



DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



# CITY OF PORTLAND

CBL: 010\_C001001

BUILDING PERMIT # 2011-09-6526

# BUILDING PERMIT

This is to certify that PORTLAND VOA ELDERLY HOUSE at 158 NORTH ST has permission to Install # 221-53 kilowatt photovoltaic panel on ground provided that the person or persons, firm or corporation, accepting this permit, comply with all of the provisions of the Statutes of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission must be completed by owner before this building or part thereof is lathed or closed-in. 48 HOUR NOTICE IS REQUIRED. A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be procured prior to occupancy.

Fire Prevention Officer

*[Signature]* 10/7/11  
Code Enforcement Officer / Plan Reviewer

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY.  
PENALTY FOR REMOVING THIS CARD.

**City of Portland, Maine - Building or Use Permit Application**

389 Congress Street, 04101 Tel: (207) 874-8703, FAX: (207) 8716

Job No: 2011-05-964-ALTCOMM 2011-6526- <del>HOME</del> BLDG	Date Applied: 9/13/2011	CBL: 010 - - C - 001 - 001 - - - - -	
Location of Construction: 158 NORTH ST	Owner Name: PORTLAND VOA ELDERLY HOUSIN INC.	Owner Address: 3939 CAUSEWAY BLVD METAIRIE, LA 70002	Phone:
Business Name:	Contractor Name: Revision Energy - Josh Baston	Contractor Address: 142 Presumpscot St., Portland, ME 04103	Phone: (207) 595-244
Lessee/Buyer's Name:	Phone:	Permit Type: BLDG - HVAC	Zone: R-6
Past Use: 60 Dwelling units for the Elderly	Proposed Use: Same - 60 Dwelling units for the elderly - install roof ballasted 53 kilowatt photovoltaic system - w/44" x 27" inverter, 54" tall on a 6' x 6' concrete pad	Cost of Work: 236767.00	CEO District:
		Fire Dept: <input checked="" type="checkbox"/> Approved w/ conditions <input type="checkbox"/> Denied <input type="checkbox"/> N/A	Inspection: Use Group: R-2 Type: N/A IBC-2009 Signature: <i>[Signature]</i>
Proposed Project Description: install photovoltaic roof system		Pedestrian Activities District (P.A.D.)	10/2/11

Permit Taken By:	<b>Zoning Approval</b>		
<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</p> <p>2. Building Permits do not include plumbing, septic or electrical work.</p> <p>3. Building permits are void if work is not started within six (6) months of the date of issuance. False informatin may invalidate a building permit and stop all work.</p>	<b>Special Zone or Reviews</b> <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetlands <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input checked="" type="checkbox"/> Site Plan <i>Admin Author.</i>  <input type="checkbox"/> Maj <input type="checkbox"/> Min <input type="checkbox"/> MM  Date: <i>OK w/ conditions</i> <i>9/13/11 ASU</i>	<b>Zoning Appeal</b> <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied  Date:	<b>Historic Preservation</b> <input checked="" type="checkbox"/> Not in Dist or Landmark <input type="checkbox"/> Does not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied  Date: <i>ASU</i>
	<b>CERTIFICATION</b>		

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE

# **BUILDING PERMIT INSPECTION PROCEDURES**

**Please call 874-8703 or 874-8693(ONLY)**

**Or email [buildinginspections@portlandmaine.gov](mailto:buildinginspections@portlandmaine.gov)**

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the City of Portland Inspection Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
  - **Permits expire in 6 months, if the project is not started or ceases for 6 months.**
  - **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a “Stop Work Order” and subsequent release to continue with construction.**
1. **Commercial Electrical Inspections**
  2. **Final Inspection of rooftop installation and electrical completion**

**The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OR CIRCUMSTANCES.**



# PORTLAND MAINE

*Strengthening a Remarkable City, Building a Community for Life • [www.portlandmaine.gov](http://www.portlandmaine.gov)*

*Director of Planning and Urban Development  
Penny St. Louis*

*Inspection Services, Director  
Tammy Munson*

**158 North St  
CBL: 010 C001001  
BP#: 2011-09-6526**

## **Conditions of Approval:**

### **Zoning:**

1. This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.

### **Building:**

1. Application approval based upon information provided by applicant. Any deviation from approved plans requires separate review and approval prior to work.
2. Equipment must be installed in compliance with the manufacturer's specifications.
3. Separate permits are required for any electrical, plumbing, sprinkler, fire alarm, HVAC systems, heating appliances, including pellet/wood stoves, commercial hood exhaust systems and fuel tanks. Separate plans may need to be submitted for approval as a part of this process.

### **Fire:**

1. Installation shall comply with City Code Chapter 10.
2. Installation shall comply with NFPA 70, *National Electrical Code*, and the manufacturer's published instructions.



P/v

email 208

Permit # 2011-6526

off Permit - 2011-05-904. All com

# General Building Permit Application

remodeling roof windows

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: <u>158 North St</u>		
Total Square Footage of Proposed Structure/Area <u>3760 (area of panels on roof)</u>	Square Footage of Lot	Number of Stories <u>3</u>
Tax Assessor's Chart, Block & Lot Chart# <u>010</u> Block# <u>C</u> Lot# <u>001</u>	Applicant * <u>must be owner, Lessee or Buyer</u> * Name <u>Volunteers of America</u> Address <u>14 Maine st suite 301</u> City, State & Zip <u>Brunswick, ME 04011</u>	Telephone:
<p style="text-align: center; font-size: 2em; font-weight: bold;">RECEIVED</p> <p style="text-align: center;">SEP 13 2011</p> <p style="text-align: center;">Dept. of Building Inspections City of Portland Maine</p>	Lessee/DBA (if Applicable)	Owner (if different from Applicant)
	Name	Cost Of Work: <u>\$236,767</u>
	Address	C of O Fee: <u>\$2390</u>
City, State & Zip	Total Fee: \$ _____	
Current legal use (i.e. single family) <u>Senior Housing</u>	Number of Residential Units <u>60</u>	
If vacant, what was the previous use? _____		
Proposed Specific use: _____		
Is property part of a subdivision? _____	If yes, please name _____	
Project description: <u>Installation of roof ballasted 53 kilowatt photovoltaic system - install 6'x6' concrete pad for inverter. 5'4" tall 44" x 27"</u>		
Contractor's name: <u>Revision Energy</u>		
Address: <u>142 Presumpscot St</u>		
City, State & Zip: <u>Portland ME 04103</u>		Telephone: _____
Who should we contact when the permit is ready: <u>Josh Boston</u>		Telephone: <u>595-2445</u>
Mailing address: <u>142 Presumpscot St</u> <u>jsbw@revisionenergy.com</u>		

Please submit all of the information outlined on the applicable Checklist. Failure to do so will result in the automatic denial of your permit.

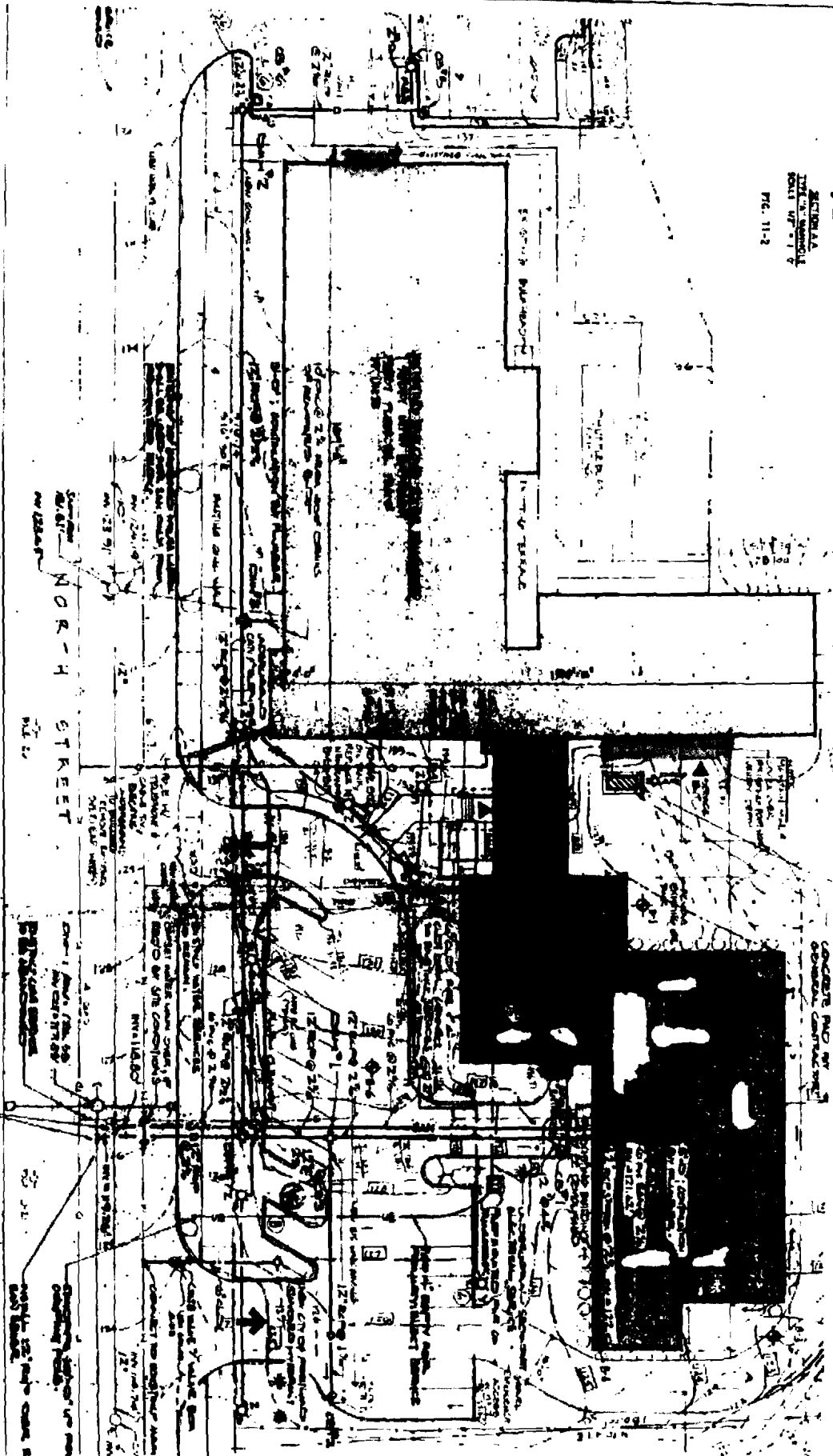
In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information or to download copies of this form and other applications visit the Inspections Division on-line at [www.portlandmaine.gov](http://www.portlandmaine.gov), or stop by the Inspections Division office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature: _____	Date: _____
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This is not a permit; you may not commence ANY work until the permit is issued

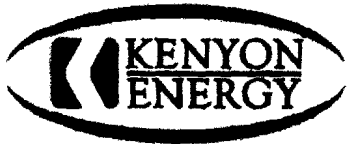
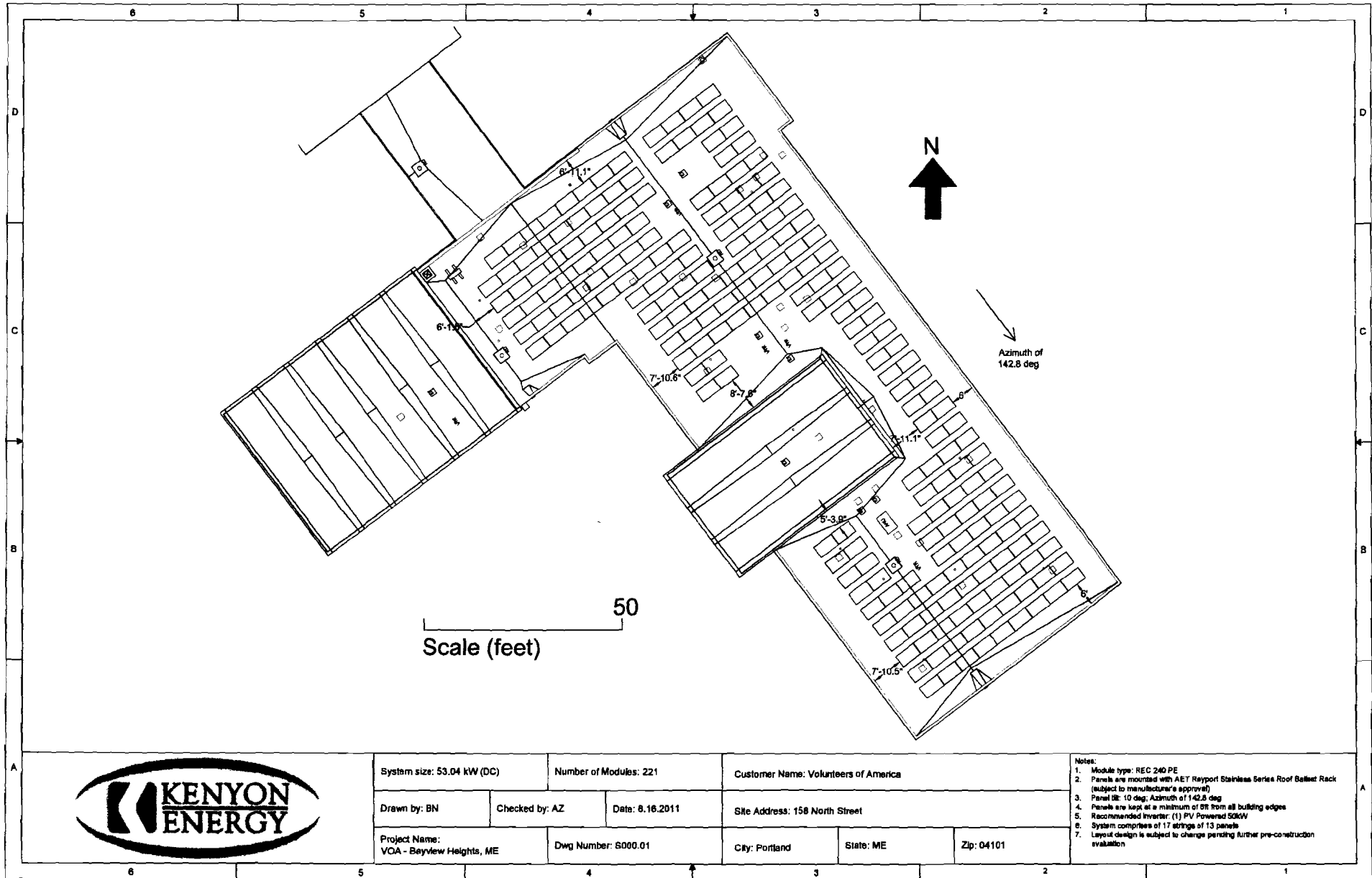
SECTION A  
 THE W. BARRON  
 ROAD UP 11-2  
 PG. 11-2



NOTE: SEE DRAWING C  
 RAYMOND BARRON

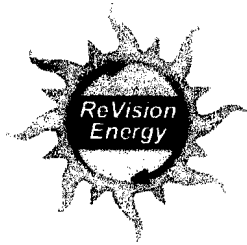
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System size: 53.04 kW (DC)		Number of Modules: 221		Customer Name: Volunteers of America		
Drawn by: BN	Checked by: AZ	Date: 8.16.2011	Site Address: 158 North Street			
Project Name: VOA - Bayview Heights, ME		Dwg Number: S000.01	City: Portland	State: ME	Zip: 04101	

- Notes:
1. Module type: REC 240 PE
  2. Panels are mounted with AET Reyport Stainless Series Roof Ballast Rack (subject to manufacturer's approval)
  3. Panel tilt: 10 deg; Azimuth of 142.8 deg
  4. Panels are kept at a minimum of 8ft from all building edges
  5. Recommended inverter: (1) PV Powered 50kW
  6. System comprises of 17 strings of 13 panels
  7. Layout design is subject to change pending further pre-construction evaluation



**Professional design, installation and service of renewable energy systems**

## **Photovoltaic System Proposal For Kenyon Energy**

**Project Location:  
VOA – Bayview Heights  
158 North Street  
Portland, Maine**

**Submitted by:  
ReVision Energy LLC  
Geoff Sparrow P.E.**

**Submittal Date: August 22, 2011**

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**Liberty**  
207-589-4171

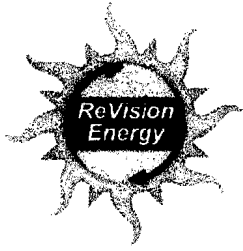
**Portland**  
207-221-6342

**Exeter, NH**  
603-501-1822

[www.revisionenergy.com](http://www.revisionenergy.com)

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**Professional design, installation and service of renewable energy systems**

ReVision Energy is pleased to submit this proposal to Kenyon Energy for the Installation of a 53 kW ballast mounted photovoltaic system to be located at VOA – Bayview Heights project located at 158 North Street in Portland, ME.

The following materials shall be provided by Kenyon Energy and be delivered to the project site with no charge to ReVision Energy per the specification

- (221) REC 240 watt photovoltaic modules
- (1) Solectria Satcom 18 string combiner box w/ fuses
- Rayport ballasted racking system with roof layout provided
- Grounding Lugs required for the racking system
- (1) PV Powered 50 kW inverter
- Submittals required for system components
- Permitting with the state of Maine, and the city of Portland as required

In accordance with the specification on drawing E0.0 ReVision Energy will install the equipment indicated above and will install and provide the balance of system components including: conduit, wire, breakers, AC meter, inverter concrete pad, ballast blocks, disconnects, labels, etc...

**Installed Cost.....\$82,161**

Thank you for the opportunity of offering our installation services for the accomplishment of this exciting solar project. Please direct any comments and questions to;

Geoff Sparrow P.E.

Director of Engineering  
ReVision Energy  
Portland, Maine 04062

(207) 939-8615  
geoff@revisionenergy.com

*Continued on next page: ReVision Energy experience and qualifications*

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**Liberty**  
207-589-4171

**Portland**  
207-221-6342

**Exeter, NH**  
603-501-1822

[www.revisionenergy.com](http://www.revisionenergy.com)

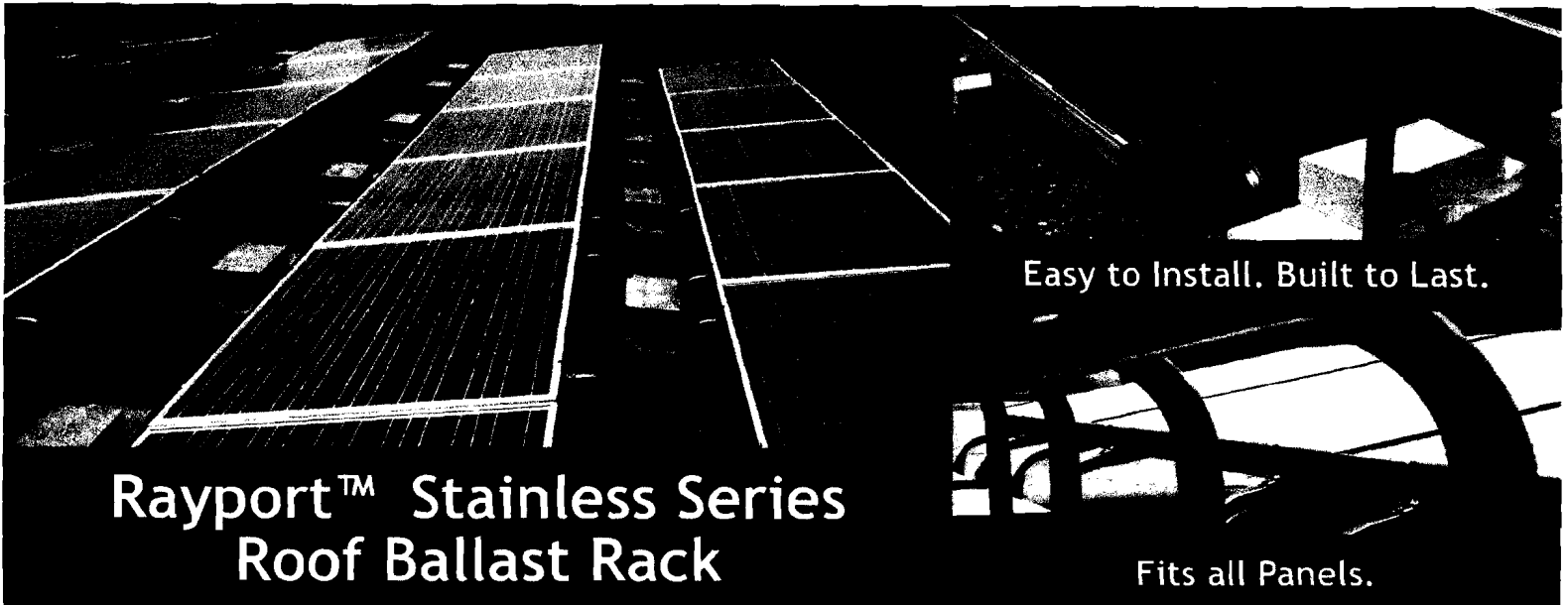
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AETenergy.com

Sales: 810.300.3871

Info@AETenergy.com



# Rayport™ Stainless Series Roof Ballast Rack

Easy to Install. Built to Last.

Fits all Panels.

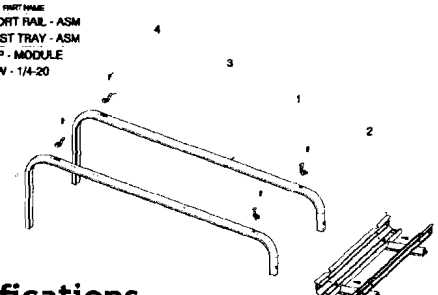
## Benefits

- The ONLY stainless steel roof ballast system available on the market
- Industry-leading installation time
- Fits most panels available on the market today
- Top-down assembly of PV panels
- Racks include integrated fasteners allowing one common bolt for all joints
- Wind tunnel tested to 120mph
- Grounding (rack): 1 grounding lug per tray to be installed at the rear support rail (every 20 rows)
- Only 4 part numbers to order
- No cutting or drilling require
- Full layout and loading analysis for every project

## Engineered Solutions for Renewable Energy Systems

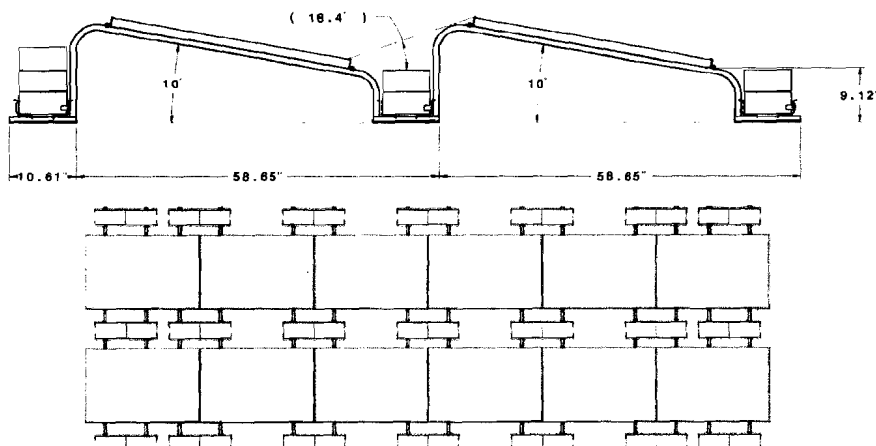
**AET products are design-driven**  
– a perfect integration of form and function.

QTY	ITEM	PART NAME
2	1	SUPPORT RAIL - ASM
1	2	BALLAST TRAY - ASM
4	3	CLAMP - MODULE
8	4	SCREW - 1/4-20

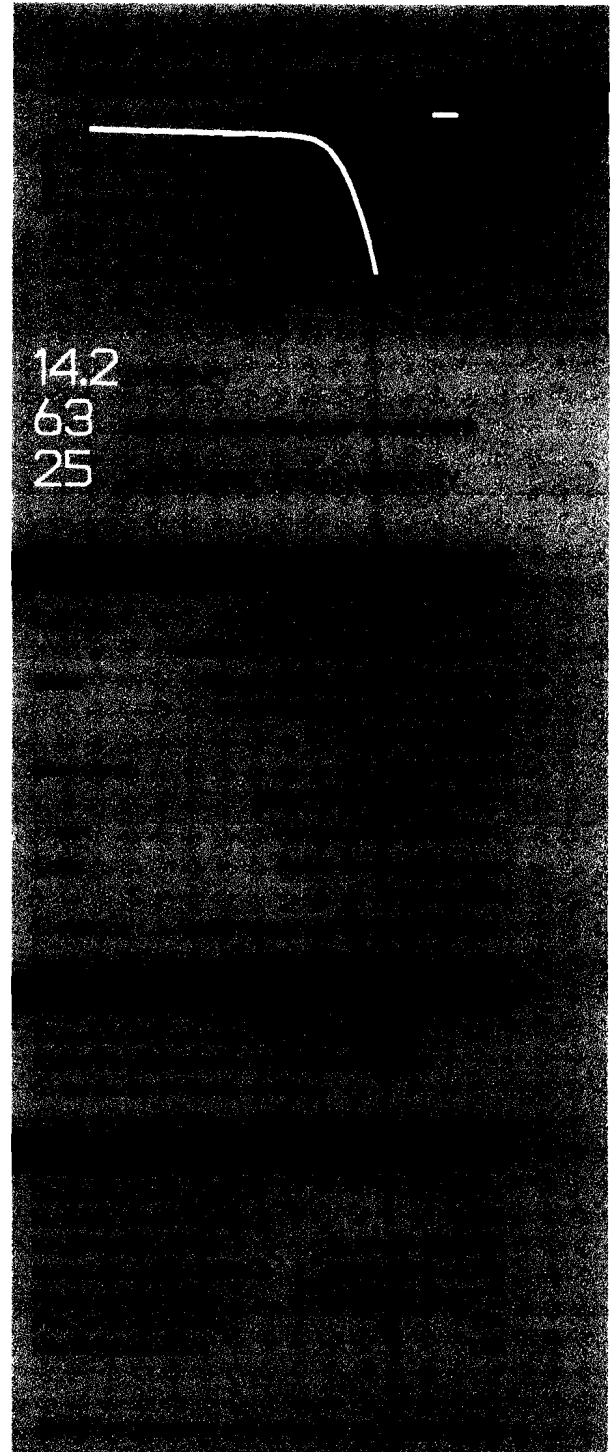
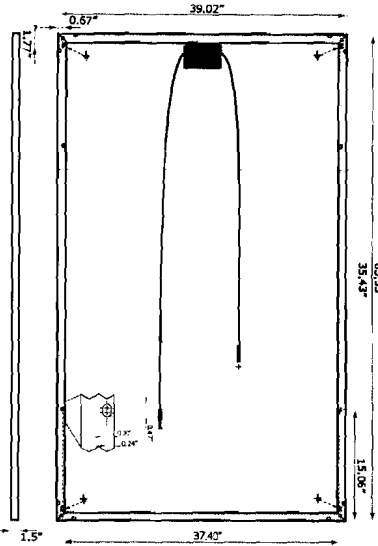


## Specifications

- Corrosion performance: Stainless Steel
- Panel-to-panel length: 1489 mm (58.65 in)
- Panel angle: 10 deg standard, additional angles available
- Panel layout: Landscape
- Panel height from roof: 232 mm (9.12 in)
- Contact surface: EPDM feet
- System Dead Load: As low as 5 psf
- Warranty: 25-Yr Structure Limited Warranty to remain intact. 10-Yr Corrosion Limited Warranty.



# REC PEAK ENERGY (BLK) SERIES



	REC215PE (BLK)	REC220PE (BLK)	REC225PE (BLK)	REC230PE (BLK)	REC235PE (BLK)	REC240PE (BLK)
Peak Power Watts - $P_{MAX}$ (Wp)	215	220	225	230	235	240
Watt Class Tolerance - $P_{TOL}$ (W)	0/+5	0/+5	0/+5	0/+5	0/+5	0/+5
Watt Class Tolerance - $P_{TOL}$ (%)	0/+2	0/+2	0/+2	0/+2	0/+2	0/+2
Maximum Power Voltage - $V_{MPP}$ (V)	28.3	28.7	29.1	29.4	29.8	30.4
Maximum Power Current - $I_{MPP}$ (A)	7.6	7.7	7.7	7.8	7.9	7.9
Open Circuit Voltage - $V_{OC}$ (V)	36.3	36.6	36.8	37.1	37.4	37.7
Short Circuit Current - $I_{SC}$ (A)	8.1	8.2	8.2	8.3	8.3	8.4
Module Efficiency (%)	13.0	13.3	13.6	13.9	14.2	14.5

Values at Standard Test Conditions STC (Air Mass AM1.5, Irradiance 1000 W/m<sup>2</sup>, Cell temperature 25°C)

Nominal Operating Cell Temperature (NOCT)	47.9°C (±2°C)
Temperature Coefficient of $P_{MPP}$	-0.46%/°C
Temperature Coefficient of $V_{OC}$	-0.32%/°C
Temperature Coefficient of $I_{SC}$	0.011%/°C

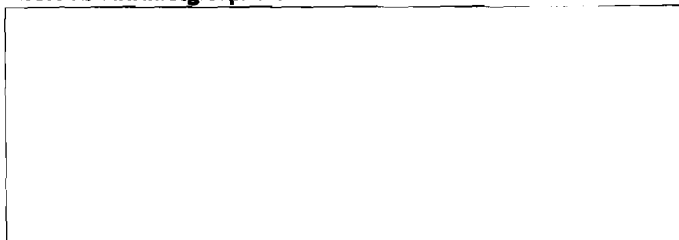


Certified according to UL1703,  
IEC 61215 and IEC 61730

Dimensions	65.55 x 39.02 x 1.5 in
Area	17.76 ft <sup>2</sup>
Weight	39.6 lbs

REC is a leading vertically integrated player in the solar energy industry. REC is among the world's largest producers of polysilicon and wafers for solar applications, and a rapidly growing manufacturer of solar cells and modules. REC is also engaged in project development activities in selected PV segments. Founded in Norway, REC is an international solar company, employing more than 4,000 people worldwide. REC had revenues in excess of NOK 9 billion in 2009, approximately EUR 1 billion and approximately USD 1.4 billion.

Please visit [www.recgroup.com](http://www.recgroup.com)

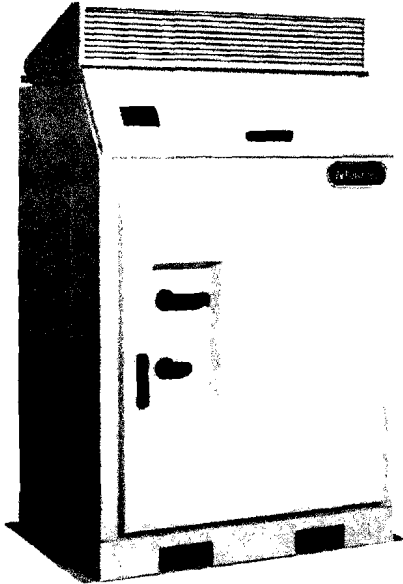


RECSolar US LLC  
PO Box 3416  
San Luis Obispo, CA 93403  
USA

[www.recgroup.com](http://www.recgroup.com)

**PV Powered**  
AN **ΔE** ADVANCED ENERGY COMPANY

## PVP35kW and PVP50kW



### PERFORMANCE MONITORING

Increase uptime and reduce maintenance costs with inverter-integrated monitoring solutions from market-leading third party partners. Each engineered solution is housed on a UL508A panel to deliver the highest level of safety, configurability and reliability. With the optional revenue grade meter and string level monitoring, PV Powered offers unprecedented choice and convenience.



All PV Powered products are designed and manufactured in the U.S. are fully compliant with the Buy American Act, and quality for projects funded by the federal stimulus package.

20720 Brinson Boulevard  
PO Box 7348  
Bend, OR 97708

1-541-312-3832

[WWW.PVPOWERED.COM](http://WWW.PVPOWERED.COM)

### Three-Phase inverter solutions for small commercial projects

The all new 35kW and 50kW commercial inverters feature the same industry leading reliability, efficiency, ease of installation, and lifetime maintainability of PV Powered's larger commercial inverters. These two new models are sized to serve smaller PV system designs, or to provide the perfect fit to complete a larger PV system. In addition, the 35kW and 50kW deliver the highest efficiency in their class and rival the efficiency of much larger inverters.

High reliability is enabled by a ground-up design for 20+ year operating life that features busbar power connections, card cage circuit board design, and the widest temperature rating of any inverter in its class. The highly integrated system saves installers time and money by including load-rated AC & DC service disconnects, neutral-free installation, oversized busbar landings and generous cable bending area. The 35kW and 50kW have a 295VDC minimum MPPT voltage that enables the stringing flexibility that is critical for smaller rooftop projects.

PV Powered backs all its commercial inverters with an industry-leading 10-year nationwide warranty and an optional 20-year warranty; plus the most responsive service and support team in the business.

### INVERTER FEATURES

#### Superior Reliability

- Designed for 20+ year operating life
- Smart Air Management™
- Low parts count reduces potential failure points
- Card cage circuit board system minimizes electronic interconnections



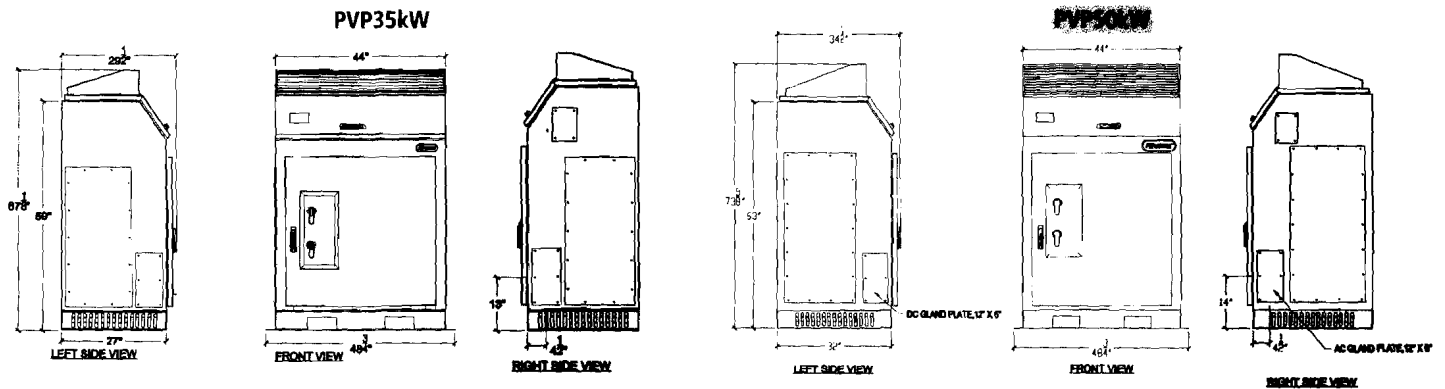
#### Exceptional Installability

- Bottom and side entry with generous bending area and oversized busbar landings
- Large DC sub-combiner area with the industry's most flexible fusing options
- Full power output at 295 VDC enables more PV array design options
- Exterior mounting flanges for fast and easy anchoring with no pre-drilling

#### Easy to Maintain

- All maintenance and service via front access
- Fast change circuit board system shortens service time
- Load-rated AC and DC service disconnects
- Dedicated monitoring section separate from AC and DC modules

## DIMENSIONS



(complete design documentation including seismic calculations available upon request)

## ELECTRICAL SPECIFICATIONS

MODEL	PVP35kW	
Continuous Output Power (kW)	35	50
Peak Efficiency (%)	96.6% (est)	97.1% (est)
Weighted CEC Efficiency (%)	95.5% (est)	96.0% (est)
Maximum DC Input Voltage (VOC)	600	600
DC Peak Power Tracking Range (VDC)	295 - 595	295 - 595
DC Imp Nominal Current (A)	125	177
AC Nominal Voltage (V)	208Y, 480Y	208Y, 480Y
AC Operating Range (V)	208: 183 - 228 480: 422 - 528	208: 183 - 228 480: 422 - 528
AC Frequency Range (Hz)	59.3 - 60.5	59.3 - 60.5
AC Maximum Continuous Current (A)	208: 100 480: 54	208: 143 480: 62
Standby Losses (W)	25 (est)	25 (est)
Harmonic Distortion (%THD)	<3	<3
Power Factor	>.99	>.99

## MECHANICAL SPECIFICATIONS

MODEL	PVP35kW	
Enclosure	NEMA 4	NEMA 4
Construction	Powder Coated Steel	Powder Coated Steel
Mounting	Pad Mount	Pad Mount
Weight (lbs)	1200	1500
Cooling	Forced Convection	Forced Convection
Temperature Range (°C)	-30 to 50	-30 to 50
Isolation Transformer	Yes	Yes

## OPTIONS

- Subcombiner fusing
- Subcombiner monitoring
- Integrated data monitoring solutions
- 20-year extended warranty
- Integrated revenue grade meter
- Preventative maintenance program
- Positive ground

## AGENCY APPROVALS (PENDING)

UL 1741, IEEE519, IEEE929, IEEE1547, CSA 107.1-1, FCC Class A

**AE CERTIFIED SERVICE<sup>SM</sup>**

AE Power Design And Services RFP

The PV Powered commercial inverter portfolio is now combined under AE's global service offerings – including the 99% inverter uptime guarantee.

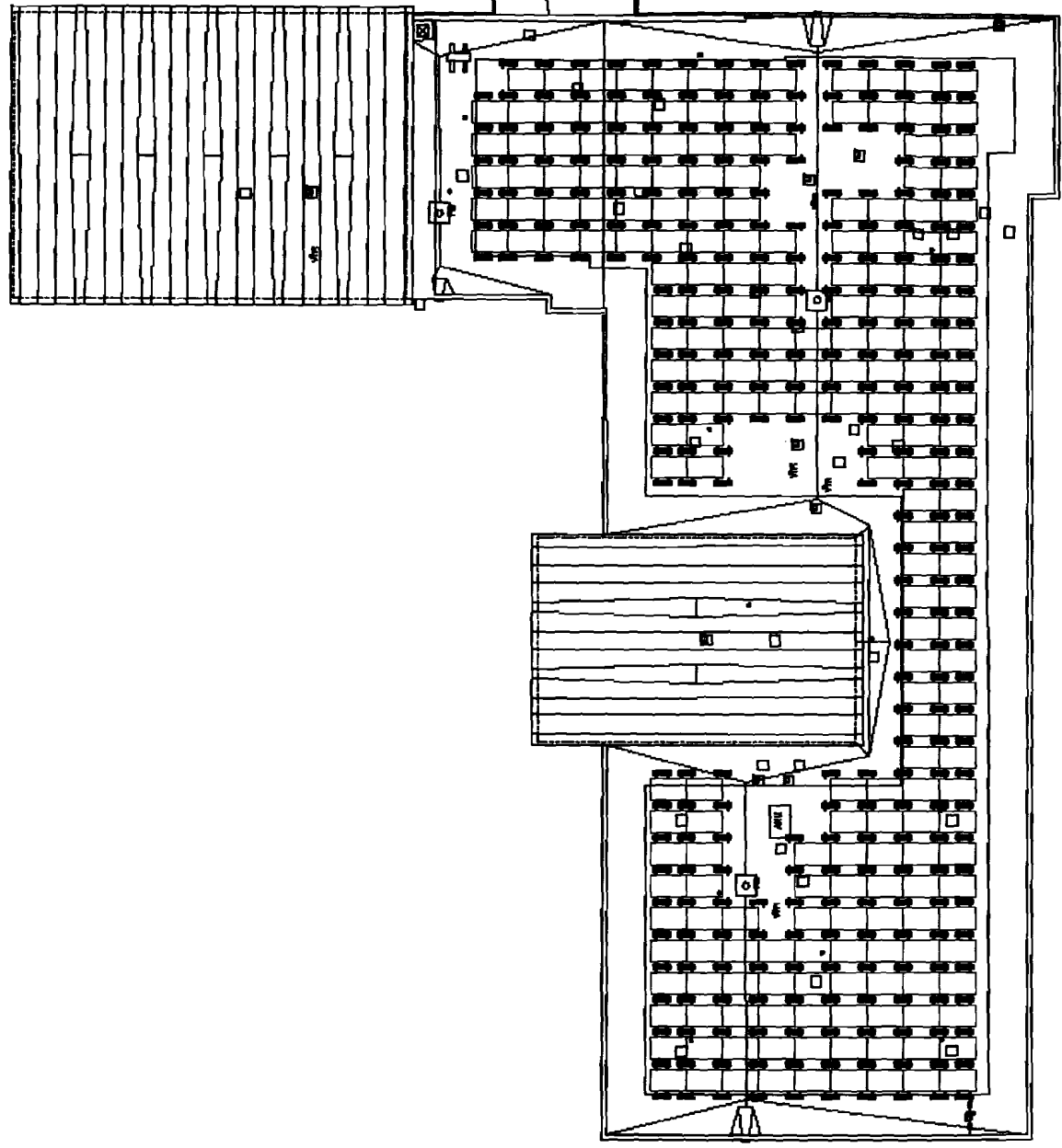


REV	NO.	DESCRIPTION	DATE
-	-	RELEASED 10-0790-A1-108 FOR PROPOSAL	REC/JEK 08/31/11
A	-	ADDED BALLAST REQUIREMENT	REC/CPL 08/01/11
B	-	REVISED BUILDING BACKGROUND	TJS/CPL 08/02/11

**RECEIVED**

OCT - 7 2011

Dept. of Building Inspections  
City of Portland Maine



**Rayport 430 - 10 Degree Ballast Design**  
\*Based on ASCE 7-05



<b>Project</b>	VOA - Bayview Heights, ME	<b>Quote No.</b>	10-0790-01	<b>Date</b>	September 2, 2011
<b>Customer</b>	Keryon Energy	<b>Contact</b>	Tim Pomcsek	<b>Phone</b>	(907) 777-0853
<b>Project Address</b>	158 North Street Portland, ME 04101	<b>Wind Speed (mph)</b>	101.0	<b>Building Height (ft)</b>	20.0
<b>Site Condition</b>	No Topographical Features	<b>Exposure Category</b>	C	<b>Module T/R Angle</b>	10.0
		<b>Importance Factor per ASCE7-05 Section 6.5.5</b>	1.00	<b>Seismic, S<sub>s</sub></b>	0.80
<b>Module Manufacturer</b>	REC	<b>Model Number</b>	REC240PE (BLU)	<b>Output Rating (watts)</b>	240
<b>Module Length (in)</b>	65.55	<b>Module Width (in)</b>	39.82	<b>Module Weight (lbs)</b>	39.68
		<b>Module Height (in)</b>	1.50	<b>Module Area (sf)</b>	17.76

**Ballast and Anchor Calculations per ASCE 7-05**

V	K <sub>a</sub>	I	K <sub>e</sub>	K <sub>z</sub>	q	G	C <sub>f</sub>	A <sub>f</sub>	F	F <sub>min</sub>	lbs/Panel	F <sub>max</sub>	F <sub>min</sub>	W <sub>tray</sub> /Module	Bricks/Module	Modules/Brick	Modules/Leg
101	0.85	1.00	0.90	1.00	19.98	0.85	1.3	3.08	41.9	7.3	129.4	127.4	22.5	180.5	6	0	0

**Systems BOM**

	Qty	Wt. - lbs	Total lbs.
Modules	221	39.7	8,770
Rails	535	2.9	1,537
Trays	293	5.6	1,640
Clamps / Screws	1070	0.20	214
Ballast Bricks	1283	32.0	41,056
<b>Total System Dead Load (lbs)</b>			53,218
<b>Area - ft<sup>2</sup></b>			6,038
<b>Pounds per Square Foot</b>			8.81

**Loading Details**

	W <sub>tray</sub> /Panel	Modules	Total Wt. (lbs)
<b>Total ballast required per ASCE calculations</b>	180.5	221	39,890
		<b>Bricks / Tray</b>	<b>Load (psf)*</b>
<b>North Row Tray Requirement</b>		5	9.96
<b>Second Row Tray Requirement</b>		4	8.45
<b>Edge Column Tray Requirement</b>		5	9.96
<b>Second Column Tray Requirement</b>		4	8.45
<b>Remaining Middle Tray Requirement</b>		4	8.45

\* Load is contact load of ballasted tray to roof surface in pounds per square inch.

Total required ballast weight of 39,890 lbs is exceeded by the total weight applied in ballast bricks of 41,056 lbs.

**LEGEND**

- 6 BALLAST BRICKS
- 5 BALLAST BRICKS
- 4 BALLAST BRICKS
- 3 BALLAST BRICKS
- 2 BALLAST BRICKS

<b>RACKING/MODULE SPECIFICATIONS</b>	
SOLAR RACKING	AET RAYPORT 10 DEGREE STD TRAY 58.62in REPEATING ROW
SOLAR MODULE	REC SOLAR REC 240 PE-US MODULE PE MODULE SIZE: 1665mm x 991mm x 38mm

THIS LAYOUT IS AN APPROXIMATION AND IS INTENDED FOR QUOTING PURPOSES ONLY. ACTUAL SYSTEM SIZE AND/OR LOCATION OF RACKING MAY VARY. IT IS THE RESPONSIBILITY OF THE INSTALLER TO CONFIRM THAT THE LOCATION OF THE RACKING DOES NOT INTERFERE WITH OR BECOME SHADED BY ANY OBSTRUCTIONS. AET ASSUMES NO RESPONSIBILITY OF THE RACKING CONFIGURATION.

2140	5	80013	SCREW - 1/4-20x1/4 FLG HEX HD
1070	4	80022	CLAMP - 3/8 INCL
293	3	80029	BALLAST TRAY ASM
535	2	80028	SUPPORT RAIL ASM - 10 DEG 891 MEX
221	1	-	SOLAR MODULE (NOT INCLUDED)

Keryon Energy  
 REC SOLAR REC 240 PE-US  
 MODULE: 240 W / SYSTEM: 53.04 KW  
 158 North Street  
 Portland, ME 04101

REC 08/31/11  
 CPL 08/01/11  
 JEK 08/31/11

Applied Energy Technologies  
 100 Commercial Street  
 Portland, ME 04101  
 (603) 777-0853

**MODULE LAYOUT**  
 1:100 10-0790-A1-108 B