

APPLICANT INFORMATION:

EMPIRE SOLAR SOLUTIONS
 2-8 JOHNES ST
 NEWBURGH, NY 12550
 PHONE: (845) 219-8031
 COURTNEY@EMPIRESOLARNY.COM

DESIGN PROFESSIONAL:

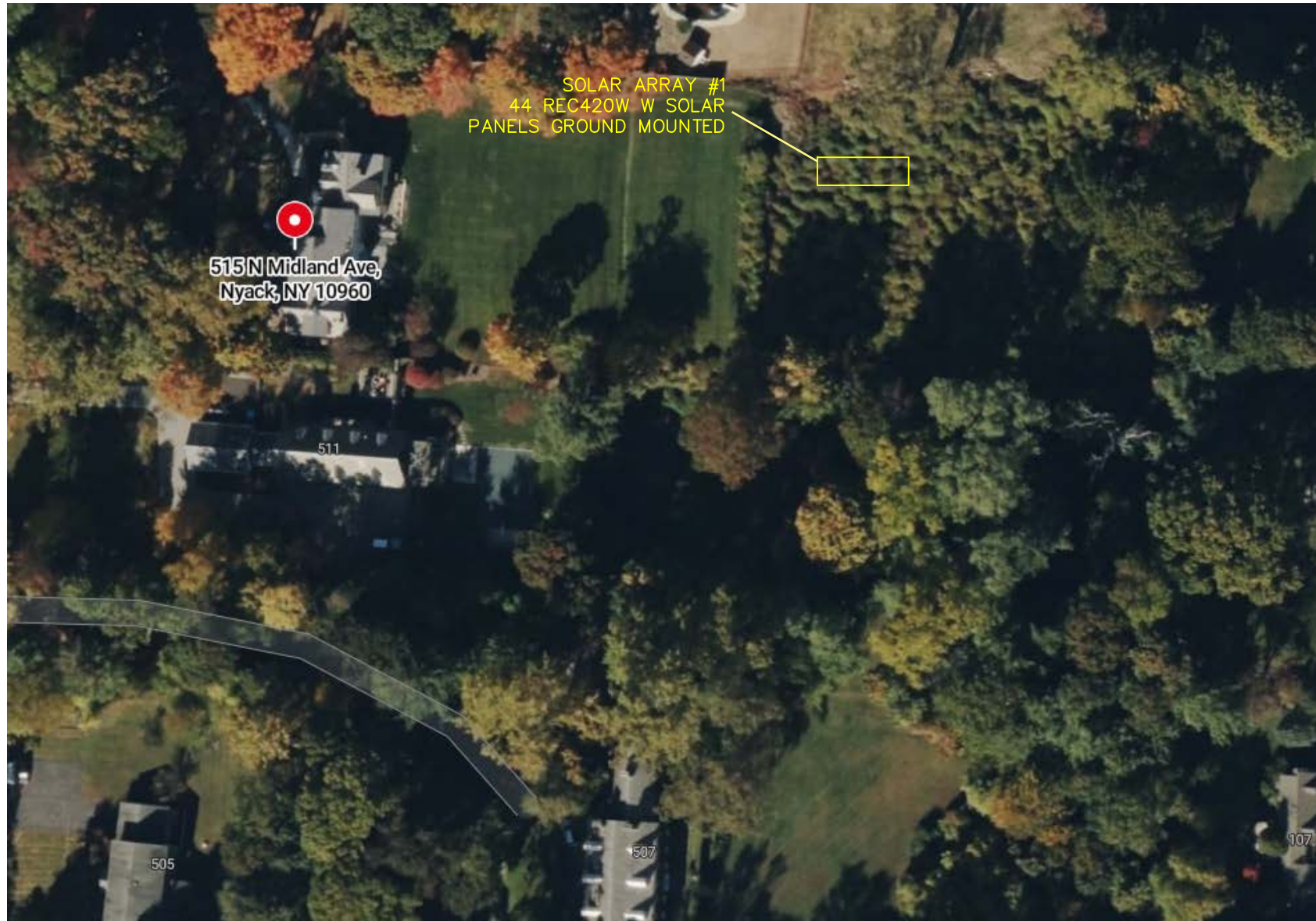
MICHAEL E. MIELE, PE
 705 ORRS MILLS ROAD
 NEW WINDSOR, NY 12553
 PHONE: 845.629.9693
 MIKEMIELEPE@GMAIL.COM

GENERAL NOTES:

1. ALL SOLAR MODULES TO BE REC420W AND SHALL BE INSTALLED AS PER REC INSTALLATION MANUAL.
2. ALL INVERTERS TO BE SOLAR EDGE INVERTERS ALL RACKING AS PER DETAILS FOR GROUND MOUNT INSTALLATION

PROJECT DESIGN DATA:

WORK SHALL BE COMPLETED AS PER 2020 RESIDENTIAL CODE OF NEW YORK STATE, PUBLICATION DATE: NOVEMBER 2019, NFPA 70, 2020 NATIONAL ELECTRICAL CODE AND 2018 WOOD FRAME CONSTRUCTION MANUAL LOAD CRITERIA AS FOLLOWS
 EXPOSURE CATEGORY: "B"
 GROUND SNOW LOAD: 50 PSF
 WIND SPEED: 120 MPH, 35SPF



AERIAL MAP:

SCALE: NTS

RESIDENTIAL SOLAR PANEL INSTALLATION
 LOCATED AT - 515-517 N MIDLAND AVENUE, UPPER NYACK, NY 10960
 VILLAGE OF UPPER NYACK, ROCKLAND COUNTY, NEW YORK



**SOLAR PANEL
 INSTALLATION
 BUMGARDNER
 RESIDENCE**
 515-517 N MIDLAND AVE
 UPPER NYACK
 NEW YORK 10960

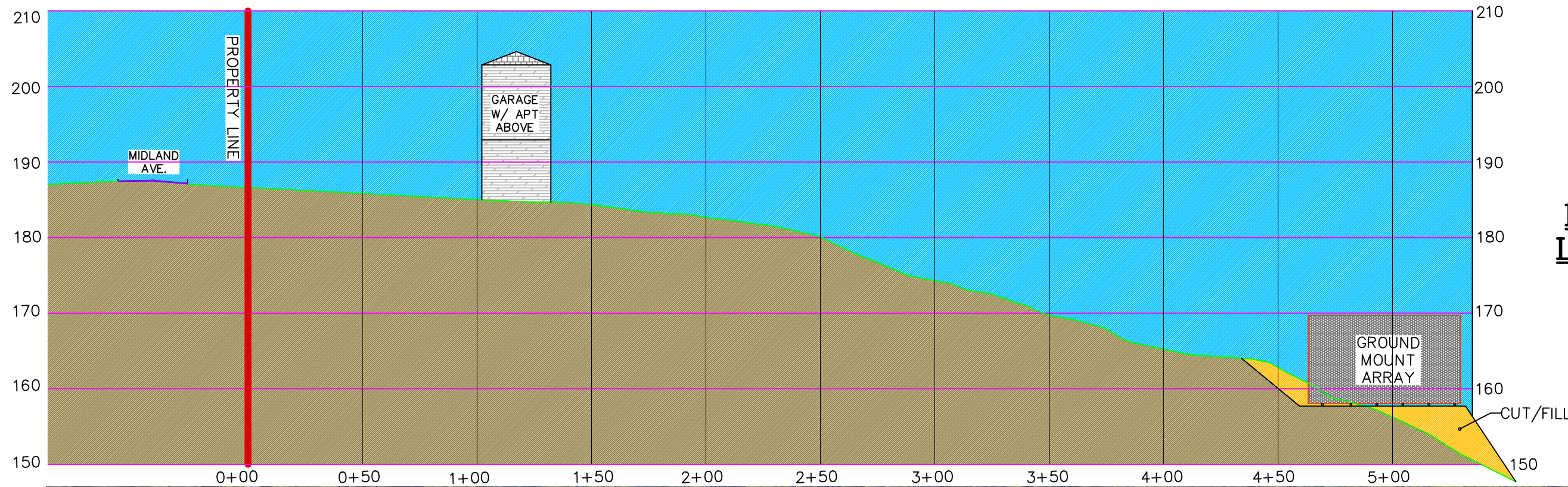
REVISIONS NOTES	
1	OCTOBER 12, 2023
2	JANUARY 29, 2024
DWG. BY: MEM	SCALE: AS-NOTED
CHECKED BY: MEM	PROJECT #: ES-0250-23
DATE: SEPTEMBER 8, 2023	SBL #: 60.13-3-1.1
MUNICIPALITY: VILLAGE OF UPPER NYACK	COUNTY: ROCKLAND

SYSTEM NOTES:	
TOTAL SYSTEM SIZE:	18.48KW DC SYSTEM
PANEL TYPE:	REC 420W
OF PANELS:	44
INVERTER:	SOLAREEDGE SE10,000H-US (2)
# OF INVERTERS:	2
ARRAY	#1
AZIMUTH:	180
TILT:	35
# OF PANELS	44

PROFESSIONAL NOTES:
 UNAUTHORIZED ALTERATION OR ADDITION TO THIS PLAN IS A VIOLATION OF SECTION 7209(2) OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS MAP NOT HAVING THE SEAL OF THE ENGINEER SHALL NOT BE VALID

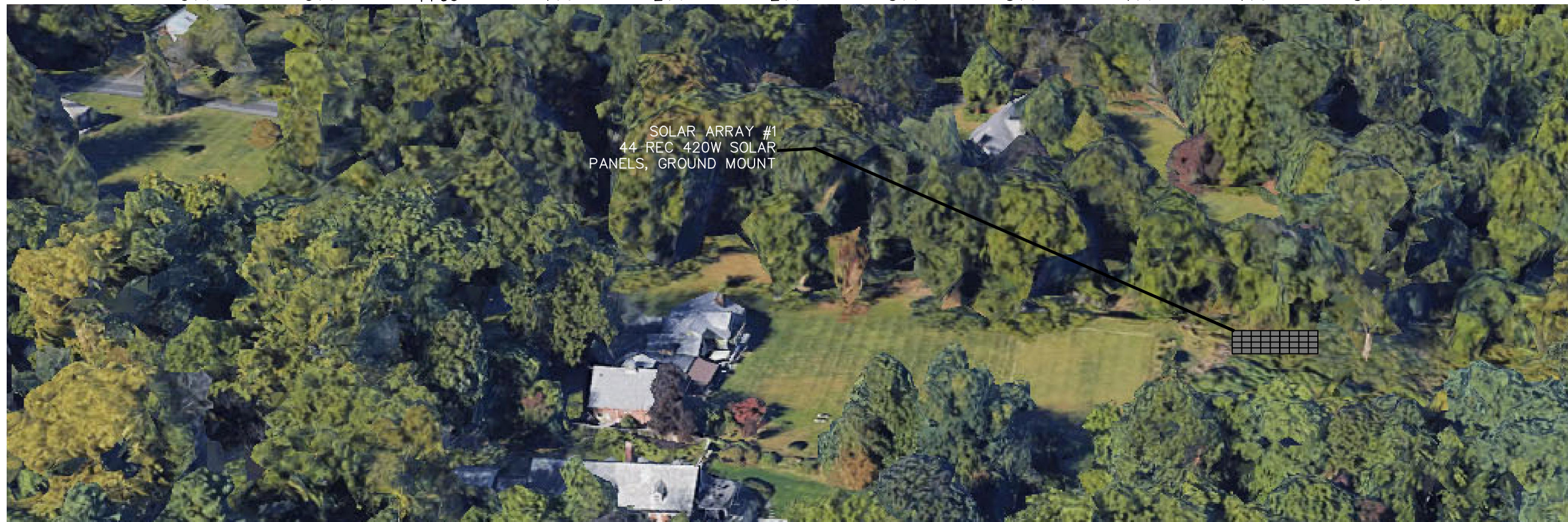


DWG# **S-1**
COVERSHEET AND NOTES
 DWG. 1 of 14



**ELEVATION "A":
LOOKING NORTH**

SCALE:
HORIZONTAL: 1"=50'
VERTICAL: 1"=15'



SOLAR ARRAY #1
44 REC 420W SOLAR
PANELS, GROUND MOUNT

**AERIAL VIEW
LOOKING NORTH**

SCALE: NTS



**SOLAR PANEL
INSTALLATION
BUMGARDNER
RESIDENCE**

515-517 N MIDLAND AVE
UPPER NYACK
NEW YORK 10960

REVISIONS NOTES

1	JANUARY 29, 2024
2	FEBRUARY 22, 2024
3	MARCH 27, 2024

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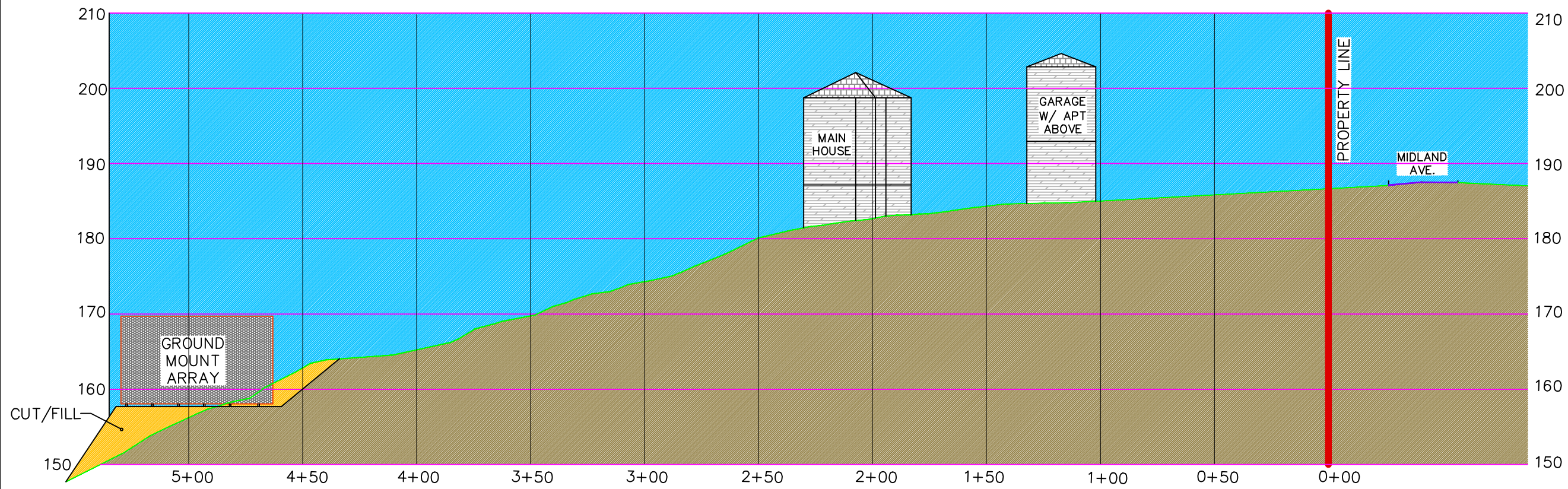


DWG#

S-2
SECTION
VIEW
LOOKING
NORTH

DWG.

2 OF 14



**ELEVATION "B":
LOOKING SOUTH**

SCALE:
HORIZONTAL: 1"=50'
VERTICAL: 1"=15'



**AERIAL VIEW
LOOKING SOUTH**

SCALE: NTS



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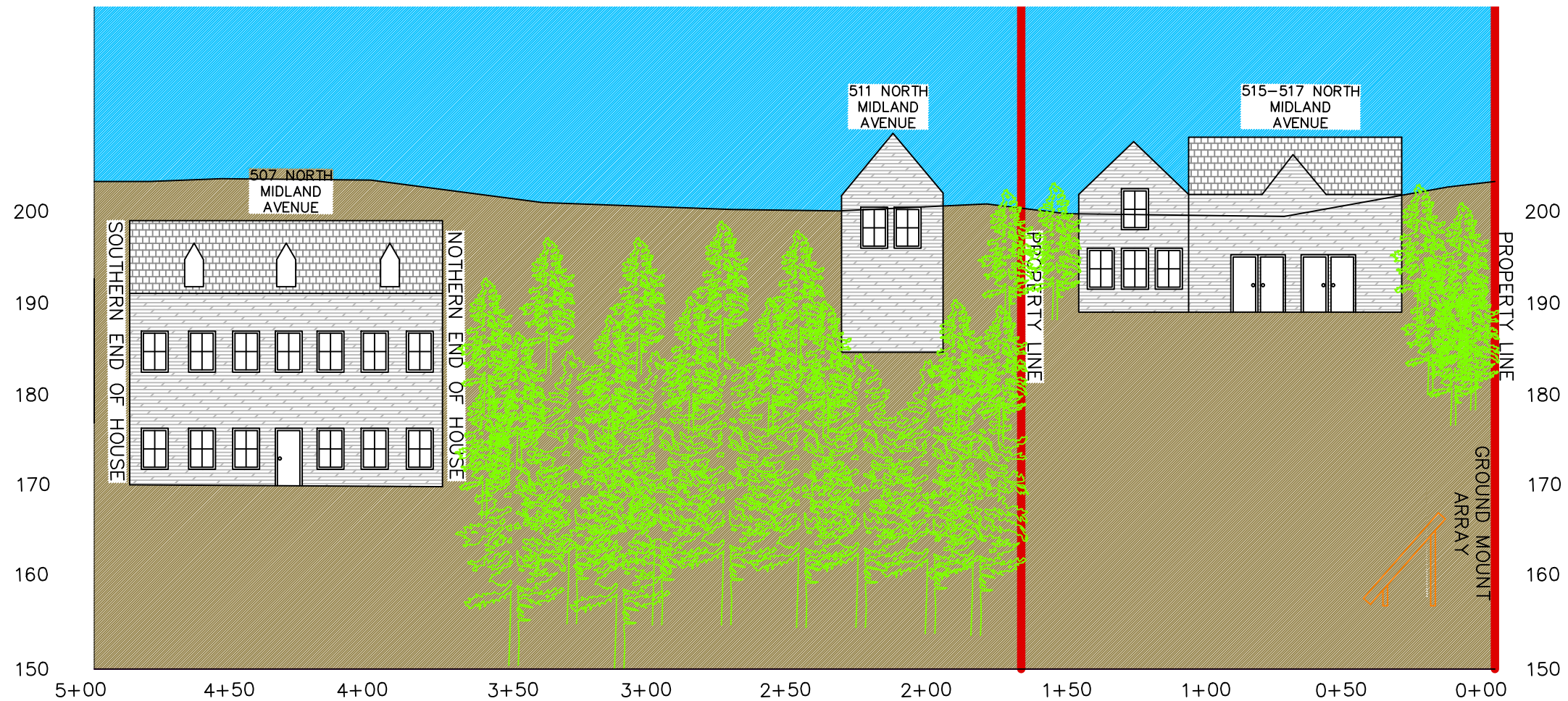
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DWG#
S-3
SECTION
VIEW
LOOKING
SOUTH
DWG.
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**ELEVATION "C":
LOOKING WEST**

SCALE:
HORIZONTAL: 1"=50'
VERTICAL: 1"=15'



**AERIAL VIEW
LOOKING WEST**

SCALE: NTS



**SOLAR PANEL
INSTALLATION
BUMGARDNER
RESIDENCE**

515-517 N MIDLAND AVE
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SEAL & SIGNATURE



DWG#

S-4
SECTION
VIEW
LOOKING
WEST

DWG.

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KEY

- A. SEE PAGES 6 & 8
- B. SEE PAGE 7
- C. SEE PAGE 8
- D. SEE PAGES 6 & 8
- E. SEE PAGES 8 & 9
- F. SEE PAGE 9

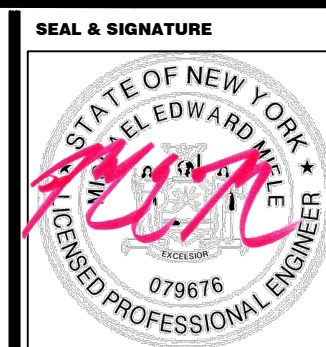


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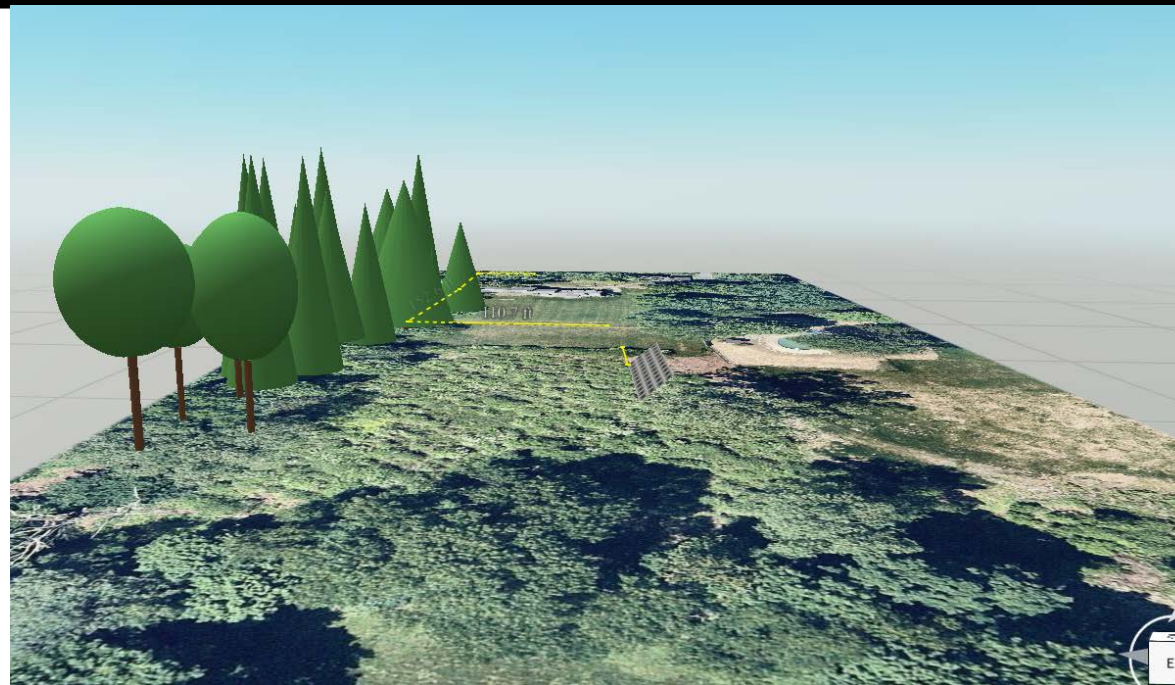
DWG# **S-5**
PROJECT KEY
DWG. 5 of 14



A
VIEW OF 115 WYNDENDOWN RD.
FROM ABOVE GROUND MOUNT (FLAGGED)



A & D
VIEW OF 115 WYNDENDOWN
RD. & 526 N BROADWAY
FROM ABOVE GROUND
MOUNT
(GROUND MOUNT
FLAGGED)



A

3D RENDERING OF ARRAY FROM WYDENDOWN RD. LOOKING AT 515-517 N MIDLAND AVE (PLEASE NOTE THERE ARE TREES BLOCKING THIS VIEW BUT REMOVED ABOVE TO SHOW GROUND MOUNT SIZE) - WEST VIEW



**SOLAR PANEL
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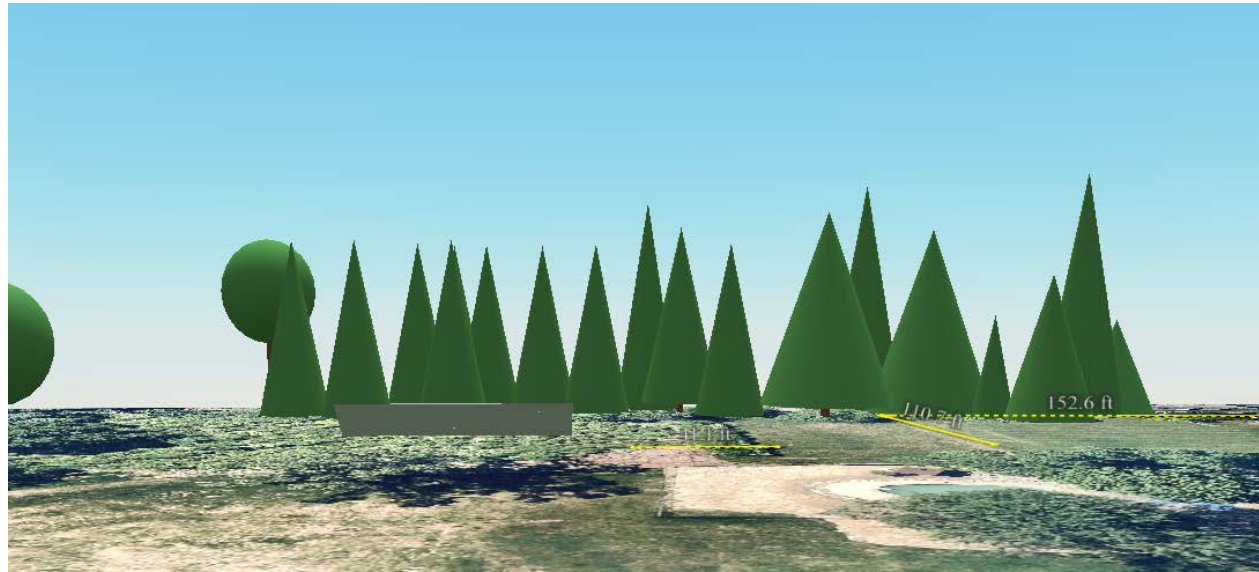


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PROJECT
PHOTOS

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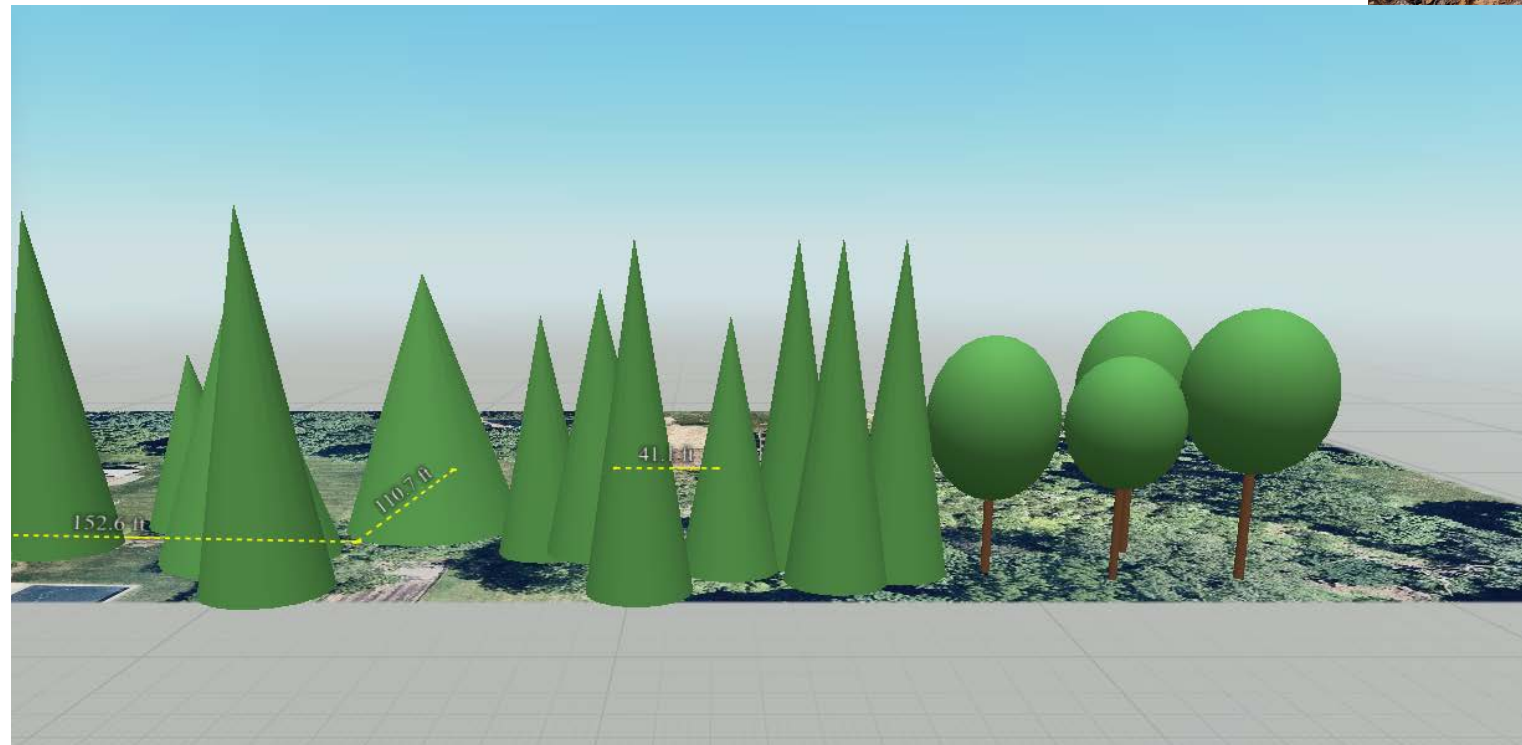


B
3D RENDERING OF ARRAY LOOKING AT 507 N MIDLAND AVE (SOUTH VIEW)



B
VIEW OF 507 N MIDLAND AVE
FROM TOP OF HILL OF
GROUND MOUNT LOCATION

CORNER OF GROUND MOUNT



B
3D RENDERING OF ARRAY FROM 507 N MIDLAND AVE. (NORTH VIEW)



B
VIEW OF 507 N MIDLAND AVE
FROM TOP OF HILL ABOVE
GROUND MOUNT

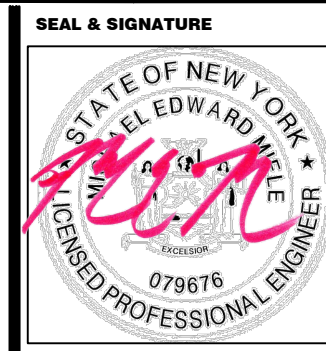


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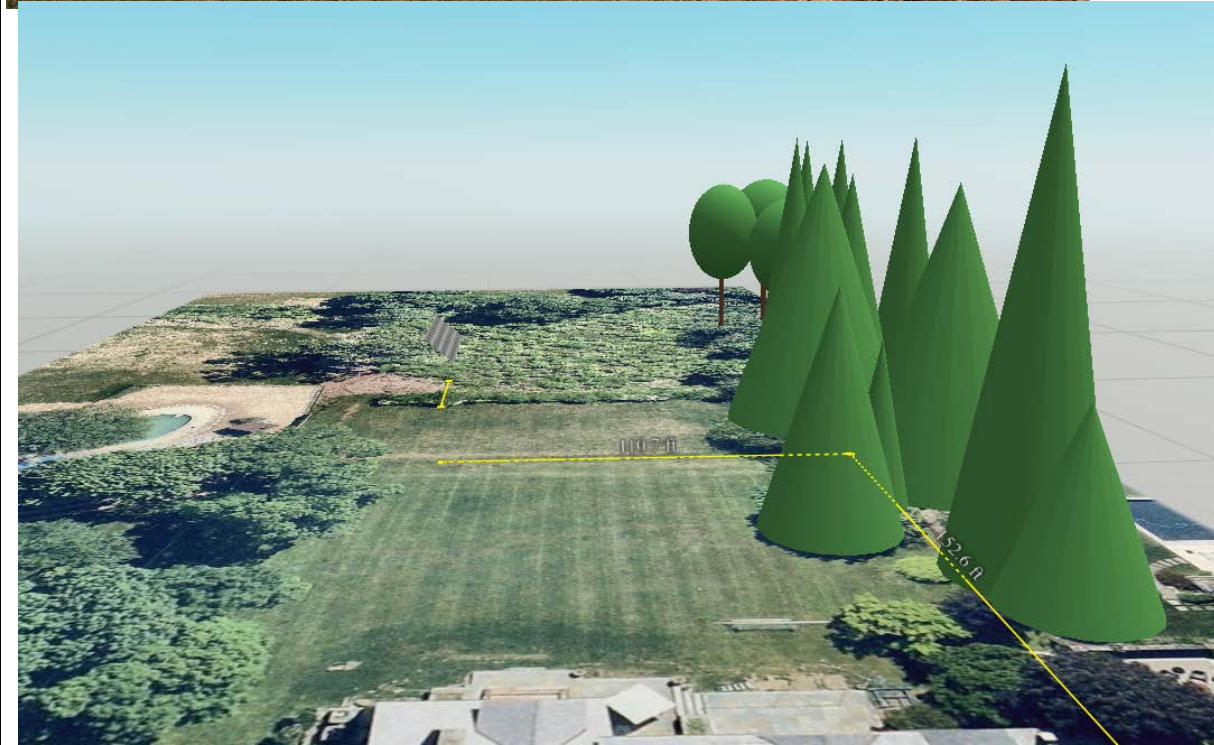
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PROJECT
PHOTOS
DWG.
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C
VIEW OF 523 N MIDLAND AVE
FROM TOP OF HILL OF
GROUND MOUNT



E, A & D
3D RENDERING OF ARRAY FROM BACK OF 515-517 N MIDLAND AVE
LOOKING AT WYDENDOWN RD. (EAST VIEW)



D
VIEW OF 526 N BROADWAY FROM TOP OF
HILL ABOVE GROUND MOUNT

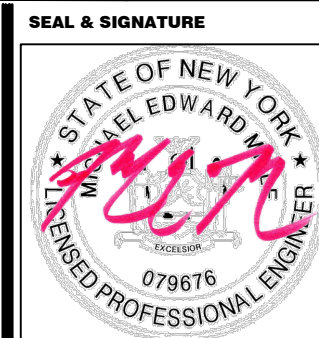


**SOLAR PANEL
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515-517 N MIDLAND AVE
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S-8
**PROJECT
PHOTOS**
DWG.
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E ↑
 VIEW OF 111 WYDENDOWN RD.
 FROM TOP OF HILL ABOVE GROUND
 MOUNT (FLAGGED)

F →
 "WIDER SHOT"
 PHOTO FROM BEDROOM WINDOW AT 511 N MIDLAND
 AVE LOOKING EAST
 (ABOVE GROUND MOUNT)



F →
 VIEW TO 511 N MIDLAND AVE FROM TOP OF HILL ABOVE
 GROUND MOUNT

F →
 "CLOSE UP"
 PHOTO FOM BEDROOM WINDOW AT 511 N MIDLAND AVE
 LOOKING EAST
 (ABOVE GROUND MOUNT)



**SOLAR PANEL
 INSTALLATION
 BUMGARDNER
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 515-517 N MIDLAND AVE
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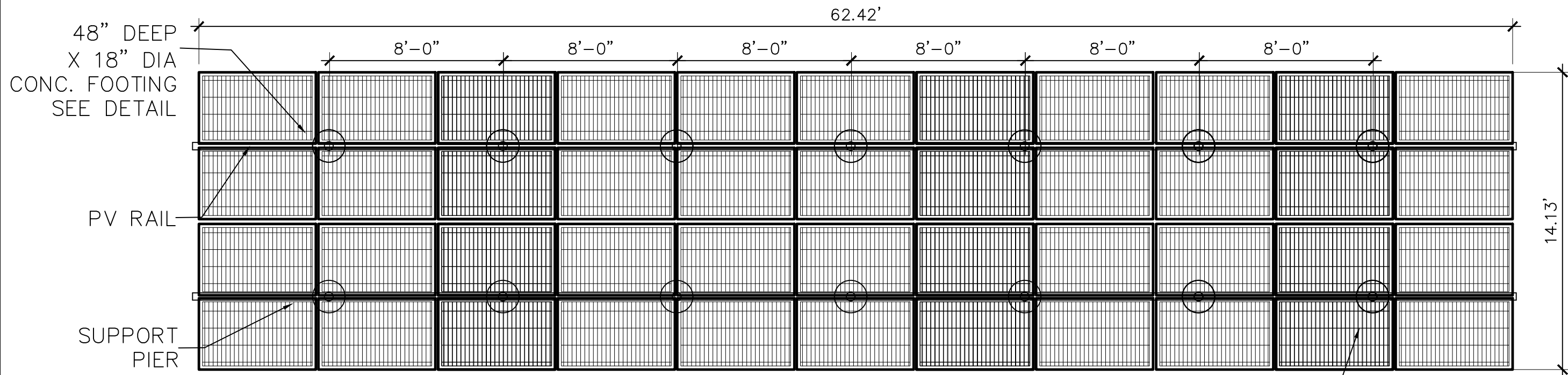
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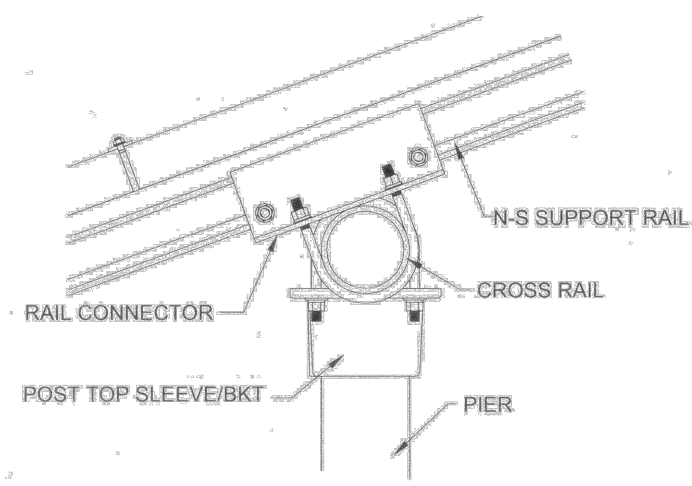
DWG#
S-9
PROJECT
PROPOSED
PHOTOS
 DWG.
 9 of 14



PROPOSED GROUND MOUNT ARRAY #1
 (44) REC 420W SOLAR PANEL MODULES
 11 X 4 GRID
 GROUND MOUNTED PORTRAIT
 CONFIGURATION

GROUND MOUNT LAYOUT ARRAY

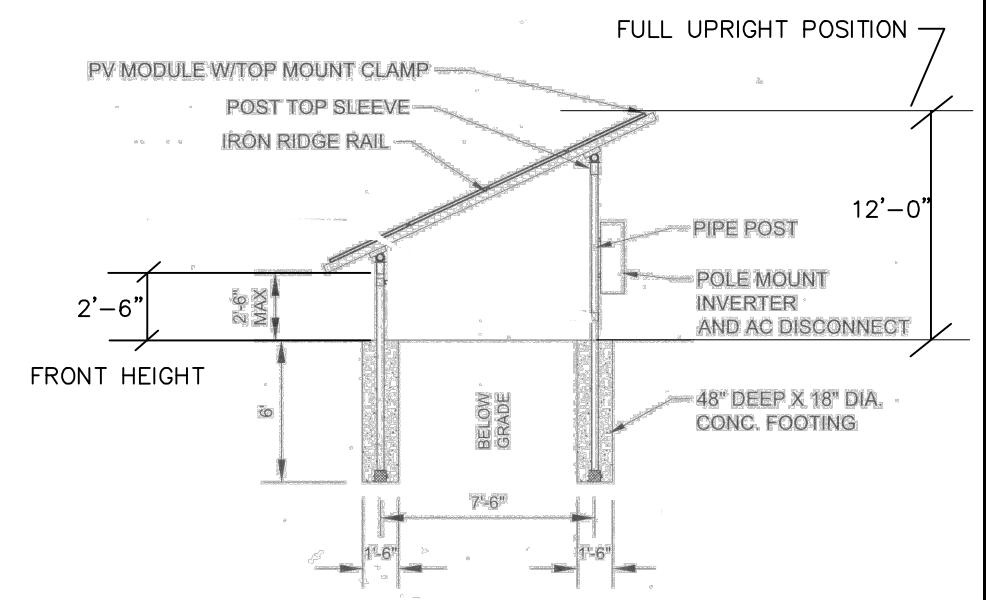
NTS



PIER AND RAIL ASSEMBLY:

SITE VERIFICATION NOTES:

1. PRIOR TO SUBMISSION TO MUNICIPALITY OF THE PLANS, THIS CONTRACTOR SHALL VISIT THE JOB SITE TO ASCERTAIN THE ACTUAL FIELD CONDITIONS AS THEY RELATE TO THE WORK INDICATED ON THE DRAWINGS AND DESCRIBED HEREIN. DISCREPANCIES, IF ANY, SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO SUBMISSION OF THE PLANS. SUBMISSION OF PLANS SHALL BE EVIDENCE THAT SITE VERIFICATION HAS BEEN PERFORMED AS DESCRIBED ABOVE.
2. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO THE START OF WORK. IF EXISTING CONDITIONS VARY FROM PLANS, THE CONTRACTOR SHALL STOP WORK AND NOTIFY PROJECT ENGINEER A.S.A.P. CONTRACTOR ASSUMES ALL RESPONSIBILITY AND LIABILITY THEREFROM.
3. THE OWNER/CONTRATOR SHALL OBTAIN ALL NECESSARY PERMITS, VERIFY ALL CONDITIONS, EXAMINE THE DESIGN DOCUMENTS AND BE RESPONSIBLE FOR ALL MEASUREMENTS, DIMENSIONS AND CONDITIONS.



SOLAR PANEL ASSEMBLY:



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DWG#
S-10
SOLAR
PANEL
LAYOUT
PLAN
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 10 of 14

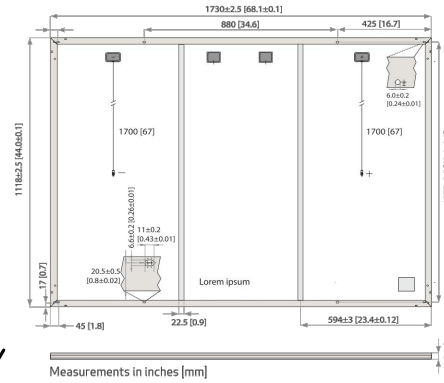
REC ALPHA PURE-R SERIES

PRODUCT SPECIFICATIONS



GENERAL DATA

Cell type:	80 half-cut REC bifacial, heterojunction cells with lead-free, gapless technology
Glass:	0.13in(3.2mm) solar glass with anti-reflective surface treatment in accordance with EN 12150
Backsheet:	Highly resistant polymer (black)
Frame:	Anodized aluminum (black)
Junction box:	4-part, 4 bypass diodes, lead-free IP68 rated, in accordance with IEC 62790
Connectors:	Stäubli MC4 PV-KBT4/KST4 (4 mm ²) in accordance with IEC 62852, IP68 only when connected
Cable:	12 AWG (4 mm ²) PV wire, G7 + 67 in (1.7 + 1.7 m) in accordance with EN 50618
Dimensions:	68.1 x 44.0 x 1.2 in (20.77 ft ³) / 1730 x 1118 x 30 mm (1.93 m ³)
Weight:	47.4 lbs (21.5 kg)
Origin:	Made in Singapore



ELECTRICAL DATA

Product Code: RECxxxAA PURE-R

	400	410	420	430
Power Output - P _{max} (Wp)	400	410	420	430
Watt Class Sorting - (W)	0/+10	0/+10	0/+10	0/+10
Nominal Power Voltage - V _{MPP} (V)	48.8	49.4	50.0	50.5
Nominal Power Current - I _{MPP} (A)	8.20	8.30	8.40	8.52
Open Circuit Voltage - V _{OC} (V)	58.9	59.2	59.4	59.7
Short Circuit Current - I _{SC} (A)	8.73	8.81	8.89	8.97
Power Density (W/ft ²)	207	212	218	223
Panel Efficiency (%)	20.7	21.2	21.8	22.3

	305	312	320	327
Power Output - P _{max} (Wp)	305	312	320	327
Nominal Power Voltage - V _{MPP} (V)	46.0	46.6	47.1	47.6
Nominal Power Current - I _{MPP} (A)	6.64	6.70	6.78	6.88
Open Circuit Voltage - V _{OC} (V)	55.5	55.8	56.0	56.3
Short Circuit Current - I _{SC} (A)	7.05	7.12	7.18	7.24

Values at standard test conditions (STC: air mass AM1.5, irradiance 1075 W/sq ft (1000 W/m²), temperature 77°F (25°C) based on a production spread with a tolerance of P_{max}, V_{OC} & I_{SC} ±3% within one watt class. Nominal module operating temperature (NMOT: air mass AM1.5, irradiance 800 W/m², temperature 68°F (20°C), windspeed 3.3 ft/s (1 m/s). *Where xxx indicates the nominal power class (P_{max}) at STC above.

MAXIMUM RATINGS

Operational temperature:	-40...+85°C
System voltage:	1000 V
Test load (front):	+7000 Pa (146 lbs/ft ²)
Test load (rear):	-4000 Pa (83.5 lbs/ft ²)
Series fuse rating:	25 A
Reverse current:	25 A

*See installation manual for mounting instructions. Design load = Test load / 1.5 (safety factor)

WARRANTY

	Standard	REC ProTrust
Installed by an REC Certified Solar Professional	No	Yes
System Size	All	≤25 kW 25-500 kW
Product Warranty (yrs)	20	25
Power Warranty (yrs)	25	25
Labor Warranty (yrs)	0	25
Power in Year 1	98%	98%
Annual Degradation	0.25%	0.25%
Power in Year 25	92%	92%

See warranty documents for details. Conditions apply

CERTIFICATIONS

IEC 61215:2016, IEC 61730:2016, UL 61730
IEC 62804 PID
IEC 61701 Salt Mist
IEC 62716 Ammonia Resistance
UL 61730 Fire Type Class 2
IEC 62782 Dynamic Mechanical Load
IEC 61215-2:2016 Hailstone (35mm)
IEC 62321 Lead-free acc. to RoHS EU 863/2015
ISO 14001, ISO 9001, IEC 45001, IEC 62941



TEMPERATURE RATINGS*

Nominal Module Operating Temperature:	44°C (±2°C)
Temperature coefficient of P _{max} :	-0.26 %/°C
Temperature coefficient of V _{OC} :	-0.24 %/°C
Temperature coefficient of I _{SC} :	0.04 %/°C

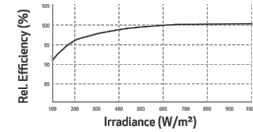
*The temperature coefficients stated are linear values

DELIVERY INFORMATION

Panels per pallet:	33
Panels per 40 ft GP/high cube container:	858 (26 pallets)

LOW LIGHT BEHAVIOUR

Typical low irradiance performance of module at STC:



Specifications subject to change without notice.

Ref: PM-DS-12-06-Rev- B 08.22



www.recgroup.com

Single Phase Inverter

with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US

MODEL NUMBER	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
APPLICABLE TO INVERTERS WITH PART NUMBER	SEXXXXH-XXXXBXX4							
OUTPUT								
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264)	✓	✓	✓	✓	✓	✓	✓	Vac
AC Output Voltage Min.-Nom.-Max. (183 - 208 - 229)	-	✓	-	✓	-	-	✓	Vac
AC Frequency (Nominal)	59.3 - 60 - 60.5 ¹⁾							Hz
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5	A
Maximum Continuous Output Current @208V	-	16	-	24	-	-	48.5	A
Power Factor	1, Adjustable - 0.85 to 0.85							
GFDI Threshold	1							A
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes							
INPUT								
Maximum DC Power @240V	4650	5900	7750	9300	11800	15500	17650	W
Maximum DC Power @208V	-	5100	-	7750	-	-	15500	W
Transformer-less, Ungrounded	Yes							
Maximum Input Voltage	480							Vdc
Nominal DC Input Voltage	380							Vdc
Maximum Input Current @240V ²⁾	8.5	10.5	13.5	16.5	20	27	30.5	Adc
Maximum Input Current @208V ²⁾	-	9	-	13.5	-	-	27	Adc
Max. Input Short Circuit Current	45							Adc
Reverse-Polarity Protection	Yes							
Ground-Fault Isolation Detection	600ka Sensitivity							
Maximum Inverter Efficiency	99	99.2						%
CEC Weighted Efficiency	99						99 @ 240V 98.5 @ 208V	%
Nighttime Power Consumption	< 2.5							W

¹⁾ For other regional settings please contact SolarEdge support

²⁾ A higher current source may be used; the inverter will limit its input current to the values stated



SOLAR PANEL INSTALLATION
BUMGARDNER RESIDENCE
 515-517 N MIDLAND AVE
 UPPER NYACK
 NEW YORK 10960

REVISIONS NOTES

1	JANUARY 29, 2024
DWG. BY: MEM	SCALE: AS-NOTED
CHECKED BY: MEM	PROJECT #: ES-0250-23
DATE: SEPTEMBER 8, 2023	SBL #: 60.13-3-1.1
MUNICIPALITY: VILLAGE OF UPPER NYACK	COUNTY: ROCKLAND

SYSTEM NOTES:

TOTAL SYSTEM SIZE:	18.48KW DC SYSTEM
PANEL TYPE:	REC 420W
OF PANELS:	44
INVERTER:	SOLAREGE SE10,000H-US (2)
# OF INVERTERS:	2
ARRAY	#1
AZIMUTH:	180
TILT:	35
# OF PANELS	44

PROFESSIONAL NOTES:

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SEAL & SIGNATURE



DWG#

S-11
SOLAR PANEL & INVERTER SPECIFICATIONS
 DWG. 11 of 14

Rigid Nonmetallic Conduit – Schedule 40

Carlson® Rigid Nonmetallic Conduit (RNC), Fittings & Accessories

Carlson® manufactures the most complete line of nonmetallic conduits and fittings in the electrical industry. Carlson Schedule 40 and Schedule 80 conduits are designed for use aboveground and underground as described in the National Electrical Code. Specify only Carlson conduits and fittings to insure raceway system integrity.

Features

Ease of Installation Nonmetallic conduits are 1/4 to 1/5 the weight of metallic systems, can be installed in less than half the time, and are easily fabricated on the job.

Safety Nonmetallic conduits are nonconductive, assuring a safe system.

Impact Resistant Carlson Schedule 40 and Schedule 80 nonmetallic conduits are resistant to sunlight and are listed for exposed or outdoor usage. The use of expansion fittings allows the system to expand and contract with temperature variations.

Corrosion Resistant Carlson conduits and fittings are nonmetallic and will not rust or corrode.

Carlson nonmetallic Schedule 40 and Schedule 80 conduits and elbows are manufactured to NEMA TC-2, Federal specification WC1094A and UL 651 specifications. Fittings are manufactured to NEMA TC-3, Federal specification WC1094A and UL514B. Both conduit and fittings carry respective UL or ETL Listings and UL or ETL labels.



TRENCH NOTES:

1. THE WARNING LABEL FOR THE TRENCH PIPING, SHALL BE INSTALLED EVERY 10'
2. TRENCH BACK FILL BACKFILL SHALL BE (CLEAN SOIL – THE SOIL REMOVED DURING TRENCH EXCAVATION TRENCH WITH THE ROCKS REMOVED)
3. TRENCH LENGTH = 542', MIN TRENCH WIDTH 24", MIN TRENCH DEPTH = 24"
4. CONDUIT SHALL BE SCHEDULE 40, (1") SEE SPEC SHEET ON SAME PAGE

Schedule 40 PVC Rigid Nonmetallic Conduit (RNC). (Heavy Wall EPC)

Listed for underground applications encased in concrete or direct burial. Also for use in exposed or concealed applications aboveground.

- Sunlight resistant • Rated for use with 90°C conductors • Superior weathering characteristics



RUS Listed

Schedule 40 Heavy Wall

With Integral Bell*



Part No.			Std. Crate Qty.		Wt. Per	Dimensions		
10'	20'	Nom. Size	10'	20'	100'	O.D.	I.D.	Wall
49005-010		1/2"	6000'		17	.840	.622	.109
49007-010	49007-020	3/4"	4400'	8800'	23	1.050	.824	.113
49008-010	49008-020	1"	3600'	7200'	34	1.315	1.049	.133
49009-010	49009-020	1 1/4"	3300'	6600'	46	1.660	1.380	.140
49010-010	49010-020	1 1/2"	2250'	4500'	55	1.900	1.610	.145
49011-010	49011-020	2"	1400'	2800'	73	2.375	2.067	.154
49012-010	49012-020	2 1/2"	930'	1860'	124	2.875	2.469	.203
49013-010	49013-020	3"	880'	1760'	163	3.500	3.068	.216
49014-010	49014-020	3 1/2"	630'	1260'	196	4.000	3.548	.226
49015-010	49015-020	4"	570'	1140'	232	4.500	4.026	.237
49016-010	49016-020	5"	380'	760'	315	5.563	5.047	.258
49017-010	49017-020	6"	260'	520'	409	6.625	6.065	.280

Rigid nonmetallic conduit is normally supplied in standard 10' lengths, with one belled end per length. For specific requirements, it may be produced in lengths shorter or longer than 10', with or without belled ends.

Use RNC Fittings with Schedule 40 and Schedule 80 Conduit.

- Notes: 1. Special fittings and conduit sizes will be quoted on request.
2. DON'T FORGET TO ORDER CEMENT.
3. Carlson reserves the right to ship to the nearest unitized quantity.



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OF INVERTERS: 2
ARRAY #1
AZIMUTH: 180
TILT: 35
OF PANELS 44

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SEAL & SIGNATURE



DWG#

S-12

SOLAR PANEL
TRENCH
DETAILS

DWG.

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WARNING
ELECTRIC SHOCK HAZARD !
 THE DIRECT CURRENT CIRCUIT CONDUCTORS OF THIS PHOTOVOLTAIC POWER SYSTEM ARE UNGROUNDED BUT MAY BE ENERGIZED WITH RESPECT TO GROUND DUE TO LEAKAGE PATHS AND/OR GROUND FAULTS

DC WARNING LABEL

WARNING
 INVERTER OUTPUT CONNECTION
 DO NOT RELOCATE THIS OVERCURRENT DEVICE

UTILITY DISCONNECT LABEL

CAUTION
 SOLAR ELECTRIC SYSTEM CONNECTED

AC PANELS

GROUND MOUNT NOTES:

ARRAY RACK ASSEMBLY
 SOLAR GROUND MOUNT RACKING SHOWN FOR ARRANGEMENT ONLY
 RACKING MANUFACTURER TO PROVIDE SEALED SHOP DRAWINGS OF FINAL RACKING ASSEMBLY.
 INSTALL AS PER MANUFACTURER STANDARD INSTALLATION DETAILS.
 POST SUPPORTED RACKING FOUNDATION AS SHOWN
 18" Ø X 48" DEEP CONCRETE FOUNDATION WITH EMBEDDED POST.

INSTALLATION NOTES:
 BRACKET TO POST INSTALLATION HEIGHT MAY VARY WITH SITE GRADING. IT IS NOT NECESSARY FOR ALL POST TOP BRACKETS TO ALIGN AT A COMMON ELEVATION FOR EACH ROW (+/-2")
 INSTALLATION CONTRACTOR SHALL ENSURE THAT ALL GRADING AND COMPACTION OF SITE IS COMPLETED PRIOR TO INSTALLATION OF THE RACKING SYSTEM TO AVOID POTENTIAL DISTURBANCE OF FOUNDATION AND ALIGNMENT.

SEALED SHOP DRAWINGS SHALL BE PROVIDED BY RACKING MANUFACTURER PRIOR TO THE INSTALLATION OF THE PV ARRAY.

THIS DRAWING IS DIAGRAMMATIC FOR THE MODULE/RACK ARRANGEMENT. FINAL RACKING DETAILS AND ASSEMBLY MAY VARY WITH FINAL INSTALLATION.

PHOTOVOLTAIC INVERTER INPUT DC DISCONNECT

WARNING
ELECTRIC SHOCK HAZARD !

DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

INTERACTIVE SOLAR PV SYSTEM RATING

RATED DC CURRENT	AMP
RATED DC VOLTAGE	VDC
MAXIMUM SYSTEM VOLTAGE	VDC
SHORT CIRCUIT CURRENT	AMP

SYSTEM INSTALLER: _____
 FOR SERVICE CALL: _____

DC INPUT WARNING LABEL #1 INVERTER 1

PHOTOVOLTAIC SYSTEM DISCONNECT FOR UTILITY OPERATION

WARNING
ELECTRIC SHOCK HAZARD !

DO NOT TOUCH TERMINALS. TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

INTERACTIVE SOLAR PV SYSTEM RATING

RATED OPERATING CURRENT	AMP
NORMAL OPERATING VOLTAGE	240 VAC

SYSTEM INSTALLER: _____
 FOR SERVICE CALL: _____

UTILITY DISCONNECT WARNING LABEL

6"

1 1/2"

WARNING
DC SOLAR CIRCUIT

DC CIRCUIT LABEL

WARNING
 THIS METER IS ALSO SERVED BY A PHOTOVOLTAIC SYSTEM

PV CIRCUITS ONLY
 NO OTHER LOADS SHALL BE APPLIED TO THIS PANEL OTHER THAN PV COMPONENTS AS PER NEC ARTICLE 690



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SOLAR PANEL SIGNAGE

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POWER OUTPUT = PTC RATING X # OF MODULES X INV EFF'
 INVERTER#1=382.65W x 22 x 0.975 =8,207.84W
 INVERTER#2=382.65W x 22 x 0.975 =8,207.84W
 TOTAL= 16,415.68W

ALL EXTERIOR MOUNTED COMBINERS, JUNCTION BOXES, TROUGHS, DISCONNECTS, ETC. SHALL BE NEMA 3R RATED.

ALL CONDUCTORS ARE TO BE COPPER UNLESS NOTED OTHERWISE

WIRE AMPACITY
 NEC TABLE 310.15(B)(16)
 #10 THWN Cu35A RATED
 #8 THWN Cu50A RATED
 #6 THWN Cu65A RATED
 #4 THWN Cu85A RATED

(4 WIRES) #10 PV WIRE
 #8 GND

(3 WIRES) #6 THWN
 #6 GND
 1-1/4" CONDUIT

(3 WIRES) #6 THWN
 #6 GND
 1-1/4" CONDUIT

(2 WIRES) #10 PV WIRE
 #8 GND

(3 WIRES) #4 THWN
 #3 GND
 1-1/2" CONDUIT

(3 WIRES) #4 THWN
 #3 GND
 1-1/2" CONDUIT

(4 WIRES) #10 THWN-2
 #8 GND
 3/4" CONDUIT

(2 WIRES) #10 THWN-2
 #8 GND
 3/4" CONDUIT

WARNING
 ELECTRIC SHOCK HAZARD
 DO NOT TOUCH TERMINALS
 TERMINALS ON BOTH THE LINE AND
 LOAD SIDES MAY BE ENERGIZED
 IN THE OPEN POSITION

NEW 200A
 DEDICATED PV AC
 SUB PANEL
 120/240V
 4 SPACE

CONFIRM LINE SIDE VOLTAGE AT ELECTRIC UTILITY SERVICE ENTRANCE BEFORE CONNECTING INVERTER AND ENSURE PROPER OPERATIONAL RANGE REQUIRED BY SYSTEM INVERTER.

AC & DC GROUNDING CONDUCTORS PER NEC ARTICLE 690.47(c)(2) CONNECTED AS PER 250.64(c)(2)

INTERCONNECTION TO UTILITY AND SYSTEM GROUNDING PER NEC-2020 ARTICLE 690

PROVIDE SIGNAGE AS REQUIRED BY NEC-2020 ARTICLE 690.

ALL OUTDOOR EQUIPTMEN SHALL BE A MINIMUM OF NEMA-3R RATED.

WARNING
 INVERTER OUTPUT CONNECTION
 DO NOT RELOCATE THIS
 OVERCURRENT DEVICE

CONTRACTOR TO ENABLE RAPID SHUTDOWN FUNCTIONALITY ON SOLAR EDGE INVERTER PER S.E DOC.#MAN-01-00186-1.6 AS REQUIRED PER NEC 2020 ARTICLE 690.12 (1) THRU (4)

ELECTRICAL CONTRACTOR TO VERIFY INTERCONNECTION REQUIREMENTS WITH ELECTRICAL UTILITY FOR CONNECTION LOCATION AND STANDARDS

ELECTRICAL CONTRACTOR TO PROVIDE EXPANSION JOINTS AND ANCHORING OF ALL CONDUIT RUNS AS PER NEC REQUIREMENTS

PROVIDE LABEL/PLACARD AT EXISTING UTILITY CONNECTION WITH "WARNING - CUSTOMER OWNED ELECTRIC GENERATION EQUIPMENT CONNECTED" WITH APPROPRIATE HAZARD AND OUTPUT RATING OF PV SYSTEM



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DWG#
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 SOLAR
 3-LINE
 DIAGRAM
 DWG.
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