

PART 1: GENERAL REGULATIONS

§ 101 Purpose.

The purpose of this Chapter is to provide minimum standards to safeguard persons, protect property and promote the general welfare by preventing excess erosion, hazardous rock and soil slippage, sediment production and other soil and water management problems by regulating and controlling the design, construction, quality of materials, use location, and maintenance of grading, excavations, and fills.

To establish performance standards which ensure land use practices respectful of the natural topography and capabilities of the land.

To encourage maximum retention of natural topography and vegetative features on hillsides.

To prevent earthflow and rockfall landslides.

To encourage imaginative and innovative site development and building design that adapts to and takes advantage of the best use of the natural terrain.

§ 102 Scope.

1. This Part concerns new grading, excavation and fills; and changes, additions or alterations made in existing excavations, fills and embankments which shall conform to the provisions of this Part.
2. The Township Board of Supervisors shall designate a Grading Officer for review, approval and granting of grading permits and to make inspections of the grading work.
3. A separate grading permit shall be required for each site. One permit shall cover all grading, excavation, and any fills made on the same site.
4. Only one permit shall be required for the grading of a large continuous parcel of land for a major planned development, such as a planned subdivision development or a planned commercial development, when the standards for grading of the entire parcel are satisfactory to and approved by the Grading Officer.
5. An approved site plan, a building permit or both are prerequisite to the granting of any grading permit.
6. All grading, excavation and fills, whether or not a grading permit is required, shall conform to the provisions, of this part.

§ 103 Exceptions.

A grading permit shall not be required for any of the following:

1. An excavation which does not exceed three feet in vertical depth at its deepest point measured from the natural ground surface and cover a surface area of less than 1 acre, provided that the surfaces of such excavation do not have slope at any point steeper than three horizontal to one vertical ([3h:1v](#)). However, this subsection shall not be deemed to nullify the application of this Part, or any requirement for obtaining a grading permit, with respect to any fill made with material from such an excavation, unless otherwise excepted by subsections (2) and (3) of this Section.
2. A fill which does not exceed 550 cubic yards per acre of material on any one site less than one acre.
3. Fill which is not intended to support structures and does not exceed three feet in vertical depth at its deepest point measured from the natural ground surface and does not cover an area of more than 1 acre, provided that the surface of such fills do not have a slope any point steeper than four horizontal to one vertical and does not obstruct a drainage course.
4. An excavation below finished grade for basements and footings of a building, swimming pool, or underground structure authorized by a building permit and an excavation of a driveway between a building site and the street. However, this subsection (4) shall not be deemed to nullify the application of this Part, or any requirement for obtaining a grading permit, with respect to any fill made with the material from such an excavation unless otherwise excused by subsections (2) and (3) of this Section.
5. Soil excavated under the authorization of a properly issued building permit which is temporarily stockpiled on the same site as the excavation. If, however, excavated material is stockpiled on a site for a period of longer than 180 days, then a permit shall be necessary when stockpiling an amount greater than 500 cubic yards of the fill material.
6. A building site improved under authorization of a properly issued building permit where the maximum natural gradient between property lines or the maximum excavation or fill, exclusive of the situations referred to in subsection (4) above, do not exceed the grades or quantities set forth in the following table:

One-Family House Site	Maximum Gradient Without Permit (horizontal:vertical)	Maximum Excavation or Fill Without Exclusive of Basements and Foundations
Less than .25 Acres	54 :1	100 cubic yards
.25 Acres to .5 acres	45 :1	200 cubic yards
.5 acres to 1 acre	45 :1	250 cubic yards
Over 1 acre	45 :1	250 cubic yards

7. Exploratory excavations under the direction of a soils engineer or engineering geologist.
8. Excavations for wells, tunnels, public utilities or sewer systems or cemetery graves.
9. A permit shall not be required for work performed by the Township, or of contractors employed by the Township in a public street or alley, Township park, playground or recreation area or on other Township property.
10. Landscaping for single-family homes, accepted agricultural land management practices such as agricultural drainage, plowing, nursery operations, removal and/or transplanting of cultivated sod, shrubs and trees cutting at or above existing ground and logging operations leaving the stump, ground cover and root mat intact.

§ 104 Definitions.

1. Unless otherwise expressly stated herein, the terms and words shall, for the purposes of this Part, have the meaning herein indicated. Words used in the singular number include the plural, and words in the plural include the singular; words in the masculine gender include the feminine and neuter; and the word “building” includes the word “structure” and the word “structure” includes the word “building.”

GRADING OFFICER

The person or firm qualified and officially appointed by Board of Supervisors to manage this Part, or ~~his~~ [their](#) authorized representative.

APPLICANT

Any landowner or agent of a landowner who proposes to make or cause to be made any excavation, fill or any combination thereof pursuant to the provisions of this part.

ARCHITECT

A registered architect licensed as such in the Commonwealth of Pennsylvania.

BEDROCK

Natural rocklayer, hard or soft, in place at ground surface or beneath unconsolidated surficial deposits.

BUILDING CODE

Township of Adams Code of Ordinances, Chapter 74, “Building Code,” as amended.

PROFESSIONAL ENGINEER

A registered professional engineer in the Commonwealth of Pennsylvania, and knowledgeable in civil & geotechnical engineering.

EROSION

The detachment and movement of soil or rock fragments by water, wind, ice or gravity, including such processes as gravitational creep.

EXCAVATION

Any act by which earth, sand, gravel, rock or any other similar material is cut into, dug, quarried, uncovered, removed, displaced, relocated or bulldozed and shall include the conditions resulting therefrom.

FILL

Any act by which earth, sand, gravel, rock or any other material is deposited, placed, pushed, dumped, pulled, transported or moved to a new location the condition resulting therefrom.

FLOODPLAIN

Areas designated by the Federal Emergency Management Administration and other areas known to be subject to flooding.

GEOTECHNICAL ENGINEERING REPORT

A report in conformance with applicable geotechnical standards prepared by a registered professional engineer.

GRADE FILL AND EMBANKMENT

The elevation of the existing or proposed ground surface at the location of any proposed excavation or fill.

GRADING

Excavation or fill, or any combination thereof, including the conditions resulting from any excavation or fill.

GRADING, ENGINEERED

A grading operation in excess of 5,000 cubic yards and performed in conformance with a grading plan prepared by a professional engineer.

GRADING, REGULAR

A grading operation of less than 5,000 cubic yards. Where the site conditions warrant, the Grading Officer may require the submission of a report on the site as prepared by professional engineer, soils engineer or engineering geologist.

GRADING PERMIT

Any permit required pursuant to the provisions of this Part.

HAZARD

Any danger or potential danger to life, limb or health, or any adverse effect or potential adverse effect to the safety, use or stability of property, waterways, public ways, structures, utilities and storm sewers, including stream pollution.

LANDSLIDE PRONE SOILS

Those soil formations whose characteristics are classified as being landslide prone or otherwise sensitive in the Soil Survey of Butler County.

MID-RANGE SLOPES

Slopes less steep than ~~3~~3:1 but steeper than 6:1 (horizontal:vertical).

PERMIT HOLDER

Any landowner, agent of said landowner, or tenant with the permission of said landowner who has been granted a grading permit pursuant to the provisions of this Part.

RETAINING WALL

A structure composed of concrete, steel or other approved building material constructed for the purpose of supporting a cut or filled embankment which would otherwise not comply with the requirements of standards set forth in this Part, and which is more than two feet in height as measured on the exposed vertical surface of the wall.

SITE

A lot, tract, or parcel of land; or series of lots, tracts or parcels of land which are adjoining and with respect to which grading work is to be continuous and performed at the same time.

SLOPE

The angle of the existing or proposed ground surface plane to the horizontal expressed as the ratio of the horizontal to the vertical, or in percentage of slope (rise or fall per 100 feet).

SLOPE STABILITY ANALYSIS

A limit-equilibrium analysis, with selected appropriate drainage conditions and shear strengths, performed by a registered professional engineer licensed in the Commonwealth of Pennsylvania.

SOIL SURVEY

The Soil Survey of Butler County Pennsylvania, as prepared by the USDA Soil Conservation Service et al, and accompanying text, issued 1989, or as amended.

SOILS ENGINEER

A registered professional engineer in the Commonwealth of Pennsylvania having training and experience in soils engineering.

SOLID WASTE

Any and all parts or combination of ashes, garbage, refuse, radioactive material, combustible demolition materials and industrial wastes such as food processing wastes, wood, plastic, metal scrap, and other such materials for which disposal is regulated by the Pennsylvania Department of Environmental Resources.

STEEP SLOPES

Slopes steeper than or equal to 3:1 (horizontal:vertical).

STORMWATER MANAGEMENT

The control of surface water run-off as regulated by Chapter 26 of the Township of Adams Code of Ordinances.

SUBDIVISION ORDINANCE

The Subdivision and Land Development Ordinance as amended, being Chapter 22 of the Township of Adams Code of Ordinances.

ZONING ORDINANCE

The Zoning Ordinance, as amended, being Chapter 27 of the Township of Adams Code of Ordinances.

§ 105. Application Procedure.

1. Every applicant for grading permit shall file a written application, including appropriate plans, specifications, and a soil conservation report with the Grading Officer in a form prescribed by the Grading Officer. The application shall indicate that the proposed grading is to be regular grading or engineered grading and shall:
 - A. Describe the land on which the proposed work is to be done by lot, block tract and street address, or similar description which will readily identify and definitively locate the proposed work.
 - B. State the estimated dates for the starting and completion of grading work.
 - C. State the purpose for which the grading application is filed.
 - D. State whether or not a building, structure or other improvement, the construction of which will require a building permit pursuant to the provisions of the Building code, is intended to be erected on the land on which the grading is to be done.
 - E. Explain why it is necessary to cut into natural existing slopes.

- F. Include a map identifying steep slopes and midrange slopes, and slope ratios to be created, disturbed, and/or removed.
 - G. The applicant must also furnish a narrative as to why slope disturbance is required and how the environmental impacts of the slope disturbance will be mitigated.
2. Every applicant for a grading permit shall also provide plans and specification that accurately portray and describe the site and proposed soil erosion controls. Plans shall be submitted in triplicate, one set of which shall be of a reproducible nature, and shall include:
- A. The name of the applicant.
 - B. The name of the owner of the land.
 - C. The permission and approval of the owner of the property if the applicant is an agent or tenant.
 - D. Accurate location by lot, block tract, street address, a location map or other similar information.
 - E. A topographic map showing the existing contours of the land and the proposed contours after completion of the proposed grading at two-foot intervals where the average slope is 10h:1v or less and at five-foot intervals where the average slope exceeds 10h:1v. These maps shall also include a key showing the ratios slopes in the following categories: 0 to 6h:1v, between 6h:1v and 3h:1v, and steeper than 3h:1v.
 - F. Cross-sections of the proposed cut or fill on fifty-foot intervals which show the method of benching, both cut and/or fill; provided, however, that there shall be not less than two cross-sections for each site.
 - G. A plot plan showing the location of the grading boundaries, lot lines, neighboring street, or ways, buildings, surface and subsurface utilities and waterways, drainage patterns, and dimensions and other data to show all work.
 - H. A description of the type and classification of the soil from the Soil Survey, other standard surveys, or from other methods.
 - I. Details and location of any proposed drainage, stormwater management structures and pipes, walls and cribbing.
 - J. Seeding locations and schedules, debris basins, diversion channels.

- K. The nature of fill material and such other information as the Grading Officer may require to carry out the purpose of this Part.
- L. The name and seal of the professional engineer who prepared said plans.
- M. Slope Stability Analysis

The slope stability analysis shall include but is not limited to the following basic data:

- a. An assessment of geologic characteristics and engineering properties of soils, sediments, and/or rock present within the project area.
- b. Accurate cross sections and slope geometry derived from topographic surveys and design plans for natural and constructed slopes.
- c. Soil and groundwater conditions including:
 - I. Soil unit profile,
 - II. Unit weight and strength parameters (c' , ϕ'), (c , ϕ), or S_u (depending on soil type and drainage and loading conditions) for each soil unit
 - III. Location of the water table and flow characteristics
- d. An assessment of the effect that the proposed construction and the placement of structures will have on the slope over the estimated life of the structure.
- e. A quantitative analysis of slope stability or slope stability modeling including all existing slopes, modified slopes and proposed new slopes.
- f. Slope stability shall be evaluated using conventional limit equilibrium methods, ~~and analyses should be performed using a state-of-the-practice slope stability computer program such as the most current versions of Slope/W[®] (Geo-Slope International), Slide[®] (Roesscience, Inc.), GStable with STEDwin (Gregory Geotechnical Software) and/or ReSSA[®] (ADAMA Engineering, Inc.) or equal software.~~
- g. An assessment of any potential landslide hazards including a description of the run-out hazard of landslide debris to the proposed development that starts upslope (whether part of the subject property or on a neighboring property) and/or the impacts of landslide run-out on downslope properties.
- h. A minimum factor of safety for all permanent slopes shall be 1.5 and for all temporary slopes shall be 1.3.

3. A soil conservation report shall be required and include existing site description of the topography, drainage, cover and soils; major potential problems such as soil limitations, erosions and sediment potential and surface runoff changes; and recommendations to minimize soil limitations, erosion and sediment and surface water disposal problems.
4. Trees and natural ground cover shall be retained wherever possible to minimize the impact of the development on the site and environment.
5. Provisions of the Subdivision and Land Development and the Stormwater Management Ordinances are incorporated herein by reference.
6. **Storm Sewer** – The applicant may have all roof drains & foundations drains connected to the storm sewer system as set forth in Chapter 162 of the Adams Township Code, Stormwater. No piping of stormwater will be allowed to discharge directly onto a slope steeper than 3:1 (horizontal:vertical)h:1v.
7. **Maximum slope distance.** The maximum slope distance for any engineered or created steep slope is 100 feet. No created steep slope may be within 150 feet of the start of another non-contiguous steep slope.
8. **Slope creation and disturbance:** The applicant must furnish a map and list of all slopes pre and post grading and their slope ratios in the following categories: 30h:1v to 6h:1v, between 6h:1v and 3h:1v, and steeper than or equal to 3h:1v. **IN ORDER FOR A PERMIT TO BE GRANTED THE FOLLOWING CONDITIONS MUST BE MET:**
 - a. In the category of steeper than or equal to 3h:1v, no additional total area of slopes of this category may be created (e.g. 1 acre of 3h:1v slopes pre and post grading)
 - b. In the category of ~~steeper than or equal to~~ less steep than to 3h:1v to steeper than or equal to 6h:1v, a minimum of 80% of the total area of slopes of this category must exist post-grading (e.g. 1 acre of 3h:1v pre grading and .8 acre of 3h:1v post-grading).
 - c. In Residential zoning districts, no slope steeper than 22.5h:1v may be created.
 - d. In all other non-Residential zoning districts, no slope steeper than 2h:1v may be created.
 - e. Slopes steeper than or equal to 3h:1v, created or pre-existing, must be placed in conservation easements as defined by the Township.
 - ~~e-f. and Created slopes must not encroach perimeter buffers~~ may encroach perimeter buffers but created slopes steeper than 3h:1v must be set back at least 20 feet away from the property border.
 - ~~f-g.~~ If there is no perimeter buffer required for a development or plan, created slopes steeper than or equal to 3h:1v must ~~begin or terminate~~ be set back at least 230 feet away from the nearest property border.
 - ~~g-h.~~ Slopes steeper than or equal to 3h:1v must be vegetated.

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h.i. No trees with a base diameter greater than 18 inches may be removed from an existing steep slope as a part of the grading plan.

§ 106. Responsibility of the Grading Officer

1. The Grading Officer shall require that a geotechnical engineering report be submitted by the applicant if the site is, has been, or is likely to become hazardous to persons or property. Overlay maps such as the Coal Resource Maps prepared by USGS, 1975, for the Greater Pittsburgh Region shall be used to locate hazardous areas. The report shall contain a detailed description of the geological conditions of the site and shall include conclusions and recommendations that will demonstrate the relationship of the geological conditions to the proposed development, including hazardous conditions, water resources, mineral resources and environmental impact.
2. In special cases, when grading occurs in areas of landslide prone soil, or rock fall prone areas as recognized by the Soil Survey, or other standard surveys, the Grading Officer may require special precautions prior to issuing a permit to the applicant. The results of all soil tests and core borings made relative to the site shall be submitted to the Grading Officer.
3. The Grading Officer may deny a grading permit if the use of land to be graded, either excavation or filling, is not specifically known except for the intent of improving the site. The Grading Officer shall review the application, plans, specifications and reports and determine whether the project will improve the site, is in the best interest of the Township, and is not detrimental to the environment. The applicant may appeal the Grading Officer's decision to the Board of Supervisors by preparing and submitting to the Board of Supervisors a proposed site plan showing the development of the land prepared in accordance with the Subdivision and Land Development Ordinance and all other relevant Township Ordinances.
4. When the requirements of this Part for obtaining a permit have been met, the Grading Officer shall approve the application and proposed plan and grant a grading permit to the applicant.
5. The Grading Officer may waive the requirement of any or all plans and specifications listed in this Part, if he finds that the information on the application is sufficient to show that the work will conform to the provisions of this Part.
6. The Grading Officer will require a slope stability analysis based on the following guidelines:
 - A. Slopes steeper than or equal to 3H:1V are considered to be a steep slope and will require a slope stability analysis as defined herein.

7. Under no circumstances will the Grading Officer allow a slope that is steeper than 2.5H:1V to be constructed in a residential district and a slope steeper than 2h:1v in all other non-residential districts.

§ 107. Special Agreement.

In the event that the applicant will move or grade an area of more than 3 acres, or grade more than 10,000 cubic yards, then a formal agreement may be required by the Board of Supervisors and must be approved as to form by the Township Solicitor. The said agreement may be a part of and incorporated in a developer's agreement as required by the Subdivision Ordinance and/or Overlay Ordinance.

§ 108. Expiration of Permit.

Every grading permit shall expire and become null and void if the work authorized by said permit has not been commenced within six months or is not completed within one year from the date of issue; provided that the Grading Officer may, if the permit holder presents satisfactory evidence that unusual difficulties have prevented work being started or completed within the specified time limits, grant a reasonable extension of time, and provided further, that the application for the extension of time is made before the date of expiration of the permit.

§ 109. Denial of Permit.

1. If the Grading Officer shall determine that the work proposed by the applicant is likely to endanger any property or person, or any street or alley, or create hazardous conditions, the grading permit shall be denied. In determining whether the proposed work is likely to endanger property or streets or alleys, or create hazardous conditions, the Grading Officer shall consider, among other relevant factors, the following: possible saturation by rains, earth movement, surface water runoff, and subsurface conditions such as the stratification and faulting of rock, aquifers, mine conditions, springs and the nature and type of the soil or rock.
2. Any person who is aggrieved by the application of the provisions of this Part may within 15 days from the date of the denial of the permit or such other adverse determination by the Grading Officer, file a written appeal therefrom to the Board of Supervisors. The Board of Supervisors shall grant a hearing upon such an appeal within 60 days after the receipt of the written appeal.
3. If any appeal is taken from the issuance of a building permit where a grading permit has also been issued and if such appeal shall, pursuant to the provisions of the Zoning Ordinance, operate as a stay of all proceedings under any such building permit, then such appeal shall also operate to stay all proceedings under any such grading permit.

§ 110. Inspections/Grading Officer Visits

1. The Grading Officer shall review the inspection reports submitted by the Developer's engineer and shall either approve that portion of the work which has been completed or notify the permit holder wherein the same fails to comply with provisions of this Part.
2. Grading and drainage plans approved by the Grading Officer or their designee shall be maintained at the site during the progress of the grading and drainage and until the work has been approved.
3. The permit holder shall submit to the Grading Officer an "as built" drawing of the project sealed by an engineer or surveyor licensed to practice in the Commonwealth of Pennsylvania before the issuance of a grading certificate of completion.
4. The permit holder shall notify the Grading Officer in order to obtain site visits in accordance with the following schedule and such notification shall be made by the permit holder at least 48 hours before the visit is made:
 - a. Pre-Construction Meeting – The developer must schedule a Pre-Construction meeting with the Grading Officer. No work can commence until the Pre-Construction meeting has been held.
 - b. Initial Visit – When work is about to commence and stake out is complete.
 - c. Periodic Visit – As determined by the Grading Officer, but not less than one site visit per week.
 - d. Rough Grading Visit – When all rough grading has been completed.
 - e. Drainage Facilities Visit – All drainage facilities (including underdrains and floor drains) shall be continually inspected by the Grading Officer or the designer.
 - f. Final Inspection Visit – When all work, including the installation of all drainage, landscaping and other structures has been completed.
5. If at any stage of the work the Grading Officer shall determine that the nature of the excavation or fills is such that further work as authorized by an existing permit is likely to endanger any property, or streets, or alleys, or create hazardous conditions, the Grading Officer may require, as a condition to allowing the work to be done, that such reasonable safety precautions be taken as the Grading Officer considers acceptable to avoid such likelihood of danger.
6. All grading & fill shall be inspected by a licensed Professional Engineer or their designated qualified soil technician from an established construction material testing (CMT) or engineering firm with a minimum of 5 years field inspection experience. The CMT or engineering firm shall prepare daily field inspection reports during the

placement, excavation, and compaction of all fill. The inspection reports shall include the location of fill being placed, the depth of fill placed and the location and results of field compaction tests to verify and confirm the placed fill has been compacted to the required compaction levels in accordance with the recommendations in the geotechnical report. The inspection reports and compaction test results shall be reviewed by a licensed professional engineer under full time employment by the CMT or engineering firm. The licensed professional engineer shall provide to the Township a letter of compliance, signed and sealed by the licensed professional engineer confirming all grading and fill operations were placed and compacted in accordance with the recommendations of the geotechnical report. The letter shall also include a copy of all field inspections reports and compaction test results.

No fill/embankment work shall be performed without the presence of a licensed Professional Engineer or their designated qualified field inspector, provided by the applicant, with reports submitted to the Grading Officer at regular intervals, no longer than monthly

§ 111. Plan Changes.

Any physical changes from the original plan uncovered in the site during the construction, such as surface water drainage, soil and bedrock dislocations, alteration of ground water discharge or any other natural or man-made modification which would tend to undermine the basis upon which the permit was issued, must be immediately reported to the Grading Officer by the permit holder. If the circumstances dictate, the Grading Officer shall revoke the permit or otherwise modify the conditions upon which the permit was initially issued.

§ 112. Fees and Bonds.

1. At the time of application, the applicant shall pay an application review fee to cover the Township cost of reviewing application documents. Any additional charges incurred by the Township to review the application of a grading permit shall be borne by the applicant. Any application fees not expended by the Township shall be returned to the applicant within 60 days of receiving the letter of compliance described in § 110.6.
2. Fees for review of application and work shall be in accordance with the schedule set forth in the applicable resolution of the Board of Supervisors and shall include, but not limited to, all legal and engineering fees incurred by the Township.
3. Fees for review of application and inspections of engineered grading permits shall be in accordance with the schedule set forth in the applicable resolution of the Board of Supervisors.
 - A. Application fee. An application fee shall be assessed upon requirement of the township, not to exceed 2% of the total estimated cost of the grading work, control facilities, and landscaping.

- B. Should a special agreement be required by the Township Board of Supervisors as described in §107 of this Part, a review fee of \$200 will be required.
4. The plan checking fee for an amendment to 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 required for the entire project, however, a minimum fee of \$25 will be charged.
 5. Should the work require the use of occupancy of Township roads or streets for access by heavy construction equipment, or for hauling of spoil or borrow material, a separate bond shall be required to guarantee the repair of pavements, curbs and sidewalks damaged during the grading operation.
 6. No bond shall be required if another bond or approved security is posted for construction and/or site improvements which already covers the cost of grading and other control facilities.
 7. As a condition of approval of an engineered grading permit under this Part, the applicant shall post a cash or performance bond or other security acceptable to the Township in the amount of 110% of the estimated cost to perform the work. The cost estimate shall include the complete scope of work needed to be performed by the applicant to comply with this Part and shall be prepared and certified by the applicant's engineer or architect and accepted as reasonable by the Grading Officer. The Grading Officer shall be the final arbiter as to the reasonableness of any cost estimates.
 8. As a condition of issuance of a Certification of Completion as described in § 113 below, a Maintenance Security or similar Bond shall be posted by the Permit Holder for a term of 18 months, in an amount equal to 15% of estimated cost to recomplete the work.
 9. No bond shall be required for a regular grading operation.

§ 113. Certificate of Completion.

If, upon final inspection of the site for which a permit has been issued, it is found that the work authorized by the grading permit has been satisfactorily completed in accordance with the requirements of this Part, a grading certificate of completion covering such work and stating that the work is approved, shall be issued to the permit holder by the Grading Officer based on the receipt of the following:

1. Certification by a Professional Engineer that the site has been constructed in accordance with the approved plans & Geotechnical Report.
2. Copies of all inspection reports.
3. Maintenance Bond as described in §112.8.

4. As-Built Drawings showing conformance with approved plan.

§ 114. Maintenance.

1. The owner of any property on which an excavation or fill has been made shall maintain in good condition and repair the excavation or fill permitted, and also all retaining walls, cribbing, drainage structures, fences, ground cover, and other protective devices as may be a part of the permit requirements.
2. The continued use of said area shall be contingent upon the proper maintenance and upkeep of all the above mentioned items, satisfactory to the Township and subject to such further conditions as the Township may prescribe from time to time to keep the site in proper condition.
3. The grading certificate of completion may be revoked by the Township Board of Supervisors at any time, upon the recommendation of the Grading Officer, where the conditions of the permit are not being observed, the work covered by the permit has been materially extended or altered without a permit to do so, or conditions exist which prejudice the health, safety and welfare of any person, persons or property. Before such revocation, the Grading Officer shall first give written notice to the permit holder and to the owner of the property involved, specifying the defect or unsatisfactory condition involved, and advising that unless such defect or unsatisfactory condition is remedied, the certificate shall be revoked. If the defect or unsatisfactory condition is remedied within 30 days of notice to the permit holder to correct same, the certificate shall not be revoked.
4. If the permit holder shall fail to correct such defect or unsatisfactory condition within such thirty-day period, the Township may undertake the necessary work and the costs thereof shall be borne by the permit holder and collected in any manner authorized by law, including the imposition of a lien against the property.

§ 115. Hazardous Condition; Nuisance.

1. Whenever the Grading Officer determines that any existing excavation, embankment or fill has become a hazard, as defined in this Part, the owner of the property upon which the grading is located, or other person or agent in control of said property, upon receipt of notice in writing from the Grading Officer shall, within the time specified in such notice, repair, reconstruct or remove such excavation, embankment, or fill so as to eliminate the hazard.
2. If the permit holder shall fail to correct such hazardous or unsatisfactory condition within the specified time period, the Township may undertake the necessary work and the costs thereof shall be borne by the permit holder and collected in any manner authorized by law, including an imposition of a lien against the property.

3. Any excavation not completed within 180 days from the date of initial grading shall constitute a nuisance and a hazard.
4. The property owner shall restore, repair, reconstruct or remove such excavation, embankment or fill as directed by the Grading Officer within 30 days of receipt of said written notice.

§ 116. Working Conditions.

The following working conditions will apply to all grading sites:

1. **Dust Control.** During grading operations, acceptable measures for dust control will be exercised.
2. **Protection of Public Facilities.** All public utilities and roadways shall be protected in the design of, and during the grading operation. Construction equipment shall not be operated on public roads without the placement of protective mats. Aggregate driveway or roadway surfaces shall be provided to prevent tracking of dirt and mud onto the public roadways.
3. **Clean-up.** All soil washed or carried onto public streets during grading operations shall be cleaned up as it accumulates. The owner of the property being graded shall be responsible to protect and clean up lower properties of silt and debris which have washed down into the lower properties as a result of the grading work on higher property.
4. **Work Days.** None of the work or activity covered by a grading permit shall be conducted on a Sunday or federal legal holiday.
5. **Work Hours.** All of the work and activity covered by a grading permit shall be conducted between the hours of 7:00 a.m. and 7:00 p.m., prevailing time.

§ 117. Environmental Protection.

1. **Stream Crossings.** Grading equipment will not be allowed to cross streams. Provision will be made for the installation of culverts or bridges for such crossings. Permits shall be obtained from the Pennsylvania Department of Environmental Resources for temporary and permanent encroachments, relocations, enclosures and temporary crossings of streams.
2. **Excessive Slopes.** Grading on excessive slopes shall be avoided so as to minimize erosion and storm runoff, to protect watershed, to discourage erosion of soils by maintaining adequate foliage cover on excessive slopes, and to promote the perpetuation of open space on hillsides. The areas considered to have excessive slope may be revised or modified by the Board of Supervisors where studies or

information provided by a qualified agency or person documents the need or possibility for such revision.

§ 118. Excavation.

1. All topsoil shall be removed from the area to be graded and stockpiled and preserved for possible re-use on the site. However, at no time should topsoil or rock be disposed of upon the slope of the development without said request specifically given written approval by the Township Grading Officer. All excavated materials from foundation construction must be placed in an engineered fill and not wasted freely on engineering graded slopes.
2. Excavation adjacent to any footing, foundations or structure shall not extend below the minimum angle of repose or natural slope of the soil under the nearest point of same unless such footing, foundation or structure is first properly underpinned or otherwise protected against settlement. Before commencing any excavation, which will affect physically in any way an adjoining property or structures thereon, the permit holder shall notify, in writing, the owners of the adjoining property or structures not less than 30 days before such excavation is to be made informing them excavation is planned. A copy of such notice(s) shall be submitted to the Grading Officer. Adjoining properties and structures shall be protected as provided in the Building Code and/or as required by the Grading Officer.
3. The top or bottom edge of final slopes shall be set back thirty feet (or the distance of the perimeter buffer, if required) from adjacent property lines, street right-of-way lines, or edge of bufferyard in order to permit the normal rounding of the edge without encroaching on the abutting property or bufferyard.

§ 119. Fills and Embankments.

1. All topsoil shall be removed from the area to be graded and stockpiled and preserved for possible re-use on the site. However, at no time should topsoil or rock be disposed of upon the slope of the development without said request specifically given written approval by the Township Grading Officer. All excavated materials from foundation construction must be placed in an engineered fill and not wasted freely on engineering graded slopes.
2. Fills, embankments and finish grading shall be designed in accordance with the following:
 - A. Where fills are located so that earth movement may result in personal injury or damage to adjacent property, streets, alleys or buildings, the bearing value and stability of the material under proposed fills and embankments shall be determined by subsurface investigation performed by a -soils engineer or engineering geologist.

- B. The type of fill material available in each stage of the grading operation shall be determined in order to plan proper filling procedures.
- 1) No unsuitable material, such as coal, boney, red-dog, expansive shale, frozen soils, and cinders, shall be placed in fill areas.
 - 2) Wood or other solid waste material shall not be placed in fill areas.
 - 3) Pieces of rock or boulders having a thickness of more than 6 inches or a cross-sectional area in any plane of more than 1-1/2 square feet shall not be permitted.
 - 4) Notwithstanding the above, a Permit Holder may choose to use the above materials if it is certified by a geotechnical engineer that said materials are stable and will not affect the stability of the land
- C. No fill of any kind shall be placed over topsoil, trees, stumps or other material which would create a nuisance, potential fire hazard, or sanitation problem which would attract rodents, termites or other pests.
- D. On major fills or embankments, a toe bench shall be constructed below mantle on bedrock under the toe of fill.
- E. Benching of the existing surface shall be required and indicated on the cross-sections.
- F. A porous drain shall be installed on the bottom and back wall of the toe bench; together with a drain pipe and suitable discharge pipe to the existing non-erosive surface beyond and below the toe of the proposed fill.
- G. Overfilling of slopes is desirable to permit final shaping of surface to proposed grade without the addition of loose fill over the surface of the slope, provided that no fill shall be higher than 10 feet vertically before the slope is shaped to proper grade.
- H. At the end of each work day, the horizontal surface of the fill shall be shaped, compacted and rolled to provide for drainage.
- I. All fills shall be compacted to provide stability of materials and to prevent undesirable settlement. The fill shall be spread in a series of layers, each not exceeding 6 inches in thickness and shall be compacted by a sheeps foot roller or other approved method after each layer is spread. Fill shall be placed at the optimum moisture content for the specified degree of compaction. The Grading Officer may require tests or other information if, in his opinion, the conditions or materials are such that additional information is needed. Where fills are to have

streets, structures, or public utilities placed in or on them, a Modified Proctor Density of 95% shall be achieved (ASTM test designation D 1557).

- J. The top or bottom edge of final slopes shall be set back thirty feet (or the distance of the perimeter buffer, if required, whichever is greater) from adjacent property lines or street right-of-way lines in order to permit the normal rounding of the edge without encroaching on the abutting property or street and to allow for location of proper drainage facilities and protective devices.

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§ 120. Minimization of Erosion and Sediment.

1. Guidelines for minimizing erosion and sediment of the Pennsylvania Department of Environmental Protection and Butler County Conservation District should be followed. One or a combination of guidelines should be used to minimize hazards, depending on the site conditions and the proposed grading. Permits issued by the Pa. DEP may be applicable and necessarily procured by the applicant.
2. The Grading Officer may approve grading plans not meeting the above guidelines if the proposed grading plans are approved by the Butler County Conservation District.

§ 121. Slope Treatment and Ground Cover.

1. In order to prevent erosion, the permit holder shall be required to provide adequate ground covering of such kind and character as may be approved by the Grading Officer.
2. For slopes three horizontal to one vertical and steeper, the ground covering shall be an approved variety of erosion resistant vegetation.
3. The completion of finish grading should be done during a season of the year when turf or ground cover can best be established.

§ 122. Retaining Walls and Fences.

1. If a retaining wall is constructed to satisfy a requirement of this Chapter, a separate building permit shall not be required. The grading permit shall include the retaining wall, and the requirements for approvals and inspections, as stated herein shall be complied with.
2. A retaining wall shall be designed and constructed in accordance with sound engineering practice. The plans submitted for approval shall bear the seal and signature of a professional engineer.
3. The backfilling of retaining walls and the construction of subterranean drainage facilities shall be done in accordance with sound engineering practice.

4. In general, where a wall is replacing an exposed slope, the vertical face of the wall shall be at least ~~five~~twenty feet back from the adjoining property.
 - A. This requirement may be waived by the Grading Officer if it can be satisfactorily demonstrated that such an exception is necessary to insure normal use of the property.
 - B. This requirement may also be waived when the proposed retaining wall is a joint venture between adjacent property owners, and documents evidencing the same are filed with the application for the permit.
5. A fence not less than four feet in height, or a design approved by the Grading Officer and meeting requirements of the Zoning Ordinance, shall be placed at the top of all new cuts and fills made when the cuts or fill slopes are steeper than ~~1.52~~5 horizontal to one vertical and also elsewhere where public safety dictates.
6. Retaining walls may not be taller than 20 feet in the C/B/I/Overlay Zoning Districts.
7. Retaining walls may not be taller than 4 feet in any other zoning district not listed in Subsection 6 above.

§ 123. Drainage Facilities.

1. No grading work shall be started prior to approval of, and implementation of a Stormwater Management Plan in conformance with Chapter 162 of the Codified Ordinances.
2. Adequate provisions shall be made to prevent surface water from damaging the cut face of excavations and/or adjacent properties. Interception and diversion facilities for stormwater and surface water run-off, both above and below the cut and fill slope areas during and after construction shall be included in the design. As a minimum, drainage facilities to proposed detention areas shall be designed to accommodate the severest storm that might occur during a ten-year period.
3. The drainage pattern prior to construction shall be indicated on the plans. Adequate measures shall be taken to prevent any erosion and water runoff damage to adjacent properties during the construction and after completion of construction.
4. Storm sewers, catch basins, drainage ditches and swales necessary to protect adjacent properties, whether they be permanent or temporary in nature, shall be constructed before any excavation or filling is started. The storm sewers, catch basins, drainage ditches and swales shall be maintained, cleaned, cleared and open during construction. If the above is not complied with, the Grading Officer shall contact the Pennsylvania Department of Environmental Protection or Butler County Conservation district, and/or stop all clearing and grading on the site until necessary

drainage facilities are completed or the permit will be revoked, and the required bond forfeited.

5. Drainage ditches with a grade of 20h:1v or greater shall be paved with concrete, bituminous mixture, brick, half pipe, rubble or other hard non-erodible material.
6. Drainage ditches with a grade of less than 20h:1v shall be grassed and sloped in such a manner that they can be conveniently cut and maintained.
7. Drainage structures, storm sewers, detention ponds, sedimentation ponds and appurtenances shall be of proper design and so constructed as to carry surface water and any subsurface water encountered to the nearest practical storm drain or natural watercourse approved by the Grading Officer as a safe place to deposit and receive such waters. Approval by the Grading Officer in no way relieves the owner of his legal responsibilities to adjacent property owners. The owner shall also comply with all State laws and regulations dealing with enclosing or discharging into existing streams, channels or storm sewers.
8. As a guide for the prevention of damage, grading plans shall follow vegetative control methods and ditch and conduit control methods in the Erosion and Sediment Control Handbook for Butler County, Pennsylvania. The Grading Officer may approve methods and materials recommended by governmental agencies, professional engineers and architects, when they are more suitable to the site in preventing damage. Private drainage facilities of any nature shall be at least designed to accommodate the largest size storm that would occur on the average of every 10 years. The site design shall provide a safe floodway for flows from storms of greater intensity.
9. No rock fill shall be placed around or over storm sewers, or drainage facilities other than that designed as part of the site drainage facilities.

§ 124. Floodplain Management.

All grading work within designated or known floodplains shall conform to the requirements and standards of the Floodplain Ordinance.

§ 125. Liability.

1. Neither the issuance of a permit under the provisions of this Chapter, nor the compliance with the provisions hereof or with any condition imposed by the Grading Officer hereunder, shall relieve any permit holder from any responsibility for damage to persons or property resulting therefrom, or as otherwise imposed by law, nor impose any liability upon the Township, its employees, and its consultants for damages to persons or property.

2. The permit holder shall be fully responsible for any non-compliance with approved plans. He shall carry the responsibility both for his own employees and for all subcontractors from the first day of grading until released by the Township. The use of qualified personnel experienced and knowledgeable in the practice of excavation and landscape restoration shall be required.

§ 126. Violation and Penalties.

1. No person shall construct, enlarge, alter, repair or maintain any grading, excavation or fill, or cause same to be done contrary to or in violation of any provision of this Chapter.
2. When notice of any violation of, or non-compliance with, any provision of this Chapter has been given by the Grading Officer, such violation shall be discontinued immediately, unless the Grading Officer has specifically designated a reasonable time limit for compliance. Any violation which continues after such notice shall be subject to the penalties provided in this Chapter.
3. Any person, firm or corporation who shall violate any provision of this Chapter, upon conviction thereof in an action brought before a district justice in the manner provided for the enforcement of summary offenses under the Pennsylvania Rules of Criminal Procedure, shall be sentenced to pay a fine of not more than \$1,000 plus costs and, in default of payment of said fine and costs, to a term of imprisonment not to exceed 90 days. Whenever any person violating any of the provisions of this Chapter is notified of such violation by the Grading Officer by service, summons or any other manner, each day that a violation of this Chapter continues or each Section of this Chapter which shall be found to have violated shall constitute a separate offense.
4. In addition to the above stated violations and penalties, the Township may seek remedies and penalties under applicable Pennsylvania statutes or regulations.

§ 127. Remedies.

In case any work is performed by any person in violation of any of the provisions of this Chapter, the proper officers of the Township, in addition to other remedies, may institute in the name of the Township, an appropriate action or proceeding, whether by legal process or otherwise, to prevent such unlawful work and to restrain or abate.

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