PROJECT TEAM

OWNER
30 WEST OAK STREET - 7B

CHICAGO, ILLINOIS, 60610 JOHN & BETSY MCLINDEN P 312.925.0700

ARCHITECT / CONTRACTOR
THE CONSTRUCTION ZONE, LTD
1729 EAST OSBORN ROAD

PHOENIX, ARIZONA 85016

ANDY BYRNES, AIA P 602.230.0383 F 602.230.0535

ANDY@CZPHX.COM

SOLAR

APN

SUN VALLEY SOLAR SOLUTIONS LLC 3225 NORTH COLORADO STREET CHANDLER, ARIZONA 85225 P 480.689.5000

PROJECT DATA

PROJECT ADDRESS 5564 EAST PALO VERDE LANE
PARADISE VALLEY, ARIZONA 85253

LEGAL DESCRIPTION LOT 13, STON

LOT 13, STONE CANYON EAST, BOOK 81 OF MAPS, PAGE 34., MARICOPA COUNTY RECORDER

172-47-058C

ZONING R-43 (HILLSIDE)

AREA OF LOT (NET) 1.154 ACRES± (50,256 SF)

# PROJECT NARRATIVE

NEW SOLAR ARRAY CONSISTING OF 30 Q CELL SOLAR PANELS LOCATED ON THE LOWER EAST PARAPET ROOF. SOLAR PANELS TO BE Q.PEAK G4.1 305 (BLACK COLOR VS. BLUE)

THE SOLAR PANEL MOUNTS WILL BE PAINTED TO MATCH APPROVED SPRAY FOAM BASE COLOR. (NOT TO EXCEED LRV38%)

PANELS WILL BE TILTED SO THAT IT WILL BE FULLY HIDDEN FROM VIEW WHEN VIEWED FROM THE SAME OR A LOWER ELEVATION BY THE +/- 13" TALL PARAPET. THE METER, DISCONNECT, INVERTER AND DEMAND MANAGER WILL BE LOCATED IN THE ENCLOSED MECHANICAL SPACE NORTH OF THE GARAGE AND WILL NOT BE

## EQUIPMENT SPECIFICATIONS

SOLAR PANELS: HANWHA Q CELLS Q.PEAK G4.1 305

VISIBLE FROM THE EXTERIOR.

RACKING SYSTEM:

EVEREST MOUNTING RAIL
6000 SERIES ALUMINUM (LRV +/-32)
CAN BE PAINTED TO MATCH ROOF "BROWN OWL" (LRV+/-33)

WILL BE PAINTED TO MATCH ROOF "BROWN OWL" (LRV+/-33)

INVERTER: SOLAR EDGE SE11,400A-US

NOT PAINTED SCREENED FROM VIEW

DEMAND MANAGER: ENERGY SENTRY 9388A NOT PAINTED SCREENED FROM VIEW

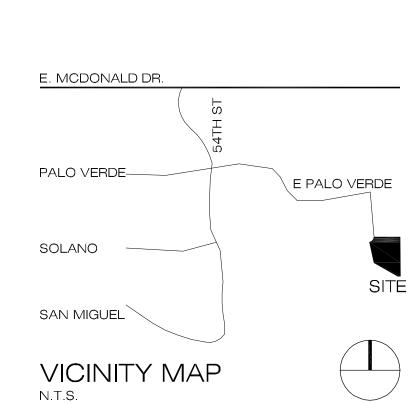
METER / DISCONNECT:

NOT PAINTED SCREENED FROM VIEW

# DRAWING INDEX

ARCHITECTURE
A100 SITE PLAN & PROJECT DATA
A101 AERIAL CONTEXT PLAN

A102 SITE PHOTOS
A300 ELEVATION & SECTION
A400 SPECIFICATIONS



1729 east osborn roaphoenlx, arizona 8501 office 602.230.038 fax 602.230.053

HILLSIDE SOLAR COMBINED REVIEW

# SITE PLANE PROJECT DATES SITE PLANE PROJECT DATES



A 101

VIEW 4

VIEW 1





SITE KEY PLAN SCALE: 1"=40'

PROPOSED +/-13" TALL PARAPET —— ROOF WILL SCREEN SOLAR PANELS IN ELEVATION

VIEW<sub>2</sub>

VIEW 3

iVIEW 4

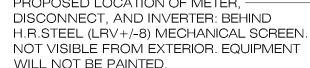




VIEW 3

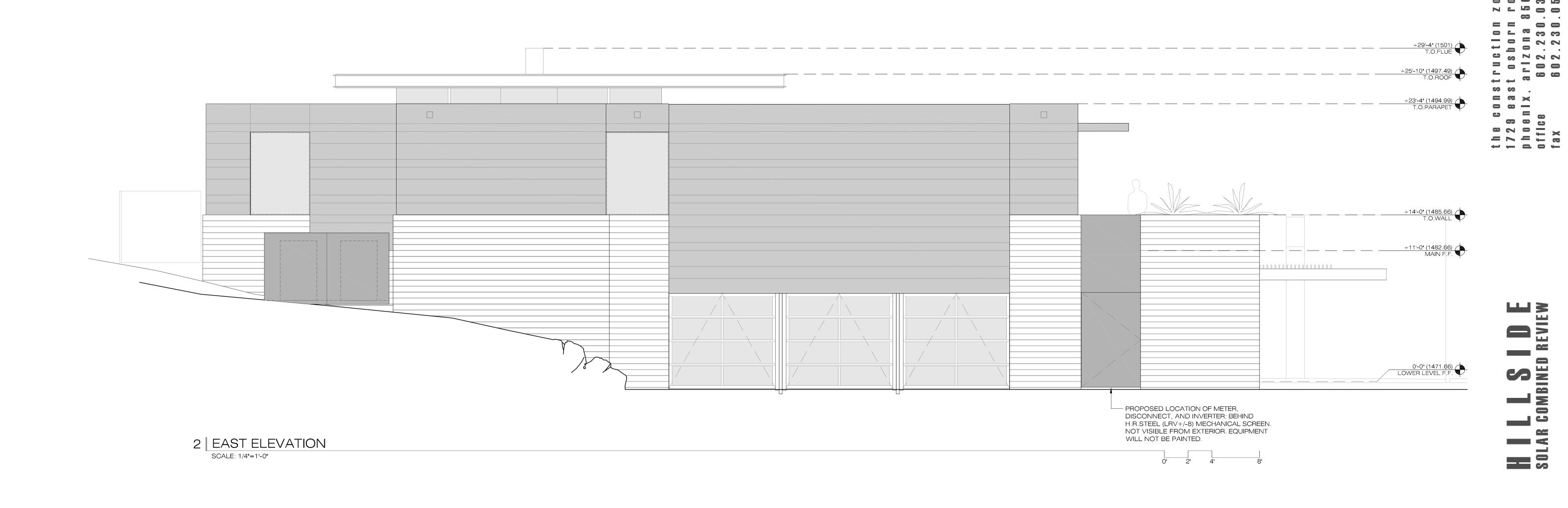
PROPOSED +/-13" TALL PARAPET — ROOF WILL SCREEN SOLAR PANELS IN ELEVATION

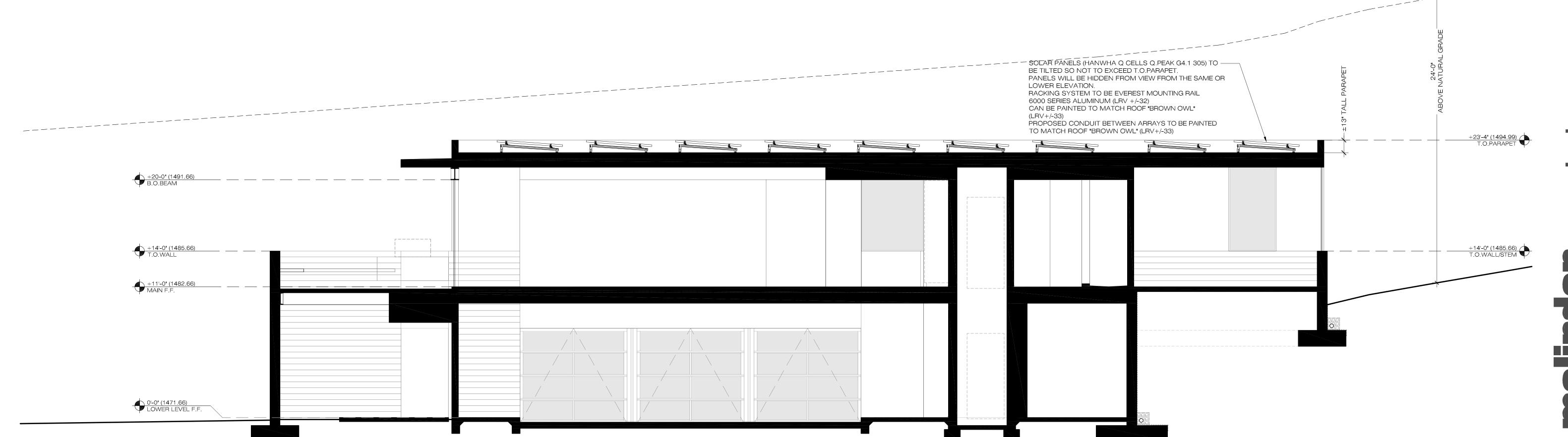






VIEW 2





A300





 High quality, German-engineered system optimized for residential MK3 mounting hardware simplifies module installation – fast, easy, and secure

 Easily integrates with third party roof attachment products L-foot provides adjustability and compatibility with common roof

 100% code-compliant, structural validation for all solar states Three rail sizes available to suit all structural conditions • Fast installation with minimal component count result in low total installed cost

• Flexible to several tilt angles and preengineered for 7, 10, 15 degree

 Simple to design using code compliant Everest Online Design Tool Same rail used as tilt legs - minimize rail waste by using scrap as tilt legs Modular construction, suitable for any system Bonding Mid Clamp | End Clamp | Micro, Optimizer & Accs Mounting Kit size, height adjustable For all common module types High corrosion resistance, stainless steel and

Technical Data: Applicable roof types | Comp shingle, tile, flat tile, concrete PV modules Module orientation Portrait and landscape

Material high grade aluminum Roof attachment Screw connection into rafter IBC compliant, stamped engineering letters avail-able for all solar states Warranty

CrossRail 48-X/48-XL/80, L-Foot, Tilt Connector System components Set, Climber Set, Mid and End Clamp Sets

Change your electric demand,

not your electric use

To reduce your energy costs, you might be switching off unnecessary 
The 9388A Energy Sentry is both

lights and turning down your heat. While important efforts in energy a financial and an environmental

conservation, these actions may have little effect on your energy bills. investment. You'll save 10% to 40%

Because electric companies care not only about how much you use, to 35%. After 11/2 to 3 years, the

but when you use it. Many electric companies charge their customers unit will have paid for itself. And it's

according to "Time-of-Use Demand Rates." These rates charge more quality design and manufacturing

for electric use during on-peak periods, those times of day when will save you money for years to come.

each month on your electric bills,

with annual savings of about 25%

As more people in your neighborhood

install an Energy Sentry, your

community's demand for electricity

declines. Your electric company will

be able to reduce it's fuel consumption

because it is able to operate at a

more efficient level. This translates to

savings which may be passed on to you.

UL 2703 Listed System Product Sheet US07-1218

Working together to save your

Money & your Earth

Everest Solar Systems, LLC 2835

info@everest-solarsystems.com www.everest-solarsystems.com

La Mirada Dr., Suite A

Vistsa, CA 92081

Service-Hotline +1.760.301.5300 warranty set forth therein.

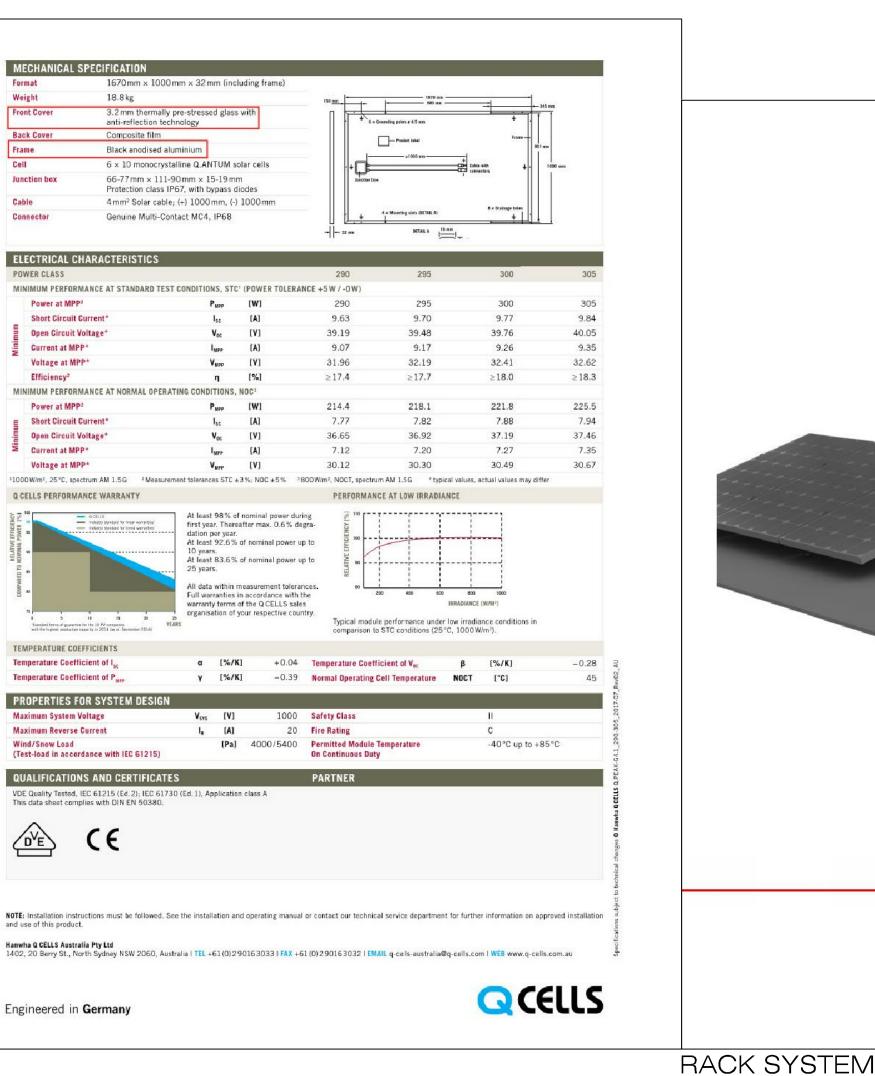
ALUMINUM / STAINLESS STEEL: (LRV: +/- 32)

PROPOSED UNPAINTED: DUE TO PARAPET AND LOW MOUNTING ANGLE THE MOUNTING SYSTEM WILL NOT BE VISIBLE.

**EVEREST SOLAR SYSTEMS** 

CROSSRAIL TILT UP SYSTEM

Mounting systems for solar technology



Power at MPP<sup>2</sup>

Short Circuit Current

Open Circuit Voltage

Current at MPP\*

Voltage at MPP\*

Efficiency<sup>2</sup>

Power at MPP<sup>2</sup>

Current at MPP\*

Voltage at MPP\*

Short Circuit Current

Open Circuit Voltage

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I<sub>sc</sub>

Temperature Coefficient of P.,.

Maximum System Voltage

Wind/Snow Load

(DVE)

APT test conditions according to IEC/TS 62804-1:2015, method B

See data sheet on rear for further

**QCELLS** 

(-1500 V, 168 h)

Maximum Reverse Current

Hanwha Q CELLS Australia Pty Ltd



Q.ANTUM

Q.ANTUM SOLAR MODULE

intensity and on clear, hot summer days.

and temperature behaviour.

MAXIMUM COST REDUCTIONS

module capacity per box.

A RELIABLE INVESTMENT

performance warranty<sup>2</sup>.

THE IDEAL SOLUTION FOR:

Engineered in Germany

SOLAR PANEL

The new high-performance module Q.PEAK-G4.1 is the ideal solu-

tion for residential buildings thanks to its innovative cell technology

Q.ANTUM. The world-record cell design was developed to achieve

the best performance under real conditions – even with low radiation

Q.ANTUM TECHNOLOGY: LOW LEVELIZED COST OF ELECTRICITY

Optimal yields, whatever the weather with excellent low-light

Long-term yield security with Anti LID Technology, Anti PID Technology<sup>1</sup>, Hot-Spot Protect and Traceable Quality Tra.Q™.

classes and an efficiency rate of up to 18.6%.

INNOVATIVE ALL-WEATHER TECHNOLOGY

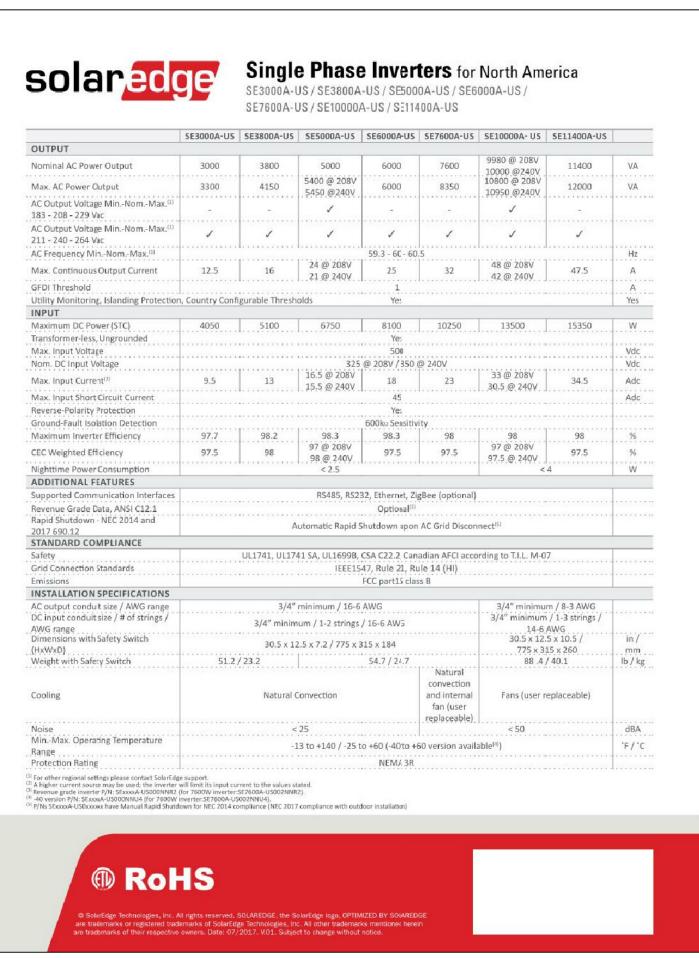
High-tech aluminium alloy frame, certified for

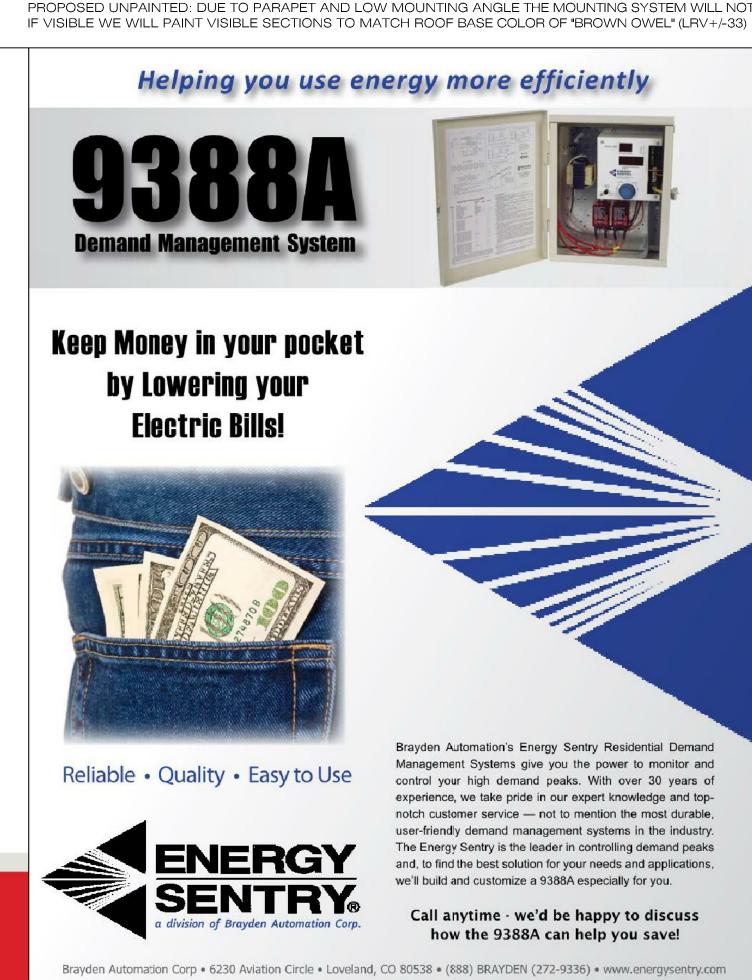
high snow (5400 Pa) and wind loads (4000 Pa).

Up to 10% lower logistics costs due to higher

Inclusive 12-year product warranty and 25-year linear

Higher yield per surface area and lower BOS costs and higher power







Also, pollution decreases, air quality improves, and our earth's resources are How can you control your electric demand without having to personally conserved. look out for what appliances are being used and when? \*Savings may vary due to different circumstances in each household. Invest in an Energy Sentry 9388A: a state-of-the-art demand controller Specifications that saves you money by monitoring your electric demand and keeping Electrical 120VAC @ .25 Amp MAX Voltage Input: Easier than adjusting your thermostat rrent Transformer Input 0-200 mA Simply set your Energy Sentry to a suitable on-peak demand limit for 9388A: 40KW or 80 KW mand Limit Ranges: your home and the current season. After that, the Energy Sentry does Demand Limit Resolution: .5KW on 40KW; 1KW on 80KW The Energy Sentry continuously monitors the electric demand in your household. As you turn on electrical equipment and appliances, your electric demand rises. When your predetermined demand Demand Calculation Update: limit is about to be exceeded, the 9388A Energy Sentry automatically Audible Short Circuit Alarm: Internal manages major energy-users, such as your heating or cooling systems, Internal with On/Off Selection for short periods of time. Once your electric demand falls back below Audible Over-Limit Alarm your limit, the Energy Sentry gradually restores the managed loads. External Alarm Output: 1 optional alarm output You control your electric bills while maintaining a comfortable home. 8, expandable to 16 When you buy an 9388A it can be programmed to manage energy-2 internal SPST-NC low-power outputs users according to your own priorities. You decide whether you want 3 Amps @ 30VAC/VDC the heat or air conditioning to be turned off first or last. Demand Available with up to eight 30 Amp limits can be set not only for on-peak periods but for off-peak periods, DPST-NC relays rated @ 300VAC to including weekends and holidays. The Energy Sentry automatically Relays: control up to 16 circuits adjust itself to daylight savings time, if applicable, and to seasonal rate Low power 3 Amp remote relays for changes at the start of summer and winter. HVAC control circuits also available Powerline carrier system available The quality of your comfort is 4 DPST-NC 30A/300VAC never compromised 2 SPST-NC 35A/300VAC Don't worry! The Energy Sentry won't turn off your computer or change the temperature in your home. The electricity supplied through your Non-volatile EEPROM/Battery, Backed wall outlets is not controlled, so your lights and plug-in appliances will never be affected. Also, the Energy Sentry can be programmed with a control strategy that matches your specific needs. For example, with 12" H x 10" W x 4" D NEMA 3R a rotating strategy, the heat or air-conditioning in each room would be turned off for only a few minutes at a time. As a result, you receive a 18" H x 12"W x 4" D NEMA 1 decrease in your electric demand without a decrease in your comfort. .060 steel housing with hinged cover door for easy access to connections on In fact, with an Energy Sentry managing your demand, you may experience an increase in comfort. That's because you will no longer | Enclosure: have to adjust the thermostat in an effort to save money. Be prepared Hinge door optional on NEMA 1 to enjoy a new peace of mind caused by the freedom from worrying Enclosure about an unexpectedly high electric demand running up your bills, and 16 lbs. being able to budget for your electric costs well in advance. All specifications are subject to change without notice. Brayden Automation Corp • 6230 Aviation Circle • Loveland, CO 80538 • (888) BRAYDEN (272-9336) • www.energysentry.com

DEMAND MANAGER

(UNPAINTED: WILL BE MOUNTED IN MECHANICAL YARD AND WILL BE SCREENED FROM VIEW REF. 2/A300 ELEVATION FOR LOCATION)

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