

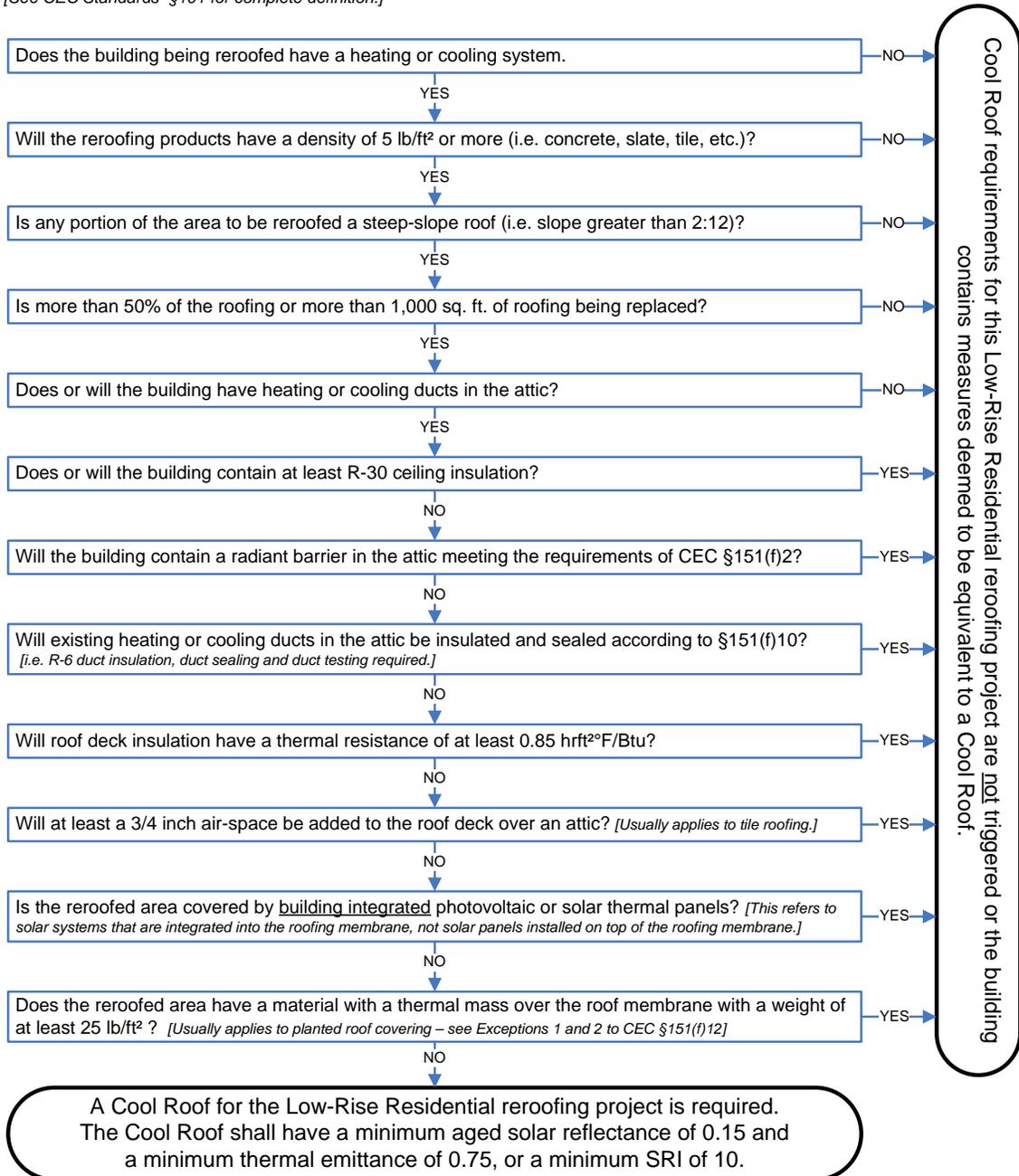


Cool Roof Reroofing Requirements for Existing Low-Rise Residential Buildings

Handout No: 34
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Note: This chart applies to existing Low-Rise Residential Buildings in Climate Zone 2 (Sonoma). As an alternative to these requirements, an applicant may submit energy calculations to show that the building complies with the California Energy Code Performance Approach. A completed CF-1R-ALT form must be submitted with all low-rise residential reroofing permit applications. The effective date of these requirements is January 1, 2010.

A **LOW-RISE RESIDENTIAL BUILDING** is typically a one- or two-family dwelling or a multi-family residential building with three stories or less or a building such as a private garage, carport, barn, greenhouse, shed or agricultural building located on a residential site. Hotels, motels or transient boarding houses are not considered a Low-Rise Residential Building. [See CEC Standards §101 for complete definition.]



Use Only for Low-Rise Residential Reroofing in Climate Zone 2 (Sonoma)

Project Address:

Reroofing Area:

Part 1 – Determination of Requirements (check all items that apply)

A Low-Rise Residential building to be reroofed is **exempt** from Cool Roof requirements if **any** of the following items apply:

- The building being reroofed has no heating or cooling systems. [CEC Table 100-A]
- The building being reroofed is entirely a low slope roof (slope less than or equal to 2:12 pitch). [CEC §152(b)H.ii]
- The proposed reroofing material has a density of less than 5 lb/ft² (i.e. composition shingle, wood shingle or shake, metal roofing).
- Less than or equal to 50% of the roofing **and** less than or equal to 1,000 sq. ft. of roofing is being replaced. [CEC §152(b)H]
- The re-roofed area will include building integrated photovoltaic or solar thermal panels. [CEC §151(f)12B]
- The re-roofed area is covered with a material with a thermal mass over the roof membrane with a weight of at least 25 lb/ft².

[NOTE: Buildings exempt from Cool Roof requirements may utilize the City’s Contractor Self-Certification Program]

Cool Roof requirements are **required** for a Low-Rise Residential building if it has:

- A steep slope roof (greater than 2:12 pitch) with reroofing products that have a density of 5 lb/ft² or more (i.e. concrete, slate, tile, etc.) The Cool Roof shall have a minimum aged solar reflectance of 0.15 and a minimum thermal emittance of 0.75, or a minimum SRI of 10. [Please complete Parts 1, 2 and 3 of this form.]

In lieu of installing a Cool Roof, any of the following “equivalent” items may be used to meet the Cool Roof requirements:

- The building has no heating or cooling ducts in the attic, or
- The building contains or will contain at least R-30 ceiling insulation, or
- The building has or will be provided with a compliant radiant barrier in the attic, or
- Existing heating or cooling ducts in the attic have been sealed, tested and insulated with R-6 insulation per CEC 151(f)10 [NOTE: **test results must be submitted and approved by Building Department**], or
- Roof deck insulation has or will have a thermal resistance of at least 0.85 hr·ft²·°F/Btu, or
- At least a 3/4 inch air-space exists or will be added to the roof deck over an attic. [CEC §152(b)H]

[NOTE: Buildings that must install Cool Roofs or equivalent may not utilize the City’s Contractor Self-Certification Program]

Part 2 - Reroofing Products

Note: If no CRRC-1 label is available, this compliance method cannot be used, use the Performance Approach to show compliance.

CRRC Product ID Number ¹	Product Type ²	Aged Solar Reflectance ^{3,4} <small>0.15 minimum</small>	Thermal Emittance ⁵ <small>0.75 minimum</small>	SRI ⁵ <small>10 minimum</small>
		<input type="checkbox"/> ⁴		
		<input type="checkbox"/> ⁴		
		<input type="checkbox"/> ⁴		

1. The CRRC Product ID Number can be obtained from the Cool Roof Rating Council’s Rated Product Directory at www.coolroofs.org/products/search.php.
2. Indicate the type of product is being used for the roof top, i.e. single-ply roof, asphalt roof, metal roof, etc.
3. If the Aged Reflectance is not available in the Cool Roof Rating Council’s Rated Product Directory then use the Initial Reflectance value from the same directory and use the equation $(0.2+0.7(\rho_{initial} - 0.2))$ to obtain a calculated aged value. Where ρ is the Initial Solar Reflectance.
4. Check box if the Aged Reflectance is a calculated value using the equation above.
5. The SRI value needs to be calculated from a spreadsheet at <http://www.energy.ca.gov/title24/>

Part 3 - Declaration

Documentation Author's Declaration Statement

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

Name:		Signature:	
Company:		Date:	
Address:		EA # CEPE #	
City/State/Zip:		Phone:	