

ALTERATIONS TO SPACE CONDITIONING SYSTEMS
(FORMERLY CF-1R-ALT-HVAC)

CF1R-ALT-02-E

(Page 1 of 3)

CERTIFICATE OF COMPLIANCE

Project Name:	34500 Annapolis Rd	Enforcement Agency:	Sonoma, County of
Dwelling Address:	34500 Annapolis Rd	Permit Number:	BLD24-2315
City and Zip Code	Annapolis, 95412	Permit Application Date:	2024-04-19

A. General Information

CF1R-ALT-02 is applicable to multiple space conditioning systems contained within a single dwelling unit.

01	Project Name	34500 Annapolis Rd	02	Date Prepared	2024-05-07
03	Project Location	34500 Annapolis Rd	04	Building Type	Single family
05	CA City	Annapolis	06	Dwelling Unit Name	34500 Annapolis Rd
07	Zip Code	95412	08	Dwelling Unit Conditioned Floor Area (ft ²)	2520
09	Climate Zone	1	10	Number of Space Conditioning (SC) Systems in this Dwelling Unit:	1

B. Space Conditioning (SC) System Information

01	02	03	04	05	06	07	08	09	10
SC System ID or Name	SC System Location or Area Served	CFA served by this SC System (ft ²)	Is the SC system a ducted system?	Installing a refrigerant containing component?	Installing new SC system components?	Installing more than 25 feet of ducts?	Installing entirely new duct system?	Installing entirely new SC system?	Alteration Type
System 1	Location 1	2520	Yes	No	Yes	Yes	No	No	Altered space conditioning system

Registration Number: 424-A020080276A-000-000-0000000-0000

Registration Date/Time: 2024-05-07 15:11:08

HERS Provider: CHEERS

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C. Extension of Existing Duct System, Greater Than 25 Feet (Section 150.2(b)1Diib)

This section does not apply to this project.

D. Altered Space Conditioning System (Sections 150.2(b)1E and F)

01	02	03	04	05	06	07	08	09	010	11	12	13	14
System ID/ Name	SC System Description of Area Served	Heating System Type	Altered Heating Component s	Heating Efficiency Type	Heating Minimum Efficiency Value	Cooling System Type	Altered Cooling Component s	Cooling Efficiency Type	Cooling Minimum Efficiency Value SEER/SEER2	Cooling Minimum Efficiency Value EER/EER2/C EER	Required Thermostat Type	New or Replaced Duct Length	New Duct R-Value
System 1	Location 1	Central gas furnace	All new heating components	AFUE	97	Central split AC	No Cooling Component Altered	n/a	n/a	n/a	Setback	Greater than 25 feet	R-8

Required Documentation:

CF2R-MCH-01-E - Space Conditioning Systems

- Duct insulation requirement for the new portions of supply-air and return-air ducts or plenums: R6 (CZ 3, 5-7) and R8 (CZ 1, 2, 4, 8-16)

CF2R and CF3R-MCH-20-H - Duct Leakage Test required when heating or cooling components are installed in ducted systems, or when more than 25 ft of duct length is replaced

- Leakage rate compliance: less than or equal to 10% or less than or equal to 7% leakage to outside, or seal all accessible leaks.

CF2R and CF3R-MCH-25-H Refrigerant Charge verification required when refrigerant containing components are installed or altered (applicable in CZ 2, 8-15).

CF2R and CF3R-MCH-23 Airflow Rate greater than or equal to 300 CFM per ton required when MCH-25 is required.

Exceptions:

- Duct systems registered with HERS provider as previously sealed are exempt from MCH-20 Duct Leakage Testing requirements.

- Heating-only systems and Air Handler Furnace changes do not require verification of Air Flow MCH-23, or Refrigerant Charge MCH-25.

- Existing duct systems constructed, insulated or sealed with asbestos are exempt from MCH-20 Duct Leakage Testing requirements.

E. Entirely New or Complete Replacement Duct System, with or without Equipment Changeout (Sections 150.2(b)1Diia and 150.2(b)1E, F)

This section does not apply to this project.

F. Entirely New or Complete Replacement Space Conditioning System (Section 150.2(b)1C)

This section does not apply to this project.

ALTERATIONS TO SPACE CONDITIONING SYSTEMS
(FORMERLY CF-1R-ALT-HVAC)

CF1R-ALT-02-E

(Page 3 of 3)

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:
Marcelus Jones Sr

Documentation Author Signature:

*Marcelus Jones Sr*Company:
Archon Energy SolutionsSignature Date:
2024-05-07Address:
46 Union Way VacavilleCEA/ HERS Certification Identification (if applicable):
RCN13748City/State/Zip:
Vacaville CA 95687Phone:
888-600-1614

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to accomplish this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

Responsible Designer Name:
Joe Pires

Responsible Designer Signature:

*Joe Pires*Company :
Moore Home ServicesDate Signed:
2024-05-07Address:
3242 Airway DriveLicense:
1051850City/State/Zip:
Santa Rosa CA 95403Phone:
(707) 433-2250

Digitally signed by California Home Energy Efficiency Rating Services (CHEERS). This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

Registration Number: 424-A020080276A-000-000-0000000-0000

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CERTIFICATE OF INSTALLATION

Project Name:	34500 Annapolis Rd	Enforcement Agency:	Sonoma, County of
Dwelling Address:	34500 Annapolis Rd	Permit Number:	BLD24-2315
City and Zip Code	Annapolis, 95412	Permit Application Date:	2024-04-19

A. General Information					
01	Dwelling Unit Name	34500 Annapolis Rd	02	Climate Zone	1
03	Dwelling Unit Total Conditioned Floor Area (ft ²)	2520	04	Number of Space Conditioning Systems in this Dwelling Unit.	1
05	Certificate of Compliance Type	Prescriptive alterations (CF1R-ALT)	06	Method Used to Calculate HVAC Loads (See Section 150.0(h))	Not applicable - equipment changeout, like-for-like
07	Calculated Dwelling Unit Sensible Cooling Load (Btu/h)	n/a	08	Calculated Dwelling Unit Heating Load (Btu/h)	n/a
09	Dwelling Unit Number of Bedrooms	7			

MCH-01b - Space Conditioning Systems Ducts and Fans - Prescriptive Alterations



B. Space Conditioning (SC) System Information									
01	02	03	04	05	06	07	08	09	10
SC System ID/ Name from parent CC	SC System Description of Area Served	CFA served by this SC System (ft ²)	Is the SC system a ducted system?	Does work include installing a refrigerant containing component?	Does work include installing new SC system components?	Does work include installing more than 25 feet of ducts?	Does work include installing an "entirely new duct system"?	Does work include installing an "entirely new SC system"?	Alteration Type
System 1	Location 1	2520	Yes	No	Yes	Yes	No	No	Altered space conditioning system
Notes:									

C. Space Conditioning (SC) System Alterations Compliance Information														
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
SC System ID/ Name from parent CC	SC System Description of Area Served	Heating System Type	Altered Heating Component	Heating Efficiency Type	Heating Minimum Efficiency Value	Cooling System Type	Altered Cooling Component	Cooling Efficiency Type	Cooling Minimum Efficiency Value SEER/SEER 2	Cooling Minimum Efficiency Value EER/EER2/ CEER	Required Thermostat Type	Number of Indoor Units for this System	Number of Ducted Indoor Units for this System	Central Fan Integrated (CFI) Ventilation System Status
System 1	Location 1	Central gas furnace	All new heating components	AFUE	97	Central split AC	No Cooling Component Altered	n/a	n/a	n/a	Setback	1	1	Not a CFI system
Notes:														



D. Installed Heating Equipment Information for Gas Furnace Indoor Unit, or Heat Pump Indoor Unit, or Packaged Unit (Gas Furnace or Heat Pump)									
01	02	03	04	05	06	07	08	09	10
SC System ID/ Name from parent CC	SC System Description of Area Served	Heating Efficiency Type	Heating Efficiency Value	Indoor Unit or Packaged Unit Manufacturer	Indoor Unit or Packaged Unit Model Number	Indoor Unit or Packaged Unit Serial Number	SC System Rated Heating Capacity, Output (Btu/h)	Multi-Split Systems only	
								Indoor Unit Name or Description of Area Served	Indoor Unit Duct Status
System 1	Location 1	AFUE	97	LENNOX	EL297UH070XE36 B-01	5924C01408	65340	n/a	n/a

E. Installed Cooling Equipment Information for Outdoor Condenser or Packaged Unit (Air Conditioner or Heat Pump)									
01	02	03	04	05	06	07	08	09	10
SC System ID/ Name from parent CC	SC System Description of Area Served	Cooling Efficiency Type	Cooling Efficiency Value SEER/SEER2	Cooling Efficiency Value EER/EER2/CEER	Condenser or Package Unit Manufacturer	Condenser or Package Unit Model Number	Condenser or Package Unit Serial Number	System Cooling Capacity at Design Conditions (Btu/h)	Condenser Nominal Capacity (tons)
Notes:									

F. Altered Space Conditioning System Duct Information (< 75% of duct system is altered; or duct system is not altered)											
01	02	03	04	05	06	07	08	09	10	11	12
SC System ID/ Name from parent CC	SC System Description of Area Served	Indoor Unit Name or Description of Area Served	Was Any New Ducting Installed?	Required New Duct R-Value	Installed New Supply Duct Location	Installed New Supply Duct R-value	Installed New Return Duct Location	Installed New Return Duct R-Value	Exception from Min R-Value	Can Approved Airflow Protocols be used to test this System?	Indoor Unit Nominal Cooling capacity (tons)
System 1	Location 1	Location 1	Both Supply and Return	R-8	Unconditioned crawl space	R-8	Unconditioned crawl space	R-8	No Exception	Yes	n/a

G. Installed New or Complete Replacement Duct System Information
This section does not apply to this project.

**H. Installed Air Filter Device Information**

This section does not apply to this project.

I. Air Filter Device Requirements

This section does not apply to this project.

J. HERS Verification Requirements for Duct Systems

01	02	03	04	05	06	07	08	09
SC System Identification or Name	SC System Description of Area Served	Indoor Unit Name or Description of Area Served	Exemption From Duct Leakage Requirements	MCH-20 Duct Leakage Test	MCH-21 Duct Location Verification	MCH-22 AHU Fan Efficacy (W/cfm)	MCH-23 AHU Airflow Rate (cfm/ton)	MCH-28 Return Duct Design - Table 160.3-A or B
System 1	Location 1	Location 1	None	Yes	No	No	No	No

Notes:

K. HERS Verification Requirements For Space Conditioning Equipment

01	02	03
SC System ID/ Name from parent CC	SC System Description of Area Served	MCH-25 Refrigerant Charge
System 1	Location 1	No

Notes:



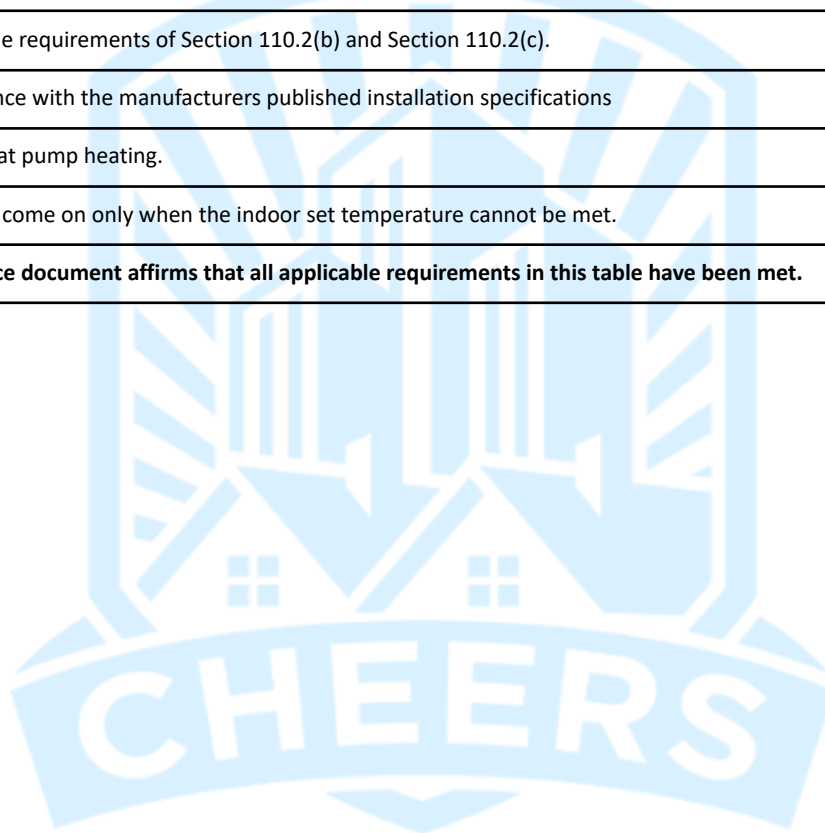
L. Space Conditioning Systems, Ducts and Fans Mandatory Requirements and Additional Measures Additional mandatory requirements from Section 150.0 that are not listed here may be applicable to some systems. These requirements may be applicable to only newly installed equipment or portions of the system that are altered. Existing equipment may be exempt from these requirements.	
Heating Equipment	
01	Equipment Efficiency: All heating equipment must meet the minimum efficiency requirements of Section 110.1 and Section 110.2(a) and the Appliance Efficiency Regulations.
02	Controls: All unitary heating systems, including heat pumps, must be controlled by a setback thermostat. These thermostats must be capable of allowing the occupant to program the temperature set points for at least four different periods in 24 hours. See Sections 150.0(i), 110.2(b).
03	Sizing: Heating load calculations must be done on portions of the building served by new heating systems to prevent inadvertent undersizing or oversizing. See sections 150.0(h)1 and 2).
04	Furnace Temperature Rise: Central forced-air heating furnace installations must be configured to operate at or below the furnace manufacturer's maximum inlet-to-outlet temperature rise specification. See Section 150.0(h)4.
05	Standby Losses and Pilot Lights: Fan-type central furnaces may not have a continuously burning pilot light. Section 110.5 and Section 110.2(d).
Cooling Equipment	
06	Equipment Efficiency: All cooling equipment must meet the minimum efficiency requirements of Section 110.1 and Section 110.2(a) and the Appliance Efficiency Regulations.
07	Refrigerant Line Insulation: All refrigerant line insulation in split system air conditioners and heat pumps must meet the R-value and protection requirements of Section 150.0(j)2 and 3, and Section 150.0(m)9.
08	Condensing Unit Location: Condensing units shall not be placed within five (5) feet of a dryer vent outlet. See Section 150.0(h)3A.
09	Liquid Line Filter Drier: A liquid line filter drier shall be installed according to the manufacturer's specifications 150.0(h)3B
10	Sizing: Cooling load calculations must be done on portions of the building served by new cooling systems to prevent inadvertent undersizing or oversizing. See Section 150.0(h)1 and 2.
Air Distribution System Ducts, Plenums and Fans	
11	Insulation: The minimum duct insulation value is R-6 or ducts can be uninsulated if the duct system is located entirely in conditioned space. Note that higher values may be required by the prescriptive or performance requirements. See Section 150.0(m)1B for exceptions.
12	Connections and Closures: All installed air-distribution system ducts and plenums must be, sealed and insulated to meet the requirements of CMC Sections 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-006-2006.
Heat Pump Thermostat	

**L. Space Conditioning Systems, Ducts and Fans Mandatory Requirements and Additional Measures**

Additional mandatory requirements from Section 150.0 that are not listed here may be applicable to some systems. These requirements may be applicable to only newly installed equipment or portions of the system that are altered. Existing equipment may be exempt from these requirements.

13	A thermostat shall be installed that meets the requirements of Section 110.2(b) and Section 110.2(c).
14	The thermostat shall be installed in accordance with the manufacturers published installation specifications
15	First stage of heating shall be assigned to heat pump heating.
16	Second stage back up heating shall be set to come on only when the indoor set temperature cannot be met.

The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.



**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Installation documentation is accurate and complete.

Documentation Author Name:

Marcelus Jones Sr

Documentation Author Signature:

Marcelus Jones Sr

Company:

Archon Energy Solutions

Signature Date:

2024-05-07

Address:

46 Union Way Vacaville

CEA/ HERS Certification Identification (if applicable):

RCN13748

City/State/Zip:

Vacaville CA 95687

Phone:

888-600-1614

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Installation is true and correct.
2. I am either: a) a responsible person eligible under Division 3 of the Business and Professions Code in the applicable classification to accept responsibility for the system design, construction, or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Installation, and attest to the declarations in this statement, or b) I am an authorized representative of the responsible person and attest to the declarations in this statement on the responsible person's behalf.
3. The constructed or installed features, materials, components or manufactured devices (the installation) identified on this Certificate of Installation conforms to all applicable codes and regulations and the installation conforms to the requirements given on the Certificate of Compliance, plans, and specifications approved by the enforcement agency.
4. I understand that a registered copy of this Certificate of Installation shall be posted or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to ensure this requirement is accomplished.
5. I understand that a registered copy of this Certificate of Installation is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to ensure this requirement is accomplished.

Responsible Builder/Installer Name:

Joe Pires (authorized Marcelus Jones Sr)

Responsible Builder/Installer Signature:

Marcelus Jones Sr

Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)

Moore Home Services

Position With Company (Title):

Address:

3242 Airway Drive

CSLB License:

1051850

City/State/Zip:

Santa Rosa CA 95403

Phone:

(707) 433-2250

Date Signed:

2024-05-07

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Dwelling Address:	34500 Annapolis Rd	Permit Number:	BLD24-2315
City and Zip Code	Annapolis, 95412	Permit Application Date:	2024-04-19

A. System Information		
01	Space Conditioning System Identification or Name	System 1
02	Space Conditioning System Location or Area Served	Location 1
03	Indoor Unit Name or Description of Area Served	Location 1
04	Building Type from parent CC	Single family
05	Verified Low Leakage Ducts in Conditioned Space (VLLDCS) Credit from parent CC?	No, credit is not taken
06	Verified Low Leakage Air Handling Unit Credit from parent CC?	No, credit is not taken
07	Duct System Compliance Category	Alteration using smoke test
08	Portions of Duct Located in Garage?	No
09	Is the system type Small Duct High Velocity (SDHV) ?	No

MCH-20e - Sealing All Accessible Leaks using Smoke Test

B. Duct Leakage Diagnostic Test		
01	Air Handling Unit Airflow (AHU Airflow) Determination Method	Heating system method
02	Condenser Nominal Cooling Capacity (ton)	n/a
03	Indoor Unit Nominal Cooling Capacity	n/a
04	Heating Capacity (kBtu/h)	65.3
05	Conditioned Floor Area Served by this HVAC System (ft ²)	2520
06	Measured AHU Airflow (cfm)	n/a
07	Duct Leakage Test Conditions	Test final
08	Duct Leakage Test Method	Total leakage
09	Leakage Factor	0.1
10	Calculated Target Allowable Duct Leakage (cfm)	141.7
11	Actual Duct Leakage Rate from Leakage Test Measurement (cfm)	404
12	Compliance Statement:	<p>System passes using smoke test of an altered HVAC system in an existing building.</p> <ul style="list-style-type: none"> No visible smoke exits the accessible portions of the duct system. Smoke is only emanating from air-handling unit (AHU) cabinet and non-accessible portions of the duct system. <p>Note: Accessible is defined as having access thereto, but which first may require removal or opening of access panels, doors, or moving similar obstructions. If access to the ducts requires an object to be demolished or deconstructed then sealing of those ducts is not required</p>

C. DUCTS LOCATED IN GARAGE SPACES
This section does not apply to this project.

D. Additional Requirements for Compliance	
01	System was tested in its normal operation condition. No temporary taping allowed.
02	Outside air (OA) duct connections to the central forced air duct system shall not be sealed/taped off during duct leakage testing. OA ducts used for Central Fan Integrated (CFI) Indoor Air Quality ventilation systems, or Central Fan Ventilation Cooling Systems, that utilize dampers that open only when OA is required and automatically close when OA is not required, may configure the OA damper to the closed position during duct leakage testing.
03	All supply and return register boots were sealed to the drywall.
04	Building cavities were not used as plenums or platform returns in lieu of ducts.
05	If cloth backed tape was used it was covered with Mastic and draw bands.

 Registration Number:
 424-A020080276A-000-001-M20002A-0000

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**D. Additional Requirements for Compliance**

06	All connection points between the air handler and the supply and return plenums are completely sealed.
07	If the system complies using the Smoke Test method, the smoke test was conducted in accordance with the requirements of Reference Residential Appendix RA3.1.4.3.6. Systems that comply using smoke test shall not be included in sample groups for HERS verification compliance.

The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.



DOCUMENTATION AUTHOR'S DECLARATION STATEMENT		
1. I certify that this Certificate of Installation documentation is accurate and complete.		
Documentation Author Name: Marcelus Jones Sr	Documentation Author Signature: <i>Marcelus Jones Sr</i>	
Company: Archon Energy Solutions	Signature Date: 2024-05-07	
Address: 46 Union Way Vacaville	CEA/ HERS Certification Identification (if applicable): RCN13748	
City/State/Zip: Vacaville CA 95687	Phone: 888-600-1614	
RESPONSIBLE PERSON'S DECLARATION STATEMENT		
I certify the following under penalty of perjury, under the laws of the State of California:		
<ol style="list-style-type: none"> 1. The information provided on this certificate of installation is true and correct. 2. I am either: a) a responsible person eligible under division 3 of the business and professions code in the applicable classification to accept responsibility for the system design, construction, or installation of features, materials, components, or manufactured devices for the scope of work identified on this certificate of installation, and attest to the declarations in this statement, or b) i am an authorized representative of the responsible person and attest to the declarations in this statement on the responsible person's behalf. 3. The constructed or installed features, materials, components or manufactured devices (the installation) identified on this certificate of installation conforms to all applicable codes and regulations and the installation conforms to the requirements given on the certificate of compliance, plans, and specifications approved by the enforcement agency. 4. I understand that a HERS rater will check the installation to verify compliance and if such checking determines the installation fails to comply, I am required to offer any necessary corrective action at no charge to the building owner. 5. I understand that a registered copy of this certificate of installation shall be posted or made available with the building permit(s) issued for the building and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to ensure this requirement is accomplished. 6. I understand that a registered copy of this certificate of installation is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to ensure this requirement is accomplished. 		
Responsible Builder/Installer Name: Joe Pires (authorized Marcelus Jones Sr)	Responsible Builder/Installer Signature: <i>Marcelus Jones Sr</i>	
Company Name: (Installing Subcontractor or General Contractor or Builder/Owner) Moore Home Services	Position With Company (Title):	
Address: 3242 Airway Drive	CSLB License: 1051850	
City/State/Zip: Santa Rosa CA 95403	Phone: (707) 433-2250	Date Signed: 2024-05-07
Third Party Quality Control Program (TPQCP) Status:	Name of TPQCP (if applicable):	

Digitally signed by California Home Energy Efficiency Rating Services (CHEERS). This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

 Registration Number:
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HERS Provider: CHEERS

 CA Building Energy Efficiency Standards
2022 Residential Compliance

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CERTIFICATE OF VERIFICATION

Project Name:	34500 Annapolis Rd	Enforcement Agency:	Sonoma, County of
Dwelling Address:	34500 Annapolis Rd	Permit Number:	BLD24-2315
City and Zip Code	Annapolis, 95412	Permit Application Date:	2024-04-19

A. System Information

01	Space Conditioning System Identification or Name	System 1
02	Space Conditioning System Location or Area Served	Location 1
03	Indoor Unit Name or Description of Area Served	Location 1
04	Building Type from parent CC	Single family
05	Verified Low Leakage Ducts in Conditioned Space (VLLDCS) Credit from parent CC?	No, credit is not taken
06	Verified Low Leakage Air Handling Unit Credit from parent CC?	No, credit is not taken
07	Duct System Compliance Category	Alteration using smoke test
08	Portions of Duct Located in Garage?	No
09	Is the system type Small Duct High Velocity (SDHV) ?	No

MCH-20e - Sealing All Accessible Leaks using Smoke Test

B. Duct Leakage Diagnostic Test

01	Air Handling Unit Airflow (AHU Airflow) Determination Method	Heating system method
02	Condenser Nominal Cooling Capacity (ton)	n/a
03	Indoor Unit Nominal Cooling Capacity	n/a
04	Heating Capacity (kBtu/h)	65.3
05	Conditioned Floor Area Served by this HVAC System (ft ²)	2520
06	Measured AHU Airflow (cfm)	n/a
07	Duct Leakage Test Conditions	Test final
08	Duct Leakage Test Method	Total leakage
09	Leakage Factor	0.1

Registration Number:
424-A020080276A-000-001-M20002A-M20A

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**B. Duct Leakage Diagnostic Test**

10	Calculated Target Allowable Duct Leakage (cfm)	141.7
11	Actual Duct Leakage Rate from Leakage Test Measurement (cfm)	404
12	Compliance Statement:	<p>System passes using smoke test of an altered HVAC system in an existing building.</p> <ul style="list-style-type: none">No visible smoke exits the accessible portions of the duct system.Smoke is only emanating from air-handling unit (AHU) cabinet and non-accessible portions of the duct system. <p>Note: Accessible is defined as having access thereto, but which first may require removal or opening of access panels, doors, or moving similar obstructions. If access to the ducts requires an object to be demolished or deconstructed then sealing of those ducts is not required</p>
13	Notes:	

C. Ducts Located in Garage Spaces

01	Duct Leakage Test Method	
02	Leakage Factor	
03	Air Handling Unit Airflow (AHU Airflow) Determination Method	
04	Measured AHU Airflow (cfm)	
05	Calculated Target Allowable Duct Leakage (cfm)	
06	Actual Duct Leakage Rate from Leakage Test Measurement (cfm)	
07	Compliance Statement:	

D. Additional Requirements for Compliance

01	System was tested in its normal operation condition. No temporary taping allowed.
02	Outside air (OA) duct connections to the central forced air duct system shall not be sealed/taped off during duct leakage testing. OA ducts used for Central Fan Integrated (CFI) Indoor Air Quality ventilation systems, or Central Fan Ventilation Cooling Systems, that utilize dampers that open only when OA is required and automatically close when OA is not required, may configure the OA damper to the closed position during duct leakage testing.
03	All supply and return register boots were sealed to the drywall.
04	Building cavities were not used as plenums or platform returns in lieu of ducts.
05	If cloth backed tape was used it was covered with Mastic and draw bands.
06	All connection points between the air handler and the supply and return plenums are completely sealed.

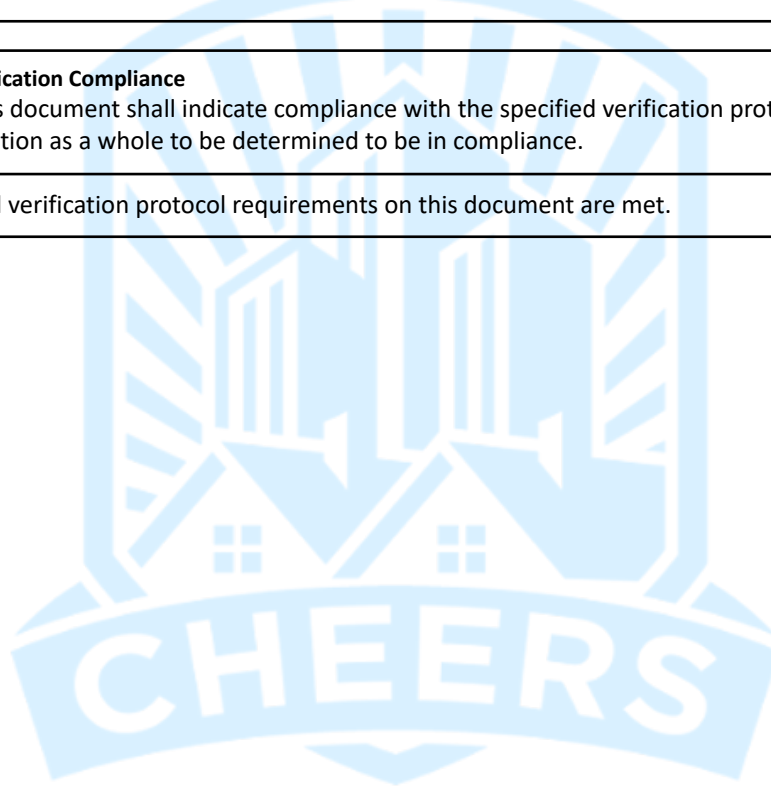
**D. Additional Requirements for Compliance**

07	If the system complies using the Smoke Test method, the smoke test was conducted in accordance with the requirements of Reference Residential Appendix RA3.1.4.3.6. Systems that comply using smoke test shall not be included in sample groups for HERS verification compliance.	
08	Verification Status:	Pass - all applicable requirements are met.
09	Correction Notes:	
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met unless otherwise noted in the Verification Status and the Corrections Notes in this table.		

E. Determination of HERS Verification Compliance

All applicable sections of this document shall indicate compliance with the specified verification protocol requirements in order for this Certificate of Verification as a whole to be determined to be in compliance.

01	Complies: All specified verification protocol requirements on this document are met.
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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Verification documentation is accurate and complete.	
Documentation Author Name: Marcelus Jones Sr	Documentation Author Signature: <i>Marcelus Jones Sr</i>
Company: Archon Energy Solutions	Date Signed: 2024-05-07
Address: 46 Union Way Vacaville	CEA/ HERS Certification Identification (if applicable): RCN13748
City/State/Zip: Vacaville CA 95687	Phone: 888-600-1614
RESPONSIBLE PERSON'S DECLARATION STATEMENT	
I certify the following under penalty of perjury, under the laws of the State of California: <ol style="list-style-type: none"> The information provided on this Certificate of Verification is true and correct. I am the certified HERS Rater who performed the verification identified and reported on this Certificate of Verification (responsible rater). The installed features, materials, components, manufactured devices, or system performance diagnostic results that require HERS verification identified on this Certificate of Verification comply with the applicable requirements in Reference Appendices RA2, RA3, and the requirements specified on the Certificate of Compliance for the building approved by the enforcement agency. The information reported on applicable sections of the Certificate(s) of Installation (CF2R) signed and submitted by the person(s) responsible for the construction or installation conforms to the requirements specified on the Certificate(s) of Compliance (CF1R) approved by the enforcement agency. I understand that a registered copy of this Certificate of Verification shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to ensure this requirement is accomplished. I understand that a registered copy of this Certificate of Verification is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to ensure this requirement is accomplished. 	
BUILDER OR INSTALLER INFORMATION AS SHOWN ON THE CERTIFICATE OF INSTALLATION	
Company Name (Installing Subcontractor, General Contractor, or Builder/Owner): Moore Home Services	
Responsible Builder or Installer Name: Joe Pires (authorized Marcelus Jones Sr)	CSLB License: 1051850
HERS PROVIDER DATA REGISTRY INFORMATION	
Sample Group Number (if applicable):	Dwelling Test Status in Sample Group (if applicable) N/A
HERS RATER INFORMATION	
HERS Rater Company Name: Archon Energy Solutions	
Responsible Rater Name: Marcelus Jones Sr	Responsible Rater Signature: <i>Marcelus Jones Sr</i>
Responsible Rater Certification Number w/ this HERS Provider: RCN13748	Date Signed: 2024-05-07

Digitally signed by California Home Energy Efficiency Rating Services (CHEERS). This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

 Registration Number:
424-A020080276A-000-001-M20002A-M20A

Registration Date/Time: 2024-05-07 15:12:09

HERS Provider: CHEERS

 CA Building Energy Efficiency Standards
2022 Residential Compliance

 Report Version: 2022.0.000
Schema Version: rev 20220101

Report Generated: 2024-05-07 15:13:27

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CHEERS REGISTRY PROJECT STATUS REPORT



Scan to Validate

PROJECT SUMMARY

Project Name: 34500 Annapolis Rd
Address: 34500 Annapolis Rd
City, State, Zip: Annapolis, CA 95412
Building Department: Sonoma, County of
Permit Number: BLD24-2315
Building Energy Code: 2022 Standards

HERS VERIFIABLE
MEASURES

COMPLETE



ENERGY CODE
COMPLIANCE

COMPLETE



CERTIFICATE OF COMPLIANCE (CF1R)

DATE	DOCUMENT	TITLE	REGISTRATION NUMBER	STATUS
05/07/2024	CF1R-ALT-02-E	Residential HVAC Alterations	424-A020080276A-000-000-00000000-0000	
D06 changed from "0.8" to "97"				

CERTIFICATE OF INSTALLATION (CF2R)

DATE	DOCUMENT	TITLE	REGISTRATION NUMBER	STATUS
05/07/2024	CF2R-MCH-01b-E	HVAC, Ducts and Fans	424-A020080276A-000-001-M01001A-0000	
Location 1				
05/07/2024	CF2R-MCH-20e-H	Duct Leakage	424-A020080276A-000-001-M20002A-0000	

CERTIFICATE OF VERIFICATION (CF3R)

DATE	DOCUMENT	TITLE	REGISTRATION NUMBER	STATUS
05/07/2024	CF3R-MCH-20e-H	Duct Leakage	424-A020080276A-000-001-M20002A-M20A	
Location 1				