CITY OF GARDEN GROVE

Community Development Department
Building & Safety Division
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POLICY NUMBER: 26-016

GEOTECHNICAL INVESTIGATION & FOUNDATION REQUIREMENTS FOR RESIDENTIAL PROJECTS AND ACCESSORY STRUCTURES

BACKGROUND

1. Section R401.4 of the California Residential Code (CRC) requires a soils test to determine soil characteristics when expansive soils are likely to be present or when the project site is located within a designated special hazard zone, such as a **liquefaction** area.
2. Section 1803.5.11 of the California Building Code (CBC) requires a geotechnical investigation for any structure located in Seismic Design Categories C, D, E, or F, as specified in Section 1613.
3. Section 1803.2 of the CBC allows the Building Official to waive the requirement for a geotechnical investigation if satisfactory data from adjacent areas demonstrates that such investigation is unnecessary for the conditions listed in Sections 1803.5.1 through 1803.5.6, and Sections 1803.5.10 and 1803.5.11.

Given that most jurisdictions within Orange County are classified as Seismic Design Category D, and the entire City of Garden Grove is located within a liquefaction zone, this policy establishes consistent requirements for geotechnical investigations in accordance with the California Residential Code (CRC) and California Building Code (CBC).

POLICY

A geotechnical investigation report shall be required for all projects unless specifically exempted under the provisions below.

EXCEPTIONS

1. One-story room addition(s) up to 1,200 Square feet.
2. Accessory dwelling unit (ADU) additions to a single-family-dwelling (SFD) not exceeding 1,200 square feet**.**
3. Detached accessory structure or SFD/ADU not exceeding 1,200 square feet**.**
4. Second-story addition above an existing first floor within the existing footprint of the dwelling.

For Exception Item 4, a **letter from a California Licensed Geotechnical Engineer or Civil Engineer practicing in soil engineering** shall be required. The letter must evaluate the condition of the existing foundation and supporting subgrade soils and provide foundation recommendations addressing the additional vertical and lateral loads from the proposed second-story addition.

ALTERNATE METHOD IN LIEU OF GEOTECHNICAL REPORT

Projects exempted under Exceptions 1 through 4 shall comply with the following alternate foundation preparation and design requirements, provided that minimum foundation clearance from slope is maintained per **CBC Section 1808.7**, **CRC Section R403.1.7**, or the **local Grading Code**, whichever is more restrictive:

A. Slab-on-Grade Construction

- **Remove and scarify the top 12 inches** of soil and replace with clean fill compacted to 90% density prior to trenching for utilities and foundations.
  i. Compaction certificate is required at time of foundation inspection.
  ii. Subgrade shall be pre-saturated to 110% of optimum moisture content**.**
- Provide a **5-inch slab on grade** reinforced with **#4 bars at 18 inches on center each way**, over **4 inches of ½-inch or larger clean aggregate**, with a **10-mil vapor retarder** in direct contact with the concrete.
- Slab dowels shall tie into a continuous **12-inch-wide by 24-inch-deep** foundation embedded into firm soil.
- Continuous foundation shall be reinforced with **2 #5 (or 3 #4) bars, top and bottom**.
- Concrete shall have a **minimum compressive strength of 4,500 psi (f'c)** using **Type V cement**, with a **maximum water-cement ratio of 0.45**.
- No special inspection required for 4,500 psi concrete if a **truck mix ticket** is provided.

B. Raised Foundation Construction

- Provide a **12-inch-wide by 24-inch-deep** continuous foundation around the perimeter of the addition.
- Reinforce continuous foundation with **2 #5 (or 3 #4) bars, top and bottom**.
- Provide **interior pad footings** with a **minimum embedment depth of 18 inches**.
- Use **concrete meeting the same strength and mix criteria** as described above.

SCOPE LIMITATION

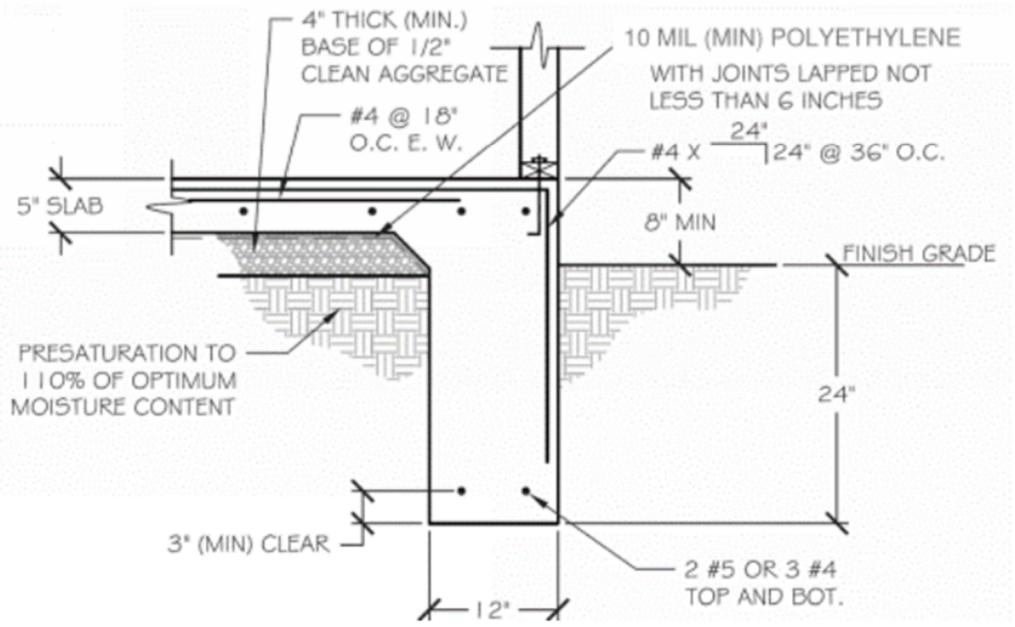
This policy does not apply to projects located within **designated flood zones or those requiring grading plans** or permits in accordance with the **local Grading Code**.

A geotechnical investigation in accordance with CBC Chapter 18 is required for all projects located within designated flood zones.

Note: refer to **Detail A** for slab-on-grade construction and **Detail B** for raised foundation construction, as shown on sheet 3 of 3.

Approved: David Dent	Signature:
Deputy Director/Chief Building Official	Date:

SLAB ON GRADE FOUNDATION DETAIL A



RAISED FLOOR FOUNDATION DETAIL B

