

CITYOF ORANGE HISTORIC PRESERVATION COMMISSION
ORANGE CITYHALL
29 North Day Street, Orange, New Jersey 07050
PHONE (973) 952-6344 - FAX (973) 672-6643

CITYOF ORANGE PRESERVATION COMMISSION
APPLICATION FOR CERTIFICATION OF APPROPRIATENESS

DATE RECEIVED _____ APPLICATION # _____

APPLICANT(S):

Name of Applicant(s): Pro Custom Solar dba Momentum Solar

Address: 325 High Street, Metuchen, NJ 08840 Email: permits@momentumsolar.com

Tele. #: (Day) 732-366-1854 (Eve) _____ (Fax) 848-291-9798

Relationship of Applicant to Property owner:

Owner(s) Lessee Prop. Under Contract Other (Specify)

Explanation if Other: Contractor

OWNER(S), IF DIFFERENT THAN APPLICANT:

Name(s) of Owner(s):

Audrey Raines

Address: 233 Heywood Avenue Email: _____

Telephone Number: (Day) 201-709-4094 (Eve) _____

Street Address of the Property that is subject of Application: 223 Heywood Avenue
Orange, NJ 07050

Tax Block: 6601 Lot: 14

Name of Historic District in which Property lies: Montrose-Seven Oaks Historic District



Existing use of the Property:

Single family residential home

Existing zoning of the Property:

Single family residential home

Describe in detail the proposed work to be done at the Property.

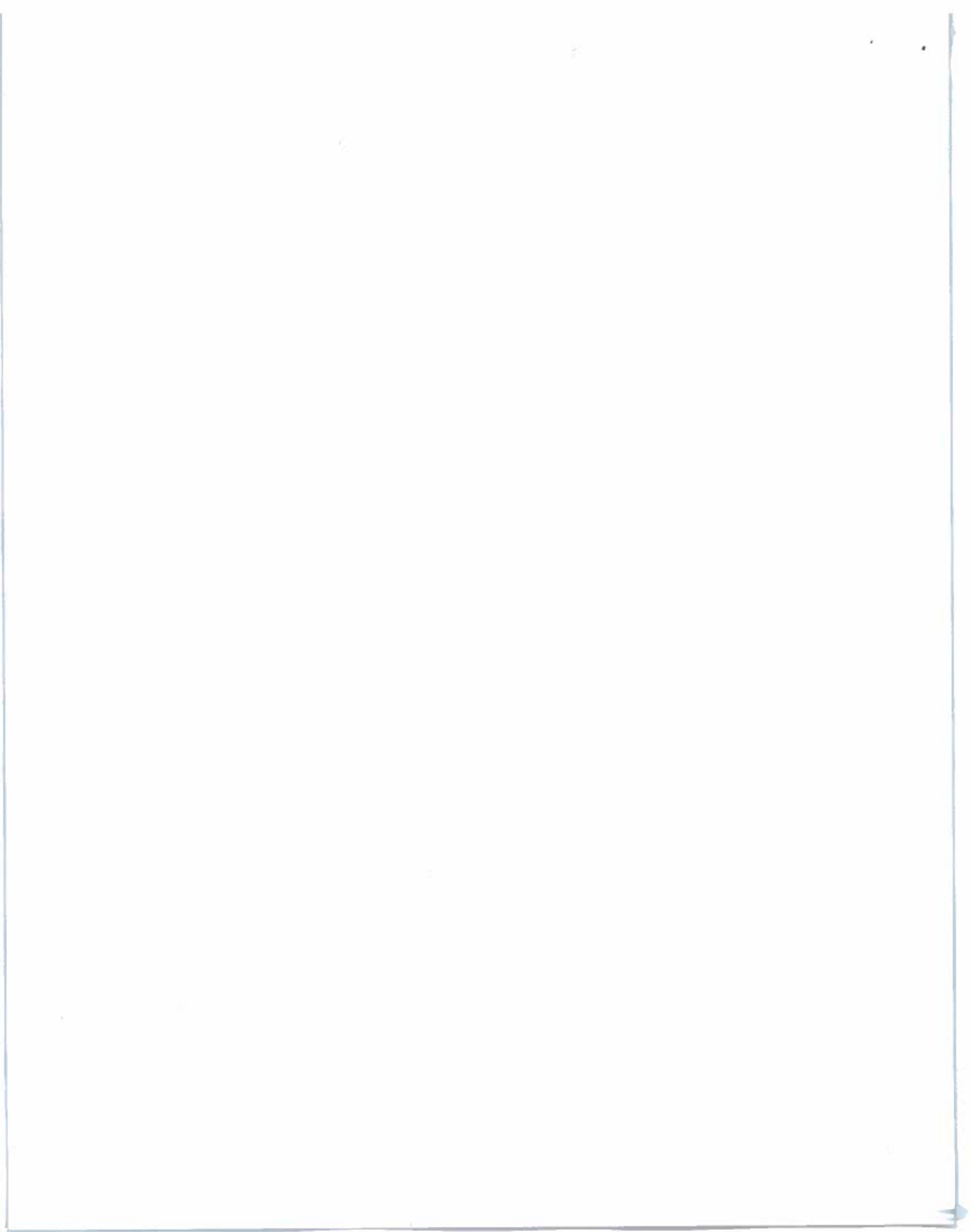
Installation of a rooftop railless solar panel pv system. Rooftop solar does not exceed height of roof.

Explain how you plan to prevent, minimize and mitigate any adverse effects to this Property, to nearby historically significant properties, and to the Historic District?

Panels are not placed on the front of the home.

Each Application must be accompanied by sketches, drawings, photographs, descriptions or other information sufficient to show the proposed alterations, additions, changes or new construction. The Commission may require the subsequent submission of such additional materials as it reasonably requires to make an informed decision. A submission shall include:

- **A photograph of each elevation of the structure.**
- **Fifteen (15) copies of drawings, photographs, material brochures, samples, specifications or information that may be necessary to assist the Commission. Copies may be submitted electronically, or by CD or flash drive.**
- **Fifteen (15) copies of a survey, or if applicable, a site plan showing the location of new and existing structures on the site and their location with respect to the building line, property line, and the front of those buildings or structures immediately adjacent to each side of the lot to be built upon.**
- **Fifteen (15) copies of façade elevation(s), if applicable, of the proposed work in sufficient detail to identify the limits and location of the proposed work, and existing and proposed materials to be used.**



▪ \$70.00 Application fee (check or money order made to the City of Orange).

By signing this Application, I hereby certify that the owner of record authorizes the proposed work and I have been authorized by the owner to make this Application as his/her authorized agent. By signing this Application, the owner hereby grants authorization to the Commission members, and its professional and support staff to enter the Property in question for inspection purposes. By signing this application I further agree that the attorney's and professional staff's review of my application is chargeable to me and that I agree to pay for such review separately from the application fee, by depositing an escrow payment of \$ _____

Signature of Applicant(s) 
(Print Name) Pro Custom Solar dba Momentum Solar

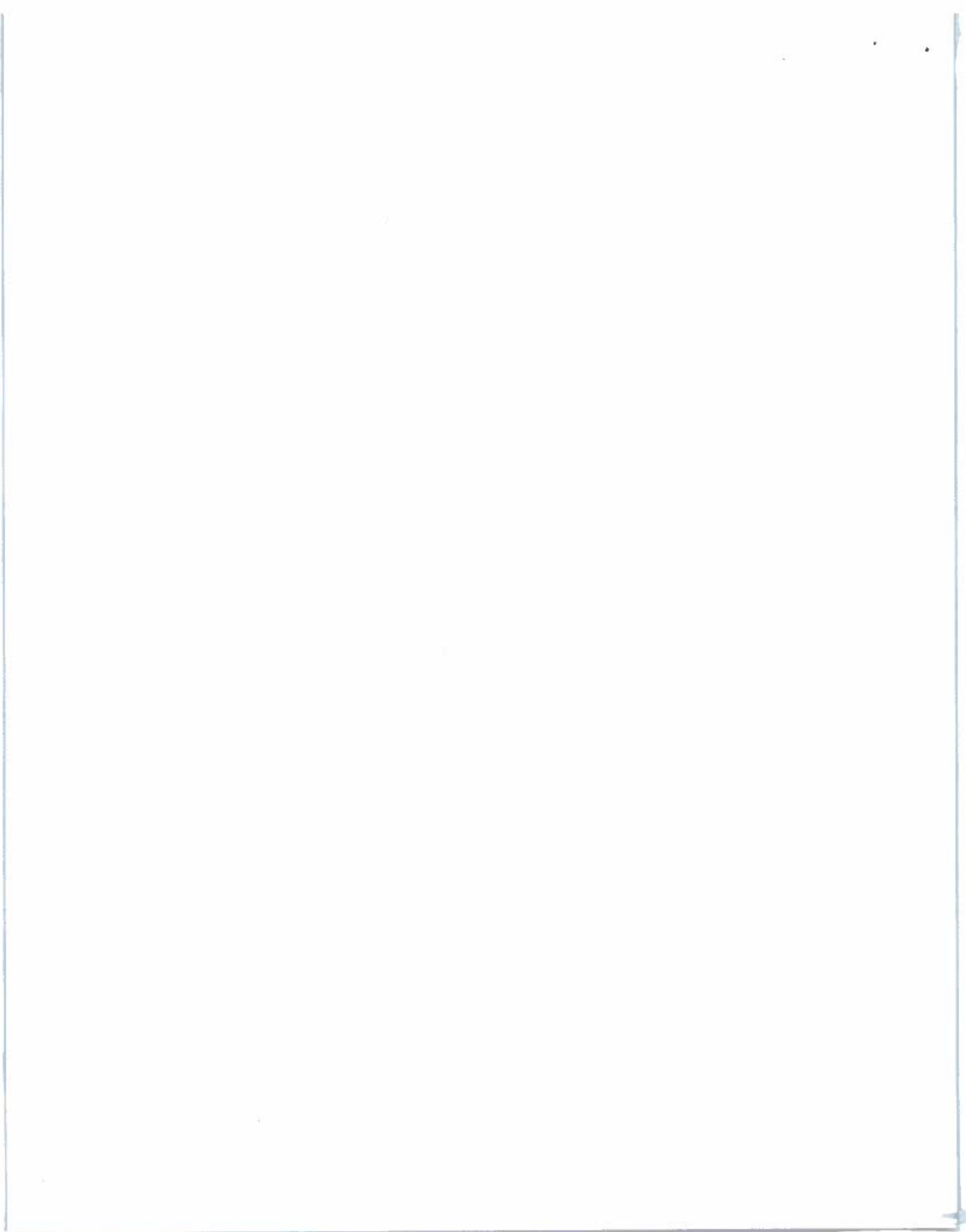
Date 5/16/2022

Signature of Owner(s) (if different than Applicant) 
(Print Name) Audrey Raines

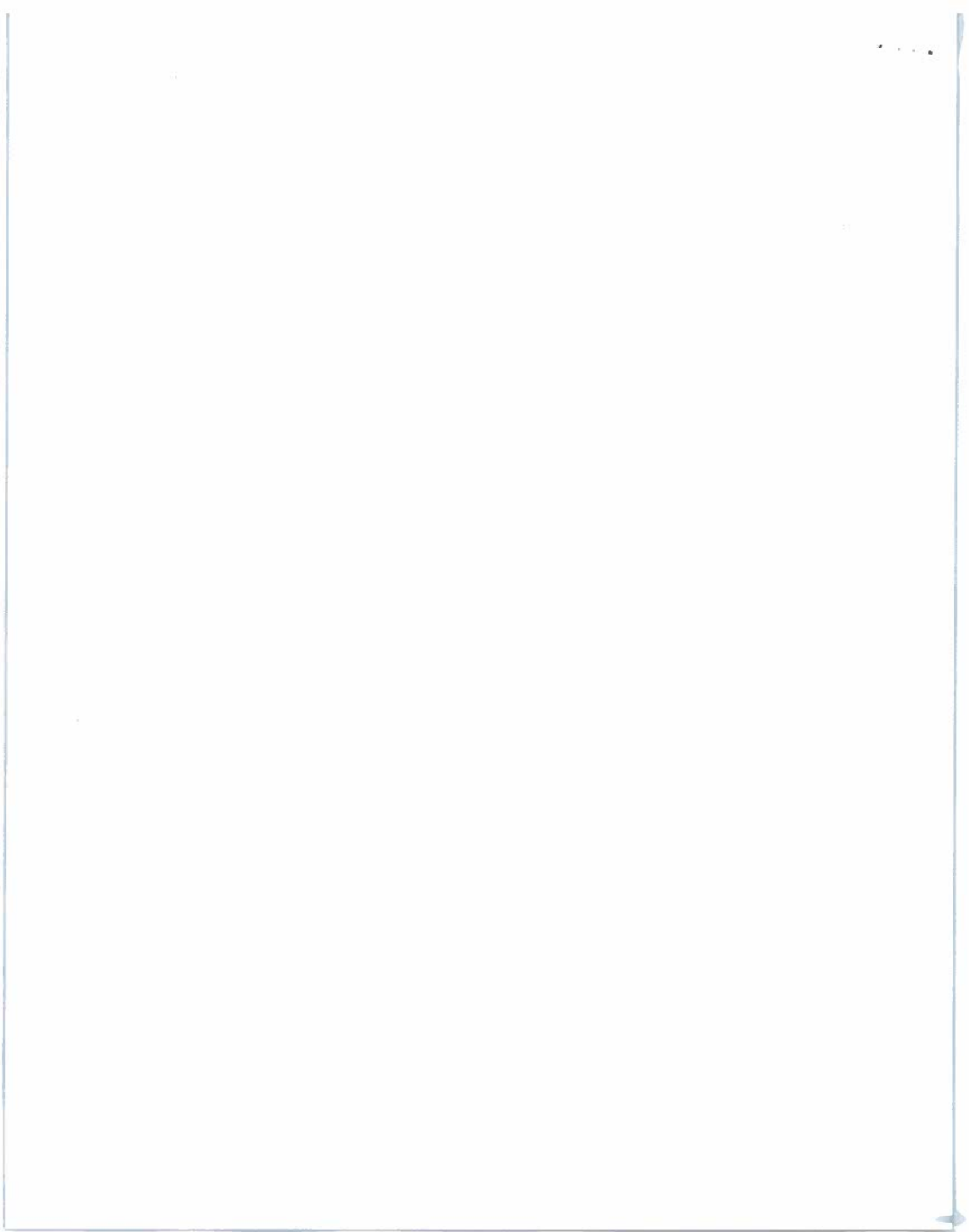
Date 5/16/2022

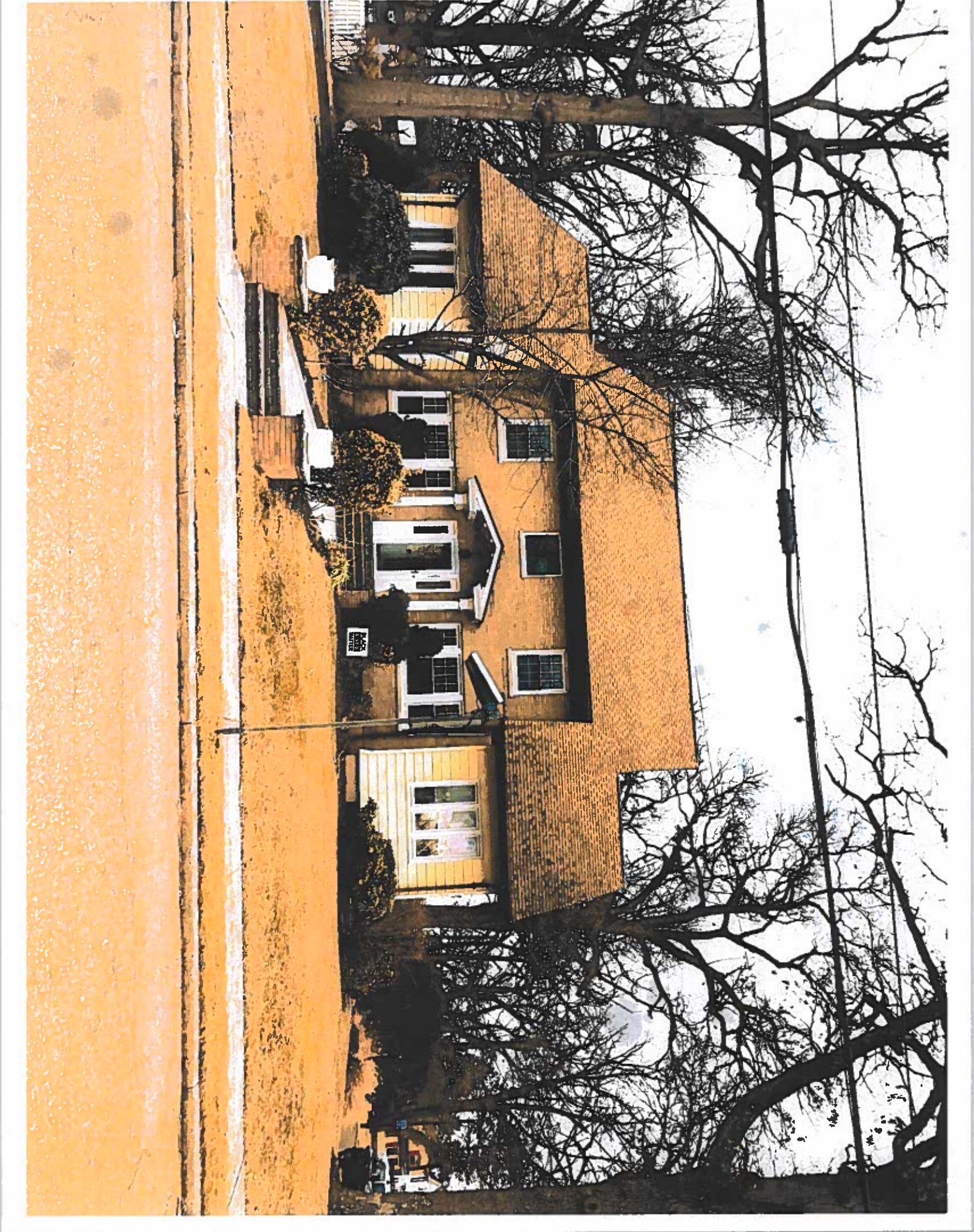
Submittal of this Application form-properly signed, with the indicated copies of documents and the Application fee will constitute a complete Application. Upon receipt of a complete Application, the Board Secretary will schedule the Application with the Commission. The Applicant delays his/her own Application if all of these required items are not submitted. The Commission shall reach a decision on the Application within forty-five (45) days of submission of a complete Application. The Applicant must appear in front of the Commission in order to present the Application during the public hearing on the scheduled date.

Telephone: _____ Fax: _____ Website: _____

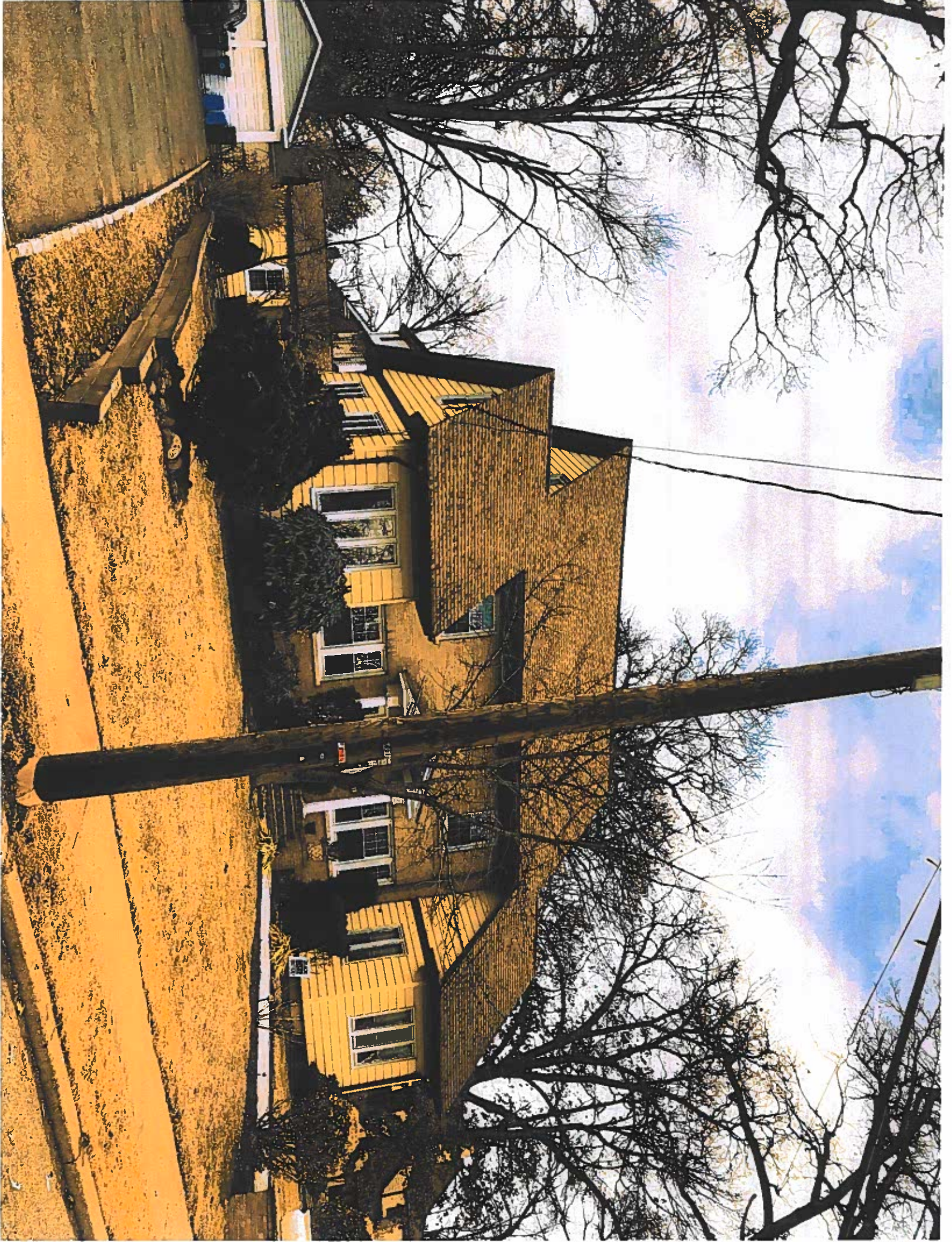


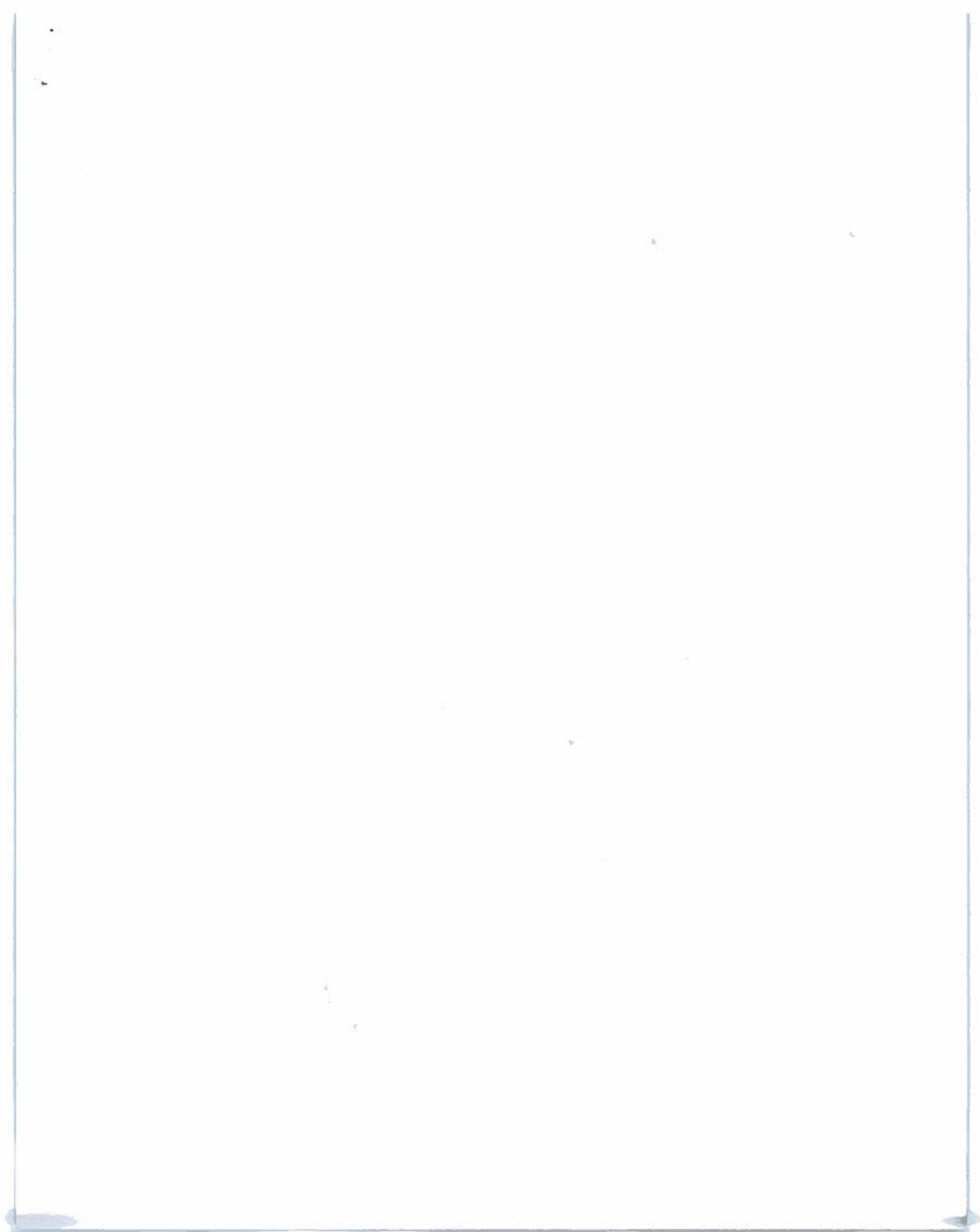
Certification of Appropriateness Application Form Adopted 10/21/15, revised 3/15/17.



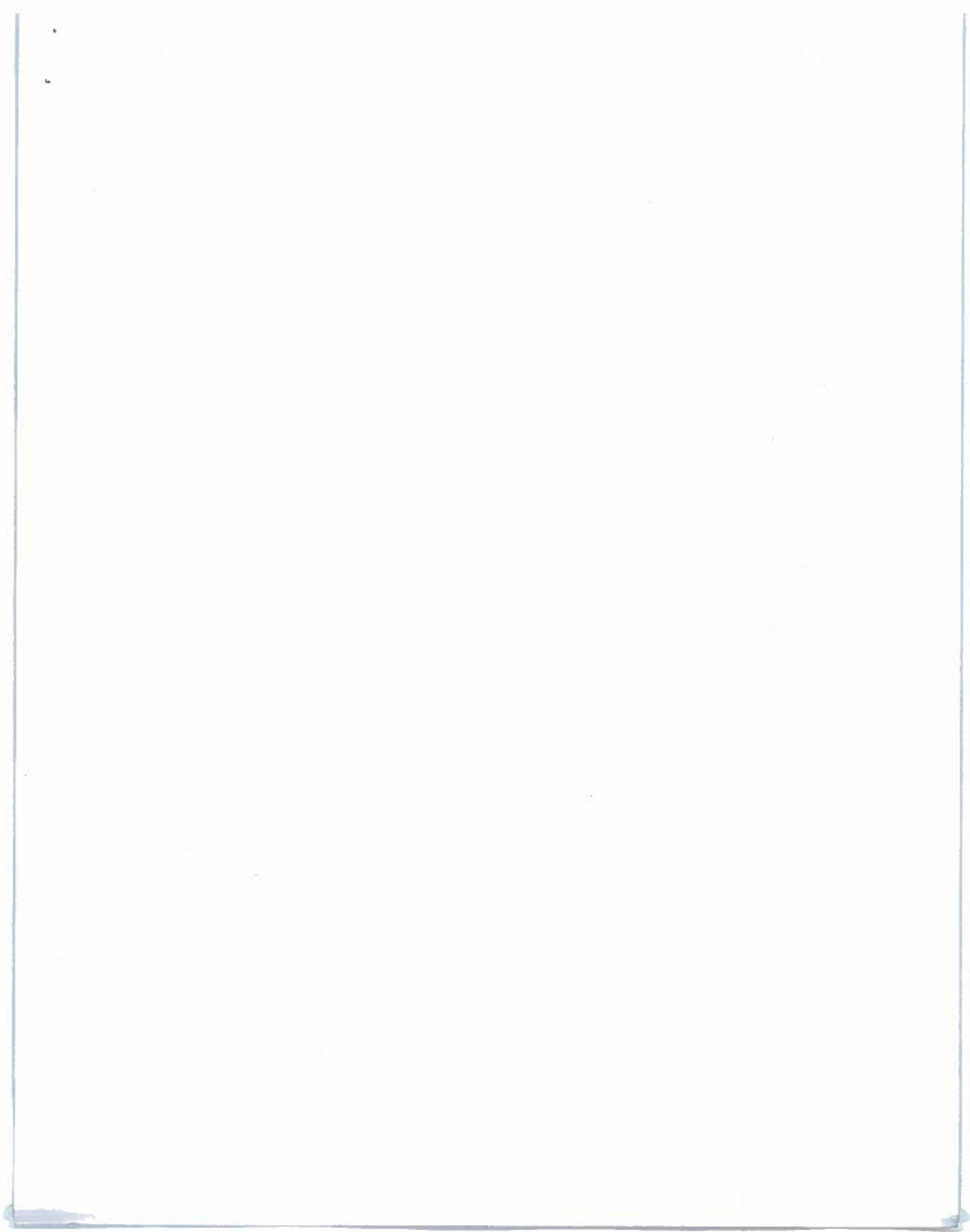


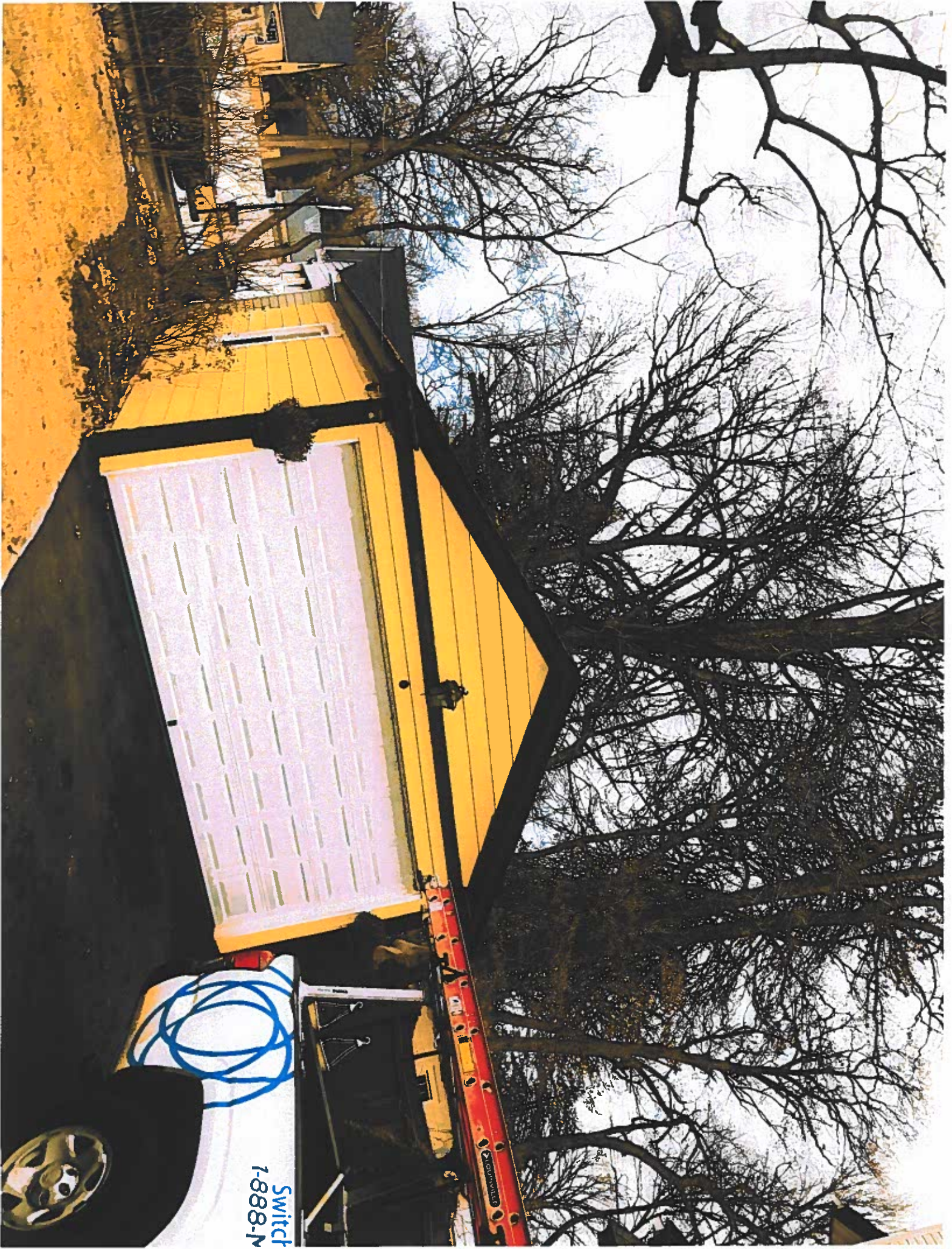


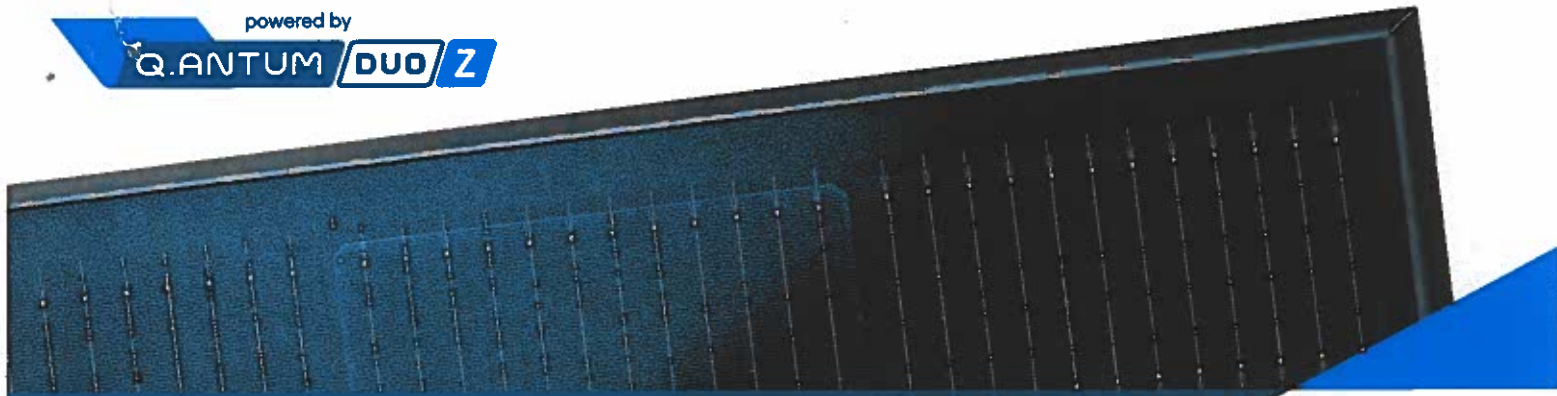












Q.PEAK DUO BLK ML-G10+ 385-405

ENDURING HIGH
 PERFORMANCE



Quality
 Controlled PV

www.tuv.com
 ID 1111232615



BREAKING THE 20% EFFICIENCY BARRIER

Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 20.9%.



THE MOST THOROUGH TESTING PROGRAMME IN THE INDUSTRY

Q CELLS is the first solar module manufacturer to pass the most comprehensive quality programme in the industry: The new "Quality Controlled PV" of the independent certification institute TÜV Rheinland.



INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behavior.



ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID Technology, Anti PID Technology¹, Hot-Spot Protect and Traceable Quality Tra.QTM.



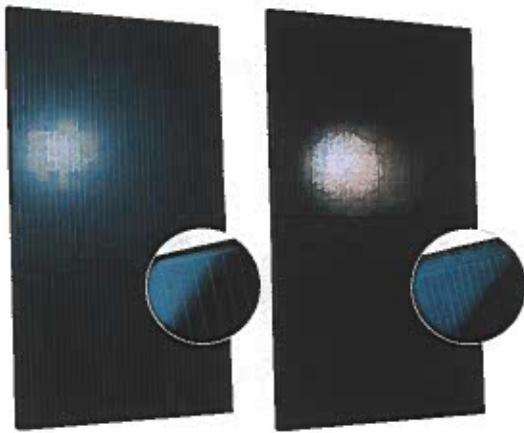
EXTREME WEATHER RATING

High-tech aluminum alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).



A RELIABLE INVESTMENT

Inclusive 25-year product warranty and 25-year linear performance warranty².



6 BUSBAR
 CELL TECHNOLOGY

12 BUSBAR
 CELL TECHNOLOGY

¹ APT test conditions according to IEC/TS 62804-1:2015, method A (-1500V, 96h)

² See data sheet on rear for further information.

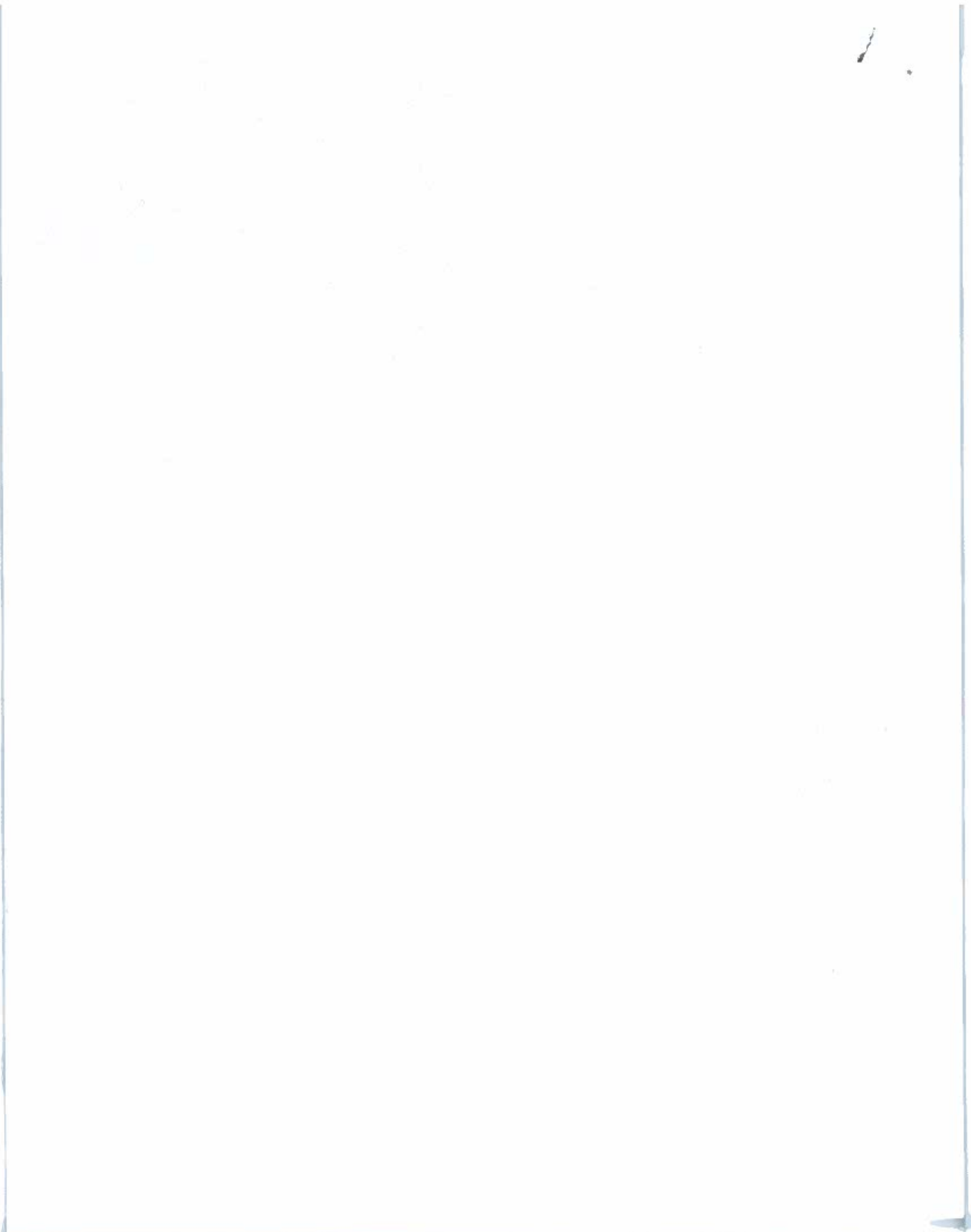
THE IDEAL SOLUTION FOR:



Rooftop arrays on
 residential buildings

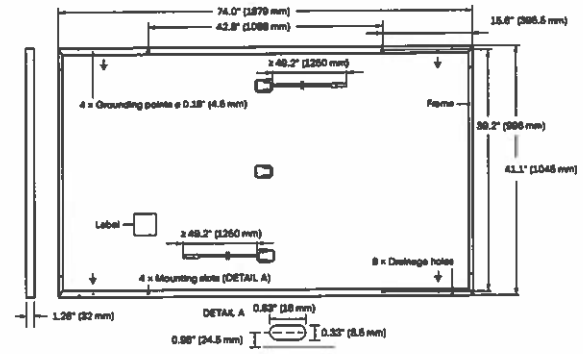
Engineered in Germany





MECHANICAL SPECIFICATION

Format	74.0in x 41.1in x 1.26in (including frame) (1879mm x 1045mm x 32mm)
Weight	48.5lbs (22.0kg)
Front Cover	0.13in (3.2mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 x 22 monocrystalline Q ANTUM solar half cells
Junction Box	2.09-3.98in x 1.26-2.36in x 0.59-0.71in (53-101mm x 32-60mm x 15-18mm), IP67, with bypass diodes
Cable	4mm ² Solar cable; (+) ≥ 49.2in (1250mm), (-) ≥ 49.2in (1250mm)
Connector	Stäubli MC4; IP68

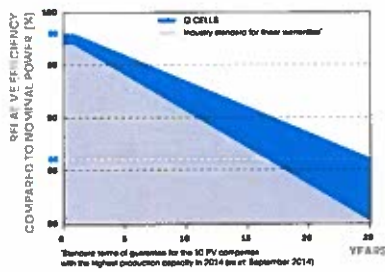


ELECTRICAL CHARACTERISTICS

POWER CLASS		385	390	395	400	405	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC: (POWER TOLERANCE +5W / -0W)							
Minimum	Power at MPP ²	P _{MPP} [W]	385	390	395	400	405
	Short Circuit Current ²	I _{sc} [A]	11.04	11.07	11.10	11.14	11.17
	Open Circuit Voltage ¹	V _{oc} [V]	45.19	45.23	45.27	45.30	45.34
	Current at MPP	I _{MPP} [A]	10.59	10.65	10.71	10.77	10.83
	Voltage at MPP	V _{MPP} [V]	36.36	36.62	36.88	37.13	37.39
	Efficiency ¹	η [%]	≥19.6	≥19.9	≥20.1	≥20.4	≥20.6
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT ²							
Minimum	Power at MPP	P _{MPP} [W]	288.8	292.6	296.3	300.1	303.8
	Short Circuit Current	I _{sc} [A]	8.90	8.92	8.95	8.97	9.00
	Open Circuit Voltage	V _{oc} [V]	42.62	42.65	42.69	42.72	42.76
	Current at MPP	I _{MPP} [A]	8.35	8.41	8.46	8.51	8.57
	Voltage at MPP	V _{MPP} [V]	34.59	34.81	35.03	35.25	35.46

¹Measurement tolerances P_{MPP} ± 3%; I_{sc}; V_{oc} ± 5% at STC: 1000W/m², 25±2°C, AM 1.5 according to IEC 60904-3 • *800W/m², NMOT, spectrum AM 1.5

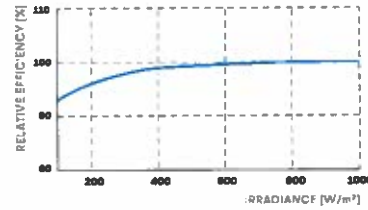
Q CELLS PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 93.5% of nominal power up to 10 years. At least 86% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organisation of your respective country.

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25°C, 1000W/m²)

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I _{sc}	α [%/K]	+0.04	Temperature Coefficient of V _{oc}	β [%/K]	-0.27
Temperature Coefficient of P _{MPP}	γ [%/K]	-0.34	Nominal Module Operating Temperature	NMOT [°F]	109±5.4 (43±3°C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V _{sys}	[V]	1000 (IEC)/1000 (UL)	PV module classification	Class II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating based on ANSI / UL 61730	TYPE 2
Max. Design Load, Push / Pull ²	[lbs/ft ²]	75 (3600Pa) / 55 (2660Pa)	Permitted Module Temperature on Continuous Duty	-40°F up to +185°F (-40°C up to +85°C)
Max. Test Load, Push / Pull ²	[lbs/ft ²]	113 (5400Pa) / 84 (4000Pa)		

²See Installation Manual

QUALIFICATIONS AND CERTIFICATES

UL 61730, CE compliant,
Quality Controlled PV - TÜV Rheinland,
IEC 61215:2016, IEC 61730:2016,
U.S. Patent No. 9,893,215 (solar cell).



PACKAGING INFORMATION

Horizontal packaging	76.4in 1940mm	43.3in 1100mm	48.0in 1220mm	1656lbs 751kg	24 pallets	24 pallets	32 modules
----------------------	------------------	------------------	------------------	------------------	---------------	---------------	---------------

Note: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

Hanwha Q CELLS America Inc.

400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | TEL +1 949 748 59 96 | EMAIL inquiry@us.q-cells.com | WEB www.q-cells.us

1.

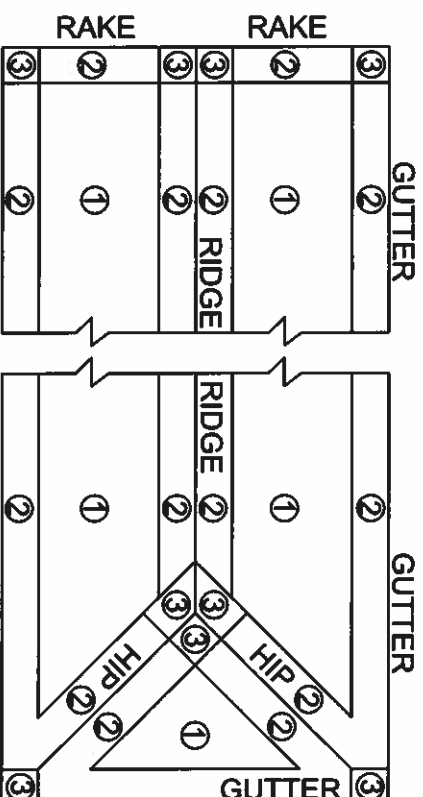
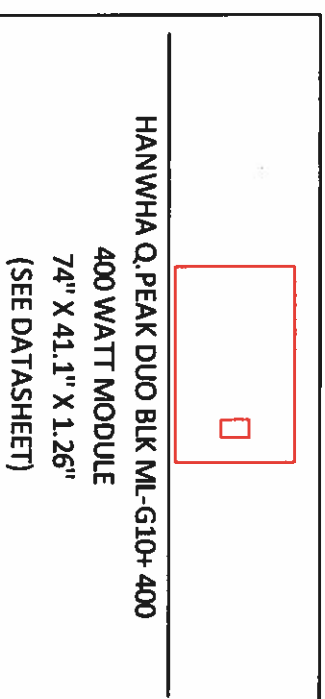
PLAN KEY	
PV-1	COVER PAGE
PV-2	PANEL LAYOUT
PV-3	LAYOUT DETAIL
PV-4	EQUIPMENT LABELS

SYSTEM INFORMATION	
MODULE	HANWHA Q.PEAK DUO BLK ML-G10+ 400
INVERTER	ENPHASE IQ7PLUS-72-2-US
RACKING	ROOFTECH RT-APEX
SYSTEM SIZE (DC)	10 KW
LOCATION	40.7546270, -74.2405527

*X= 2 OR M DEPENDING ON MANUFACTURER'S AVAILABILITY. SAME ELECTRICAL CHARACTERISTICS WITH DIFFERENT DC CONNECTOR. SEE SPECS FOR DETAILS.

1. ALL WIND DESIGN CRITERIA ARE FOR LOW SLOPE ROOFS, GABLE AND HIP ROOFS CONSIDERED FROM AN ANGLE OF MIN. 9.5° (1/2) TO MAX. 45° (3/4) NOT TO EXCEED 30' MEAN ROOF HEIGHT ATTACHED WITH FASTENERS AS SPECIFIED BY THE MANUFACTURER. SPAN TABLES ARE DERIVED FROM MECHANICAL LOAD TESTS PERFORMED BY THE MANUFACTURERS INDEPENDENT TESTING AGENCIES ON BEHALF OF THE MANUFACTURER.
2. ROOF SEALANTS SHALL CONFORM TO ASTM C920 AND ASTM 6511
3. ALL ATTACHMENTS SHALL BE INSTALLED IN STRICT COMPLIANCE WITH MANUFACTURERS PRINTED INSTRUCTIONS.

FASTENER:
REFER TO STRUCTURAL CERTIFICATION LETTER FOR ALL STRUCTURAL INFORMATION OF EXISTING BUILDING STRUCTURE. ATTACHMENT SPACING NOT EXCEED MANUFACTURERS SPECIFICATIONS FOR WIND LOADS AS PER ASCE 07-16. RISK CATEGORY II TOPOGRAPHIC EFFECTS B, C, & D AND ROOF WIND ZONES 1, 2, & 3. ROOF ZONES 2 & 3 ARE WITHIN 48" OF ANY OUTER EDGE, HIP, RIDGE, OR GUTTER LINE FOR STRUCTURES 30'-0" OR LESS MEAN ROOF HEIGHT.



ROOF WIND ZONES AS PER IRC R301.2(7) ROOF ZONES 2 & 3 ARE 48" FROM OUTER ROOF EDGES, RIDGES, HIPs, RAKES, AND GUTTER EDGES FOR STRUCTURES BELOW 30'-0" MEAN ROOF HT.

The most advanced Rail-less & Self-flashing PV Mounting System

RT-APEX

Universal Clamping / Slide In Mounting
One Step Leveling / Integrated Flexible Flashing
Proven PV mounting since 1994

Roof Tech Inc. The Standard for Waterproof Passive Flat and Slope Roof
www.roof-tech.us info@roof-tech.us

The standard for rail-less PV mounting

RT-APEX

Installation

Item & Part Number
RT-APEX Base (RT300-400-001)

RT-APEX Base 24 ea
805-40 Screws 48 ea
Additional RT-Flush 12 ea
Hidden Clamp (RT3-42-400-001)
Hidden Flashing Splice (RT3-42-400-002)
Module Clamping Splice (RT3-42-400-003)

Module clamp 12 ea
End Clamp 12 ea
RT-APEX Start (RT3-42-400-004)

RT-APEX Start (RT3-42-400-004) 8 ea

Roof Tech Inc. info@roof-tech.us
www.roof-tech.us
10620 Treann St. Suite 230, San Diego, CA 92131
858 935 6064

BILL OF MATERIALS			
NON SH MODULES	25	SH MODULES	0
INVERTERS	25	40A OCPD	1
ROOFTECH BASE	83	SOLAR AC DISCO	1
MID CLAMP	57	125A LINE TAPS	2
END CLAMP	21	TRUNK CABLE	30
END SPLICE	5	WIRE CLIP	63
MID FLOATING SPLICE	5		
SKIRTS	6		
ENPHASE COMBINER	1		



momentum
SOLAR

PRO CUSTOM SOLAR LLC D.B.A. MOMENTUM SOLAR
3096 HAMILTON BLVD., SOUTH PLAINFIELD, NJ 07080
(732) 902-6224
MOMENTUMSOLAR.COM

STRUCTURAL ENGINEERING

DANIEL W. DUNZIN RA LEED - AP

(908) 872-3864
570 BURNT HILL ROAD
SKILMAN, NJ 08538
ENGINEERING LETTER ATTACHED HAS SPECIFICATIONS FOR WIND AND LOAD CALCULATIONS FOR SOLAR INSTALLATION SPANS & ATTACHMENTS TO MEET LOCAL AND STATE BUILDING CODE REQUIREMENTS. THE MANUFACTURER'S (RT-APEX) HAS PROVIDED THE NECESSARY FASTENERS AND FLASHING UNDER THE DIRECTION OF A LICENSED ARCHITECT; TO ALTER OR ITEM IN ANY WAY.

VICINITY MAP



CUSTOMER INFORMATION

AUDREY RAINES
233 HEYWOOD AVENUE
ORANGE, NJ 07050
201.709.4094

PV SYSTEM INFORMATION

SYSTEM SIZE (DC): 10 KW
25 MODULES: HANWHA Q.PEAK DUO BLK ML-G10+ 400
(SAFE HARBOR MODULES: 0)
25 INVERTERS: ENPHASE IQ7PLUS-72-2-US

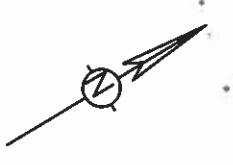
PROJECT INFORMATION - MS95051

INITIAL DATE: 5/10/2022 DESIGNER: **KTB**
REV: DATE: DESIGNER:
REV: DATE: DESIGNER:

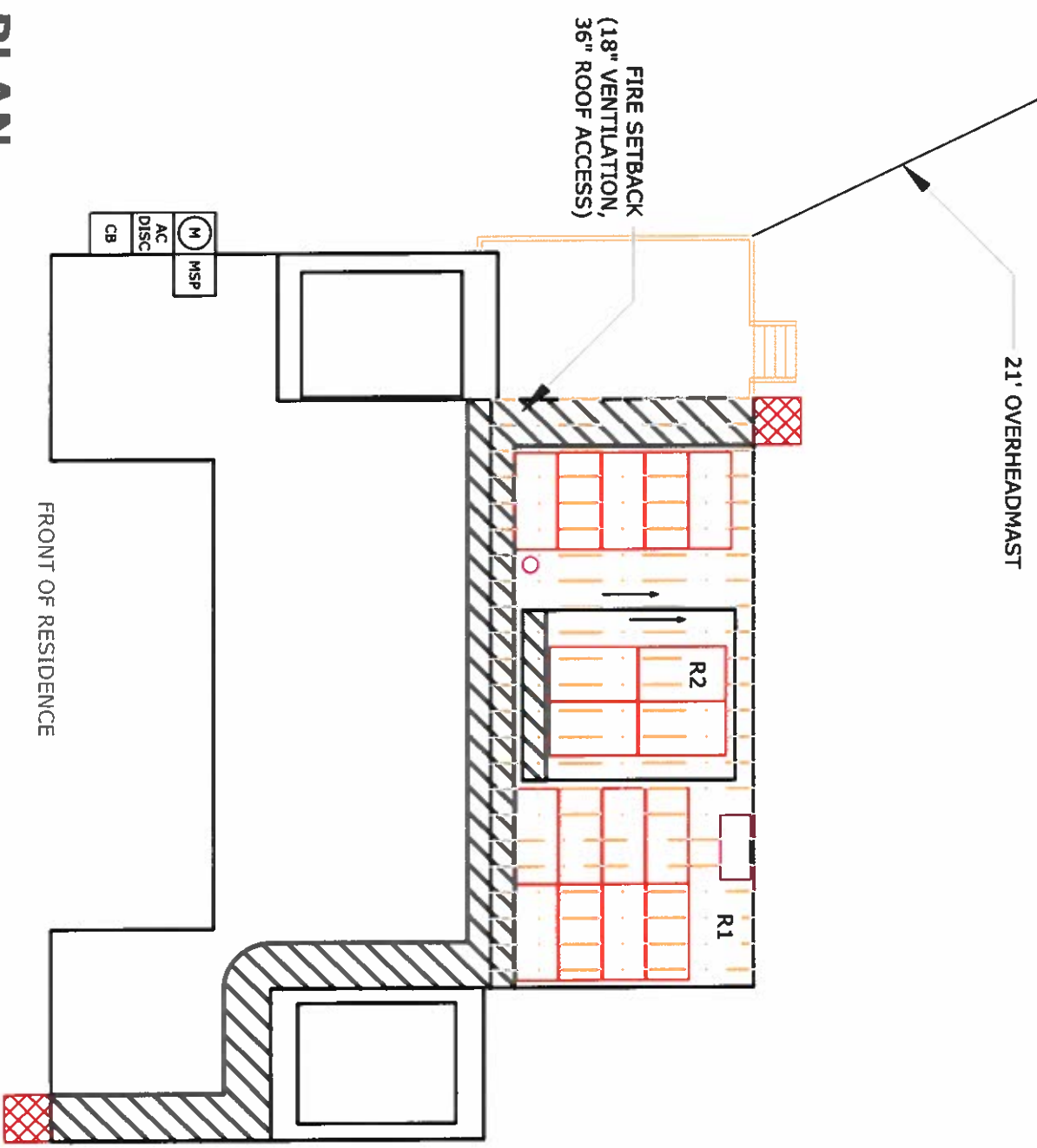
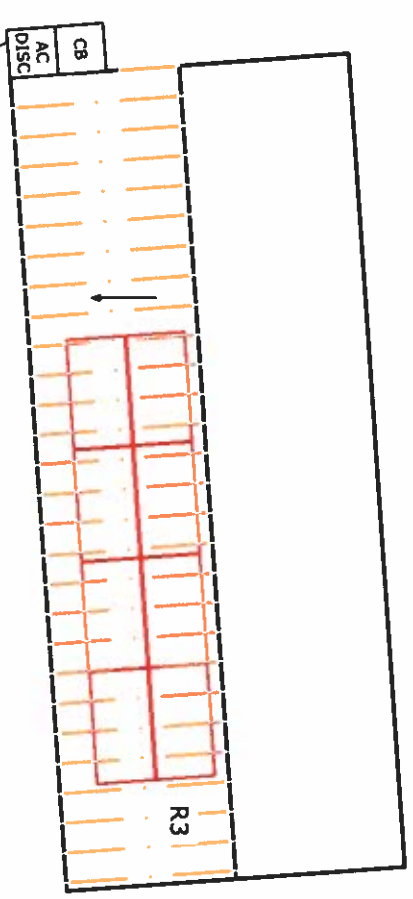
COVER PAGE

PV-1





ROOF	MODULE COUNT	AZIMUTH	TILT	SHADING	LANDSCAPE ATTACHMENT MAX SPAN (ROOF AREA 1/2/3)	PORTRAIT ATTACHMENT MAX SPAN (ROOF AREA 1/2/3)
R1	13	31°	38°	52%	66/66/66	39/39/39
R2	4	31°	25°	60%	64/64/64	37/37/37
R3	8	207°	20°	34%	72/72/72	44/44/44



HAXTUN AVE

NOTES:
200A FEEDER REPLACEMENT REQUIRED

TOTAL SQUARE FOOTAGE OF ROOF: 2914 SQFT
 SQUARE FOOTAGE OF SOLAR ARRAY: 528.03 SQFT
 PERCENTAGE OF SOLAR ROOF COVERAGE: 18.13%
 18" RIDGE SETBACK SHALL BE REQUIRED

SYMBOL LEGEND

MSP	MAIN SERVICE PANEL		CHIMNEY
SP	SUB-PANEL		SKYLIGHT
M	UTILITY METER		VENT
AC DISC	AC DISCONNECT		PIPE VENT
UDC	UTILITY DISCONNECT		FAN
LC	LOAD CENTER		SATELLITE DISH
NAR	NEMA 3R BOX W/ ENVOY-S		FIRE SETBACKS
CB	COMBINER BOX		GROUND ACCESS
PF	PERFORMANCE METER		PITCH DIRECTION
D	MODULE		



PRO CUSTOM SOLAR LLC D.B.A. MOMENTUM SOLAR
 3096 HAMILTON BLVD., SOUTH PLAINFIELD, NJ 07080
 (732) 902-6224
 MOMENTUMSOLAR.COM

STRUCTURAL ENGINEERING

DANIEL W. DUNZIK RA LEED - AP
 LICENSE # A111688
 (908) 872-5664
 370 BURNT HILL ROAD
 SKILLMAN, NJ 08538
 ENGINEERING LETTER ATTACHED HAS SPECIFICATIONS FOR WIND AND LOAD CALCULATIONS FOR SOLAR INSTALLATION SPANS & ATTACHMENTS TO MEET LOCAL AND STATE BUILDING CODE REQUIREMENTS. WARNING THAT IT IS A VIOLATION OF THE LAW FOR AN ENGINEER, ARCHITECT OR ANY OTHER LICENSED PROFESSIONAL TO ACT AS AN ARCHITECT, TO ALTER AN ITEM IN ANY WAY.

CUSTOMER INFORMATION

AUDREY RAINES
 233 HEWWOOD AVENUE
 ORANGE, NJ 07050
 2017094094

PV SYSTEM INFORMATION

SYSTEM SIZE (DC): 10 KW
 25 MODULES: HANWHA Q.PEAK DUO BLK ML-G10+ 400
 (SAFE HARBOR MODULES: 0)
 25 INVERTERS: ENPHASE IQ7PLUS-72-2-US

PROJECT INFORMATION - MS92051

INITIAL DATE: 5/10/2022 DESIGNER: KJB
 REV: DATE: DESIGNER:
 REV: DATE: DESIGNER:

PANEL LAYOUT

PV-2

SITE PLAN

SCALE: 3/32" = 1'-0"

HEWWOOD AVENUE

FRONT OF RESIDENCE

