



City of Grass Valley Building Department

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Nevada County Building Department

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"Partnering to Improve Consistency & Customer Service"

COMMERCIAL COOL ROOF REQUIREMENTS

When more than 2,000sq.ft. OR more than 50 percent of the roof (whichever is less) is being replaced on a conditioned commercial (nonresidential, hotel/motel & high-rise residential) building a Cool Roof shall be installed in accordance with the following requirements:

LOW-SLOPED (< 2:12) NONRESIDENTIAL BUILDING:

Complete and submit the registered [California Energy Code](#) Form 2019-NRCC-ENV-E at time of permit application submittal giving Cool Roof product information.

Roofing product shall have a minimum solar aged reflectance of 0.63 and a minimum thermal emittance of 0.75, or a minimum SRI of 75, OR

The roof area is completely covered by building integrated photovoltaic panels and solar thermal panels, OR

The roof construction has a thermal mass over the roof membrane with a weight of at least 25 per square foot, OR

The aged solar reflectance is met along with installing supplemental roof/ceiling insulation per Table 141.0-B (*shown below*):

Aged Solar Reflectance	Climate Zone 1, 3-9 U-factor	Climate Zone 2, 10-16 U-factor
0.62 - 0.60	0.075	0.052
0.59 - 0.55	0.066	0.048
0.54 - 0.50	0.060	0.044
0.49 - 0.45	0.055	0.041
0.44 - 0.40	0.051	0.039
0.39 - 0.35	0.047	0.037
0.34 - 0.30	0.044	0.035
0.29 - 0.25	0.042	0.034

Complete and provide the registered [California Energy Code](#) Form 2019-NRCI-ENV-O1-E to be on site at time of final roof inspection

STEEP-SLOPED (>2:12) NONRESIDENTIAL BUILDING:

Complete and submit the registered [California Energy Code](#) Form 2019-NRCC-ENV-E at time of permit application submittal giving Cool Roof Product information.

Roofing product shall have a minimum solar aged reflectance of 0.20 and a minimum thermal emittance of 0.75, or a minimum SRI of 16, OR

The roof area is completely covered by building integrated photovoltaic panels and solar thermal panels, OR

The roof construction has a thermal mass over the roof membrane with a weight of at least 25 per square foot

Complete and provide the registered [California Energy Code](#) Form 2019-NRCI-ENV-O1-E to be on site at time of final roof inspection

LOW-SLOPED ($\leq 2:12$) HOTEL/MOTEL & HIGH-RISE RESIDENTIAL (CLIMATE ZONE 11 ONLY):

Complete and submit the registered California Energy Code Form 2019-NRCC-ENV-E at time of permit application submittal giving Cool Roof Product information.

Roofing product shall have a minimum solar aged reflectance of 0.55 and a minimum thermal emittance of 0.75, or a minimum SRI of 64, OR

The roof area is completely covered by building integrated photovoltaic panels and solar thermal panels, OR

The roof construction has a thermal mass over the roof membrane with a weight of at least 25 per square foot

Complete and provide the registered California Energy Code Form 2019-NRCI-ENV-O1-E to be on site at time of final roof inspection

STEEP-SLOPED ($>2:12$) HOTEL/MOTEL & HIGH-RISE RESIDENTIAL (CLIMATE ZONE 11 ONLY):

Complete and submit the registered California Energy Code Form 2019-NRCC-ENV-E at time of permit application submittal giving Cool Roof Product information.

Roofing product shall have a minimum solar aged reflectance of 0.20 and a minimum thermal emittance of 0.75, or a minimum SRI of 16, OR

The roof area is completely covered by building integrated photovoltaic panels and solar thermal panels, OR

The roof construction has a thermal mass over the roof membrane with a weight of at least 25 per square foot

Complete and provide the registered California Energy Code Form 2019-NRCI-ENV-O1-E to be on site at time of final roof inspection

All roofs that are exposed to the roof deck shall have the exposed area insulated with minimum R-14 insulation unless existing roofs are insulated with minimum R-7 insulation or it will reduce the base flashing height to less than 8" at penthouse and parapet walls.

