

# APPENDIX E

## EXCAVATION AND GRADING

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### SECTION E103

#### PERMITS REQUIRED

**E103.1 Permits required.** Except as specified in Section E103.2, no person shall do any *grading* without first having obtained a *grading* permit from the *building official*.

**E103.2 Exempted work.** A *grading* permit is not required for the following if they meet the definition of *regular grading*:

1. When approved by the *building official*, *grading* in an isolated, self-contained area where there is no danger to private or public property.
2. An *excavation* below finished *grade* for basements and footings of a building, retaining wall or other structure authorized by a valid building permit. This shall not exempt any *fill* made with the material from such *excavation* or exempt any *excavation* having an unsupported height greater than 5 feet (1524 mm) after the completion of such structure.
3. Cemetery graves.
4. Refuse disposal *sites* controlled by other regulations.
5. *Excavations* for wells, tunnels, or utilities.
6. Mining, quarrying, excavating, processing or stockpiling of rock, sand, gravel, aggregate or clay where established and provided for by law, provided such operations do not affect the lateral support or increase the stresses in or pressure upon any adjacent or contiguous property.
7. Exploratory *excavations* under the direction of soil engineers or *engineering geologists*.
8. An *excavation* that: (1) is less than 2 feet (610 mm) in depth or (2) does not create a cut *slope* greater than 5 feet (1524 mm) in height and steeper than 1 unit vertical in 1½ units horizontal (66.7% *slope*).
9. A *fill* less than 1 foot (305 mm) in depth and placed on natural terrain with a *slope* flatter than 1 unit vertical in 5 units horizontal (20% *slope*), or less than 3 feet (914 mm) in depth, not intended to support structures, that does not exceed 50 cubic yards (38.3 m<sup>3</sup>) on any one lot and does not obstruct a drainage course.

Exemption from the permit requirements of this chapter shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this chapter or any other laws or ordinances.

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## SECTION E105 DEFINITIONS

**E105.1 General.** For the purposes of this appendix, the definitions listed hereunder shall be construed as specified in this section.

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**ENGINEERED GRADING.** *Any grading in excess of 1,000 cubic yards.*

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**REGULAR GRADING.** *Any grading less than or equal to 1000 cubic yards.*

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## SECTION E106 GRADING PERMIT REQUIREMENTS

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**E106.3 Grading designation.** *Grading in excess of ~~5,000~~ 1,000 cubic yards (~~3625~~ 765 m<sup>3</sup>) shall be performed in accordance with ~~the~~ an approved *grading* plan prepared by a Texas professional civil engineer and shall be designated as "*engineered grading*." *Grading* involving less than or equal to 5,000 1,000 cubic yards (~~3825~~ 765 m<sup>3</sup>) shall be designated "*regular grading*" unless the permittee chooses to have the *grading* performed as *engineered grading*, or the city engineer or building official determines that the property is located in a Houston special flood hazard area as defined in Chapter 19 of the City Code, special conditions or unusual hazards exist, in which case *grading* shall conform to the requirements for *engineered grading*.*

**E106.4 Engineered grading requirements.** Application for a *grading* permit shall be accompanied by two sets of plans and specifications, as well as supporting data consisting of a *soils engineering* report and *engineering geology* report. The plans and specifications shall be prepared and signed by ~~an~~ a Texas professional engineer ~~individual licensed by the State of Texas to prepare such plans or specifications when required by the building official.~~

Specifications shall contain information covering construction and material requirements.

Plans shall be drawn to scale upon substantial paper or cloth and shall be of sufficient clarity to indicate the nature and extent of the work proposed and show in detail that they will conform to the provisions of this code and all relevant laws, ordinances, rules and regulations. The first sheet of each set of plans shall display the location of the work, the name and address of the owner, and the name of the person who prepared them.

The plans shall include the following information:

1. General vicinity of the proposed *site*.
2. Property limits and accurate contours of existing ground and details of terrain and area drainage.

3. Limiting dimensions, elevations, or finish contours to be achieved by the *grading* and proposed drainage channels and related construction.
4. Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams and other protective devices to be constructed with, or as a part of, the proposed work, together with a map showing the drainage area and the estimated runoff of the area served by any drains.
5. Location of any buildings or structures on the *site* upon which the work is to be performed and the location of any buildings or structures on property adjacent to the *site* that are within 15 feet (4572 mm) of the property or that may be affected by the proposed *grading* operations.
6. The dates of the *soils engineering* and *engineering geology* reports together with the names, addresses, and phone numbers of the firms or individuals who prepared the reports.

Recommendations included in the *soils engineering* report and the *engineering geology* report shall be incorporated in the *grading* plans or specifications. ~~When approved by the building official, specific~~ Specific recommendations contained in the *soils engineering* report and the *engineering geology* report that are applicable to the proposed grading shall at minimum ~~may~~ be included by reference in the engineered grading plans.

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**E106.9 Issuance.** The provisions of Section 105.3 are applicable to *grading* permits. The *building official* may require that *grading* operations and project designs be modified if delays occur which incur weather-generated problems not considered at the time the permit was issued.

~~\_\_\_\_\_ The building official may require professional inspection and testing by a soils engineer. When the building official has cause to believe that geologic factors may be involved, the grading will be required to conform to the requirements for engineered grading.~~

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## SECTION E114 GRADING INSPECTION

**E114.1 General.** *Grading* operations for which a permit is required shall be subject to inspection by the *building official*. *Professional inspection* of *grading* operations shall be provided by the Texas professional engineer ~~civil engineer, soils engineer and the engineering geologist~~ retained to provide such services in accordance with Section E114.5 for engineered grading and as required by the *building official* for *regular grading*.

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## SECTION E115 COMPLETION OF WORK

**E115.1 Final reports.** Upon completion of the rough *grading* work and at the final completion of the work, the following reports and drawings and supplements thereto are required for

*engineered grading* or when *professional inspection* is performed for *regular grading*, as applicable.

1. An as-built *grading* plan prepared by the Texas professional engineer ~~civil engineer~~ retained to provide such services in accordance with Section E114.5 showing original ground surface elevations, *as-graded* ground surface elevations, lot drainage patterns, and the locations and elevations of surface drainage facilities and of the outlets of subsurface drains. As-constructed locations, elevations and details of subsurface drains shall be shown as reported by the *soils engineer*. The Texas professional ~~Civil~~ engineers shall provide a special inspection report to the field inspector that states ~~that~~, to the best of their knowledge, the work within their area of responsibility was done in accordance with the final approved *grading* plan and applicable provisions of this chapter.
2. A report prepared by the *soils engineer* retained to provide such services in accordance with Section E114.5, including locations and elevations of field density tests, summaries of field and laboratory tests, other substantiating data, and comments on any changes made during *grading* and their effect on the recommendations made in the approved *soils engineering* investigation report. *Soils engineers* shall provide a special inspection report to the field inspector that states ~~submit a statement that~~, to the best of their knowledge, the work within their area of responsibilities is in accordance with the approved *soils engineering* report and applicable provisions of this chapter.
3. A report prepared by the *engineering geologist* retained to provide such services in accordance with Section E114.5, including a final description of the geology of the *site* and any new information disclosed during the *grading* and the effect of same on recommendations incorporated in the approved *grading* plan. *Engineering geologists* shall provide a special inspection report to the field inspector that states ~~submit a statement that~~, to the best of their knowledge, the work within their area of responsibility is in accordance with the approved *engineering geologist* report and applicable provisions of this chapter.

**E115.2 Notification of completion.** The permittee shall notify the *building official* when the grading operation is ready for final inspection. Final approval shall not be given until all work, including installation of all drainage facilities and their protective devices, and all erosion-control measures have been completed in accordance with the final approved *grading* plan, and the required special inspection reports have been submitted.