

ATTACHMENT B

AN ORDINANCE TO AMEND PROVISIONS OF THE UNIFIED DEVELOPMENT ORDINANCE REGULATING SEDIMENTATION AND EROSION CONTROL

WHEREAS, the Durham County Board of Commissioners wishes to amend certain provisions regarding sedimentation and erosion control in the Unified Development Ordinance; and

WHEREAS, it is the objective of the Durham County Board of Commissioners to have the UDO promote the health, safety, and general welfare of the community;

NOW, THEREFORE, be it ordained that Article 3, Applications and Permits; Article 8, Environmental Protection; Article 12, Infrastructure and Public Improvements; and Article 15, Enforcement, are amended to make the following changes:

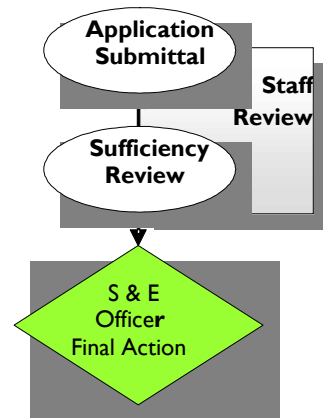
SECTION 1

Modify Section 3.8, Sedimentation and Erosion Control, paragraph 3.8.1, Applicability; paragraph 3.8.2, Application Requirements; paragraph 3.8.3, Fees; paragraph 3.8.4, Action by Durham Soil and Water Conservation District; paragraph 3.8.5, Action by Sedimentation and Erosion Control Office; paragraph 3.8.6, Preconstruction Conference; paragraph 3.8.7, Disapproval of Plan; paragraph 3.8.8, Amendment of Plan; paragraph 3.8.9, Appeals; and paragraph 3.8.10, Expiration, as set forth below.

Sec. 3.8 Sedimentation and Erosion Control

3.8.1 Applicability

- A.** If required under Sec. 12.10, Sedimentation and Erosion Control, an approved sedimentation and erosion control plan and/or a land-disturbing permit shall be obtained before commencing land-disturbing activity.



- B.** Pursuant to Sec. 113A-57(4) of the North Carolina Sedimentation Pollution Control Act of 1973, land-disturbing activity that requires a sedimentation and erosion control plan under Sec. 12.10, Sedimentation and Erosion Control, shall not commence until at least 30 days after a sedimentation and erosion control plan is filed with the County Sedimentation and Erosion Control Office, regardless of when the plan is approved.

3.8.2 Application Requirements

A. Erosion and Sedimentation Control Plan

- 1.** Three copies of a sedimentation and erosion control plan shall be filed with the County Sedimentation and Erosion Control Office.
- 2.** A sedimentation and erosion control plan shall contain engineering drawings, vicinity maps, assumptions, calculations, narrative statements, and a construction sequence as needed to adequately describe the proposed development and the measures proposed to comply with the requirements of this Article.
- 3.** A sedimentation and erosion control plan shall be prepared by, and bear the seal and signature of, a registered professional engineer, registered landscape architect, registered architect, registered land surveyor, or certified professional sediment and erosion control specialist. The County Sedimentation and Erosion Control Officer or designee may, however, deem such a seal and signature not necessary due to site simplicity (as the absence of sensitive geographical features and receiving watercourses) and the limited nature of the sedimentation and erosion control measures required.
- 4.** The approval of a sedimentation and erosion control plan is conditioned on the applicant's compliance with federal, state and local water quality laws, regulations, and rules.
- 5.** An approved sedimentation and erosion control plan shall be kept on file at the job site.

B. Land-Disturbing Permit

- 1.** A land-disturbing permit may be obtained by submitting the following:
 - a.** Applicable fee;
 - b.** Zoning compliance checkoff issued by the Durham City-County Planning Department;
 - c.** Completed Durham County Financial Responsibility/Ownership Form With Landowner Consent Form (FRO);
 - d.** Approved sedimentation and erosion control plan, if required;
 - e.** Improvement security, if required;
 - f.** Certification that tree protection fencing has been installed, if required; and
 - g.** Approval of the proposed project by the City or County as applicable.
- 2.** No permit shall be issued until such time as the Sedimentation and Erosion Control Officer or designee is assured that the proposed land-disturbing activity will be carried out in accordance with this section and Sec. 12.10, Sedimentation and Erosion Control, and the approved sedimentation and erosion control plan, if required. A land-disturbing permit application may be disapproved for the same reasons that a sedimentation and erosion control plan may be disapproved, as set forth in Sec. 3.8.7, Disapproval of Plan, of this Ordinance.

3. The Sedimentation and Erosion Control Officer or designee shall require security to assure performance of the conditions of the permit whenever a land-disturbing activity is in excess of five acres or whenever the Officer or designee determines that the activity may result in significant off-site damage. The applicant shall file with the Officer or designee an improvement security in the form of a performance or cash bond or letter of credit. The amount shall be that which the Officer or designee deems sufficient to cover all costs of protection or other improvements required for conformity with standards specified in this section and Sec. 12.10, Sedimentation and Erosion Control. The security may be adjusted or released as the amount of disturbed area changes. The security shall be released when the Officer or designee has certified that all of the requirements of such sections have been met. Forfeiture of the improvement security shall not release the person conducting the land disturbing activity of their obligation to install and maintain necessary erosion control measures, to stabilize the site, or any other obligation of this section or Sec. 12.10, Sedimentation and Erosion Control, or any rule or order promulgated in furtherance thereof.
4. Prior to initiating land-disturbing activity, the permittee shall notify the Sedimentation and Erosion Control Office of the date that such activity will begin.
5. A land-disturbing permit issued shall be prominently displayed at the job site until all construction is completed, all permanent sedimentation and erosion control measures are removed, and the site has been stabilized as required.

3.8.3 Fees

The fees charged for the administration and enforcement of this Article shall be as prescribed by the Board of Commissioners.

3.8.4 Action by Sedimentation and Erosion Control Office

- A. The County Sedimentation and Erosion Control Office shall forward a copy of each complete sedimentation and erosion control plan to the Durham Soil and Water Conservation District for review and comment.
- B. The County Sedimentation and Erosion Control Officer or designee shall review each complete sedimentation and erosion control plan submitted and within 30 days of receipt shall notify the person submitting the plan that it has been approved, approved with modifications, or disapproved. Failure to approve, approve with modifications, or disapprove a complete plan within 30 days of receipt shall be deemed approval. Failure to approve, approve with modifications, or disapprove a revised plan within 15 days of receipt shall be deemed approval. Disapproval of a plan must specifically state in writing the reasons for disapproval.
- C. If, following commencement of a land-disturbing activity pursuant to an approved sedimentation and erosion control plan, the County Sedimentation and Erosion Control Officer or designee determines that the plan is inadequate to meet the requirements of this section or Sec. 12.10, Sedimentation and Erosion Control, the Officer or designee may require such revisions as it deems necessary to comply with such sections. Failure to approve, approve with modifications, or disapprove a revised plan within 15 days of receipt shall be deemed approval. Pending approval of a revised plan, work shall cease or shall continue only as authorized by the Officer or designee.

- D. The County Sedimentation and Erosion Control Officer or designee shall review each permit application that does not require an approved sedimentation and erosion control plan and within 14 calendar days of receipt shall notify the person submitting the application that it has been issued or denied.

3.8.5 Action by Durham Soil and Water Conservation District

The Durham Soil and Water Conservation District shall review a sedimentation and erosion control plan and submit any comments and recommendations to the County Sedimentation and Erosion Control Office within 20 days of receipt, or within any shorter period of time as may be agreed upon by the Office. Failure of the District to submit its comments and recommendations within 20 days or within any agreed-upon shorter period of time shall not delay final action on the plan.

3.8.6 Preconstruction Conference

When deemed necessary by the Sedimentation and Erosion Control Officer or designee, a preconstruction conference may be required.

3.8.7 Disapproval of Plan

- A. An erosion control plan may be disapproved upon a finding that an applicant, or a parent, subsidiary or other affiliate of the applicant:
 - 1. Is conducting or has conducted land-disturbing activity without an approved plan, or has received notice of violation of a plan previously approved by the North Carolina Sedimentation Control Commission or a local government pursuant to the North Carolina Sedimentation Pollution Control Act of 1973, as amended, and all rules and orders adopted pursuant to it (the Act) or local ordinance adopted pursuant to the Act, and has not complied with the notice within the time specified in the notice;
 - 2. Has failed to pay a civil penalty assessed pursuant to the Act or a local ordinance adopted pursuant to the Act by the time the payment is due;
 - 3. Has been convicted of a misdemeanor pursuant to NCGS § 113A-64(b) or any criminal provision of a local ordinance adopted pursuant to the Act; or
 - 4. Has failed to substantially comply with state rules or local ordinances and regulations adopted pursuant to the Act.
- B. For purposes of this subsection, an applicant's record may be considered for only the two years prior to the application date.
- C. Any person engaged in land-disturbing activity who fails to file a plan in accordance with this Article, or who conducts a land-disturbing activity except in accordance with provisions of an approved plan, shall be deemed in violation of this Article.

3.8.8 Amendment of Plan

Applications for amendment of an erosion control plan in written and/or graphic form may be made at any time under the same conditions as described in this section for a new application. Until such time as such amendment is approved by the Sedimentation and Erosion Control Officer or designee, the land-disturbing activity shall not proceed except in accordance with the erosion control plan as originally approved.

3.8.9 Appeals

- A.** Except as provided in paragraph B. of this subsection, the appeal of a disapproval or approval with modifications of a plan shall be governed by the following provisions:
- 1.** The disapproval or modification of any proposed erosion control plan or the refusal to issue a land-disturbing permit by the Sedimentation and Erosion Control Officer or designee shall entitle the person submitting the plan, or applying for the permit, to a hearing if such person submits written demand to the Clerk to the Board of Commissioners for a hearing within 15 days after receipt of written notice of disapproval or modifications. The written demand must specify, with particularity, the factual and/or legal basis for the appeal. No grounds, other than those so specified, may be argued;
 - 2.** Hearings held pursuant to this section shall be conducted by the Board of Commissioners within 15 days after the date of the appeal or request for a hearing, or at the next regularly scheduled meeting, whichever is later; and
 - 3.** If the Board of Commissioners upholds the disapproval or modification of a proposed erosion control plan or refusal to issue a permit following the public hearing, the person submitting the plan or permit application shall then be entitled to appeal the Board of Commissioners' decision to the State Sedimentation Control Commission as provided in NCGS § 113A-61(c) and Title 15 NCAC 4B.0018(d).
- B.** In the event that an erosion control plan is disapproved pursuant to Sec. 3.8.7, Disapproval of Plan, the County Sedimentation and Erosion Control Office shall notify the Director of the Division of Land Resources (within the North Carolina Department of Environment and Natural Resources [DENR]) of such disapproval within ten days. The Office shall advise the applicant and the Director in writing as to the specific reasons that the plan was disapproved. The applicant may appeal the Office's disapproval of the plan pursuant to Sec. 3.8.7, Disapproval of Plan, directly to the State Sedimentation Control Commission.

3.8.10 Expiration

- A.** A land-disturbing permit shall expire at the end of:
- 1.** One year from the date of issuance if no land-disturbing activity has been undertaken in that period. No land-disturbing activity may take place following expiration until the person responsible has applied for, and received, a new land-disturbing permit. The fee for the new permit shall be 100% of the current applicable fee; or
 - 2.** A two-year period, unless it is extended by the Sedimentation and Erosion Control Officer or designee upon written request of the permit holder. The request for extension shall include reasons for incompleteness of the work. After review of the original plan and an on-site inspection of the completed work, the permit may be extended effective for a period not to exceed six months from the date of expiration of the original permit. The fee for the extended permit shall be 25% of the current applicable fee. If work cannot be completed and the site permanently stabilized prior to expiration of the permit extension, then a new land-disturbing permit must be applied for and obtained as described in this section.

- B.** An approved sedimentation and erosion control plan for which no permit has been issued shall expire one year from the approval date. If a plan has been disapproved, a revised plan must be submitted within one year from the disapproval date or the file will be closed.

SECTION 2

Modify Section 8.8, Steep Slope Protection Standards, adding new paragraph 8.8.2, Exception – Sedimentation and Erosion Control, and renumbering subsequent paragraphs as set forth below.

Sec. 8.8 Steep Slope Protection Standards

8.8.1 Purpose

The primary purpose for the slope protection standards is to minimize grading, land instability and the removal of vegetation in order to:

- A.** Protect the quality of wetlands and water courses below the slope from increased sedimentation;
- B.** Protect steep slope plant and animal habitat from disturbance and development; and
- C.** Preserve the aesthetic quality of the natural terrain.

8.8.2 Exception – Sedimentation and Erosion Control

Notwithstanding the requirements of this section, steep slopes for purposes of sedimentation and erosion control are defined in Sec.12.10.4B, Stabilization of Disturbed Land, and regulated under Sec. 3.8, Sedimentation and Erosion Control, and Sec. 12.10, Sedimentation and Erosion Control.

8.8.3 Steep Slope Areas

- A.** Slope is the relationship of vertical rise to horizontal run, expressed as a percentage. Steep slope areas shall be defined as land areas that:
 - 1.** Have a grade of 25% or more;
 - 2.** Have an area of 5,000 square feet or greater; and
 - 3.** Are located within 200 feet of any floodway fringe or perennial stream or within 100 feet of an intermittent stream.
- B.** Steep slope areas refer to natural grades and shall not include man-made grades. Slope calculations shall use the smallest contour interval for which maps are available. Steep slope areas shall be determined irrespective of tract boundaries.
- C.** Steep slope areas shall be clearly indicated on all site plans, development plans, preliminary plats and final plats. When a property owner or developer believes that the presence or location of a steep slope area is different than what is shown on the appropriate topographic map, the Development Review Board shall have the authority to determine the location or presence of the moderate or steep slope area for purposes of meeting the requirements of this section.

8.8.4 Steep Slope Development Limitations

Development and land disturbing activity on steep slope areas shall be conducted only in accordance with the following requirements. Compliance with these requirements shall be determined by the approving authority.

- A.** Development shall be designed and constructed in order to minimize disturbance to the natural landform as much as possible. Development shall demonstrate appropriate terrain-adaptive design and construction techniques. An inability to design a particular development allowed by the underlying zone without significant disturbance to the natural landform may indicate that the site should not accommodate the full amount of proposed development. Alternate site design and construction measures shall be encouraged to mitigate the effects of development on steep slopes. The grade of reconstructed slopes shall not exceed 50%. Non-load bearing retaining walls shall be encouraged in order to reduce the amount of disturbance to the natural slope.
- B.** In order to accommodate building placement on steep slope areas, street and side yard setbacks on lots on the interior of the development may be reduced by up to 50% by the Development Review Board.
- C.** On any tract proposed for construction, no more than 15% of the steep slope area on the tract shall be graded. For purposes of this calculation, the land areas of individual steep slope areas on the tract shall be added together to establish the total steep slope area for the tract.
- D.** Development shall be designed and arranged in order to minimize the impact of street construction on steep slope areas. Proposed right-of-way for major thoroughfares, minor thoroughfares and collector streets shall be exempt from the steep slope area grading limits of this section, provided that the Development Review Board determines that proposed rights-of-way are designed and arranged in order to minimize the impact on steep slope areas.

8.8.5 Density Credits

The amount of land designated as steep slopes may be credited for residential density on adjacent land in the same development at a rate of 15% of that allowed by the zoning.

SECTION 3

Modify Section 12.10, Sedimentation and Erosion Control, paragraph 12.10.1, Purposes; paragraph 12.10.2, Scope and Exclusions; paragraph 12.10.3, General Requirements; paragraph 12.10.4, Basic Control Objectives; paragraph 12.10.5, Land Disturbing Permits; paragraph 12.10.6, Mandatory Standards for Land-Disturbing Activity; paragraph 12.10.7, Design and Performance Standards; paragraph 12.10.8, Permanent Downstream Protection of Stream Banks, Channels and Slopes; paragraph 12.10.9, Borrow and Waste Areas; paragraph 12.10.10, Access and Haul Roads, paragraph 12.10.11, Operations in Lakes or Natural Watercourses; paragraph 12.10.12, Responsibility for Maintenance; and paragraph 12.10.13, Additional Measures, as set forth below.

Sec. 12.10 Sedimentation and Erosion Control

12.10.1 Purpose

- A.** This Section is adopted for the purpose of:
 - 1.** Regulating private, non-exempt land-disturbing activity to control accelerated erosion and sedimentation in order to prevent the pollution of water and other damage to lakes, watercourses and other public and private property by sedimentation; and
 - 2.** Establishing procedures through which these purposes can be fulfilled.
- B.** No person shall undertake any land-disturbing activity without first obtaining a permit from the Sedimentation and Erosion Control Officer or designee as required by this section.

12.10.2 Applicability

- A. Exemptions.** The following activities do not require a permit under this section:
 - 1.** Land-disturbing activities for the purpose of fighting fires;
 - 2.** Land-disturbing activities for the stockpiling of raw or processed sand, stone or gravel in material processing plants and storage yards, provided that sediment control measures have been utilized to protect against off-site damage;
 - 3.** Land-disturbing activities that are less than 12,000 square feet in surface area. In determining the area, lands under one or diverse ownership being developed as a unit will be aggregated. Notwithstanding this provision, an erosion control plan and/or permit may be required by the Sedimentation and Erosion Control Officer or designee when off-site damage is occurring, or if the potential for off-site damage exists. Additionally, this section may apply when the applicant, or a parent, subsidiary, or other affiliate of the applicant has engaged in any activity enumerated in Sec. 3.8.7, Disapproval of Plan;
 - 4.** As set forth in NCGS § 113A-52.01, land-disturbing activities undertaken on agricultural land for the production of plants and animals useful to man, including but not limited to:
 - a.** Forage and sod crops, grain and feed crops, tobacco, cotton and peanuts;
 - b.** Dairy animals and dairy products;
 - c.** Poultry and poultry products;
 - d.** Livestock, including beef cattle, llamas, sheep, swine, horses, ponies, mules or goats, including the breeding and grazing of any or all such animals;
 - e.** Bees and apiary products; and
 - f.** Fur animals;
 - 5.** Land-disturbing activities undertaken on forest land for the production and harvesting of timber and timber products and which are conducted in accordance with best management practices set out in Forest Practice Guidelines Related to Water Quality, as adopted by the North Carolina Department of Environment and Natural Resources (DENR.) If land-disturbing

activity undertaken on forestland for the production and harvesting of timber and timber products is not conducted in accordance with Forest Practice Guidelines Related to Water Quality, the provisions of this Article shall apply to such activity and any related land-disturbing activity;

6. Land-disturbing activities undertaken by persons as defined in NCGS § 113A-52(8) who are otherwise regulated by the provisions of the Mining Act of 1971, NCGS § 74-46--74-68;
7. Land-disturbing activities over which the state has exclusive regulatory jurisdiction as provided in NCGS § 113A-56(a);
8. Land-disturbing activities undertaken for the duration of an emergency, activities essential to protect human life; and
9. This section shall not require ground cover on cleared land forming the future basin of a planned reservoir.

B. Plan Required

Subject to the exemptions listed in subsection 12.10.2, a sedimentation and erosion control plan shall be required for any land-disturbing activity within the County, including the City, if more than 20,000 aggregate square feet will be disturbed, or if 12,000 or more aggregate square feet will be disturbed in a M/LR-A, M/LR-B, F/J-A, or E-A watershed protection overlay district. The Sedimentation and Erosion Control Officer or designee may also require a plan for any land-disturbing activity if it determines that off-site damage is occurring or the potential for off-site damage exists. A plan may also be required when the applicant, or a parent, subsidiary, or other affiliate of the applicant, has engaged in any activity listed in Sec. 3.8.7, Disapproval of Plan.

	Less than 12,000 s.f.	12,000 s.f. to 20,000 s.f.	More than 20,000 s.f.
Plan	MR	MR(*R)	R
Permit	MR	R	R
Plan to District			R

MR - May be required when off-site damage is occurring, the potential for off-site damage exists, or if the applicant or a parent, subsidiary, or other affiliate of the applicant has engaged in any activity enumerated in Sec. 3.8.7, Disapproval of Plan.

R - Required.

***R** - Required in a Lake Michie/Little River Critical Area (M/LR-A), Lake Michie/Little River Protected Area (M/LR-B), Falls/Jordan Critical Area (F/J-A) and Eno River Critical Area (E-A).

B. Protection of Property

Persons conducting land-disturbing activity shall take all reasonable measures to protect all public and private property from damage caused by such activity.

C. More Restrictive Rules Shall Apply

Whenever conflicts exist between federal, State or local laws, and ordinances or rules, the more restrictive provision shall apply.

12.10.3 Basic Control Objectives

In order for a sedimentation and erosion control plan to be approved, the following control objectives shall be met:

A. Identify Critical Areas

On-site areas which are subject to severe erosion, and off-site areas which are especially vulnerable to damage from erosion and/or sedimentation, are to be identified and receive special attention;

B. Limit Time of Exposure

All land-disturbing activity is to be planned and conducted to limit exposure to the shortest feasible time;

C. Limit Exposed Areas

All land-disturbing activity is to be planned and conducted to minimize the size of the area to be exposed at any one time;

D. Control Surface Water

Surface water runoff originating upgrade of exposed areas shall be controlled to reduce erosion and sediment loss during the period of exposure;

E. Control Sedimentation

All land-disturbing activity is to be planned and conducted so as to restrain off-site sedimentation damage; and

F. Manage Stormwater Runoff

When the increase in the velocity of stormwater runoff resulting from a land-disturbing activity is sufficient to cause accelerated erosion of the receiving watercourse, plans are to include measures to control the velocity at the point of discharge so as to minimize accelerated erosion of the site and increased sedimentation of the stream.

12.10.4 Mandatory Standards for Land-Disturbing Activity

No land-disturbing activity shall occur except in accordance with the mandatory standards listed below. Except where more stringent standards are specified in this Ordinance, the technical standards and specifications contained in the North Carolina Erosion and Sediment Control Planning and Design Manual shall also apply.

A. Buffer Zones

Except where more stringent buffer requirements are specified in Article 8, Environmental Protection, and/or Article 9, Landscaping and Buffering, the following requirements shall apply:

- 1.** No land-disturbing activity during periods of construction or improvement to land shall be permitted in proximity to a lake or natural watercourse unless a buffer zone is provided along the margin of the watercourse of sufficient width to confine visible siltation within the 25% of the buffer zone nearest the land-disturbing activity. This subsection shall not apply to a land-disturbing activity in connection with the construction of facilities to be located on, over or under a lake or natural watercourse; and

2. Unless otherwise provided, the width of a buffer zone is measured from the top of the bank nearest edge of the disturbed area, with the 25% of the strip nearer the land-disturbing activity containing natural or artificial means of confining visible siltation.

B. Stabilization of Disturbed Land

The angle for disturbed land shall be no greater than the angle which can be retained by vegetative cover or other adequate erosion control devices or structures.

1. **Ongoing Activity.** Land left exposed shall be planted or otherwise provided with temporary ground cover, devices, or structures sufficient to restrain erosion within the applicable time period after completion of any phase of grading or period of inactivity as follows: seven days for a steep slope; ten days for a moderate slope; 14 days for land with no slope or inclination. For purposes of this section, a moderate slope means an inclined area, the inclination of which is less than or equal to three units of horizontal distance to one unit of vertical distance; and a steep slope means an inclined area, the inclination of which is greater than three units of horizontal distance to one unit of vertical distance. No other criteria apply.

Commentary: *The moderate and steep slope definitions in this section are mandated by state law (S.L. 2009-486) for sedimentation and erosion control purposes. This steep slope definition differs from the steep slope definition under UDO Sec. 8.8, Steep Slope Protection Standards, which is otherwise applicable throughout the UDO.*

2. **Completed Activity.** For any area of land-disturbing activity where grading activities have been completed, temporary or permanent ground cover sufficient to restrain erosion shall be provided as soon as practicable, but in no case later than seven days after completion of grading.

C. Stabilization of Sedimentation and Erosion Control Devices

Whenever land-disturbing activity exceeds 12,000 square feet, the person conducting the land-disturbing activity shall install such sedimentation and erosion control devices and practices as are sufficient to retain the sediment generated by the land-disturbing activity within the boundaries of the tract during construction upon and development of such tract, and shall plant or otherwise provide a temporary ground cover sufficient to restrain erosion generated by such devices and practices within seven days.

- D. Erosion and sedimentation control measures, structures and devices shall be so planned, designed and constructed as to provide protection from the calculated maximum peak of runoff from the 25-year storm. Runoff rates shall be calculated using the procedures in the USDA, Soil Conservation Service's "National Engineering Field Manual for Conservation Practices," or other calculation procedures acceptable to the Sedimentation and Erosion Control Officer or designee.
- E. Each sediment basin or trap in the Suburban or Rural Tier shall have a minimum volume of 3,600 cubic feet per acre of disturbed area and a minimum surface area of 435 square feet per cfs of Q_{25} (25-year storm) peak inflow. Each sediment basin or trap in the Downtown, Compact Neighborhood, or Urban Tier shall have a minimum

volume of 1,800 cubic feet per acre of disturbed area and a minimum surface area of 325 square feet per cfs of Q_{25} peak inflow. A skimmer shall be used in each sediment basin or trap.

- F.** Sediment basins and traps shall be designed and constructed such that the basin will have a settling efficiency of at least 70% for the 40-micron (0.04mm) size soil particle transported into the basin by the runoff of that two-year storm that produces the maximum peak rate of runoff as calculated according to procedures in the United States Department of Agriculture Soil Conservation Service's "National Engineering Field Manual for Conservation Practices" or according to procedures adopted by any other agency of the State or the United States or any generally recognized organization or association.
- G.** Sediment basins and traps shall not be installed in perennial or intermittent streams.
- H.** Existing ponds and lakes shall not be used as sediment basins or traps.
- I.** One party shall retain operational control of any basin or trap. Sold outparcels shall be permitted separately.
- J.** Newly constructed open channels shall be designed and constructed with side slopes no steeper than two horizontal to one vertical if a vegetative cover is used for stabilization, unless soil conditions permit steeper slopes or where the slopes are stabilized by using mechanical devices, structural devices or other acceptable ditch liners. In any event, the angle for side slopes shall be sufficient to restrain accelerated erosion.
- K.** Additional areas may be added per the criteria enumerated in this section only if the basin or trap is properly installed and maintained.
- L.** In high quality water (HQW) zones, uncovered areas shall be limited at any time to a maximum total area of 20 acres. Only the portion of the land-disturbing activity within a HQW zone shall be governed by this section. Larger areas may be uncovered with the written approval of the Director of DENR.

12.10.5 Permanent Downstream Protection of Stream Banks, Channels and Slopes

A. Intent

Stream banks and channels downstream from any land-disturbing activity shall be protected from increased degradation by accelerated erosion caused by increased velocity of runoff from the land-disturbing activity.

B. Performance Standard

The land-disturbing activity shall be planned and conducted such that the velocity of stormwater runoff in the receiving watercourse at the point of discharge resulting from a 25-year storm after development shall not exceed the greater of:

- 1.** The velocity specified according to the soil type in the following table, for a point of discharge into a receiving watercourse with bare soil or rock banks or bed;

Materials		Maximum Permissible Velocities	
Name	Description	FPS ¹	MPS ²
Fine Sand (noncolloidal)	Cecil fine sandy loam, Pinkston fine sandy loam	2.5	0.8
Sand Loam (noncolloidal)	Appling sandy loam, Creedmoor sandy loam, Helena sandy loam, Mayodan sandy loam, Wedowee sandy loam, Wilkes sandy loam, White shore sandy loam	2.5	0.8
Silt Loam (noncolloidal)	Georgeville silt loam, Herndon silt loam, Lignum silt loam, Roanoke silt loam	3.0	0.9
Ordinary Firm Loam	Iredell loam, Mecklenburg loam, Wahee loam, Davidson clay loam, White Store clay loam-eroded	3.5	1.1
Fine Gravel		5.0	1.5
Stiff Clay (very colloidal)	Iredell-Urban land complex, White Store-Urban land complex, Mayodan-Urban land complex	5.0	1.5
Graded, Loam to Cobbles (noncolloidal)	Tatum gravelly silt loam, Nason stony silt loam, Goldston slaty (channery) silt loam	5.0	1.5
Graded, Silt to Cobbles (colloidal)		5.5	1.7
Alluvial Silts (noncolloidal)	Wehadkee silt loam, Congaree silt loam, Chewacla silt loam, Cartecay silt loam	3.5	1.1
Alluvial Silts (colloidal)		5.0	1.5
Coarse Gravel (noncolloidal)		6.0	1.8
Cobbles and shingles		5.5	1.7
Shales and Hard Pans		6.0	1.8

¹ **FPS:** Feet per second

² **MPS:** Meters per second

- The velocity specified according to the type of vegetation and depth of flow in the following table, for a point of discharge into a vegetated receiving watercourse; or

Vegetatively Protected Watercourses and Point of Stormwater Discharge			
Group No.	Vegetation	Depth of Flow (feet)	Maximum Permissible Velocity
1	Bermudagrass	up to1	4
		greater than 1	6
2	Reed canarygrass; Kentucky bluegrass	up to1	3
		greater than 1	6
3	Grass and legumes, mixed; Weeping lovegrass	up to1	3
		greater than 1	4
4	Annuals: Annual lespedeza (KOBÉ); Sudangrass Small grain: (Rye, Oats, barley);	up to1	2.5
		greater than 1	2.5

	Ryegrass		
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Notes: Do not use vegetative protection on longitudinal parallel to flow slopes steeper than 10% except for side slopes. Annuals: use only as temporary protection until permanent cover is established.

- 3. The velocity in the receiving watercourse determined for the 25-year storm prior to development.
- C. If the conditions enumerated in paragraph B, Performance Standard, of this subsection cannot be met, the channel below the discharge point shall be designed and constructed to withstand the expected velocity.

D. Slope Protection

When soils with slopes as indicated in the following table, occur between a point of stormwater discharge and the next confluence of concentrated stormwater runoff, such areas, on- or off-site, shall be protected from accelerated erosion by diverting the stormwater discharge from those soil surfaces. Diversion may include the provision of piped, paved or armored storm drainage facilities.

Critical Soils of Durham County		
ApC	Appling sandy loam	6-10% slopes
CfC	Cecil fine sandy loam	6-10% slopes
CrC	Creedmoor sandy loam	6-10% slopes
DaD	Davidson clay loam	6-10% slopes
GeC	Georgeville silt loam	6-10% slopes
GeD	Georgeville silt loam	10-15% slopes
GIE	Goldston slaty silt loam	10-25% slopes
GIF	Goldston slaty silt loam	25-45% slopes
GrC	Granville sandy loam	6-10% slopes
Gu	Gullied land	Clayey materials
HeC	Helena sandy loam	6-10% slopes
HrC	Herndon silt loam	6-10% slopes
HsC	Herndon stony silt loam	2-10% slopes
IrC	Iredell loam	6-10% slopes
IyC	Iredell-Urban land complex	6-10% slopes
MfC	Mayodan sandy loam	6-10% slopes
MfD	Mayodan sandy loam	10-15% slopes
MfE	Mayodan sandy loam	15-25% slopes
MrC	Mayodan-Urban land complex	0-10% slopes
MrD	Mayodan-Urban land complex	10-15% slopes
MuC	Mecklenburg loam	6-10% slopes
NaD	Nason silt loam	10-15% slopes
NaE	Nason silt loam	15-25% slopes
NoD	Nason stony silt loam	10-15% slopes
PfC	Pinkston fine sandy loam	2-10% slopes
PfE	Pinkston fine sandy loam	10-25% slopes
TaE	Tatum gravelly silt loam	15-25% slopes
Ur	Urban land	
WmD	Wedowee sandy loam	10-25% slopes
WmE	Wedowee sandy loam	15-25% slopes

WsC	White Store sandy loam	6-10% slopes
WsE	White Store sandy loam	10-25% slopes
WvC2	White Store clay loam	2-10 % slopes, eroded
WvE2	White Store clay loam	10-25% slopes, eroded
WwC	White Store-Urban land complex	0-10% slopes
WwE	White Store-Urban land complex	10-25% slopes
WxE	Wilkes sandy loam	10-25% slopes

E. Acceptable Management Measures

Measures applied alone or in combination to satisfy the intent of this section are acceptable if there are no objectionable secondary consequences. The State Sedimentation Control Commission recognizes that the management of stormwater runoff to minimize or control downstream channel and bank erosion is a developing technology. Innovative techniques and ideas will be considered and may be used when shown to have the potential to produce successful results. Some alternatives are to:

1. Avoid increases in surface runoff volume and velocity by including measures to promote infiltration to compensate for increased runoff from areas rendered impervious;
2. Avoid increases in stormwater discharge velocities by using vegetated or roughened swales and waterways in lieu of closed drains and high velocity paved sections;
3. Provide energy dissipaters at outlets of storm drainage facilities to reduce flow velocities at the point of discharge. These may range from simple rip-rapped sections to complex structures; and
4. Protect watercourses subject to accelerated erosion by improving cross sections and/or providing erosion-resistant lining.

F. Exceptions

This section shall not apply where it can be demonstrated, to the satisfaction of the Sedimentation and Erosion Control Officer or designee, that stormwater discharge velocities will not create an erosion problem in the receiving watercourses.

12.10.6 Borrow and Waste Areas

When the person conducting the land-disturbing activity is also the person conducting the borrow or waste disposal activity, areas from which borrow is obtained and which are not regulated by the provisions of the Mining Act of 1971, and waste areas for surplus materials other than landfills regulated by the State Department of Environmental and Natural Resources Division of Solid Waste Management, shall be considered as part of the land-disturbing activity where the borrow material is being used or from which the waste material originated. When the person conducting the land-disturbing activity is not the person obtaining the borrow and/or disposing of the waste, these areas shall be considered a separate land-disturbing activity.

12.10.7 Access and Haul Roads

Temporary access and haul roads, other than public roads, constructed or used in connection with any land-disturbing activity shall be considered a part of such activity.

12.10.8 Operations in Lakes or Natural Watercourses

Land-disturbing activity in connection with construction in, on, over, or under a lake or natural watercourse shall be planned and conducted in such a manner as to minimize the extent and duration of disturbance of the stream channel. The relocation of a stream, where relocation is an essential part of the proposed activity, shall be planned and executed so as to minimize changes in the stream flow characteristics, except when justification for significant alteration to flow characteristic is provided.

12.10.9 Responsibility for Maintenance

During the development of a site, the person conducting the land-disturbing activity shall install and maintain all temporary and permanent erosion and sedimentation control measures as required by the North Carolina Sedimentation Pollution Control Act of 1973, as amended, and all rules and orders adopted pursuant to it (the Act), this section, rules or orders adopted or issued pursuant to this section or the Act, or an approved sedimentation and erosion control plan. After site development, the land owner or person in possession or control of the land shall install and/or maintain all necessary permanent erosion and sediment control measures, except those measures installed within a road or street right-of-way or easement accepted for maintenance by a governmental agency.

12.10.10 Additional Measures

Whenever the Sedimentation and Erosion Control Officer or designee determines that significant sedimentation is occurring as a result of land-disturbing activity, despite application and maintenance of protective practices, the person conducting the land-disturbing activity will be required to and shall take the additional protective action directed.

SECTION 4

Modify Section 15.1, Violations; Violators, paragraph 15.1.3, Violator, and Section 15.5, Sedimentation and Erosion Control Enforcement and Penalties, paragraph 15.5.1; paragraph 15.5.3; paragraph 15.5.4; paragraph 15.5.5; paragraph 15.5.6, Revocation of Permits; paragraph 15.5.7, Civil Penalties; paragraph 15.5.8, Criminal Penalties; paragraph 15.5.9, Enforcement Alternatives; and paragraph 15.5.10, Restoration of Areas Affected by Failure to Comply, as set forth below.

Sec. 15.1 Violations; Violators

15.1.1 Applicability

Sec. 15.5, Sedimentation and Erosion Control Enforcement and Penalties, shall apply to enforcement of provisions of this Ordinance and state statute or regulation governing sedimentation and erosion control. Sec. 15.6, Floodplain and Flood Damage Protection Enforcements and Penalties, shall apply to enforcement of

provisions of this Ordinance and state statute or regulation governing floodplain and flood damage protection. The provisions of those sections, where applicable, shall supersede conflicting provisions of this Article.

15.1.2 Violation

- A.** It shall be unlawful and a violation of this Ordinance to establish, create, expand, alter, occupy, or maintain any use, land development activity, or structure, including but not limited to signs and buildings, that violates or is inconsistent with any provision of this Ordinance or any order, approval, or authorization issued pursuant to this Ordinance. Approvals and authorizations include, but are not limited to: special use permits, sign permits, certificates of compliance, variances, building permits, development plans, site plans, and conditions of such permits, variances, and plans.
- B.** It shall also be a violation to engage in any construction, land development activity, or use, without all approvals and authorizations required by this Ordinance.
- C.** Each day of a violation may be considered a separate and distinct violation.

15.1.3 Violator

A. General

Violators may include any person who owns, leases, occupies, manages, or builds any structure or engages in any land development activity in violation of this Ordinance and any person who owns, leases, or occupies a use in violation of this Ordinance. A violation may be charged against more than one violator.

Commentary: *The definition of violator and the ability to charge more than one violator means that both tenant and landlord, where applicable, may be in violation and subject to penalties.*

B. Sedimentation and Erosion Control (Sec. 3.8, Sec. 12.10, Sec. 15.5)

The person responsible for violations of Sec. 3.8, Sedimentation and Erosion Control or Sec. 12.10, Sedimentation and Erosion Control, or Sec. 15.5, Sedimentation and Erosion Control Enforcement and Penalties, consistent with the provisions of NCGS, §113A-64 shall mean:

- The developer or other person who has, or holds himself out as having, financial or operation control over the land-disturbing activity; or
- The landowner or person in possession or control of the land when he or she has directly or indirectly allowed the land-disturbing activity, has benefited from it, or has failed to comply with the North Carolina Sedimentation Pollution Control Act of 1973, as amended, and all rules and orders adopted pursuant to it (the Act), Sec. 3.8, Sedimentation and Erosion Control, Sec. 12.10, Sedimentation and Erosion Control, Sec. 15.5, Sedimentation and Erosion Control Enforcement and Penalties, rules or orders adopted or issued pursuant to those sections or the Act, or an approved sedimentation and erosion control plan.

15.1.4 Responsibility

The Planning and/or Inspections Director, and/or County Engineer, or appropriate designees, shall enforce this Ordinance and the remedies authorized under this section. The responsible individual shall have the authority to settle any violations that involve the payment of money to the governing entity in exchange for a written release from actual or potential claims.

[Secs. 15.2, 15.3, and 15.4 are omitted.]

Sec. 15.5 Sedimentation and Erosion Control Enforcement and Penalties

- 15.5.1** Agents, officials or other qualified persons authorized by the Sedimentation and Erosion Control Officer or designee may periodically inspect land-disturbing activities to ensure compliance with the North Carolina Sedimentation Pollution Control Act of 1973, as amended, and all rules and orders adopted pursuant to it (the Act), Sec. 3.8, Sedimentation and Erosion Control, Sec. 12.10, Sedimentation and Erosion Control, rules or orders adopted or issued pursuant to those sections or the Act, or an approved sedimentation and erosion control plan and to determine whether the measures utilized or required in the plan are effective in restraining erosion and retaining sediment resulting from land-disturbing activity. Notice of the right to inspect shall be included in the notification of plan approval of each sedimentation and erosion control plan.
- 15.5.2** No person shall willfully resist, delay or obstruct an authorized representative, employee or agent of Durham County while that person is lawfully inspecting or attempting to inspect a land-disturbing activity under this section.
- 15.5.3** If it is determined that a person engaged in land-disturbing activity has failed to comply with the Act, this section, Sec. 3.8, Sedimentation and Erosion Control, Sec. 12.10, Sedimentation and Erosion Control, rules or orders adopted or issued pursuant to those sections or the Act, or an approved sedimentation and erosion control plan, a notice of violation shall be served upon that person. The notice may be served by any means authorized under NCGS § 1A-1, rule 4. The notice shall specify a date by which the person must comply with the Act, this section, Sec. 3.8, Sedimentation and Erosion Control, Sec. 12.10, Sedimentation and Erosion Control, rules or orders adopted pursuant to those sections or the Act, or an approved sedimentation and erosion control plan and inform the person of the actions that need to be taken to comply. If the person engaged in land-disturbing activity fails to comply within the time specified, enforcement action shall be initiated.
- 15.5.4** The Sedimentation and Erosion Control Officer or designee shall have the power to conduct such investigations as he/she may reasonably deem necessary to carry out their duties as prescribed in this section, and for this purpose to enter at reasonable times upon any property, public or private, for the purpose of investigating and inspecting the sites of any land-disturbing activity.

15.5.5 The Sedimentation and Erosion Control Officer or designee shall also have the power to require written statements, or the filing of reports under oath, with respect to land-disturbing activity.

15.5.6 Revocation of Permits

- A.** The County Engineer shall have the power to revoke land-disturbing permits issued pursuant to Sec. 3.8, Sedimentation and Erosion Control, and Sec. 12.10, Sedimentation and Erosion Control. When the Sedimentation and Erosion Control Officer or designee proposes to the County Engineer that a land-disturbing permit be revoked, the Officer or designee shall serve the permittee or other responsible person with a notice of intent to revoke specifying the time and date of a pre-termination hearing to be held before the County Engineer. The notice shall be delivered at least three working days, Monday through Friday, before the date specified for the pre-termination hearing.
- B.** Should the County Engineer determine that the land disturbing permit should be revoked, he/she shall serve the permittee or other responsible person with a notice of revocation. Upon receipt of the notice of revocation, the responsible person shall immediately cause or order the cessation of all land-disturbing activities except those activities which are specifically directed towards bringing the site into a state of compliance.
- C.** The person responsible for the land-disturbing activity may appeal the revocation of a land-disturbing permit to the Board of Commissioners by submitting a written demand to the Clerk to the Board of Commissioners for a hearing within 15 days after receipt of the written notice of revocation. The written demand must specify, in detail, the factual and/or legal basis for the appeal. No grounds other than those so specified may be argued.
- D.** No person shall resume or continue any land-disturbing activity other than those necessary to bring the site into a state of compliance after receipt of a revocation notice and before reissuance of a land-disturbing permit or decision of the Board of Commissioners reinstating a land-disturbing permit. After the Sedimentation and Erosion Control Officer or designee has inspected the site and approved the remedial work, the responsible party may reapply for a land-disturbing permit. The fee for reapplication shall be 100% of the current application fee.

15.5.7 Civil Penalties

- A.** Any person who violates any of the provisions of the Act, this section, Sec. 3.8, Sedimentation and Erosion Control, Sec. 12.10, Sedimentation and Erosion Control, or rules or orders adopted or issued pursuant to those sections or the Act, or who initiates or continues a land-disturbing activity for which a sedimentation and erosion control plan and/or land-disturbing permit is required except in accordance with such plan or permit shall be subject to civil penalties. The maximum civil penalty for a violation shall be \$5,000.00, or \$5,000.00 per day for a continuing violation. Civil penalties may be imposed from the date a violation was commenced. Each day of continuing violation shall constitute a separate violation.
- B.** The Sedimentation and Erosion Control Officer or designee shall impose the civil penalties authorized by this section. The Sedimentation and Erosion Control Officer or designee shall notify the person upon whom the civil penalties are imposed of the amount and the reason for the penalties. In determining the amount of the penalties

the Sedimentation and Erosion Control Officer or designee shall consider the degree and extent of harm caused by the violation, the cost of rectifying the damage, the amount of money the violator saved by noncompliance, whether the violation was committed willfully, and the prior record of the violator in complying or failing to comply with the Act, this section, Sec. 3.8, Sedimentation and Erosion Control, Sec. 12.10, Sedimentation and Erosion Control, rules or orders adopted or issued pursuant to those sections or the Act, or an approved sedimentation and erosion control plan. The notice of civil penalties shall be served by any means authorized under NCGS §1A-1, rule 4, and shall direct the violator to either pay or contest the civil penalties, within 30 days after receipt of the notice, by filing a petition for a contested case under NCGS §150B, art. 3. The administrative law judge hearing the matter shall make a recommended decision to the Board of Commissioners. If either party wishes to challenge the recommended decision, they must file with the Clerk to the Board of Commissioners, and serve on the other parties, and the Office of Administrative Hearings, specific exceptions and objections, detailing the errors of fact or law they contend exist within the recommended decision, and other written argument they wish to submit, within 30 days after the issuance of same. Other parties shall file any response they wish to make to a submission of exceptions and objections within 30 days of service of same, but may not use this subsequent filing to submit new, or additional, exceptions and objections of their own. The recommended decision and any written submissions of the parties will be reviewed by the Board of Commissioners within 90 days after the official record in this matter is served upon the Clerk to the Board of Commissioners by the Office of Administrative Hearings. The Board of Commissioners shall adopt or modify the recommended decision consistent with the provisions of NCGS §150B-36. Appeal of the decision of the Board of Commissioners shall be in accordance with NCGS §150B, art. 4.

- C. If payment is not received within 30 days after demand for payment is made the matter will be referred to the County Attorney's Office for initiation of a civil action to recover the amount of the civil penalties. Civil penalties that are not contested are due when the violator is served with a notice of civil penalties. Civil penalties that are contested are due at the conclusion of administrative and judicial review.
- D. The clear proceeds of civil penalties collected pursuant to this section shall be credited to the Durham Public Schools in accordance with the provisions of NCGS §115C-437.

15.5.8 Criminal Penalties

Any person who knowingly or willfully violates any provision of the Act, this section, Sec. 3.8, Sedimentation and Erosion Control, Sec. 12.10, Sedimentation and Erosion Control, or rules or orders adopted or issued pursuant to those sections or the Act, or who knowingly or willfully initiates or continues a land-disturbing activity for which an approved sedimentation and erosion control plan and/or land-disturbing permit is required except in accordance with such plan or permit shall be guilty of a Class 2 misdemeanor which may include a fine not to exceed \$5,000.00, as provided in NCGS §113A-64.

15.5.9 Enforcement Alternatives

Violation of any provision of this Article shall result in forfeiture of any applicable security or portion thereof required under Sec. 3.8.3, Fees.

- A.** Whenever there is reasonable cause to believe that any person is violating or threatening to violate the Act, this section, Sec. 3.8, Sedimentation and Erosion Control, Sec. 12.10, Sedimentation and Erosion Control, any rule or order adopted or issued pursuant to those sections or the Act, or an approved sedimentation and erosion control plan, the County Attorney may, either before or after the institution of any other action or proceeding authorized by this section, institute a civil action as provided in Sec. 15.3.3, Injunctive Relief in Superior Court, for injunctive relief to restrain the violation or threatened violation in superior court.
- B.** The institution of an action for injunctive relief under this section shall not relieve any party to such proceedings from any civil or criminal penalties assessed under this section.
- C.** Land-disturbing activities undertaken without first obtaining a land-disturbing permit, but which are required by Sec. 3.8, Sedimentation and Erosion Control, to obtain a land-disturbing permit, shall be subject to a permit fee of 200% of the current applicable fee, in addition to any civil penalties assigned per Sec. 15.5.7, Civil Penalties.
- D.** Conveyance of the property subject to the permit, in whole or in part, shall not terminate the permit holder's obligations under the Act, this section, Sec. 3.8, Sedimentation and Erosion Control, Sec. 12.10, Sedimentation and Erosion Control, any rule or order adopted or issued pursuant to those sections or the Act, or an approved sedimentation and erosion control plan until such time as a substitute, or succeeding, permit is approved by the Sedimentation and Erosion Control Officer or designee.

15.5.10 Restoration of Areas Affected by Failure to Comply

The Sedimentation and Erosion Control Officer or designee may require a person who engaged in a land disturbing activity and failed to retain sediment generated by the activity, as required by NCGS §113A-57(3) and Sec. 12.10, Sedimentation and Erosion Control, to restore the waters and land affected by the failure so as to minimize the detrimental effects of the resulting pollution by sedimentation. This authority is in addition to any other civil or criminal penalty or injunctive relief authorized under this section or the Act.

SECTION 5

That the Unified Development Ordinance shall be renumbered as necessary to accommodate these changes and clarifications.

SECTION 6

That this amendment of the Unified Development Ordinance shall become effective upon adoption.