SPACE CONDITIONING SYSTEMS, DUCTS, AND FANS

SAMPLE FORM – NOT VALID FOR SUBMISSION TO BUILDING DEPARTMENTS

CERTIFICATE OF INSTALLATION

Note: This table completed by ECC Registry.

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

A. General Information

Notes:

- The outdoor design temperatures for heating shall be ≥99.0% Heating Dry Bulb or the Heating Winter Median of Extremes values.
- The outdoor design temperatures for cooling shall be ≤1.0% Cooling Dry Bulb and Mean Coincident Wet Bulb values.

01	Dwelling Unit Name		02	Climate Zone	
03	Dwelling Unit Total Conditioned Floor Area (ft^2)		04	Number of Space Conditioning Systems in this Dwelling Unit	
05	Certificate of Compliance Type		06	Method Used to Calculate HVAC Loads (See Section 160.3(b)1).	
07	Outdoor Design Condition Source (See Section 160.3(b)2		08	Cooling Outdoor Design Temperature Selected (°F)	
09	Heating Outdoor Design Temperature Selected (°F)		10	Calculated Dwelling Unit Sensible Cooling Load (Btu/h)	
11	Calculated Dwelling Unit Heating Load (Btu/h)		12	Dwelling Unit Number of Bedrooms	

MCH-01c - Space Conditioning Systems Ducts and Fans - Prescriptive, Newly Constructed Buildings

SAMPLE FORM – NOT VALID FOR SUBMISSION TO BUILDING DEPARTMENTS

B. Design Space Conditioning (SC) System Component Specifications from LMCC

This table reports the space conditioning system features that were specified on the registered LMCC compliance document for this project.

01	02	03	04	05	06	07	07b	08	09	10	11	12
SC System ID/Name from LMCC	Heating System Type	Heating Efficiency Type	Heating Efficiency Value	Cooling System Type	Cooling Efficiency Type	Cooling Efficiency Value SEER/SEER2	Cooling Efficiency Value EER/EER2/ CEER	Distribution System Type	Duct Location	Duct R-value	Thermostat Type	Comments

C. Installed Space Conditioning (SC) System Component Information

01	02	03	04	05	06	07	08	09	10	11
SC System ID/Name from LMCC	SC System Description of Area Served	Conditioned Floor Area Served by the System (ft^2)	Heating System Type	Cooling System Type	Distribution System Type	Duct Location	SC System Thermostat Type	Cooling Zoning Type	Cooling System Compressor Speed Type	Number of Indoor Units for this System
Notes:										

D. Installed Heating Equipment Information (not heat pumps)

01	02	03	04	05	06	07	08	09	10	11
SC System ID/Name from LMCC	SC System Description of Area Served	Indoor Unit Name or Description of Area Served	Does Indoor Unit Provide CFI IAQ Ventilation?	Indoor Unit Duct Status	Heating Efficiency Type	Heating Efficiency Value	Heating Unit Manufacturer	Heating Unit Model Number	Heating Unit Serial Number	Rated Heating Capacity Output (Btu/h)
Notes:										

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E. Installed Cooling System Outdoor Condensing Unit or Package Unit Equipment Information (not heat pumps)

01	02	03	04	04b	05	06	07	08	09
SC System ID/Name from LMCC	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 Cooling Capacity (ton)
Notes:									

F. Installed Split System Indoor Unit (Coil or Fan Coil) Equipment Information - applicable to DX or hydronic, heating or cooling, coils and fan coil units

Systems with more than one indoor coil or fan coil unit (e.g. multi-split systems) shall provide information for each of the system indoor unit coils or fan coil units.

01	02	03	04	05	06	07	08	09	10
SC System ID/Name from LMCC	SC System Description of Area Served	Indoor Unit Name or Description of Area Served	Indoor Unit Type	Indoor Unit Duct Status	Does Indoor Unit Provide CFI IAQ Ventilation?	Indoor Unit Manufacturer	Indoor Unit Model Number	Indoor Unit Serial Number	Indoor Unit Nominal Cooling Capacity (ton)
Notes:									

G. Installed Heat Pump System – Split System Condensing Unit or Package Unit Equipment Information

01	02	03	04	05
SC System ID/Name from LMCC	SC System Description of Area Served	Condenser or Package Unit Manufacturer	Condenser or Package Unit Model Number	Condenser or Package Unit Serial Number
Notes:				

SAMPLE FORM – NOT VALID FOR SUBMISSION TO BUILDING DEPARTMENTS

H. Installed Heat Pump System – Efficiency and Performance Compliance Information

01	02	03	04	05	06	07	08	08b	09	10
SC System ID/Name from LMCC	SC System Description of Area Served	Heating Efficiency Type	Heating Efficiency Value	System Rated Heating Capacity at 47°F (Btu/h)	System Rated Heating Capacity at 17°F (Btu/h)	System Cooling Efficiency Type	System Rated Cooling Efficiency Value SEER/SEER2	System Rated Cooling Efficiency Value EER/EER2/CEER	System Cooling Capacity at Design Conditions (Btu/h)	Condenser Nominal Cooling Capacity (ton)
	Notes:									

I. Installed Duct System Information

01	02	03	04	05	06	07	08	09	10	11	12	13	14
SC System ID/Name from LMCC	SC System Description of Area Served	Indoor Unit Name or Description of Area Served	Supply Duct Location	Supply Duct R-Value	Return Duct Location	Return Duct R-Value	Exception from Min R-Value for Ducts In Conditioned Space	Method of compliance with Airflow and Fan Efficacy Req's in 160.3(b)5L	Number of Air Filter Devices on System	Can Approved Airflow Protocols be used to test this System?	Can Approved Fan Efficacy Protocol be used to test this System?	Total Duct Length	Required New Duct R-Value
Notes:													

J. Installed Air Filter Device Information

Mandatory requirements for air filter devices are specified Section 160.2(b)1. The installer shall place a sticker in or near each filter grille that displays the design airflow rate for that filter grille/rack and the maximum allowed clean filter pressure drop at the design airflow rate. This will inform the occupant of the airflow vs pressure drop performance required for replacement air filters.

01	02	03	04	05	06	07	08	09	10	11	12	013
SC System ID/Name from LMCC	SC System Description of Area Served	Indoor Unit Name or Description of Area Served	Air Filter Name or Description of Location	Air Filter Rack Type	Design Airflow Rate for Air Filter Device (cfm)	Air Filter Nominal Depth (inch)	Air Filter Nominal Length (inch)	Air Filter Nominal Width (inch)	Air Filter Calculated Nominal Face Area ($inch^2$)	Air Filter Required Minimum Face Area ($inch^2$)	Face Area Compliance	Design Allowable Pressure Drop for Air Filter Device (inch W.C.)
Notes:												

SAMPLE FORM – NOT VALID FOR SUBMISSION TO BUILDING DEPARTMENTS

K. Air Filter Device Requirements

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

Mandatory Air Filter Device Requirements can be found in Section 160.2(b)1. Some mandatory requirements may apply in addition to those listed below.

01	All recirculated air and all outdoor air (including make up air) supplied to the occupiable space is filtered before passing through the system's thermal conditioning components.
02	The space conditioning system shall be designed to accommodate the clean-filter pressure drop imposed by the system air filter device(s). The design airflow rate and maximum allowable clean-filter pressure drop at the design airflow rate applicable to each air filter device shall be determined by the system designer. The system installer shall affix a sticker/label to each system air filter grille/rack locations that discloses the filter's design airflow rate and the filter's maximum allowable clean-filter pressure drop at the design airflow rate. The sticker/label shall be permanently affixed to the air filter device, readily legible, and visible to a person replacing the air filter.
03	All system air filters shall be located and installed in such a manner as to allow access and regular service by the system owner.
04	he system shall be provided with air filter media having a designated efficiency equal to or greater than MERV 13 when tested in accordance with ASHRAE Standard 52.2, or a particle size efficiency rating equal to or greater than 50% in the 0.30-1.0 µm range and equal to or greater than 85 percent in the 1.0-3.0 µm range when tested in accordance with AHRI Standard 680.
05	The system shall be provided with air filters that have been labeled by the manufacturer to disclose efficiency and pressure drop ratings that conform to the efficiency and pressure drop requirements for the air filter grilles/racks.
06	Filter racks or grilles shall use gaskets, sealing, or other means to close gaps around inserted filters and prevent air from bypassing the filter.

L. ECC Verification Requirements for Duct Systems

01	02	03	04	05	06	07	09
SC System ID/Name from LMCC	SC System Description of Area Served	Indoor Unit Name or Description of Area Served	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
Notes:							

M. ECC Verification Requirements for Space Conditioning Equipment

01	02	03
SC System ID or Name from CF1R	SC System Description of Area Served	MCH-25 Refrigerant Charge
Notes:		

SPACE CONDITIONING SYSTEMS, DUCTS, AND FANS

SAMPLE FORM – NOT VALID FOR SUBMISSION TO BUILDING DEPARTMENTS

N. Space Conditioning Systems, Ducts and Fans – Mandatory Requirements and Additional Measures

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

Additional mandatory requirements from Section 160.3 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 160.3(a), 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 160.3(b)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 160.3(b)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 160.3(b)5I, and Section 160.3(b)6.
08	Condensing Unit Location: Condensing units shall not be placed within 5 feet of a dryer vent outlet. See Section 160.3(b)3A.
09	Liquid Line Filter Drier: A liquid line filter drier shall be installed according to the manufacturer's specifications 160.3(b)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 160.3(b)1 and 2.

Cooling and Heating Equipment (Additional Requirement)

11	**Defrost:** See section 160.3(b)7 A. If a heat pump is equipped with an installer adjustable defrost delay timer, the delay timer shall be set to greater than or equal to 90 minutes. B. The installer shall certify on the Certificate of Installation that the control configuration has been tested in accordance with the testing procedure in the LMCI. **Exception to 160.3(b)7.** Dwelling units in Climate Zones 1, 6 through 10, 15, and 16 shall not be required to comply with the 90 minute delay timer requirements.
12	**Capacity variation with third-party thermostats:** See section 160.3(b)8 Variable or multi-speed systems shall comply with the following requirements: A. The space conditioning system and thermostat together shall be capable of responding to heating and cooling loads by modulating system compressor speed.

Air Distribution System Ducts, Plenums and Fans

13	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 160.3(b)5Aii for exceptions.
14	Connections and Closures: All installed air-distribution system ducts and plenums must meet the requirements of CMC Sections 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-006-2006.

Heat Pump Thermostat

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

O. Test of Defrost Delay Timer Setting (Section 160.3(b)7)

The installing contractor shall confirm that a heat pump's installer-adjustable Defrost Delay Timer Setting (if it exists) is set to no less than 90 minutes.

01	Test Applicability. Select the statement describing test applicability for this project: 1. The test applies because the heat pump utilizes an installer adjustable Defrost Delay Timer Setting to control defrost and there are no exceptions. 2. The test does not apply because the heat pump does not utilize an installer-adjustable Defrost Delay Timer Setting to control defrost. 3. The test does not apply because Exception 1. Dwelling units in Climate Zones 6 and 7 applies. 4. The test does not apply because Exception 2 **.** Dwelling units with a conditioned floor area of 500 square feet or less in Climate Zones 3, 5 through 10, and 15 applies.	
02	Recording Configuration of Controls. Specify the mechanism for setting the Defrost Delay Timer Setting (for example, the name of defrost delay timer setting in the thermostat setup, or the location and number of the specific dip switch, jumper, or dial that adjusts Defrost Delay timer).	
03	Record the heat pump's Maximum Available Defrost Delay Timer Setting (minutes).	
04	Record where you set the Defrost Delay Timer Setting (fo example, the numeric timer setting, dip switch position, jumper configuration, or dial setting).	
05	Record where you set the Defrost Delay Timer Setting, in minutes.	
06	Confirming Configuration of Controls. If possible, the Defrost Delay Timer Setting must be 90 minutes or greater. Confirm the Defrost Delay Timer Setting is at least 90 minutes.	

SAMPLE FORM – NOT VALID FOR SUBMISSION TO BUILDING DEPARTMENTS

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
Documentation Author Company Name:	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 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:	Responsible Builder/Installer Signature:	
Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)	Position With Company (Title):	
Address:	CSLB License:	
City/State/Zip:	Phone:	Date Signed:

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

LMCI-MCH-01c-E User Instructions

Section A. General Information

1. This field is filled out automatically. It is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document.
2. This field is filled out automatically. It is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document.
3. This field is filled out automatically. It is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document. When the project scope includes an addition to an existing building, the value is equal to the sum of the existing conditioned floor area plus the conditioned floor area of the addition. The default value from the LMCC- may be overwritten in this document. Overwriting the default value will automatically flag this entry and subject it to additional scrutiny by QA and enforcement personnel
4. This field is filled out automatically. It is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document. This value may be overwritten in this document, but valid discrepancies with the LMCC are uncommon. Overwriting the default value will automatically flag this entry and subject it to additional scrutiny by QA and enforcement personnel.
5. This field is filled out automatically. It is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document.
6. Oversized equipment can result in reduced efficiency and capacity. Entirely new systems must be properly sized to match the heating and cooling load of the space that it serves. To do this, heating and cooling load calculations must be performed using an approved calculation methodology. These are listed here. Select the load calculation methodology used for this dwelling unit. If the project consists of a partial replacement of equipment or ducts (change-out), then load calculations are not required. Select N/A. Load calculations are always recommended, especially if the loads of the house have been changed since the original equipment has been installed (reduced via weatherization, other improvements).
7. Enter the Outdoor Design Condition Source (See Section 150.0(h)2), user select from the list.
8. Enter the Cooling Outdoor Design Temperature Selected (°F) for the dwelling unit described by this document.
9. Enter the Heating Outdoor Design Temperature Selected (°F) for the dwelling unit described by this document.
10. Enter the total sensible cooling load for the dwelling unit described by this document. For projects involving dwelling units with more than one system, this will be a sum of the loads for the parts of the dwelling unit served by those systems. If the project consists of a partial replacement of equipment or ducts (change-out) then load calculations are not required. Select N/A.
11. Enter the total heating load for the dwelling unit described by this document. For projects involving dwelling units with more than one system, this will be a sum of the loads for the parts of the dwelling unit served by those systems. If the project consists of a partial replacement of equipment or ducts (change-out) then load calculations are not required. Select N/A.
12. Enter the number of bedrooms in the dwelling unit

Section B. Design Space Conditioning (SC) System Component Specifications from LMCC

1. This field is filled out automatically. It is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document.
2. This field is filled out automatically. It is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document.
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7. This field is filled out automatically. It is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document.

7b. This field is filled out automatically. It is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document.

8. This field is filled out automatically. It is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document.
9. This field is filled out automatically. It is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document.
10. This field is filled out automatically. It is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document.
11. This field is filled out automatically. It is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document.
12. This field is filled out automatically. It is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document.

Section C. Installed Space Conditioning (SC) System Component Information

1. Select System name from the list of systems identified in previous sections and originally specified on the LMCC.
2. Briefly describe the area served by this system. Examples: entire house, upstairs, downstairs, sleeping area, north wing, etc.
3. Enter the conditioned floor area served by the system described in this row. The total value of this column for all rows must equal the total dwelling unit conditioned floor area as shown in Section A.

4. This field is filled out automatically. It appears in Section B and is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document. This value may be overwritten in this document, but valid discrepancies with the LMCC are uncommon. Overwriting the default value will automatically flag this entry and subject it to additional scrutiny by QA and enforcement personnel.
5. This field is filled out automatically. It appears in Section B and is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document. This value may be overwritten in this document but valid discrepancies with the LMCC are uncommon. Overwriting the default value will automatically flag this entry and subject it to additional scrutiny by QA and enforcement personnel.
6. This field is filled out automatically. It appears in Section B and is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document. This value may be overwritten in this document but valid discrepancies with the LMCC are uncommon. Overwriting the default value will automatically flag this entry and subject it to additional scrutiny by QA and enforcement personnel.
7. This field is filled out automatically. It appears in Section B and is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document. This value may be overwritten in this document but valid discrepancies with the LMCC are uncommon. Overwriting the default value will automatically flag this entry and subject it to additional scrutiny by QA and enforcement personnel.
8. This field is filled out automatically. It appears in Section B and is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document. This value may be overwritten in this document but valid discrepancies with the LMCC are uncommon. Overwriting the default value will automatically flag this entry and subject it to additional scrutiny by QA and enforcement personnel.
9. This field is filled out automatically. It appears in Section B and is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document. This value may be overwritten in this document but valid discrepancies with the LMCC are uncommon. Overwriting the default value will automatically flag this entry and subject it to additional scrutiny by QA and enforcement personnel.
10. This field is filled out automatically. It appears in Section B and is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document. This value may be overwritten in this document but valid discrepancies with the LMCC are uncommon. Overwriting the default value will automatically flag this entry and subject it to additional scrutiny by QA and enforcement personnel.
11. If the space conditioning system is a multiple-split system, then enter the number of ducted/ductless indoor units (AHU) connected to the outdoor unit. If the system is a type that does not have an outdoor unit, such as a heating-only type that uses only a furnace air-handling unit, enter 1 for the number of indoor units (The furnace air-handling unit is an indoor unit).

Section D. Installed Heating Equipment Information (not heat pumps)

1. This field is filled out automatically. It is referenced from the same row and column in the previous section.
2. This field is filled out automatically. It is referenced from the same row and column in the previous section.
3. Enter a brief name or description of the indoor unit area served. Examples: Master Bedroom, Dining Room, Living Room, etc
4. If the indoor unit is used to bring outdoor air into the dwelling, the system may be used to comply with the IAQ mechanical ventilation requirements. This is called central fan integrated ventilation (CFI). Systems that have only one indoor unit may use CFI ventilation if yes is selected in this field. Systems in multifamily dwellings, and systems with more than one indoor unit connected to one outdoor unit may not select yes.

5. Enter the description of the duct system on this indoor unit. The possible choices are Ductless; Ducted >10ft length, Ducted ≤10ft length.
6. This field is filled out automatically. It is referenced from the same row and column in the previous section
7. Enter the certified heating efficiency of the *installed* equipment. This value is verified against the minimum value shown in Section C. The installed efficiency must be greater than or equal to the required minimum efficiency.
8. Enter the name of the *installed* Heating Unit Manufacturer as shown on the equipment nameplate.
9. Enter the name of the *installed* Heating Unit Model Number as shown on the equipment nameplate.
10. Enter the name of the *installed* Heating Unit Serial number as shown on the equipment nameplate.
11. Enter the rated heating capacity (output) of the *installed* Heating Unit in Btu/h.

Section E. Installed Cooling System Outdoor Unit or Package Unit Equipment Information (not heat pumps).

1. This field is filled out automatically. It is referenced from the same row and column in the previous section.
2. This field is filled out automatically. It is referenced from the same row and column in the previous section.
3. Enter the certified cooling efficiency type for the installed equipment. Select a type from the list provided.
4. Enter the certified cooling efficiency of the *installed* equipment. This value is verified against the minimum value shown in Section B. The installed efficiency must be greater than or equal to the required minimum efficiency.

4b. Enter the certified cooling efficiency of the installed equipment. This value is verified against the minimum value shown in Section B. The installed efficiency must be greater than or equal to the required minimum efficiency.

5. Enter the name of the *installed* Condenser or Package Unit Manufacturer as shown on the equipment nameplate.
6. Enter the name of the *installed* Condenser or Package Unit Model Number as shown on the equipment nameplate.
7. Enter the name of the *installed* Condenser or Package Unit Serial Number as shown on the equipment nameplate.
8. Enter the sensible cooling capacity at design conditions of the *installed* cooling system in Btu/h. This information is found in the system performance information on the manufacturer's published documentation for the installed system.
9. Enter the *installed* Condenser Nominal Cooling Capacity in tons. Note that this is based on the condenser, not the coil or air handler. This can usually be determined by the condenser model number.

Section F. Installed Split System Indoor Coil or Fan Coil Unit Equipment Information (applicable to DX or hydronic heating/cooling coils or fan coil units)

1. This field is filled out automatically. It is referenced from the same row and column in the previous sections.
2. This field is filled out automatically. It is referenced from the same row and column in the previous sections.
3. Enter a brief name or description of the indoor unit area served. Examples: Master Bedroom, Dining Room, Living Room, etc..
4. Enter the type of indoor unit or air handling unit installed by selecting one of the choices from the list.
5. Enter the description of the ducts system on this indoor unit. The possible choices are Ductless; Ducted >10ft length, Ducted ≤10ft length.

6. If the indoor unit is used to bring outdoor air into the dwelling, the system may be used to comply with the IAQ mechanical ventilation requirements. This is called central fan integrated ventilation (CFI). Systems that have only one indoor unit may use CFI ventilation if yes is selected in this field. Systems in multifamily dwellings, and systems with more than one indoor unit connected to one outdoor unit may not select yes.
7. Enter the name of the *installed* Indoor Coil or Fan Coil Unit Manufacturer as shown on the equipment nameplate.
8. Enter the name of the *installed* Indoor Coil or Fan Coil Unit Model Number as shown on the equipment nameplate.
9. Enter the name of the *installed* Indoor Coil or Fan Coil Unit Serial Number as shown on the equipment nameplate.
10. If there are multiple indoor units connected to the outdoor unit, enter the nominal cooling capacity (ton) from the nameplate of the indoor unit.

Section G. Installed Heat Pump System – Split System Condensing Unit or Package Unit Equipment Information

1. This field is filled out automatically. It is referenced from the same row and column in the previous sections.
2. This field is filled out automatically. It is referenced from the same row and column in the previous sections.
3. Enter the name of the *installed* Heat Pump Condenser or Package Unit Manufacturer as shown on the equipment nameplate.
4. Enter the name of the *installed* Heat Pump Condenser or Package Unit Model Number as shown on the equipment nameplate.
5. Enter the name of the *installed* Heat Pump Condenser or Package Unit Serial Number as shown on the equipment nameplate.

Section H. Installed Heat Pump System – Efficiency and Performance Compliance Information

1. This field is filled out automatically. It is referenced from the same row and column in the previous sections.
2. This field is filled out automatically. It is referenced from the same row and column in the previous sections.
3. This field is filled out automatically. It is referenced from the same row in Section C.
4. Enter the certified heating efficiency of the *installed* equipment. This value is verified against the minimum value shown in Section C. The installed efficiency must be greater than or equal to the required minimum efficiency.
5. Enter the certified heating capacity at 47°F of the *installed* equipment. This value is verified against the minimum value shown in Section C. The installed capacity must be greater than or equal to the required minimum capacity.
6. Enter the certified heating capacity at 17°F of the *installed* equipment. This value is verified against the minimum value shown in Section C. The installed capacity must be greater than or equal to the required minimum capacity.
7. Enter the certified cooling efficiency of the *installed* equipment. This value is verified against the minimum value shown in Section C. The installed efficiency must be greater than or equal to the required minimum efficiency.
8. Enter the certified cooling efficiency of the *installed* equipment. This value is verified against the minimum value shown in Section C. The installed efficiency must be greater than or equal to the required minimum efficiency.

8a. Enter the certified cooling efficiency of the installed equipment. This value is verified against the minimum value shown in Section C. The installed efficiency must be greater than or equal to the required minimum efficiency.

9. Enter the sensible cooling capacity at design conditions of the *installed* cooling system in Btu/h.
10. Enter the *installed* Condenser Nominal Cooling Capacity in tons. Note that this is based on the condenser, not the coil or air handler. Can usually be determined by the condenser model number.

Section I. Installed Duct System Information

1. This field is filled out automatically. It is referenced from the same row and column in the previous sections.
2. This field is filled out automatically. It is referenced from the same row and column in the previous sections.
3. This field is filled out automatically. It is referenced from the same row and column in the previous sections.
4. This field is filled out automatically. It appears in Section B and C, and is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document. This value may be overwritten in this document but valid discrepancies with the LMCC are uncommon. Overwriting the default value will automatically flag this entry and subject it to additional scrutiny by QA and enforcement personnel.
5. Enter the R-value of the *installed* supply ducts. This value is verified against the minimum value shown in Section C. The installed R-value must be greater than or equal to the required minimum R-value.
6. This field is filled out automatically. It appears in Section B and C, and is referenced from the Certificate of Compliance (LMCC), which must be completed prior to this document. This value may be overwritten in this document but valid discrepancies with the LMCC are uncommon. Overwriting the default value will automatically flag this entry and subject it to additional scrutiny by QA and enforcement personnel.
7. Enter the R-value of the *installed* return ducts. This value is verified against the minimum value shown in Section C. The installed R-value must be greater than or equal to the required minimum R-value.
8. The duct system needs to meet minimum R-6 requirement except for portions of ducts located in conditioned space. Duct systems that are entirely in conditioned space can be uninsulated, subject to ECC verification.
9. For newly constructed systems taking the performance credit for better than default air flow or fan efficacy, field verification of these criteria is required and this field is filled out automatically. Otherwise, the user may pick the appropriate choice. Refer to section 160.3(b)5L and Nonresidential Compliance Manual Chapter 11 for more information.
10. Specify the number of air filter devices installed in this indoor unit's duct system. Air filter devices installed in completely new systems must be properly sized, as documented in the next section. The value entered here will determine the number of rows needed in the following section.
11. If the system is of a type that can use one of the approved protocols for testing the airflow rate, then enter yes. Otherwise enter no. Note: the protocol in RA3.3.3.1.5 (Alternative to Compliance with Minimum System Airflow Requirements for Altered Systems) is not one of the protocols that is allowed to be used to justify a "yes" to this question.
12. If the system is of a type that can use the approved protocol protocols for verifying the indoor unit's fan efficacy, then answer yes. Otherwise answer no.
13. This field is filled out automatically for some system types. Otherwise select the value that describes the length of the duct system.
14. This field is filled out automatically.

Section J. Installed Air Filter Device Information

1. This field is filled out automatically. It is referenced from the same row and column in the previous sections.
2. This field is filled out automatically. It is referenced from the same row and column in the previous sections
3. This field is filled out automatically. It is referenced from the same row and column in the previous sections
4. Enter a descriptive name of each air filter device so that it may be distinguished from others in the same system. Examples: FG1, filter2, etc.
5. Select the appropriate type of filter device from the list.

6. Enter the design flow in CFM of the filter device. The total for all filter devices in a single system should be greater than or equal to the total system design CFM in cooling mode (or heating mode for heat-only systems).
7. Enter the nominal depth of the filter in inches. This is the dimension that is parallel to the airflow. many filters available for sale are 1-inch depth. The 2025 Standards encourage use of 2-inch depth filters.
8. Enter the nominal length of the filter. for example, if the filter is 20" x 30", enter 30.
9. Enter the nominal width of the filter, for example, if the filter is a 20" x 30", enter 20.
10. This field is calculated automatically based on your entries in 8 and 9.
11. This value is calculated automatically for 1-inch depth filters. 2-inch depth or greater filters may use a value determined by the system designer.
12. This field determines whether a 1-inch depth filter complies with the sizing requirements in section 160.2(b)1. A 2-inch depth or greater filter may use the face area determined by the system designer, however most systems have to meet airflow rate and fan efficacy requirements.
13. Enter the design static pressure drop determined by the system designer if 2-inch or greater filters are used. For 1-inch depth filters, the maximum pressure drop is mandatory 0.1 inch W.C.. Filters installed in the filter grille/rack must be capable of meeting this maximum pressure drop at the design airflow rate, as shown on the manufacturer's filter labe. Not accounting for higher filter pressure drops will result in poor system airflow characteristics, reduced capacity and reduced efficiency. This may result in not passing field verification.

Section K. Air Filter Device Requirements.

This table is a list of requirements for air filter devices.

Section L. ECC Verification Requirements for duct systems

1. This field is filled out automatically. It is calculated based on data from the LMCC and from previous sections in this document.
2. This field is filled out automatically. It is calculated based on data from the LMCC and from previous sections in this document.
3. This field is filled out automatically. It is calculated based on data from the LMCC and from previous sections in this document.
4. This field is filled out automatically. It is calculated based on data from the LMCC and from previous sections in this document.
5. This field is filled out automatically. It is calculated based on data from the LMCC and from previous sections in this document.
6. This field is filled out automatically. It is calculated based on data from the LMCC and from previous sections in this document.

7. This field is filled out automatically. It is calculated based on data from the LMCC and from previous sections in this document.
8. This field is filled out automatically. It is calculated based on data from the LMCC and from previous sections in this document.

Section M. ECC Verification Requirements for Space Conditioning Equipment

1. This field is filled out automatically. It is referenced from the same row and column in the previous sections.
2. This field is filled out automatically. It is referenced from the same row and column in the previous sections
3. This field is filled out automatically. It is calculated based on data from the LMCC and from previous sections in this document.

Section N. Space Conditioning Systems, Ducts and Fans – Mandatory Requirements and Additional Measures

This table is a list of mandatory measures and additional requirements for space conditioning systems, ducts and fans.

Section O. Test of Defrost Delay Timer Setting (Section 160.3(b)7)

This table is certification requirements for Test of Defrost Delay Timer Setting

Documentation Declaration Statements

1. The person who prepared the LMCI 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 for their name, company (if applicable), address, phone number, license number (if applicable), date and signature.