

Policy for soils/geotechnical reports.  
Version -6

Per section 1803.1.1 a soils investigation report, and ASCE 7-05 section 11.8.2 a geotechnical report, is required for all projects. The following projects will not require a soils or geotechnical report.

Soils/Geotechnical report Exemption

- 1) Single Family Dwelling/Duplex buildings, and their accessory buildings not more than 2- levels, without basements or stem walls over 3 feet in height, without cantilever columns, piles or caissons and with foundations complying with the following:
  - A) New foundation construction.
    - Depth of footings below the natural and finished grades shall not be less than 24 inches for exterior and 18 inches for interior footings.
    - Exterior walls and interior bearing walls shall be supported on continuous footings.
    - Footings shall be reinforced with four ½-inch diameter deformed reinforcing bars. Two bars shall be placed within 4 inches of the bottom of the footings and two bars within 4 inches of the top of the footing.
    - On-grade concrete floor slabs shall be placed on a 4-inch fill of coarse aggregate or on 2 inch sand bed over a moisture barrier membrane. The slabs shall be at least 3-1/2 inches thick and shall be reinforced with ½- inch diameter deformed reinforcing bars. Reinforcing bars shall be spaced at intervals not exceeding 16 inches each way.
    - The soil below an interior concrete slab shall be pre-saturated to a depth of 18 inches prior to placing the concrete.
    - All drainage adjacent to footings shall be conducted away from the structure by a 3-foot-wide sloped apron draining into an approved non-erosive device.
    - Allowable foundation and lateral pressures for footing design shall not exceed the minimum value of 1500psf as shown in table 1804.2 of the 2010 CBC.

- B) Existing footings may be utilized provided the building complies with the following:
- A civil or structural engineer shall be required for the project and shall prepare a statement to be included on the plans, stating that the engineer has inspected the supporting soils on the site and is knowledgeable of the soils in the area. The statement shall also include the following information:
    - a) The type of soil on the site and the estimated classification of expansiveness.
    - b) The structural adequacy and conditions of existing footings. Justification for the structural adequacy of the foundation beyond just a statement may be required.
  - All drainage adjacent to existing footings shall be conducted away from the structure with a 3-foot-wide sloped apron draining to a non-erosive device.
  - Where the wall above an existing foundation is completely removed for 50% of its lineal length, then the entire foundation under the entire wall length is to be considered new foundation construction.

2) Free-standing Block Walls per the El Segundo standard detail.

3) Retaining walls complying with the following:

- Maximum 12 feet in height with level grade behind the wall. Maximum slope of 1 unit vertical to 6 unit horizontal will be considered level. No surcharge loads.
- Minimum distance from a property line shall be the same as the height of the wall as measured from the bottom of the footing to the top of the wall.
- Allowable loads shall not exceed the values for class of soil materials 5 as shown in table 1804.2 of the 2010 CBC.

4) Equipment pads that are not subject to seismic loads, and the design soil bearing value are 1,500 psf.

5) Other projects as determined by the Building Official.

6) When approved by the Building Official, soils reports for interior foundation projects, that are not with a Single Family Dwelling, or Duplex and their associated accessory buildings as indicted in item 1. (Does not include exterior foundations), and allowable loads shall not exceed the values for class of soil materials 5 as shown in table 1804.2 of the 2010 CBC:

A) An existing soils report can be used if it gives recommendations for the dimensions of footings and appropriate reinforcing.

B) If there is no existing soils report available, then the foundation can be designed with the following requirements.

- Depth of footings below the natural and finished grades shall not be less than 18 inches for the interior footings.
- Interior bearing walls shall be on continuous footings.
- Footings shall be reinforced with four ½-inch diameter deformed reinforcing bars. Two bars shall be placed within 4 inches of the bottom of the footings and two bars within 4 inches of the top of the footing.
- On-grade concrete floor slabs shall be placed on a 4-inch fill of coarse aggregate or on 2 inch sand bed over a moisture barrier membrane. The slabs shall be at least 3-1/2 inches thick and shall be reinforced with ½- inch diameter deformed reinforcing bars. Reinforcing bars shall be spaced at intervals not exceeding 16 inches each way.
- The soil below an interior concrete slab shall be pre-saturated to a depth of 18 inches prior to placing the concrete.
- Allowable foundation and lateral pressures for footing design shall not exceed the minimum value of 1500psf as shown in table 1804.2 of the 2010 CBC.

C) As an alternate, AND WITH THE APPROVAL FROM BUILDING SAFETY, a Licensed Engineer or Architect can design the foundation based on the minimum allowable code values, including soil bearing values, in the current El Segundo Building Code as long as the following is provided:

- The Engineer or Architect of record shall add a statement to the plans that a structural observation report will be provided at the time of excavation for the foundation. It shall include a statement that they have seen the soils conditions, and their design does not have to be changed, if adequate soil conditions are found.
- The structural observation report shall include the type of soil on the site, and the estimated expansiveness of the soil.
- If inadequate soil conditions are found, then a soils report will be required. Revised plans, calculations, and the soils report will have to be submitted to Building and Safety for approval.

Construction in accordance with these requirements does not prevent the Building Official or Inspector from requiring a soils report, at any time, based on site conditions.

