

ORDINANCE NO. 337-0

AN ORDINANCE ADOPTING THE 1979 EDITIONS OF THE UNIFORM BUILDING CODE AND THE UNIFORM MECHANICAL CODE WITH OREGON AMENDMENTS

WHEREAS, the City of Troutdale wishes to regulate the erection, construction, enlargement, equipment, use, area, and maintenance of buildings or structures in the City of Troutdale; provide for the issuance of permits and collections of fees therefor; provide penalties for the violations thereof as set forth in Section 205 of the Uniform Building Code and Section 204 of the Uniform Mechanical Code; and repeal all ordinances in conflict therewith, NOW THEREFORE,


BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF TROUTDALE:

The Uniform Building Code and the Uniform Mechanical Code of the International Conference of Building Officials, 1979 Editions, along with the Oregon Amendments included therein, and Chapters 11 and 70 in the Appendix of the Uniform Building Code, excluding Tables 70A and 70B with Chapter 70 fees to be based on building fees in Table 3A, are hereby adopted by the Common Council of the City of Troutdale.

PASSED BY THE COMMON COUNCIL OF THE CITY OF TROUTDALE THIS
8TH DAY OF JULY, 1980.

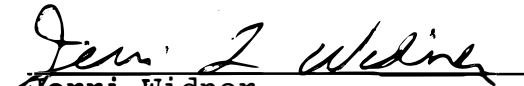
YEAS 6

NAYS 0



R. M. Sturges, Mayor

ATTEST:



Jerri Widner,
Finance Director, City Recorder

APPENDIX

Chapter 11

AGRICULTURAL BUILDINGS

Scope

Sec. 1107. The provisions of this chapter shall apply exclusively to agricultural buildings. Such buildings shall be classified as a Group M, Division 3 Occupancy and shall include the following uses:

1. Storage, livestock and poultry.
2. Milking barns.
3. Shade structures.
4. Horticultural structures (greenhouse and crop protection).

Construction, Height and Allowable Area

Sec. 1108. (a) General. Buildings classed as a Group M, Division 3 Occupancy shall be of one of the types of construction specified in this code and shall not exceed the area or height limits specified in Sections 505, 506 and 507 and Table No. 11-A.

(b) Special Provisions. The area of a Group M, Division 3 Occupancy in a one-story building shall not be limited if the building is entirely surrounded and adjoined by public space, street or yards not less than 60 feet in width, regardless of the type of construction.

The area of a two-story Group M, Division 3 Occupancy shall not be limited if the building is entirely surrounded and adjoined by public space, streets or yards not less than 60 feet in width and is provided with an approved automatic sprinkler system throughout, conforming to U.B.C. Standard No. 38-1.

Buildings using plastics shall comply with Type V-N construction. Plastics shall be approved plastics regulated by Chapter 52. For foam plastic, see Section 1717.

EXCEPTIONS: 1. When used as skylights or roofs, the areas of plastic skylights shall not be limited.

2. Except where designs must consider snow loads, plastics less than 20 mils thick may be used without regard to structural considerations. The structural frame of the building, however, shall comply.

Occupancy Separations

Sec. 1109. Occupancy separations shall be as specified in Section 503 and Table No. 11-B.

Exterior Walls and Openings

Sec. 1110. Except where Table No. 17-A requires greater protection,

exterior walls of agricultural buildings shall be not less than one-hour fire-resistive construction when less than 20 feet from property line.

Openings in exterior walls of agricultural buildings which are less than 20 feet from property lines shall be protected by fire assemblies having a fire-protection rating of not less than three-fourths hour.

Exit Facilities

Sec. 1111. Exit facilities shall be as specified in Chapter 33.

EXCEPTIONS: 1. The maximum distance of travel from any point in the building to an exterior exit door, horizontal exit, exit passageway or an enclosed stairway shall not exceed 300 feet.

2. One exit is required for each 15,000 square feet of floor area and fraction thereof.

3. Exit openings shall be not less than 2 feet 6 inches by 6 feet 8 inches.

TABLE NO. 11-A—BASIC ALLOWABLE AREA FOR A GROUP M, DIVISION 3 OCCUPANCY, ONE STORY IN HEIGHT AND MAXIMUM HEIGHT OF SUCH OCCUPANCY

I	II			III & IV		V	
	F-R	1-Hour	N	1-Hour or Type IV	N	1-Hour	N
Allowable Area¹							
Unlimited	60,000	27,100	18,000	27,100	18,000	21,100	12,000 ¹
Maximum Height in Stories²							
Unlimited	12	4	2	4	2	3	2

¹See Section 1108 for unlimited area under certain conditions.

²For maximum height in feet, see Chapter 5, Table No. 5-D.

**TABLE NO. 11-B— REQUIRED SEPARATIONS BETWEEN GROUP M, DIVISION 3 AND OTHER OCCUPANCIES
(In Hours)**

Occupancy	A	E	I	H	B-1	B-2	B-3	B-4	R-1	R-3	M
Rating	4	4	4	4	4	1	1	1	1	1	N

Chapter 70

EXCAVATION AND GRADING

Purpose

Sec. 7001. The purpose of this chapter is to safeguard life, limb, property and the public welfare by regulating grading on private property.

Scope

Sec. 7002. This chapter sets forth rules and regulations to control excavation, grading and earthwork construction, including fills and embankments; establishes the administrative procedure for issuance of permits; and provides for approval of plans and inspection of grading construction.

Permits Required

Sec. 7003. No person shall do any grading without first having obtained a grading permit from the building official except for the following:

1. Grading in an isolated, self-contained area if there is no danger apparent 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 nor exempt any excavation having an unsupported height greater than 5 feet after the completion of such structure.
3. Cemetery graves.
4. Refuse disposal sites controlled by other regulations.
5. Excavations for wells or tunnels or utilities.
6. Mining, quarrying, excavating, processing, 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 which (a) is less than 2 feet in depth, or (b) which does not create a cut slope greater than 5 feet in height and steeper than one and one-half horizontal to one vertical.
9. A fill less than 1 foot in depth and placed on natural terrain with a slope flatter than five horizontal to one vertical, or less than 3 feet in depth, not intended to support structures, which does not exceed 50 cubic yards on any one lot and does not obstruct a drainage course.

Hazards

Sec. 7004. Whenever the building official determines that any existing excavation or embankment or fill on private property has become a hazard to life and limb, or endangers property, or adversely affects the safety, use or stability of a public way or drainage channel, the owner of the property upon which the excavation or fill is located, or other person or agent in

control of said property, upon receipt of notice in writing from the building official, shall within the period specified therein repair or eliminate such excavation or embankment so as to eliminate the hazard and be in conformance with the requirements of this code.

Definitions

Sec. 7005. For the purposes of this chapter the definitions listed hereunder shall be construed as specified in this section.

APPROVAL shall mean a written engineering or geological opinion concerning the progress and completion of the work.

AS-GRADED is the surface conditions extant on completion of grading.

BEDROCK is in-place solid rock.

BENCH is a relatively level step excavated into earth material on which fill is to be placed.

BORROW is earth material acquired from an off-site location for use in grading on a site.

CIVIL ENGINEER shall mean a professional engineer registered in the state to practice in the field of civil works.

CIVIL ENGINEERING shall mean the application of the knowledge of the forces of nature, principles of mechanics and the properties of materials to the evaluation, design and construction of civil works for the beneficial uses of mankind.

COMPACTION is the densification of a fill by mechanical means.

EARTH MATERIAL is any rock, natural soil or fill and/or any combination thereof.

ENGINEERING GEOLOGIST shall mean a geologist experienced and knowledgeable in engineering geology.

ENGINEERING GEOLOGY shall mean the application of geologic knowledge and principles in the investigation and evaluation of naturally occurring rock and soil for use in the design of civil works.

EROSION is the wearing away of the ground surface as a result of the movement of wind, water and/or ice.

EXCAVATION is the mechanical removal of earth material.

FILL is a deposit of earth material placed by artificial means.

GRADE shall mean the vertical location of the ground surface.

Existing Grade is the grade prior to grading.

Rough Grade is the stage at which the grade approximately conforms to the approved plan.

Finish Grade is the final grade of the site which conforms to the approved plan.

GRADING is any excavating or filling or combination thereof.

KEY is a designed compacted fill placed in a trench excavated in earth

material beneath the toe of a proposed fill slope.

SITE is any lot or parcel of land or contiguous combination thereof, under the same ownership, where grading is performed or permitted.

SLOPE is an inclined ground surface the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

SOIL is naturally occurring superficial deposits overlying bed rock.

SOIL ENGINEER shall mean a civil engineer experienced and knowledgeable in the practice of soil engineering.

SOIL ENGINEERING shall mean the application of the principles of soil mechanics in the investigation, evaluation and design of civil works involving the use of earth materials and the inspection and testing of the construction thereof.

TERRACE is a relatively level step constructed in the face of a graded slope surface for drainage and maintenance purposes.

Grading Permit Requirements

Sec. 7006. (a) Permits Required. Except as exempted in Section 7003 of this code, no person shall do any grading without first obtaining a grading permit from the building official. A separate permit shall be required for each site, and may cover both excavations and fills.

(b) Application. The provisions of Section 302 (a) are applicable to grading and in addition the application shall state the estimated quantities of work involved.

(c) Plans and Specifications. When required by the building official, each application for a grading permit shall be accompanied by two sets of plans and specifications, and supporting data consisting of a soil engineering report and engineering geology report. The plans and specifications shall be prepared and signed by a civil engineer when required by the building official.

(d) Information on Plans and in Specifications. 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 give the location of the work and the name and address of the owner and the person by whom they were prepared.

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 property where the work is to be performed and the location of any buildings or structures on land of adjacent owners which are within 15 feet of the property or which may be affected by the proposed grading operations.

Specifications shall contain information covering construction and material requirements.

(e) Soil Engineering Report. The soil engineering report required by Subsection (c) shall include data regarding the nature, distribution and strength of existing soils, conclusions and recommendations for grading procedures and design criteria for corrective measures when necessary, and opinions and recommendations covering adequacy of sites to be developed by the proposed grading.

Recommendations included in the report and approved by the building official shall be incorporated in the grading plans or specifications.

(f) Engineering Geology Report. The engineering geology report required by Subsection (c) shall include an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and opinions and recommendations covering the adequacy of sites to be developed by the proposed grading.

Recommendations included in the report and approved by the building official shall be incorporated in the grading plans or specifications.

(g) Issuance. The provisions of Section 303 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.

Fees

Sec. 7007. (a) Plan-checking Fee. For excavation and fill on the same site, the fee shall be based on the volume of the excavation or fill, whichever is greater. Before accepting a set of plans and specifications for checking, the building official shall collect a plan-checking fee. Separate permits and fees shall apply to retaining walls or major drainage structures as indicated elsewhere in this code. There shall be no separate charge for standard terrace drains and similar facilities. The amount of the plan-checking fee for grading plans shall be as set forth in Table No. 70-A.

The plan-checking fee for a grading permit authorizing additional work to that under a valid permit shall be the difference between such fee paid for the original permit and the fee shown for the entire project.

(b) Grading Permit Fees. A fee for each grading permit shall be paid to the building official as set forth in Table No. 70-B.

TABLE NO. 70-A—PLAN-CHECKING FEES

50 cubic yards or less	No Fee
51 to 100 cubic yards	\$10.00
101 to 1000 cubic yards	15.00
1001 to 10,000 cubic yards	20.00
10,001 to 100,000 cubic yards—\$20.00 for the first 10,000 cubic yards, plus \$10.00 for each additional 10,000 cubic yards or fraction thereof.	
100,001 to 200,000 cubic yards—\$110.00 for the first 100,000 cubic yards, plus \$6.00 for each additional 10,000 cubic yards or fraction thereof.	
200,001 cubic yards or more—\$170.00 for the first 200,000 cubic yards, plus \$3.00 for each additional 10,000 cubic yards or fraction thereof.	
Other Inspections and Fees:	
Additional plan review required by changes, additions or revisions to approved plans	
(minimum charge—one-half hour)	\$15.00 per hour

TABLE NO. 70-B—GRADING PERMIT FEES

50 cubic yards or less	\$10.00
51 to 100 cubic yards	15.00
101 to 1000 cubic yards—\$15.00 for the first 100 cubic yards plus \$7.00 for each additional 100 cubic yards or fraction thereof.	
1001 to 10,000 cubic yards—\$78.00 for the first 1,000 cubic yards, plus \$6.00 for each additional 1,000 cubic yards or fraction thereof.	
10,001 to 100,000 cubic yards—\$132.00 for the first 10,000 cubic yards, plus \$27.00 for each additional 10,000 cubic yards or fraction thereof.	
100,001 cubic yards or more—\$375.00 for the first 100,000 cubic yards, plus \$15.00 for each additional 10,000 cubic yards or fraction thereof.	
Other Inspections and Fees:	
1. Inspections outside of normal business hours	\$15.00 per hour
(minimum charge—two hours)	
2. Reinspection fee assessed under provisions of Section 305 (h)	\$15.00 each
3. Inspections for which no fee is specifically indicated.	\$15.00 per hour
(minimum charge—one-half hour)	

The fee for a grading permit authorizing additional work to that under a valid permit shall be the difference between the fee paid for the original permit and the fee shown for the entire project.

Bonds

Sec. 7008. The building official may require bonds in such form and amounts as may be deemed necessary to assure that the work, if not completed in accordance with the approved plans and specifications, will be corrected to eliminate hazardous conditions.

In lieu of a surety bond the applicant may file a cash bond or instrument of credit with the building official in an amount equal to that which would be required in the surety bond.

Cuts

Sec. 7009. (a) General. Unless otherwise recommended in the approved soil engineering and/or engineering geology report, cuts shall conform to the provisions of this section.

(b) Slope. The slope of cut surfaces shall be no steeper than is safe for the intended use. Cut slopes shall be no steeper than two horizontal to one vertical.

(c) Drainage and Terracing. Drainage and terracing shall be provided as required by Section 7012.

Fills

Sec. 7010. (a) General. Unless otherwise recommended in the approved soil engineering report, fills shall conform to the provisions of this section.

In the absence of an approved soil engineering report these provisions may be waived for minor fills not intended to support structures.

(b) Fill Location. Fill slopes shall not be constructed on natural slopes steeper than two to one.

(c) Preparation of Ground. The ground surface shall be prepared to receive fill by removing vegetation, noncomplying fill, top-soil and other unsuitable materials scarifying to provide a bond with the new fill, and, where slopes are steeper than five to one, and the height is greater than 5 feet, by benching into sound bedrock or other competent material as determined by the soils engineer. The bench under the toe of a fill on a slope steeper than five to one shall be at least 10 feet wide. The area beyond the toe of fill shall be sloped for sheet overflow or a paved drain shall be provided. Where fill is to be placed over a cut, the bench under the toe of fill shall be at least 10 feet wide but the cut must be made before placing fill and approved by the soils engineer and engineering geologist as a suitable foundation for fill. Unsuitable soil is soil which, in the opinion of the building official or the civil engineer or the soils engineer or the geologist, is not competent to support other soil or fill, to support structures or to satisfactorily perform the other functions for which the soil is intended.

(d) Fill Material. Detrimental amounts of organic material shall not be permitted in fills. Except as permitted by the building official, no rock or similar irreducible material with a maximum dimension greater than 12 inches shall be buried or placed in fills.

EXCEPTION: The building official may permit placement of larger rock

when the soils engineer properly devises a method of placement, continuously inspects its placement and approves the fill stability. The following conditions shall also apply:

- A. Prior to issuance of the grading permit, potential rock disposal areas shall be delineated on the grading plan.
- B. Rock sizes greater than 12 inches in maximum dimension shall be 10 feet or more below grade, measured vertically.
- C. Rocks shall be placed so as to assure filling of all voids with fines.

(e) **Compaction.** All fills shall be compacted to a minimum of 90 percent of maximum density as determined by U.B.C. Standard No. 70-1. Field density shall be determined in accordance with U.B.C. Standard No. 70-2 or equivalent as approved by the building official.

(f) **Slope.** The slope of fill surfaces shall be no steeper than is safe for the intended use. Fill slopes shall be no steeper than two horizontal to one vertical.

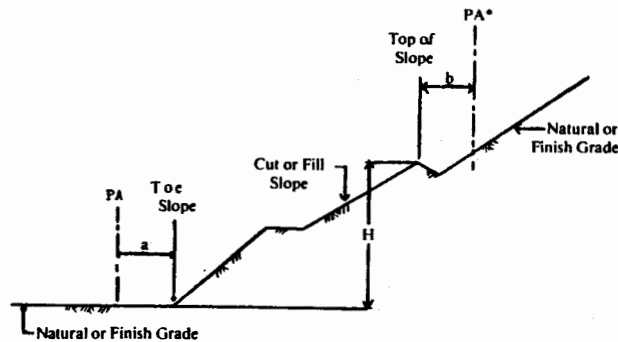
(g) **Drainage and Terracing.** Drainage and terracing shall be provided and the area above fill slopes and the surfaces of terraces shall be graded and paved as required by Section 7012.

Setbacks

Sec. 7011. (a) General. The setbacks and other restrictions specified by this section are minimum and may be increased by the building official or by the recommendation of a civil engineer, soils engineer or engineering geologist, if necessary for safety and stability or to prevent damage of adjacent properties from deposition or erosion or to provide access for slope maintenance and drainage. Retaining walls may be used to reduce the required setbacks when approved by the building official.

(b) **Setbacks from Property Lines.** The tops of cuts and toes of fill slopes shall be set back from the outer boundaries of the permit area, including slope-right areas and easements, in accordance with Figure No. 1 and Table No. 70-C.

(c) **Design Standards for Setbacks.** Setbacks between graded slopes (cut or fill) and structures shall be provided in accordance with Figure No. 2.



*Permit Area Boundary **FIGURE NO. 1**

TABLE NO. 70-C
REQUIRED SETBACKS FROM PERMIT AREA BOUNDARY
(IN FEET)

H	SETBACKS	
	a	b'
Under 5	0	1
5 - 30	H/2	H/5
Over 30	15	6

*Additional width may be required for interceptor drain.

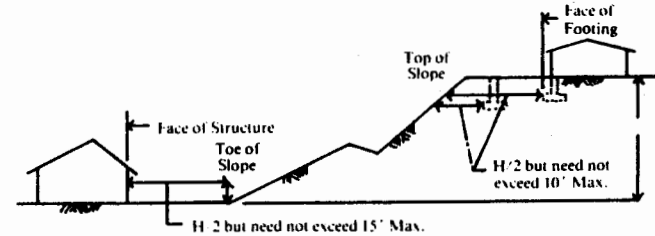


FIGURE NO. 2

Drainage and Terracing

Sec. 7012. (a) General. Unless otherwise indicated on the approved grading plan, drainage facilities and terracing shall conform to the provision of this section.

(b) **Terrace.** Terraces at least 6 feet in width shall be established at not more than 30-foot vertical intervals on all cut or fill slopes to control surface drainage and debris except that where only one terrace is required, it shall be at mid-height. For cut or fill slopes greater than 60 feet and up to 120 feet in vertical height, one terrace at approximately mid-height shall be 12 feet in width. Terrace widths and spacing for cut and fill slopes greater than 120 feet in height shall be designed by the civil engineer and approved by the building official. Suitable access shall be provided to permit proper cleaning and maintenance.

Swales or ditches on terraces shall have a minimum gradient of 5 percent and must be paved with reinforced concrete not less than 3 inches in thickness or an approved equal paving. They shall have a minimum depth at the deepest point of 1 foot and a minimum paved width of 5 feet.

A single run of swale or ditch shall not collect runoff from a tributary area exceeding 13,500 square feet (projected) without discharging into a down drain.

(c) **Subsurface Drainage.** Cut and fill slopes shall be provided with subsurface drainage as necessary for stability.

(d) **Disposal.** All drainage facilities shall be designed to carry waters to the nearest practicable drainage way approved by the building official and/or other appropriate jurisdiction as a safe place to deposit such waters. Erosion of ground in the area of discharge shall be prevented by installation of nonerosive downdrains or other devices.

Building pads shall have a drainage gradient of 2 percent toward approved drainage facilities, unless waived by the building official.

EXCEPTION: The gradient from the building pad may be 1 percent if all of the following conditions exist throughout the permit area:

- A. No proposed fills are greater than 10 feet in maximum depth.
- B. No proposed finish cut or fill slope faces have a vertical height in excess of 10 feet.
- C. No existing slope faces, which have a slope face steeper than 10 horizontally to 1 vertically, have a vertical height in excess of 10 feet.

(e) **Interceptor Drains.** Paved interceptor drains shall be installed along the top of all cut slopes where the tributary drainage area above slopes towards the cut and has a drainage path greater than 40 feet measured horizontally. Interceptor drains shall be paved with a minimum of 3 inches of concrete or gunite and reinforced. They shall have a minimum depth of 12 inches and a minimum paved width of 30 inches measured horizontally across the drain. The slope of drain shall be approved by the building official.

Erosion Control

Sec. 7013. (a) Slopes. The faces of cut and fill slopes shall be prepared and maintained to control against erosion. This control may consist of effective planting. The protection for the slopes shall be installed as soon as practicable and prior to calling for final approval. Where cut slopes are not subject to erosion due to the erosion-resistant character of the materials, such protection may be omitted.

(b) **Other Devices.** Where necessary, check dams, cribbing, riprap or other devices or methods shall be employed to control erosion and provide safety.

Grading Inspection

Sec. 7014. (a) General. All grading operations for which a permit is required shall be subject to inspection by the building official. When required by the building official, special inspection of grading operations and special testing shall be performed in accordance with the provisions of Section 306 and Subsection 7014 (c).

(b) **Grading Designation.** All grading in excess of 5000 cubic yards shall be performed in accordance with the approved grading plan prepared by a civil engineer, and shall be designated as "engineered grading." Grading involving less than 5000 cubic yards shall be designated "regular grading" unless the permittee, with the approval of the building official, chooses to have the grading performed as "engineered grading."

(c) **Engineered Grading Requirements.** For engineered grading, it shall be the responsibility of the civil engineer who prepares the approved grading plan to incorporate all recommendations from the soil engineering and engineering geology reports into the grading plan. He also shall be responsible for the professional inspection and approval of the grading within his area of technical specialty. This responsibility shall include, but need not be limited to, inspection and approval as to the establishment of line, grade and drainage of the development area. The civil engineer shall act as the coordinating agent in the event the need arises for liaison between the other professionals, the contractor and the building official. The civil engineer also shall be responsible for the preparation of revised plans and the submission of as-graded grading plans upon completion of the work. The grading contractor shall submit in a form prescribed by the building official a statement of compliance to said as-built plan.

Soil engineering and engineering geology reports shall be required as specified in Section 7006. During grading all necessary reports, compaction data and soil engineering and engineering geology recommendations shall be submitted to the civil engineer and the building official by the soils engineer and the engineering geologist.

The soils engineer's area of responsibility shall include, but need not be limited to, the professional inspection and approval concerning the preparation of ground to receive fills, testing for required compaction, stability of all finish slopes and the design of buttress fills, where required, incorporating data supplied by the engineering geologist.

The engineering geologist's area of responsibility shall include, but need not be limited to, professional inspection and approval of the adequacy of natural ground for receiving fills and the stability of cut slopes with respect to geological matters and the need for subdrains or other ground water drainage devices. He shall report his findings to the soils engineer and the civil engineer for engineering analysis.

The building official shall inspect the project at the various stages of the work requiring approval and at any more frequent intervals necessary to determine that adequate control is being exercised by the professional consultants.

(d) **Regular Grading Requirements.** The building official may require inspection and testing by an approved testing agency.

The testing agency's responsibility shall include, but need not be limited to, approval concerning the inspection of cleared areas and benches to receive fill, and the compaction of fills.

When the building official has cause to believe that geologic factors may be involved the grading operation will be required to conform to "engineered grading" requirements.

(e) **Notification of Noncompliance.** If, in the course of fulfilling their responsibility under this chapter, the civil engineer, the soils engineer, the engineering geologist or the testing agency finds that the work is not being done in conformance with this chapter or the approved grading plans, the

discrepancies shall be reported immediately in writing to the person in charge of the grading work and to the building official. Recommendations for corrective measures, if necessary, shall be submitted.

(f) **Transfer of Responsibility for Approval.** If the civil engineer, the soils engineer, the engineering geologist or the testing agency of record is changed during the course of the work, the work shall be stopped until the replacement has agreed to accept the responsibility within the area of their technical competence for approval upon completion of the work.

Completion of Work

Sec. 7015. (a) Final Reports. Upon completion of the rough grading work and at the final completion of the work the building official may require the following reports and drawings and supplements thereto:

1. An as-graded grading plan prepared by the civil engineer including original ground surface elevations, as-graded ground surface elevations, lot drainage patterns and locations and elevations of all surface and sub-surface drainage facilities. He shall provide approval that the work was done in accordance with the final approved grading plan.

2. A soil grading report prepared by the soils engineer including locations and elevations of field density tests, summaries of field and laboratory tests and other substantiating data and comments on any changes made during grading and their effect on the recommendations made in the soil engineering investigation report. He shall provide approval as to the adequacy of the site for the intended use.

3. A geologic grading report prepared by the engineering geologist including a final description of the geology of the site including any new information disclosed during the grading and the effect of same on recommendations incorporated in the approved grading plan. He shall provide approval as to the adequacy of the site for the intended use as affected by geologic factors.

(b) **Notification of Completion.** The permittee or his agent 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 reports have been submitted.