



Makani Kai Marina

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Exhibit A: GUIDELINES FOR SOLAR INSTALLATION

Owner Responsibilities

1. Homeowner wishing to install a solar water heating system must first submit a written letter of request to the Board of Directors through the Resident Manager.
2. The necessary information to accompany the written letter are as following:
 - Panel brochure showing size and weight of panels.
 - Drawing of plumbing routes.
 - The location of the panels for optimum sun exposure.
 - The name of the proposed installer.

NOTE: Solar installations are only approved for owners of units that stand without any other unit stacked above or below, that is, the unit must be contiguous from foundation to roof (compliance under HRS-514B).

3. Prior to the start of any installation, the Unit Owner will schedule an appointment with the Installer and the Resident Manager at the Unit, to explain the installation, pipe routing, and equipment locations.
4. Prior to the start of any installation the Unit Owner will request for a Roof Inspection through the Resident Manager. This will ascertain and document if there are any issues or damaged identified on the existing roof prior to the start of the solar installation, and identify any areas that need to be kept clear of solar equipment/components in order to facilitate repairs to windows or other AOA maintained appurtenances.
5. At the completion of the installation, a second "Installation Inspection" is required and requested through the Resident Manager to confirm compliance with installation plan and document any deviations or damages to the roof or structure. A record of the two inspections, prior to and after installation of solar panels and piping will be kept with the Unit Owner and with the Resident Manager.
6. The owner will take "ALL" repair and replacement responsibilities for any damage that may occur to the roof, structure, or neighboring units during and after the installation, if such damage is caused by the operation, maintenance, or failure of

their solar system. "Responsibilities" shall include reimbursement to the AOA for all costs of materials and labor for repairs performed by an appropriately licensed contractor recognized and approved by the AOA MKM Board of Directors. All repair and restoration work shall be at the direction of the Resident manager.

7. The ongoing inspection and maintenance of the solar installation shall be the responsibility of the current owner of record of the unit.
8. The Home Owner realizes that these are the "Standard Guidelines" for Makani Kai Marina and because of the different types of construction, floor plans and orientation of the buildings; approval will be on a "Case by Case" basis. The requirements for each installation may change depending on the type of construction of the Unit. The Resident Manager will consult with the contractor, the Board, and any affected neighbors to determine the requirements of each individual installation.

Materials & Installation

1. All components and materials shall be of quality or equivalent to Hawaiian Electric Company's approved material list.
2. All components and materials shall be installed in a good workmanship type manner, conforming to existing plumbing, electrical, and building codes. The company doing the work shall be a licensed contractor. The installation must meet HECO's requirements for solar water heating systems.
3. Placement of collectors, tanks, pipes, etc. shall be in accordance with the approved drawing submitted. If any pipes, tanks, and or collectors are placed on the outside of the Unit, Board approved solid covers that match the siding will have to be included in the installation.
4. The hot water solar company installing the solar system will obtain a City & County of Honolulu building permit.

Homeowner(s) Liability

1. Homeowner(s) and subsequent homeowner(s) of the unit shall be legally responsible for damage to any unit or common elements due to, caused by, or resulting from the solar unit or its installation, if not covered by the installer's warranty.
2. Homeowner(s) and subsequent homeowner(s) shall be legally responsible for the removing and replacing of the solar collectors and other materials or equipment in the event that roofing or other work necessitates their removal.
3. The AOA Board of Directors recommends Homeowner(s) obtain and maintain a home owner's policy that includes insurance coverage for the obligations of the owner and names the Makani Kai Marina AOA as an additional insured under this policy.

Roof Mounting

1. Solar panels shall be mounted to the pitch of the roof and shall not protrude more than 12" from the roofline.
2. Solar panels and frame support shall, when possible, blend in with the color of the roofing material and with whatever color(s) the Board of Directors or its designated design committee shall deem appropriate.
3. There shall be no shiny aluminum or distracting metal exposure of any kind.
4. Panels and frame structure shall be mounted in such a way as to conform to City & County codes and conditions.
5. All roof penetrations shall be sealed with appropriate base materials.
6. Pressure and Temperature Relief valves shall be faced or vented so as to pose no safety hazard to residents or guests should they discharge.
7. Storage tanks or heaters shall not be mounted on the roof.
8. Contractors shall consult with Makani Kai Marina management to assure compliance with Makani Kai Marina unique roofing standards.

Pipe Runs

1. Pipe runs to and from the solar collectors shall be insulated with a closed cell tubular insulation.
2. Pipe runs up the side of the building shall be strapped to the wall using copper tube straps with stainless steel screws at intervals not to exceed 6 feet 3 as may be necessary. All piping running on the exterior of the unit will have Board approved covers made to conceal it from view.
3. Pipe runs in the attic or along cabinet top or baseboards shall be strapped in such a way as to avoid sagging or loose pipes.
4. All pipe runs shall be plumb in relation to the structure.
5. Penetrations shall be sealed with appropriate based roofing sealant.

Sensor Wire

1. Sensor wire shall be strapped to the pipe run.
2. Where exposed, the sensor wire shall be coated for protection.

Water Heater and Solar Tank Hookups

1. All plumbing in and around the tanks shall utilize copper and brass fittings.
2. No galvanized fitting shall be allowed except for internally insulated galvanized nipples in the heater themselves.

3. Solar plumbing system control valves, cross connection control devices, and similar devices shall be readily accessible for service and maintenance.
4. Plumbing and configuration of the tank or tanks shall be in such a manner as to be as neat as possible and avoid blockage of storage area access.
5. Two (2) ball valves or gate valves shall be installed on the solar feed and return lines to isolate the solar collectors, if necessary.
6. Hose bib or boiler drain shall be installed on the collector feed line to allow drainage of the collectors.
7. The circulating pump shall be installed on the collector feed line and shall have valves and unions on either side of it.
8. If a water filter is installed on the City supply line of the tank, it must be located at least 2 feet below top of the tank to avoid heat damage.

Electrical Connections

All electrical devices, timers, differential controllers, etc., shall be U.L. listed and conform to the City & County codes.

Additional Requirement

Prior to the start of installation, a list of “Additional Requirements” will be issued by the Resident Manager to the Home Owner. These requirements will become part of the scope of work for the project and must be completed by the installer or home owner.

I have read the guidelines above and agree to abide by the outlined

guidelines: Signed: _____

Unit : _____

Date: _____

I have read and been provided with the “Additional Requirements” list and agree to complete these items as part of the scope of work for this project

Signed: _____

Unit: _____

Date: _____