

ORDINANCE 1-03

GRADING AND EXCAVATING

GENERAL REGULATIONS

<u>SECTION</u>	<u>DESCRIPTION</u>
101.	Purpose
102.	Scope
103.	Exceptions
104.	Definitions
105.	Application Procedure
106.	Responsibility of the Administrator
107.	Special Agreement
108.	Expiration of Permit
109.	Denial of Permit
110.	Inspections
111.	Plan Changes
112.	Fees and Bonds
113.	Certificate of Completion
114.	Maintenance
115.	Hazardous Condition; Nuisance
116.	Working Conditions
117.	Environmental Protection
118.	Excavation
119.	Blasting
120.	Fills and Embankments
121.	Erosion and Sedimentation Control
122.	Slope Treatment and Ground Cover
123.	Retaining Walls and Fences
124.	Drainage Facilities
125.	Flood Plain Management
126.	Liability
127.	Violation and Penalties
128.	Remedies

PART I

GENERAL REGULATIONS

1. PURPOSE.

The purpose of these regulations 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, excavation, and fills.

To establish performance standards, which insure 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.

2. SCOPE.

1. This Section 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 Ordinance.
2. The Township Board of Supervisors shall designate an Administrator for review, approval, granting of grading permits, and to make inspections of the grading work.
3. A separate grading permit shall be required for each site. One (1) permit shall cover all grading, excavation, and any fills made on the same site.
4. Only one (1) 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 the grading of the entire parcel are satisfactory to and approved by the Administrator.
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 Ordinance.

3. EXCEPTIONS.

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

1. An excavation, which does not exceed three (3) feet in vertical depth, at its deepest point, measured from the natural ground surface and cover a surface area of less than five thousand (5,000) square feet, provided that the services of such excavation do not have slope at any point steeper than four (4) horizontal to one (1) vertical. 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 two (2) and three (3) of this Section.
2. A fill, which does not exceed five hundred (500) cubic yards of material, on any one (1) site.
3. Fill, which is not intended to support structures and does not exceed three (3) feet in vertical depth at its deepest point, measured from the natural ground surface and does not cover an area of more than five thousand (5,000) square feet, provided that the surface of such fills do not have a slope at any point steeper than (4) horizontal to one (1) 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 four (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 two (2) and three (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 one hundred and twenty (120) days, then a permit shall be necessary when disposing 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:

<u>ONE FAMILY HOUSE SITE</u>	<u>MAXIMUM GRADIENT WITHOUT PERMIT</u>	<u>MAXIMUM EXCAVATION OR FILL WITHOUT PERMIT, EXCLUSIVE OF BASEMENTS AND FOUNDATIONS</u>
Less than 10,000 sq. ft.	15 in 100 ft.	100 cu. yds.
10,000 to 24,000 sq. ft.	15 in 100 ft.	200 cu. yds.
24,000 to 44,000 sq. ft.	15 in 100 ft.	250 cu. yds.
Over 44,000 sq. ft.	20 in 100 ft.	250 cu. yds.

7. Exploratory excavations under the direction of a soils engineer or engineering geologist.
8. Excavations for wells, tunnels, public utilities or cemetery graves.
9. A permit shall not be required for work performed by the Township, or of contractors employed by the Township in the public street or alley, Township park, playground or recreation area or on other Township property.
10. Farms, including, plowing, clearing, grading and grubbing activities essential to the farm business activity.
11. Grading of subdivision and land development sites which were approved previously by the Board of Supervisors and Township Engineer and are subject to the performance and Completion Bond Requirements of the subdivision, and the Land Development Ordinance.

4. **DEFINITIONS**

For the purpose of this Part, certain terms and words are herein defined:

Administrator - the person qualified and officially appointed by the Board of Supervisors to manage this Part, or his 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 Cross Creek Code of Ordinances "Building Code," as amended.

Engineer - a registered professional engineer in the Commonwealth of Pennsylvania, and knowledgeable in civil engineering.

Engineering Geologist - a person who holds a degree in geology from an accredited college or university and who has training and experience in the field of engineering geology.

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.

Excessive Slope - shall be defined as either of the following; those slopes as identified on the soil group map as steep slopes of twenty-five (25) percent or more; or any virgin area where, in a one hundred (100) foot horizontal distance, the average slope exceeds twenty-five (25) percent.

Fill and Embankment - 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 including the condition resulting therefrom.

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

Geotechnical Engineering Report - a report prepared by a soils engineer or engineering geologist.

Grade - 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 five thousand (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 five thousand (5,000) cubic yards. Where the site conditions warrant, the Administrator may require the submission of a report on the site as prepared by a professional engineer, soils engineer or engineering geologist.

Grading Permit - any permit required pursuant to the provision of this Part.

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

Landscape Architect - a landscape architect licensed as such in the Commonwealth of Pennsylvania.

Landslide Prone Soils - those soil formations whose characteristics are classified as being landslide prone or otherwise sensitive in the Soil Survey of Greene and Washington Counties.

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 the standards set forth in the Part, and which is more than two (2) feet in height as measured on the exposed vertical surface of the wall.

Site - a lot, tract or parcel of land, but may be a series of lots, tracts or parcels of land which are adjoining and with respect to which the 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 a ratio of the horizontal to the vertical, or in percentage to the slope (rise or fall per hundred feet).

Soil Survey - the Soil Survey of Greene and Washington Counties, Pennsylvania, as prepared by the USDNR Conservation Service et al, and accompanying text, issued September, 1983.

Soils Engineer - a registered professional engineer in the Commonwealth of Pennsylvania having training and experience in soils and engineering.

Solid Waste - any and all parts or combination of ashes, garbage, refuse, radioactive material, combustible demolition material and industrial wastes such as food processed wastes, wood, plastic, metal scrap, and other such materials whose disposal is regulated by the Pennsylvania Department of Environmental Protection.

Steep Slopes - or excessive slopes can be defines as slopes where, in a one hundred (100) foot horizontal distance, the average slope exceeds twenty-five (25) percent.

Storm Water Management - the control of the surface water run-off as regulated by Chapter __ of the Township of Cross Creek Code of Ordinances.

Subdivision Ordinance - the Subdivision and Land Development Ordinance as amended, being Chapter __ of the Township of Cross Creek Code of Ordinances.

Zoning Ordinance - the Zoning Ordinance, as amended.

1. Unless otherwise expressly stated, the terms and works shall, for the purpose 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.”

5. **APPLICATION PROCEDURE.**

1. Every applicant requesting a grading permit shall file a written application, plans, specifications and a soil conservation report therefore with the Administrator in a form prescribed by the Administrator. 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 the 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.
2. The plans and specification shall accurately portray and describe the site and proposed soil erosion controls. Plans shall be submitted in triplicate, one (1) 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 similar information.
 - E. A contour map showing the present contours of the land and the proposed contours after completion of the proposed grading at two (2) foot intervals where the average slope is ten (10) percent or less and at five (5) foot intervals where the average slope exceeds ten (10) percent.
 - F. Cross-sections of the proposed cut or fill on fifty (50) foot intervals which show the method of benching, both cut and/or fill; provided, however, that there shall be not less than two (2) cross-sections for each site.

- G. A plot plan showing the location of the grading boundaries, lot lines, neighboring streets, or ways, building, surface and subsurface utilities and waterways, drainage patterns and sufficient dimensions and other data to show all work.
 - H. A description of the type and classification of the soil from the Soil Survey, other standards surveys, or from other methods.
 - I. Details and location of any proposed drainage, storm water 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 Administrator may require to carry out the purpose of this Part.
 - L. The name and seal of the professional engineer who prepared said plans, except that Administrator may waive the preparation or approval and signature by the professional engineer, an architect, or landscape architect, only when it is self-evident that the proposed work is simple, clearly shown on the plans submitted, creates no potential nuisance to the adjacent property or hazardous conditions and does not include the construction of a fill on landslide prone soils or upon which a structure may be erected.
3. An approved erosion and Sedimentation Plan will be required from the Washington County Conservation District to include existing site description of the topography, drainage, cover and soils; major 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. An N.P.D.E.S. Permit from the PA DEP may be required dependant upon the size of the site and amount of land disturbance.
 5. Trees and natural ground cover shall be retained wherever possible to minimize the impact of the development on the site and environment.
 6. Provisions of the Subdivision and Land Development and Storm Water Management Ordinances are incorporated herein by reference.

6. RESPONSIBILITY OF THE ADMINSTRATOR.

1. The Administrator 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. The overlay map such as the Coal Resources Maps prepared by the 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 Administrator may require special precautions prior to issuing a permit from the applicant. The results of all soil tests and core borings made relative to the site shall be submitted to the Administrator.
3. The Administrator may deny a grading permit if the use of land to be graded either excavating or filling, is not specifically known except for the intent improving the site. The Administrator 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 Administrator's decision to the Board of Supervisors by preparing a site plan showing the development of the land in accordance with the Subdivision and Land Development Ordinance.
4. When the requirements of this Part for obtaining a permit have been met, the Administrator shall approve the application and proposed plan and grant a grading permit to the applicant.
5. The Administrator may waive the requirement of any or all plans and specifications listed in the 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. The said agreement may be incorporated in the developer's agreement as required in the Subdivision and Land Development Ordinance.

7. SPECIAL AGREEMENT.

In the event that the applicant will move or grade an area of more than fifty thousand (50,000) square feet, or grade more than ten-thousand (10,000) cubic yards, then the formal agreement may be required by the Board of Supervisors, and said agreement will be prepared by the applicant at his own cost and expense, and must be approved as to form by the Township Solicitor. The said agreement may be part of, and incorporated in, a developer's agreement as required by the Subdivision Ordinance.

8. 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 (6) months or is not completed within one (1) year from the date of issue; provided that the Administrator 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.

9. DENIAL OF PERMIT.

1. If the Administrator 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 Administrator shall consider, among other relevant factors, the following: possible saturation by rains, earth movements,

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 and rock.

2. Any person who is aggrieved by the application of the provisions of this Part may within fifteen (15) days from the date of the denial of the permit or such other adverse determination by the Administrator, file a written appeal therefrom to the Board of Supervisors. The Board of Supervisors shall grant a hearing upon such an appeal within thirty (30) days after the receipt of the written appeal.
3. If any appeal is taken from the issuance of a building permit where grading permit has also been issued and if such an 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.

10. INSPECTIONS.

1. The Administrator shall make the inspections thereafter required 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 the provisions of this Part.
2. Grading and drainage plans approved by the Administrator 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 Administrator an “as built” drawing of the project before the issuance of the grading certificate of completion.
4. The permit holder shall notify the Administrator in order to obtain inspections in accordance with the following schedule and such notification shall be made by the permit holder at least twenty-four (24) hours before the inspection is made:
 - A. Initial Inspection-when work is about to be commenced and stake out is completed.
 - B. Rough Grading- when all rough grading has been completed.
 - C. Drainage Facilities:
 - (1) All drainage facilities that connect to or shall become public drainage facilities shall be continuously inspected during construction.
 - (2) Other drainage facilities shall be inspected before such facilities are backfilled.
 - D. Additional Inspection- when in the opinion of the Administrator other inspections are necessary.
 - E. Final Inspection- when all work, including the installation of all drainage, landscaping and other structures have been completed.
5. If at any stage of the work the Administrator shall determine by inspection that the nature of this excavation or fills is such that further work is authorized by an existing permit is likely to endanger property, or streets, or alleys, or create hazardous conditions, the Administrator may require, as a condition to allowing

the work to be done, that such reasonable safety precautions be taken as the Administrator considers acceptable to avoid such likelihood of danger.

11. 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 Administrator by the permit holder. If the circumstances dictate, the Administrator shall revoke the permit or otherwise modify the conditions upon which the permit was initially issued.

12. FEES AND BONDS.

1. At the time of the 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 an excavation permit shall be borne by the applicant. Any application fees not expended by the Township shall be returned to the applicant within a reasonable period of time.
2. Fees for review of application and inspections of regular grading permits shall be in accordance with the schedule set forth in the applicable resolution of the Board of Supervisors.
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. Inspection Fee: An inspection fee equal to two (2) percent of the total estimated cost of the grading work, control facilities and landscaping shall be collected by the Administrator prior to the issuance of the grading permit. A minimum fee of fifty dollars (\$50.00) shall be charged. Inspection costs incurred by the Township in excess of the initial fee collected shall be paid for by the applicant prior to the final inspection of the work.
 - B. Should a special agreement be required by the Township Board of Supervisors as described in 107. if this Ordinance, a review fee of one hundred and fifty dollars (\$150.00) 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 twenty-five dollars (\$25.00) will be charged.
5. Should the work require the use or 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. 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 fifty (50) percent 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 Administrator. The Administrator shall be the final arbiter as to the reasonableness of any cost estimates.

7. Upon completion of the grading under an engineered grading permit, a maintenance bond in the amount of fifteen (15) percent of the cost estimated shall be posted (payable to Cross Creek Township) for a period of eighteen (18) months.
8. 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.

13. 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 Administrator.

14. MAINTENANCE.

1. The owner of any property on which an excavation or fill has been made shall maintain 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 of 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 recommendation of the Administrator, 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 Administrator 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 a defect or unsatisfactory condition is remedied, the certificate shall be revoked. If the defect or unsatisfactory condition is remedied within thirty (30) days of notice to the permit holder to correct the same, the certificate shall not be revoked.
4. If the permit holder shall fail to correct such defect of unsatisfactory condition with such thirty (30) day period the Township may undertake the necessary work and the cost 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.

15. HAZARDOUS CONDITION; NUISANCE.

1. Whenever the Administrator determines that any existing excavation, embankment or fill has become a hazard, as defined in this Ordinance, 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 Administrator 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 one hundred and eighty (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 Administrator within thirty (30) days of receipt of said written notice.

16. WORKING CONDITIONS.

The following working conditions 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 been washed down into the lower properties as a result of the grading work on higher properties.
4. Work Days- None of the work or activity covered by a grading permit shall be conducted on a Sunday or legal holiday without the approval of the Supervisors.
5. Work Hours- All of the work and activity covered by a grading permit shall be conducted between the hours of seven o'clock A.M. (7:00) and six o'clock P.M. (6:00), prevailing time, unless time limits are extended, excused or otherwise modified by the Board of Supervisors.

17. ENVIRONMENTAL PROTECTION.

1. Live Stream Crossings- Grading equipment will not be allowed to cross live streams. Provisions will be made for the installation of culverts or bridges for such crossings. Permits shall be obtained from the Pennsylvania Department of Environmental Protection 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 watersheds, 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.

18. EXCAVATION.

1. All topsoil shall be removed from the area to be graded and stockpiled and preserved for possible re-use on the site.
2. Maximum slope steepness of a cut shall be no greater than two (2) horizontal to one (1) vertical for minimizing erosion and landslide hazards. However, a governmental review agency, professional engineer, soils engineer or engineering geologist may determine the types of soil on the sites to be graded from the Soil Survey, geological surveys or core borings. Maximum slopes can then be determined as follows:
 - A. Landslide prone solids or unstable rock formations where existing slopes are greater than twenty-five (25) percent shall have proposed cut slopes no steeper than three (3) horizontal to one (1) vertical.
 - B. Landslide prone soils where existing slopes are less than twenty-five (25) percent shall have proposed cut slopes no steeper than two (2) horizontal to one (1) vertical.
 - C. Soils which are not, or have low probability of being landslide prone shall have a slope no steeper than one and one half (1 - ½) horizontal to one (1) vertical.
3. Cut slopes up to one (1) horizontal and one (1) vertical may be allowed under a grading permit, provided that two or more of the following conditions are satisfied:
 - A. The material in which the excavation is made is stable to sustain a slope steeper than the slope specified above for the recognized soil conditions on the site. An acceptable geological report, signed and sealed by a soils engineer, certifying that the steeper slope will have sufficient stability, and that it will not endanger any property, or result in property damage and that creation of a hazard will be minimal, shall be submitted to and may be approved by the Administrator.
 - B. A retaining wall of other approved support, designed by the professional engineer and approved by the Administrator is provided to support the face of the excavation or to provide a fall zone at rock faced slopes.
 - C. The proposed slopes demonstrated on a site plan which is presented to the Planning Commission and the Township Board of Supervisors to be absolutely necessary to permit the reasonable development of the site, subject to other requirements of this Chapter.
4. The Administrator may require that the excavation be designed so that a line having a slope of two (2) horizontal to one (1) vertical measured from the bottom of the cut slope will be entirely inside the property lines of the property on which the excavation is made, if conditions exist which, under applicable engineering practice the excavation may not be deemed to be stable or safe.
5. The Administrator may require an excavation to be made with a cut slope flatter than those specified above if he finds the material in which the excavation is to be made is subject to erosion, is prone to landslides, or if other conditions exist which, under applicable engineering practices, make such flatter cut slope necessary for stability and safety.
6. 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 thirty (30) days before such excavation is to be made informing them that excavation has been planned. A copy of such notice(s) shall be submitted to the Administrator. Adjoining properties and structures shall be protected as provided in the Building Code and/or as required by the Administrator.

7. The top or bottom edge of final slopes shall normally set back five (5) feet 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.

19. **BLASTING.**

1. No person, firm or corporation may store, handle or use any explosive in the Township of Cross Creek without first obtaining a special permit from the Administrator. The Administrator shall have the authority to impose reasonable regulations and restrictions upon the storage, handling and use of explosives. Any violation of any regulation or requirement imposed by the Administrator, or imposed under any Section of this Part shall be grounds for the revocation of any permit theretofore issued.
2. All blasting which is conducted in the Township shall be in conformity with State requirements and shall be in compliance with the Act of July 10, 1957, P.L. 685, 73 P.S. §164-168, as amended, and the Department of Labor and Industry Rules and Regulations promulgated pursuant to the aforesaid statute.
3. The Administrator shall be notified at least twenty-four (24) hours prior to any blasting.
4. The Administrator has the authority to deny a permit if they feel it is a realistic danger, hazard or environmental concern to the surrounding properties, residents or other entities. The Administrator may require that an embankment or fill be constructed with an exposed surface flatter than two (2) horizontal to one (1) vertical if he finds that under the particular conditions such flatter surface is necessary for stability and safety.

20. **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.
2. The site shall be prepared by cutting toe benches and other keyways so as to provide a firm base on which to place the fill. No fill or embankment shall be made on landslide prone soils without adequate engineered preparation and drainage of the area to be filled.
3. No fill shall be made which creates any exposed surface steeper in slope than two (2) horizontal to one (1) vertical, except under one or more of the following conditions:
 - A. The fill, in the judgment of the Administrator, is located so that settlement, sliding, or erosion of the fill material will not result in property damage or be a hazard to adjoining property, streets, alleys, buildings, storm drains or drainage ways.
 - B. Soils Capability and Geological Report, signed and sealed by the professional engineer, experienced in erosion control and soils analysis, certifying that he has inspected the site and that the proposed deviation from the slope specified above will not endanger any property or result in property damage, and that creation of a hazard will be minimal, shall be submitted to and may be approved by the Administrator.

4. Fills, embankments and finish grading shall be designed in accordance with the following:
 - A. Where fills are located so that the 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) Rock may be incorporated in fills and embankments but only layers twenty-four (24) inches thick, maximum, as per the latest edition of Pennsylvania Department of Transportation Specifications Publication 408, with voids filled and a blanket of compacted fill separating one layer of rock from the next. Rock fill shall not be placed near the bottom of the proposed foundations, building caissons and subsurface utility installations. Suitable earth shall be reserved or provided to cover rock fill under proposed seeded or planted areas.
 - (2) No unsuitable material, such as coal, boney, red-dog, expansive shale and cinders, shall be placed in fill areas.
 - (3) Wood and other solid waste material shall not be placed in fill areas.
 - 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 the slopes is desirable to permit the final shaping of the surface to proposed grade without the addition of loose fill over the surface of the slope, provided that no fill shall be higher than ten (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 (excepting rock) shall be spread in a series of layers, each not exceeding twelve (12) inches in thickness and shall be compacted by a sheepsfoot 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 Administrator 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 ninety-five (95) percent shall be achieved (ASTM test designation D 1557).
 - J. The top or bottom edge of the final slopes shall be set back five (5) feet 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.

21. **EROSION AND SEDIMENTATION CONTROL**

1. All grading shall be done in conformity with the requirements of the Pennsylvania Department of Environmental Resources (25 Pa. Code, Chapter 102). Reports and plans required to be submitted to this agency shall also be submitted to the Township when the area involved is less than twenty five (25) acres.
2. Guidelines for minimizing erosion and sediment contained in the “Erosion and Sediment Control Handbook” for Washington County, Pennsylvania, and the Department of Environmental Resources, Soil Erosion and Sedimentation Control Manual, shall be followed. One or a combination of guidelines shall be used to minimize hazard, depending on site conditions and proposed grading. However, the Township Engineer may approve grading plans not exceeding the guidelines of these handbooks of proposed grading will not constitute a hazard.
3. All slopes exceeding 3:1 shall be sown with crown vetch or other approved anti-erosion vegetation.
4. Adequate provisions shall be made to prevent surface water from damaging the cut face of excavations and/or the sloping surface of fills. Interception and diversion facilities for storm water and surface water run-off, both above and below the cut area during and after construction, shall be included in the design.
5. Fill shall be placed and compacted so as to minimize sliding and erosion.
6. Care shall be taken to prevent sedimentation from entering natural watercourses or existing channels and suitable protection shall be provided for periods of possible flooding. Approved anti-erosion devices shall be installed where directed to achieve this requirement.

22. **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 Administrator.
2. For slopes steeper than three (3) horizontal to one (1) vertical, 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.

23. **RETAINING WALLS AND FENCES.**

1. If a retaining wall is constructed to satisfy a requirement of this Chapter, a 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. 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. Retaining walls more than four (4) foot high require a building permit and that they be designed and a drawing submitted and sealed by a registered professional engineer. Retaining walls may not exceed fifteen (15) feet at any point above finish grade nor be more than eight (8) feet in height, on average above finish grade.

5. In general, where a wall is replacing an exposed slope, the vertical face of the wall shall be at least three (3) feet from the back of the adjoining property.
 - A. This requirement may be waived by the Administrator 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.
6. A fence not less than four (4) feet in height, of a design approved by the Administrator 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 two (2) horizontal to one (1) vertical and also elsewhere where public safety dictates.

24. **DRAINAGE FACILITIES.**

1. No grading work shall be started prior to the approval of, and implementation of a Storm Water Management Plan in conformance with the Cross Creek Stormwater Management Ordinance as amended.
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 storm water 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 (10) 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 Administrator shall stop all clearing and grading on the site until the necessary drainage facilities are completed or the permit will be revoked and the required bond forfeited.
5. New storm sewers and utilities traversing a proposed fill area shall be buried a minimum of three (3) feet from top of pipe to proposed grade. Fill shall be constructed in that area prior to installation of said sewers and utilities. The minimum size storm sewer exclusive of toe or bench drains, shall be fifteen (15) inches in diameter unless a variation in size is approved by the Administrator. All storm sewers located under pavement areas shall be reinforced concrete pipe.
6. Slopes steeper than two (2) horizontal to one (1) vertical and of more than twenty (20) feet in vertical height shall be separated by a level berm of at least ten (10) feet in width at intervals of no more than twenty feet (20') vertically if the slope is potentially hazardous due to easily erosive material.
7. On slopes of two (2) horizontal to one (1) vertical or less steep, the ten (10) feet level berms will not be required unless deemed necessary by the Administrator.
8. Drainage ditches with a grade of five (5) percent or greater shall be paved with concrete, bituminous mixture, brick, half pipe, rubble or other hard non-erodable material.

9. Drainage ditches with a grade of less than five (5) percent shall be grassed and sloped in such a manner that they can be conveniently cut and maintained.
10. 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 Administrator as a safe place to deposit and receive such waters. Approval by the Administrator 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.
11. 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 Washington County, Pennsylvania. The Administrator 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 ten (10) years. The site design shall provide a safe floodway for flows from storms of greater intensity.
12. 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.

25. FLOOD PLAIN MANAGEMENT.

All grading work within designated or known flood plains shall conform to the requirements and standards of the Flood Plain Ordinance as amended.

26. LIABILITY.

1. Neither the issuance of a permit under the provisions of this Ordinance, nor the compliance with the provisions hereof or with any condition imposed by the Administrator hereunder, shall relieve any permit holder from any responsibility for damage to any 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 the qualified personnel experienced and knowledgeable in the practice of excavation and landscape restoration shall be required.

27. 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 regulation.
2. When notice of any violation of, or non-compliance with, any provision of this regulation has been given by the Administrator, such violation shall be discontinued immediately, unless the Administrator has specifically designated a reasonable time limit for compliance. Any violation which continues after such notice shall be subject to the penalties in this regulation.

3. Any person who violates any of the provisions of this regulation may be charged with such violation, and upon conviction thereof, shall be sentenced to pay a fine of not more than one-thousand dollars (\$1,000.00) for each violation, or alternatively, sentenced to pay a fine of not more than a maximum permitted under Pennsylvania law as the same may be from time to time amended and in effect as of the date of conviction.

Whenever any person violating any of the provisions of this regulation is notified of such violation by the Administrator by service, summons or any other manner, each day or portion thereof a violation occurs or continues, shall constitute a separate violation.

4. In addition to the above stated violations and penalties, the Township may seek remedies and penalties under applicable Pennsylvania statutes and regulations.

28. REMEDIES.

In case any work is performed by any person in violation of any of the provisions of this regulation, 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 such violation.