



## **City of Laguna Hills Public Works / Engineering Department**

### **Standard Grading Notes** Updated 05/26/16

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1. All work shall be in accordance with the Grading Code of the City of Laguna Hills and any special requirements of the permit. A copy of the Grading Code and Manual shall be retained on the job site while work is in progress. When referenced on the plans, a copy of Orange County Public Works Standard Plans and Standard Plans for Public Works Construction shall also be retained on the site.
2. Grading shall not be started without first notifying the Grading Inspector. A pre-grading meeting on the site is required before start of grading with the following people present: Owner, Grading Contractor, design Civil Engineer, Soil Engineer, Engineering Geologist, Grading Inspector and when required, the Archaeologist and Paleontologist. The required inspections for grading will be explained at this meeting.
3. Issuance of a grading permit does not eliminate the need for an Erosion Control Plan or permits from other agencies with regulatory responsibilities for construction activities associated with the work authorized on this plan.
4. The Grading Permit and an approved copy of the grading plan shall be on the permitted site while work is in progress.
5. Preliminary soil and geology reports, and all subsequent reports as approved by the City, are considered a part of the approved Grading Plan.
6. The Soils Engineer and Engineering Geologist shall perform sufficient inspections and be available during grading and construction to verify compliance with the plans, specifications, and the code within their purview.
7. The Civil Engineer shall be available during grading to verify compliance with the plans, specifications, code and any special conditions of the permit within their purview.
8. The Soils Engineer and Engineering Geologist shall, after clearing and prior to the placement of fill in canyon, inspect each canyon for areas of adverse stability and determine the presence or absence of subsurface water or spring flow. If needed, subdrains will be designed and constructed prior to the placement of fill in each respective canyon.
9. Subdrain outlets shall be completed at the beginning of the subdrain construction.
10. The exact location of the subdrains shall be surveyed in the field for line/grade and shown on as-graded plans.
11. Areas to receive fill shall be properly prepared and approved in writing by the Soils Engineer and the Grading Inspector prior to placing fill.
12. Fills shall be benched into competent material per Orange County Public Works Standard Plan No. 1322.

13. All existing fills shall be approved by the Grading Inspector or removed prior to placing additional fills.
14. Fills shall be compacted throughout to a minimum of 90% relative compaction. Aggregate base for asphaltic areas shall be compacted to a minimum of 95% relative compaction. Maximum density by Uniform Building Code Standard No. 70-1 or approved equivalent and field density by Uniform Building Code Standard No. 70-2 or approved equivalent.
15. Cut and fill slopes shall be no steeper than 2 foot horizontal to 1 foot vertical (2:1) except where specifically approved otherwise.
16. All cut slopes shall be investigated both during and after grading by the Engineering Geologist to determine if any slope stability problem exists. Should excavation disclose any geological hazards or potential geological hazards, the Engineering Geologist shall submit recommended treatment to the Grading Inspector for approval.
17. Where support or buttressing of cut and natural slopes is determined to be necessary by the Engineering Geologist and Soil Engineer, the Soil Engineer shall submit design, location and calculations to the Grading Inspector prior to construction. The Engineering Geologist and Soil Engineer shall inspect and control the construction of the buttressing and certify to the stability of the slope and adjacent structures upon completion.
18. When cut pads are brought to near grade, the Engineering Geologist shall determine if the bedrock is extensively fractured or faulted and will readily transmit water. If considered necessary by the Engineering Geologist and Soil Engineer, a compacted fill blanket will be placed.
19. All trench backfills shall be tested and approved by the Soil Engineer per the Grading Code.
20. Any existing irrigation lines and cisterns shall be removed or crushed in place and approved by the Grading Inspector and Soil Engineer.
21. Any existing water wells shall be abandoned in compliance with the specifications approved by the Orange County Health Care Agency, and Division of Environmental Health.
22. Any existing cesspools and septic tanks shall be abandoned in compliance with the Uniform Plumbing Code to the approval of the Grading Inspector.
23. Stockpiling of excess material shall be approved by the Grading Inspector prior to excavation.
24. Export soil must be transported to a legal dump or to a permitted site approved by the Grading Inspector.
25. The permittee shall comply with the Grading Code requirements for haul routes when an excess of 5,000 cubic yards of earth is transported to or from a permitted site on public roadways.
26. The permittee is responsible for dust control measures.
27. The permittee shall give responsible notice to the owner of adjoining lands and buildings prior to beginning excavations that may affect the lateral and subjacent support of the adjoining property. The notice shall state the intended depth of excavation and when the excavation will commence. The adjoining owner shall be allowed at least 30 days and reasonable access on the permitted property to protect his structure, if he so desires, unless otherwise protected by law.
28. All concrete structures that come in contact with the on-site soils shall be constructed with Type V cement, unless deemed unnecessary by soluble sulphate-content tests conducted by the Soils Engineer.

29. Slopes exceeding 5 feet in height shall be planted with an approved plant material prior to Certificate of Occupancy. In addition, slopes exceeding 15 feet in height shall be provided with an approved irrigation system.
30. All existing drainage courses through this site shall remain open until facilities to handle stormwater are approved and functional; however, in any case, the permittee shall be held liable for any damage due to obstructing natural drainage patterns.
31. Temporary sanitation facilities shall be maintained on the site during the course of construction.
32. The location and protection of all utilities is the responsibility of the permittee.
33. Approved protective measures and temporary drainage provisions shall be used to protect adjoining properties during grading.
34. Grading operations including maintenance of equipment within one-half mile of a human occupancy shall not be conducted between the hours of 6:00 P.M. And 7:00 A.M. daily, on Sunday, or on a federal holiday.
35. All construction vehicles or equipment, fixed or mobile, operated within 1,000 feet of a dwelling shall be equipped with properly operating and maintained mufflers.
36. All operations shall comply with the Laguna Hills Municipal Code for noise control.
37. Stockpiling and/or vehicle staging areas shall be located as far as practicable from dwellings and within the limits of the Grading Permit.
38. Grading and excavation shall be halted during periods of high winds. Operations shall comply with AQMD Rule 403. Fugitive Dust.
39. Pavement sections shall be no less than 4" Asphalt Concrete over 6" Aggregate Base and prior to rough grade release for building permits by the Grading Inspector, the Soils Engineer shall submit for approval, pavement section recommendations based on 'R' value analysis of the sub-grade soils, and expected traffic indices.
40. Asphalt concrete shall be constructed per the requirements of the Orange County Public Works Standard Plan No. 1805.
41. Aggregate base shall be constructed per the requirements of the Orange County Public Works Standard No. 1804.
42. Roof gutters shall be installed to prevent roof drainage from falling on manufactured slopes.
43. The Civil Engineer, as a condition of rough grade approval, shall provide a blue top with accompanying witness stake, set at the center of each pad reflecting the pad elevation for precise permits and a blue top with witness stake set at the drainage scale high point reflecting the high point elevation for Preliminary Permits.
44. Prior to final approval, the Civil Engineer shall certify to the Grading Inspector the amount of earth moved during the grading operation.
45. The Engineering Geologist shall perform periodic inspection and submit a complete report and map upon completion of the rough grading.
46. The Grading Contractor shall submit a statement of compliance to the approved grading plan prior to final approval.

47. The compaction report and approval from the Soil Engineer shall indicate the type of field-testing performed. The method of obtaining the in-place density shall be identified whether sand cone, drive ring, or nuclear, and shall be noted for each test. Sufficient maximum density determinations shall be performed to verify the accuracy of the maximum density curves used by the Field Technician.
48. In the event that soil contamination is discovered during excavation and removal of an existing tank, work shall be stopped until a site assessment and mitigation plan has been prepared, submitted and approved by County of Orange Environmental Health and the City.
49. Survey monuments shall be preserved and referenced before construction and replaced after construction pursuant to Section 8771 of the Business and Professions Code.
50. Retaining walls are not approved per this Grading Plan. Retaining walls require a separate Building Permit.
51. Other building improvements such as stairs, buildings, swimming pools, etc. require a separate Building Permit.

*Notes:*

- 1) *The County of Orange Grading and Excavation Code is available online at <http://www.oc.ca.gov>.*
- 2) *The entire City of Laguna Hills Grading Code is available online at <http://www.ci.laguna-hills.ca.us>. Please follow the links to the Municipal Code and click on Title 10, Chapter 10-16.*
- 3) *AQMD rules and regulations are available online at <http://www.aqmd.gov>.*