



CITY of CALABASAS

PLANNING COMMISSION AGENDA REPORT
SEPTEMBER 2, 2021

TO: Members of the Planning Commission

FROM: Tom Bartlett, AICP, City Planner
Teal Pacyna, Assistant Planner

PROPOSAL: An ordinance to amend Section 17.90.020 of the City of Calabasas Land Use and Development Code, by strengthening the definitions of permeable paving and pervious surface.

APPLICANT: City of Calabasas

RECOMMENDATION: Adopt Resolution 2021-718 recommending to the City Council adoption of Ordinance 2021-393, amending the City of Calabasas Land Use and Development Code by strengthening the definitions of permeable paving and pervious surface.

STAFF RECOMMENDATION:

Staff recommends that the Planning Commission adopt Resolution No. 2021-718 (Exhibit A) recommending that the City Council adopt Ordinance 2021-393 (Exhibit B), amending the City of Calabasas Land Use and Development Code by strengthening the definitions of permeable paving and pervious surface.

REVIEW AUTHORITY:

Pursuant to Chapter 17.76 of the Calabasas Land Use and Development Code, the Planning Commission is the recommending body for amendments to the City of Calabasas Land Use and Development Code, and the City Council is the final approval body.

BACKGROUND:

The Planning Commission requested an overview regarding the role and application of permeable paving requirements in the City of Calabasas. On September 17, 2020 staff presented an overview to the Planning Commission regarding pervious surfaces and

permeable paving systems. During the overview presentation, staff established that pervious surfaces minimize surface water runoff and soil erosion by allowing water infiltration into the soil and through storm water detention and retention. Staff also explained that based on this purpose and functionality, pervious surfaces may include landscaping, natural areas, porous (permeable) paving materials, lakes, ponds, and pools.

Following the staff presentation, the Commission requested that the definition of permeable pavement be modified to better establish a minimum standard for paving systems that are intended to function as pervious surfaces.

STAFF ANALYSIS:

Not all pavers or paving materials classified as “pervious” or “permeable” meet the City’s intended definition of pervious surface. The consequences of an incorrectly designed “permeable” paver system is that it will not permit sufficient water penetration into the underlying soil, and can actually increase the quantity and velocity of storm water runoff. Below is the current definition.

"Permeable paving" means any paving material that permits water penetration to a soil depth of eighteen (18) inches or more. Includes nonporous surface material poured or laid in sections not exceeding one square foot in area and less than two-thirds of the total surface area of a lot that permits water penetration to a soil depth of eighteen (18) inches or more. Examples include crushed stone or gravel.

Although this definition specifies an intended water penetration depth of 18 inches, it arbitrarily specifies horizontal hard surface dimensions and percentages (e.g., for bricks, stones, concrete pavers, etc. placed on the ground surface), while not specifying any dimension(s) for spacing between the hard surface pavers. The rewritten definition of permeable pavement eliminates the ambiguity by referencing well-established engineering standards for “pervious” or “permeable” paving systems.

Staff consulted two sources for established national design standards regarding permeable paving systems: the American Society of Civil Engineers (ASCE), and the American Society of Testing and Materials (ASTM). The ASTM standard applies more generally to permeable unit paving systems, and sets minimum open void space percentages for those systems so that sufficient water infiltration would occur. The revised definition for permeable paving therefore now includes a specific reference to uniform design minimums recognized under ASTM C1781 - Surface Infiltration Rate of Permeable Unit Pavement Systems. Also, added to the definition is a specific design standard for interlocking concrete pavement, as taken from ASCE 68-18 – Permeable Interlocking Concrete

Pavement. This design standard provides manufacturers a universal design minimum for the design and fabrication of permeable paver systems.

The resulting modified definition of **permeable pavers** is as follows:

"Permeable paving" means any paving material or paving system that permits water penetration to a soil depth of eighteen (18) inches or more. Paving systems may include combinations of nonporous surface material poured or laid in distinct and separate sections installed in combination with permeable materials (examples include crushed stone, gravel or equivalent) such that at least two-thirds of the total surface area of the system permits water penetration to a soil depth of eighteen (18) inches or more. Permeable paving systems that require drainage to the curb or direct connection to the storm drain system do not qualify as permeable paving. Engineered paving systems under this definition include interlocking concrete pavers installed to comply with the standard from the American Society of Civil Engineers (ASCE) – Standard 68-18 for Permeable Interlocking Concrete Pavement, or an equivalent standard for interlocking concrete pavers may be adopted by Resolution by the City Council. Individual paving units must have a minimum surface open area void space of 5% and a minimum in-service infiltration rate of not less than 10in/hr and complying with ASTM Standard C1781 – Standard Test Method for Surface Infiltration Rate of Permeable Unit Pavement Systems, or an equivalent standard as may be adopted by Resolution by the City Council. Alternative designs, which meet infiltration testing in accordance with ASTM Standard C1781, or an equivalent standard as may be adopted by Resolution by the City Council, may be considered subject to review and approval by the Director. Any permeable paving system must be certified by a licensed civil engineer, landscape architect, or other qualified, licensed professional, as meeting the requirements of this definition.

In addition, to achieve sufficient internal consistency within the Land Use and Development Code, staff has also improved the definition of “pervious surface”. This re-written definition also corrects a spelling error. As written today in chapter 17.90 of the Land Use and Development Code, the definition of **pervious surface** is:

*"Pervious surface" means portions of a site that are only paved with permeable paying (**sic**) materials and are not covered with structures after development. Includes landscaped and natural areas.*

Now, as revised, the definition of “pervious surface” reads as follows:

“Pervious surface” means those portions of a property or site that allow for water penetration into the soil, to a soil depth of 18 inches or more, such as landscaped areas, natural areas, and developed hardscape areas where permeable paving has been used or which otherwise includes storm water runoff features consistent with Calabasas Municipal Code Chapter 17.26. Pervious surfaces may not be covered with structures that prevent water penetration into the soil, to a depth of at least 18 inches.

As a result, the updated Code definition for **pervious surface** better explains which elements of a property development appropriately fall within that term; while the updated Code definition for **permeable paving** now clarifies how hardscape areas must be specified, engineered and installed to fall within, and contribute to, the overall pervious surface area for a project.

ENVIRONMENTAL REVIEW

This project is exempt from environmental review under CEQA, based upon Sections 15183 and 15308 of the CEQA Guidelines.

EXHIBITS:

Exhibit A: Planning Commission Resolution No. 2021 - 718

Exhibit B: Draft Ordinance No. 2021 – 393