



**Community Development and Sustainability Department**

23 Russell Boulevard, Suite 2 Davis, California 95616  
 Phone: (530)757-5610 Fax: (530)757-5660 TDD: (530)757-5666  
 Website: <http://community-development.cityofdavis.org/>  
 Email: [cddweb@cityofdavis.org](mailto:cddweb@cityofdavis.org)

# RESIDENTIAL COOL ROOF WORKSHEET AND REQUIREMENTS


Address \_\_\_\_\_ Permit # \_\_\_\_\_

***Under the provisions of the 2013 California Energy Code §150.2(b) H, re-roof projects are required to comply with cool roof requirements when more than 50% of a roof is replaced. The cool roof requirements and acceptable alternatives are listed below:***

**High-Slope Roof (2:12 slope and greater)**

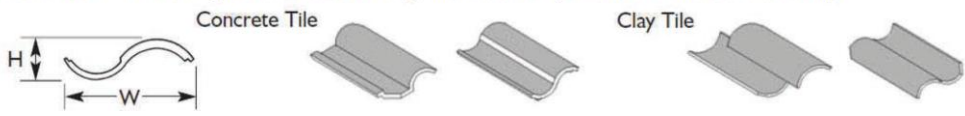
Check applicable box below:

- Install compliant cool roof material that is listed in the Cool Roof Rating Council (CRRC) Rated Product Directory (0.20 aged solar reflectance, 0.75 thermal emittance, or an SRI of 16).  
<http://coolroofs.org/products/results>

	<b>Initial</b>	<b>Weathered</b>	
	Solar Reflectance	0.00	Pending
	Thermal Emittance	0.00	Pending
	Rated Product ID Number	-----	
	Licensed Seller ID Number	-----	
Classification	Production Line		
<small>Cool Roof Rating Council ratings are determined for a fixed set of conditions, and may not be appropriate for determining seasonal energy performance. The actual effect of solar reflectance and thermal emittance on building performance may vary.          Manufacturer of product stipulates that these ratings were determined in accordance with the applicable Cool Roof Rating Council procedures.</small>			

- Air-space of 1.0 inch (25 mm) is provided between the top of the roof deck to the bottom of the roofing product.
- The installed roofing product has a profile ratio of rise to width of 1 to 5 for 50 percent or greater of the width of the roofing product (high profile "S" tile).

**High Profile Tile** – Tiles having a rise to width ratio greater than 1:5 (measured in installed condition)



- Existing ducts in the attic are insulated to R6 and sealed in accordance with one of the following requirements:
  - New duct systems:*
    - no more than 6% duct leakage
  - Existing duct systems:*
    - no more than 15% duct leakage or
    - no more than 10% leakage to the exterior or
    - seal all exposed leaks using theatrical smoke to verify
- Buildings with at least R-38 ceiling insulation.
- Buildings with a radiant barrier in the attic.
 

Radiant barrier must be installed in compliance with the manufacturer's installation instructions. When installed as roof sheathing it is not allowable to install radiant barrier directly over skipped sheathing. The skipped sheathing must be removed or a 1x4 shall be installed over each truss/rafter to provide a 3/4" air space between the radiant barrier and the skipped sheathing.
- Buildings that have no ducts in the attic.
- R-4 or greater insulation above the roof deck.
- Roof area covered by building integrated photovoltaic panels and solar thermal panels.

**Low-Slope Roof (less than 2:12 slope)**

*Check applicable box below:*

- Install compliant cool roof material that is listed in the Cool Roof Rating Council (CRRC) Rated Product Directory (*0.63 aged solar reflectance, 0.75 thermal emittance, or an SRI of 75*).  
<http://coolroofs.org/products/results>
- No ducts in the attic
- The aged solar reflectance can be met by using insulation at the roof deck specified in TABLE 150.2-A.

*TABLE 150.2-A AGED SOLAR REFLECTANCE INSULATION TRADE OFF TABLE*

Aged Solar Reflectance	Roof Deck Insulation R-value	Aged Solar Reflectance	Roof Deck Insulation R-value
0.62-0.60	2	0.44-0.40	12
0.59-0.55	4	0.39-0.35	16
0.54-0.50	6	0.34-0.30	20
0.49-0.45	8	0.29-0.25	24

Reviewed & Approved By \_\_\_\_\_

Date \_\_\_\_\_