



OPEN MEETING

**REGULAR MEETING OF THE THIRD LAGUNA HILLS MUTUAL
ARCHITECTURAL CONTROL AND STANDARDS COMMITTEE**

**Monday, October 22, 2018 – 9:30 a.m.
Laguna Woods Village Community Center Sycamore Room
24351 El Toro Road**

NOTICE AND AGENDA

1. Call to Order
2. Acknowledgement of Media
3. Approval of the September 24, 2018 Report
4. Approval of the Agenda
5. Chair Remarks
6. Member Comments - *(Items Not on the Agenda)*
7. Department Head Update

Consent:

All matters listed under the Consent Calendar are considered routine and will be enacted by the Committee by one motion. In the event that an item is removed from the Consent Calendar by members of the Committee, such item(s) shall be the subject of further discussion and action by the Committee.

Items for Discussion and Consideration:

Variance Requests:

8. 4020-N (Casa Milano, LHX06_C) - Install Photovoltaic (Solar) System on Two-Story Building

Standard Updates:

9. Review Further Updates to Architectural Standard 30: Storage Cabinets
10. Review Updates to Architectural Standard 34: Windows and Window Attachments
11. Review a New Architectural Standard 44: Fencing; Vinyl

Discussion Items: (No reports)

12. 5371-2E – A/C Placement
13. 3052-D – Removal of Wooden Atrium Cover

Reports:

None.

Items for Future Agendas

Concluding Business:

14. Committee Member Comments
15. Date of next meeting – Monday, November 26, 2018
16. Adjourn

Steve Parsons, Chair
Kurt Wiemann, Staff Officer
Eve Morton, Alterations Coordinator: 949-268-2565



OPEN MEETING

**REGULAR MEETING OF THE THIRD LAGUNA HILLS MUTUAL
ARCHITECTURAL CONTROL AND STANDARDS COMMITTEE**

**Monday, September 24, 2018 – 9:30 a.m.
Laguna Woods Village Community Center Sycamore Room
24351 El Toro Road**

REPORT

COMMITTEE MEMBERS PRESENT: Chair – Bill Walsh, Roy Bruninghaus, John Frankel

COMMITTEE MEMBERS ABSENT: Steve Parsons

OTHERS PRESENT: Burt Baum, Jack Connelly

ADVISORS PRESENT: Bob Hatch, Mike Butler, Michael Plean

STAFF PRESENT: Brett Crane, Gavin Fogg, Eve Morton

1. Call to Order

Chair Walsh called the meeting to order at 9:30 a.m.

2. Acknowledgement of Media

No media were present.

3. Approval of August 27, 2018 Report

Director Frankel moved to approve the Report. Director Bruninghaus seconded. The motion passed with a unanimous vote.

4. Approval of the Agenda

Director Bruninghaus moved to approve the Agenda. Advisor Plean seconded. The motion passed with a unanimous vote.

5. Committee Chair Remarks

None.

6. Member Comments - (Items Not on the Agenda)

None.

7. Department Head Update

None.

Consent:

All matters listed under the Consent Calendar are considered routine and will be enacted by the Committee by one motion. In the event that an item is removed from the Consent Calendar by members of the Committee, such item(s) shall be the subject of further discussion and action by the Committee.

None.

Items for Discussion and Consideration:

8. 2231-P (Casa Linda, II06_1) - Retain Veneer Wall Coverings within Original Patio Footprint

Director Frankel made a motion to not accept Staff's recommendation and approve this request. Advisor Hatch seconded. The vote was three in favor of the motion and five disapproved. The motion died.

Director Bruninghaus made a motion to accept Staff's recommendation and not approve this request. Advisor Plean seconded. A vote was cast and five were in favor of the motion and three disapproved. The motion passed.

The committee requested that Staff recommend to this Member to use alternate materials to build a similar wall covering and also to not attach it to the building.

The committee also requested that Staff address this type of alteration in existing Standards and tighten up wording if need be.

Reports:

None.

Items for Future Agendas

None.

Concluding Business:

9. Committee Member Comments

Director Bruninghaus thanked Chair Walsh for his hard work on the committee.

Director Frankel also thanked Chair Walsh.

Director Connelly thanked Chair Walsh and stated that the trend here is to try to help Members with their variance request which is commendable and different from other HOAs he has dealt with.

Advisor Hatch said he is ending his advisory role with the committee. He wrote a paper on his views regarding Common Area and hopes the committee will read it. He stated that the role of a committee advisor should be to be honest and frank and not be rubber stampers.

10. Date of next meeting – Monday, October 22, 2018

11. Adjourned at 10:17 a.m.

DRAFT

Chair, Bill Walsh

Kurt Wiemann, Staff Officer

Eve Morton, Alterations Coordinator, 268-2565



STAFF REPORT

DATE: October 22, 2018
FOR: Board of Directors
SUBJECT: Variance Request
Mr. David R Masters of 4020-N (Casa Milano, LHX06_C)
Install Photovoltaic (Solar) System on Two-Story Building

RECOMMENDATION

Staff recommends the Board approve the request to install a solar system for Unit 4020-N with the conditions in Appendix A.

BACKGROUND

Mr. Masters of 4020-N Calle Sonora Estes, a Casa Milano style unit, is requesting Board approval of a variance to install solar panels on the roof of the attached garage structure.

Plans have been provided of the above-mentioned items (Attachment 1).

The cost of the proposed alteration would be borne by the Member.

The Mutual Standard for solar panel installations on two-story buildings was rescinded via Resolution 3-18-85 on June 19, 2018. Committee review is now required, due to the allocation of roof space for solar panels that accounts for alterations present on the roof on a case by case basis. Since being rescinded, the Mutual Standard has been modified for use as guidelines for such installations include potential roof allocations per unit for each building type.

A copy of the "Third Mutual Solar Installation Guidelines" is available in Attachment 3.

DISCUSSION

Mr. Masters is proposing to install a 20-module Photovoltaic (PV) system on the roof of the attached garage belonging to building 4020. The garage is a single-story structure attached to a two-story building that contains six units.

The flat roof area for Building 4020 measures 5,385 square feet (SF); due to the requirements of a 3' setback around each assigned area, the remaining space grants each unit approximately 725 SF of allocated space. Mr. Masters proposes to use 353 SF for the array of solar panels (modules) in his system. The location being proposed to contain the solar system is within the allocated roof space assigned to Unit N under the Solar Guidelines (Attachment 3).

Mr. Masters has coordinated with Staff and the Third Mutual roof contractor, Letner Roofing Co., who have determined the need to re-roof the garage ahead of the installation. This would bring the schedule for the re-roofing of the garage forward 5-8 years and as such, Mr. Masters

has agreed to bear the costs to re-roof the garage. The roof, currently a built-up roof (BUR) system, will be stripped to its plywood layer and new cool-roof, using insulation and a PVC membrane, would be installed prior to the solar installation. The mounting system for the solar modules will then be attached to the rafters of the garage. Letner Roofing Co. will return to install PVC flashing boots to all penetrations to prevent any moisture intrusion.

Structural drawings with roof load calculations will be required upon approval, prior to a Mutual Consent being issued for the project.

A condition requiring the Third Mutual Solar Installation Guidelines to be followed through-out the installation and maintenance of this project has been added (Appendix A).

Previous examples of a two-story unit solar panel installation is at Unit 3249-B, that was granted over-the-counter using the previous Third Mutual Alteration Standard.

Staff recommends approval of the request based on the proposal meeting the Mutual Solar Installation Guidelines previously set forth for such requests.

At the time of preparing this report, there are no open Mutual Consents for Unit 4020-N.

A Neighbor Awareness Notice was sent to Units 4019-C, 4019-P, 4020-A, 4020-B, 4020-C, 4020-O , 4020-P, 4024-B and 4024-C on July 9, 2018, due to line of sight and/or effects of construction noise/debris within 150' of the alteration.

At the time of preparing this report, no responses from the Neighbor Awareness Notices have been received by Staff.

All future costs and maintenance associated with the subject alterations are the responsibility of the Mutual member(s) at 4020-N.

Prepared By: Gavin Fogg, Alterations Inspector II

Reviewed By: Kurt Wiemann, Permits, Inspections & Restoration Manager

Eve Morton, Alterations Coordinator

ATTACHMENT(S)

- Appendix A: Conditions of Approval
- Attachment 1: Site Plan
- Attachment 2: Variance Request, September 27, 2018
- Attachment 3: Solar Installation Guidelines – Two Story Buildings
- Attachment 4: Photos
- Attachment 5: Map

APPENDIX A

CONDITIONS OF APPROVAL

Conditions of approval would be as follows:

1. Installation of the proposed PV System must be in accordance with the Third Mutual Solar Installation Guidelines for Two-Story Buildings.
2. The cost of re-roofing the garage prior to the installation of the PV System will be the responsibility of the Member Owner of 4020-N.
3. No improvement shall be installed, constructed, modified or altered at unit **4020-N**, ("Property") within the Third Laguna Hills Mutual ("Mutual") unless and until a Mutual Consent for Alterations application for the improvement has been made to, and approved, in writing, by, the Village Management Services, Inc. ("VMS, Inc."), Alterations Division ("Division"), or, in the event of a Variance from the Mutual's Alteration Standards, the Architectural Control and Standards Committee ("ACSC"). In the event written permission is given for the installation, construction, modification or alteration of any improvement(s) upon the Property, the Member Owner or Owners ("Member Owner") agrees to comply with the Mutual's Governing Documents and any specific terms or conditions imposed, and that the installation, construction, modification or alteration shall be in strict compliance with the terms of the approval.
4. A Variance for Unit Alterations has been granted at **4020-N** for a **Photovoltaic System (Solar Panels) on roof**, subject to the attached plans stamped approved and is subject to the final inspection by the Division. Any variations to the approved attached plans are not allowed and could result in a stop work notice and/or severe fines to the Member.
5. Prior to the issuance of a Mutual Consent for Unit Alterations, a complete set of unit specific plans prepared by a licensed architect or structural engineer depicting the proposed improvement must be submitted to the Division office located in the Laguna Woods Village Community Center. The plans must depict any required structural modifications ensuring the structural integrity of the building is maintained upon completion of the proposed improvement.
6. All costs for maintenance, repair, renovation, replacement or removal of the improvement, present and future, are the responsibility of the Property's Member Owner at 4020-N and all future Mutual members at 4020-N.
7. Parking of contractors or other invitees' vehicles is prohibited in covered resident parking, open resident spaces, handicapped spaces or fire lanes. Contractors or other invitees must park on the street. To the extent possible contractors' or other invitees' vehicles should be limited in number.
8. Member Owner(s) of the Property must sign and submit to the Mutual, c/o VMS, Inc., at the Division office located in the Laguna Woods Village Community Center, an executed and notarized "Covenant to Run with the Land" for a proposed improvement that would utilize any portion of the Mutual's Common Area. Prior to the issuance of a Mutual Consent for Unit Alterations, that "Recordable Common Area Agreement" must be filed with the Orange County Clerk/Recorder.

9. A City of Laguna Woods permit is required, which may include the requirement to obtain clearance from the South Coast Air Quality Management District (Asbestos Hot Line at (909) 396-2336). Prior to the issuance of a Mutual Consent for Unit Alterations, the appropriate City of Laguna Woods permit number(s) must be submitted to the Division office located in the Laguna Woods Village Community Center. The City permit must be finalized within the prescribed timeframe, and a copy of the final permit must be submitted to the Division within two weeks.
10. Prior to the issuance of a Mutual Consent for Unit Alterations, if required, a Mutual Roof Alteration Notification ("Tie-In Form") must be submitted to the Division. All roof tie-ins must be performed by a C-39 Licensed Contractor. The Member Owner may hire a C-39 Licensed Contractor of his/her own choice to perform roof tie-ins for the installation of solar panels on all roof types except PVC Cool Roofs. For PVC Cool Roofs, regardless of the roof type, all tie-ins must be performed by the Mutual's roofing contractor at the Member Owner's expense. All tie-ins may only be made to sound structural elements. Existing structural elements proposed to be tied to, which exhibit signs of dry rot or other structural defects, must first be replaced or repaired at the Member Owner's expense during construction of the improvement.
11. Prior to the issuance of a Mutual Consent for Unit Alterations, any altered exterior surface should match the Building color; vinyl fence/gate will be either white or taupe, tubular steel or wrought iron fence/gate will be black or white; the approved colors and materials are identified as "Third Laguna Hill Mutual Color Selections" at Resident Services, located at the Community Center first floor.
12. Member Owner shall be responsible for all activity by contractors, subcontractors, material suppliers and their employees and agents and any others who perform work on the Property, including any violation of the Mutual's Governing Documents, including, but not limited to, traffic and parking violations, maintenance of a clean job site at all times, and use of Mutual property for storage of equipment or materials without prior approval. Member Owner acknowledges and agrees that all such persons are his/her invitees. Member Owner shall be responsible for informing all his/her invitees of the Mutual's Rules and Regulations.
13. Member Owner hereby consents to and grants to the Mutual and the Division, and their representatives, a right of entry upon the Property at any time to be used to inspect the Property and the improvements thereon and for the Mutual and the Division, and their representatives and contractors to remedy any violation upon the Property, including, but not limited to, removing trash, removing any improvement installed without approval or modifying an improvement to bring the same into compliance with the terms of the approval.
14. Member Owner shall be liable for any violation of the Mutual's Governing Documents by any invitee, including any fine, assessment, traffic or other charge levied in connection therewith.
15. Member is responsible for following the gate clearance process in place to admit contractors and other invitees.
16. Prior to the Issuance of a Mutual Consent for Unit Alterations, the Member shall post a Conformance Deposit in the amount of \$250 for all improvements exceeding a total of \$500. The Conformance Deposit will be held until Final City Building Permit Issuance if required, to assure no damages to Mutual property occurs during construction, including, but not limited to, internet/TV, landscaping, or exterior walls/roof.

17. The Conformance Deposit shall be held by the Mutual and applied, at the Mutual's sole discretion, to any fine levied against the Member Owner or the Property, to cover and/or recoup any costs whatsoever, including, but not be limited to, administrative and legal costs, incurred by the Mutual or VMS, Inc., in connection with the Property, or to any unpaid charges or assessments on the Mutual's account for the Property. For example, the Mutual could apply all or a portion of the Conformance Deposit to cover the following: fines levied against any invitee of Member Owner; fines levied for construction violations; costs incurred by the Mutual in repairing damage to Mutual property caused by Member Owner's contractor or other invitee; costs incurred by the Mutual in curing a violation on the Property; costs incurred in removing or altering an improvement upon the Property; or to an unpaid assessment, special assessment, late charge, interest or collection costs posted to the Mutual's account for the Property. The foregoing list is illustrative only and in no way represents the only situations where the Mutual could apply all or a portion of the Conformance Deposit.
18. If at any time the amount of the Conformance Deposit falls below 3/4ths of the amount originally required to be posted, Member Owner agrees to immediately deposit additional sums with the Mutual in an amount sufficient to return the Conformance Deposit to the originally required level. Until the Conformance Deposit is so replenished, an automatic stop work order shall be in effect.
19. Any remaining Conformance Deposit is refundable if the Member Owner notifies the Division, in writing, that the improvement(s) for which the Conformance Deposit was posted have been completed in accordance with the approval, and the Division agrees with the same. The Mutual will mail the unused portion of the Conformance Deposit, if any, to the Member Owner's address of record with the Mutual. Under no circumstances shall Member Owner be entitled to any interest on any portion of the Conformance Deposit. If no written request for return of a Conformance Deposit is made by Member Owner within two years from the date when the Conformance Deposit is posted with the Mutual, the Conformance Deposit will be deemed forfeited to the Mutual.
20. All improvements must be installed in accordance with the California State Building Code, and the published Mutual Architectural Alterations Standards. See <http://www.lagunawoodsvillage.com>.
21. During construction, work hours established by the Mutual and the Noise Ordinance set forth in the City of Laguna Woods Municipal Code must be adhered to at all times.
22. During construction, both the Mutual Consent for Unit Alterations and the City Building Permit must be on display for public view at all times in a location approved by the Division.
23. It is mandatory that no waste or materials associated with the construction be dumped in the Village trash bins; such waste or materials associated with the construction must be disposed of offsite by the contractor.
24. A dumpster is approved for placement at the location identified by Security Staff by calling 949-580-1400. All dumpsters must conform to the Policy for Temporary Containers. Dumpsters must be ordered from the approved City of Laguna Woods waste hauler and must be maintained at all times.
25. A portable bathroom is approved for placement at the location identified by Security Staff by calling 949-580-1400.

26. The Mutual Consent for Unit Alterations expires six months after the date of approval, unless an application is submitted with fees and approved by the Division for an extension. Only one extension for a maximum of an additional six months may be granted.
27. Violations of the forgoing conditions or the Mutual's Governing Documents (See <http://www.lagunawoodsvillage.com>), including, but not limited to, work outside the approved plans, excessive noise, illegal dumping, or working after hours, will result in disciplinary action, which could result in a stop work notice, loss of privileges and/or severe fines to the Owner Member. Such fines left unpaid will result in forfeiture of a portion or all of the Conformance Deposit required above or other legal remedy.
28. Mutual member shall indemnify, defend and hold harmless Third and its officers, directors, committee members and agents from and against any and all claims, demands, costs, fines, judgments, settlements and any other costs, expenses, amounts and liabilities arising from Mutual member's improvements and installation, construction, design and maintenance of same.

SCOPE OF WORK

PHOTOVOLTAIC SYSTEM SUMMARY
SYSTEM SIZE: DC STC - 6.0kW
DC PTC - 5.59kW
CEC AC - 5.53kW

MODULES: (20) LG (LG300N1C-G4) MODULES
MODULE MK POWER (PMAA): 300W
INVERTER: (1) SOLAREDEGE SE6000H-US INVERTER
OPTIMIZER: (20) SOLAREDEGE POWER OPTIMIZER P320

ARRAY TILT:
#1 - 0°
#1 - 180°

AZIMUTH:
#1 - 180°

ELECTRICAL INFORMATION
UTILITY COMPANY: SCE
MAIN SERVICE AMPERAGE: 100A

BUILDING INFORMATION: SINGLE STORY HOUSE
TYPE OF CONSTRUCTION: V-B
OCCUPANCY: RESIDENTIAL GROUP R - 3
ROOF TYPE: COOL ROOF
NUMBER OF LAYERS: 0
ROOF RAFTER: 2'X4" @ 24" O.C.

CODE SUMMARY

THIS PROJECT SHALL COMPLY WITH THE FOLLOWING CODE

2016 CALIFORNIA ELECTRICAL CODE
2016 CALIFORNIA RESIDENTIAL CODE
2016 CALIFORNIA BUILDING CODE
2016 CALIFORNIA GREEN BUILDING STANDARDS CODE
2016 CALIFORNIA ENERGY CODE
2016 CALIFORNIA PLUMBING CODE
2016 CALIFORNIA MECHANICAL CODE
2016 CALIFORNIA FIRE CODE
2014 NATIONAL ELECTRICAL CODE
ALL OTHER ORDINANCES ADOPTED BY THE LOCAL GOVERNING AGENCIES.

SHEET INDEX

- PV-0 COVER SHEET
- PV-1 PLOT PLAN WITH ROOF PLANS
- PV-2 ROOF PLAN WITH MODULES
- PV-2A STRING LAYOUT
- PV-3 ATTACHMENT DETAIL
- PV-3A GROUNDING DETAILS
- PV-4 ELECTRICAL LINE DIAGRAM
- PV-5 WIRING CALCULATIONS
- PV-6 PLACARDS
- PV-7 SOLAREDEGE OPTIMIZER CHART
- PV-8+ MANUFACTURER SPEC SHEET

GENERAL NOTES:

- INSTALL A 6.0kW SOLAR PV SYSTEM WITH (01) SOLAREDEGE SE6000H-US INVERTER, (20) SOLAREDEGE POWER OPTIMIZER P320 AND (20) LG (LG300N1C-G4) MODULES.
- THIS PROJECT SHALL COMPLY WITH THE 2016 CA BUILDING CODE, 2016 CALIFORNIA FIRE CODE (CFC), 2016 CA PLUMBING CODE, 2016 CA RESIDENTIAL CODE, 2016 CA ENERGY CODE, 2016 CA MECHANICAL CODE, 2016 CA FIRE CODE, 2016 CA ELECTRICAL CODE 2014 NEC.
- ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS IN COMPLIANCE TO UL REQUIREMENTS TO ACCOMMODATE CONDUCTORS SHOWN.
- THIS SYSTEM WILL NOT BE INTERCONNECTED UNTIL APPROVAL FROM THE LOCAL JURISDICTION AND THE UTILITY IS OBTAINED. THIS SYSTEM IS AN UTILITY INTERACTIVE SYSTEM WITH NO STORAGE BATTERIES.
- ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING THOSE THAT ARE EXPOSED TO OUTSIDE ENVIRONMENT SHALL BE WEATHERPROOF TYPE NEMA 3R AND SHALL BE LISTED BY "UL" FOR THE TYPE OF APPLICATION AND "UL" LABEL SHALL APPEAR ON ALL ELECTRICAL EQUIPMENT.
- WIRING METHOD SHALL BE EMT ABOVE GROUND MOUNTED IN CONCEALED SPACES (UNLESS APPROVED OTHERWISE) AND SCHEDULE-40 PVC FOR BELOW GROUND INSTALLATION UNLESS NOTED OTHERWISE.
- AN OSHA APPROVED LADDER PROVIDING ACCESS TO ALL PORTIONS OF THE ARRAY SHALL BE SECURED IN PRIOR TO REQUESTING INSPECTION.
- SOLAR MODULES MOUNTED ON ROOF USING ALUMINUM RACKING SYSTEM. SYSTEM WEIGHT: 3 LB/FTSQ.
- CONNECT SYSTEM TO MAIN PANEL VIA PV BREAKER. IF THE EXISTING MAIN SERVICE PANEL DOES NOT HAVE VERIFIABLE GROUNDING ELECTRODE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE.
- RUN CONDUIT THROUGH EAVE/ATTIC TO MAIN PANEL. THE SOLAR PHOTOVOLTAIC INSTALLATION SHALL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS.
- SINGLE STORY ROOF STRUCTURE: 2' X 4" RAFTER @ 24" O.C. COOL ROOF.
- THIS PROJECT HAS BEEN DESIGNED IN COMPLIANCE WITH THE CBC SECTION 1609 TO WITHSTAND A MINIMUM 110 MPH WIND LOAD.



1 AERIAL VIEW

PV-0

SCALE: NTS



2 VICINITY MAP

PV-0

SCALE: NTS



SASHA

REVISIONS

DESCRIPTION	DATE

Signature with Seal

PROJECT NAME & ADDRESS

DAVID MASTERS

4020 CALLE SONORA
ESTE, LAGUNA WOODS,
CA 92637, USA

CONTRACTOR INFORMATION

ALPHA SOLAR ELECTRIC

SHEET NAME

COVER SHEET

SHEET SIZE

ANSI B

11" X 17"

SHEET NUMBER

PV-0

● ROOF ACCESS POINT SHALL BE LOCATED IN AREAS THAT DO NOT REQUIRE THE PLACEMENT OF OF GROUND LADDERS OVER OPENINGS SUCH AS WINDOWS OR DOORS, AND LOCATED AT STRONG POINTS OF BUILDING CONSTRUCTION IN LOCATIONS WHERE THE ACCESS POINT DOES NOT CONFLICT WITH OVERHEAD OBSTRUCTIONS SUCH AS TREE LIMBS, WIRES OR SIGNS.

ROOF ACCESS POINT
ROOF #1
(20) LG (LG300N1C-G4) (300W)
MODULES

EXISTING
DRIVEWAY

CALLE SONORA ESTE

PROPERTY LINE

2'-4"

~124'-0"

PROPERTY LINE



(E) 100A MAIN
SERVICE PANEL

28'-10"

~156'-4"

~120'-4"

13'-11"

EXISTING
DRIVEWAY

1-STORY
HOUSE

~37'-0"

23'-6"

PROPERTY LINE

PV-1

1 PLOT PLAN WITH ROOF PLAN

SCALE: 1/16" = 1'

DAVID MASTERS

4020 CALLE SONORA
ESTE, LAGUNA WOODS ,
CA 92637, USA

PROJECT NAME & ADDRESS

REVISIONS

DESCRIPTION DATE

Signature with Seal

SASHIA



MODULE TYPE, DIMENSIONS & WEIGHT

NUMBER OF MODULES = 20 MODULES
MODULE TYPE = LG (LG300N1C-G4) (300W) MODULES
MODULE WEIGHT = 37.48 LBS / 17.0 KG.
MODULE DIMENSIONS = 64.57"X 39.37" = 17.65 SF
UNIT WEIGHT OF ARRAY = 2.12 PSF



ARRAY AREA				
ROOF	# OF MODULES	ARRAY AREA (Sq. Ft.)	ROOF AREA (Sq. Ft.)	ROOF AREA COVERED BY ARRAY (%)
#1	20	353	682.50	51.72

ROOF DESCRIPTION				
ROOF TYPE		COOL ROOF		
ROOF LAYER				
ROOF	ROOF TILT	AZIMUTH	RAFTER SIZE	RAFTER SPACING
#1	0°	180°	2x4	24" o.c.



SASHIA

304

REVISIONS	
DESCRIPTION	DATE

Signature with Seal

PROJECT NAME & ADDRESS

DAVID MASTERS
4020 CALLE SONORA ESTE, LAGUNA WOODS ,
CA 92637, USA

CONTRACTOR INFORMATION

SHEET NAME

ROOF PLAN &
MODULES

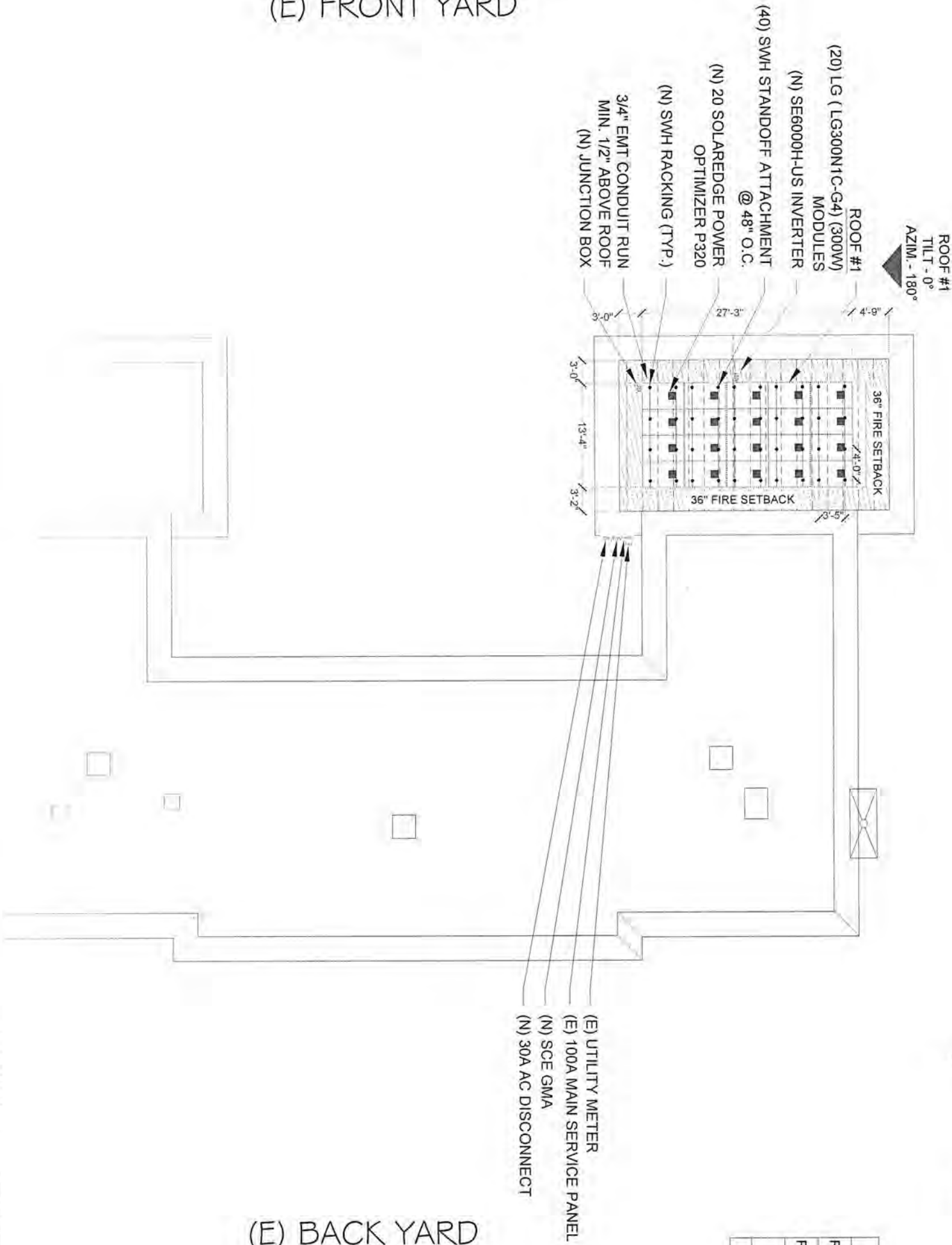
SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-2

CALLE SONORA ESTE
(E) FRONT YARD



(E) BACK YARD

LG (LG300N1C-G4)
(300W) MODULES

64.57"

39.37"

LEGEND

- JUNCTION BOX
- MAIN SERVICE PANEL
- AC DISCONNECT
- INVERTER
- VENT, ATTIC FAN (ROOF OBSTRUCTION)
- ROOF ATTACHMENT
- RAFTERS
- CONDUIT

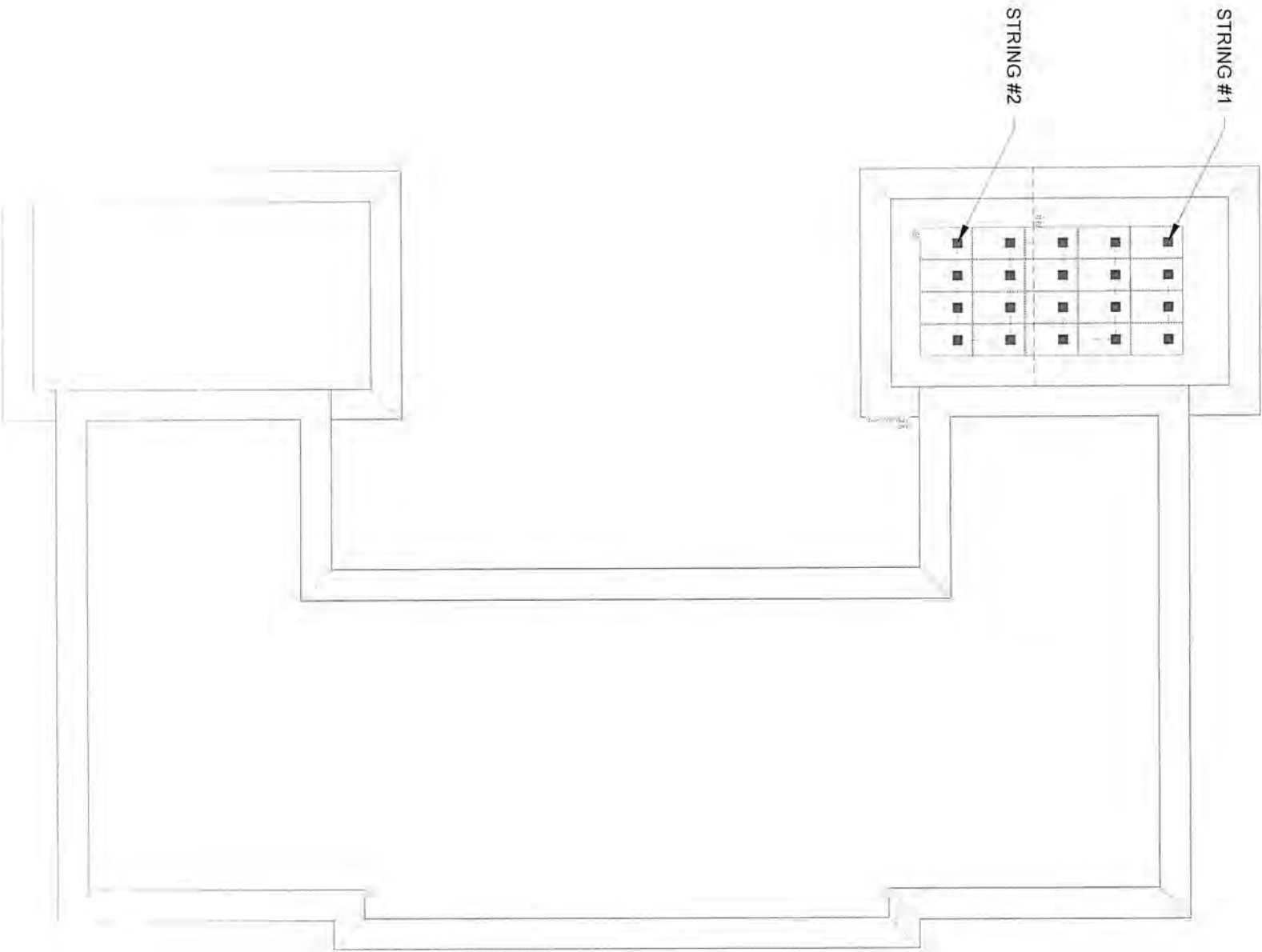
1 ROOF PLAN & MODULES

SCALE: 1/16" = 1'

PV-2

(20) LG (LG300N1C-G4) (300W) MODULES
(2) STRINGS OF 10 MODULES CONNECTED IN SERIES.

CALLE SONORA ESTE
(E) FRONT YARD



(E) BACK YARD



BILL OF MATERIALS

EQUIPMENT	QTY	DESCRIPTION
SOLAR PV MODULE	20	LG (LG300N1C-G4) (300W) MODULES
INVERTER	1	SOLAREEDGE SE6000H-US INVERTER
OPTIMIZER	20	SOLAREEDGE POWER OPTIMIZER P320
AC DISCONNECT	1	30A, 240V, NEMA 3R, UL LISTED
ATTACHMENT	40	SWH STANDOFF
RAILS	0	SWH RACKING 144"
RAILS	10	SWH RACKING 168"
RAIL SPLICE	0	SPLICE KIT
MID CLAMPS	30	MID CLAMP
END CLAMPS	20	END CLAMP
GROUNDING LUG	5	

DAVID MASTERS

4020 CALLE SONORA
ESTE, LAGUNA WOODS ,
CA 92637, USA

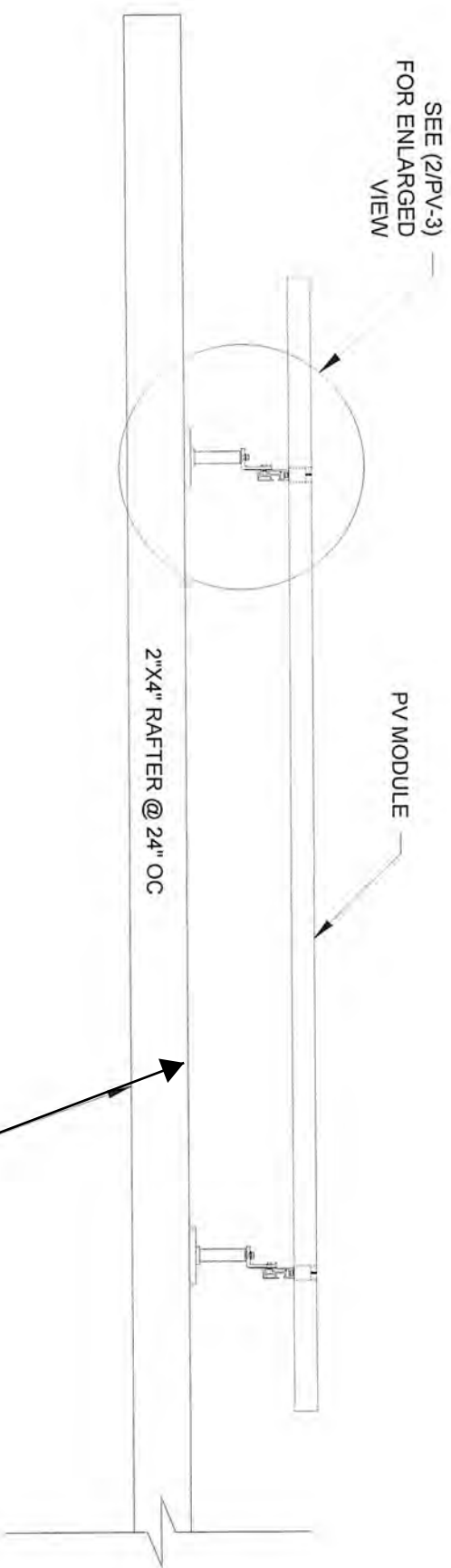
PROJECT NAME & ADDRESS

Signature with Seal

REVISIONS
DESCRIPTION DATE REV

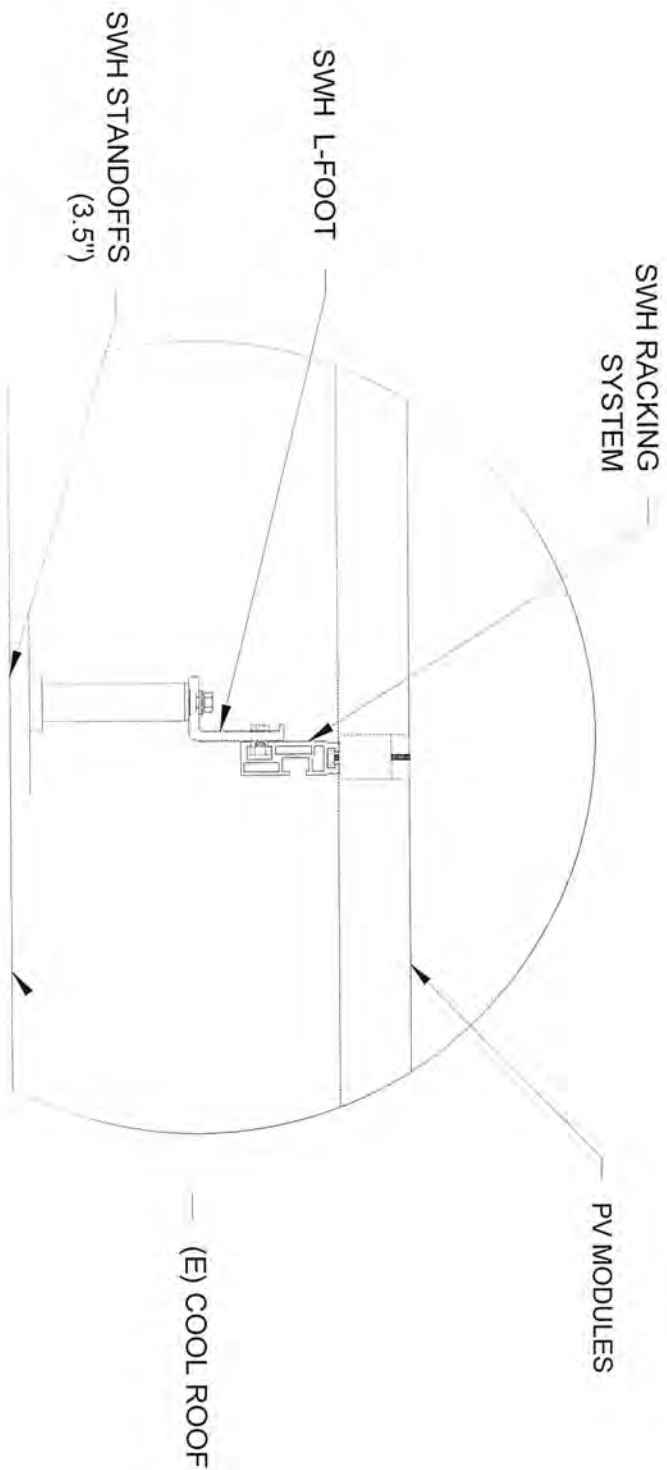
SASHIA





1 ATTACHMENT DETAIL

PV-3 SCALE: 1"=1'-0"



2 ATTACHMENT DETAIL (enlarged section view)

PV-3 SCALE: NTS



04

REVISIONS	
DESCRIPTION	DATE

Signature with Seal

PROJECT NAME & ADDRESS

DAVID MASTERS
4020 CALLE SONORA
ESTE, LAGUNA WOODS ,
CA 92637, USA

CONTRACTOR INFORMATION

ALPHA SOLAR ELECTRIC

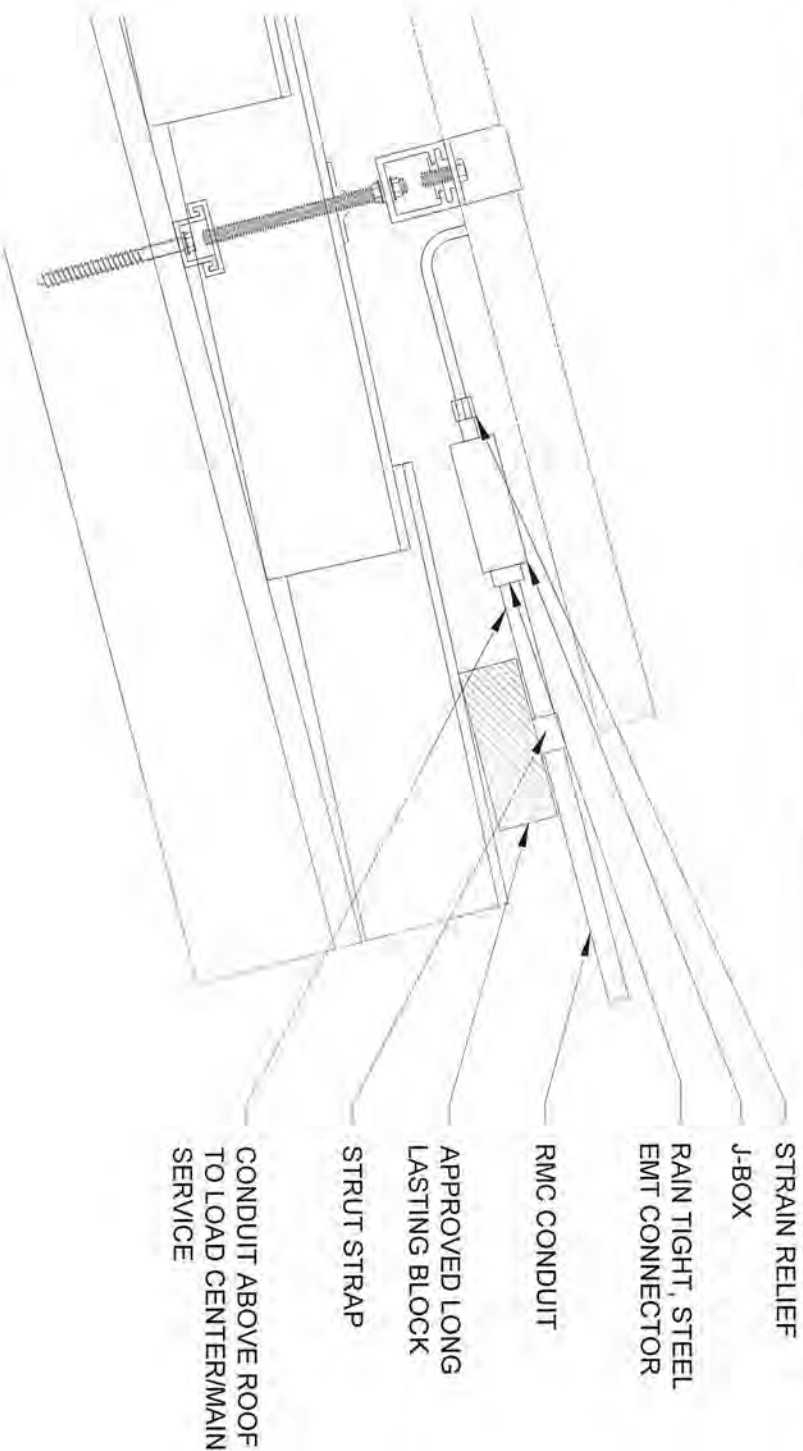
SHEET NAME
ATTACHMENT
DETAIL

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

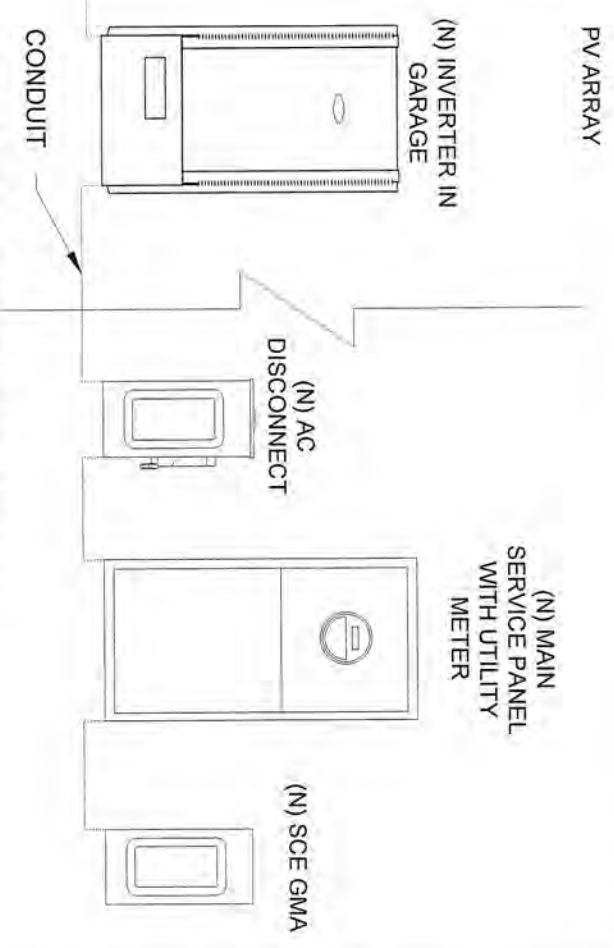
PV-3



1 CONDUIT DETAILS

PV-3A

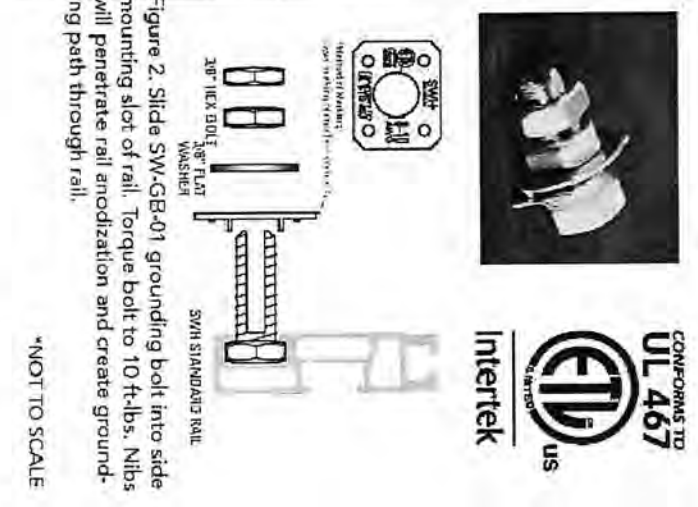
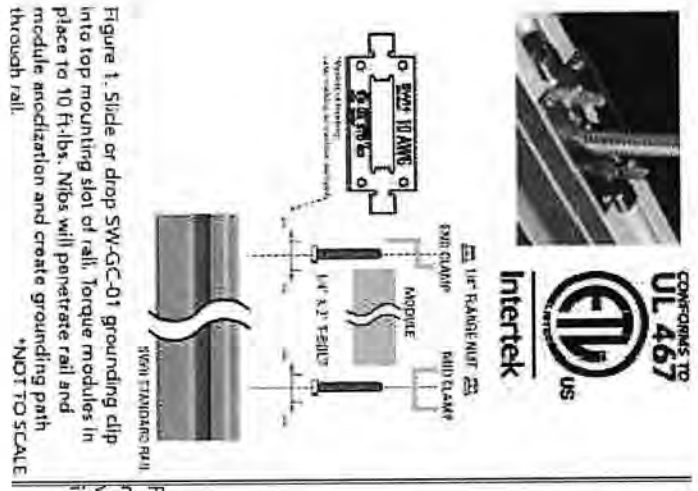
SCALE: NTS



2 ELECTRICAL EQUIPMENT ELEVATION

PV-3A

SCALE: NTS



3 SWH SIDE MOUNT GROUNDING BOLT

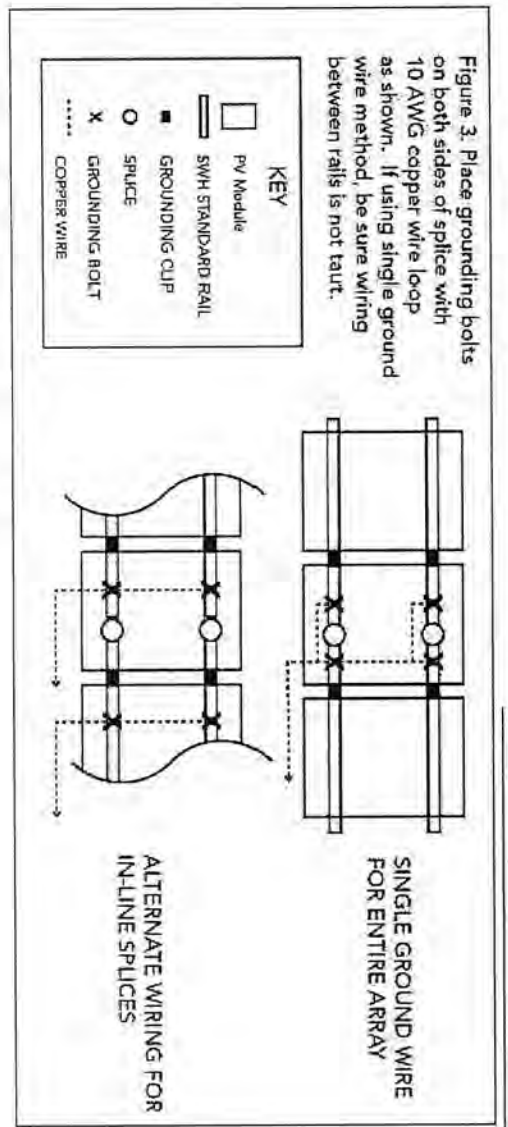
PV-3A

SCALE: NTS

4 SWH TOP MOUNT GROUNDING CLIP

PV-3A

SCALE: NTS



5 WIRING BETWEEN RAILS

PV-3A

SCALE: NTS

REVISIONS

DESCRIPTION	DATE	BY

Signature with Seal

DAVID MASTERS

4020 CALLE SONORA
ESTE, LAGUNA WOODS ,
CA 92637, USA

CONTRACTOR INFORMATION

ALPHA SOLAR ELECTRIC

SHEET NAME
GROUNDING
DETAILS

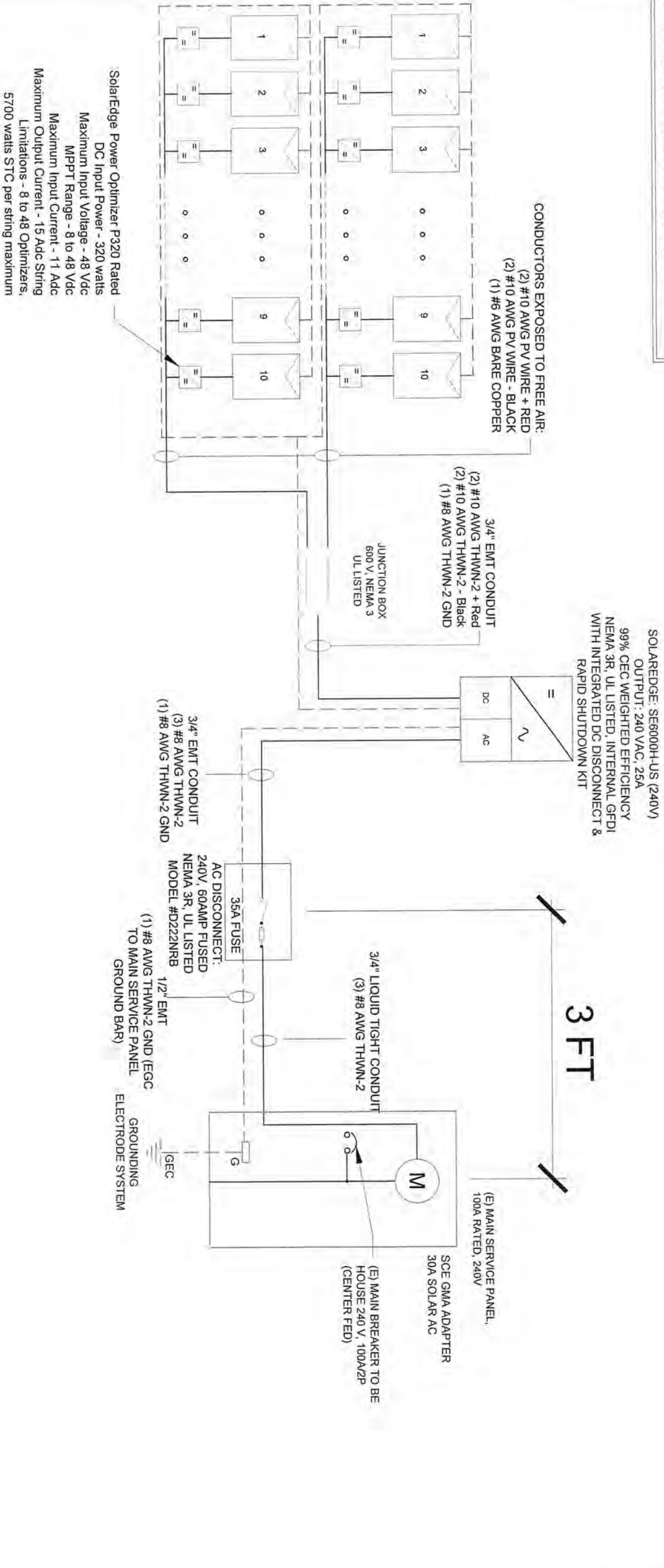
SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-3A

(20) LG (LG300N1C-G4) (300W) MODULES
(2) STRINGS OF 10 MODULES CONNECTED IN SERIES.



1 ELECTRICAL LINE DIAGRAM

SCALE: NTS

INTERCONNECTION
120% RULE - NEC 705.12(D)(2)
UTILITY FEED + SOLAR BACKFEED
100 A + 35A = 135A

SERVICE INFO

UTILITY PROVIDER: SCE
MAIN SERVICE VOLTAGE: 240V
MAIN PANEL BRAND: N/A
MAIN SERVICE PANEL: 100A
MAIN CIRCUIT BREAKER RATING: 100A
MAIN SERVICE LOCATION: NORTH WALL
SERVICE FEED SOURCE: OVERHEAD

SHEET NAME

ELECTRICAL LINE
DIAGRAM

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-4

DAVID MASTERS

4020 CALLE SONORA
ESTE, LAGUNA WOODS ,
CA 92637, USA

CONTRACTOR INFORMATION

ALPHA SOLAR ELECTRIC

PROJECT NAME & ADDRESS

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SOLAR MODULE SPECIFICATIONS	
MANUFACTURER / MODEL #	LG (LG300N1C-G4) (300W) MODULES
VMP	32.2V
IMP	9.34A
VOC	39.8V
ISC	9.90A
MODULE DIMENSION	64.57"L x 39.37"W x 1.57"D (in Inch)
MODULE TEMPERATURE COEFFICIENT OF Voc	-0.28%/°C

INVERTER SPECIFICATIONS	
MANUFACTURER / MODEL #	SOLAREGE SE6000H-US
NOMINAL AC POWER	6.0 KW
NOMINAL OUTPUT VOLTAGE	240 VAC
MAX. CONTINUOUS OUTPUT CURRENT	25A

PERCENT OF VALUES	NUMBER OF CURRENT CARRYING CONDUCTORS IN EMT
.80	4-6
.70	7-9
.50	10-20

AMBIENT TEMPERATURE SPECS	
RECORD LOW TEMP	3°
AMBIENT TEMP (HIGH TEMP 2%)	31°
CONDUIT HEIGHT	0.5"
ROOF TOP TEMP	53°
CONDUCTOR TEMPERATURE RATE	90°

ELECTRICAL NOTES

- 1.) ALL EQUIPMENT TO BE LISTED BY UL OR OTHER NRTL, AND LABELED FOR ITS APPLICATION.
- 2.) ALL CONDUCTORS SHALL BE COPPER, RATED FOR 600 V AND 90 DEGREE C WET ENVIRONMENT.
- 3.) WIRING, CONDUIT, AND RACEWAYS MOUNTED ON ROOFTOPS SHALL BE ROUTED DIRECTLY TO, AND LOCATED AS CLOSE AS POSSIBLE TO THE NEAREST RIDGE, HIP, OR VALLEY.
- 4.) WORKING CLEARANCES AROUND ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC 110.26.
- 5.) DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS. CONTRACTOR SHALL FURNISH ALL NECESSARY OUTLETS, SUPPORTS, FITTINGS AND ACCESSORIES TO FULFILL APPLICABLE CODES AND STANDARDS.
- 6.) WHERE SIZES OF JUNCTION BOXES, RACEWAYS, AND CONDUITS ARE NOT SPECIFIED, THE CONTRACTOR SHALL SIZE THEM ACCORDINGLY.
- 7.) ALL WIRE TERMINATIONS SHALL BE APPROPRIATELY LABELED AND READILY VISIBLE.
- 8.) MODULE GROUNDING CLIPS TO BE INSTALLED BETWEEN MODULE FRAME AND MODULE SUPPORT RAIL, PER THE GROUNDING CLIP MANUFACTURERS INSTRUCTION.
- 9.) MODULE SUPPORT RAIL TO BE BONDED TO CONTINUOUS COPPER G.E.C. VIA WEEB LUG OR ILSCO GBL-4DBT LAY-IN LUG.
- 10.) THE POLARITY OF THE GROUNDED CONDUCTORS IS NEGATIVE

DC CONDUCTOR AMPACITY CALCULATIONS:
ARRAY TO JUNCTION BOX:

EXPECTED WIRE TEMP (In Celsius)	31°
TEMP. CORRECTION PER TABLE (310.15)	0.96
NO. OF CURRENT CARRYING CONDUCTORS	4
CONDUIT FILL CORRECTION PER NEC 310.15(B)(2)(a)	0.8
CIRCUIT CONDUCTOR SIZE	10 AWG
CIRCUIT CONDUCTOR AMPACITY	40A

REQUIRED CIRCUIT CONDUCTOR AMPACITY PER NEC 690.8(A&B)	15.47A
1.25 X 1.25 X Isc	
DERATED AMPACITY OF CIRCUIT CONDUCTOR PER NEC TABLE 310.15	
TEMP. CORRECTION PER TABLE (310.15) X CONDUIT FILL CORRECTION PER NEC 310.15(B)(2)(a) X CIRCUIT CONDUCTOR AMPACITY	30.72A
Result should be greater than (15.47A) otherwise less the entry for circuit conductor size and ampacity	

DC CONDUCTOR AMPACITY CALCULATIONS:
FROM JUNCTION BOX TO INVERTER:

AMBIENT TEMPERATURE ADJUSTMENT FOR EXPOSED CONDUIT PER NEC 310.15(B)(2)(c)	+22°
EXPECTED WIRE TEMP (In Celsius)	31°+22° = 53°
TEMP. CORRECTION PER TABLE (310.15)	0.76
NO. OF CURRENT CARRYING CONDUCTORS	4
CONDUIT FILL CORRECTION PER NEC 310.15(B)(2)(a)	0.80
CIRCUIT CONDUCTOR SIZE	10 AWG
CIRCUIT CONDUCTOR AMPACITY	40A

REQUIRED CIRCUIT CONDUCTOR AMPACITY PER NEC 690.8(A&B)	15.47A
1.25 X 1.25 X Isc	
DERATED AMPACITY OF CIRCUIT CONDUCTOR PER NEC TABLE 310.15	
TEMP. CORRECTION PER TABLE (310.15) X CONDUIT FILL CORRECTION PER NEC 310.15(B)(2)(a) X CIRCUIT CONDUCTOR AMPACITY	24.32A
Result should be greater than (15.47A) otherwise less the entry for circuit conductor size and ampacity	

AC CONDUCTOR AMPACITY CALCULATIONS:
INVERTER TO MSP

No. OF INVERTER	1
EXPECTED WIRE TEMP (In Celsius)	31°
TEMP. CORRECTION PER TABLE (310.15)	0.96
NO. OF CURRENT CARRYING CONDUCTORS	3
CONDUIT FILL CORRECTION PER NEC 310.15(B)(2)(a)	1.00
#1CIRCUIT CONDUCTOR SIZE	10 AWG
CIRCUIT CONDUCTOR AMPACITY	40A

INVERTER OUTPUT CONDUCTORS

REQUIRED CIRCUIT CONDUCTOR AMPACITY PER NEC 690.8(B)	31.25A
1.25 X MAX INVERTER OUTPUT CURRENT	
DERATED AMPACITY OF CIRCUIT CONDUCTOR PER NEC TABLE 310.15	
TEMP. CORRECTION PER TABLE (310.15) X CONDUIT FILL CORRECTION PER NEC 310.15(B)(2)(a) X CIRCUIT CONDUCTOR AMPACITY	38.4A
Result should be greater than (31.25A) otherwise less the entry for circuit conductor size and ampacity	



SASHA

REVISIONS	
DESCRIPTION	DATE

Signature with Seal

PROJECT NAME & ADDRESS

DAVID MASTERS
4020 CALLE SONORA
ESTE, LAGUNA WOODS ,
CA 92637, USA

CONTRACTOR INFORMATION

ALPHA SOLAR ELECTRIC



SHEET NAME
WIRING
CALCULATIONS
SHEET SIZE

ANSI B
11" X 17"
SHEET NUMBER
PV-5

⚠ **WARNING**

ELECTRIC SHOCK HAZARD
IF A GROUND FAULT IS INDICATED
NORMALLY GROUNDED CONDUCTORS
MAY BE UNGROUNDED AND ENERGIZED

LABEL LOCATION:

DC DISCONNECT, INVERTER
(PER CODE: CEC 690.35(F))

[To be used when inverter is ungrounded]

⚠ **WARNING**

ELECTRIC SHOCK HAZARD
THE DC CONDUCTORS OF THIS
PHOTOVOLTAIC SYSTEM ARE UNGROUNDED
AND MAY BE ENERGIZED

LABEL LOCATION:

DC DISCONNECT, INVERTER
(PER CODE: CEC 690.35(F))

[To be used when inverter is ungrounded]

⚠ **WARNING**

ELECTRIC 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

LABEL LOCATION:

AC DISCONNECT, POINT OF INTERCONNECTION
(PER CODE: CEC 690.17(E))

⚠ **WARNING**

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

LABEL LOCATION:

AC DISCONNECT, POINT OF INTERCONNECTION
PER CODE: CEC 690.17(E), CB

WARNING - Electric Shock Hazard

No user serviceable parts inside
Contact authorized service provider for assistance

LABEL LOCATION:

INVERTER, JUNCTION BOXES (ROOF), AC DISCONNECT
(PER CODE: CEC690.13.G.3 & CEC 690.13.G.4)

**WARNING: PHOTOVOLTAIC
POWER SOURCE**

LABEL LOCATION:

CONDUIT, COMBINER BOX
(PER CODE: CEC690.31(G)(3)(4) & CEC 690.13(G)(4)

ADHESIVE FASTENED SIGNS:

- THE LABEL SHALL BE SUITABLE FOR THE ENVIRONMENT WHERE IT IS INSTALLED.
- WHERE REQUIRED ELSEWHERE IN THIS CODE, ALL FIELD APPLIED LABELS, WARNINGS, AND MARKINGS SHOULD COMPLY WITH ANSI Z595.4 (NEC 110.21(B) FIELD MARKING).
- ADHESIVE FASTENED SIGNS MAY BE ACCEPTABLE IF PROPERLY ADHERED. VINYL SIGNS SHALL BE WEATHER RESISTANT [IFC 605.11.1.3]

PHOTOVOLTAIC SYSTEM AC DISCONNECT

RATED AC OPERATING CURRENT 35 AMPS
AC NOMINAL OPERATING VOLTAGE 240 VOLTS

LABEL LOCATION:

AC DISCONNECT, POINT OF INTERCONNECTION
(PER CODE: CEC690.54)

WARNING

**INVERTER OUTPUT CONNECTION DO NOT
RELOCATE THIS OVERCURRENT DEVICE**

LABEL LOCATION:

POINT OF INTERCONNECTION
(PER CODE: CEC 705.12(D)(7))

[Not required if panelboard is rated not less than sum of ampere ratings of all overcurrent devices supplying it]

CAUTION: SOLAR CIRCUIT

LABEL LOCATION:

MARKINGS PLACED ON ALL INTERIOR AND EXTERIOR DC CONDUIT, RACEWAYS, ENCLOSURES,
AND CABLE ASSEMBLIES AT LEAST EVERY 10 FT, AT TURNS AND ABOVE/BELOW PENETRATIONS
AND ALL COMBINER/JUNCTION BOXES. (PER CODE: IFC605.11.1.4)

SOLAR DISCONNECT

LABEL LOCATION:

DISCONNECT, POINT OF INTERCONNECTION
(PER CODE: CEC690.13(B))

⚠ **WARNING DUAL POWER SOURCE
SECOND SOURCE IS PHOTOVOLTAIC SYSTEM**

LABEL LOCATION:

POINT OF INTERCONNECTION
(PER CODE: CEC 705.12(D)(4))

**CAUTION: SOLAR ELECTRIC
SYSTEM CONNECTED**

LABEL LOCATION:

WEATHER RESISTANT MATERIAL, DURABLE ADHESIVE,
UL969 AS STANDARD TO WEATHER RATING (UL LISTING
OF MARKINGS NOT REQUIRED), MIN 3/8" LETTER HEIGHT
ARIAL OR SIMILAR FONT NON-BOLD, PLACED WITHIN
THE MAIN SERVICE DISCONNECT, PLACED ON THE
OUTSIDE OF THE COVER WHEN DISCONNECT IS
OPERABLE WITH SERVICE PANEL CLOSED.
(PER CODE: CEC690.15, 690.13(B))

INVERTER #1

RATED MAXIMUM POWER- POINT CURRENT (Imp)	18.68	A
RATED MAXIMUM POWER- POINT VOLTAGE (Vmp)	380	V
MAXIMUM SYSTEM VOLTAGE (VOC)	480	V
MAXIMUM CIRCUIT CURRENT (Isc)	30	A

LABEL LOCATION:

DC DISCONNECT, INVERTER
(PER CODE: CEC690.53)

**PHOTOVOLTAIC SYSTEM EQUIPPED
WITH RAPID SHUTDOWN DISCONNECT**

LABEL LOCATION:

SERVICE DISCONNECTING
(PER CODE: NEC 690.56(C))

CAUTION

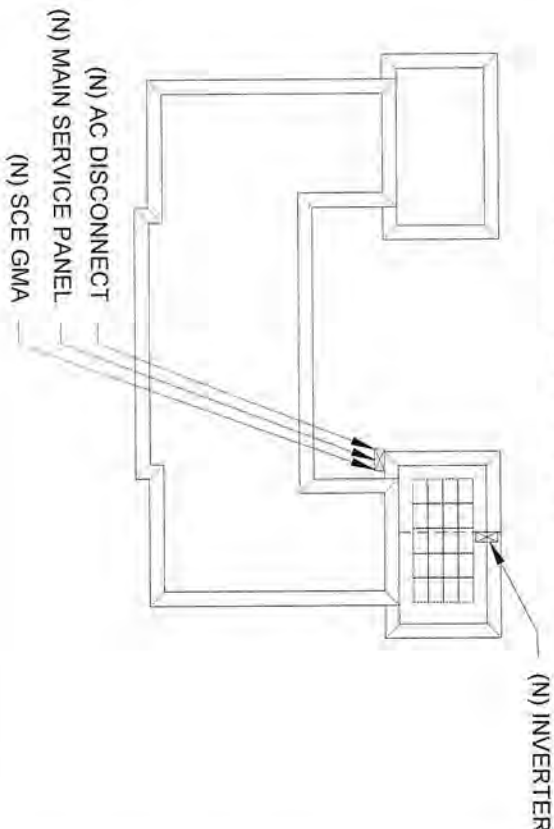
POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE
FOLLOWING SOURCES WITH DISCONNECTS LOCATED AS SHOWN

AT: ☒

MAIN SERVICE
AC DISCONNECT
INVERTER



CALLE SONORA ESTE



SASHA

304
300

REVISIONS

DESCRIPTION DATE

Signature with Seal

PROJECT NAME & ADDRESS

DAVID MASTERS

4020 CALLE SONORA
ESTE, LAGUNA WOODS,
CA 92637, USA

CONTRACTOR INFORMATION

ALPHA SOLAR ELECTRIC

SHEET NAME

PLACARDS

SHEET SIZE

ANSI B

11" X 17"

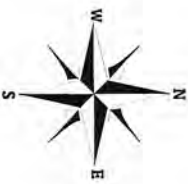
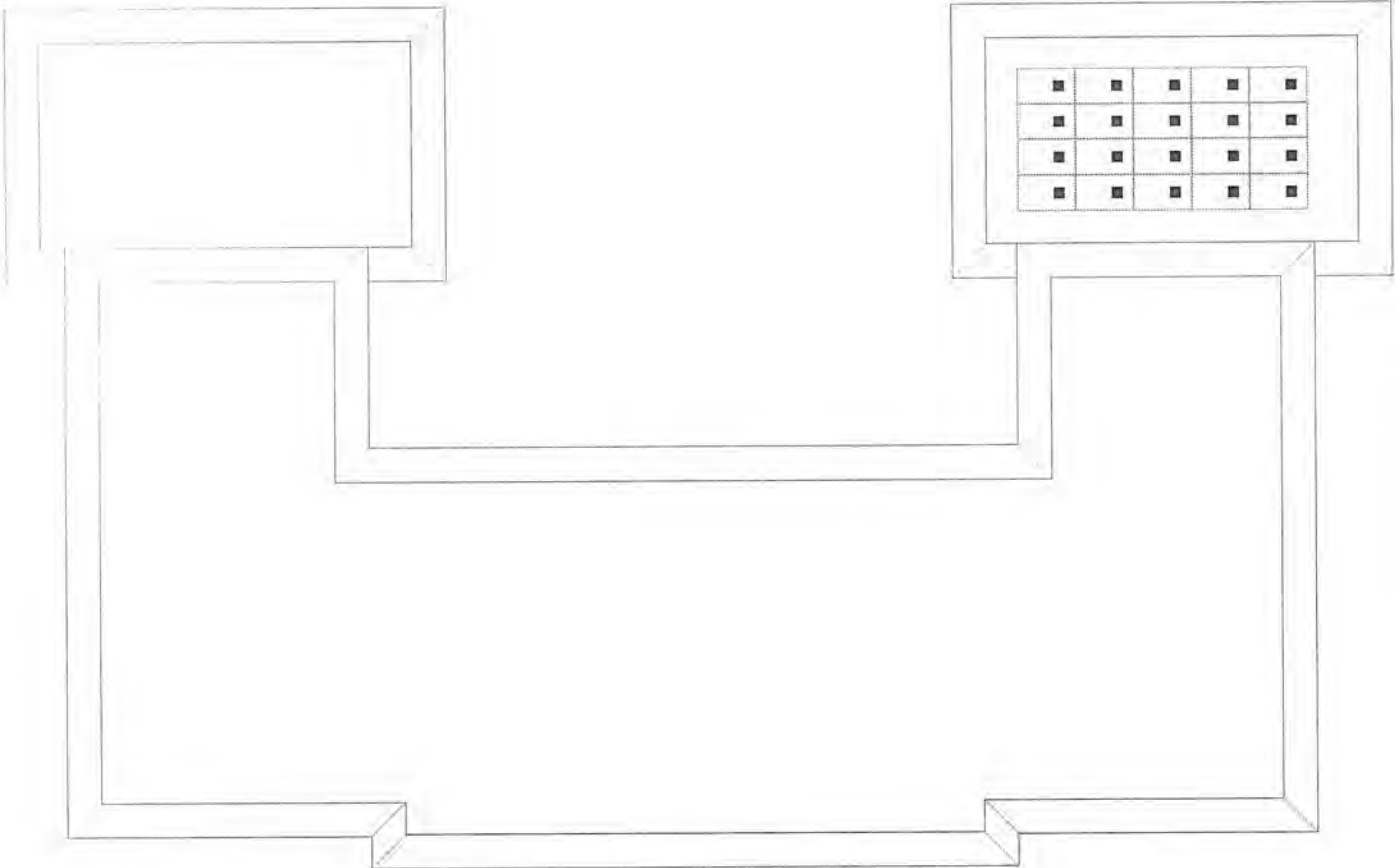
SHEET NUMBER

PV-6

1-10 11

SOLAREEDGE OPTIMIZER CHART

CALLE SONORA ESTE



REVISIONS

DESCRIPTION	DATE

Signature with Seal

PROJECT NAME & ADDRESS

DAVID MASTERS
4020 CALLE SONORA
ESTE, LAGUNA WOODS ,
CA 92637, USA

CONTRACTOR INFORMATION

ALPHA SOLAR ELECTRIC

SHEET NAME
SOLAREEDGE
OPTIMIZER CHART

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-7

SolarEdge

SolarEdge Single Phase Inverters for North America

SE3000H-US / SE3800H-US / SE5000H-US / **SE6000H-US** / SE7600H-US

INVERTERS



- Optimized installation with HD-Wave technology**
- Specifically designed to work with power optimizers
 - Record-breaking efficiency
 - Integrated arc fault protection for NEC 2011 690.11 and integrated rapid shutdown for NEC 2014 690.12
 - Extremely small
 - High reliability without any electrolytic capacitors
 - Built-in module-level monitoring
 - Outdoor and indoor installation
 - Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)



USA-CANADA-GERMANY-ITALY-FRANCE-JAPAN-CHINA-AUSTRALIA-THE NETHERLANDS-UK-ISRAEL-TURKEY-SOUTH AFRICA-BULGARIA www.solaredge.us

SolarEdge

Single Phase Inverters for North America

SE3000H-US / SE3800H-US / SE5000H-US / **SE6000H-US** / SE7600H-US

	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	
OUTPUT						
Rated AC Power Output	3000	3800	5000	6000	7600	VA
Max. AC Power Output	3000	3800	5000	6000	7600	VA
AC Output Voltage Min.-Nom.-Max. (183 - 208 - 229)	✓	✓	✓	✓	✓	Vac
AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264)						Vac
AC Frequency (Nominal)			59.3 - 60 - 60.5 ⁽ⁱ⁾			Hz
Maximum Continuous Output Current 208V			24			A
Maximum Continuous Output Current 240V	12.5	16	21	25	32	A
GFDI Threshold			1			A
Utility Monitoring, Islanding Protection, Country Configurable Thresholds			Yes			
INPUT						
Maximum DC Power	4650	5900	7750	9300	11800	W
Transformer-less, Ungrounded	Yes		Yes			
Maximum Input Voltage			480			Vdc
Nominal DC Input Voltage			380		400	Vdc
Maximum Input Current 208V	-		15.5			Adc
Maximum Input Current 240V	8.5	10.5	13.5	16.5	20	Adc
Max. Input Short Circuit Current			45			Adc
Reverse-Polarity Protection			Yes			
Ground-Fault Isolation Detection			600mA Sensitivity			%
Maximum Inverter Efficiency	99		99.2			%
CEC Weighted Efficiency			99			%
Nighttime Power Consumption			< 2.5			W
SELF-SUSTAINING POWER OUTLET (OPTIONAL)						
Nominal Output Voltage			120			V
Maximum Output Power			1500 ⁽ⁱⁱ⁾			W
External Outlet with GFDI			Yes			
ADDITIONAL FEATURES						
Supported Communication Interfaces		RS485, Ethernet, ZigBee (optional), Cellular (optional)				
Revenue Grade Data, ANSI C12.20		Optional ⁽ⁱⁱⁱ⁾				
Rapid Shutdown - NEC 2014 690.12		Automatic Rapid Shutdown upon AC Grid Disconnect				
STANDARD COMPLIANCE						
Safety		UL1741, UL1699B, CSA C22.2, Canadian AFCL according to T.I.L. M-07				
Grid Connection Standards		IEEE1547, Rule 21, Rule14 (M), FCC Part 15 Class B				
Emissions						
INSTALLATION SPECIFICATIONS						
AC Output Conduit Size / AWG Range		0.75-1" Conduit / 14-6 AWG				
DC Input Conduit Size / # of Strings / AWG Range		0.75-1" Conduit / 1-2 strings / 14-6 AWG				
Dimensions with Safety Switch (HxWxD)		17.7 x 14.6 x 6.8 / 450 x 370 x 174				in / mm
Weight with Safety Switch		25.3 / 11.5				lb / kg
Noise		< 25				dba
Cooling		Natural Convection				
Operating Temperature Range		-13 to +140 / -25 to +60 ^(iv) (-40 F / -40 C, optional)				F / C
Protection Rating		NEMA 3R (Inverter with Safety Switch)				

(i) For other regional settings please contact SolarEdge support
(ii) Depends on PV availability
(iii) Revenue grade inverter P/N: SE6000H-US0000NKC2
(iv) For other regional settings please contact SolarEdge support
Bv-401 Version P/N: SE6000H-US0000R1M14

SUNSPEC **RoHS**

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REVISIONS	
DESCRIPTION	DATE

Signature with Seal

PROJECT NAME & ADDRESS

DAVID MASTERS
4020 CALLE SONORA
ESTE, LAGUNA WOODS,
CA 92637, USA

CONTRACTOR INFORMATION

ALPHA SOLAR ELECTRIC

SHEET NAME
EQUIPMENT
SPECIFICATION

SHEET SIZE

ANSI B
11" X 17"
SHEET NUMBER

PV-9



MIZER

TIMIZER

OPTIMIZER



POWER OPTIMIZER

POWER OPTIMIZER

- ## POWER OPTIMIZER

POWER OPTIMIZER

POWER OPTIMIZER

SASHA

19

Page

30

REVISIONS	
DESCRIPTION	DATE

Signature with Seal

Agenda Item #8

DAVID MASTER
4020 CALLE SONO
ESTE, LAGUNA WOOD
CA 92637, USA

CONTRACTOR INFORMATION
ALPHA SOLAR ELECTRICITY

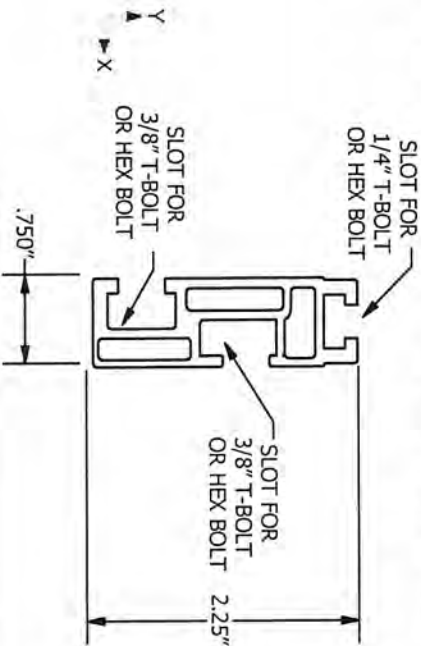
ANSI B
11" X 17"

PV-10

Agenda Item #8 Page 19 of 37

SWH Solar Mount Rail

MEG-PN: MR-SW-SR-10.5, MR-SW-SR-12, MR-SW-SR-14, MR-SW-SR-14B, MR-SW-SR-17



- Rail material: 6063-T5 extruded aluminum alloy

- Finish: Clear or black anodized

CONFORMS TO UL SUB 2703



Intertek
4009330

Properties	Units	Solar Mount
Beam Height	in	2.250
Approximate Weight	plf	0.700
Total Cross Sectional Area	in ²	0.588
Area Moment of Inertia X-Axis	in ⁴	0.299 ¹
Area Moment of Inertia Y-Axis	in ⁴	0.038 ¹
Tensile Strength	MPa	190.249 ¹
Yield Stregh	MPa	165.732 ¹
Elongation (G.L.=25mm)	%	17.2
Hardness (HR15T)		71

¹updated 6/12/2012

Typical Composition

Material	% Si	% Fe	% Cu	% Mn	% Mg	% Zn	% Ni	% Cr	% Pb	% Sn	% Ti	% Al
6063	0.3972	0.2679	0.0469	0.0666	0.4936	0.0436	0.0056	0.0205	0.0010	0.0044	0.0188	98.6

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SASHA

REVISIONS	
DESCRIPTION	DATE

Signature with Seal

PROJECT NAME & ADDRESS

DAVID MASTERS
4020 CALLE SONORA
ESTE, LAGUNA WOODS ,
CA 92637, USA

CONTRACTOR INFORMATION

ALPHA SOLAR ELECTRIC



SHEET NAME

EQUIPMENT
SPECIFICATION

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-11

SWH Racking System Data Sheet Version 12.10.v2

SWH Solar Mount Flashed L-feet Kit

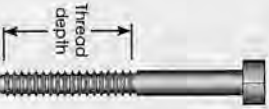
MFG-PN: MR-SW-FL-1210H,
MR-SW-FL-1210HB

- Raised L-feet material: 6005-T5 extruded aluminum alloy
 - Flashing material: Coated steel flashing (silver/black)
 - Flashing thickness: 0.5 mm/1 mm (uncoated/coated)
 - L-feet material: Clear or black anodized
 - Bolt & nut material: 304 stainless steel
 - Raised L-feet weight: .372 lbs (not including hardware)
 - Flashing weight: 1.04 lbs (not including hardware)
 - Attach 5/16" x 5" lag bolt through raised L-feet and flashing to the rafter below roof. Use stud finder tool and drill a pilot hole before anchoring
- CONFORMS TO UL SUB 2703



Lag pull-out (withdrawal) capacities (lbs) in typical roof lumber (ASD)

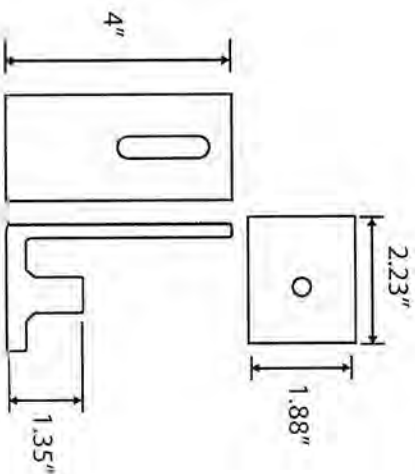
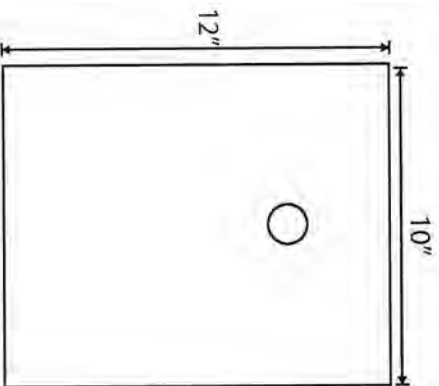
	Specific gravity	5/8" lag screw* specifications per inch thread depth
Douglas Fir, Larch	0.50	266
Douglas Fir, South	.46	235
Engelmann Spruce, Lodgepole Pine ¹	.46	235
Hem, Fir, Redwood (close grain)	.43	212
Hem, Fir (North)	.46	235
Southern Pine	.55	307
Spruce, Pine, Fir	.42	205
Spruce, Pine, Fir ²	.50	266



Sources: American Wood Council, NDS 2005, Table 11.2a, 11.3.2A.

- Notes:
- (1) Thread must be embedded in the side grain of a rafter or other structural member integral with building structure.
 - (2) Lag bolts must be located in the middle third of the structural member.
 - (3) These values are not valid for wet service.
 - (4) This table does not include shear capacities. If necessary, contact a local engineer to specify lag bolt size with regard to shear forces.
 - (5) Install lag bolts with head and washer flush to surface (no gap). Do not over-torque.
 - (6) Withdrawal design values for lag screw connections shall be multiplied by applicable adjustment factors if necessary. See Table 10.3.1 in the American Wood Council NDS for Wood Construction.

*Use flat washers with lag screws. 1



SWH Racking System Data Sheet Version 12.10.v2

SWH TOP MOUNT GROUNDING CLIP

MFG-PN: EA-SW-GC-01

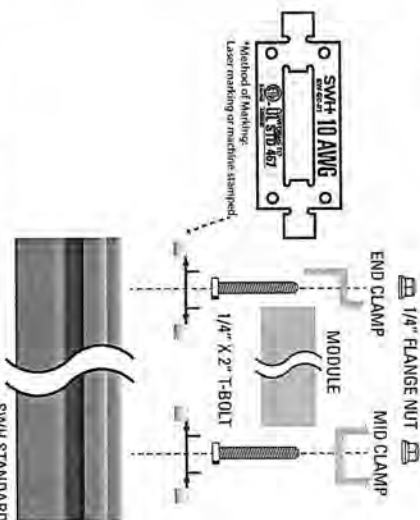


Figure 1. Slide or drop SW-GC-01 grounding clip into top mounting slot of rail. Torque modules in place to 10 ft-lbs. Nibs will penetrate rail and module anodization and create grounding path through rail.

*NOT TO SCALE

SWH SIDE MOUNT GROUNDING BOLT

MFG-PN: EA-SW-GB-01

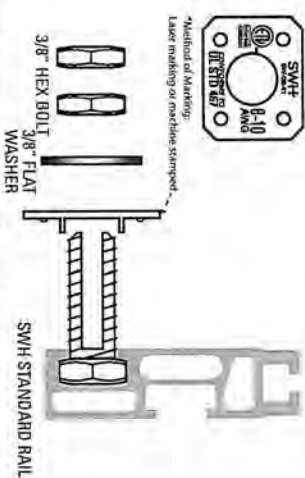
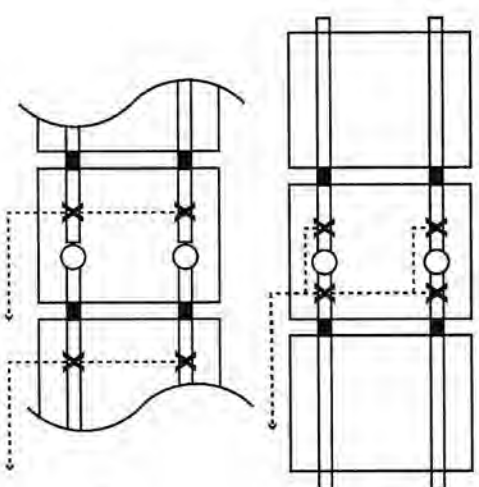
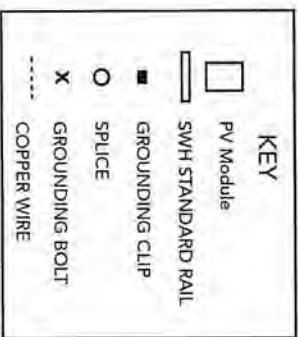


Figure 2. Slide SW-GB-01 grounding bolt into side mounting slot of rail. Torque bolt to 10 ft-lbs. Nibs will penetrate rail anodization and create grounding path through rail.

*NOT TO SCALE

Figure 3. Place grounding bolts on both sides of splice with 10 AWG copper wire loop as shown. If using single ground wire method, be sure wiring between rails is not taut.



SINGLE GROUND WIRE FOR ENTIRE ARRAY

ALTERNATE WIRING FOR IN-LINE SPLICES



REVISIONS

DESCRIPTION	DATE

Signature with Seal

PROJECT NAME & ADDRESS

DAVID MASTERS
4020 CALLE SONORA
ESTE, LAGUNA WOODS,
CA 92637, USA

CONTRACTOR INFORMATION

ALPHA SOLAR ELECTRIC

SHEET NAME
EQUIPMENT
SPECIFICATION

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-12

SWH Standoff Kit

Part No. MR-SW-HP-35S, MR-SW-HP-35SB
MR-SW-HP-5S, MR-SW-HP-5SB

SWH Standoff Post Only

Part No. MR-SW-HP-P-35, MR-SW-HP-P-35B
MR-SW-HP-P-5, MR-SW-HP-P-5B
MR-SW-HP-P-8, MR-SW-HP-P-8B



3.5", 5", 8" Standoff Materials:

- 6061-T6 extruded aluminum alloy
- Mill finish or coated black

Hardware Materials:

- 304 stainless steel
- Tighten 3/8" hex nut to L-bracket to 20 ft-lbs torque

3.5" & 5" Standoff Kit Includes:

- 3.5", 5"x1"OD Solid Aluminum Standoff
- 5/16" x 5" Stainless Hanger Bolt
- 3/8"x 1" SS Hex Bolt
- 3/8" SS Flat Washer
- 1.5" x 5/16" x 1/8" SS Heavy Flat Washer
- 1.5" x 5/16" x 1/8" Rubber Gasket

3.5", 5", 8" Standoff Post Only:

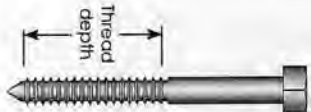
- Mounts to SWH Dual Anchor Flange Base for Standoff.
Part No: MR-SW-HP-B554M

*Illustration not to scale

Lag pull-out (withdrawal) capacities (lbs) in typical roof lumber (ASD)

	³ / ₁₆ " lag screw* specifications	
	Specific gravity	per inch thread depth
Douglas Fir, Larch	0.50	266
Douglas Fir, South	.46	235
Engelmann Spruce, Lodgepole Pine ¹	.46	235
Hem, Fir, Redwood (close grain)	.43	212
Hem, Fir (North)	.46	235
Southern Pine	.55	307
Spruce, Pine, Fir	.42	205
Spruce, Pine, Fir ²	.50	266

¹ MSR 1650 f & higher
² E of 2 million psi and higher grades of MSR and MEL



Notes:

- (1) Thread must be embedded in the side grain of a rafter or other structural member integral with building structure.
- (2) Lag bolts must be located in the middle third of the structural member.
- (3) These values are not valid for wet service.
- (4) This table does not include shear capacities. If necessary, contact a local engineer to specify lag bolt size with regard to shear forces.
- (5) Install lag bolts with head and washer flush to surface (no gap). Do not over-torque.
- (6) Withdrawal design values for lag screw connections shall be multiplied by applicable adjustment factors if necessary. See Table 10.3.1 in the American Wood Council NDS for Wood Construction.

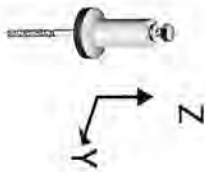
*Use flat washers with lag screws.

Sources: American Wood Council, NDS 2005, Table 11.2a, 11.3.2A.

Axial Load Capacity

Note: Loads are given for standoff only. Check load limits for lag screw or other attachment methods

Part	Average Ultimate Load (lbs) Y±	Average Ultimate Load (lbs) Z±	Standoff Dimension OD x H	Assembled Weight
MR-SW-HP-35S	893	8601	1" x 3.5"	0.444 lbs
MR-SW-HP-5S	928	9007	1 x 5"	0.562 lbs



SASHA

REVISIONS

DESCRIPTION DATE REV

Signature with Seal

PROJECT NAME & ADDRESS

DAVID MASTERS
4020 CALLE SONORA
ESTE, LAGUNA WOODS,
CA 92637, USA

CONTRACTOR INFORMATION

ALPHA SOLAR ELECTRIC

SHEET NAME

EQUIPMENT
SPECIFICATION

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-13

Intertek

Test Verification of Conformity

In the basis of the tests undertaken, the sample(s) of the below product have been found to comply with the requirements of the referenced specifications at the time the tests were carried out.

Applicant Name & Address:	
Photovoltaic Mount	
Product Description:	Fire Class Resistance Rating: - Flush Mount (Symmetrical). Class A Fire Rated for Steep Slope applications when using Type 1 listed photovoltaic modules. Tested with a 5" gap (distance between the bottom the module frame and the roof covering), per the standard this system can be installed at any gap allowed by the manufacturers installation instructions. No perimeter guarding is required.
Ratings & Principle Characteristics:	SWH – Standoff PV Racking
Models:	Solar Warehouse
Brand Name:	UL 2703 (Section 15.2 and 15.3) Standard for Safety Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels, First Edition dated Jan. 28, 2015 Referencing UL1703 Third Edition dated Nov. 18, 2014, (Section 31.2) Standard for Safety for Flat-Plate Photovoltaic Modules and Panels.
Relevant Standards:	
Verification Issuing Office:	
Date of Tests:	3/18/2015 to 03/20/2015
Test Report Number(s):	101988205MID-001.
This verification is part of the full test report(s) and should be read in conjunction with them. This report does not automatically imply product certification. This Test Verification of Conformity document may be used as a Letter of Compliance (LOC), as the above has met the relevant fire requirements of the standard.	
Completed by:	Reviewed by:
Title:	Title:
Signature:	Signature:
Date:	Date:

This Verification is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to permit copying or distribution of this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test/inspection results referenced in this Verification are relevant only to the sample tested/inspected. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

GFT-OP-11a (24-MAR-2014)

Intertek

Test Verification of Conformity

In the basis of the tests undertaken, the sample(s) of the below product have been found to comply with the requirements of the referenced specifications at the time the tests were carried out.

Applicant Name & Address:	
Photovoltaic Roof Mount System	
Product Description:	Fire Class Resistance Rating: - Class A for Steep Slope applications when using Type 2, listed photovoltaic modules and a Fire Rated roof. Testing was conducted with a 5" gap between the module and the roof surface.
Ratings & Principle Characteristics:	Solar Warehouse PV mounting System
Models:	Solar Warehouse
Brand Name:	UL Subject 2703 (Section 15.2 and 15.3) Outline of Investigation for Rack Mounting Systems and Clamping Devices for Flat-Plate Photovoltaic Modules and Panels, First Edition, January 28, 2015 Referencing UL1703 Third Edition(Section 31.2) Standard for Safety for Flat-Plate Photovoltaic Modules and Panels, Oct. 2015.
Relevant Standards:	Intertek Testing Services NA, Inc. 8431 Murphy Drive Middleton, WI 53562 USA
Verification Issuing Office:	
Date of Tests:	10/28/2015-10/29/2015
Test Report Number(s):	102270334MID-001
This verification is part of the full test report(s) and should be read in conjunction with them. This report does not automatically imply product certification.	
Completed by:	Reviewed by:
Title:	Title:
Signature:	Signature:
Date:	Date:

This Verification is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to permit copying or distribution of this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test/inspection results referenced in this Verification are relevant only to the sample tested/inspected. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

GFT-OP-11a (24-MAR-2014)



REVISIONS	
DESCRIPTION	DATE

Signature with Seal

PROJECT NAME & ADDRESS

DAVID MASTERS
4020 CALLE SONORA
ESTE, LAGUNA WOODS
CA 92637, USA

CONTRACTOR INFORMATION

ALPHA SOLAR ELECTRIC



SHEET NAME

EQUIPMENT
SPECIFICATION

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-14



Laguna Woods Village

MANOR # 4020-N☐ ULWM☒ TLHM

Variance Request Form

SA 21302484

Model: <u>Casa Milano</u>	Plan:	Date: <u>9-5-2018</u>
Member Name: <u>David Masters</u>	Signature: <u>David Masters</u>	
Phone: [REDACTED]	E-mail: [REDACTED]	
Contractor Name/Co: <u>Base</u> <u>SuperGreen Solutions</u>	Phone: [REDACTED]	E-mail: [REDACTED]
Owner Mailing Address: <u>4020 Calle Sonora Este, Unit N</u> <u>Laguna Woods</u> (to be used for official correspondence)		

Description of Proposed Variance Request ONLY:

Solar PV system 6KwDC 20 panels on top of the garage roof

Dimensions of Proposed Variance Alterations ONLY:

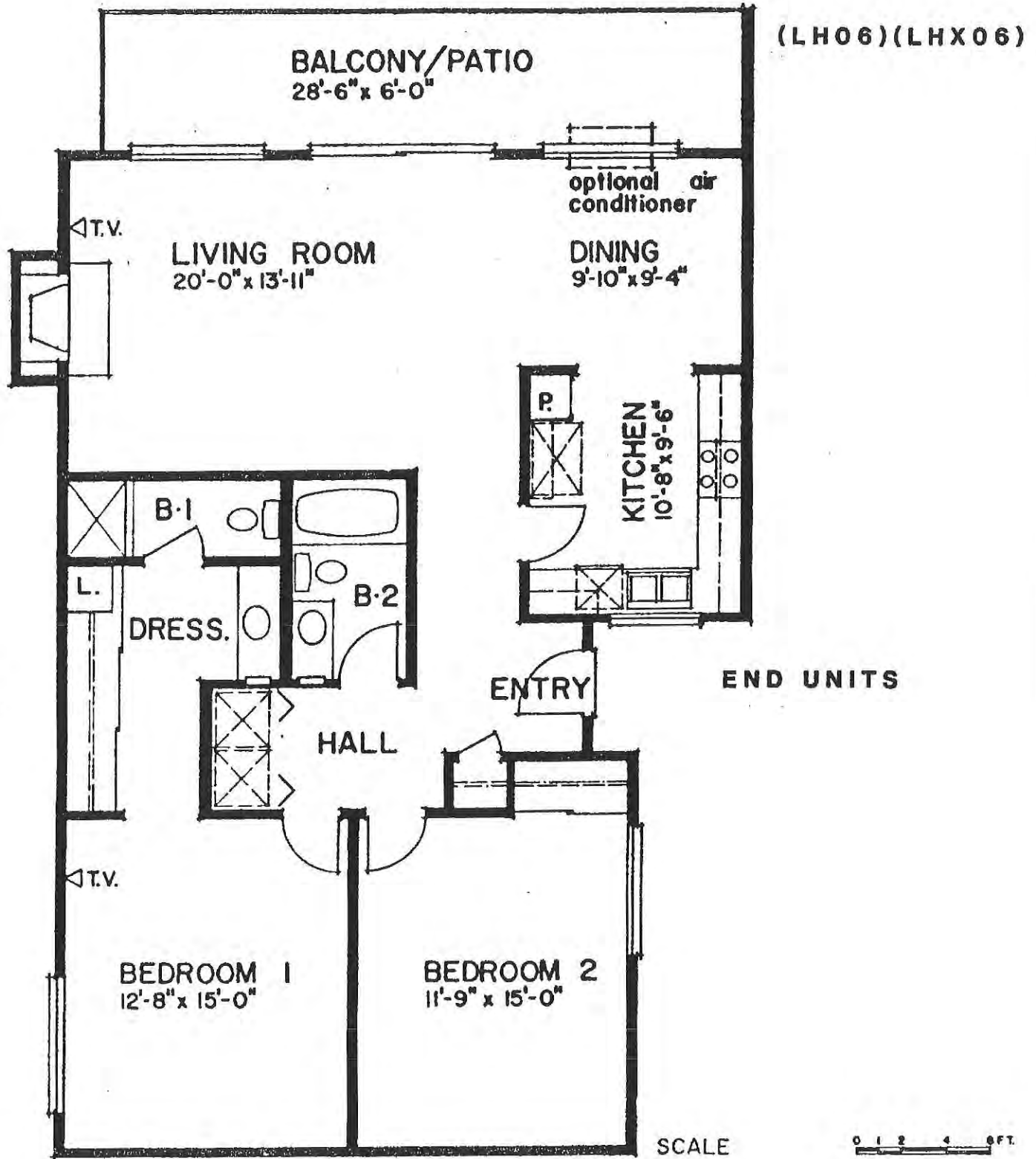
FOR OFFICE USE ONLY

RECEIVED BY: [Signature] DATE RECEIVED: 9/27/18 Check# 1664 BY: SuperGreen Solutions

Alteration Variance Request	Complete Submittal Cut Off Date: <u>10/25/18</u>
Check Items Received:	Meetings Scheduled:
<input type="checkbox"/> Drawing of Existing Floor Plan	Third AC&S Committee (TACSC): <u>11/26/18</u>
<input type="checkbox"/> Drawing of Proposed Variance	United M&C Committee: _____
<input type="checkbox"/> Dimensions of Proposed Variance	Board Meeting: <u>12/18/18</u>
<input type="checkbox"/> Before and After Pictures	<input type="checkbox"/> Denied <input type="checkbox"/> Approved
<input type="checkbox"/> Other: _____	<input type="checkbox"/> Tabled <input type="checkbox"/> Other _____

v.1.18

CATALINA, CASA MILANO, LA QUINTA,
VILLA LUGANO





Solar Guidelines: Based on the Rescinded Alteration Standard 45 - Solar Panels, Two-Story Buildings with Flat Roofs

**ADOPTED OCTOBER 2014, RESOLUTION 03-14-108
REVISED JANUARY 2016, RESOLUTION 03-16-09
RESCINDED JUNE 2018, RESOLUTION 03-18-85**

1.0 GENERAL REQUIREMENTS

See Standard Section 1: General Requirements

2.0 APPLICATIONS

- 2.1** In this section, “Solar Panel” refers to roof mounted panels that use solar energy to generate electricity using photo-voltaic cells (Solar Electric System).
- 2.2** This section refers to two story dwellings with shared flat roof space. The system shall be designed so the panel array does not encroach outside of the area allocated on the roof for each owner of a manor. Refer to Pages 6, 7, 8, 9 and 10 for roof allocation on the flat roofs of 6-, 8-, and 12-unit buildings. The designated areas will be of a first come first serve basis.
- 2.4** Detailed, site-specific plans, including for all electrical lines for the solar panel installation, including penetrations, shall be submitted to the Manor Alterations Department for approval.
- 2.5** Detailed plans of the installation of roof jacks should be submitted to the Manor Alterations Department for approval, and installation of roof jacks, including hot mopping and flashing, is required to be completed during the original installation.
- 2.6** For all installations, all tie-ins must be performed by the Mutual’s roofing contractor at the Member’s expense.

- 2.7** Electric lines must be set on blocking above the surface to facilitate re-roofing.
- 2.8** Structural calculations for the existing roof structure, signed and wet-stamped by a California-licensed structural engineer are required to ensure the solar panel system does not compromise the existing roof structure and that the roof is adequate to accept attachments and to support all applied loadings, per the California Building Code and any other applicable laws or ordinances.
- 2.9** The mounting system must have a current Engineering Certification that certifies the system will be structurally adequate and satisfy building codes when installed per the instructions.
- 2.10** The solar panel array must be located a minimum of 3 feet from the edge of the roof; and a minimum of 3 feet shall be maintained between rows of solar panels, and between any architectural features such as, but not limited to skylights, mechanical equipment, and vent pipes in order to enable proper access for maintenance.
- 2.11** The solar panel array cannot be installed over any existing Mutual component or Member alteration.
- 2.12** Flat roof mounting shall be set with the highest point flush with the top of the parapet wall so as to be hidden from the ground or surrounding properties.
- 2.13** Lag screws must have adequate pullout strength and shear capacities.
- 2.14** The waterproof integrity of the roof, including the selection and use of appropriate flashing and sealers, must be maintained.
- 2.15** Solar Electric Panels, and their associated electrical components, must be UL listed, or comply with equivalent international standards.
- 2.16** The use of solar micro-inverter or power optimizer technology is required due to the potential number of separate systems that could be installed on one building.
- 2.17** A solar panel system may only serve a single Manor.
- 2.18** Leasing of Solar Panels is permitted only under the following conditions:

- a. Only pre-paid leases are permitted, and Member must provide the Mutual a copy of the pre-paid lease contract together with proof of payment before any work on the construction or installation of the solar panel system begins; and
- b. The pre-paid lease contract must be assignable by the Member.

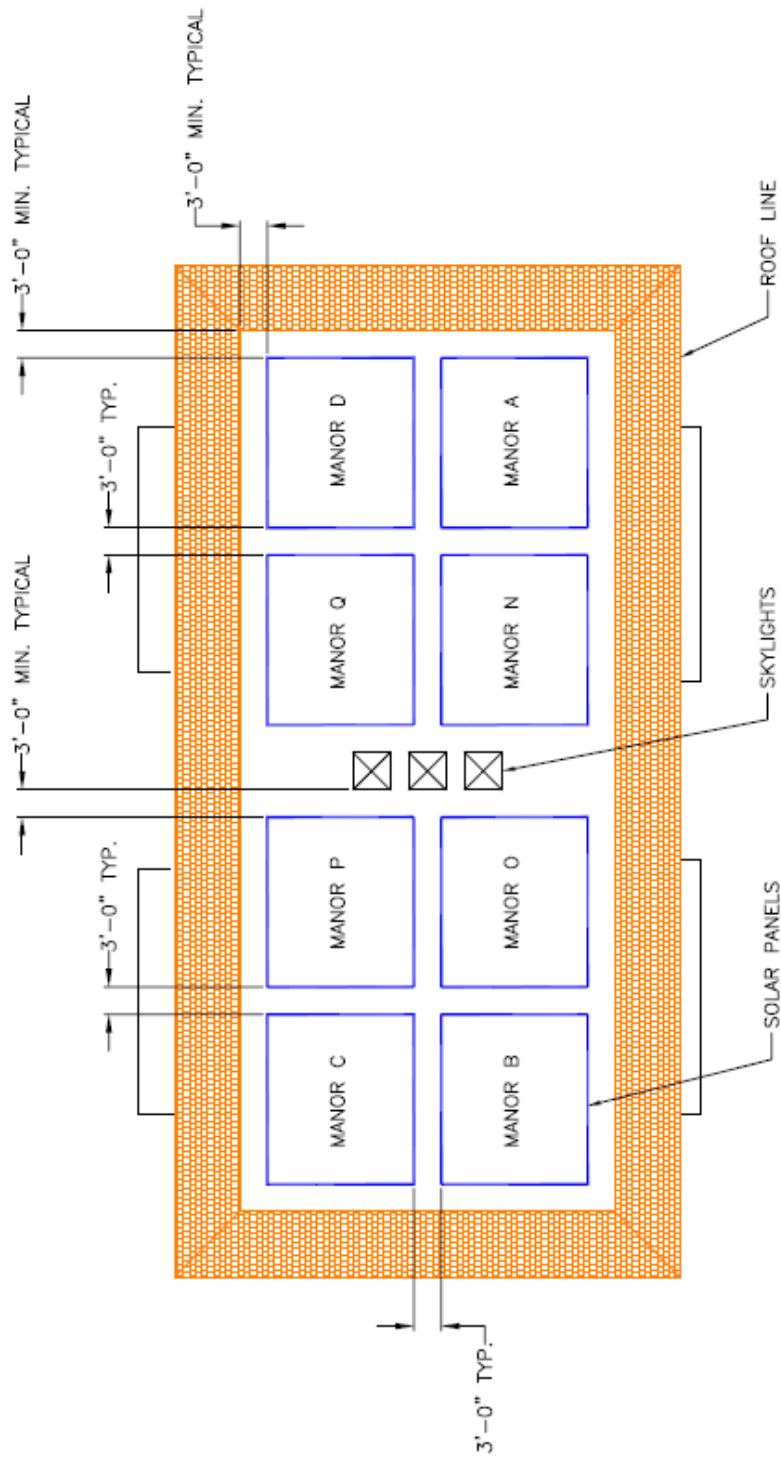
2.19 Panels for water solar heating systems are not permitted.

3.0 OBLIGATIONS

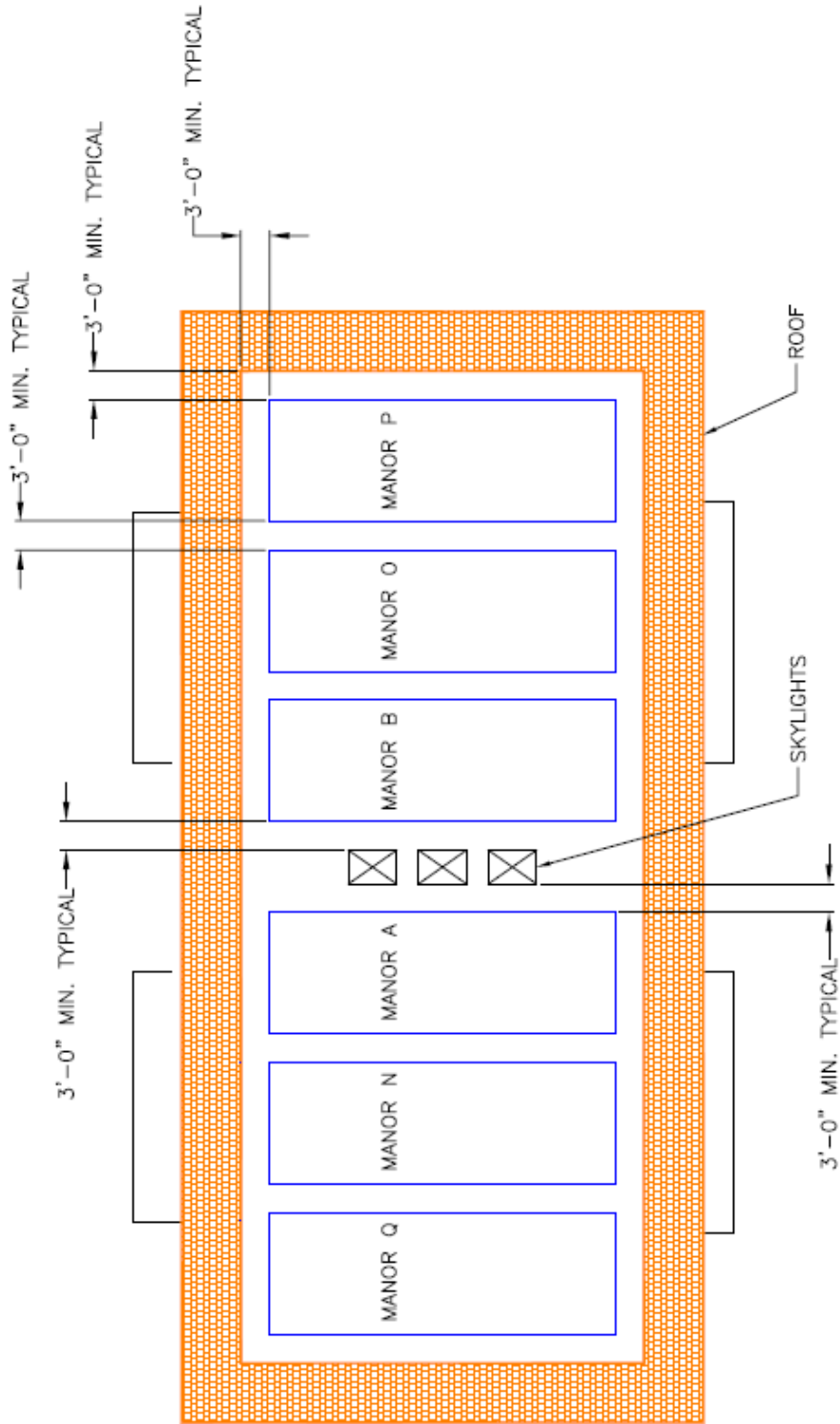
- 3.1** The Mutual Member must sign and submit to Third Laguna Hills Mutual, c/o VMS, Inc, Community Services, the "Recordable Common Area Agreement" for the subject solar panel installation utilizing Common Area.
- 3.2** Member accepts responsibility and agrees to pay for repairs to common areas, including but not limited to roofing, framing, wiring and drywall caused, in whole or in part, by Member's solar panels or their installation, operation, maintenance or removal, and Member accepts all responsibility for damage to Member's Manor or other Manors or to personal property caused or contributed to by the installation, operation, maintenance or removal of the solar panels.
- 3.3** The Member is responsible for, and will bear all costs associated with removing, altering, covering or reinstalling the alteration as may be necessary or appropriate to allow the Mutual to conduct maintenance or repairs of common area. If the Mutual gives a minimum of thirty (30) days advance written notice of the need to remove, alter, cover or replace the solar panel and the Member does not accomplish this within five calendar days before the removal, alteration, or covering is necessary, then the Mutual will accomplish the removal, alteration or covering at the Member's cost, which will be billed as a Chargeable Service to the Member.
- 3.4** The Member is responsible for, and will bear all costs associated with, clean-up or repair of Mutual owned or controlled property made necessary by or resulting from the alteration.
- 3.5** All costs associated with roof replacement above and beyond the typical cost for roof replacement due to the solar panel installation shall be borne by the Member(s).
- 3.6** The roof area for possible solar panel installation is allocated to Manors within a given building as in the attached diagrams. It is

Member's responsibility to ascertain and adapt to any roof interference by vents or other roof installations already in place.

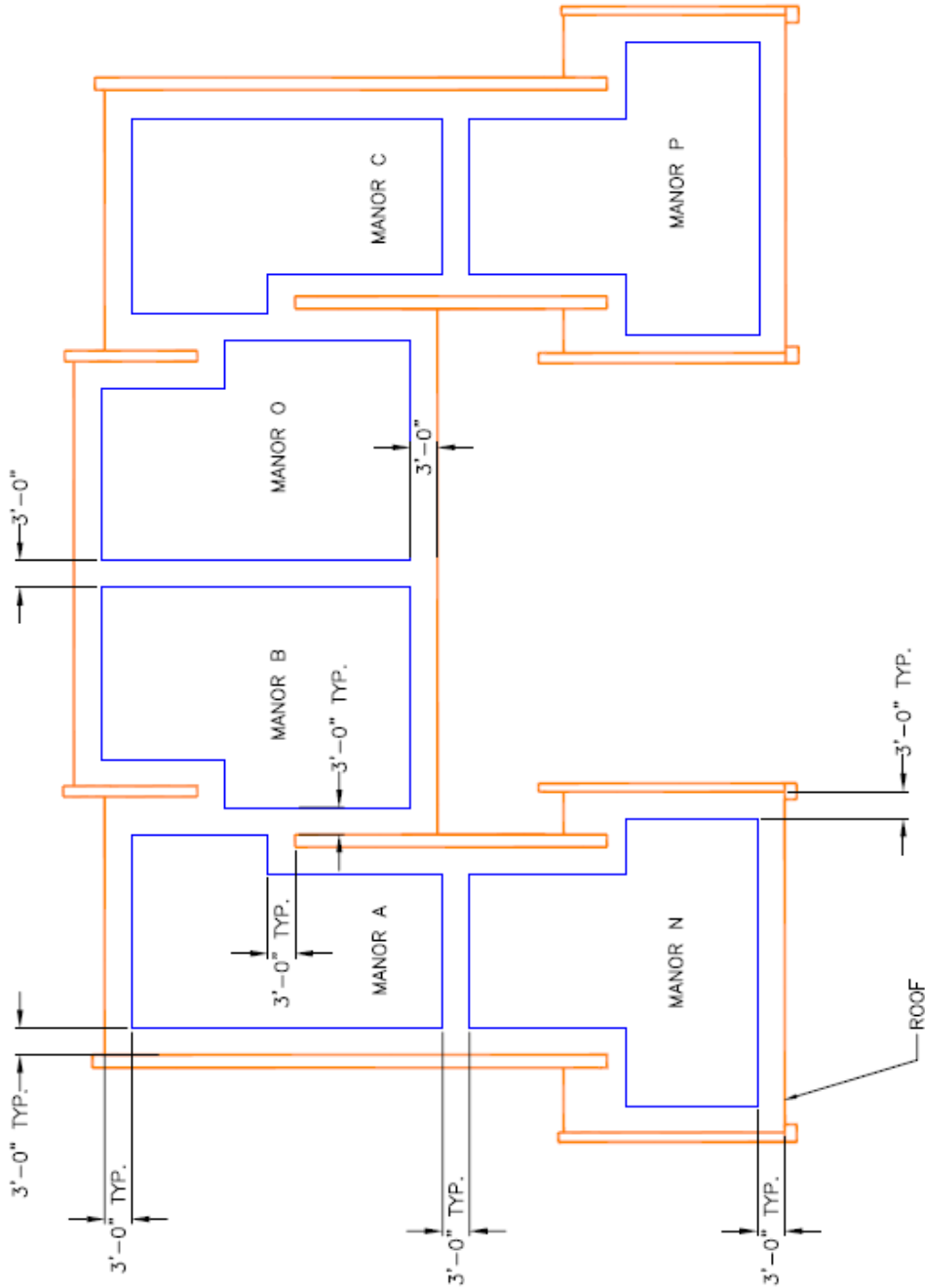
- 3.7** Upon sale of Member's Manor, all obligations herein shall apply to all subsequent owners of the Manor.
- 3.8** If Member discontinues use of the solar panels, Member will remove panels, all associated parts, connections and wiring associated with the solar panels after giving notice to the Mutual through the Permit and Inspections office.
- 3.9** Regardless of the roof type, the restoration of the roof must be performed by the Mutual's roofing contractor at the Member's expense.
- 3.10** Member must present to the Mutual a vendor/installer agreement that requires vendor to hold harmless and indemnify the Mutual for any and all claims, damages, costs and expenses, including attorney fees related to or arising from the installation, use, maintenance, repair or removal of the solar panel system.



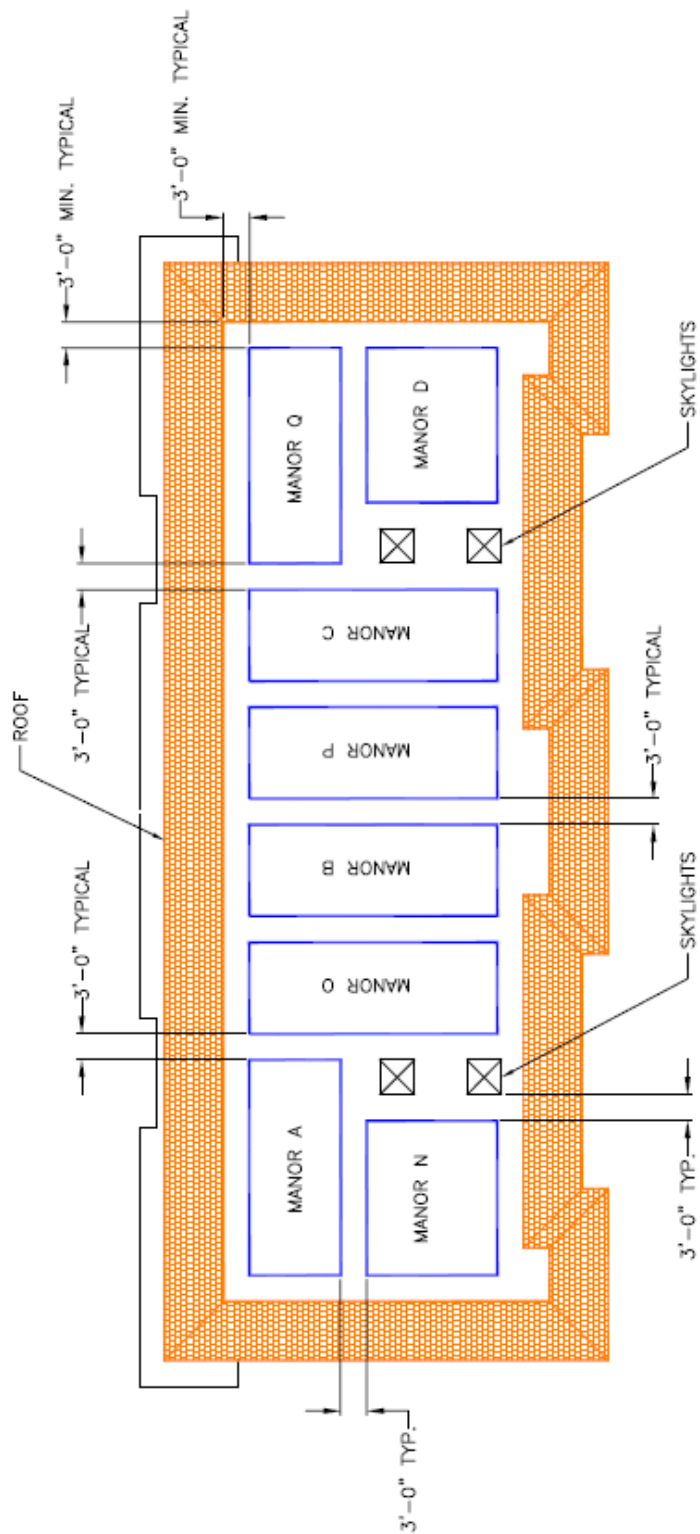
SOLAR PANEL ROOF DIVISIONS
CASA CONTENTA (KK08)
8 UNIT BUILDING



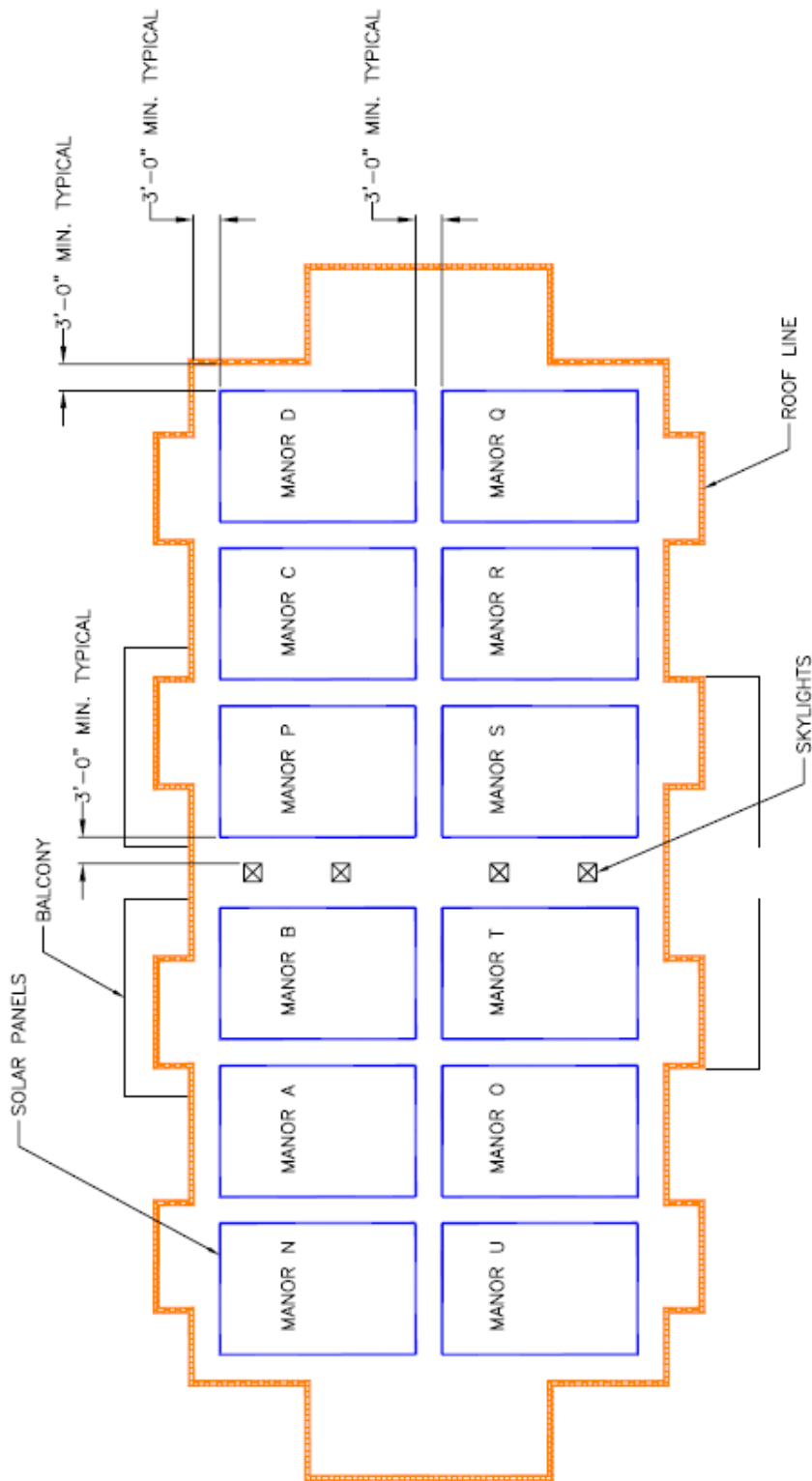
SOLAR PANEL ROOF DIVISIONS
 CASA LINDA /CASA VISTA (II-06)
 6 UNIT BUILDING



SOLAR PANEL ROOF DIVISIONS – THIRD
 CASA MILANO/CATALINA/LA QUINTA/VILLA LUGANO
 (LHX06) (LH06)
 6 UNIT BUILDING

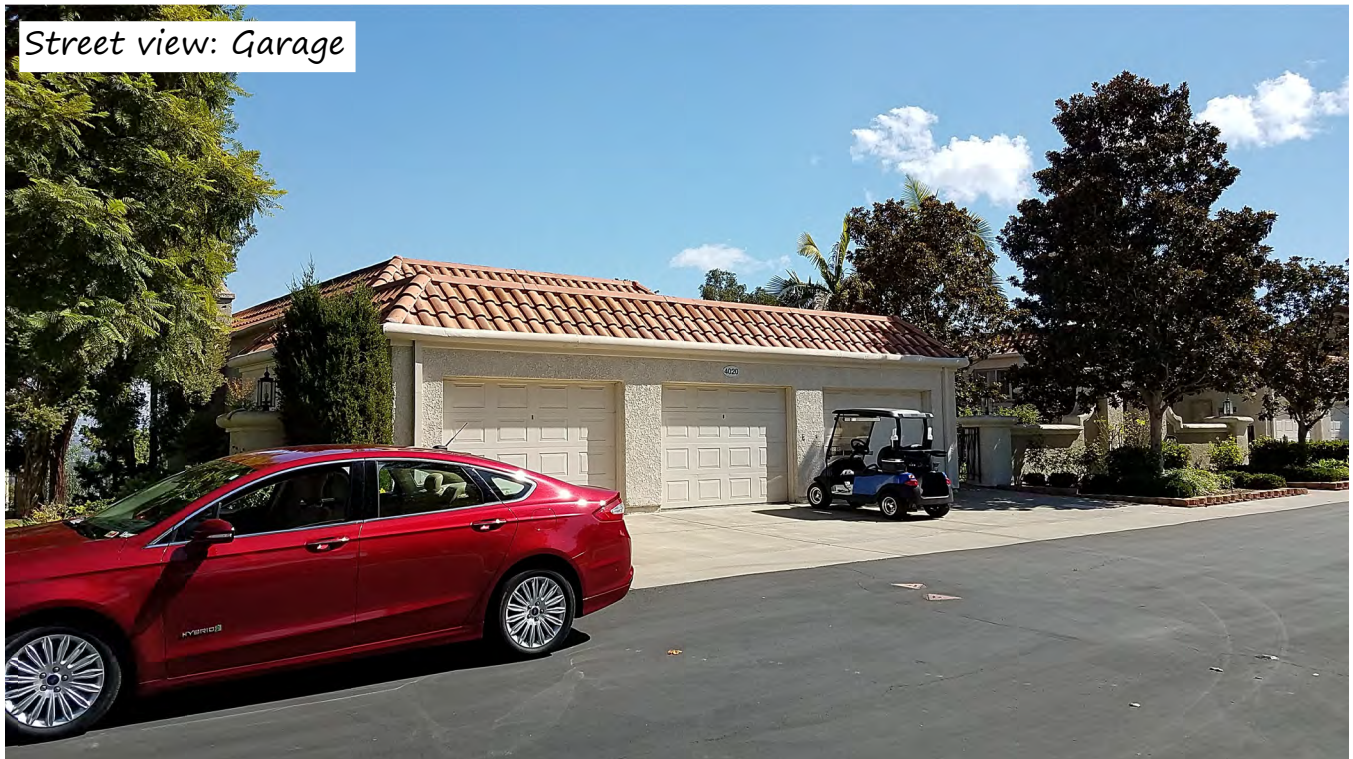


SOLAR PANEL ROOF DIVISIONS
 CASTILLA / LA BRISA (HH08)
 8 UNIT BUILDING

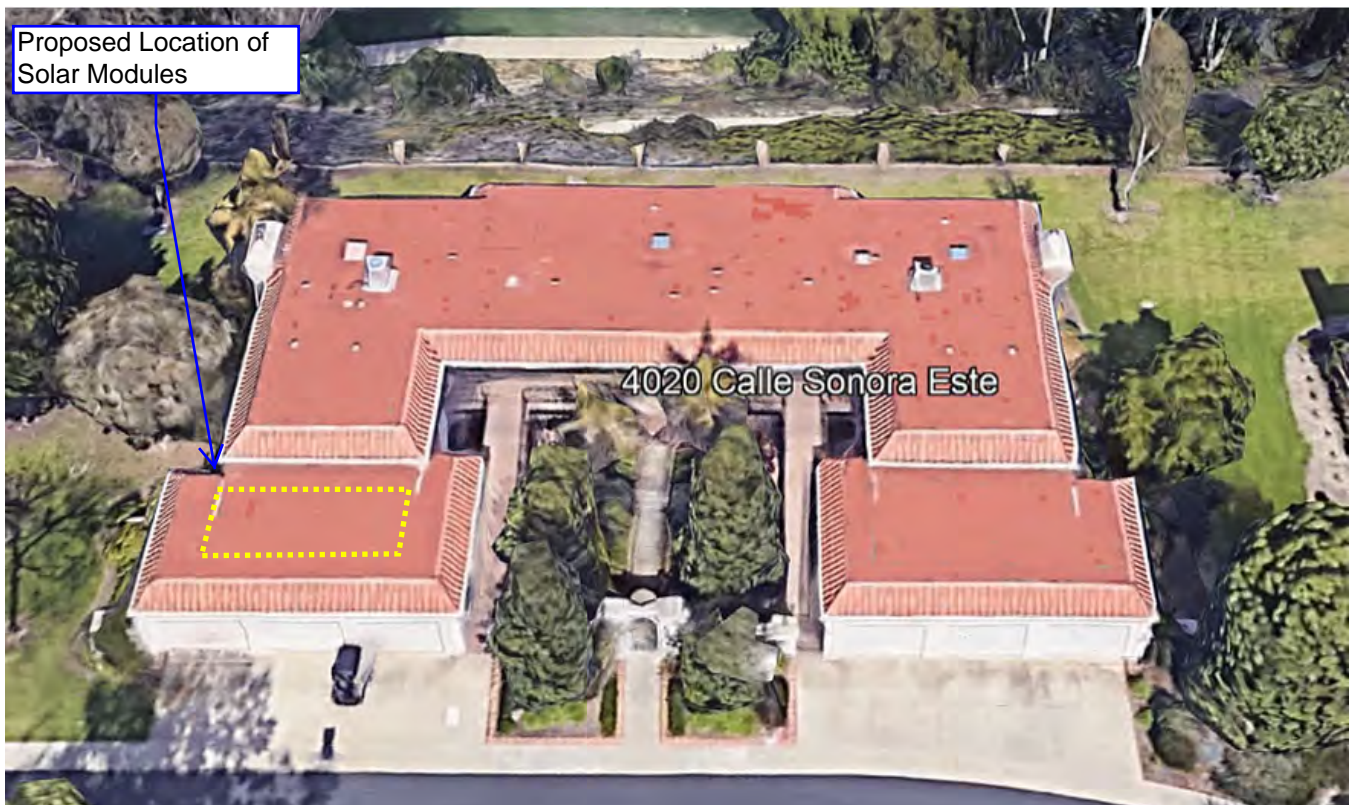
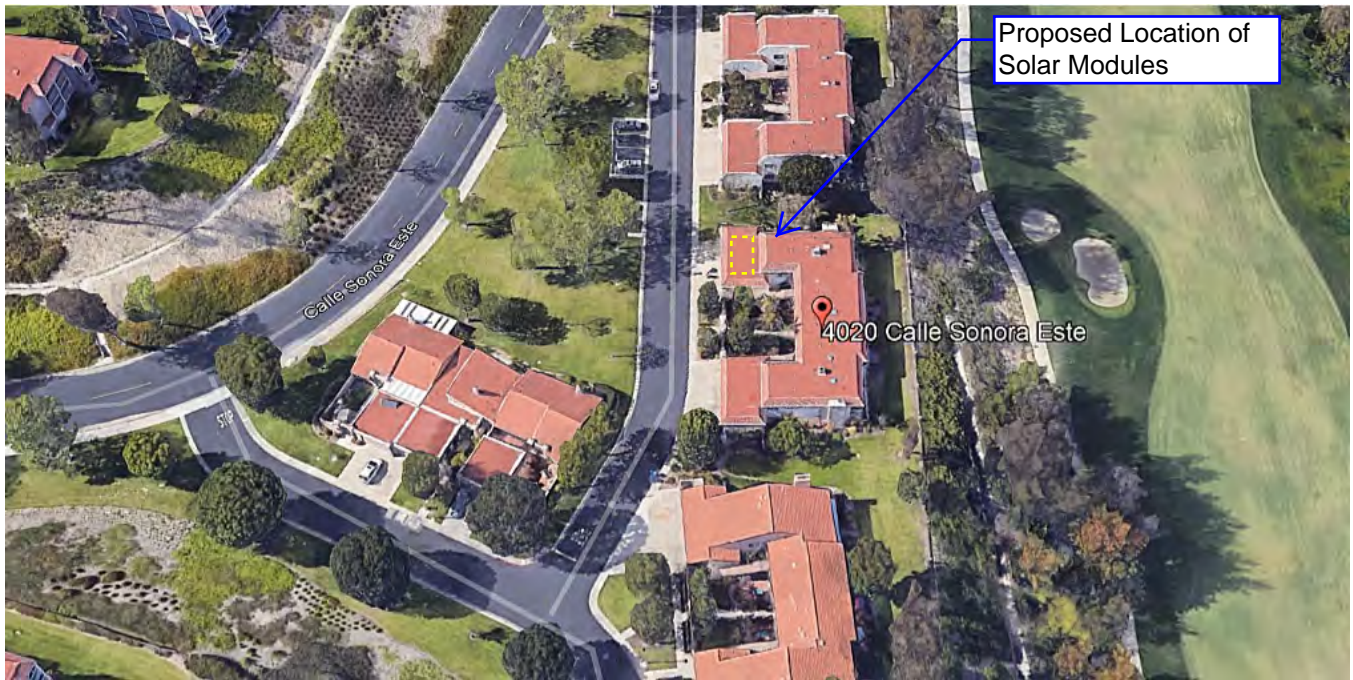


SOLAR PANEL ROOF DIVISIONS
 MONTEREY/CORONADO (PQ-12)
 12 UNIT BUILDING

Attachment: 4



Attachment: 5

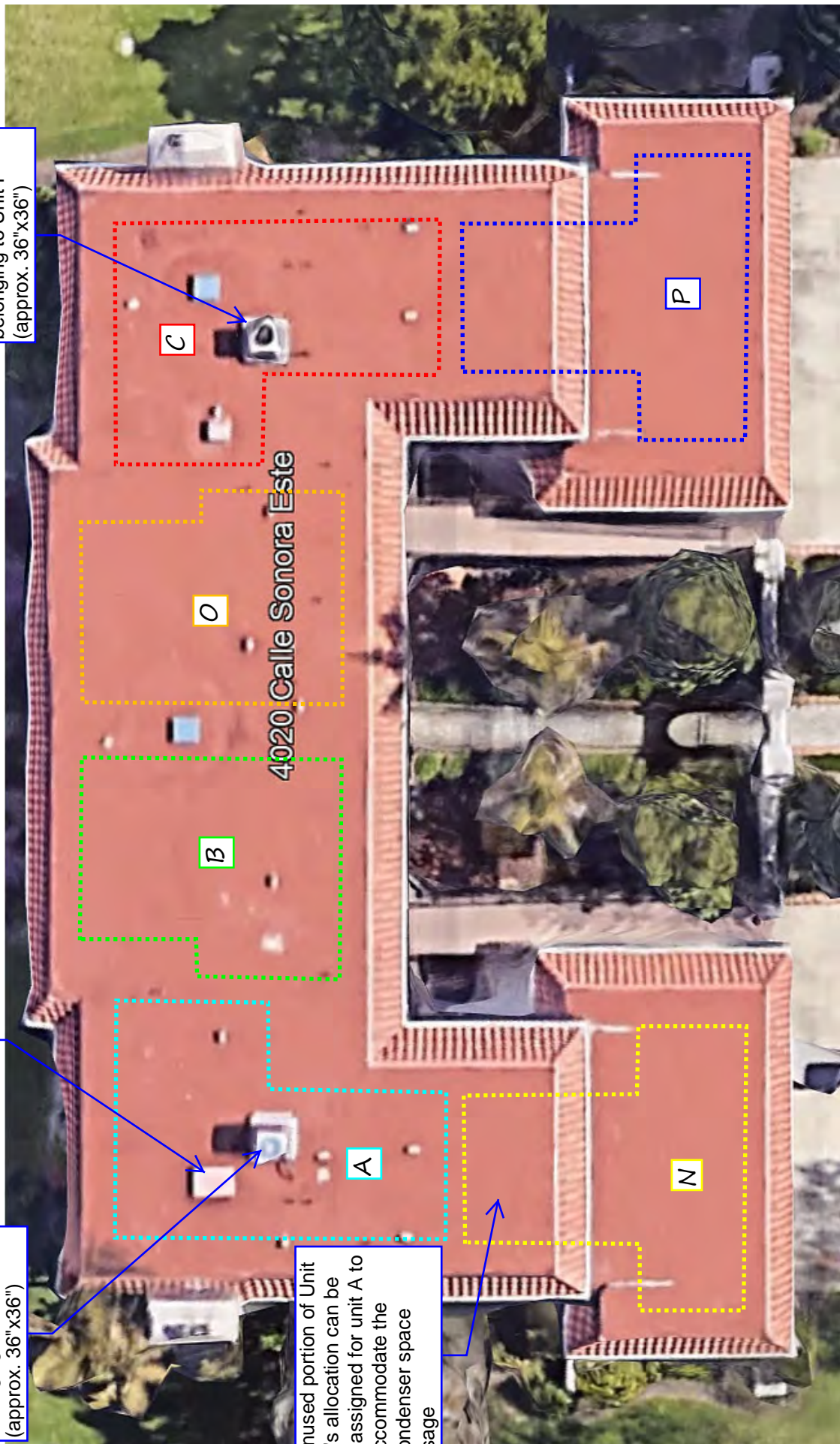


HVAC Condenser
belonging to Unit P
(approx. 36"x36")

Attic Vent (22" x 48")

HVAC Condenser
belonging to Unit N
(approx. 36"x36")

Unused portion of Unit
N's allocation can be
reassigned for unit A to
accommodate the
condenser space
usage



~~THIRD LAGUNA HILLS MUTUAL~~



SECTION STANDARD 30: STORAGE CABINETS

FEBRUARY 1985

REVISED JUNE 2002, RESOLUTION M3-02-29

GENERAL REQUIREMENTS REVISED APRIL 2011, RESOLUTION 03-11-49

GENERAL REQUIREMENTS REVISED JANUARY 2018, RESOLUTION 03-18-12

REVISED NOVEMBER 2018, RESOLUTION 03-18-XXX

1.0 GENERAL REQUIREMENTS

See Standard Section 1: General Requirements

2.0 GENERAL CONDITIONS

- 2.1 ~~The Permits and Inspections~~~~Alterations office~~~~division shall issue a~~
~~permits Mutual Consent for a~~All storage cabinets in carports,
breezeways, and parking areas require a Mutual Consent issued by the
Alterations Division prior to installation.
- 2.2 All cabinets shall be constructed of wood per standard plan drawings.
- 2.3 Cabinets shall be positively attached to adjacent wall or structure to prevent overturning as required by the Uniform International Building Code. Method of attachment shall provide a minimum of 1.5-inch clearance (air) space to prevent moisture damage to the cabinet.
- 2.4 A 12" access shall be maintained between cabinets and existing plumbing, electrical, or other utility installations and/or outlets.
- 2.5 No refrigerators, freezers, or other major electric appliances will be allowed in or around storage cabinets. No electrical wiring shall be run through the cabinet.
- 2.6 No loose items are allowed outside of storage cabinets. All personal property, including foot lockers, file cabinets, trunks and work benches

shall be stored in cabinets and shall not violate use restrictions set forth in Article III of Declaration of Covenants, Conditions, and Restrictions.

- 2.7 All cabinets shall be legibly labeled with the ~~manor~~ carport number.
- 2.8 Permits-A Mutual Consent will not be required for cabinets, which are located within patios or balconies provided they are no taller than 4'-0", nor or wider than 4'-0", ~~or~~ nor deeper than 3'-0".
- 2.9 Pre-manufactured cabinets shall be evaluated on a case-by-case basis. All cabinets must be approved by the Alterations Division prior to installation. All non-conforming cabinets shall be removed at the owner's expense upon their discovery.

3.0 **CARPORT CABINETS**

- 3.1 Cabinets shall be limited to the width of the assigned carport and are limited to the back wall of the carport. Cabinets shall be built-in; freestanding cabinets are not permitted. Cabinets shall be no taller than 3'-6", no wider than the carport stall, nor deeper than 2'-6".
- 3.2 Cabinets shall be painted to match all existing cabinets or adjacent building walls (if no cabinets exist in the area). Cabinets shall be labeled with the carport number.
- 3.3 The cabinet shall be installed on a base constructed of galvanized or non-ferrous metal, pressure treated lumber, or equivalent material as determined by the ~~Permits and Inspections office~~ Alterations Division.

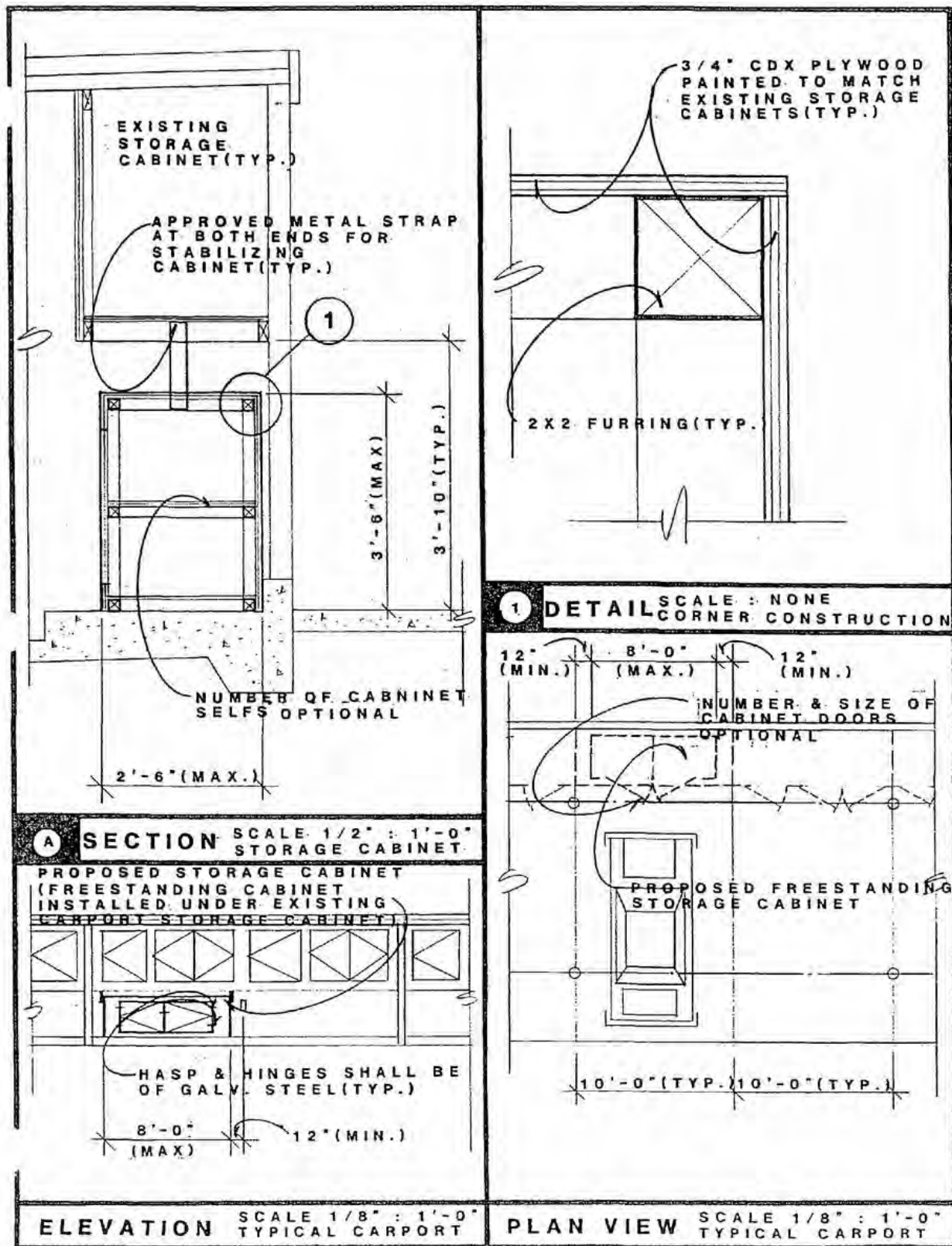
4.0 **BREEZEWAY/BALCONY CABINETS**

- 4.1 Breezeway cabinets will be permitted in Casa Linda (11-06 type), Casa Vista (II 06-) and Casa Contenta (KK-08 type) buildings only.
- 4.2 The cabinet shall be no taller than 6', no wider than 3'-0", nor deeper than 1'-6".
- 4.3 Breezeway cabinets will be limited to two, based upon available space. Available space shall be divided equally among adjacent units.
~~Cabinets will be limited to two per breezeway on a first-come, first-served basis.~~
- 4.4 Cabinets located on a balcony will be limited to one. Cabinet heights may not exceed the height of the balcony railing. Cabinets against the building shall not exceed 6' in height.

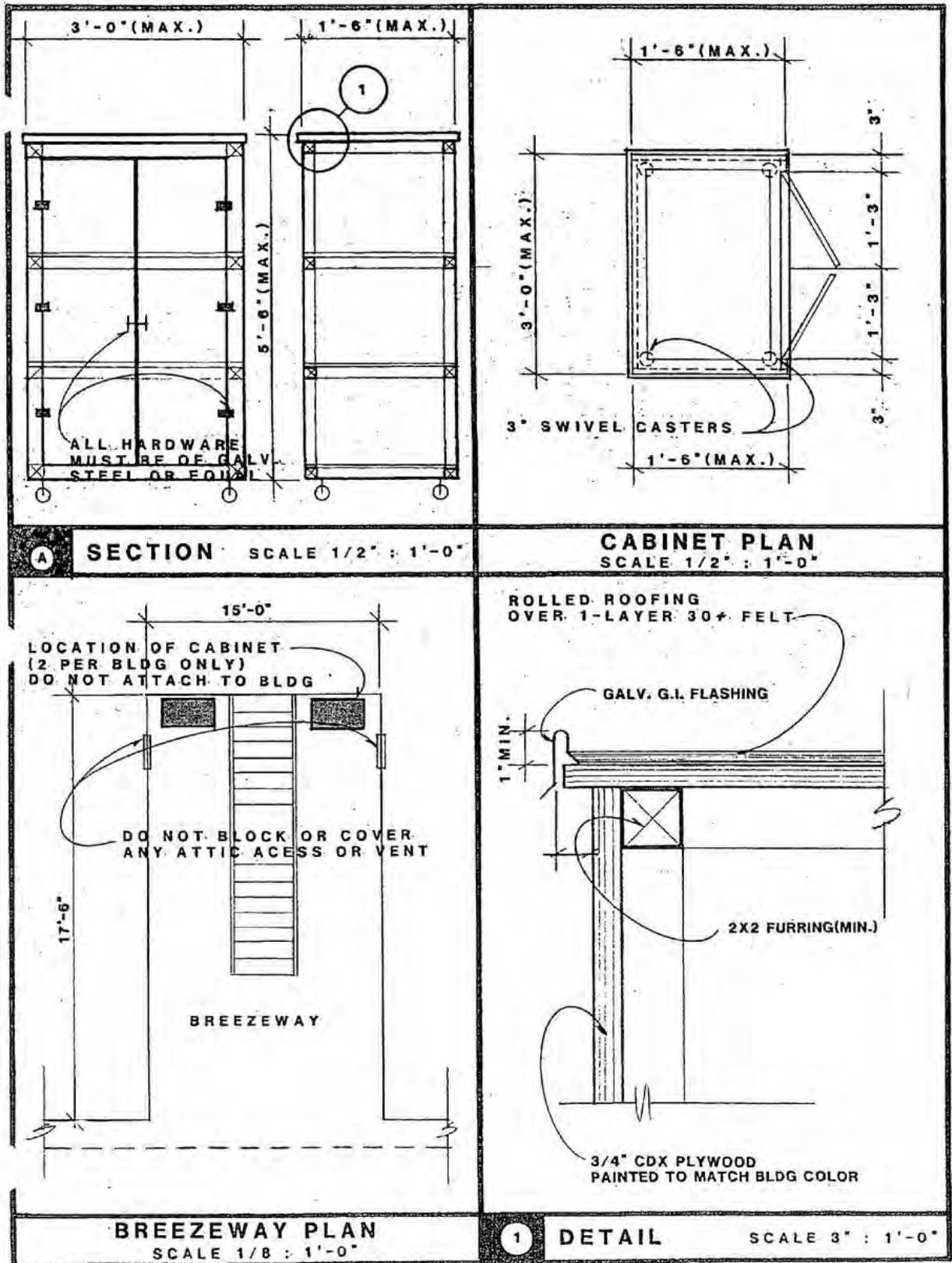
- 4.5 Cabinet units will be placed under stairwell area as indicated on drawing.
- 4.6 Cabinets will be painted to match existing building color. All breezeway cabinets shall be legibly labeled with the manor number.
- 4.7 The cabinet shall be placed on lockable casters.

5.0 **UNDERGROUND CARPORT CABINETS** **(GARDEN VILLA-TYPE BUILDINGS)**

- 5.1 Cabinets shall be limited to the back wall of the manor owner's space, as approved by the ~~Permits and Inspections office~~Alterations Division and conform to the standard plans.
- 5.2 Cabinets shall be painted to match all existing cabinets or adjacent building walls (if no cabinets exist in the area). Cabinets shall be labeled with the carport number.
- 5.3 The cabinet shall be no taller than 7'-0", no wider than 4'-0", nor deeper than 3'-0".
- 5.4 In those areas where the adjacent wall height is 3'-6"; the cabinets shall not exceed the height of the wall.
- 5.5 The cabinet shall be installed on a base constructed of galvanized or non-ferrous metal, pressure treated lumber, or equivalent material as determined by the ~~Permits and Inspections office~~Alterations Division.

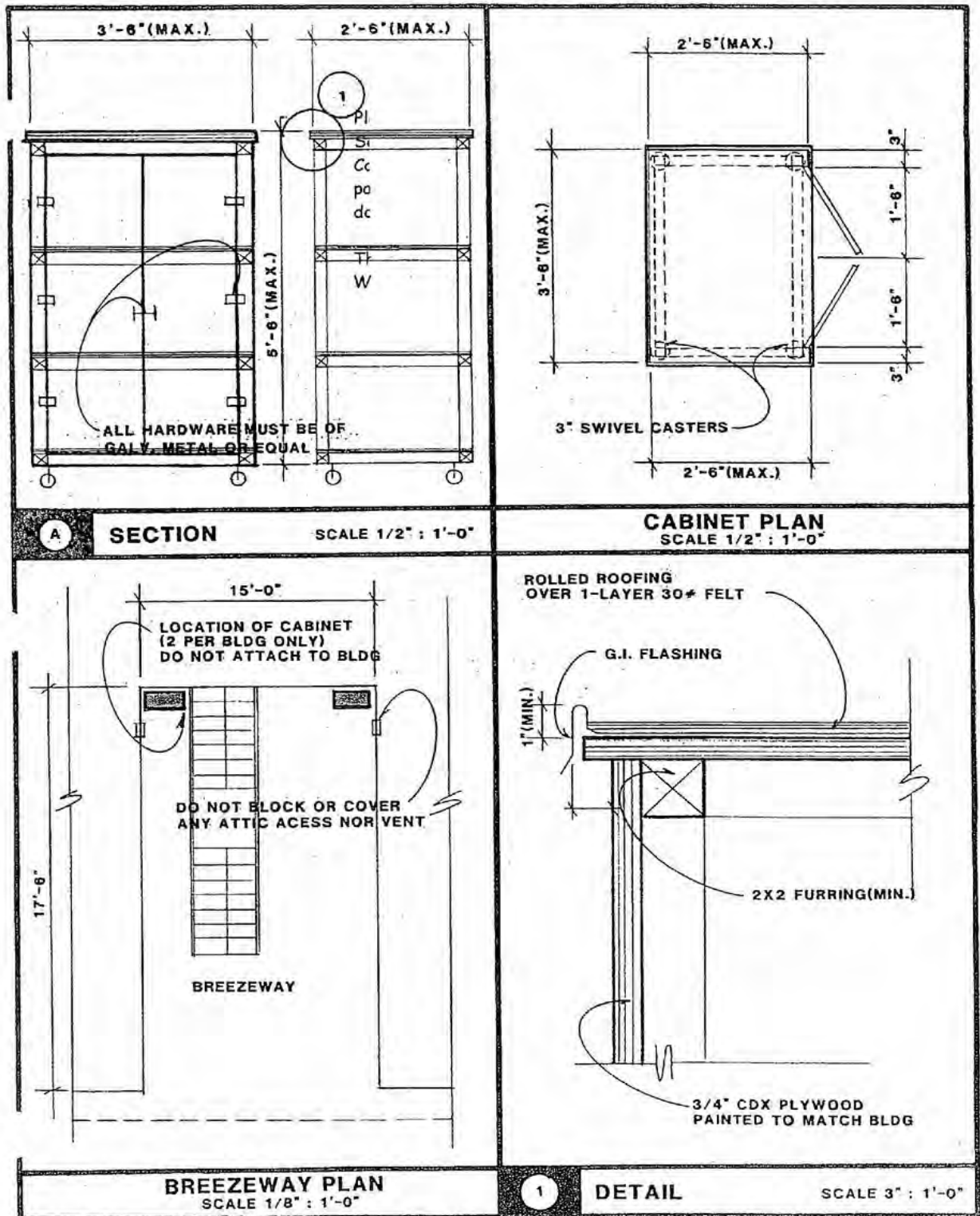


11-06 BLDG



BREEZEWAY STORAGE CABINET
JUNE 3, 1992

AK 08 BLDG



BREEZEWAY STORAGE CABINET
JUNE 5, 1992



THIRD LAGUNA HILLS MUTUAL

SECTION STANDARD 34: WINDOWS & WINDOW ATTACHMENTS

MAY 1996, RESOLUTION M3-96-28

SEPTEMBER 2002, RESOLUTION M3-02-47

NOVEMBER 2002, RESOLUTION M3-02-62

OCTOBER 2004, RESOLUTION 03-04-27

REVISED FEBRUARY 2006, RESOLUTION 03-06-10

REVISED SEPTEMBER 2006, RESOLUTION 03-06-41

REVISED MAY 2007, RESOLUTION 03-07-47

REVISED APRIL 2011, RESOLUTION 03-11-51

GENERAL REQUIREMENTS REVISED APRIL 2011, RESOLUTION 03-11-49

REVISED DECEMBER 2011, RESOLUTION 03-11-215

REVISED NOVEMBER 2018, RESOLUTION 03-18-XX

1.0 GENERAL REQUIREMENTS

See Standard Section 1: General Requirements

2.0 APPLICATIONS

2.1 New construction window replacement is permitted only upon the approval of the ~~Permits and Inspections~~ Alterations Division office. Retrofit windows are permitted upon the approval of the Alterations Division ~~Permits and Inspections~~ office in accordance with the criteria established herein.

2.2 Windows may be framed with either aluminum or vinyl. Wood framed windows, and the use of other materials, ~~will be~~ are subject to the review of the Board of Directors.

2.3 Aluminum framed windows must match the original window frame color on the building with either a natural or bronzed anodized finish.

- 2.4 All vinyl framed windows must be white in color. Colors other than white vinyl will be reviewed by the Board of Directors.
- 2.5 Windows and sliding glass doors on the same wall of an individual manor will be replaced concurrently to ensure visual continuity ~~upon~~ in the building and surrounding area except when windows and/or sliding glass doors are obscured by patio walls or glass enclosures. At any such time that the enclosure is removed, exposing the windows and/or sliding glass doors, the Member must replace the windows and/or sliding glass doors to conform to the Mutual Standard.
- 2.6 Any existing retrofit windows in the building will set the precedent for trim size/dimensions to be utilized for new retrofit installations.
- 2.7 The top of window heights shall be at 6'-8" unless a special height is called for on the standard plan drawing.
- 2.8 Size and location of windows shall be as per standard plan drawings.
- 2.9 All retrofit windows must be certified with the City of Laguna Woods. Any retrofit window that is not properly certified is subject to permit revocation and removal at the sole cost of the manor owner.
- 2.10 Any retrofit of bedroom windows for a La Jolla-style manor must include a minimum of one (1) roll and turn style window or a casement window in order to meet building code egress regulations.

3.0 INSTALLATION REQUIREMENTS

- 3.1 All windows are required to meet building code regulations.
- 3.2 XOX windows may replace XO windows, and vice versa. Fixed panels may replace sliding panels, and sliding panels may replace fixed panels.

- 3.3** XO windows may be converted to picture windows, and vice versa, provided the height and width of the opening remain the same and egress is not compromised.
- 3.4** Windows may be converted to sliding glass doors, and vice versa, provided that 1) the area faces into a patio, atrium, or balcony, and 2) the height and width of the opening remain the same.
- 3.5** Where windows have a configuration of XO above an XO or OO in the same opening, the bottom section may be filled in using standard construction practices. The dimensions of the top section must remain the same.
- 3.6** Casement windows are not permitted where the window, when open, would protrude into an area where maintenance of property, i.e., mowing, pruning, planting, would be impeded, or where the window would protrude into a walkway or area where pedestrians walk.
- 3.7** Casement windows are permitted to be installed where egress windows in bedrooms are required due to the installation of a patio enclosure.
- 3.8** Bathroom windows covered with an original or permitted grille may remain as is during the retrofit of other windows on the same elevation, provided the existing frame is painted to match the retrofit windows.
- 3.9** Bathroom windows may remain as is during the retrofit of other windows on the same elevation when retrofitting the subject window would reduce the glass size to less than one (1) foot in any direction.
- 3.10** Retrofit louvered bathroom windows. Louvered bathroom windows may be retrofitted with other window options that fit the existing opening, a single fixed pane of glass, a double hung window, casement window, and glass blocks. Replacement windows must conform to Section 34 window standards. Plans and specifications must be submitted to the Permits Department for approval prior to installation.
- 3.11** Recessed vinyl retrofitted kitchen windows. Flanges on recessed vinyl retrofit kitchen windows shall be cut to fit the size of the window it is replacing. Metal frames around the window shall be painted to match the vinyl window frame, except for casement windows in three-story buildings. Paint must be appropriate for use on metal surfaces.
- 3.12** The total width of the perimeter frame and sash for retrofit vinyl windows shall not exceed ~~further than~~ four inches. Unless the subject window is surrounded by original wood framing, all non-casement window flanges must extend beyond any open areas between the

aluminum frame and all sides in order to adequately protect against water intrusion.

- 3.13 With the exception of recessed windows, cutting of the flanges is not permitted.
- 3.14 The retrofit window frame should be constructed in a flat plane with out raised or sculptured parts.
- 3.15 Windows must be properly insulated according to the manufacturer's installation instructions.
- 3.16 Retrofits of recessed windows must paint any exposed aluminum framing to match the color of the vinyl window. Garden Villa casement windows are an exception to this ~~standard~~ Standard.

4.0 **TYPE OF GLASS**

- 4.1 All glass to be clear, single light (no grids) with the following exception: single story manors may install vinyl retrofit windows and doors with grids that match the design pattern and dimension of the grids for all windows and doors on the same elevation. All glass shall be tempered as required on standard plan, except as outlined in Section 6.0. Thermopane-type glass is required. Replacement window will correspond with Section 2.0.
- 4.2 Stained or leaded-type glass per Section 6.0.
- 4.3 Reflective tints or films applied to glass after manufacture may be applied providing it does not have a reflectivity factor of more than 15%. Documentation of such material must be on hand and approved by the Alterations Division ~~Permits and Inspections~~ office before such application.
- 4.4 All bathroom windows will be of opaque glass.

5.0 **ATTACHMENTS**

- 5.1 No window awnings permitted.
- 5.2 No storm windows or glass shields will be installed on the exterior of any window.

6.0 STAINED GLASS

- 6.1** Any application for stained, leaded, etc., types of glass must be submitted to the Permits and Inspections office for approval of design, color, and sizes.
- 6.2** All ~~questionable~~ non-standard designs will be reviewed by the Board of Directors.

7.0 WROUGHT IRON GRILLES

- 7.1** All wrought iron grilles will be painted in accordance with the Mutual Paint Policy and approved color palette.
- 7.2** All grilles shall be decorative in nature and design. They will match other wrought iron, i.e., gates and fences where present.
- 7.3** Grilles shall not be placed on sliding glass doors or any other part of the unit except windows.
- 7.4** Grilles may be placed on only the first floor of any building except on those buildings where windows face into a breezeway and do not open directly into a walkway as determined by the Alterations Division ~~Permits and Inspections~~ office.
- 7.5** Maximum overhang of grilles shall be limited to 6" in any direction beyond window dimensions. No grille shall protrude more than 6" from the window.

- 7.6 Quick emergency release pins are required for fire purposes. Release pins shall be U.L. or U.B.C. approved and a smoke detector shall be utilized within the room where the grilles are installed.

8.0 **GARDEN WINDOWS**

- 8.1 Garden windows may be defined as planter windows, greenhouse, protruding windows, or bay windows.
- 8.2 No garden window shall extend outward from the building beyond 24". The largest horizontal or vertical dimensions of a garden window shall not exceed 8'-0" x 6'-0".
- 8.3 Garden windows shall be permitted only in dining rooms, nooks, and kitchens. Exception: any room where a window will face into a walled patio area.
- 8.4 No garden window shall be permitted where it may conceivably obstruct normal pedestrian traffic even within a walled patio area.
- 8.5 No garden window shall be permitted above the first floor of any building except on buildings where the window faces into the breezeway area.
- 8.6 A window in which an existing fire-rated assembly has been included into the building to satisfy building code requirements shall not be removed and replaced by a garden window, except where a garden window is a similarly fire-rated unit.
- 8.7 Garden window frame will meet Staff approval and ~~Section 1.3.this~~ Standard.

9.0 SLIDING GLASS DOORS

- 9.1** In order to maintain visual consistency, sliding glass doors are subject to the Standards set forth in Section 2.0.



STANDARD 44: FENCES; VINYL
NOVEMBER 2018, RESOLUTION 03-18-XX

1.0 GENERAL REQUIREMENTS

SEE STANDARD SECTION 1: GENERAL REQUIREMENTS

2.0 PREPARATIONS

- 2.1** An Alterations Inspector will visit the site prior to work, for adjustments pertaining to this section.
- 2.2** Attachments to buildings shall be avoided; if necessary connections shall only be accomplished using galvanized or stainless steel lag bolts, predrilled with waterproof silicone sealant applied prior to installation.
- 2.3** No vinyl fencing is permitted in areas where access for maintenance is required.
- 2.4** In no case shall concrete post supports cover sprinklers, sprinkler lines or other Mutual maintained property.
- 2.5** No fencing will be allowed that may encroach upon a view of a neighboring manor as determined by the Alterations Division.
- 2.6** All vinyl shall be white or beige in color.
- 2.7** All fencing shall border patio slabs only. No fencing shall be installed in garden or grass areas or on common area.

3.0 APPLICATIONS

- 3.1** No fence shall be over 5'-0" in height, inclusive of wall and fence; nor under 12" in height.
- 3.2** All posts shall be attached to slab or set in concrete. No posts shall have contact with any soil.
- 3.3** Vinyl fencing may be installed as approved by the Alterations Division as part of a block wall. See specifications for block walls.
- 3.4** Openings for gates are permissible. Gates may not open onto common area unless a walkway exists.



- 3.5 Gates shall be no higher than the wall in which they are part of, with the exception of decorative arc or radius finished tops.
- 3.6 Existing fencing may be lowered as requested by the resident with the approval of the Alterations Division.

4.0 SPRINKLER REVISIONS

- 4.1 Sprinklers will be revised only by VMS Landscape staff. The cost of such revisions shall be at the expense of the resident owner of that unit.
- 4.2 No sprinklers will be placed inside any patio area by VMS Landscape staff, and any sprinkler systems added shall not be connected to the Mutual-owned system.