INDOOR AIR QUALITY AND MECHANICAL VENTILATION



CEC-LMCV-MCH-27-H

SAMPLE FORM – NOT VALID FOR SUBMISSION TO BUILDING DEPARTMENTS

CERTIFICATE OF VERIFICATION

Note: This table completed by ECC Registry.

| Project Name: | Enforcement Agency: |
|--------------------|--------------------------|
| Dwelling Address: | Permit Number: |
| City and Zip Code: | Permit Application Date: |

Title 24, Part 6, Section 160.2(b)2 **Ventilation and Indoor Air Quality for Attached Dwelling Units.** All dwelling units shall meet the requirements of ANSI/ASHRAE Standard 62.2-2022 Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings subject to the amendments specified by Title 24, Part 6, Section 160.2(b)2

A. Whole-Dwelling Mechanical Ventilation - General Information

Note: Non-dwelling units do not meet the definition for a dwelling unit as defined in Section 100.1(b). Non-dwelling units are not designed to provide independent living facilities and do not provide permanent provisions for living, sleeping, eating, cooking and sanitation.

| | <i>y y</i> 1 <i>y y</i> 3 | |
|----|--|-------|
| 01 | Dwelling Unit Name | |
| 02 | Building Type | |
| 03 | Project Scope | |
| 04 | Total Conditioned Floor Area of Dwelling Unit (For addition projects the conditioned floor area equals existing area plus addition area) | |
| 05 | Number of Bedrooms in Dwelling Unit (For addition projects the number of bedrooms equals the existing bedrooms plus addition bedrooms) | |
| 06 | Ventilation System Type | |
| 07 | Ventilation Operation Schedule | × 0,9 |
| 08 | Fault Indicator Display (FID) Status | |
| 80 | Fault Indicator Display (FID) Status | |

B. Ventilation - Total Ventilation Rate

A mechanical supply system, exhaust system, or combination thereof shall provide whole-dwelling ventilation with outdoor air each hour at no less than the rate in 160.2(b)2Aiv.

| _ | | | |
|----|---|--|--|
| 01 | | | |
| 01 | rotal Required Ventilation rate, (Qtot) | | |
| | | | |

C. Installed Ventilation - Total Ventilation Rate

A mechanical supply system, exhaust system, or combination thereof shall provide whole-dwelling ventilation with outdoor air each hour at no less than the rate in 160.2(b)2Ai.

| 01 | 02 | 03 | 04 | 05 |
|----------|-------------------------------|-----------------------------|--|---|
| Fan Name | Fan Location | Runtime (Min/Hr) | Installed Mechanical Ventilation Rate (CFM) | Equivalent Continuous Ventilation (CFM) |
| | | | | |
| | | | | |
| | | | | |
| 06 | Total Installed Equivalent Co | ontinuous Ventilation (CFM) | | |

Registration Number: Registration Date/Time: ECC Provider:
CA Building Energy Efficiency Standards - 2025 Low-Rise Multifamily Compliance January 1, 2026

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D. HRV or ERV serving Individual Dwelling Unit

- Heat or Energy Recovery Systems must have a fan efficacy of ≤ 1.0 W/cfm in all climate zones (Section 160.2(b)2Biii).
- Heat or Energy Recovery Systems must prescriptively have a fan efficacy of ≤ 0.6 W/cfm and a minimum sensible heat recovery of 67% in climate zones 1, 2, 4 11-14 and 16 (Section 170.2(c)3Biva).

| | | (| |
|-------------------|---------------------------|---|----------------------------------|
| 01 | 02 | 03 | 04 |
| Manufacturer Make | Manufacturer Model Number | Fan Efficacy Performance Rating (W/CFM) | Sensible Recovery Efficiency (%) |
| | | | |
| | | | |
| | | _ | V 0 V |

| E. Add | itional Envelope Requirements | | | |
|--------|-------------------------------|--|---|--|
| 01 | Envelope Leakage | | 5 | |

F. Additional Central Ventilation System Balancing Requirements 01 Maximum Ventilation Flow (CFM)

G. Fault Indicator Display Installation Verification

Qualification Requirements for Ventilation System Fault Indicator Displays are detailed in in Appendix JA17.

| 01 | FID Manufacturer Name/Make | |
|----|--|------|
| 02 | FID Model Number | 0.6, |
| 03 | The display module is mounted adjacent to the system thermostat. | 2.60 |
| 04 | The manufacturer has certified to the Energy Commission that the FID model meets the requirements of Reference Joint Appendix JA17 (make and model found on CEC list of approved FID devices). | |
| 05 | The system has operated for at least 15 minutes and the FID reports that the system is operating within acceptable parameters. | |
| 06 | Compliance Statement: | |

| H. Compliance Statement |
|-------------------------|
|-------------------------|

| | p.i.di.ioo ota | | | |
|----|----------------|--|--|--|
| 01 | | | | |

I. Determination of ECC 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

| require | ements in order for this Certificate of Verification as a whole to be determined to be in compliance |
|---------|--|
| 01 | |

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

| Documentation Author Name: | Documentation Author Signature: | |
|----------------------------|---|--|
| Company: | Date Signed: | |
| Address: | CEA/AEA/ECC Certification Identification (If applicable): | |
| City/State/Zip: | Phone: | |

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 Verification is true and correct.
- 2. I am the certified ECC Rater who performed the verification identified and reported on this Certificate of Verification (responsible rater).
- 3. The installed features, materials, components, manufactured devices, or system performance diagnostic results that require ECC 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.
- 4. The information reported on applicable sections of the Certificate(s) of Installation (LMCI) signed and submitted by the person(s) responsible for the construction or installation conforms to the requirements specified on the Certificate(s) of Compliance (LMCC) approved by the enforcement agency.
- 5. 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 shall be made available to the enforcement agency for all applicable inspections. I will take the necessary steps to fulfill this requirement.
- 6. 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. I will take the necessary steps to fulfill this requirement.

BUILDER OR INSTALLER INFORMATION AS SHOWN ON THE CERTIFICATE OF INSTALLATION

| Responsible Builder or Installer Name: CSLB License: | | | |
|---|------------------------------|--|--|
| CC PROVIDER DATA REGISTRY INFORMATION | | | |
| Sample Group Number (if applicable): Dwelling Test Status in Sample Group (if applicable): | | | |
| ECC RATER INFORMATION | | | |
| ECC Rater Company Name: | | | |
| Responsible Rater Name: | Responsible Rater Signature: | | |
| Responsible Rater Certification Number w/ this ECC Provider: | Date Signed: | | |

For assistance or questions regarding the Energy Standards, contact the Energy Hotline at: 1-800-772-3300

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| CERTIFICATE OF VERIFICATION - USER INSTRUCTIONS | LMCV-MCH-27-H |
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LMCV-MCH-27-H User Instructions

Section A. General Information

- Building Unit Name: This field is filled out automatically. It is referenced from the LMCI-MCH-01, which
 must be completed prior to this document. This is the unique identifier for this dwelling unit. Needed
 mostly for multifamily dwelling units. Ventilation is calculated and provided for each dwelling unit
 individually.
- 2. Building Type: This field is filled out automatically. It is referenced from the LMCC. Values are "Multifamily". User is allowed to overwrite imported value with "Non-dwelling unit" selection.
- 3. Project Scope: This field is filled out automatically. It is referenced from the LMCC.
 - If parent document is the LMCC-PRF-01, values are "Newly Constructed", "Newly Constructed (Addition Alone)" and "Addition and /or Alteration"
 - If parent document is CF1R-NCB-01, values are "Newly Constructed" and "Newly Constructed (Addition Alone)"
 - If parent document is CF1R-ADD-01, values are "ADU Addition < 300 ft²"," ADU Addition > 300 to < 400 ft²"," ADU Addition > 400 to < 700 ft²" and "ADU Addition > 700 to < 1000 ft²".
- 4. Total Conditioned Floor Area of Dwelling Unit: This field is filled out automatically. It is referenced from the LMCI-MCH-01.
- 5. Number of Bedrooms in Dwelling Unit: This field is filled out automatically. It is referenced from the LMCI-MCH-01.
- 6. Ventilation system Type: This may be filled out automatically or be user input.
 - If parent document is the LMCC-PRF-01, the value will be filled out automatically.
 - If building type is equal to Non-dwelling unit, an N/A value will be filled out automatically.
 - If parent document is the CF1R-NCB or CF1R-ADD, user selects from list of Supply, Exhaust, Balanced, Balanced ERV, Balanced HRV, Central Fan Integrated (CFI), Central Ventilation System Supply and Central Ventilation System Exhaust and Central Ventilation System Balanced.
- 7. Ventilation operation schedule: This may be filled out automatically or be user input.
 - If building type is equal to Non-dwelling unit, an N/A value will be filled out automatically.
 - User selects from list of Continuous, Short-Term Average, Scheduled and Real-time Control.
 - Note if "Ventilation System Type" (A11) = Central Fan Integrated & "Ventilation Operation Schedule" (A12) = Continuous; then user will not be allowed to proceed.

Section B. Whole Building Continuous Ventilation – Total Ventilation Rate Method

1. This value is automatically calculated using equation 160.2-B from the Energy Standards.

Section C. Installed Ventilation - Total Ventilation Rate Method

- 1. User input text identifying the fan name for each installed ventilation fan.
- 2. User input text identifying the fan location for each installed ventilation fan.
- 3. Runtime (Min/Hr): This value may be filled out automatically or be user input.
 - If ventilation operation schedule from section A = "continuous", then value of 60 will be automatically entered.
 - If ventilation operation schedule from section A = "short term average", then user enter value of less than or equal to 60 for each installed ventilation fan.
- 4. User to enter CFM value from test procedures described in RA3.7.4 for each installed ventilation fan.
- 5. Equivalent continuous ventilation CFM is automatically calculated for each ventilation fan.

| CERTIFICATE OF VERIFICATION - USER INSTRUCTIONS | LMCV-MCH-27-H |
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6. Total installed equivalent continuous ventilation CFM is automatically calculated based on the installed ventilation fans.

Section D. HRV or ERV serving Individual Dwelling Unit

- 1. User input manufacturer make of the installed equipment from the manufacturer nameplate.
- 2. User input model number of the installed equipment from the manufacturer nameplate.
- 3. User input the fan efficacy performance rating (W/CFM) for the installed equipment as determined by RA3.7.4.4.
- 4. User input the sensible recovery efficiency performance rating (%) for the installed equipment as determined by RA3.7.4.4.

Section E. Additional Envelope Requirements

1. Envelope Leakage: This field is filled out automatically. It is referenced from the LMCI-MCH-24, which must be completed prior to this document.

Section F. Additional Central Ventilation System Balancing Requirements

1. Maximum Ventilation Flow (CFM): This field is filled out automatically calculated.

Section G. Fault Indicator Display Installation Verification

- 1. Enter the manufacturer name or make of the approved Fault Indicator Display. Must match name shown on the list of approved devices kept by the Commission.
- 2. Enter the manufacturer model number of the approved Fault Indicator Display. Must match name shown on the list of approved devices kept by the Commission.
- 3. The installer must confirm that the FID display module is mounted adjacent to thermostat that controls the system being verified. This requirement is detailed in Residential Appendix JA17.
- 4. The installer must confirm that the installed FID is approved and appears the list of approved devices kept by the Commission. This requirement is detailed in Residential Appendix JA17.
- 5. The installer must confirm that the system has operated for at least 15 minutes and that they system is operating within acceptable parameters as specified by the FID and equipment manufacturers. This requirement is detailed in Residential Appendix JA17.

Section H. Compliance Statement

1. This field is filled out automatically.

Section I. Determination of ECC Verification Compliance

1. This field is filled out automatically based on all verification protocol requirements in this document showing compliance.

Documentation Declaration Statements

- 1. The person who prepared the LMCV will sign and complete the fields for their name, company (if applicable), address, phone number, certification information (if applicable), date and signature.
- 2. The person who is assuming responsibility for the project being built to comply with Title 24, Part 6, will complete the fields (if applicable) for their company, responsible builder or installer name, CSLB license number, sample group number, dwelling test status in sample group, ECC Rater company name, ECC Rater name, ECC Rater signature, ECC Rater certification number and date signed.