



1. PURPOSE

The 2025 California Building Code (CBC) Section 1803.2 and the 2025 California Residential Code (CRC) Section R401.4, effective January 1, 2026, establish requirements for geotechnical investigations and foundation design. These investigation reports are generally required for all new construction, additions, and accessory structures located in Cupertino.

This policy is organized to help contractors, property owners, and engineers quickly find what they need: (1) *whether a geotechnical investigation is required*; (2) *whether the project qualifies for a waiver*; (3) *how to request a waiver or modification*; and (4) *what design standards apply if a waiver is granted*.

2. DO I NEED GEOTECHNICAL INVESTIGATION?

Unless your project qualifies for a waiver (see Section 3) or a modification is approved (see Section 4), a geotechnical investigation report is required before permit issuance. Where required, the investigation must:

- Evaluate earthquake-related hazards, including slope instability, liquefaction and soil strength loss, differential settlement, reduction in soil-bearing capacity, and surface rupture due to faulting or lateral spreading.
- Be prepared, sealed, and signed by a State of California Registered Geotechnical Engineer or a State of California Registered Civil Engineer with appropriate geotechnical experience and training.
- Determine Site Class per ASCE 7-22 Chapter 20, based on the upper 100 feet of the soil profile. If investigation data is insufficient or shallower than 50 feet, the “Default Site Condition” (enveloping Site Classes C, CD, and D) is mandatory unless a specific class is justified per ASCE 7-22 Section 20.3.

3. DOES MY PROJECT QUALIFY FOR A WAIVER?

A site-specific geotechnical investigation is generally not required for the project types below, provided the project is located in a non-hillside area that is not within a designated geological hazard zone (i.e., where highly expansive, compressible, shifting, slope instability, liquefaction and soil strength loss, differential settlement, reduction in soil-bearing capacity, surface rupture, or other questionable soils are not present. Moderate expansive soils typical of Cupertino flatlands are permitted, provided foundations conform to Section 5):

1. **Residential Additions/Remodels:** Single-family or duplex residential additions of 750 square feet or less, and non-structural remodels.
2. **Detached Accessory Structures:** Detached accessory structures 750 square feet or less, including garages, carports, recreation rooms, storerooms, workshops, stables, barns, playhouses, patio structures, gazebos, trellises, equipment sheds, animal enclosures, and similar structures.

3. **Habitable Detached Structures (ADUs up to 750 sq. ft.):** Single-family residential Accessory Dwelling Units (ADUs) of 750 square feet or less are exempt from a site-specific geotechnical investigation; because ADUs are habitable residences, engineered foundation plans conforming to Section 5 are required regardless of the waiver.
4. **Non-Habitable Accessory Structures:** Ground-supported cantilever fences not exceeding 7 feet in height; permitted decks between 30 inches and 4 feet above grade at any point (decks under 30 inches are permit-exempt per 2025 CRC R105.2); retaining walls retaining 4 feet or less of level backfill; ground-mounted photovoltaic systems; and other similar structures.

If your project fits one of these categories: no waiver application is required — simply design to the prescriptive values in Section 5. If it doesn't fit, continue to Section 4.

4. HOW DO I REQUEST A WAIVER OR MODIFICATION?

If your project does not fall into a category in Section 3, there are two possible paths to avoid a full site-specific investigation:

Path 1 – Proximity Exception: Per 2025 CBC Section 1803.2 and 2025 CRC Section R401.4.1.1.1, the Building Official is permitted to waive the requirement for a geotechnical investigation where soils conditions are known based on reports of prior investigations of nearby sites of the subject property, provided such sites share the same geologic formation, for similar types of construction that demonstrate an investigation is not necessary for any of the conditions set forth in Sections 1803.5.1 through 1803.5.6 and Sections 1803.5.11 and 1803.5.12. The designer of record should reference the applicable nearby report(s) at the time of permit submittal. Additionally, a letter from the soil engineer of record for the referenced report must be submitted, verifying the soil conditions and confirming that the referenced report is adequate for use on the subject property.

Path 2 – Formal Modification Request: If no known reports of nearby sites are available, per 2025 CRC Section R104.10 and 2025 CBC Section 104.10 (Modifications), the Engineer of Record (or Soils Engineer) responsible for the foundation design may submit a written request for modification when special individual reasons exist that make application of these requirements impractical. Requests may be granted when supporting facts demonstrate that granting the request will not lessen the degree of structural integrity, durability, strength, and seismic safety. The extent of any change in requirements will be based on the strength of the supporting facts.

A Formal Modification Request must include a completed Alternate Materials and Methods/Modification Form and a justification letter with the following minimum information:

1. Plot plan showing location of proposed and existing structures and existing natural grade contours.
2. Use, floor area, number of stories, and height of existing and proposed structures.
3. Determination of maximum design loads for proposed footings and retaining walls.
4. Visual observation report of the performance and condition of any existing structures on site, including structure size, foundation type, and loading.
5. Soil classification.
6. Observations from a site visit regarding potential for differential settlement, slope instability, expansive soils, lateral spreading, liquefaction, and presence of fill materials.
7. Estimated cost of construction and related foundation and soils investigation.

8. A statement that a foundation inspection will be performed by the Engineer of Record (or Soils Engineer) during construction to verify that site conditions are consistent with those described in the letter.

The Alternate Materials and Methods/Modification Form is available at: [Alternate Materials and Methods/Modification Form](#).

5. WHAT DESIGN VALUES APPLY IF A WAIVER IS GRANTED?

When a site-specific geotechnical investigation is waived or modified (Sections 3 or 4), the building and foundation systems shall comply with the following prescriptive design criteria:

- Allowable Soil Bearing Pressure: maximum presumptive allowable value of 1,500 psf for clay/silt materials, with higher allowable pressures depending on soil classification (CBC Table 1806.2).
- Minimum Footing Depth: exterior footings shall be at least 18 inches below the lowest adjacent grade (amended per 2025 CRC §R403.1.4 and 2025 CBC §1809.4); interior footings shall be at least 12 inches below ground surface.
- Maximum Lateral Bearing Pressure: 100 psf per foot below natural grade for Class 5 soil materials (clay/silt) (CBC Table 1806.2).
- Sliding Resistance: dead load × coefficient of friction per CBC Table 1806.2 (0.25–0.35 for silty sands/gravel), or a default presumptive lateral sliding cohesion value of 130 psf may be assumed for Class 5 clay/silt materials.
- Slope Clearances and Footing Setbacks: foundations on or adjacent to slopes steeper than one unit vertical in three units horizontal (33.3%) require specific clearances and setbacks per CBC §1808.7 and §1803.5.2.

6. IMPORTANT REMINDERS

- The Chief Building Official retains authority to require a site-specific geotechnical investigation at any time, regardless of the exemption categories or prescriptive values above.
- A waiver or modification of the geotechnical investigation requirement does not authorize any work performed in a manner that violates the California Building Code or California Residential Code.