

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0106354
Insp Area: 4

Site Address: 201 VISTA CREEK CR SAC Sub-Type: NSFR
Parcel No: 225-1530-036 WESTBOROUGH VIL 5 LOT 47 Housing (Y/N): N

CONTRACTOR

US HOME
2366 GOLD MEADOW DR STE 100
GOLD RIVER, CA 95670 77041

OWNER

ARCHITECT

Nature of Work: MP 3537 W/OPT. 2 STORY 13 ROOM SFR

CONSTRUCTION LENDING AGENCY: I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec 3097, Civ C).

Lender's Name _____ Lender's Address _____

LICENSED CONTRACTORS DECLARATION: I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

License Class B License Number 451839 Date 6/7/01 Contractor Signature Don McCloskey

OWNER-BUILDER DECLARATION: I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code: any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500.00):

I, as a owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professional Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

I, as owner of the property, am exclusively contracting with licensed contractors to construct the ~~work~~ ^{work} (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

I am exempt under Sec. _____ B & P for this reason: JUN 07 2001

Date _____ Owner Signature _____

NEIGHBORHOODS, PLANNING
AND DEVELOPMENT SERVICES

IN ISSUING THIS BUILDING PERMIT, the applicant represents, and the city relies on the representation of the applicant, that the applicant verified all measurements and locations shown on the application or accompanying drawings and that the improvement to be constructed does not violate any law or private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of any improvement or the violation of any private agreement relating to location of improvements.

I certify that I have read this application and state that all information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date 6/7/01 Applicant/Agent Signature Don McCloskey

WORKER'S COMPENSATION DECLARATION: I hereby affirm under penalty of perjury one of the following declarations:

I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued

I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier OLD REPUBLIC INS CO Policy Number MWC107468 00 Exp Date 11/01/2001

(This section need not be completed if the permit is for \$100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

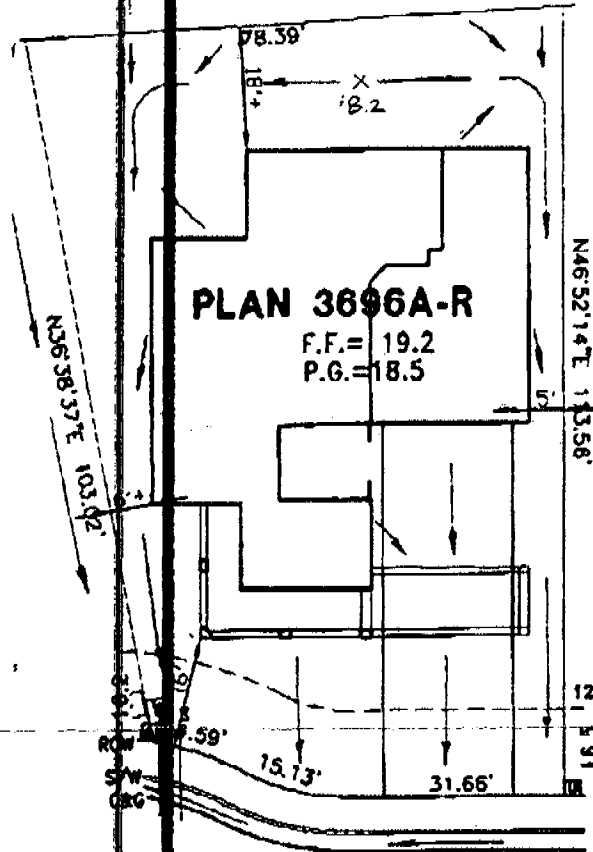
Date 6/7/01 Applicant Signature Don McCloskey

WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEE.

THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.

THIS PLOT PLAN IS NOT FOR SALES PURPOSES. THIS PLOT PLAN IS FOR THE PURPOSES OF INDICATING COMPLIANCE WITH ZONING SET BACKS, GENERAL DRAINAGE DIRECTION, AND APPROXIMATE UTILITY CONNECTION. ALL OTHER DATA SHOWN HEREON IS CONCEPTUAL. THIS PLOT PLAN DOES NOT REFLECT AS-BUILT CONDITION, RETAINING WALL ARE OPTIONAL, AND MAY OR MAY NOT BE CONSTRUCTED.

SCALE: 1" = 20'



This set of plans and specifications were prepared on the job at all times and it is intended to make any changes or alterations for approval of the Building Inspector Division. The approval of this plan and specifications SHALL NOT be held to permit or approve a violation of any City Ordinance or State Law without written permission from the Building Inspector Division.

201 VISTA CREEK CIRCLE

= TRANSFORMER
 = UTILITY SERVICE BOX

PLOT PLAN			
LOT 47			
WESTBOROUGH VILLAGE 5			
FOR U.S. HOMES			
CITY OF SACRAMENTO		CALIFORNIA	
WOOD RODGERS INC.			
<small>ENGINEERING PLANNING MAPPING SURVEYING 3201 C STREET, SUGB, 100-8, SACRAMENTO, CA 95818 PHONE: (916) 361-2789 FAX: (916) 361-2787</small>			
<small>DATE:</small> APR 2001	<small>DRAWN:</small> HMB	<small>CHECKED:</small> <i>JRM</i>	<small>PROJECT NO.:</small> 1045.031

NO. 593 212

APR 17 9:12 PM 2001 Wood Rodgers, Inc.

E:\JOBS\WESTBOROUGH\1045\1045.PLOT\DWG\1045PH2.DWG

RESIDENTIAL SUBDIVISION BUILDING PERMIT APPLICATION

Project Address: 201 Vida Creek Circle
Lot Number: 47

Assessor Parcel # 225-1530-034
Subdivision ~~WEST~~ BOROUGH VILLAGE-5
WEST

OWNER INFORMATION:

Legal Property Owner: US HOME Phone# 858-3900
Owner Address 366 GOLD MEADOW WAY City GOLD RIVER State CA. Zip 95670

CONTRACTOR INFORMATION:

Contractor: US HOME Lic. # 451839 Phone # 858-3900 Fax 858-3925
DON McCLOSKEY 719-9059

PROJECT INFORMATION:

Land Use Zone R1A Occupancy Group R3 Construction Type VN Fed Code 1A
No. of Stories: _____ No. of Rooms: _____ Street Width: _____
1st Floor Area _____ 2nd Floor Area _____ Basement _____ Roof Material _____
AREA IN SQUARE FOOT OF:
Dwelling/Living 3696
Garage/Storage 724
Decks/Balconies _____
Carports _____
SCOPE OF WORK: _____

FOR OFFICE USE ONLY

- Information Above Complete
- Violation Files Checked
- Standard Setbacks
- County Sewer
- AR Flood Waiver Required
- Flood Elevation Certificate Required
- Water Development Infill Area
- Planning Approval
- Design Review Approval
- Special Fee Districts Apply:

THE FOLLOWING MUST BE PROVIDED IN ORDER TO SUBMIT FOR PERMIT

- 2 COMPLETE PLOT PLANS, LEGIBLE & DRAWN TO SCALE
- 11 X 17 COPY OF FLOOR PLAN WITH FOLLOWING INFORMATION
 - a) Assessor's Parcel Number
 - b) New Floor Area
 - c) Owners Name
 - d) Project Address

US • HOME®

US HOME CORPORATION - SACRAMENTO DIVISION

Date: January 14, 2002

To: City of Sacramento, Building Department

From: Burt Witzelberger, Senior Construction Manager

Re: Westlake, Village 5, Phase 1, Lot 47
201 Vista Creek Circle

The above address will be used as a model for the US Home, The Marina at Westlake subdivision. Prior to homeowner occupancy, a conversion of the dwelling will take place with all components subject to a city final inspection. All appliances, fences, plumbing and electrical fixtures will be in compliance of a single-family dwelling. If there are any additional questions, please feel free to contact me.

Respectfully,

Burt Witzelberger

CERTIFICATION OF INSULATION

PART I GENERAL

NS Homes
Westlake
Sacto.
201 Vista Creek

LOT # *477*

- P.O. BOX 854, WEST SACRAMENTO, CA 95691 LIC. #202026
- 1309 MELODY ROAD, MARYSVILLE, CA 95901 LIC. #202026
- P.O. BOX 9851, FRESNO, CA 93793-9851 LIC. #202026
- P.O. BOX 1631, RENO, NV 89505 LIC. #10675
- 3326 A PONDEROSA WAY, LAS VEGAS, NV 89118 LIC. #10675

DATE INSULATION COMPLETED _____

WALLS		CEILING		ROOF	
(SQUARE FEET)		(SQUARE FEET)		(SQUARE FEET)	
TYPE OF INSULATION		TYPE OF INSULATION		TYPE OF INSULATION	
MATERIAL FIBERGLASS		MATERIAL FIBERGLASS		MATERIAL FIBERGLASS	
FORM BATTS		FORM BATTS & BLOW		FORM BATTS	
MANUFACTURER'S PRODUCT I.D.		MANUFACTURER'S PRODUCT I.D.		MANUFACTURER'S PRODUCT I.D.	
OCF		OCF		OCF	
		BAGS			
R-VALUE INSTALLED	APPLIED THICKNESS	R-VALUE INSTALLED	APPLIED THICKNESS	R-VALUE INSTALLED	APPLIED THICKNESS
<i>13</i>	<i>3 1/2</i>	<i>38</i>	<i>14 3/4"</i>		
MATERIAL FIBERGLASS		FORM BATTS		MANUFACTURER OCF	
		<i>Foam</i>		MANUFACTURER W R GRACE	
I CERTIFY THAT THIS INSULATION HAS BEEN INSTALLED IN CONFORMANCE WITH ALL APPLICABLE CODES AND MATERIAL STANDARDS AND REGULATIONS.					
SIGNATURE - INSULATION CONTRACTOR <i>Jeck Cable</i>			TITLE MANAGER		DATE
SIGNATURE - GENERAL CONTRACTOR			TITLE		DATE
REMARKS					

US HOME AT WESTLAKE PLAN # 3537 REAR ROOF

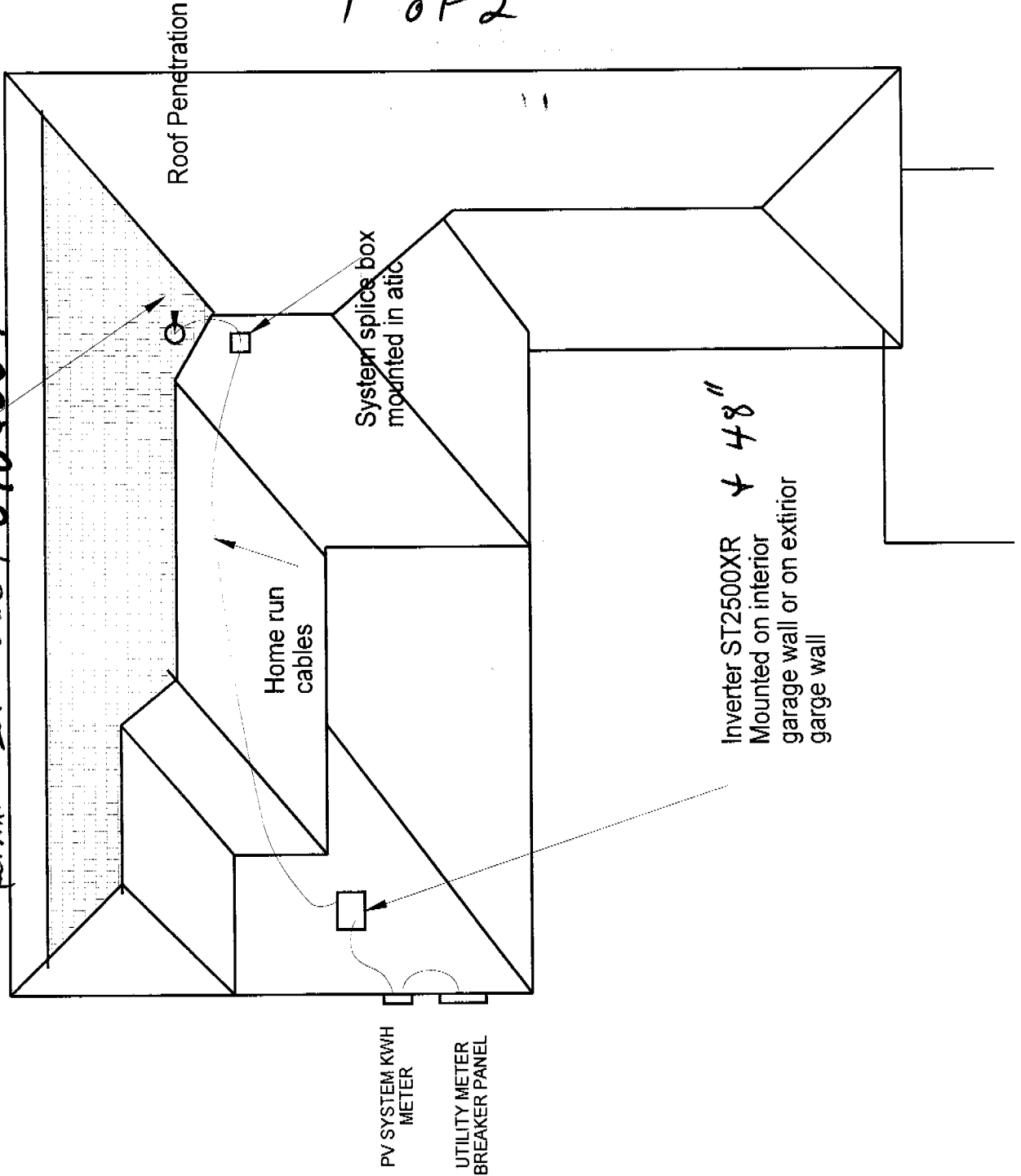
SUNSLATE roof - 240 SUNSLATES - 2.3kWatt

Lot 47 201 Vista Creek Cir.

Permit # ~~01-00559~~ 6106354

T.L.M. 01-11-02
THE APPROVAL OF ALL ELECTRICAL WORK
IS SUBJECT TO FIELD INSPECTIONS.

1 OF 2



FILE COPY



Name: Westlake US Homes

System Design

Offer S-01.12.METERIALS

System components and parameters

All calculations are made with 1000 W/m2 sun irradiation at 25 degC.

1. Sunslate

Sunslate Type: SM-II	Total Sunslates:	240
Cells per Sunslate: 6	Bare Slates	120
Connection in Sunslate: 6 in Series and 1 parallel	Sunslate Blanks:	0

2. Strings (Fields)

Sunslates per String: 24	Ump:	69.84 [VDC]
Connections: All in Series	Uoc:	87.12 [VDC]
	Pmp:	292.77 [W]

3. System

Installed DC power:	Pmp:	<u>2,927.69</u> [W]
Total Strings: 10	Ump:	69.84 [VDC]
Connection in Sunslate: 1 in Series and 10 parallel	Uoc:	87.12 [VDC]
	Pmp:	<u>2,213.34</u> Watts AC @ PTC

4. Cables

Field connecting	Row connecting	Sunslate-Sunslate	Bridges
10 ea.- Field2.5B	70 ea.- Twister	160 ea.- Inerconnect	10 ea.

5. Inverter

1 ea.-ST2500

6. Field connecting box (if any)

1 ea.-----

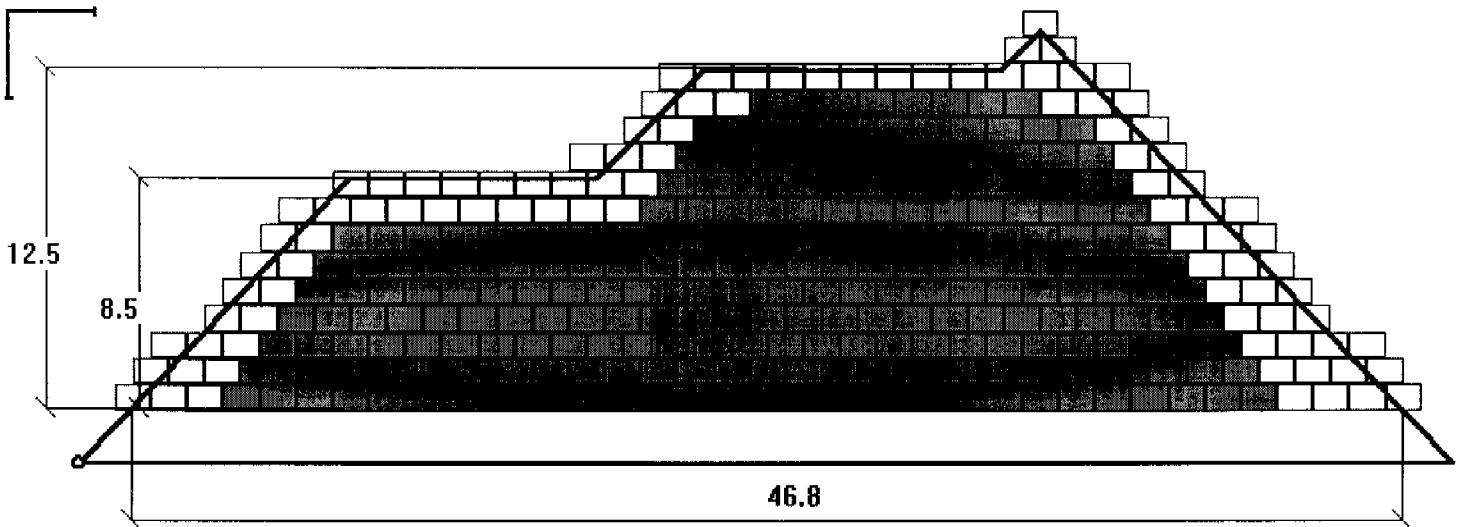
0106354



Project Name: Westlake-USH#3537 Rear Roof

System Design

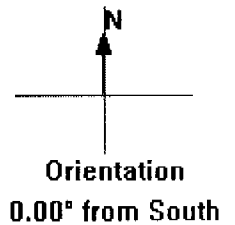
Offer S-01.12.RR

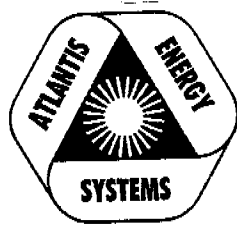


THE APPROVAL OF ALL ELECTRICAL WORK IS SUBJECT TO FIELD INSPECTIONS.

Total installed power DC @ STC:	2,928	[W]
Total installed power AC @ PTC:	2,213	[W]
Sunslates surface:	310.0	Sq.Ft.

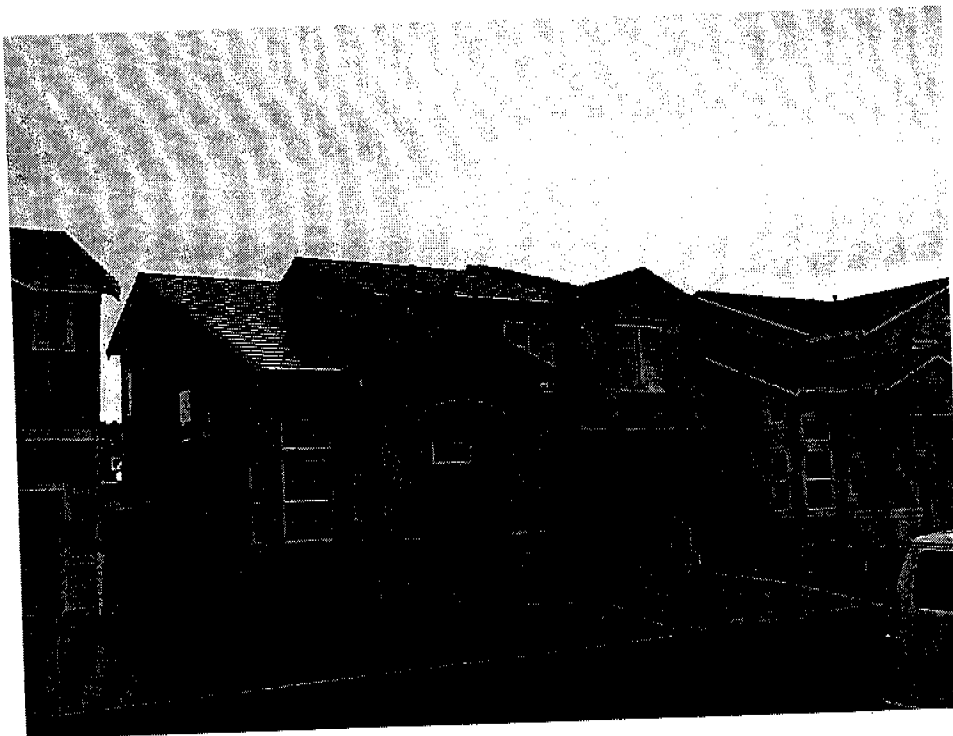
0106354
20F2





SUNSLATES[®] PACKAGE SYSTEM

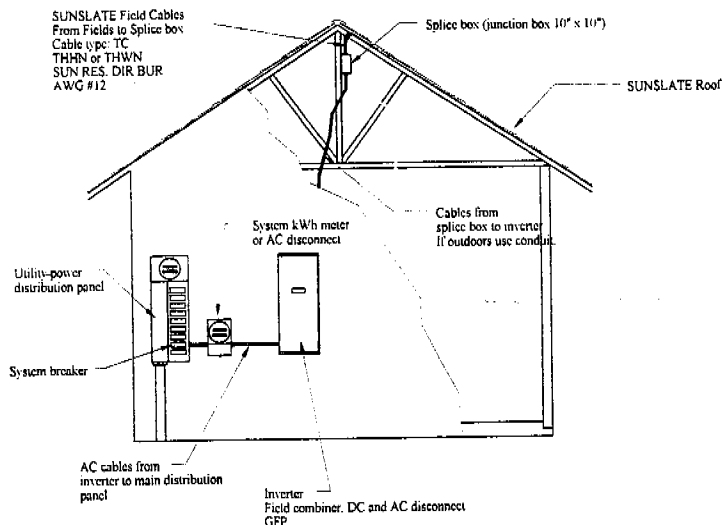
TYPE: 240/SM-II



4610 Northgate Blvd. 150,
SACRAMENTO, CA 95834
TEL: 916-920-9500. FAX: 916-927-1697
www.atlantisenergy.com

240 - SUNSLATES® SYSTEM PACKAGE SPECIFICATIONS

Maximum Surface	415	Sq.Ft.
Minimum Surface	355	Sq.Ft.
SUNSLATES® Surface	311	Sq.Ft.
SUNSLATES® Power @ STC	2.93	kWatts



MATERIALS

ROOF	SUNSLATES® /w cables	SM-II	240
	Field cables	Max 50' each	10
	Bridge cables	Field loop	12
	Twister cables	Row to row cable	16
	Shields	Strain relief	250
	Silicone sealant	Shin-Etsu, 1 component RTV- tube	3
	'Eternit' slates	40 x 72	80
	'Eternit' starters	40 x 42	42
	Hooks	200 per box	2
	Installation tool	'T' type	2
	Battens - vertical	2 x 2 in feet	--
Battens - horizontal	1 x 4 in feet	--	
NOTE: Other materials required for roof installation (as flashing, ridge covers...etc.) will be ordered and billed as needed. Does not include roof under-laymen's (as plywood, roofing felt...etc.). Wood price may vary depending on market prices.			
ELECTRICAL	DC to AC Inverter	ST 2500 XR/ 240, 3 wire	1
	Pull box / splice box	10" x 10" with terminal strips	1
	Field combiner box /w fuses	TCB - 10 /10 inputs	1
	Meter base or disconnect	4 Jaw meter base	1
	System breaker	15 Amp / 240 Volt	1
	DC meter / DC amps and DC volts	500 VDC, 10 ADC	1
NOTE: Cables from splice box to inverter (12 total) and from inverter to beaker panel are to be provided by contractor. For cable sizing review the table below. Other materials required for electrical installation (as conduits, pull boxes, cables, fittings...etc.) are not included.			

SUNSLATES® SPECIFICATIONS:

One SUNSLATE®

SUNSLATES® Model	Pmax Watts	Vmax Volts	Voc Volts	Imax Amps	Isc Amps
SM-II	12.20	2.86	3.67	4.30	4.72

Field of 24 SUNSLATES® in series (String)

SUNSLATES® Model	Pmax Watts	Vmax Volts	Voc Volts	Imax Amps	Isc Amps
24 - SM-II	292.8	68.64	88.08	4.30	4.72

System of 10 SUNSLATES® fields in parallel

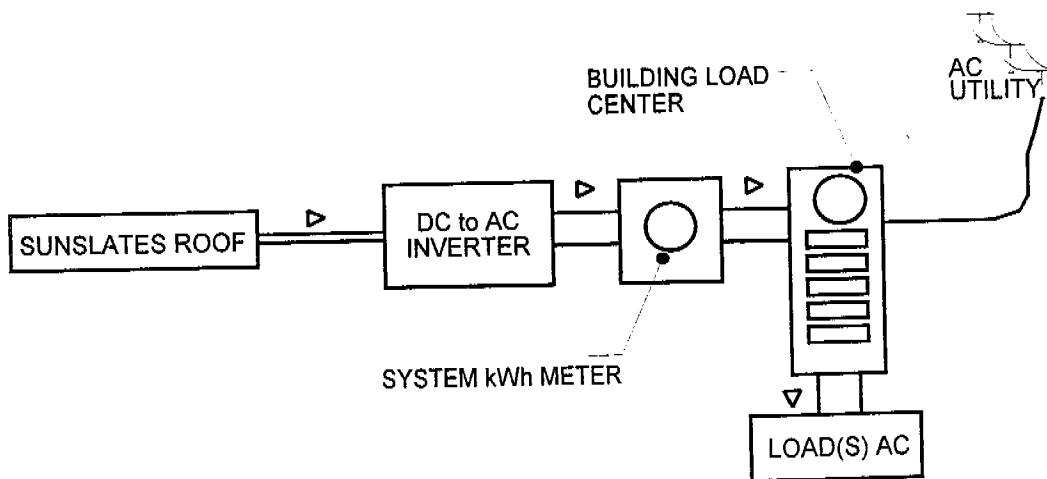
SUNSLATES® Model	Pmax Watts	Vmax Volts	Voc Volts	Imax Amps	Isc Amps
24 - SM-II	2,928.0	68.64	88.08	43.0	47.2

The system is designed for a 48VDC nominal voltage. The electrical characteristics are within ± 10 percent of the indicated values of Isc, Voc and Pmax under standard test conditions (1000 W/m² irradiance, 25 degC (77 degF) cell temperature and AM 1:5 spectrum). Under normal conditions, the SUNSLATE™ is likely to experience conditions that produce more current and/or voltage than reported at standard test conditions (output may vary depending on time of day, time of year, ambient conditions, ambient temperature and shading). Accordingly, the value of Isc and Voc marked on the SUNSLATE should be multiplied by a factor 1.25 when determining component voltage ratings, conductor ampacities, fuse size and the size of controls connected to the PV output.

SYSTEM DESCRIPTION

The grid connected power systems consist from:

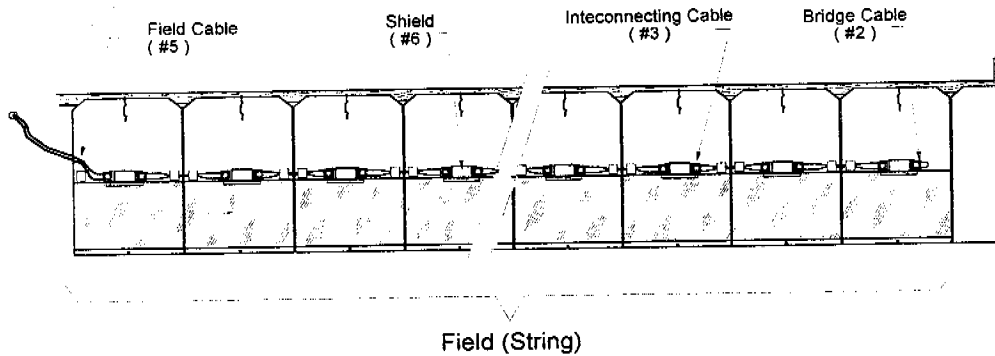
- Installed SUNSLATES®
- Cables
- DC to AC inverter
- Load (building AC loads from distribution panel).



240 - SUNSLATES® SYSTEM

This is one of the most common SUNSLATES® system designs. Saving the energy is done by back feeding the utility grid with the generated power. The system will generate electricity in the day, run the kWh meter backwards, building up a credit (if access power is generated) and the building will use this credit at night.

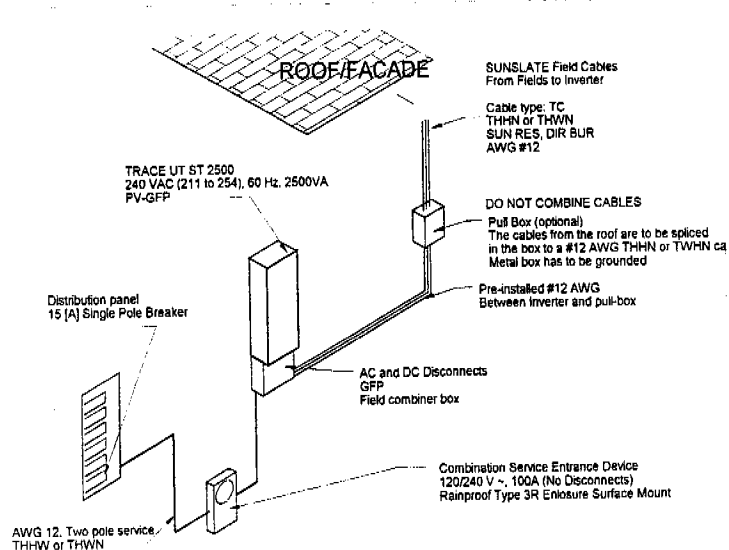
The building (roof) on which the SUNSLATES® are installed is setup from SUNSLATES® fields (strings). All the fields are installed with an equal number of SUNSLATES® in them (24 SUNSLATES®). The field has a beginning (bridge cable) and an end (field connecting cable). When installing the field, always start (first SUNSLATES® from the string) with bridge cable and end with field connecting cable, which goes through the roof into the building. The "System Design" document (see appendix 2), will show how many fields are needed and the position of every field.



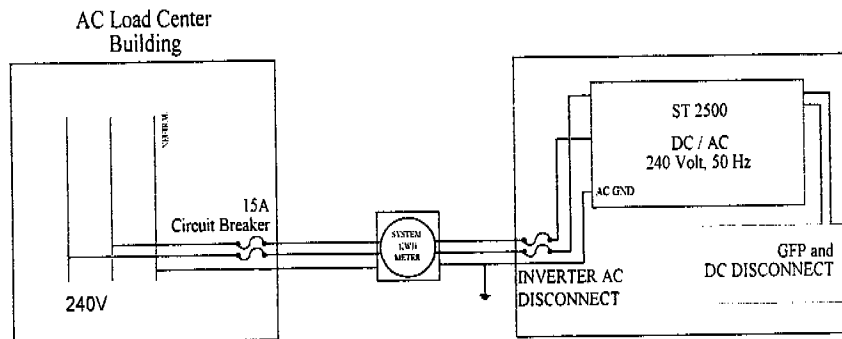
For SUNSLATES® installation details refer to 'SUNSLATES® INSTALLATION MANUAL'
Part # MN100

The fields are then extended using pre-installed cables at the splice box, which is located in a convenient location. The pre-installed cables are mounted run to the inverter where they are combined in parallel. The inverter will transform the DC power into AC matching the utility grid. The produced power will be back-fed into the main electrical distribution panel of the building and if not used by any load from the building will be led back to the utility grid by rotating back the utility's kWh-meter. The additional kWh meter is for monitoring the SUNSLATES® system performance only.

SYSTEM WIRING



AC LINE DIAGRAM



The inverter system consists from:

- DC to AC converter
- Field combiner board
- GFP on the DC side
- DC and AC inverter disconnects

All components are UL listed and pre-installed to comply with NEC section 690. The inverter comes pre-wired and in a wall mount NEMA3R enclosure.

See inverter specifications and installation manual for details

DC WIRE SIZING TABLE

All DC conductors are to be sized using the table below. The voltage drop will be no greater than 1.5% from maximum conditions. Refer to 310-15 and 310-16 of NEC (1996) for correction factors.

Gauge A.W.G.	R @ 77 Ohms Per 1000'	R @ 149 Ohms per 1000'	Diameter in mils 1000th in.	@ 77 degF		@ 149 degF		Metallic Conduit		Gauge A.W.G.
				Maximum Length for Field	Maximum Length for System	Maximum Length for Field	Maximum Length for System	Number of Conductors 2	Number of Conductors 4	
000	0.063	0.073	410	1571	131	1356	113	1.5"	2"	000
00	0.079	0.092	365	1253	104	1076	90	1.25"	2"	00
0	0.1	0.116	325	990	82	853	71	1.25"	1.5"	0
1	0.126	0.146	289	785	65	678	56	1.25"	1.5"	1
2	0.159	0.184	258	622	52	538	45	1"	1.25"	2
4	0.253	0.292	204	391	33	339	28	0.75"	1"	4
6	0.403	0.465	162	246	20	213	18	0.5"	0.75"	6
8	0.641	0.739	128	154	13	134	11	0.5"	0.75"	8
10	1.02	1.18	102	97	8	84	7	0.5"/6	0.5"/6	10
12	1.62	1.87	97	61	5	53	4	0.5"/9	0.5"/9	12

NOTE: All dimensions for length are in feet (1' = 0.3048 m). Length is for a cable of two conductors (positive and negative). Refer to NEC and local building codes for conduit type, installation and grounding. Wire conductor type: THHN, THWN or THWN-2. Based on 1.5% DC voltage drop.



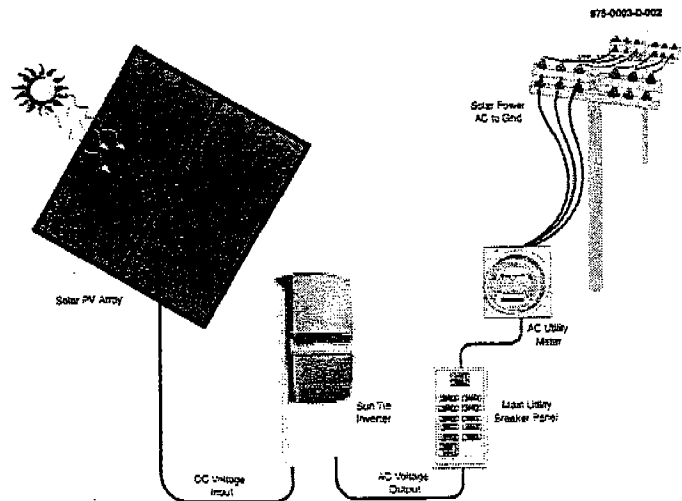
Sun Tie

UTILITY INTERACTIVE SOLAR ELECTRIC INVERTER

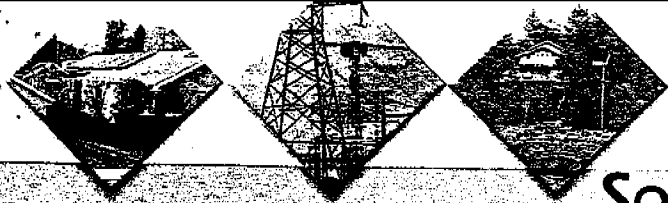
MODEL	ST1000	ST1500	ST2000	ST2500
AC voltage-nominal	240 VAC			
Maximum power point tracking voltage range	42-85 VDC			
Minimum input DC voltage (for full rated AC output)	52 VDC (typically, four nominal 12 VDC PV modules, in series)			
Minimum wake-up DC input voltage	50 VDC			
Absolute Maximum PV open circuit voltage	125 VDC			
AC voltage-min/max	211-254 VAC			
AC output characteristics	Current source			
Nominal frequency	60 Hz			
Frequency window-min/max	59.5/60.5 Hz Default			
Continuous AC output @ 25 °C	1.0 kVA	1.5 kVA	2.0 kVA	2.5 kVA
Efficiency-peak	92%		94%	
AC output waveform	Sine wave, high frequency PWM controlled			
Total harmonic distortion	Less than 5% at rated power per IEEE 929 and UL 1741			
AC disconnect	Double-pole 15 amp, 240 VAC branch circuited rated breaker			
DC disconnect	Single-pole 100 amp DC rated circuit breaker			
Islanding protection	Over/under AC voltage and frequency detection plus active islanding detection-meets IEEE 929 and UL 1741 requirements			
User display	Backlight alphanumeric LCD display-AC amps, AC volts _{rms} , DC volts, AC frequency, output power (W) and (Wh) produced			
Specified temperature range	-38-113 °F (-39-45 °C)			
Enclosure Type	Outdoor, rainproof, powder coated aluminum enclosure, fully screened			
Dimensions (inverter only)	13.25" W x 33.25" H x 5.3" D (33.8 cm W x 83.1 cm H x 13.25 cm D)			
Dimensions (shipping)	15.75" W x 37.75" H x 9.5" D (39.4 cm W x 94.4 cm H x 23.8 cm D)			
Weight (inverter only)	35 lb. (15.9 kg)			
Weight (shipping)	40 lb. (18 kg)			
Mounting	Vertical wall mount only			
Listings	UL listed to UL1741, 1st edition and cUL listed to CSA C22.2 No. 107.1-95			
STANDARD FEATURES AND OPTIONS				
PV ground and fault protection system	-	Standard	-	Standard
PV combiner board with 8 fused inputs, 20 amps maximum per input	-	Standard	-	Standard
Surge arrester-Combined AC/DC protection	Standard	Standard	Standard	Standard
Rain Shield (STRS) Protective rain shield (required for outdoor installation)	Optional	Optional	Optional	Optional

Specifications subject to change without notice.
Specifications @ 25 °C.

Available From:



The Sun Tie connects all the elements of a utility interactive solar electric system together.



Sun Tie™ (ST)

SOLAR ELECTRIC INVERTER

Connecting The Sun To Your Utility Meter

Trace Engineering's new Sun Tie (ST) solar electric inverters are designed, built and priced to make the benefits of site-generated PV power easy for anyone to attain. The Sun Tie operates interactively with the utility, without the use of batteries. Made specifically for new, small-scale, independent power producers, the ST is a perfect choice for anyone interested in participating in the emerging Green Power market. The ST is available in four models with output capacity of 1.0, 1.5, 2.0 and 2.5 kVA.

Distributed generation, using the power of the sun, is a win-win choice for the environment, utility companies and consumers alike. With this form of electrical distribution, solar PV power is generated and inverted at the location where it's used. Solar electricity helps reduce the need for new large-scale—and often environmentally harmful—generating stations and distribution lines.

Consumers can have lower electricity bills because any PV power they generate is either used in their home or business or, when there is excess, sold to the utility company. "Net Metering" is one way electricity is exchanged between the power grid and solar generators. Net Metering programs are available from many utility companies, contact your local electricity provider for details.

Utilities benefit from increased solar generation by gaining the ability to resell the PV power they purchase to environmentally conscious customers at premium Green Power rates. Consumer generated, solar electricity can also help utility companies meet their growth requirements at lower capital costs.

Introducing the Sun Tie

All-in-One Design

All NEC (U.S. National Electrical Code) required DC input and AC output connections, disconnects and circuit breakers are housed within the Sun Tie's compact case. A built in LCD panel provides easy-to-read system status and daily cumulative power production information.

Works With Any Type of PV Technology

The ST is designed to optimize the output from all types of solar electric technologies. The open circuit voltage window of the Sun Tie ranges up to 125 VDC so both conventional Crystalline and newer Thin Film PV modules can be used.

Maximum Power Point Tracking

The Sun Tie uses sophisticated software to track and adjust the output of the PV array. Our Maximum Power Point Tracking (MPPT) software, which samples once a minute, ensures complete harvest of the sun's energy all day long.

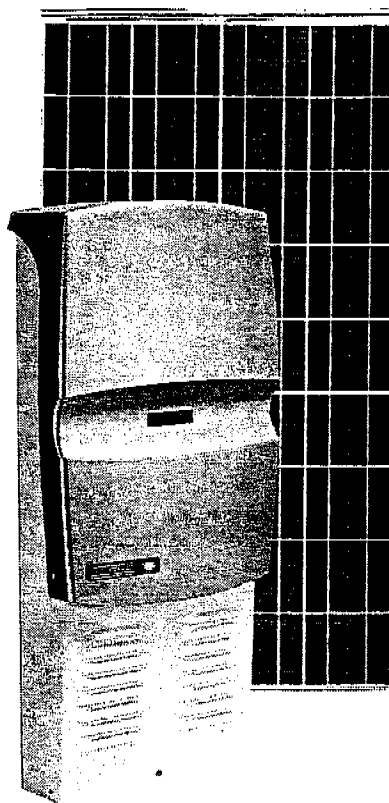
Expandable

Multiple ST inverters can be connected to a utility grid so that additional generating capacity may be added in a fully modular manner.

High Efficiency, Long Life Design

The high frequency, solid state design of the ST inverter is extremely efficient. The inverter efficiency is over 90%, with peak efficiencies of 94%. Built and designed in the U.S.A. by Trace Engineering, makers of the world's most reliable inverters, the Sun Tie is sure to provide many years of trouble free service and carries a two year warranty.

* The Sun Tie is shown with optional protective rain shield which is required for outdoor installation of the inverter.



ST Series Inverter*

Standard Features:

Sun Tie—Utility interactive inverter, 240 VAC 60 Hz output. Includes factory installed DC and AC input/output breakers, combination DC and AC lightning arrestor.

Options:

STRS—Protective rain shield, required for outdoor installation of ST Series inverters

Certifications:

UL Listed—The Sun Tie is UL Listed to UL 1741 and cUL Listed to CSA 22.2 No. 107.1-95. The ST is designed to comply with IEEE 929.

Note:

ST1000 and **ST2000** models do not include PV ground fault interrupters and PV combiner boards. Trace offers a PV ground fault interrupter (**PVGFP**) which requires an enclosure (not included) and a UL Listed 10 circuit combiner box (**TCB10**). Both of these items can be ordered separately.

THE POWER COMPANY
Trace
ENGINEERING