMAIN ON PROPERTY	<input type="checkbox"/> CONCRETE TRUCK ALLOWED ON PROPERTY			

COMMENTS: *City registration, permit, insurance and bond included in price*

Due to the severe Illinois weather conditions—No guarantee can be given for cracking or chipping of concrete. All material is guaranteed to be as specified, and the above work to be performed in accordance with the drawings and specifications submitted for above work and completed in a substantial workmanlike manner for the sum of:

three thousand two hundred fifty Dollars (\$ 3250.00)

with payment to be as follows: ONE HALF BEGINNING OF JOB — BALANCE ON COMPLETION

Any alteration from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. Contractor is not responsible for any lawn or utility damage.
Additional Terms & Information: See Other Side

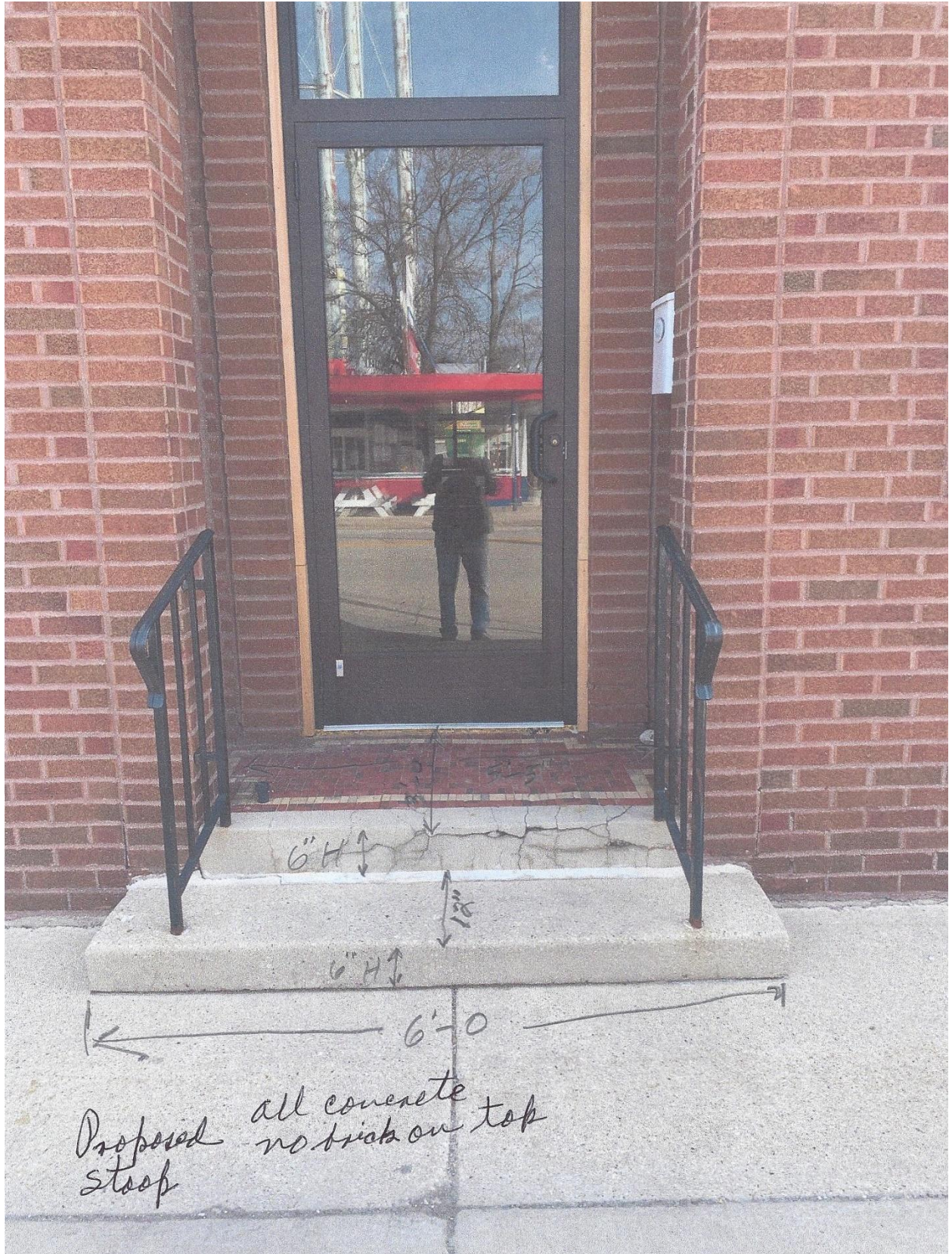
Authorized Signature Jesus Ortiz
Note: This proposal may be withdrawn by us if not accepted within _____ days.

Acceptance Of Proposal - The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Signature Dean Ortiz

Date of Acceptance: _____

Signature _____



Proposed stoop all concrete no brick on top



Able Construction
42 W. Streamwood Blvd.
Streamwood, Illinois 60107
JOSE ORTIZ
630-342-1169