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GOALS Energy Efficiency, Water Efficiency
SOLUTIONS Air Seal, Insulation, Ventilation,



135 Van Ness, Santa Cruz, CA 95060



House front PRE



Rear POST upgrade

Zero E How close? Within **15%**
Green Cert PHI

1574 ft² CFA
YR Built 1922
SFR detached
Walkscore 85

PHOTOS <https://app.ajohp.org/l/5jlei> **VIDEO** <https://app.ajohp.org/l/smt3a>

Author AjO: Kawahara Role: Owner

★ The existence of a feature does not guarantee optimum performance. Design, install, operations; each are essential.

See details of this project and others @ [AjOhp.org](https://www.ajohp.org)
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PRE

POST

21,939 kWh
\$1,498
110K Gal WATER

2,869 kWh
87% SAVINGS
\$492
29K Gal WATER

ENERGY COSTS

Annual

RENEWABLE ENERGY

ENCLOSURE

Air Changes/Hour @50
Air Tightness Improved

Air Seal

Attic
Walls
Floors

Insulation

Attic Flr R Val
Attic Flr Type
Floor R Val
Floor Type
Walls R Val
Walls Type

Insulation Exterior

Walls R Val
REL

Enclosure Cladding

New
Rain Screen

Roof

New

Vapor Barrier

Installed Crawl
Sealed

Bulk Water

Drain, site strategies

Windows

% New
Frame
glass layers

Doors

New
R Val

HVAC

Heating

Primary heat system
No Combustion

Distribution

New
Duct insul
Location

Ventilation

Type
Whole Bldg vent
Natural Cross Vent
REL Ventilation

HVAC Test-Out

Max Temp rm/rm
Thermostat: Programmable

WATER EFFICIENCY

Fuel
Type
Year Installed

Water Pipes Insulation

% total hot

Efficient Fixtures

Kitch faucet
Dishwasher
Showers
Toilets

Exterior

Climate approp. Indscpg
Irrigation: low-water
Turf < 25%
Rain water reuse

INDOOR AIR QUALITY

Sealed combustion
Garage separated: living area

Moisture Control

Vapor Retarder installed

Materials

24.37	Solar Thermal
0	0.59 98 %
0	Yes Yes Yes
0	80 Cellulose loose 28 EPS 14 Cellulose loose
0 10 yrs	13 150 yrs
	Yes Yes
	Yes
	Yes Yes
	Yes
Wood Single-pane	100 % Fiberglass Triple-pane
1	4 4
Furnace	Hydronic Air Handler Yes
	Yes R 80 Conditioned space
0 yrs	HRV Yes Yes 30 yrs
	< 3° F Yes
Nat Gas Tank	Solar Thermal Boiler-Tankless 2012
0 %	100 %
	≤ 1.5 GPM ≤ 5.5 GPC ≤ 1.5 GPM ≤ 1.10 GPF
	Yes Yes Yes Yes
	DHW, Furnace Detached
	Yes
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Low/No VOC paints/finishes
Low/No VOC Sealants
No Carpet



LIGHTING

≥ 90% Energy Efficient

Yes
Yes
Yes

Yes

PRE



House front Pre

POST



House front Post



Exterior walls moisture damage



Exterior walls, sealed & insulated



Attic: knob & tube, no insulation



Attic: R 80