CITY OF ENCINITAS
Development Services Department
505 S. Vulcan Ave
Encinitas, CA 92024
www.encinitasca.gov
Phone: 760-633-2730
Email:
building@encinitasca.gov

BUILDING PERMIT
ENERGY EFFICIENCY DOCUMENTATION DETERMINATION

Energy documentation is required for new buildings, additions and alterations that affect the energy efficiency of a building. Please use the following matrix to determine which form is required to be completed prior to submittal. You will upload either an NRCC form or CF1R form when applying for your permit.

TYPE	WORK CLASS	NRCC FORM	CF1R FORM
MEP (Non-Residential)	Alteration & Repair	✓	
MEP (Non-Residential)	New Installation	✓	
MEP (Non-Residential)	Water Heater	✓	
MEP (Residential)	Alteration & Repair		✓
MEP (Residential)	New Installation		✓
MEP (Residential)	Temporary Power Pole		✓
MEP (Residential)	Water Heater		✓
Sign	Permanent	✓	

For NON-RESIDENTIAL NON-HERS projects please visit the following for required forms:

https://energycodeace.com/NonresidentialForms/2019

For RESIDENTIAL NON-HERS projects please visit the following for required forms:

https://energycodeace.com/ResidentialForms/2019

For projects that requires HERS Verification, the form must be filled out and completed by a HERS rater. Registered HERS professionals can be found at:

https://www.calcerts.com/RaterSearch.php

HERS VERIFICATION

A HERS rater is typically required to fill out the Energy Documentation form for newly built homes, new HVAC, HVAC replacement, relocation of a HVAC unit and the addition or replacement of 40 or more feet of duct work.

For additional information regarding when a HERS rater is required for *residential* projects, please view Table RA2.1 below of the 2019 Reference Appendices for the 2019 Building Energy Efficiency Standards.

For additional information regarding when a HERS rater is required for *NON-residential* projects, please view Table NA1.1 below of the 2019 Reference Appendices for the 2019 Building Energy Efficiency Standards.

Alterations to Space Conditioning Systems that are exempt from HERS verification requirements may use the CF1R and NRCC Compliance Documents. Possible exemptions from duct leakage testing include: less than 40 ft of ducts were added or replaced; or the existing duct system was insulated with asbestos; or the existing duct system was previously tested and passed by a HERS Rater. **If space conditioning systems are altered and are not exempt from HERS verification, then a CF1R-ALT-02 must be completed and registered with a HERS Provider Data Registry.**

A simplified fact sheet to determine when HERS is required for Residential and Non Residential Projects can be found at:

https://energycodeace.com/download/35128/file_path/fieldList/FactSheet.Res.NR.HERS.2019

COMMONLY USED FORMS

The following forms are the recommended forms based on the scope of work. The form may change upon further review.

TYPE	WORK CLASS	NRCC FORM	CF1R FORM
MEP (Non-Residential)	Alteration & Repair (HVAC)	2019-NRCC-MCH-E	
MEP (Non-Residential)	New Installation (HVAC)	2019-NRCC-MCH-E	
MEP (Non-Residential)	Water Heater	2019-NRCC-PLB-E	
MEP (Residential)	Alteration & Repair (HVAC)		2019-CF1R-ALT-02-E
MEP (Residential)	New Installation (HVAC)		2019-CF1R-ADD-02-E
MEP (Residential)	Temporary Power Pole		2019-CF1R-ADD-02-E
MEP (Residential)	Water Heater (Replacement)		2019-CF1R-ALT-05-E
MEP (Residential)	Water Heater (Addition)		2019-CF1R-ADD-02-E
Sign	Permanent	2019-NRCC-LTS-E	

The certificates of installation will translate the forms name from CF1R to CF2R, and NRCC to NRCI. For example, Certificate of Installation for a Sign is 2019-NRCI-LTS-01-E.

Table RA2-1 – Summary of Measures Requiring Field Verification and Diagnostic Testing

Measure Title	Description	Procedure(s)
Duct Measures		
Duct Sealing	Component Packages require that space conditioning ducts be sealed. If sealed and tested ducts are claimed for compliance, field verification and diagnostic testing is required to verify that approved duct system materials are utilized, and that duct leakage meets the specified criteria.	RA3.1.4.3
Duct Location, Surface Area and R-value	Compliance credit can be taken for improved duct location, surface area and R-value. Field verification is required to verify that the duct system was installed according to the design, including location, size and length of ducts, duct insulation R-value and installation of buried ducts.[1] For buried ducts measures, Duct Sealing and High Quality Insulation Installation (QII) is required.	RA3.1.4.1
Verification of low leakage ducts located entirely in conditioned space	Duct system location shall be verified by visual inspection and diagnostic testing. Compliance credit can be taken for verified duct systems with low air leakage to the outside when measured in accordance with Reference Residential Appendix Section RA3.1.4.3.8. Field Verification for ducts in conditioned space is required. Duct sealing is required.	RA3.1.4.3.8
Low Leakage Air-handling Units	Compliance credit can be taken for installation of a factory sealed air handling unit tested by the manufacturer and certified to the Commission to have met the requirements for a Low Leakage Air-Handling Unit. Field verification of the air handler's model number is required. Duct Sealing is required.	RA3.1.4.3.9
Verification of Return Duct Design	Verification to confirm that the return duct design conform to the criteria given in TABLE 150.0-B or TABLE 150.0-C.	RA3.1.4.4
Verification of Air Filter Device Design	Verification to confirm that the air filter devices conform to the requirements given in Standards Section 150.0(m)12.	RA3.1.4.5
Verification of Prescriptive Bypass Duct Requirements	Verification to confirm zonally controlled systems comply with the bypass duct requirements in Section 150.1(c)13.	RA3.1.4.6
Air Conditioning Measures		
Improved Refrigerant Charge	Component Packages require in some climate zones that air-cooled air conditioners and air-source heat pumps be diagnostically tested in the field to verify that the system has the correct refrigerant charge. For the performance method, the Proposed Design is modeled with less efficiency if diagnostic testing and field verification is not performed. The system must also meet the prerequisite minimum System Airflow requirement.	RA3.3 RA3.2 RA1.2
Installation of Fault Indicator Display	Component Packages specify that a Fault Indicator Display can be installed as an alternative to refrigerant charge testing. The existence of a Fault Indicator Display has the same calculated benefit as refrigerant charge testing. Field verification is required.	RA3.4.2
Verified System Airflow	When compliance requires verified system airflow greater than or equal to a specified criterion, field verification and diagnostic testing is required.	RA3.3
Air-handling Unit Fan Efficacy	When compliance requires verified fan efficacy (Watt/cfm) less than or equal to a specified criterion, field verification and diagnostic testing is required.	RA3.3
Verified Energy Efficiency Ratio (EER)	Compliance credit can be taken for increased EER by installation of specific air conditioner or heat pump models. Field verification is required.[2]	RA3.4.3 RA3.4.4.1
Verified Seasonal Energy Efficiency Ratio (SEER)	HERS Rater field verification of the SEER rating is required for some systems.	RA3.4.3 RA3.4.4.1

Rated Heat Pump Capacity Verification	When performance compliance uses a heat pump, the rated capacity of the installed system shall be verified to be greater than or equal to the specified value.	RA3
Evaporatively Cooled Condensers	Compliance credit can be taken for installation of evaporatively cooled condensers. Field verification of duct leakage is required. Field verification of refrigerant charge is required. Field verification of EER is required.	RA3.1.4.3 RA3.2 RA3.4.3 RA3.4.4.1
Ventilation Cooling Measures		
Whole House Fan	When performance compliance uses a whole house fan, the installed whole house fan airflow rate (cfm) and fan efficacy (W/cfm) shall be verified to be equal to or better than the specified values.	RA3.9
Central Fan Ventilation Cooling System	When performance compliance uses a central fan ventilation cooling system (CFVCS), the installed CFVCS ventilation airflow rate (cfm) and fan efficacy (W/cfm) shall be verified to be equal to or better than the specified values.	RA3.3.4
Mechanical Ventilation Measures for Improved Indoor Air Quality		
Continuous Whole-Building Mechanical Ventilation Airflow	Measurement of whole-building mechanical ventilation is mandatory for newly constructed buildings.	RA3.7.4.1
Intermittent Whole-Building Mechanical Ventilation Airflow	Measurement of whole-building mechanical ventilation is mandatory for newly constructed buildings.	RA3.7.4.2
Building Envelope Measures		
Building Envelope Air Leakage	Compliance credit can be taken for reduced building envelope air leakage. Field verification and diagnostic testing is required.	RA3.8
Quality Insulation Installation (QII)	Compliance Software recognizes standard and improved envelope construction. Quality Insulation Installation is a prescriptive measure in all climate zones for newly constructed buildings and additions greater than 700 square feet, except low-rise multifamily buildings in Climate Zone 7. Field verification is required.	RA3.5
Quality Insulation Installation for Spray Polyurethane Foam (SPF) Insulation	A HERS Rater shall verify the installation of SPF insulation whenever Rvalues other than the default R-value per inch are used for compliance.	RA3.5.6
Single Family Domestic Hot Water Measures		
Verified Pipe Insulation Credit (PIC-H)	Inspection to verify that all hot water piping in non-recirculating systems is insulated and that corners and tees are fully insulated. No piping should be visible due to insulation voids with the exception of the last segment of piping that penetrate walls and delivers hot water to the sink, appliance, etc.	RA3.6.3
Verified Parallel Piping (PP-H)	Inspection that requires that the measured length of piping between the water heater and single central manifold does not exceed five feet	RA3.6.4
Verified Compact Hot Water Expanded Credit (CHWDS-H-EX)	Field verification to insure that the eligibility criteria specified in RA3.6.5 are met.	RA3.6.5
Demand Recirculation: Manual Control (RDRmc-H)	Inspection to verify that all recirculating hot water piping is insulated and that corners and tees are fully insulated. No piping should be visible due to insulation voids.	RA3.6.6
Demand Recirculation: Sensor Control (RDRmc-H)	Inspection to verify that all recirculating hot water piping is insulated and that corners and tees are fully insulated. No piping should be visible due to insulation voids.	RA3.6.7
Verified Drain Water Heat Recovery System (DWHR-H)	Inspection to verify that the DWHR unit(s) and installation configuration match the compliance document and the DWHR(s) is certified to the Commission to have met the requirements.	RA3.6.9
Multi Family Domestic Hot Water Heating Measures		

Multiple Recirculation Loop Design for DHW Systems Serving Multiple Dwelling Units	Inspection that a central DHW system serving a building with more than for DHW Systems Serving eight dwelling units has at least two recirculation loops, each serving roughly the same number of dwelling units. These recirculation loops may the same water heating equipment or be connected to independent water heating equipment.	RA3.6
Verified Drain Water Heat Recovery System (DWHR-H)	Inspection to verify that the DWHR unit(s) and installation configuration match the compliance document and the DWHR(s) is certified to the Commission to have met the requirements.	RA3.6.9

1. Note: Compliance credit for increased duct insulation R-value (not buried ducts) may be taken without field verification if the Rvalue is the same throughout the building, and for ducts located in crawlspaces and garages where all registers are either in the floor or within 2 feet of the floor. These two credits may be taken subject only to enforcement agency inspection.
2. Note: The requirement for verification of a high EER does not apply to equipment rated only with an EER.

Table NA1-1 – Summary of Measures Requiring Field Verification and Diagnostic Testing

Measure Title	Description	Procedure(s)
Duct Measures		
Duct Sealing	Component Packages require that space conditioning ducts be sealed. If sealed and tested ducts are claimed for compliance, field verification and diagnostic testing is required to verify that approved duct system materials are utilized, and that duct leakage meets the specified criteria.	NA2.1.4.2
Mechanical Ventilation Measures		
Dwelling-Unit Mechanical Ventilation Airflow – Continuous Operation	Verify that whole-building ventilation system complies with the airflow rate required by ASHRAE Standard 62.2.	NA2.2.4.1
Dwelling-Unit Mechanical Ventilation Airflow – Intermittent Operation	Verify that whole-building ventilation system complies with the airflow rate required by ASHRAE Standard 62.2.	NA2.2.4.2
Building Envelope Measure		
Building Envelope Air Leakage	The purpose of this test procedure is to measure the air leakage rate through a high-rise residential dwelling unit enclosures measured in cubic feet per minute	NA2.3