



NRCA-MCH-21-H

Project Name and Address	Authority Having Jurisdiction
Name: Project Name	Enforcement Agency: Agency
Address: Project Address	Permit Number: Permit Number
City, Zip: City, Zip Code	Permit Application Date: Date

Building: Enter Value	Floor: Enter Value	Room: Enter Value	Control/tag: Value
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<input type="checkbox"/> Construction inspection and functional testing Comply	Date Submitted to AHJ: Date
<input type="checkbox"/> Does not comply	

Intent:	<ul style="list-style-type: none"> This form is completed only when NA1.9 Acceptance Test Technicians Alternative Procedure is used in accordance with Section 160.2(b)2Aivb2, where a certified ATT is allowed to perform the test that is typically performed by an ECC-Rater for multifamily buildings with four or more stories. Submit one Certificate of Acceptance for each dwelling unit using a Supply-Only or Exhaust-Only ventilation system to verify that the envelope leakage conforms to the requirements of the Energy Standards §160.2(b)2Aivb2 and Reference Nonresidential Reference-Appendices NA7.18.2, NA2.3, ANSI/RESNET/ICC 380-2019, and ASTM E779-10 (2010). This test is restricted to multifamily buildings with four habitable stories or more. The certified technician (or ATT) is required to complete this compliance Certificate of Acceptance prior to completing NRCA-MCH-20(a-d)-H. <p>NOTE: An uncertified technician may complete this acceptance test using this form if a HERS ECC Rater performs the required verification, or a certified ATT may perform this acceptance test with no HERS ECC Rater verification needed.</p>
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Table A-1: Construction Inspection

Prior to functional testing, verify and document all of the following:

Step	Entry	Item	Code Reference
1.0	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	Confirm the pressure boundary wall, ceiling, and floor penetrations are sealed.	NA7.18.2.1(a)
2.0	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	Confirm all gaps around the windows and doors are sealed.	NA7.18.2.1(b)
3.0	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	Confirm all chases are sealed at floor level using a hard cover and the hard cover is sealed.	NA7.18.2.1(c)
4.0	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	Check if Construction Inspection complies with all requirements.	N/A

Table A-2: Instrument Specifications

The equipment listed must have their calibrations checked at the manufacturer's recommended interval, and at least annually if not specified.



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Step	Entry	Item	Code Reference
1.0	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	Air-Moving Fan is capable of moving air into or out of the unit to achieve target pressure differences with the exterior.	NA2.3.2 _L RESNET §380 §4.1.1
2.0	Model Serial No.	Manometer. Capable of measuring pressure differences within a maximum error of 1% of reading or 0.25Pa (0.001 in. H2O), <u>whichever is greater.</u>	NA2.3.2 _L RESNET §380 §4.1.2
3.0	Model Serial No.	Airflow Meter. Capable of measuring volumetric airflow with a maximum error of 5% of measured flow.	NA2.3.2 _L RESNET §380 §4.1.3
4.0	Model Serial No.	Thermometer. Capable of measuring air temperature within an accuracy of $\pm 1^{\circ}\text{C}$ (2°F).	NA2.3.2 _L RESNET §380 §4.1.4
5.0	Model Serial No.	Blower Door. A device that combines the Air-Moving Fan (1), Airflow Meter (3.0 1) and a cover to integrate into fenestration <u>the building opening</u> . NOTE: it is highly recommended that the assemblage of the blower door system also integrates the Manometer (2.0) and include manufacturer software that will correct CFM measurements for altitude and air temperature (i.e., air viscosity and density). Otherwise, these corrections must be made manually.	NA2.3.2 _L RESNET §380 §4.1.5

Table B-1: Functional Test Preparation

Step	Entry	Item	Code Reference
1.0	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	Open doors and windows of all directly adjacent units (all sides, top, and bottom).	NA2.3.3(1)
2.0	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	Fenestration: Exterior doors and windows must be closed and latched.	RESNET §380 §4.2.1
3.0	P, F, N/A	Attached Garage: Doors and windows to the garage must be closed and latched. (Pass, Fail, N/A)	RESNET §380 §4.2.2



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Step	Entry	Item	Code Reference
4.0	U, V, N/A	Crawlspaces. U - Unvented crawlspaces. Interior access doors and hatched must be open and exterior doors and hatches must be closed. V – Vented Crawlspaces. Interior access doors and hatched must be closed and exterior vents left as found. N/A	RESNET §380 §4.2.3
5.0	A, O, N/A	Attics. A - Air Sealed & insulated Roof Deck: Interior access doors and hatches must be opened. O – All others: Interior access doors and hatches must be open. N/A	RESNET §380 §4.2.4
6.0	A, O, N/A	Basement. A - Air Sealed & Insulated: Interior access doors and hatches must be closed. O - Otherwise: Interior access doors and hatches must be open. N/A	RESNET §380 §4.2.5
7.0	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	Interior Doors: All doors between rooms inside the dwelling unit must be open.	RESNET §380 §4.2.6
8.0	P, F, N/A	Chimney D dampers & C combustion-air I nlets on S solid F fuel A ppliances must be closed. (Pass, Fail, N/A)	RESNET §380 §4.2.7
9.0	P, F, N/A	Combustion A pppliance F flue G gas V vents must be left as found. (Pass, Fail, N/A)	RESNET §380 §4.2.8
10.0	P, F, N/A	Fans must be turned off. (i.e. clothes dryer, ceiling fan, attic/crawlspace fan, kitchen/bathroom exhaust fan, air handler, ventilation fan, etc.) (Pass, Fail, N/A)	RESNET §380 §4.2.9
11.0	P, F, N/A	Non-motorized D dampers s ; connect ing ed to exterior or unconditioned space ; must be left as found. (Pass, Fail, N/A)	RESNET §380 §4.2.10.1
12.0	P, F, N/A	Motorized D dampers s ; connect ion ed to exterior or unconditioned space ; must be closed (not further sealed). (Pass, Fail, N/A)	RESNET §380 §4.2.10.2



Step	Entry	Item	Code Reference
13.0	P, F, N/A	Intermittent L ocal E xhaust: m ust be left open. (Pass, Fail, N/A)	RESNET §380 §4.2.11.1
14.0	P, F, N/A	Intermittent W hole- H ouse V entilation System (include HVAC fan-integrated outdoor air inlets): m ust not be sealed. (Pass, Fail, N/A)	RESNET §380 §4.2.11.2
15.0	P, F, N/A	Continuously O perating L ocal E xhaust: m ust be sealed at the exterior where conditions allow. (Pass, Fail, N/A)	RESNET §380 §4.2.11.3
16.0	P, F, N/A	Continuously O perating W hole- H ouse V entilation S ystem: m ust be sealed at the exterior where conditions allow. (Pass, Fail, N/A)	RESNET §380 §4.2.11.4
17.0	P, F, N/A	All other openings must be left open. (Pass, Fail, N/A)	RESNET §380 §4.2.11.5
18.0	P, F, N/A	Whole-building F an L ouvers/shutters must be closed: (if there is a seasonal cover, it must be installed). (Pass, Fail, N/A)	RESNET §380 §4.2.12
19.0	P, F, N/A	Evaporative Coolers openings must be placed in off position: (if there is a seasonal cover, it must be installed). (Pass, Fail, N/A)	RESNET §380 §4.2.13
20.0	P, F, N/A	Operable window trickle-vents and through-wall vents must be closed. (Pass, Fail, N/A)	RESNET §380 §4.2.14
21.0	P, F, N/A	Supply R egisters and R eturn G rids must be left as found and uncovered. (Pass, Fail, N/A)	RESNET §380 §4.2.15
22.0	P, F, N/A	Plumbing drains with p-traps must be filled with water or sealed. (Pass, Fail, N/A)	RESNET §380 §4.2.16
23.0	P, F, N/A	Vented combustion appliances must remain off or in pilot-only mode. (Pass, Fail, N/A)	RESNET §380 §4.2.17
24.0	P, F, N/A	Code or manufacturer required component air bypasses must not be sealed. (Pass, Fail, N/A)	RESNET §380 §4.2.18

Table B-2: Installation of Functional Test Apparatus



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Step	Entry	Item	Code Reference
1.0	No Entry	Blower Door Installation.	NA2.3.3(2), RESNET 380 §4.3.1
1.1	P, F, N/A	Installed in an existing doorway or window with no obstructions within five (5) feet of the fan inlet and two (2) feet of the fan outlet. (Pass, Fail, N/A)	NA2.3.3(2), RESNET 380 §4.3.1.1
1.2	P, F, N/A	Installed in a door or window that is NOT exposed to wind, where conditions allow. (Pass, Fail, N/A)	NA2.3.3(2), RESNET 380 §4.3.1.1
1.3	P, F, N/A	If using a fenestration to unconditioned space, the unconditioned space has unrestricted pathway to exterior and all windows and doors of the unconditioned space are open. (Pass, Fail, N/A)	NA2.3.3(2), RESNET 380 §4.3.1.1
1.4	P, F, N/A	If using a fenestration to an interior shared hallway, the hallway must be connected to exterior by open doors or windows. (Pass, Fail, N/A)	NA2.3.3(2), RESNET 380 §4.3.1.1
1.5	Location	Describe location of blower door installation.	NA2.3.3(2), RESNET 380 §4.3.1.1
2.0	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	Tubing used to measure the pressure difference must be installed in accordance with manufacturer's instructions and vertical sections must be positioned out of direct sunlight.	NA2.3.3(2), RESNET 380 §4.3.1.2

Table B-3: Functional Testing

Step	Entry	Item	Code Reference
1.1	Enter Value <input type="checkbox"/> Deg. C <input type="checkbox"/> Deg. F	Measure <u>indoor</u> Temperature <u>Indoor</u> .	RESNET 380 §4.3.1.3
1.2	Enter Value <input type="checkbox"/> Deg. C <input type="checkbox"/> Deg. F	Measure <u>outdoor</u> Temperature <u>Outdoor</u> .	RESNET 380 §4.3.1.3
2.0	Enter Value	Observations of general weather conditions.	RESNET 380 §4.3.1.3
3.0	Enter Value	Altitude of project site above sea-level. (Feet)	RESNET 380 §4.3.1.4



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Step	Entry	Item	Code Reference
4.0	Enter Value	Measure, or obtain from designs, the total dwelling unit surface area, which is the sum of the area of walls between dwelling units, exterior walls, ceiling, and floor. (Square Feet)	NA2.3.3(2)
4.1	Enter Value	Square footage of the dwelling unit. (Square Feet)	NA2.3.3(2)
4.2	Enter Value	Sum of the area of all exterior walls. (Square Feet)	NA2.3.3(2)
4.3	Enter Value	Sum of area of all walls between dwelling units. (Square Feet)	NA2.3.3(2)
4.4	Enter Value	Total: (Step 4.1 x 2) + Step 4.2 + Step 4.3. (Square Feet)	NA2.3.3(2)
5.0	Enter Value	Pretest Baseline Building Pressure: Air-Moving Fan (OFF) (SEALED): Manometer measured pressure difference across enclosure (minimum 10 second average) (Pa)	RESNET 380 §4.4.1.1
6.0	<input type="checkbox"/> Pressurized or <input type="checkbox"/> Depressurized	Induced Enclosure Pressure: Air-Moving Fan (ON) (UNSEALED). Adjust to create an induced enclosure pressure difference of 50 ± 3 Pa ($0.2 \text{ in.} \pm 0.012 \text{ H}_2\text{O}$).	RESNET 380 §4.4.1.2
6.1	Pressure (Pa) Airflow (CFM) <input type="checkbox"/> Not Achieved	If induced enclosure pressure difference of 50 ± 3 Pa is achieved, then record the average value of the induced enclosure pressure difference and Airflow over a minimum 10-second period. If induced enclosure pressure difference of 50 ± 3 Pa is not achieved, retry using additional fans. (Pa and CFM or Not Achieved) <u>Or Else</u> , proceed to 6.2.	RESNET 380 §4.4.1.2
6.2	Pressure (Pa) Airflow (CFM)	If induced enclosure pressure difference of 50 ± 3 Pa is still not achieved from step B-3,6.1, then record the highest induced pressure difference and airflow over a minimum 10-second period. (Pa and CFM) <u>Note</u> : 15 Pa (0.06 in. H ₂ O) is the minimum allowable.	RESNET 380 §4.4.1.4



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Step	Entry	Item	Code Reference
6.3	Adj. Airflow (CFM)	If (Step 6.2), then adjust to CFM50: Step 6.2b (CFM) x (50 ÷ Step 6.2(Pa)) ^{0.65} (CFM) <u>Note</u> : a manometer equipped to make the correction is permitted.	RESNET 380 §4.4.1.4
7.0	No Entry	Return Systems and home to normal operating or as found condition.	RESNET 380 §4.4.1.3
8.0	Cor. Airflow (CFM50)	Corrected -CFM50. Correct the CFM measurement for air viscosity and density using the installed manufacturer integrated software for the Blower Door assemblage (Construction Inspection 5) (CFM) If the Blower Door assemblage does not include such software, then the corrections must be performed manually following the requirements of ASTM E779-10 (2010), Section 9, Equation 4.	RESNET 380 §4.4.1.5
9.0	Adj. Airflow (CFM50)	Adjusted CFM50. Corrected CFM50 (Step 8) x 1.1. (CFM)	NA2.3.4(1), RESNET 380 §4.4.1.5.1 Eqn. (5a)
10.0	CFM50/SQ-FT	CFM50/ft ² . Adjusted CFM50 (Step 9) ÷ Step B-3,4.4 (CFM/§SqfFt)	NA2.3.4(3) RESNET 380 §4.5.2 Eqn. 10
11.0	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	Select "Pass" if: Step 10 \leq 0.3 CFM/§SqfFt	NA2.3.5, §160.2(b)2Aivb2



Declaration Statement	Signatory
Document Author I assert that this Certificate of Acceptance documentation is accurate and complete.	Name Company Name Author Signature Date Signed
Acceptance Test Technician I certify the following under penalty of perjury, under the laws of the State of California: The information provided on this Certificate of Acceptance is true and correct. I am the person who performed the acceptance verification reported on this Certificate of Acceptance (Field Technician). The construction or installation identified on this Certificate of Acceptance complies with the applicable acceptance requirements indicated in the plans and specifications approved by the enforcement agency and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and signed by the responsible builder/installer and has been posted or made available with the building permit(s) issued for the building.	Name Company Name ATT No.: ATT Cert. No. Title Phone Signature Date Signed
Responsible Person I assert the following under penalty of perjury, under the laws of the State of California: I am the Field Technician, or the Field Technician is acting on my behalf as my employee or my agent and I have reviewed the information provided on this Certificate of Acceptance. I am 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 Acceptance and attest to the declarations in this statement (responsible acceptance person). The information provided on this Certificate of Acceptance substantiates that the construction or installation identified on this Certificate of Acceptance complies with the acceptance requirements indicated in the plans and specifications approved by the enforcement agency and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and is posted or made available with the building permit(s) issued for the building. I understand that a completed, signed copy of this Certificate of Acceptance 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 signed copy of this Certificate of Acceptance 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.	Name Company Name Lic. No.: License No. Title Phone Signature Date Signed