

DOCKETED

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MARK PESTRELLA, Director

**COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS**

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ADOPTED

BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES

30 October 16, 2018

CELIA ZAVALA
EXECUTIVE OFFICER

October 16, 2018

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, California 90012

Dear Supervisors:

**DEVELOPMENT SERVICES CORE SERVICE AREA PROPOSED AMENDMENTS TO THE
2017 LOS ANGELES COUNTY GREEN BUILDING STANDARDS CODE
(ALL SUPERVISORIAL DISTRICTS)
(3 VOTES)**

SUBJECT

Public Works is seeking Board approval for a proposed ordinance to amend the Los Angeles County Green Building Standards Code known as Title 31 of the Los Angeles County Code to add supplemental cool roof standards for reduction of the heat island effect on newly constructed or altered buildings.

IT IS RECOMMENDED THAT THE BOARD:

1. Find that the proposed ordinance is categorically exempt from the provisions of the California Environmental Quality Act for the reasons stated in this Board letter.
2. Approve the introduction of an ordinance to amend Title 31 - Los Angeles County Green Building Standards Code to add cool roof building standards.
3. Introduce, waive reading, and place the proposed ordinance on a subsequent agenda for adoption.
4. Find that the proposed changes and modifications to building standards contained in the 2016 California Green Building Standards Code, as adopted in Title 31 - Los Angeles County Green Building Standards Code, are necessary because of local climatic, geological, and/or topographical conditions, as detailed in the ordinance.

5. Approve the cost analysis and effectiveness study by the California Energy Commission regarding the proposed energy standards included in the ordinance and find that these proposed energy standards will require buildings to be designed to consume no more energy than permitted by the California Energy Code.
6. Approve and authorize the Director of Public Works or his designee to file the adopted ordinance containing the Board of Supervisors' findings with the California Building Standards Commission and the California Energy Commission.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

The enclosed proposed ordinance, when adopted, will amend Title 31 – Los Angeles County Green Building Standards Code to mandate the utilization of cool roofing materials for new building construction, building additions, and major roof replacements in the unincorporated areas of Los Angeles County.

Pursuant to provisions of the California Health and Safety Code, on November 22, 2016, the Board adopted an ordinance amending Title 31 – Green Building Standards Code to incorporate, by reference, the building standards contained in the 2016 California Green Building Standards Code together with certain changes and modifications.

The 2016 California Green Building Standards Code contains voluntary requirements for the use of cool roof materials, which were not adopted or made mandatory in November 2016. The recommended ordinance will adopt and make mandatory certain voluntary cool roof requirements from the 2016 Green Building Standards Code.

On July 31, 2017, the Board directed Public Works, in coordination with the Department of Regional Planning, the Chief Sustainability Officer, and the Department of Public Health, to draft an ordinance that would require utilization of cool roofing materials for new building construction, building additions, and major roof replacements in the unincorporated areas of Los Angeles County. The recommendation to mandate the use of cool roofing materials through this proposed ordinance is in alignment with this Board initiative to address the effects of climate change in the unincorporated County areas. These standards will help reduce the urban heat island effect, improve air quality, and decrease the energy consumption of buildings.

The ordinance also provides for exceptions for certain types of roof repairs, photovoltaic roofs, or roof replacements of less than some to-be-determined portion of roof area.

Implementation of Strategic Plan Goals

The Countywide Strategic Plan directs the provisions of Strategy II.1, Continually Pursue Development of our Workforce, and Strategy II.3.3, Make Environmental Sustainability our Daily Reality, as it provides services to the public that have a wide-reaching positive effect on the entire community. The adoption of the County's Green Building Standards Code amendments provides minimum green building design and construction standards and encourages sustainable construction practices that promote the health and welfare of the general public throughout the unincorporated areas of Los Angeles County. By mandating updated green building standards, the County will be able to ensure that its Strategic Goals are fully addressed.

FISCAL IMPACT/FINANCING

There will be minimal impact on expenditures for Public Works pertaining to training personnel. All associated costs including these training costs and the printing of the code amendments are included in the Public Works General Fund Fiscal Year 2018-19 Budget.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

Pursuant to provisions of the California Health and Safety Code, the County adopted the 2016 California Green Building Standards Code with modifications in Title 31 of the County Code. The California Green Building Standards Code had voluntary cool roof building standards, which through the proposed ordinance will become mandatory subject to exemptions identified in Sections 3 and 5, respectively. In accordance with Sections 17958.5 and 17958.7 of the Health and Safety Code, the Board must determine and expressly find that the amendments to the State standards are necessary because of local climatic, geological, and/or topographical conditions.

The applicable finding(s) for each proposed amendment to the State's building standards are clearly delineated in a chart, set forth in the proposed ordinance.

The proposed ordinance establishes additional energy conservation measures that require buildings to be more energy efficient than the standards contained in the California Energy Code. Accordingly, Section 25402.1 of the Public Resources Code requires that the Board find the proposed energy standards to be cost-effective and require buildings to be designed to consume no more energy than permitted by the California Energy Code. The enclosed Energy Cost-Effectiveness study contains supporting analysis of energy savings and a basis for cost-effectiveness for the proposed energy standards in Title 31.

Following the adoption of the ordinance by the Board, four copies of the enclosed application, the ordinance, and cost-effectiveness studies must be submitted to the Executive Director of the California Energy Commission for approval. The energy standards contained in the proposed ordinance cannot become operative until they have been approved by the California Energy Commission. Accordingly, upon approval by the Board, Public Works will seek approval from the California Energy Commission. The proposed amendments contained in the ordinance will then become operative when the Board's findings are filed with the State of California Building Standards Commission.

ENVIRONMENTAL DOCUMENTATION

Adoption of this proposed ordinance is exempt from the California Environmental Quality Act (CEQA) in that it can be seen with certainty that there is no possibility that the ordinance will have a significant effect on the environment pursuant to State CEQA Guidelines Section 15061(b)(3). Adoption of the proposed ordinance is covered by the general rule that CEQA applies only to projects that have the potential for causing a significant effect on the environment. Adoption of the proposed ordinance does not have such potential.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

Other departments embarking on construction projects will be required to comply with the provisions of this proposed ordinance if construction permit applications are submitted on or after the operative date of the proposed ordinance.

The Honorable Board of Supervisors

10/16/2018

Page 4

Copies of the proposed code amendments were circulated to professional associations within the design and construction communities for review and comments. No comments regarding the ordinance language were received by Public Works.

CONCLUSION

Upon approval of the proposed ordinance, please return one adopted copy of this Board letter and one adopted copy of the proposed ordinance to the Department of Public Works, Building and Safety Division.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Mark Pestrella". The signature is fluid and cursive, with the first name "Mark" written in a larger, more prominent script than the last name "Pestrella".

MARK PESTRELLA

Director

MP:RDA:sd

Enclosures

c: Chief Executive Office (Chia-Ann Yen)
County Counsel
Executive Office
Department of Public Health
Department of Regional Planning



COUNTY OF LOS ANGELES
OFFICE OF THE COUNTY COUNSEL

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MARY C. WICKHAM
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August 7, 2018

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Mark Pestrella, Director
Department of Public Works
900 South Fremont Avenue
Alhambra, California 91803

Attention: Hassan Alameddine, Assistant Deputy Director
Building & Safety Division

**Re: Ordinance Amending Title 31 – Green Building Standards
Code – of the Los Angeles County Code**


Dear Mr. Pestrella:

As requested, we have prepared the proposed analysis and ordinance amending Title 31 – Green Building Standards Code – of the Los Angeles County Code, to add supplemental and administrative provisions that are not in the current Green Building Standards Code.

The ordinance and its analysis may be presented to the Board of Supervisors for its consideration after a duly-noticed public hearing.

Very truly yours,

MARY C. WICKHAM
County Counsel

By 
CAROLE B. SUZUKI
Senior Deputy County Counsel
Public Works Division

APPROVED AND RELEASED:



LAWRENCE L. HATETZ
Chief Deputy

CBS:ck
Enclosures

ANALYSIS

This ordinance amends Title 31 – Green Building Standards Code – of the Los Angeles County Code, to add supplemental green building standards for cool roofs to reduce the heat island effect for newly-constructed buildings and for alterations and additions to existing buildings, subject to specified exceptions. This ordinance also adds administrative provisions that are not in the current Green Building Standards Code.

MARY C. WICKHAM
County Counsel

By 
CAROLE B. SUZUKI
Senior Deputy County Counsel
Public Works Division

CBS:ck

Requested: 04/25/18
Revised 07/25/18

ORDINANCE NO. _____

An ordinance amending Title 31 – Green Building Standards Code – of the Los Angeles County Code, relating to building standards for cool roof construction to reduce the heat island effect.

The Board of Supervisors of the County of Los Angeles ordains as follows:

SECTION 1. Section 202 is hereby amended to read in alphabetical order as follows:

202 DEFINITIONS.

...

COOL ROOF RATING COUNCIL or CRRC. The entity recognized by the California Energy Commission to rate and certify the reflectance and emittance values of roofing products.

...

SECTION 2. Section 301.3.3 is hereby amended to read as follows:

301.3.3 Nonresidential buildings greater than or equal to 25,000 square feet.

In addition to the requirements of Section 301.3, any newly constructed nonresidential building greater than or equal to 25,000 square feet shall comply with all requirements of Section A5.601.2.4 Tier 1. Roofing materials shall comply with Tier 2 requirements of Table A5.106.11.2.3.[BSC].

Exceptions:

1. Compliance with Section A5.601.2.3 shall be voluntary.

2. High-rise residential buildings of seven stories or greater shall comply with Table A4.106.5.1(~~34~~) in lieu of Table A5.106.11.2.23.

SECTION 3. Section 4.106.6 of Title 31 is hereby added to read as follows:

4.106.6 Cool roof for reduction of heat island effect.

Roofing materials shall comply with the solar reflectance and thermal emittance requirements of this section.

Exceptions:

1. Roof repair.
2. Roof replacement when the roof area being replaced is equal to or less than 50 percent of the total roof area.
3. Installation of building-integrated photovoltaics.
4. Installation of a steep-sloped roof (roof slope > 2:12) in climate zone 16 on other than a low-rise multifamily building.
5. Additions resulting in less than 500 square feet of added roof area or less than 50 percent of the total roof area, whichever is greater.
6. Roof construction that has a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 pounds per square foot.

4.106.6.1 Solar reflectance.

Roofing materials shall have a minimum 3-year aged solar reflectance equal to or greater than the values specified in Table 4.106.6(1) and Table 4.106.6(2).

Solar reflectance values shall be based on the aged reflectance value of the roofing product or the equation in Section A4.106.5.1, if the CRRC testing for aged solar reflectance is not available.

4.106.6.2 Thermal emittance.

Roofing materials shall have a CRRC initial or aged thermal emittance equal to or greater than the values specified in Table 4.106.6(1) and Table 4.106.6(2).

4.106.6.3 Solar reflectance index alternative.

Roofing materials having a Solar Reflectance Index (SRI) equal to or greater than the values specified in Table 4.106.6(1) and Table 4.106.6(2) may be used as an alternative to compliance with the 3-year aged solar reflectance and thermal emittance values.

SRI values used to comply with this section shall be calculated using the SRI Calculation Worksheet (SRI-WS) developed by the California Energy Commission or in compliance with ASTM E1980-01, as specified in the current California Energy Code. Solar reflectance values used in the SRI-WS shall be based on the aged reflectance value of the roofing product or the equation in Section A4.106.5.1, if the CRRC certified aged solar reflectance is not available. Certified thermal emittance used in the SRI-WS may be either the initial value or the aged value listed by the CRRC.

SECTION 4. Tables 4.106.6(1) and 4.106.6(2) are hereby added to read as follows:

TABLE 4.106.6(1) – LOW-RISE RESIDENTIAL

ROOF SLOPE	MINIMUM 3-YEAR AGED SOLAR REFLECTANCE	THERMAL EMITTANCE	SRI
≤2:12	0.65	0.85	78
>2:12	0.25	0.85	20

TABLE 4.106.6(2) – HIGH RISE RESIDENTIAL BUILDINGS, HOTELS AND MOTELS

ROOF SLOPE	MINIMUM 3-YEAR AGED SOLAR REFLECTANCE	THERMAL EMITTANCE	SRI
≤2:12	0.65	0.75	78
>2:12	0.25	0.75	20

SECTION 5. Section 5.106.11 is hereby added to read as follows:

5.106.11 Cool roof for reduction of heat island effect.

Roofing materials shall comply with the solar reflectance and thermal emittance requirements of this section.

Exceptions:

1. Roof repair.
2. Roof replacement when the roof area being replaced is equal to or less than 50 percent of the total roof area.
3. Installation of building-integrated photovoltaics.
4. Additions resulting in less than 500 square feet of added roof area or less than 50 percent of the total roof area, whichever is greater.

5. Roof construction that has a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 pounds per square foot.

5.106.11.1 Solar reflectance.

Roofing materials shall have a minimum 3-year aged solar reflectance equal to or greater than values specified in Table 5.106.11.

Solar reflectance values shall be based on the aged reflectance value of the roofing product or the equation in Section A5.106.11.2.1, if the CRRC testing for aged solar reflectance is not available.

5.106.11.2 Thermal emittance.

Roofing material shall have a CRRC initial or aged thermal emittance equal to or greater than the values specified in Table 5.106.11.

5.106.11.3 Solar reflectance index alternative.

Roofing material having an SRI equal to or greater than the values specified in Table 5.106.11 may be used as an alternative to compliance with the 3-year aged solar reflectance and thermal emittance values.

SRI values used to comply with this section shall be calculated using the SRI-WS developed by the California Energy Commission or in compliance with ASTM E1980-01, as specified in the current California Energy Code. Solar reflectance values used in the SRI-WS shall be based on the aged reflectance value of the roofing product or the equation in Section A5.106.11.2.1, if the CRRC certified aged solar reflectance is not available. Certified thermal emittance used in the SRI-WS may be either the initial value or the aged value listed by the CRRC.

SECTION 6. Table 5.106.11 is hereby added to read as follows:

TABLE 5.106.11

ROOF SLOPE	MINIMUM 3-YEAR AGED SOLAR REFLECTANCE	THERMAL EMITTANCE	SRI
≤2:12	0.68	0.85	82
>2:12	0.28	0.85	27

SECTION 7. The provisions of this ordinance contain various changes or modifications to requirements contained in the building standards published in the California Green Building Standards Code.

Pursuant to California Health and Safety Code sections 17958.5, 17958.7, and 18941.5, the Board of Supervisors hereby expressly finds that all of the changes and modifications to requirements contained in the building standards published in the California Green Building Standards Code contained in this ordinance are reasonably necessary because of local climatic, geological, or topographical conditions in the County of Los Angeles, as more particularly described in the table set forth below:

GREEN BUILDING STANDARDS CODE AMENDMENTS		
CODE SECTION	CONDITION	EXPLANATION
4.106.6, 4.106.6.1, 4.106.6.2, 4.106.6.3, Table 4.106.6(1) and Table 4.106.6(2)	Climatic	Environmental resources in the County of Los Angeles are scarce due to varying and occasionally immoderate temperature and weather conditions. Adding mandatory requirements for cool roofs for residential occupancies will achieve a greater reduction in greenhouse gases, higher efficiencies of energy, and improved environmental air quality.

5.106.11, 5.106.11.1, 5.106.11.2, 5.106.11.3, and Table 5.106.11	Climatic	Environmental resources in the County of Los Angeles are scarce due to varying and occasionally immoderate temperature and weather conditions. Adding mandatory requirements for cool roofs for non-residential occupancies will achieve a greater reduction in greenhouse gases, higher efficiencies of energy, and improved environmental air quality.
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[TITLE31SECT30133CSCC]