

ZONING ANALYSIS
ADDRESS: 69-04 173 STREET, QUEENS 11365
BLOCK: 6947 LOT: 35
ZONING DIST.: R4,
ZONING MAP: 14C
ESTIMATED YEAR BUILT: 1950
LOT FRONTAGE: 20'
LOT DEPTH: 95'
LOT AREA: 1900 SQ FT
APPROX. BUILDING HEIGHT: 25'
BUILDING STORIES: 2
OCCUPANCY: (RES) J-3
DWELLING UNITS: 2 FAMILY
CONSTRUCTION CLASS: III
NO CHANGE IN USE OR OCCUPANCY

	ROOF 1
RAFTER SIZE/ RAFTER SPACING	2"x10" @ 16" O.C.
ACTUAL SPAN	19'-0"
SHEATHING	2" WOOD DECK
COLLAR TIES	N/A
SHINGLE TYPE / LAYER	1 LAYER EPDM

PLAN KEY	
PV-001.00	COVER PAGE
PV-002.00	SITE PLAN
PV-003.00	ROOF PLAN
PV-004.00	ROOF ELEVATIONS & DETAILS
PV-005.00	CONNECTION DETAILS
PV-006.00	WARNING LABELS
PV-007.00	ELECTRIICAL ONE LINE DIAGRAM
PV-008.00	ENGINEERS LETTER
PV-009.00	BUILDING ELEVATION

LG NEON 2 BLACK LG 370 LG370Q1C-V5 370 WATT MODULE 66.9" X 40" X 1.57" SEE DATA SHEET	
SYSTEM INFORMATION	
MODULE	(12) LG NEON R, LG370Q1C-V5 370W
OPTIMIZER	P370
INVERTER	SOLAREEDGE SE6000H-US
RACKING	IRON RIDGE XR100
SYSTEM SIZE (DC)	4.44 KW
FASTENER TYPE	(4) OMG XHD 3" LAGS

SOLAR PANELS AND ATTACHEMENT SYSTEM SHALL BE DESIGNED BY THE MANUFACTURER TO WITHSTAND WINDS IN EXCESS OF 130MPH AND 50.0 PSF. SOLAR PANELS SHALL BE DESIGNED TO SUPPORT IN EXCESS OF 30LBS SNOW LOAD.



AREA MAP

TAX MAP

GENERAL NOTES:

1. THE INSTALLATION SHALL BE IN COMPLIANCE WITH THE N.E.C. LATEST ADOPTED EDITION AND ALL ADDENDA THERE TO AND ALL N.Y.C. BUILDING, FIRE, AND ENERGY CODES AS ADOPTED BY AND/OR AMENDED BY LOCAL JURISDICTION.

2. THE SOLAR SYSTEM INSTALLATION COMPLIES WITH " NYC ZR 23-62(M)SOLAR SYSTEMS" ROOF SLOPE GREATER THAN 20 DEGREES SHALL BE LIMITED TO 18 INCHES IN HEIGHT, AS MEASURED PERPENDICULAR TO THE ROOF SURFACE.

3. SOLAR ELECTRIC GENERATING SYSTEM DOES NOT INCLUDE ANY EQUIPMENT CONNECTED TO THE SOLAR ELECTRIC GENERATING SYSTEM THAT IS A COMPONENT OF OR PARTS ON A NON-SOLAR ELECTRIC GENERATING SYSTEM; DOES NOT USE ANY SORT OF RECREATIONAL FACILITY OR EQUIPMENT AS A STORAGE MEDIUM.

4. THESE CONSTRUCTION DOCUMENTS ARE BASED ON FIELD INSPECTIONS OF THE EXISTING CONDITIONS AVAILABLE AT THE TIME OF INSPECTION. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATION OF CONSTRUCTION DETAILS.

5. THE ENGINEER DOES NOT SUPPLY OR INSTALL ANY OF THE WORK IN THESE CONSTRUCTION DOCUMENTS. ALL MEANS AND METHODS OF CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

6. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, PERMITS, FEES LICENSES, INSURANCE, ETC. AS REQUIRED FOR A COMPLETE INSTALLATION OF THE PHOTOVOLTAIC SYSTEM.

7. CONTRACTOR SHALL CHECK ALL MEASUREMENTS AND CONDITIONS INCLUDING THE ROOF, STRUCTURE, ELECTRICAL SYSTEM, ETC. RELEVANT TO THIS INSTALLATION PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY FOR A WRITTEN DIRECTIVE PRIOR TO COMMENCEMENT OF ANY WORK.

8. ANY AND ALL DAMAGE TO THE EXISTING HOME CAUSED BY THE EXECUTION OF THIS SOLAR PROJECT SHALL BE THE CONTRACTORS RESPONSIBILITY AND BE REPAIRED TO ITS ORIGINAL STATE PRIOR TO CONSTRUCTION

9. CONTRACTOR SHALL OBTAIN ALL PERMITS, APPROVALS, AFFIDAVITS, CERTIFICATIONS AS REQUIRED BY LOCAL AUTHORITIES HAVING JURISDICTION FOR THE WORK AND PAY ALL ASSOCIATED FEES. NO WORK SHALL COMMENCE WITHOUT THE REQUIRED PERMITS.

10. CONTRACTOR SHALL COORDINATE ALL FINAL INSPECTIONS AS REQUIRED BY ALL FEDERAL, STATE, AND LOCAL AGENCIES AND FOR ALL QUALIFYING REBATE, INCENTIVE, AND OTHER SOLAR PROGRAMS.

STRUCTURAL NOTES:

1. A FIELD INSPECTION WITH MEASUREMENTS WAS CONDUCTED ON THE EXISTING STRUCTURE AND SUBSEQUENT STRUCTURAL ANALYSIS PERFORMED. THE EXISTING STRUCTURE HAS ADEQUATE STRUCTURAL CAPACITY TO SUPPORT THE LOAD OF THE NEW SOLAR ARRAY

2. STRUCTURAL LOADS:
- DEAD LOADS = 10PSF (+0.7PSF, NEW SOLAR PANELS) = 10.7PSF.

- SNOW LOADS = 30PSF (24.5PSF- FACTORED PER ASCE 7-10)

- *WIND LOADS = 130MPH WIND SPEED AND -56.2 PSF *WIND LOADS PER ASCE 7-10.

- IMPORTANCE FACTOR - 1.0 RISK CATEGORY II WIND EXPOSURE CATEGORY - B

3. WIND LOAD DESIGN PRESSURE IN COMPLIANCE TO NYC 2014 BUILDING CODE 1603 INCLUSIVE

FIRE DEPARTMENT OF NEW YORK NOTES:

ALL WORK RELATED TO INSTALLATION SHALL BE IN STRICT COMPLIANCE WITH THE NEW YORK CITY FIRE CODE IN ITS ENTIRETY, SECTION 504 BUILDING AND ROOF ACCESS, SECTION 512 ROOF TOP SOLAR PANEL INSTALLATIONS

FDNY 512.4.2 - PHOTOVOLTAIC SOLAR PANEL INSTALLATION MARKINGS:
INDOOR AND OUTDOOR DIRECT CURRENT CONDUIT, ENCLOSURES, RACEWAYS, CABLE ASSEMBLIES, JUNCTION BOXES, COMBINER BOXES, AND MAIN SERVICE AND OTHER DISCONNECTS SHALL HAVE DURABLE, RETROREFLECTIVE AND, IF OUTDOORS, WEATHERPROOF, MARKINGS, IN WHITE CAPITAL LETTERS WITH A HEIGHT OF NOT LESS THAN 3/8 INCH (9.5MM) ON A RED BACKGROUND, READING "WARNING: PHOTOVOLTAIC POWER SOURCE." CONTINUOUS INSTALLATIONS, INCLUDING CONDUIT, RACEWAYS,

ENCLOSURES AND CABLE ASSEMBLIES, SHALL BE MARKED EVERY 10 FEET (3048MM), WITHIN 1 FOOT (305MM) OF ALL TURNS OR BENDS, AND WITHIN 1 FOOT (305MM) ABOVE AND BELOW ALL PENETRATIONS OF ROOF OR CEILING ASSEMBLIES AND ALL WALLS.

FDNY 504.4.7 - ROOFTOP CONDUITS AND PIPING:
TO THE MAXIMUM EXTENT PRACTICABLE, CONDUITS, INCLUDING CABLE TRAYS, AND PIPING, SHALL BE INSTALLED AT ROOFTOP LOCATIONS WHERE THEY DO NOT OBSTRUCT ROOFTOP ACCESS LANDINGS, CLEAR PATH OR REQUIRED CLEARANCES, IF IT IS IMPRACTICABLE TO AVOID THESE AREAS,

CONDUITS AND PIPING SHALL BE DESIGNED AND INSTALLED TO FACILITATE ACCESS AND MINIMIZE TRIPPING HAZARDS. STEPS OR RAMPS (OR PLATFORMS WITH STEPS, RAMPS OR LADDERS) SHALL BE PROVIDED THAT ARE CONSTRUCTED OF NONCOMBUSTIBLE MATERIAL, EQUIPPED WITH RAILINGS, AND DESIGNED TO ALLOW ANY CONDUIT OR PIPING INSTALLATIONS THAT EXCEED 1 FOOT (305MM) IN HEIGHT ABOVE THE ROOF SURFACE, OR MORE THAN 24 INCHES (610MM) IN WIDTH, TO BE READILY TRAVERSED. STEPS, RAMPS, PLATFORMS AND LADDERS SHALL NOT BE PLACED IN AREAS OR IN A MANNER THAT WOULD OBSTRUCT ANY DOOR OR MEANS OF EGRESS. ALL CONDUITS AND PIPING INSTALLATIONS SHALL BE COLOR CODED.

TENANT SAFETY NOTES 28-104.8.4:

TENANT PROTECTION PLAN
CONSTRUCTION DOCUMENTS FOR ALTERATIONS OF BUILDINGS IN WHICH ANY DWELLING UNIT WILL BE OCCUPIED DURING CONSTRUCTION SHALL INCLUDE A TENANT PROTECTION PLAN. SUCH PLAN SHALL CONTAIN A STATEMENT THAT THE BUILDING CONTAINS DWELLING UNITS THAT WILL BE OCCUPIED DURING CONSTRUCTION AND SHALL INDICATE IN SUFFICIENT DETAIL THE SPECIFIC UNITS THAT ARE OR MAY BE OCCUPIED DURING CONSTRUCTION, THE MEANS AND METHODS TO BE EMPLOYED TO SAFEGUARD THE SAFETY AND HEALTH OF THE OCCUPANTS, INCLUDING, WHERE APPLICABLE, DETAILS SUCH AS TEMPORARY FIRE-RATED ASSEMBLIES, OPENING PROTECTIVE OR DUST CONTAINMENT PROCEDURES. THE ELEMENTS OF THE TENANT PROTECTION PLAN MAY VARY DEPENDING ON THE NATURE AND SCOPE OF THE WORK BUT AT A MINIMUM SHALL MAKE DETAILED AND SPECIFIC PROVISIONS FOR.

1. EGRESS. AT ALL TIMES IN THE COURSE OF CONSTRUCTION PROVISION SHALL BE MADE FOR ADEQUATE EGRESS AS REQUIRED BY THIS CODE AND THE TENANT PROTECTION PLAN SHALL IDENTIFY THE EGRESS THAT WILL BE PROVIDED. REQUIRED EGRESS SHALL NOT BE OBSTRUCTED AT ANY TIME EXCEPT WHERE APPROVED BY THE COMMISSIONER. ALL EXISTING MEANS OF EGRESS FOR TENANTS OF THE BUILDING TO BE MAINTAINED CLEAN AND FREE OF ALL OBSTRUCTIONS, SUCH AS BUILDING MATERIALS, ETC.

2. FIRE SAFETY. ALL NECESSARY LAWS AND CONTROLS, INCLUDING THOSE WITH RESPECT TO OCCUPIED DWELLINGS, AS WELL AS ADDITIONAL SAFETY MEASURES NECESSITATED BY THE CONSTRUCTION SHALL BE STRICTLY OBSERVED.

3. HEALTH REQUIREMENTS. SPECIFICATION OF METHODS TO BE USED FOR CONTROL OF DUST, DISPOSAL OF CONSTRUCTION DEBRIS, PEST CONTROL AND MAINTENANCE OF SANITARY FACILITIES, AND LIMITATION OF NOISE TO ACCEPTABLE LEVELS SHALL BE INCLUDED.

DUST CONTROL: DEBRIS, DIRT DUST TO BE KEPT TO A MINIMUM AND BE CONFINED TO THE IMMEDIATE CONSTRUCTION ARE; AND BE CLEANED UP AND CLEARED FROM THE BUILDING PERIODICALLY TO AVOID ANY EXCESSIVE ACCUMULATION. CONSTRUCTION WORK WILL BE CONFINED TO THE PROPOSED CONSTRUCTION FLOOR. CONTRACTOR WILL LIMIT TO THE MINIMAL AMOUNT OF DUST OR OTHER SUCH INCONVENIENCE CREATED TO ALL OTHER AREAS OF THE BUILDING.

1.1. THERE SHALL BE INCLUDED A STATEMENT OF COMPLIANCE WITH APPLICABLE PROVISIONS OF LAW RELATING TO LEAD AND ASBESTOS.

1. COMPLIANCE WITH HOUSING STANDARDS. THE REQUIREMENTS OF THE NEW YORK CITY HOUSING MAINTENANCE CODE, AND, WHERE APPLICABLE, THE NEW YORK STATE MULTIPLE DWELLING LAW SHALL BE STRICTLY OBSERVED.

2. STRUCTURAL SAFETY. NO STRUCTURAL WORK SHALL BE DONE THAT MAY ENDANGER THE OCCUPANTS.

3. NOISE RESTRICTIONS. WHERE HOURS OF THE DAY OR THE DAYS OF THE WEEK IN WHICH CONSTRUCTION WORK MAY BE UNDERTAKEN ARE LIMITED PURSUANT TO THE NEW YORK CITY NOISE CONTROL CODE, SUCH LIMITATIONS SHALL BE STATED. CONSTRUCTION OPERATIONS WILL BE CONFINED TO NORMAL WORKING HOURS 9AM TO 5PM, MONDAYS THROUGH FRIDAYS, EXCEPT LEGAL HOLIDAYS.



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PROJECT INFORMATION

CUSTOMER: WALTER LIM
ADDRESS: 69-04 173RD ST
QUEENS, NY 11365
BLOCK: 6947, LOT: 35
JURISDICTION: CITY OF NEW YORK

SYSTEM SIZE (DC): 4,440

GENERAL

DRAWING INFORMATION

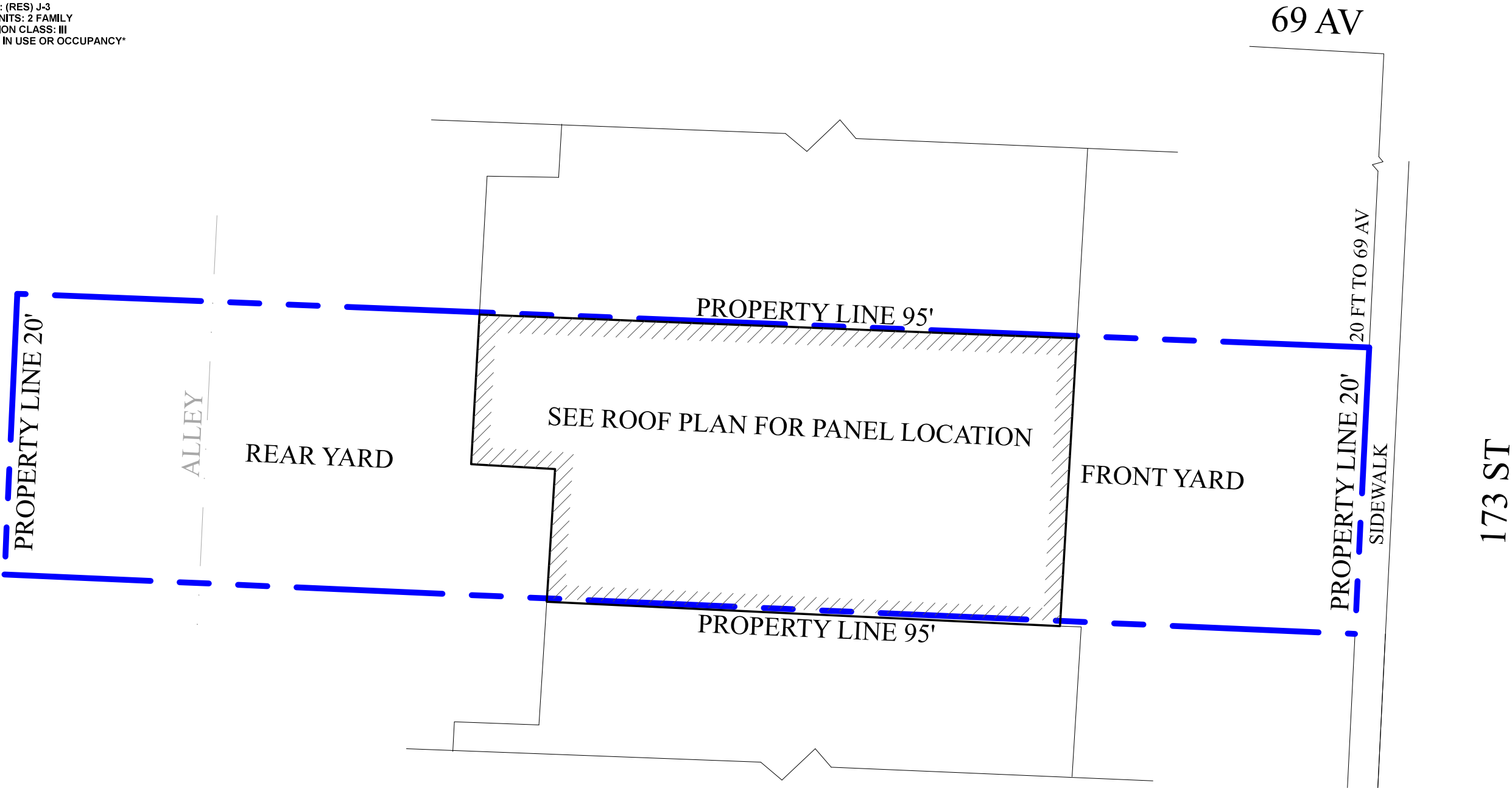
INITIAL: EB	DRAWING DATE: 8/7/19
REVISION: PANEL CHANGE - DB	DRAWING DATE: 8/13/19
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PV-001.00

SHEET
1 OF 9

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LOT AREA: 1900 SQ FT
APPROX. BUILDING HEIGHT: 25'
BUILDING STORIES: 2
OCCUPANCY: (RES) J-3
DWELLING UNITS: 2 FAMILY
CONSTRUCTION CLASS: III
NO CHANGE IN USE OR OCCUPANCY

	ROOF 1
RAFTER SIZE/ RAFTER SPACING	2"x10" @ 16" O.C.
ACTUAL SPAN	19'-0"
SHEATHING	2" WOOD DECK
COLLAR TIES	N/A
SHINGLE TYPE / LAYER	1 LAYER EPDM



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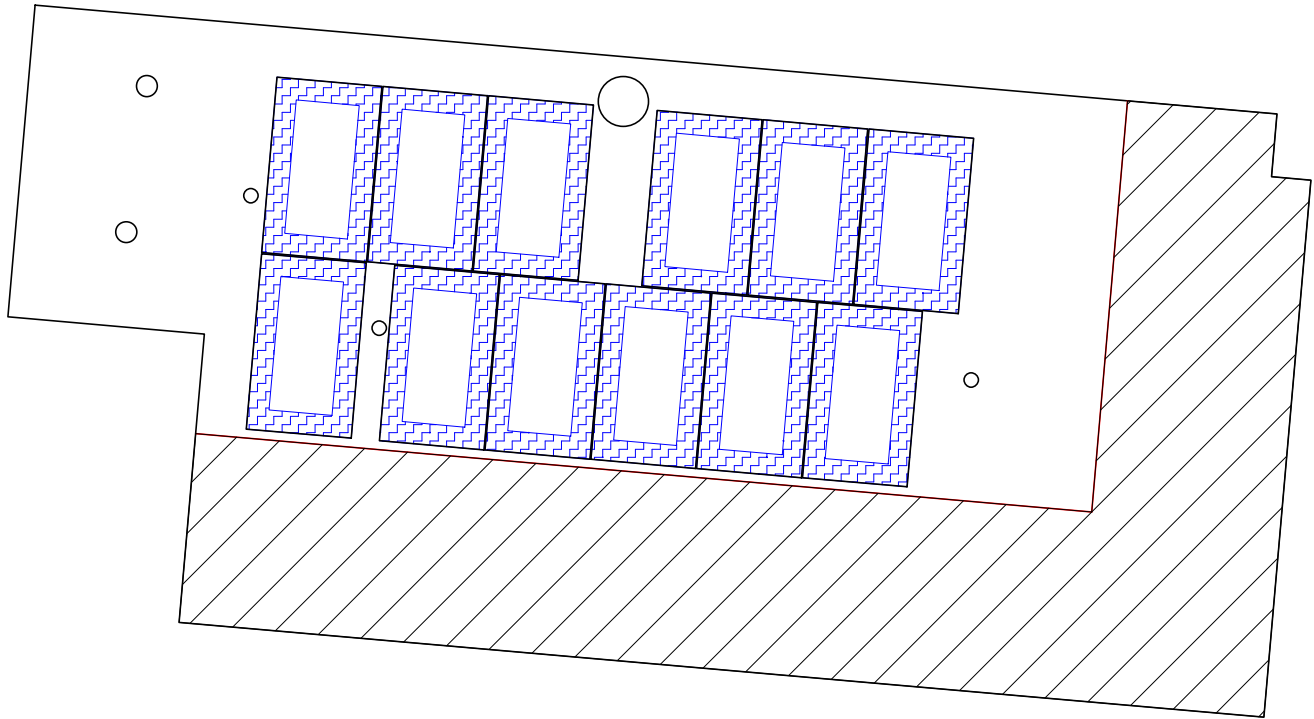


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SITE PLAN	
DRAWING INFORMATION	
INITIAL: EB	DRAWING DATE: 12.30.2019
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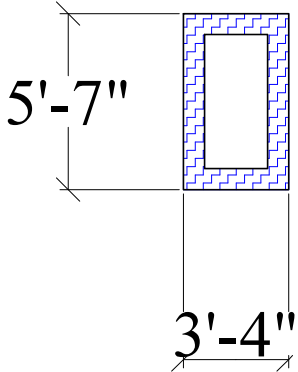
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NO CHANGE IN USE OR OCCUPANCY



R-1
Modules (12)
Pitch: 0°
Azimuth: 185°



INVERTER: SOLAREEDGE SE6000H
MODULES: (12) LG 370W
RACKING: IRON RIDGE XR100
WATTAGE: 4,380
ROOF TYPE: EPDM
WIND LOAD: -33.0 PSF
FASTENER: (4) OMG XHD 3" LAGS
GENERAL NOTES:
-SOLAREEDGE SE6000H-US INVERTER LOCATED IN BASEMENT NEAR MSP
-SOLAREEDGE P370 OPTIMIZERS ARE LOCATED ON ROOF BEHIND EACH MODULE.
-FIRST RESPONDER ACCESS MAINTAINED AND FROM ADJACENT ROOF.
-WIRE RUN FROM ARRAY TO CONNECTION IS 40 FEET.
-COGEN DISCONNECT LOCATED ADJACENT TO UTILITY METER.



REPRESENTS ALL FIRE CLEARANCE INCLUDING ALTERNATIVE METHODS

FIRST RESPONDER ACCESS

MINIMUM OF 36" UNOBSTRUCTED AS PER SECTION R324 OF THE 2015 IRC (AMENDED 2017)

LEGEND



COGEN DISCONNECT



UTILITY METER



GROUND ACCESS POINT



SATELLITE DISH



CHIMNEY



FAN VENT



PLUMBING VENT



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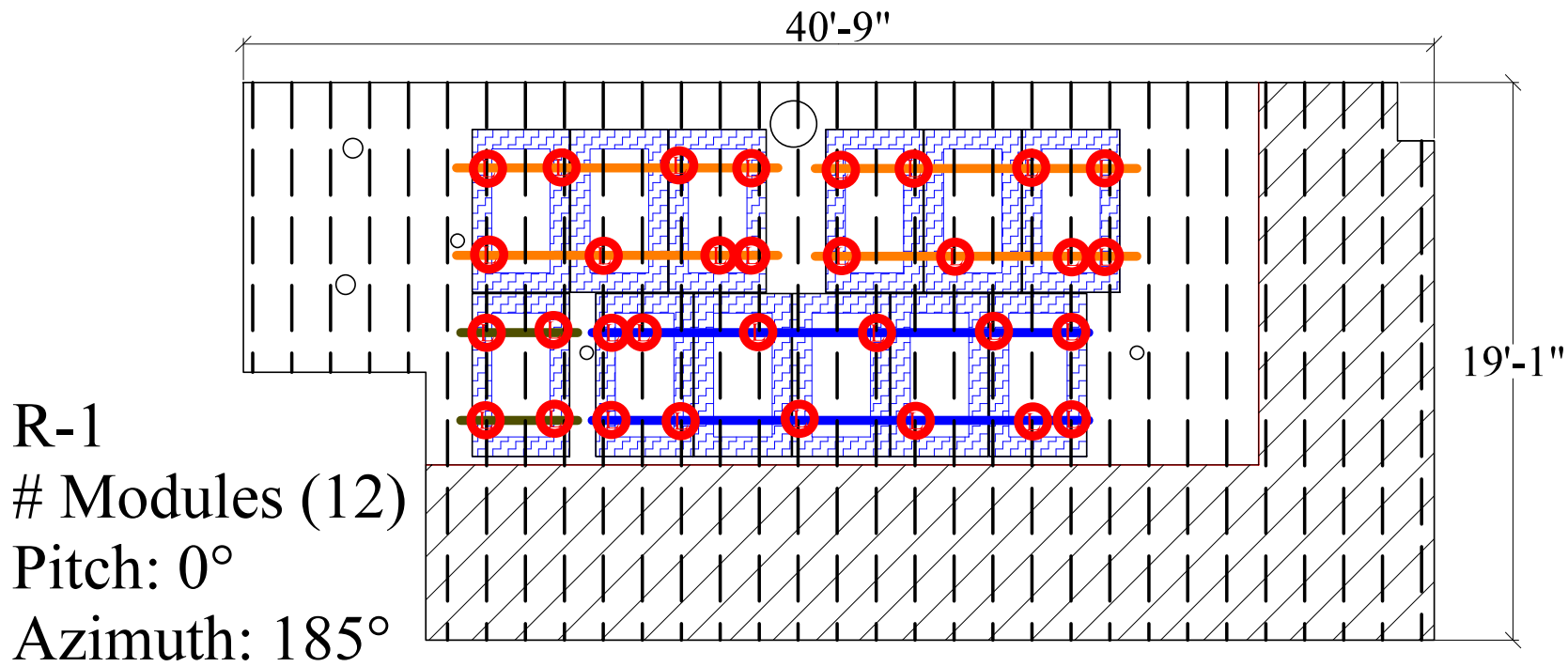
ROOF PLAN

DRAWING INFORMATION

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SHEET
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17' 2

11' 5

4' 0

Penetrations 32

UFO's 32

40MM Sleeves 16

End Caps 16

Consumption Monitoring

Critter Guard 100'

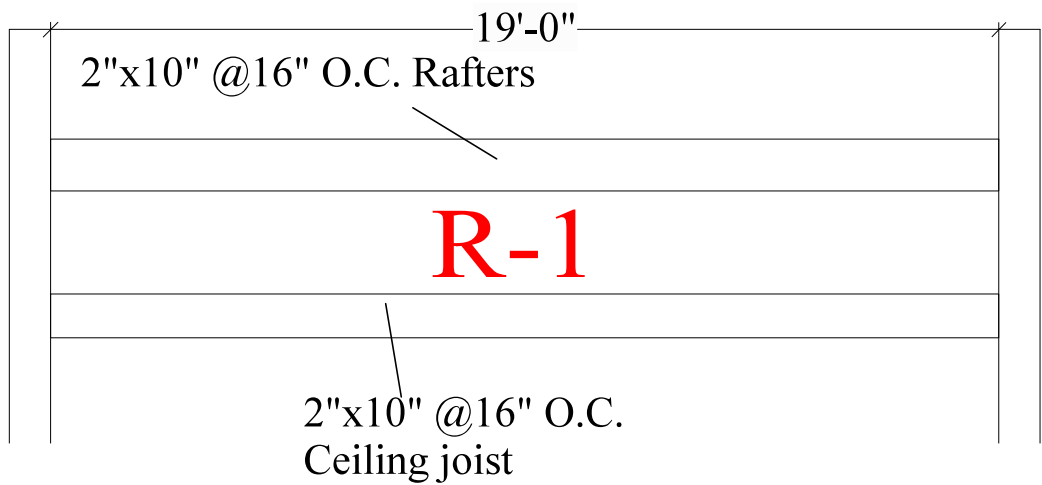


Table R301.2(1) Climate and Geographical Design Criteria for Smithtown													
Ground Snow Load	Wind Design				Seismic Design Category	Subject To Damage From			Winter Design Temp. °	Ice Barrier Underlayment Required °	Flood Hazards °	Air Freezing Index	Mean Annual Temp. °
	Speed °	Topographic effects °	Special Wind region	Wind-borne debris zone °		Weathering °	Frost line depth °	Termite °					
	lbs/ ft ²	mph											
30	130	Yes	No	Yes 1 mile	B	Severe	3 Feet	Moderate To Heavy	11	Yes	No	452	52.7
Design Dead, Roof, Snow Loads in accordance with Tables R301.5, R301.6 (IRC) and Allowable Deflections in accordance with Table R301.7 (IRC)										Net Design Wind Pressure- ASCE 7-05			
Attic Without Storage	Attic With Storage	Roof no ceiling load	Roof With Cathedral Ceiling	Rafters having slope greater than 3/12 with NO finished Ceiling attached			Rafters having slopes grester than 3/12 with finished ceiling attached			Roof 0 to 7 Degrees [-33.0] Roof> 7 to 27 Degrees [-56.2]			
LL=10psf DL=10psf	LL=10psf DL=20psf	LL=20psf DL=10psf	LL=20psf DL=15psf	L/180			L/240			Roof> 27 to 45, Degrees [-30.4]			

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ROOF ELEVATIONS AND DETAILS

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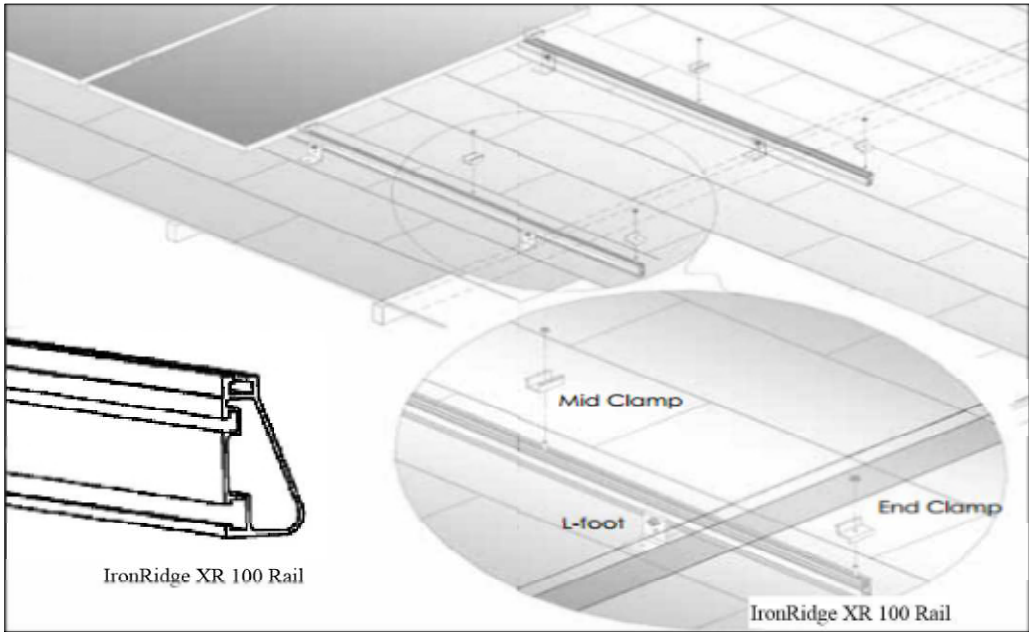
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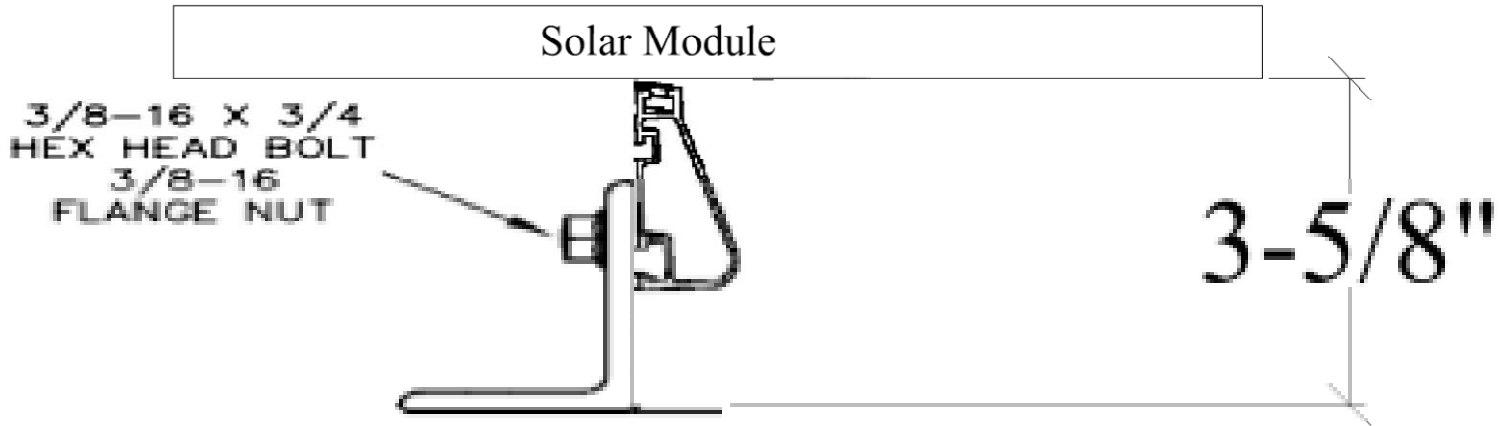
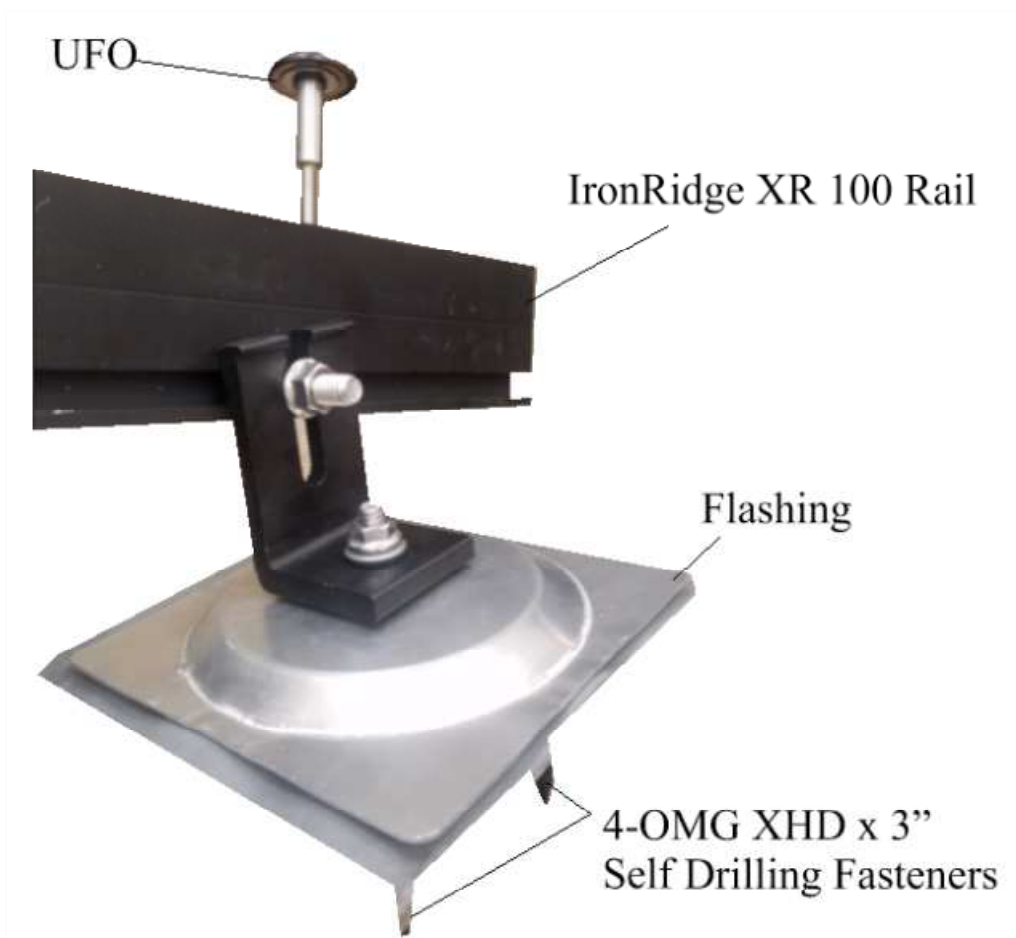
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SHEET 4 OF 9



GENERAL NOTES:

- L-FEET ARE SECURED TO ROOF RAFTERS @ 48" O.C. USING (4) OMG XHD x 3" SELF DRILLING FASTENERS.
- SUBJECT ROOF HAS ONE LAYER.
- ALL PENETRATIONS ARE SEALED AND FLASHED.



	ROOF 1
RAFTER SIZE/ RAFTER SPACING	2"x10" @ 16" O.C.
ACTUAL SPAN	19'-0"
SHEATHING	2" WOOD DECK
COLLAR TIES	N/A
SHINGLE TYPE / LAYER	1 LAYER EPDM

DESIGNED AS PER ASCE7-10

**MODULES MOUNTED FLUSH TO ROOF,
NO HIGHER THAN 6" ABOVE ROOF SURFACE.**

INVERTER: SOLAREdge SE6000H
MODULES: (12) LG 370W
RACKING: IRON RIDGE XR100
WATTAGE: 4,380
ROOF TYPE: EPDM
WIND LOAD: -33.0 PSF
FASTENER: (4) OMG XHD 3" LAGS

**New York
POWER SOLUTIONS
SMARTER SOLAR**
50 MAIN ST STE 1000
WHITE PLAINS NY 10606
914-719-7786

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CONNECTION DETAILS

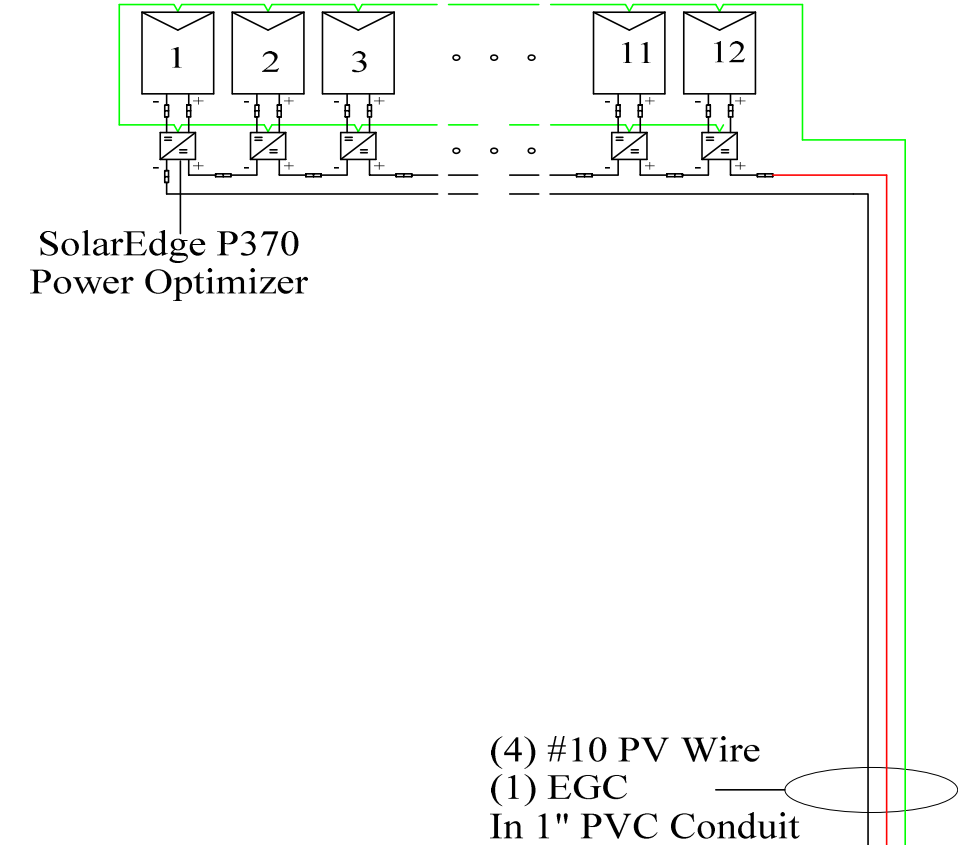
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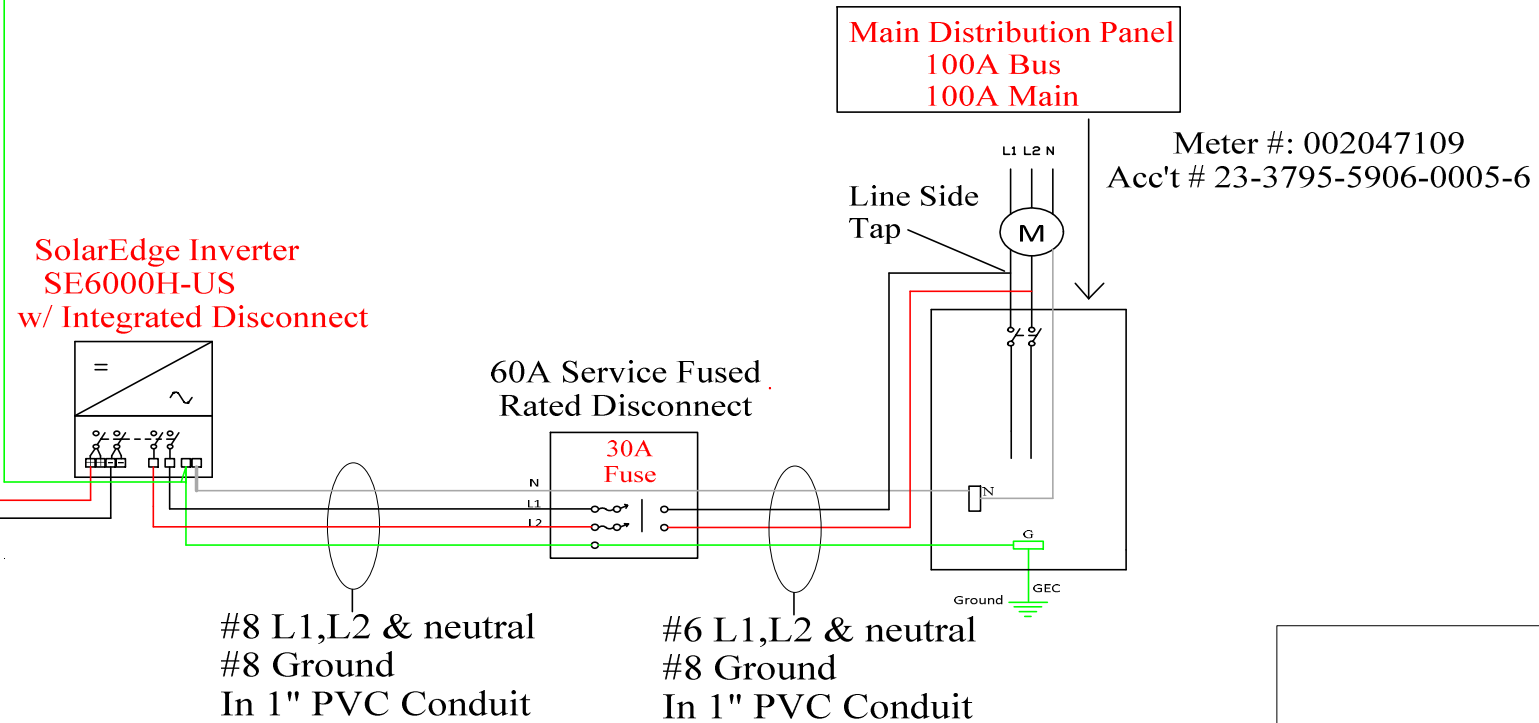
PV-005.00

SHEET
5 OF 9

	!WARNING PHOTOVOLTAIC POWER SOURCE	DC CONDUITS	1 AT EVERY SEPARATION BY ENCLOSURES / WALLS / PARTITIONS / CEILINGS / FLOORS OR NO MORE THAN 10'	NEC 690.64.B.4 LABEL LOCATION: ON DISTRIBUTION PANEL AND POINT OF INTERCONNECTION !CAUTION PHOTOVOLTAIC SYSTEM CIRCUIT IS BACKFED NEC 690.14.C.2 LABEL LOCATION: ON AC DISCONNECT AND POINT OF INTERCONNECTION PHOTOVOLTAIC AC DISCONNECT NEC 705.12.D.7 LABEL LOCATION: ON POINT OF INTERCONNECTION LINE SIDE TAP NEC 690.17(4) LABEL LOCATION: ON DC DISCONNECT AND COMBINER BOX !WARNING ELECTRICAL SHOCK HAZARD DO NOT TOUCH TERMINALS TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION DC VOLTAGE IS ALWAYS PRESENT WHEN SOLAR MODULES ARE EXPOSED TO SUNLIGHT	 50 MAIN ST STE 1000 WHITE PLAINS NY 10606 914-719-7786  CORPORATE OFFICE: 77 GAZZA BLVD FARMINGDALE, NY 11735 NYC: 100 CHURCH ST SUITE 800 NEW YORK, NY 10007 OFFICE: 877.828.3882 FAX: 866.444.4479 www.DOMINIONEXPEDITING.COM CHOI ENGINEERING PLLC  PROJECT INFORMATION CUSTOMER: WALTER LIM ADDRESS: 69-04 173RD ST QUEENS, NY 11365 BLOCK: 6947, LOT: 35 JURISDICTION: CITY OF NEW YORK WARNING LABELS DRAWING INFORMATION INITIAL: EB DRAWING DATE: 12.30.2019 REVISION: PANEL CHANGE - DB DRAWING DATE: 8/13/19 REVISION: DRAWING DATE: PV-006.00 SHEET 6 OF 9
	!WARNING PHOTOVOLTAIC POWER SOURCE PHOTOVOLTAIC SYSTEM EQUIPPED WITH RAPID SHUTDOWN	COMBINER BOX	1 AT ANY JUNCTION BOX OR DC COMBINER IF USED		
	!WARNING ELECTRICAL SHOCK HAZARD DO NOT TOUCH TERMINALS TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION	JUNCTION BOX	1 AT ANY JUNCTION BOX OR DC COMBINER IF USED		
	PHOTOVOLTAIC AC DISCONNECT MAXIMUM AC OPERATING CURRENT 30 A MAXIMUM AC OPERATION VOLTAGE 208 V !WARNING ELECTRICAL SHOCK HAZARD DO NOT TOUCH TERMINALS TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION	AC DISCONNECT	1 OF EACH AT FUSED AC DISCONNECT COMPLETE VOLTAGE AND CURRENT VALUES ON DISCONNECT LABEL		
	LINE SIDE TAP !WARNING DUAL POWER SOURCE SECOND SOURCE IS PHOTOVOLTAIC SYSTEM	MAIN DISCONNECT PANEL	1 OF EACH AT BUILDING MAIN DISCONNECT PANEL		
	!WARNING DUAL POWER SOURCE SECOND SOURCE IS PHOTOVOLTAIC SYSTEM	UTILITY METER	1 AT UTILITY METER		
DESIGNED AS PER ASCE7-10		INVERTER: SOLAREEDGE SE6000H MODULES: (12) LG 370W RACKING: IRON RIDGE XR100 WATTAGE: 4,380 ROOF TYPE: EPDM WIND LOAD: -33.0 PSF FASTENER: (4) OMG XHD 3" LAGS			
MODULES MOUNTED FLUSH TO ROOF, NO HIGHER THAN 6" ABOVE ROOF SURFACE.					



- Equipment list
- PV:
(12) LG370Q1C-V5
(12) SolarEdge Power Optimizer P-370
(1) string of (12)
- Inverter:
(1) SolarEdge SE6000H-US
SolarEdge AC/DC Safety Switch
- AC Disconnect:
60A Fused Service Rated Disconnect
- All wiring to meet the 2014 NEC and 2015 Energy Code



AC COMBINER:
1-PHASE, MAIN LUG LOADCENTER, 125A

NOTE:
ALL WIRING TO MEET THE 2014 NEC AND 2015 ENERGY CODE
60A FUSED SERVICE RATED DISCONNECT

EXIST. ELEC. METER AND ALL NEW EQUIP.
LOCATED IN BASEMENT.

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NYC: 100 CHURCH ST SUITE 800 NEW YORK, NY 10007
OFFICE: 877.828.3882 FAX: 866.444.4479
www.DOMINIONEXPEDITING.COM

CHOI ENGINEERING PLLC



PROJECT INFORMATION	
CUSTOMER: WALTER LIM	
ADDRESS: 69-04 173RD ST	
QUEENS, NY 11365	
BLOCK: 6947, LOT: 35	
JURISDICTION: CITY OF NEW YORK	
SYSTEM SIZE (DC): 4,440	

ELECTRICAL ONE LINE DIAGRAM	
DRAWING INFORMATION	
INITIAL: EB	DRAWING DATE: 12.30.2019
REVISION: PANEL CHANGE - DB	DRAWING DATE: 8/13/19
REVISION:	DRAWING DATE:

PV-007.00

NYC BUILDING DEPARTMENT
QUEENS BOROUGH OFFICE
120-55 Queens Blvd,
Kew Gardens, NY 11424

ATTN: CONSTRUCTION OFFICIAL

Re: Proposed Photovoltaic Solar Panel Installation:
69-04 173rd Street, Queens, NY 11365

Dear Sir/Madam:

A site inspection was performed and analysis of the structure located at 69-04 173rd Street was conducted in regards to the proposed solar panel array installation. There is adequate structure capacity for the installation of the array with the following minimum design requirements we clarify that:

1. The array will be installed on the existing roof surface. Roof surface R-1 is constructed of 2"x10" wood rafters @ 16" O.C. spanning 19'-0" at a pitch of 0 degrees with 2" plank sheathing. The new solar array (see site map by contractor) will add 0.7 lb/Sf. Overall to the roof. No additional structure support is to be installed or required for existing roof structure.

2. The system shall be secured to roof surface R-1 using EcoFasten SimpleGrio SQ attachments. The attachment system shall be UL 1703 approved and tested. The attachment shall be min. (4) OMG XHD 3" Lags each, with a min. of 2 embedded into rafters. When mounted in landscape or portrait attachment shall be @ 48° o.c. max. staggered to displace the load evenly across the rafters. The maximum panel cantilever length shall be 16". Provide water tight gasket and sealant penetrations. Attachments shall follow panel rows as specified by the system manufacturer's installation manual. The panel shall match the roof slope.

Structure Design Loads:

- DEAD LOADS = 10 psf (+0.7 psf NEW SOLAR PANELS) = 10.7 psf
- SNOW LOADS = 30 PSF(24.5 psf- FACTORED PER ASCE 7-10), Climate Zone A4
- WIND LOAD = 130 mph WIND SPEED EXPOSURE B WIND LOADS PER ASCE 7-10.

3. Solar modules shall be secured to the roof as per the manufacturer's specifications. Solar module shall be UL – 1701 rated or better. Solar Panels and attachments system shall be designed by the manufacturer to withstand wind is excess of 130 mph and 50 psf. Solar Panels shall be designed to support excess of 30 lb snow load by the manufacturer. Solar panels do not add any additional snow load to existing structure. Refer to manufacturers' specifications.

4. All penetrations shall be completely water tight and guaranteed for a period of ten years or the duration of existing roof warrantee whichever is longer.

5. Positive drainage of the system shall be maintained so as to not void the existing roof warrantee.

6. All attachment system components shall be manufactured by the specified manufacturer. All attachments system design is based on manufacturers printed design specifications. All aspect of this design shall be installed in strict compliance with manufacturers printed specifications.

7. All aspect of the installation shall comply with ASCE7-10, New York City Building code and supplement, New York City Fire code, International Residential Code 2015 and all addenda there to.

If you have any questions relating to this matter, please contact me at your earliest convenience.

Thank you.


50 MAIN ST STE 1000
WHITE PLAINS NY 10606
914-719-7786


"A Permit Management & Consulting Firm"
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PE LETTER

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SHEET
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ZONING HEIGHT NOTE:
THIS APPLICATION COMPLIES WITH ZR 23-62 (m)

**New York
POWER SOLUTIONS
SMARTER SOLAR**
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BUILDING ELEVATION	
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