

# Building Summary

## Property

Parfitt  
1417 17th  
Anacortes, WA 98273

Weather:Whidbey Island, WA  
CVH\_Parfitt  
Parfitt Final.blg

## Organization

Viridian Northwest  
(360) 464-4046  
Daimon Doyle

## Builder

Clifton View Homes

## HERS

Confirmed Rating  
6/1/2016  
Rating No:VNW-1524  
Rater ID:4424648

## Property/Builder Information

Building Name	CVH_Parfitt
Owner's Name	Parfitt
Property Address	1417 17th
City, St, Zip	Anacortes, WA 98273
Phone Number	

Builder's Name	Clifton View Homes
Phone Number	(360) 969-2363
Email Address	cvh@whidbey.net
Plan/Model Name	
Community/Development	
Permit Date/Number	

## Rating Organization/RESNET Information

Organization Name	Viridian Northwest
Address	4508 15th Ave NE
City, St, Zip	Olympia, WA 98516
Phone Number	(360) 464-4046
Website	
Rater's Name	Daimon Doyle
Rater's Email	info@viridainnw.com

Rater's ID	4424648
Provider ID	1998-100
Sample Set ID	00000000
Registry ID	

Rating Date	6/1/2016
Rating Type	Confirmed Rating
Reason for Rating	New Home
Rating Number	VNW-1524

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## General Building Information

Area of Conditioned. Space(sq ft)	2873
Volume of Conditioned. Space	32680
Year Built	2016
Housing Type	Single-family detached
Level Type(Apartments Only)	None
Floors on or Above-Grade	2
Number of Bedrooms	2
Foundation Type	Slab
Enclosed Crawl Space Type	N/A
Thermal Boundary Location	N/A

## Foundation Wall Information

Name	Library Entry	Location	Length(ft)	Total Height(ft)	Depth Below Grade(ft)	Height Above Grade(ft)	Uo Value Combo*	Uo Value (wall only)
Foundation	R-10 Int, 2 ft deep	Cond->ambient/grr	161.0	2.5	2.0	0.5	0.076	0.094

\* Uo Value Combo combines wall, airfilm, and soil path

## Foundation Wall Library List

### Foundation Wall: R-10 Int, 2 ft deep

Type	Solid concrete or stone
Thickness(in)	8.0
Studs	None
Interior Insulation	
Continuous R-Value	10.0
Frame Cavity R-Value	0.0
Cavity Insulation Grade	1
Ins top	0.0 ft from top of wall
Ins Bottom	0.0 ft from bottom of wall
Exterior Insulation	
R-Value	0.0
Ins top	0.0 ft from top of wall
Ins bottom	0.0 ft below grade

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## Foundation Wall Library List

Note

## Slab Floor Information

Name	Library Entry	Area(sq ft)	Depth Below Grade(ft)	Full Perimeter(ft)	Exposed Perimeter(ft)	On-Grade Perimeter(ft)
Main Floor	R-20 Continuous	1656	0.0	161	161	161

## Slab Floor Library List

### Slab Floor: R-20 Continuous

Slab Covering	None
Perimeter Insulation (R-Value)	10.0
Perimeter Insulation Depth (ft)	2.0
Under-Slab Insulation (R-Value)	20.0
Under-Slab Insulation Width (ft)	17.0
Slab Insulation Grade	1
Radiant Slab	Yes
Note	

## Rim and Band Joist Information

Name	Location	Area(sq ft)	Continuous Ins	Framed Cavity Ins	Cavity Ins Thk(in)	Joist Spacing	Insulation Grade	Uo Value
Rim Joist 2nd Floor	Cond -> ambient	140.00	10.0	21.0	5.5	24.0	1	0.031

## Above-Grade Wall

Name	Library Entry	Location	Exterior Color	Area(sq ft)	Uo Value
6" SIPs	SIP 5-5/8"	Cond -> ambient	Medium	2492.00	0.043

### Above-Grade Wall: SIP 5-5/8"

Information from Path Layer

Layers	Paths		
	Foam	Framing	Spline
Inside Air Film	0.680	0.680	0.680
Gyp board	0.450	0.450	0.450

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OSB	1.094	1.094	1.094
Framing	0.000	6.875	0.000
Foam	21.175	0.000	20.838
Spline	0.000	0.000	1.094
Ext. Finish (lap)	1.430	1.430	1.430
Outside Air Film	0.250	0.250	0.250
Total R-Value	25.08	10.78	25.84
U-Value	0.040	0.093	0.039
Relative Area	0.860	0.060	0.080
UA	0.034	0.006	0.003

Total Component UA: 0.043

Total Component Area: 1.0

Component Uo: 0.043

## Window Information

Name	Wall Assignment	Orient	U-Value	SHGC	Area (sqft)	Overhang			Interior		Adjacent	
						Depth (ft)	To Top (ft)	To Btm (ft)	Winter Shading	Summer Shading	Winter Shading	Summer Shading
W28 - Attic	AGWall 1	West	0.170	0.330	10.00	1.5	1.5	5.5	0.85	0.70	None	None
W29 - Attic	AGWall 1	West	0.170	0.330	10.00	1.5	1.5	5.5	0.85	0.70	None	None
W12 - Utility	AGWall 1	West	0.170	0.330	10.00	1.5	4.0	8.0	0.85	0.70	None	None
W13 - Guest Bath	AGWall 1	West	0.170	0.330	7.50	1.5	12.0	14.5	0.85	0.70	None	None
W22 - Office	AGWall 1	West	0.210	0.390	15.00	1.5	5.0	10.0	0.85	0.70	None	None
W23 - Office	AGWall 1	West	0.210	0.390	15.00	1.5	11.0	16.0	0.85	0.70	None	None
W24 - Office	AGWall 1	West	0.210	0.390	15.00	1.5	11.0	16.0	0.85	0.70	None	None
W14 - Guest Bdrm	AGWall 1	North	0.210	0.390	15.00	8.0	1.0	6.0	0.85	0.70	None	None
W15 - Guest Bdrm	AGWall 1	North	0.210	0.390	15.00	8.0	1.0	6.0	0.85	0.70	None	None
W01 - Living	AGWall 1	North	0.210	0.390	15.00	8.0	1.0	6.0	0.85	0.70	None	None
W02 - Living	AGWall 1	North	0.210	0.390	15.00	8.0	1.0	6.0	0.85	0.70	None	None
W16 - Master Bath	AGWall 1	North	0.170	0.330	5.00	1.0	1.0	4.0	0.85	0.70	None	None

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Name	Wall Assignment	Orient	U-Value	SHGC	Area (sqft)	Overhang			Interior		Adjacent	
						Depth (ft)	To Top (ft)	To Btm (ft)	Winter Shading	Summer Shading	Winter Shading	Summer Shading
W25 - Master Closet	AGWall 1	North	0.170	0.330	5.00	8.0	1.0	4.0	0.85	0.70	None	None
W17 - Master Bath	AGWall 1	East	0.170	0.330	24.00	1.5	4.0	8.0	0.85	0.70	None	None
W03 - Living	AGWall 1	East	0.170	0.330	5.00	7.0	1.0	2.0	0.85	0.70	None	None
W04 - Living	AGWall 1	East	0.170	0.330	5.00	7.0	1.0	2.0	0.85	0.70	None	None
W05 - Dining	AGWall 1	East	0.210	0.390	19.30	1.5	1.0	6.5	0.85	0.70	None	None
W06 - Dining	AGWall 1	East	0.210	0.390	19.30	1.5	1.0	6.5	0.85	0.70	None	None
W18 - Kitchen	AGWall 1	East	0.170	0.330	6.00	1.5	8.0	10.0	0.85	0.70	None	None
W26 - Attic	AGWall 1	East	0.170	0.330	10.00	1.5	2.0	6.0	0.85	0.70	None	None
W27 - Attic	AGWall 1	East	0.170	0.330	10.00	1.5	2.0	6.0	0.85	0.70	None	None
W19 - Office	AGWall 1	South	0.210	0.390	12.25	1.5	1.0	4.5	0.85	0.70	None	None
W20 - Office	AGWall 1	South	0.210	0.390	12.30	1.5	1.0	4.5	0.85	0.70	None	None
W21 - Office	AGWall 1	South	0.210	0.390	12.30	1.5	1.0	4.5	0.85	0.70	None	None
W7 - Kitchen	AGWall 1	South	0.210	0.390	15.75	1.5	1.0	5.5	0.85	0.70	None	None
W8 - Kitchen	AGWall 1	South	0.210	0.390	15.75	1.5	1.0	5.5	0.85	0.70	None	None
W9 - Kitchen	AGWall 1	South	0.210	0.390	15.80	1.5	1.0	5.5	0.85	0.70	None	None
W10 - Utility	AGWall 1	South	0.210	0.390	14.50	1.5	1.0	5.0	0.85	0.70	None	None
W11 - Utility	AGWall 1	South	0.210	0.390	14.50	1.5	1.0	5.0	0.85	0.70	None	None
D1 Entry	AGWall 1	North	0.260	0.200	36.00	8.0	1.0	8.0	0.85	0.70	None	None
D2 Kitchen	AGWall 1	North	0.260	0.200	20.00	0.0	0.0	0.0	0.85	0.70	None	None
D6 Master	AGWall 1	North	0.260	0.200	40.00	8.0	1.0	8.0	0.85	0.70	None	None
D4 Guest	AGWall 1	West	0.260	0.200	40.00	8.0	1.0	8.0	0.85	0.70	None	None

## Door Information

Name	Library Entry	Wall Assignment	Opaque Area(sq ft)	Uo Value	R-Value of Opaque Area	Storm Door
D1 - Entry	Codel SF6P	AGWall 1	20.0	0.160	5.3	No

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## Roof Information

Name	Library Entry	Ceiling Area(sq ft)	Roof Area(sq ft)	Exterior Color	Radiant Barrier	Type	Uo Value	Cement or Clay Tiles	Roof Tile Ventilation
Upper Ceiling	10 1/4 SIPS Vaulted	1461.00	1461.00	Medium	No	Vaulted	0.026	No	No
Lower Ceiling	10 1/4 SIPS Vaulted	452.00	452.00	Medium	No	Vaulted	0.026	No	No

## Ceiling: 10 1/4 SIPS Vaulted

Information from Path Layer

Layers

Paths

Foam Framing Spline

Inside Air Film	0.858	0.858	0.858
Gyp board	0.450	0.450	0.450
OSB (x2)	1.094	1.094	1.094
Framing	0.000	11.563	0.000
Foam	35.612	0.000	32.725
Spline	0.000	0.000	0.937
Shingles	0.400	0.400	0.400
Outside Air Film	0.858	0.858	0.858
Total R-Value	39.27	15.22	37.32
U-Value	0.025	0.066	0.027
Relative Area	0.937	0.000	0.063
UA	0.024	0.000	0.002

Total Component UA: 0.026

Total Component Area: 1.0

Component Uo: 0.026

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## Mechanical Equipment

Number of Mechanical Systems	2
Heating SetPoint(F)	68.00
Heating Setback Thermostat	Present
Cooling SetPoint(F)	85.00
Cooling Setup Thermostat	Present

## ASHP: Daikin Altherma 30

Fuel Type	Electric
Heating Seasonal Efficiency	13.00 HSPF
Compressor Heating Output Capacity at 17F (kBtuh)	17.5
Compressor Heating Output Capacity at 47F (kBtuh)	28.7
Electric Resistance Backup Capacity (kW)	0
Cooling Output Capacity (kBtuh)	28.5
Cooling Seasonal Efficiency	9.33 SEER
Desuperheater	No
Note	
Number Of Units	1
Location	Conditioned area
Performance Adjustment	100
Percent Heating Load Served	100
Percent Cooling Load Served	100

## DHW: Desuperheater

Water Heater Type	Ground source heat pump
Fuel Type	Electric
Energy Factor	4.50
Recovery Efficiency	0.00
Water Tank Size (gallons)	50
Extra Tank Insulation (R-Value)	0.0
Note	
Number Of Units	1
Location	Conditioned area
Performance Adjustment	100

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## Mechanical Equipment

Percent Load Served

100

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## Infiltration and Mechanical Ventilation

### Whole House Infiltration

Measurement Type	Blower door test
Heating Season Infiltration Value	0.82 ACH @ 50 Pascals
Cooling Season Infiltration Value	0.82 ACH @ 50 Pascals
Shelter Class	4
Code Verification	Tested

### Mechanical Ventilation for IAQ

Type	Exhaust Only
Rate(cfm)	60
Sensible Recovery Efficiency(%)	0.00
Total Recovery Efficiency(%)	0.00
Hours per Day	24.0
Fan Power (watts)	6.00

### Ventilation Strategy for Cooling

Cooling Season Ventilation	Natural Ventilation
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## Builder

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## Lights and Appliances

### Rating/RESNET audit

Ceiling Fan CFM / Watt	0.00
Refrigerator kWh/yr	665
Refrigerator Location	Conditioned
Range/Oven Fuel Type	Electric
Induction Range	No
Convection Oven	No

### Dishwasher

Energy Factor	0.00
Dishwasher kWh/yr	259
Place Setting Capacity	12

### Clothes Dryer

Fuel Type	Electric
Location	Conditioned
Moisture Sensing	No
Energy Factor	2.73
Gas Energy Factor	2.67

### Clothes Washer

Location	Conditioned
LER (kWh/yr)	96
MEF	3.410
Capacity (CU.Ft)	3.810
Electricity Rate	0.11
Gas Rate	1.22
Annual Gas Cost	11.00

### Qualifying Light Fixtures

Interior CFLs %	90.0
Interior Fluorescent %	10.0
Exterior Lights %	100.0
Garage Lights %	100.0

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## Mandatory Requirements

### IECC Requirements

Verified IECC 04	true
Verified IECC 06	true
Verified IECC 09	true
Verified IECC 12	true
Verified IECC 15	false
Verified NY-ECCC 2010	false
ENERGY STAR Products	true

### ENERGY STAR Version 3 Checklist

Thermal Enclosure Checklist	true
HVAC System Quality Installation Contractor Checklist	true
HVAC System Quality Installation Rater Checklist	true
Water Management System Builder Checklist	true

### ENERGY STAR Version 3 Appliances

	Exist	Amount
Refrigerators	true	1
Ceiling Fans	false	0
Exhaust Fans	true	4
Dishwashers	true	1

### ENERGY STAR Version 3 Basements

Basement Wall Area 50% Below Grad:	false
Basement Floor Area	0.00
2009 IECC Prescriptive Requirements for ENERGY STAR v3.0	false
Slab Insulation Exemption:	true
Indoor airPlus Verification Checklist	true
Ducted Returns in each Bedroom	false

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## DOE Zero Energy Ready Home

Home Builder ID Number 548

### Mandatory Requirements

Verified Fenestration	true
Verified Insulation	true
Verified Duct Location	true
Verified Appliance	true
Verified Lighting	true
Verified Fan Efficiency	true
Verified EPA Indoor airPLUS	true
Verified Renewable Energy Ready Solar Electric	true
Verified Renewable Energy Ready Solar Hot Water	true

### Optional Home Builder Commitments for Recognition

Certified under the EPA WaterSense for New Homes Program	Yes
Certified under the IBHS fortified for Safer Living Program	Yes
Followed the DOE Zero Energy Ready Home Quality	No

### Management Guidelines

The buyer of this home signed a waiver giving DOE Zero Energy Ready Home access to utility bill data for one year. Yes

## Interior Mass

Name	Type	Location	Area(sq ft)	Thickness(in)
Drywall Thickness(in)	0.50			
Main Floor	Concrete	Sunlit floor	1656.0	3.0

## Active Solar

System Type	None
Collector Loop Type	None
Collector Type	None
Collector Orientation	None
Area(sq ft)	0.0
Tilt(degrees)	0.0

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## Active Solar

Volume(cu ft/gal) 0.0

## Photovoltaics

Name	Collector Orientation	Collector Area(sq ft)	PV Panel Peak Power(Watts)	Collector Tilt(degrees)	Inverter Efficiency(%)
	South	702.0	10890.0	34.0	96.5

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# Component Loads

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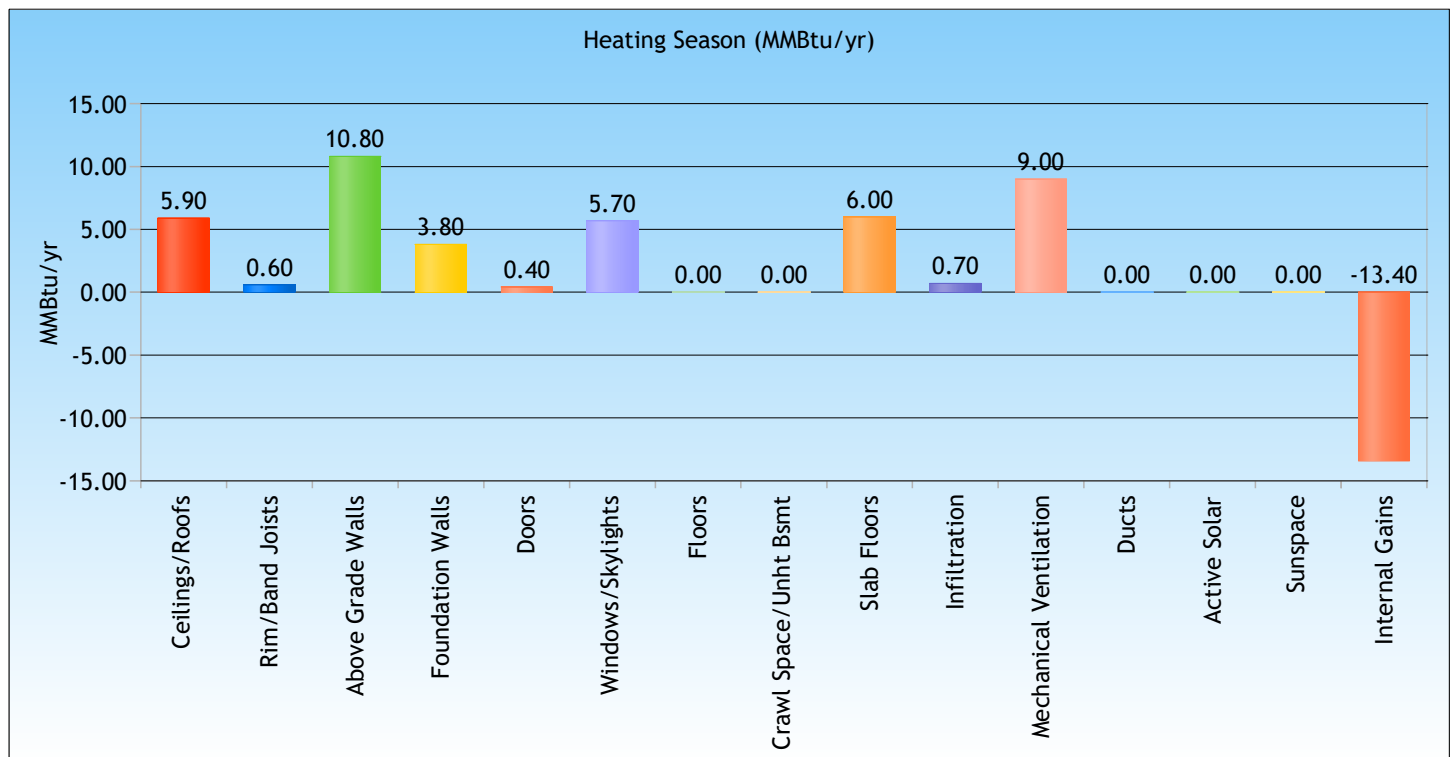
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## Builder

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## Heating Season

	MMBtu/yr
Ceilings/Roofs	5.9
Rim/Band Joists	0.6
Above Grade Walls	10.8
Foundation Walls	3.8
Doors	0.4
Windows/Skylights	5.7
Floors	0.0
Crawl Space/Unht Bsmt	0.0
Slab Floors	6.0
Infiltration	0.7
Mechanical Ventilation	9.0
Ducts	0.0
Active Solar	0.0
Sunspace	0.0
Internal Gains	-13.4
Total	29.5



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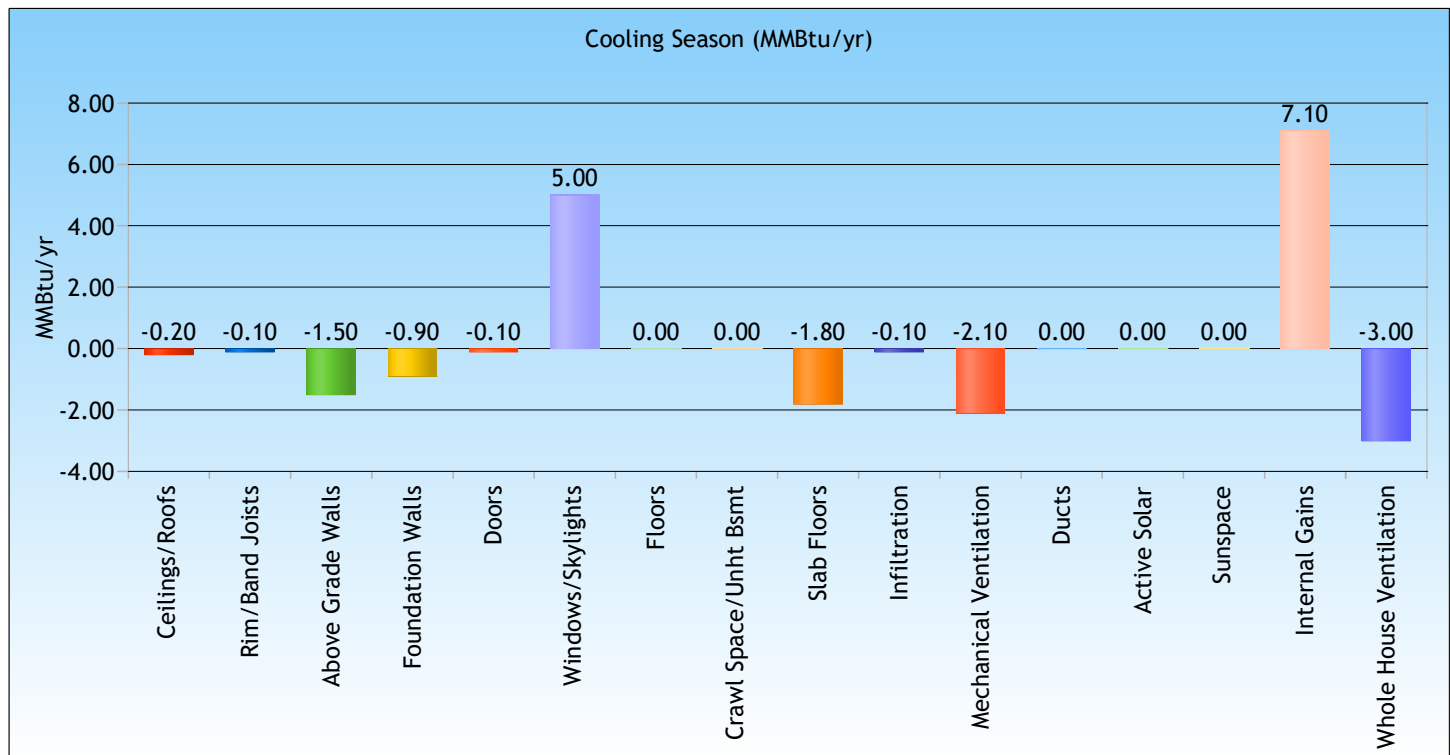
Parfitt Final.blg

## Builder

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## Cooling Season

	MMBtu/yr
Ceilings/Roofs	-0.2
Rim/Band Joists	-0.1
Above Grade Walls	-1.5
Foundation Walls	-0.9
Doors	-0.1
Windows/Skylights	5.0
Floors	0.0
Crawl Space/Unht Bsmt	0.0
Slab Floors	-1.8
Infiltration	-0.1
Mechanical Ventilation	-2.1
Ducts	0.0
Active Solar	0.0
Sunspace	-0.0
Internal Gains	7.1
Whole House Ventilation	-3.0
Total	2.3



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**Annual End-Use Cost****\$/yr**

Heating	222
Cooling	21
Water Heating	55
Lights & Appliances	559
Photovoltaics	-1256
Service Charge	94
Total	-305

**Annual End-Use Consumption**

Heating (kWh)	2335
Cooling (kWh)	231
Water Heating (kWh)	587
Lights & Appliances (kWh)	6019
Photovoltaics (kWh)	-13515

**Annual Energy Demands****kW**

Heating	4.4
Cooling	0.6
Water Heating (Winter Peak)	0.1
Water Heating (Summer Peak)	0.1
Lights & Appliances (Winter Peak)	0.5
Lights & Appliances (Summer Peak)	1.4
Total Winter Peak	5.0
Total Summer Peak	2.1

**Utility Rates**

Electricity

PSE Elec 1/2016



# Performance Report

## Property

Parfitt  
1417 17th  
Anacortes, WA 98273

## Organization

Viridian Northwest  
(360) 464-4046  
Daimon Doyle

## HERS

Confirmed Rating  
6/1/2016  
Rating No: VNW-1524  
Rater ID: 4424648

Weather: Whidbey Island, WA  
CVH\_Parfitt  
Parfitt Final.blg

## Builder

Clifton View Homes

### Annual Load

### MMBtu/yr

Heating	29.5
Cooling	2.3
Water Heating	9.4

### Annual Consumption

### MMBtu/yr

Heating	8.0
Cooling	0.8
Water Heating	2.0
Lights & Appliances	20.5
Photovoltaics	-46.1
<b>Total</b>	<b>-14.8</b>

### Annual Energy Cost

### \$/yr

Heating	222
Cooling	21
Water Heating	55
Lights & Appliances	559
Photovoltaics	-1256
Service Charges	94
<b>Total</b>	<b>-305</b>

### Design Loads

### kBtu/hr

Space Heating	16.8
Space Cooling	6.9

### Utility Rates

Electricity PSE Elec 1/2016

# Performance Report

## Property

Parfitt  
1417 17th  
Anacortes, WA 98273

## Organization

Viridian Northwest  
(360) 464-4046  
Daimon Doyle

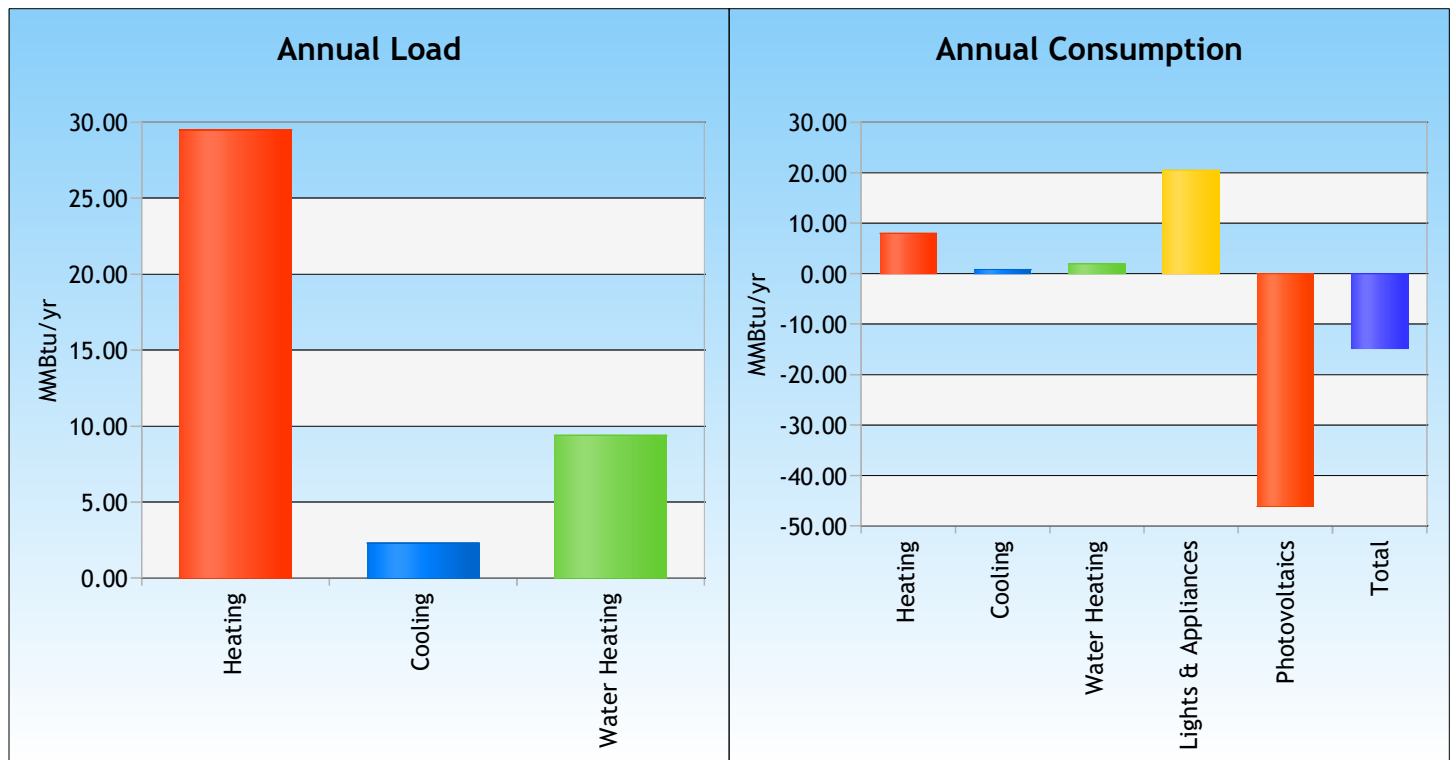
## HERS

Confirmed Rating  
6/1/2016  
Rating No: VNW-1524  
Rater ID: 4424648

Weather: Whidbey Island, WA  
CVH\_Parfitt  
Parfitt Final.blg

## Builder

Clifton View Homes



# DRAFT

# Performance Report

## Property

Parfitt  
1417 17th  
Anacortes, WA 98273

## Organization

Viridian Northwest  
(360) 464-4046  
Daimon Doyle

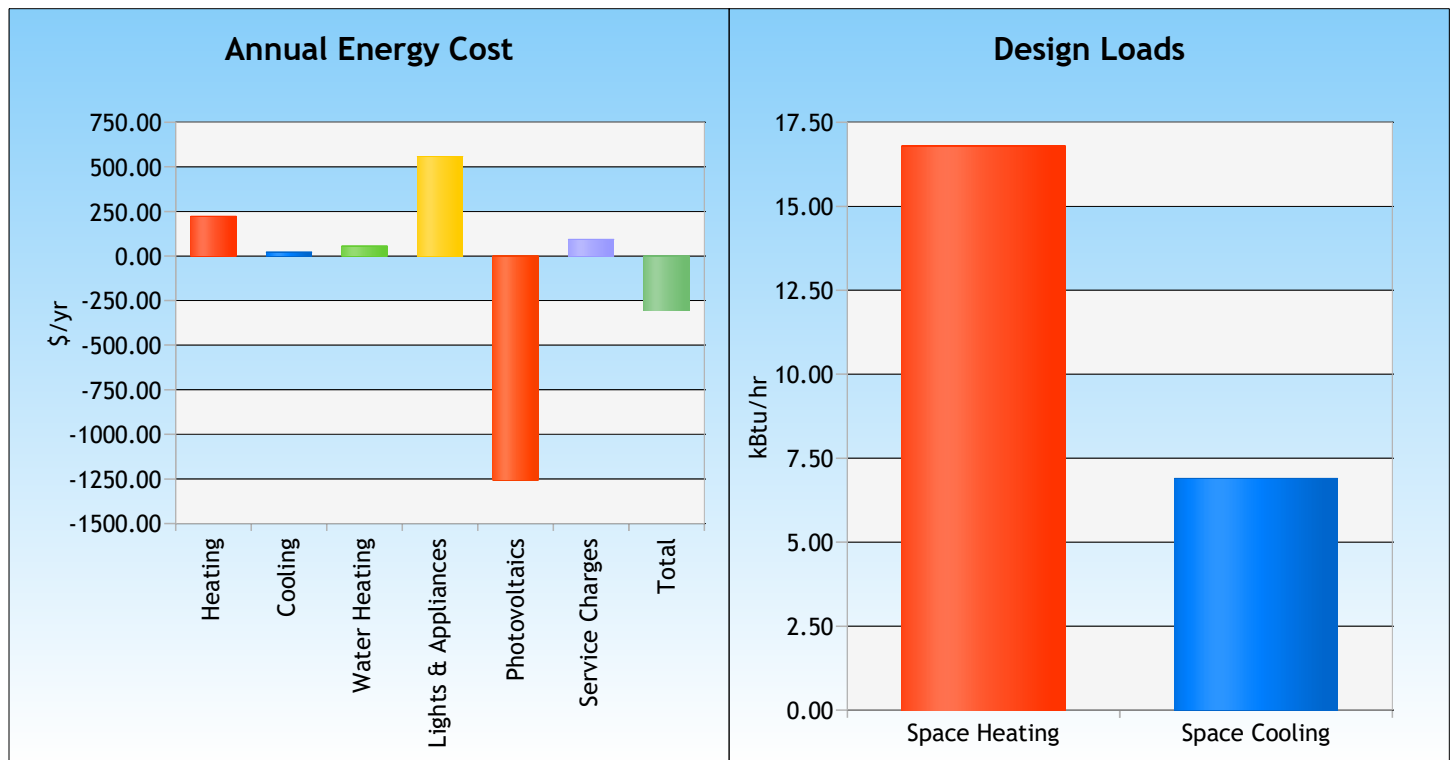
## HERS

Confirmed Rating  
6/1/2016  
Rating No: VNW-1524  
Rater ID: 4424648

Weather: Whidbey Island, WA  
CVH\_Parfitt  
Parfitt Final.blg

## Builder

Clifton View Homes



# DRAFT



# Source Energy & Emissions

## Property

Parfitt  
1417 17th  
Anacortes, WA 98273

## Organization

Viridian Northwest  
(360) 464-4046  
Daimon Doyle

## HERS

Confirmed Rating  
6/1/2016  
Rating No:VNW-1524  
Rater ID:4424648

Weather:Whidbey Island, WA  
CVH\_Parfitt  
Parfitt Final.blg

## Builder

Clifton View Homes

## Source Energy Consumption (MMBtu/year)

	All Electric Reference Home	As Designed	Difference	% Difference
Heating	39.1	10.4	-28.7	-73.5%
Cooling	3.4	1.8	-1.6	-47.1%
WaterHeating	15.5	2.6	-12.9	-83.2%
LightsAppliances	37.6	26.7	-10.9	-29.0%
Photovoltaics	0.0	-60.0	-60.0	
<b>Total</b>	<b>95.6</b>	<b>-18.5</b>	<b>-114.1</b>	<b>-119.3%</b>

## Total Emissions

Type of Emissions	All Electric Reference Home	As Designed	Difference	% Difference
Carbon Dioxide (CO2) - tons/year	3.1	-0.6	-3.7	-119.3%
Sulfur Dioxide (SO2) - lbs/year	2.0	-0.4	-2.4	-119.3%
Nitrogen Oxides (NOx) - lbs/year	5.4	-1.0	-6.5	-119.3%

## Emissions By End-Use

(All Electric Reference Home versus As Designed)

	CO2-tons/yr		SO2-lbs/yr		NOx-lbs/yr	
	Reference	Design	Reference	Design	Reference	Design
Heating	1.3	0.3	0.8	0.2	2.2	0.6
Cooling	0.1	0.1	0.1	0.0	0.2	0.1
WaterHeating	0.5	0.1	0.3	0.1	0.9	0.1
LightsAppliances	1.2	0.9	0.8	0.6	2.1	1.5
Photovoltaics	0.0	-1.9	0.0	-1.2	0.0	-3.4

The energy and emission values are calculated by comparing the Rated Home to an all-electric version of the Reference Home as defined in the 'Mortgage Industry National Home Energy Rating Systems Standards' as promulgated by the Residential Energy Services Network (RESNET). Site-to-source multipliers and air emission data were taken from the US EPA eGRID2012 database.

**REM/Rate - Residential Energy Analysis and Rating Software v14.6**

This information does not constitute any warranty of energy cost or savings.

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# 2005 EPACT Energy Efficient Home Tax Credit ( 13-001 )

## Property

Parfitt  
1417 17th  
Anacortes, WA 98273

## Organization

Viridian Northwest  
(360) 464-4046  
Daimon Doyle

## HERS

Confirmed Rating  
6/1/2016  
Rating No:VNW-1524  
Rater ID:4424648  
Registry ID:

Weather:Whidbey Island, WA  
CVH\_Parfitt  
Parfitt Final.blg

## Builder

Clifton View Homes

## Confirmed Rating: - No Registry ID

### Normalized, Modified End-Use Loads (MMBtu/yr)

	2006 IECC	
	50% Target	As Designed
Heating	29.6	16.4
Cooling	2.3	4.3
Total	31.9	20.7

### Envelope Loads (MMBtu/yr)

	2006 IECC	
	90% Target	As Designed
Heating	53.2	30.0
Cooling	4.2	4.0
Total	57.4	33.9

### Building Features

Ceiling Flat	NA
Sealed Attic	NA
Vaulted Ceiling	R-0.0
Above Grade Walls	R-16.5
Foundation Walls	R-10.0
Air-Source HP	Electric, Htg: 13.0 HSPF. Clg: 9.3 SEER.

Exposed Floor	NA
Slab	R-30.0
Duct	NA
Window	U-Value: 0.210, SHGC: 0.390

This home **MEETS** the requirements for the residential energy efficiency tax credits under Section 1332, Credit for Construction of New Energy Efficient Homes, of the Energy Policy Act of 2005 extended to December 31, 2014.

As demonstrated above, this dwelling unit has a projected level of annual heating and cooling energy consumption that is at least 50% below the annual level of heating cooling energy consumption of a 2006 IECC reference dwelling in the same climate zone, and the building envelope components improvements alone account for at least 10% of those savings. The projected heating and cooling energy savings above have been calculated in the manner prescribed in Appendix A of the RESNET Publication No. 13-001. Field inspections of the dwelling unit performed by the undersigned eligible certifier during and after the completion of construction have confirmed that all features of the home affecting such heating and cooling energy consumption comply with the design specifications provided to the undersigned certifier.

This report provides information useful in determining whether the home qualifies for Energy Efficiency Tax Credits. It is not valid for tax purposes, as homes must be inspected and approved by a certified HERS rater in order to qualify.

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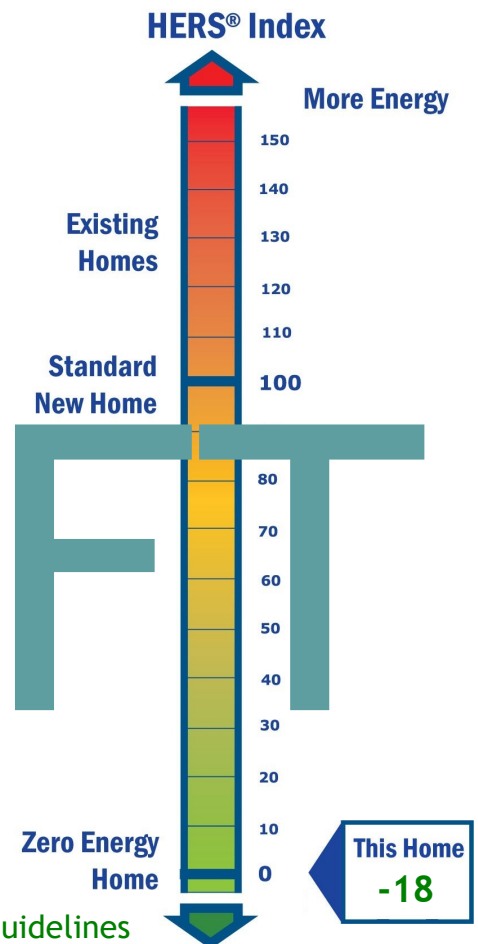
YOUR HOME WAS DESIGNED, ENGINEERED,  
AND CONSTRUCTED IN CONFORMANCE TO  
U.S. DEPARTMENT OF ENERGY (DOE)  
GUIDELINES FOR EXTRAORDINARY  
LEVELS OF EXCELLENCE AND QUALITY.

**Confirmed Rating: - No Registry ID**

This home built at 1417 17th  
By Clifton View Homes  
Verified by Daimon Doyle

**DRAFT**

Independent professional  
organization to meet or exceed  
strict home performance  
guidelines set by  
the U.S. Department of Energy  
on 6/1/2016



THIS HOME MEETS OR EXCEEDS THE MINIMUM  
CRITERIA FOR THE FOLLOWING:

DOE Zero Energy Ready Home Quality Management Guidelines

REM/Rate - Residential Energy Analysis and  
Rating Software v14.6

SAM RASHKIN, CHIEF ARCHITECT  
BUILDING TECHNOLOGIES  
U.S. DEPARTMENT OF ENERGY



# DOE Zero Energy Ready Home

**Confirmed Rating: - No Registry ID**

Energy Performance	
House Type	DOE Zero Energy Ready Home Builder Partner ID#
Single-family detached	548
Year built	Square footage of Conditioned Space including Basement
2016	2873.0
Number of Bedrooms	Square footage of Conditioned Space without Basement
2	2873.0
Site address (if not available, list the site Lot #)	Registered Builder
1417 17th	Clifton View Homes
Anacortes	Certified Rater
WA, 98273	Daimon Doyle
HERS Index without On-site Generation	Date of Rating
39	6/1/2016
HERS Index with On-site Generation	Rating Software
-19	REM/Rate - v14.6
HERS Index of the Target Home using size adjustment factor	Estimated annual energy costs(\$)
47	-291
Estimated annual energy use	Estimated annual energy savings
Electric: -4168 kWh	Electric: 25717 kWh
Energy cost rates	Estimated annual emissions reductions
Electric: 0.10 \$/kWh	CO2: 3.7 tons / SO2: 2.4 lbs / NOx: 6.5 lbs

## DOE Zero Energy Ready Home Certification

As the certified Rater for this house, I certify this house meets/complies with all mandatory requirements of the DOE Zero Energy Ready home guidelines, including the following:

X	Compliance with all ENERGY STAR Qualified Homes Version 3 requirements and checklists
X	Compliance with Mandatory Fenestration Requirements
X	Compliance with Mandatory Insulation Requirements
X	Compliance with Mandatory Duct Location Requirements
X	Compliance with Mandatory Appliance Requirements
X	Compliance with Mandatory Lighting Requirements
X	Compliance with Mandatory Fan Efficiency Requirements
X	Compliance with Mandatory EPA Indoor airPLUS
X	Compliance with Mandatory Renewable Energy Ready Solar Electric Requirements
X	Compliance with Mandatory Renewable Energy Ready Solar Hot Water Requirements
	This home was qualified via sampling in lieu of testing, in accordance with allowable sampling provisions as stated in the DOE Zero Energy Ready Home National Program Requirements

## Optional Compliance for Builder Recognition

I further certify that the following also apply to this house:

YES	NO	DONT KNOW	Optional Home Builder Commitments for Recognition
-----	----	--------------	---

\*Certification under the DOE Zero Energy Ready Home permits limited exceptions to full compliance with Indoor airPLUS. Builders seeking the Indoor airPLUS label must achieve full compliance with the Indoor airPLUS Verification Checklist.

**REM/Rate - Residential Energy Analysis and Rating Software v14.6**

This information does not constitute any warranty of energy cost or savings.

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# DOE Zero Energy Ready Home

**Confirmed Rating: - No Registry ID**

## Optional Compliance for Builder Recognition

I further certify that the following also apply to this house:

YES	NO	DONT KNOW	Optional Home Builder Commitments for Recognition
	X		Certified under the EPA WaterSense for New Homes Program
	X		Certified under the IBHS Fortified for Safer Living Program
X			Followed the DOE Zero Energy Ready Home Quality Management Guidelines
	X		The buyer of this home signed a waiver giving DOE Zero Energy Ready Home access to utility bill data for one year

\*Certification under the DOE Zero Energy Ready Home permits limited exceptions to full compliance with Indoor airPLUS. Builders seeking the Indoor airPLUS label must achieve full compliance with the Indoor airPLUS Verification Checklist.

# DRAFT

# ENERGY STAR v3.1 Home Report

## Property

Parfitt  
1417 17th  
Anacortes, WA 98273

## Organization

Viridian Northwest  
(360) 464-4046  
Daimon Doyle

## HERS

Confirmed Rating  
6/1/2016  
Rating No: VNW-1524  
Rater ID: 4424648

Weather: Whidbey Island, WA  
CVH\_Parfitt  
Parfitt Final.blg

## Builder

Clifton View Homes

## Confirmed Rating: - No Registry ID

### Normalized, Modified End-Use Loads (MMBtu/yr)

	ENERGY STAR	As Designed
Heating	25.1	16.1
Cooling	5.1	4.3
Water Heating	10.5	1.8
Lights and Appliances	23.0	20.5
Total	63.7	42.8
HERS Index of Reference Design Home	60	39 HERS Index w/o PV
HERS Index Target (SAF Adjusted)	57	-19 HERS Index
Size Adjustment Factor	0.95	

### ENERGY STAR v3.1 Mandatory Requirements

X	Duct leakage at post construction better than or equal to ENERGY STAR v3.0 requirements.
X	Envelope insulation levels meet or exceed ENERGY STAR v3.0 requirements.
X	<b>Slab on Grade Insulation is EXEMPT based on EPA slab insulation exemption rules.</b>
X	Envelope insulation achieves RESNET Grade I installation, or Grade II with insulated sheathing.
X	Windows meet the 2009 IECC Requirements - Table 402.1.1.
X	Duct insulation meets the EPA minimum requirements of R-6.
X	Mechanical ventilation system is installed in the home.
X	ENERGY STAR Checklists fully verified and complete.



This home **MEETS** or **EXCEEDS** the energy efficiency requirements for designation as an EPA ENERGY STAR Version 3.1 Qualified Home.  
HERS Index w/o PV <= HERS Index of Reference Design Home AND HERS Index <= HERS Index Target to comply.

## Pollution Prevented

Type of Emissions	Reduction
Carbon Dioxide (CO2) - tons/yr	1.7
Sulfur Dioxide (SO2) - lbs/yr	1.1
Nitrogen Oxides (NOx) - lbs/yr	3.1

## Energy Cost Savings

	\$/yr
Heating	684
Cooling	39
Water Heating	299
Lights & Appliances	297
Total	1318

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version 3.1 Reference Home as defined in the ENERGY STAR Qualified Homes HERS Index Target Procedure for National Program Requirements, Version 3.1 promulgated by the Environmental Protection Agency (EPA). In accordance with RESNET Mortgage Industry National Home Energy Rating Systems Standards, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads.

### REM/Rate - Residential Energy Analysis and Rating Software v14.6

This information does not constitute any warranty of energy cost or savings.

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# ENERGY STAR v3.1 Home Verification Summary

## Property

Parfitt  
1417 17th  
Anacortes, WA 98273

## Organization

Viridian Northwest  
(360) 464-4046  
Daimon Doyle

## HERS

Confirmed Rating  
6/1/2016  
Rating No: VNW-1524  
Rater ID: 4424648

Weather: Whidbey Island, WA  
CVH\_Parfitt  
Parfitt Final.blg

## Builder

Clifton View Homes

## Confirmed Rating: - No Registry ID

### Building Information

Conditioned Area (sq ft)	2873
Conditioned Volume (cubic ft)	32680
Insulated Shell Area (sq ft)	6604
Number of Bedrooms	2
Housing Type	Single-family detached
Foundation Type	Slab

### Rating

HERS Index	-19
HERS Index w/o PV	39
HERS Index Target (SAF Adjusted)	57
HERS Index of Reference Design Home	60
Size Adjustment Factor	0.95



This home MEETS OR EXCEEDS the EPA's requirements for an ENERGY STAR Home.  
HERS Index w/o PV <= HERS Index of Reference Design Home AND HERS Index <= HERS Index Target to comply.

### Building Shell

Ceiling w/Attic	None	Window Type	Vinyltek2000,LoEa,SH
Sealed Attic	None	Window	U-Value: 0.210, SHGC: 0.390
Vaulted Ceiling	10 1/4 SIPS Vaulted U=0.026	Window/Wall Ratio	0.20
Above Grade Walls	SIP 5-5/8" U=0.043	Infiltration Type	Blower door test
Found. Walls(Cond)	R-10 Int, 2 ft deep R=10.0	Infiltration	Htg: 0.82 Clg: 0.82 ACH50
Found. Walls(Uncond)	None	Duct Leakage to Outside	NA
Floors	None	Total Duct Leakage	NA
Slab Floors	R-20 Continuous U=0.032		

### Mechanical Systems

ASHP	Htg: 28.7 kBtuh, 13.0 HSPF. Clg: 28.5 kBtuh, 9.3 SEER.
Water Heating	Ground source heat pump, Elec, 4.50 EF.
Programmable Thermostat	Heat=Yes; Cool=Yes
Ventilation System	Exhaust Only: 60 cfm, 6.0 watts.

### Lights and Appliances

Percent Interior Lighting	100.00	Clothes Dryer Fuel	Electric
Percent Garage Lighting	100.00	Clothes Dryer EF	2.73
Refrigerator (kWh/yr)	665.00	Clothes Washer LER	96.00
Dishwasher kWh/yr	259	Clothes Washer Capacity	3.81
Ceiling Fan (cfm/Watt):	0.00	Range/Oven Fuel	Electric

Note: Where feature level varies in home, the dominant value is shown.

REM/Rate - Residential Energy Analysis and Rating Software v14.6

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# Energy Appraisal Addendum

**Property**

Parfitt  
1417 17th  
Anacortes, WA 98273

**Organization**

Viridian Northwest  
(360) 464-4046  
Daimon Doyle

**HERS**

Confirmed Rating  
6/1/2016  
Rating No: VNW-1524  
Rater ID: 4424648

Weather: Whidbey Island, WA  
CVH\_Parfitt  
Parfitt Final.blg

**Builder**

Clifton View Homes

This form is to be filled out and a copy attached to the Uniform Residential Appraisal Report (FHLMC Form 70; FNMA Form 1004) and submitted in conjunction with the Home Energy Rating Report.

In order to evaluate the energy efficiency of the dwelling improvements, and in the absence of comparable sales or other traditional database, the appraiser has reviewed both the estimate of energy efficiency improvement costs and calculated the present worth of the energy efficient improvements as provided by the Certified HERS Energy Rater.

The energy efficiency value increment, based on the lesser of the referenced improvement cost or present worth estimate, is concluded in the sum of \$\_\_\_\_\_, which represents an added value to the market value conclusion set forth in the appraisal report.

ADJUSTED VALUE

CONCLUSION

MARKET VALUE

ENERGY-EFFICIENCY INCREMENT

TOTAL ESTIMATED VALUE

\$ \_\_\_\_\_

\$ \_\_\_\_\_

\$ \_\_\_\_\_

**DRAFT**

\_\_\_\_\_  
Appraiser Signature

\_\_\_\_\_  
Date

## SPECIAL LIMITING CONDITION FOR USE WITH FHLMC AND FNMA EEM PILOTS

In providing the final estimate of total estimated value, the appraiser has included added value based on the lower of the cost of energy improvements or a net present worth calculation of the projected energy savings of the property provided by the Certified HERS Energy Rater. The appraiser does not assume responsibility for the accuracy of the calculation provided by the rater. The appraiser has used an acceptable valuation methodology in including the cost or present worth calculation due to absence of comparable market data on energy efficient properties as stipulated by FNMA and FHLMC for the period of this pilot. The results of the present worth calculation of energy savings and therefore the final estimate of value, are subject to variance based on the effective use and maintenance of the items and the lifestyle of the occupants of the property.

URLR - Energy Appraisal Addendum

Energy Mortgage Pilot Form 70B - Freddie Mac; Energy Mortgage Pilot Form 1004C - Fannie Mae

**REM/Rate - Residential Energy Analysis and Rating Software v14.6**

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# Home Energy Rating Certificate

**Property**

Parfitt  
1417 17th  
Anacortes, WA 98273

**HERS**

Rating Type: Confirmed Rating  
Rating Date: 6/1/2016  
Registry ID:

Certified Energy Rater: Daimon Doyle  
Rating Number: VNW-1524

**Confirmed Rating: - No Registry ID**

**HERS Index: -18**

**General Information**

Conditioned Area	2873 sq. ft.	House Type	Single-family detached
Conditioned Volume	32680 cubic ft.	Foundation	Slab
Bedrooms	2		

**Mechanical Systems Features**

Air-source heat pump:	Electric, Htg: 13.0 HSPF. Clg: 9.3 SEER.
Water Heating:	Ground source heat pump, Electric, 4.50 EF, 50.0 Gal.
Duct Leakage to Outside	NA
Ventilation System	Exhaust Only: 60 cfm, 6.0 watts.
Programmable Thermostat	Heat=Yes; Cool=Yes

**Building Shell Features**

Ceiling Flat	NA	Slab	R-10.0 Edge, R-20.0 Under
Sealed Attic	NA	Exposed Floor	NA
Vaulted Ceiling	R-0.0	Window Type	U-Value: 0.210, SHGC: 0.390
Above Grade Walls	R-16.5	Infiltration Rate	Htg: 0.82 Clg: 0.82 ACH50
Foundation Walls	R-10.0	Method	Blower door test

**Lights and Appliance Features**

Percent Interior Lighting	100.00	Range/Oven Fuel	Electric
Percent Garage Lighting	100.00	Clothes Dryer Fuel	Electric
Refrigerator (kWh/yr)	665	Clothes Dryer EF	2.73
Dishwasher (kWh/yr)	259	Ceiling Fan (cfm/Watt)	0.00

**Estimated Annual Energy Cost**

Use	MMBtu	Cost	Percent
Heating	16.1	\$222	-76%
Cooling	4.3	\$37	-13%
Hot Water	1.8	\$55	-19%
Lights/Appliances	20.5	\$561	-193%
Photovoltaics	-46.1	\$-1260	433%
Service Charges		\$94	-32%
<b>Total</b>	<b>-3.3</b>	<b>\$-291</b>	<b>100%</b>

**Criteria**

This home meets or exceeds the minimum criteria for the following:

TITLE

Company

Address

City, State, Zip

Phone #

Fax #

**REM/Rate - Residential Energy Analysis and Rating Software v14.6**

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The Home Energy Rating Standard Disclosure for this home is available from the rating provider.



## RESNET HERS Index Certificate

**Confirmed Rating: - No  
Registry ID**

Annual Estimates\*:

C02 emissions(Tons): -1

Energy Savings (\$)\*\*: 2226

\*Based on standard operating conditions

\*\*Based on U.S. DOE designation of a HERS  
Index of 130 as the 'Typical Existing Home'

TITLE

Company

Address

City, State, Zip

Phone #

This home has been inspected  
and performance tested in  
accordance with Chapter 3 of  
the RESNET standards.

**RESNET**<sup>®</sup>  
www.resnet.us

### HERS<sup>®</sup> Index

