ORDINANCE NO. 3581

AN ORDINANCE to amend and reordain Section 5-4-5 (EXCEPTIONS), Section 5-4-7 (MINIMUM CRITERIA; CITY HANDBOOK) and Section 5-4-11 (INSPECTIONS AND AMENDMENTS OF PLANS), and to repeal Section 5-4-20.1 (INCORPORATION OF REGULATIONS OF THE VIRGINIA SOIL AND WATER CONSERVATION BOARD), all of Chapter 4 (EROSION AND SEDIMENT CONTROL), Title 5 (TRANSPORTATION AND ENVIRONMENTAL SERVICES) of The Code of the City of Alexandria, Virginia, 1981, as amended.

THE CITY COUNCIL OF ALEXANDRIA HEREBY ORDAINS:

Section 1. That Section 5-4-5 of The Code of the City of Alexandria, Virginia, 1981, as amended, be and the same hereby is amended and reordained to read as follows:

Sec. 5-4-5 Exceptions.

The provisions of this chapter shall not apply to any construction, reconstruction, repair or alteration of any building or structure when no land is disturbed and no trees, shrubs, grass or vegetation is destroyed or removed, nor to any of the following:

(a) The construction or erection of any building or structure when the disturbed land area of the site is less than 2,500 square feet in size, provided there is no natural or man-made drainage ditch, swale draining in excess of 2,500 square feet, or storm sewer on the disturbed land and no existing or proposed grade on the disturbed land exceeds 10 percent.

(b) The alteration of any building or structure when the disturbed land area of the site will be less than 2,500 square feet, provided there is no natural or man-made drainage ditch, swale draining in excess of 2,500 square feet, or storm sewer on the disturbed land and no existing or proposed grade on the disturbed land exceeds 10 percent.

(c) The clearing, grading, excavating, filling or changing the contour of, or removing topsoil from, less than 2,500 square feet of land, provided there is no natural or man-made drainage ditch, swale draining in excess of 2,500 square feet, or storm sewer on the disturbed land and no existing or proposed grade on the disturbed land exceeds 10 percent.

(d) The clearing, grading, excavating, filling or changing the contour of, or removing topsoil from, less than 500 square feet of land, provided there is no natural or man-made drainage ditch, swale, draining in excess of 2,500 square feet or storm sewer on the disturbed land, and further provided the disturbance of the land does not cause sedimentation on land outside the exterior boundaries of the land disturbed.

(e) The removal or destruction of trees, shrubs, grass, weeds, vegetation, ground cover, or other plant life which cover less than 2,500 square feet of land, provided there is no natural or man-made drainage ditch, swale draining in excess of 2,500 square feet, or storm sewer on the disturbed land and no existing or proposed grade on the disturbed land exceeds 10 percent.

(f) The planting, trimming, pruning or removal of trees, shrubs, grass, weeds, vegetation, ground cover or other plant life pursuant to chapter 2 of title 6 of this code.

(g) The removal or destruction of trees, shrubs, grass, weeds, vegetation, ground cover or other plant life which is dead, poisonous or infected with disease or injurious insects or pests.

(h) The gardening and care of lawns.

(i) The removal or destruction of trees, shrubs, grass, weeds, vegetation, ground cover or other plant life from lots of less than 2,500 square feet on which there now exists a dwelling.

(j) The exploration or drilling for oil and gas including the well site, roads, feeder lines and off-site disposal areas.

(k) The repair or rebuilding of the tracks, right-of-way, bridges, communication facilities and other related structures and facilities of a railroad company.

(l) Shore erosion control projects on tidal waters when the projects are approved by local wetlands boards, the Marine Resources Commission or the U.S. Army Corps of Engineers.

(m) Emergency work to protect life, limb or property, and emergency repairs; provided, that, if the land-disturbing activity would have required an approved erosion and sediment control plan if the activity were not an emergency, the land area disturbed shall be shaped and stabilized in accordance with the requirements of the plan-approving authority.

Section 2. That Section 5-4-7 of The Code of the City of Alexandria, Virginia, 1981, as amended, be and the same hereby is amended and reordained to read as follows:

Sec. 5-4-7 Minimum criteria; city handbook.

(a) The director of the department of transportation and environmental services and/or his or her duly authorized representative(s) shall administer and enforce the provisions of this chapter. Use of the title "director" in this chapter shall be construed to mean the aforesaid director and/or authorized representatives(s).

(b) The city council hereby adopts the following general criteria as the minimum requirements for controlling erosion and sedimentation for land-disturbing activities:

(1) Stabilization of denuded areas and soil stockpiles.

a. 1. Permanent or temporary soil stabilization must be applied to denuded areas within seven days after final grade is reached on any portion of the site. Soil stabilization must also be applied within seven days to denuded areas which may not be at final grade but will remain dormant (undisturbed) for longer than 30 days.

2. Soil stabilization refers to measures which protect soil from the erosive forces of raindrop impact and flowing water. Applicable practices include vegetative establishment, mulching and the early application of gravel base on areas to be paved. Soil stabilization measures should be selected to be appropriate for the time of year, site conditions and estimated duration of use.

b. During construction of the project, stockpiles shall be stabilized or protected with sediment measures to prevent soil loss. The applicant is responsible for the temporary protection and permanent stabilization of all stockpiles on the site, as well as for soil intentionally transported from the site.

(2) Establishment of permanent vegetation. A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved which, in the opinion of the director, is mature enough to control soil erosion satisfactorily and to survive severe weather conditions.

(3) Protection of adjacent properties.

a. Properties adjacent to the site of a land disturbance shall be protected from sediment deposition. This may be accomplished by preserving a well-vegetated buffer strip around the lower perimeter of the land disturbance, by installing perimeter controls such as sediment barriers, filters, dikes, sediment basins or by a combination of such measures.

b. Vegetated buffer strips may be used alone only where runoff in sheet flow is expected. Buffer strips should be at least 20 feet in width. If at any time it is found that a vegetated buffer strip alone is ineffective in stopping sediment movement onto adjacent property, additional perimeter controls must be provided.

(4) Timing and stabilization of sediment-trapping measures. Sediment basins and traps, perimeter dikes, sediment

barriers and other measures intended to trap sediment on-site must be constructed as a first step in grading and be made functional before upslope land disturbance takes place. Earthen structures such as dams, dikes and diversions must be seeded and mulched immediately after installation.

(5) Sediment basins. Stormwater runoff from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The sediment basin shall be designed and constructed to accommodate the anticipated sediment loading from the land- disturbing activity. The outfall device or system design shall take into account the total drainage area flowing through the disturbed area to be served by the basin. The director may require sediment basins or traps for smaller disturbed areas where deemed necessary. The sediment basin requirement may also be waived if the director agrees that site conditions do not warrant its construction.

(6) Cut and fill slopes. Cut and fill slopes must be designed and constructed in a manner which will minimize erosion. Consideration must be given to the length and steepness of the slope, the soil type, upslope drainage area, groundwater conditions and other applicable factors. Slopes which are found to be eroding excessively within one year of construction must be provided with additional slope-stabilizing measures until the problem is corrected. The following guidelines are provided to aid site planners and plan reviewers in developing an adequate design.

a. Roughened soil surfaces are generally preferred to smooth surfaces on slopes.

b. Diversions should be constructed at the top of long, steep slopes which have significant drainage areas above the slope. Diversions or terraces may also be used to reduce slope length.

c. Concentrated stormwater should not be allowed to flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.

d. Wherever a slope face crosses a water seepage plane which endangers the stability of the slope, adequate drainage or other protection should be provided.

(7) Stormwater management criteria for controlling off-site erosion. Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increases in the volume, velocity and peak flow rate of stormwater runoff for the stated frequency storm of 24-hour duration in accordance with the following standards and criteria:

a. A stormwater management plan shall be developed so that, from the site, the postdevelopment peak runoff rate from a two year and a 10 year storm, considered individually, shall not exceed their respective predevelopment rates. The predevelopment and postdevelopment peak runoff rates must be verified by engineering calculations. Within the Four Mile Run Watershed, postdevelopment peak runoff during a 100 year frequency storm shall not increase the peak runoff of the Four Mile Run Flood Control Channel as required by the city's contract with the United States Army Corps of Engineers.

b. 1. Concentrated stormwater runoff leaving a development site must be discharged directly into a well-defined, natural or man-made, off-site receiving channel or pipe. If these is no well-defined, off-site receiving channel or pipe, one must be constructed to convey stormwater to the nearest adequate channel. Newly constructed channels and conduits carrying a flow of 1,000 or more cubic feet per second shall be designed for a 100 year storm frequency and newly constructed channels and conduits carrying a flow of less than 1,000 cubic feet per second shall be designed for a 10 year storm frequency.

2. An "adequate channel" shall be defined as a natural or man-made channel or pipe which is capable of conveying the runoff from a two year storm or a 10 year storm, considered individually, without overtopping its banks or eroding after development of the site in question. A receiving channel may also be considered adequate at any point where the total contributing drainage area is at least 100 times greater that the drainage area of the development site in question or, where it can be shown that the peak rate of runoff from the site for a two year and a 10 year storm, considered individually, will not be increased after development.

3. Runoff rate and channel adequacy must be verified with engineering calculations to the satisfaction of the director. Natural channels shall be analyzed by the use of a two year frequency storm to verify that stormwater will not overtop channel banks or cause erosion of channel beds or banks. All previously constructed man-made channels shall be analyzed by the use of the 10 year frequency storm to verify that stormwater will not overtop its banks, and by the use of the two year storm to demonstrate that stormwater will not cause erosion of channel beds or banks. Pipes and sewer systems shall be analyzed by the use of a 10 year frequency storm to verify that stormwater will be contained within the pipe or system.

c. If an existing off-site receiving channel is not an adequate channel, the applicant must choose one of the following options:

1. Obtain permission from downstream property owners to improve the receiving channel to an adequate condition.

Such improvement shall extend downstream until an adequate channel section is reached.

2. Improve the channels to a condition where a 10 year frequency storm will not overtop the banks or cause erosion to the channel bed or banks; or

3. Improve the pipe or pipe system to a condition where the 10 year frequency storm is contained within the appurtenances; or

4. Provide a combination of channel improvement, stormwater detention or other measures which are satisfactory to the director to prevent downstream channel erosion.

d. All channel improvements or modifications must comply with all applicable laws and regulations. Modifications to flowing streams should be made in accordance with Best Management Practices Handbook--Hydrologic Modifications, Virginia State Water Control Board Planning Bulletin 319, 1979.

e. If the applicant chooses an option which includes stormwater detention, he must provide the city with a plan for maintenance of the detention facilities. The plan shall set forth the maintenance requirements of the facility and the party responsible for performing the maintenance. The responsible party may be an individual, organization or the city, whichever has consented to carry out the maintenance. If the designated maintenance responsibility is with an individual or organization other than the city, a maintenance agreement should be executed between the responsible party and the city.

f. The owner or developer may continue to discharge stormwater that has not been concentrated (sheet flow) onto lower-lying property if:

1. the peak flow rate for a 10 year storm after development does not exceed the predevelopment peak flow rate;

2. the increase in total volumes of runoff caused by the development will not have an adverse impact on the lower-lying property; and

3. there will be no exacerbation of existing drainage problems on the lower-lying or other downhill property.

g. In applying these stormwater management criteria, individual lots in subdivision developments shall not be considered separate development projects, but rather the subdivision development, as a whole, shall be considered a single development project.

(8) Stabilization of waterways and outlets. All on-site stormwater conveyance channels shall be designed and constructed to withstand the expected velocity of flow from a 10 year frequency storm without erosion. Stabilization adequate to prevent erosion must also be provided at the outlets of all pipes and paved channels. Energy dissipators shall be installed as required by the director.

(9) Storm sewer inlet protection. All storm sewer inlets which are made operable during construction shall be protected so that sediment-laden waste will not enter the conveyance system without first being filtered or otherwise treated to remove sediment.

(10) Working in or crossing watercourses.

a. Construction vehicles should be kept out of watercourses to the extent possible. Where in-channel work is necessary, precautions must be taken to stabilize the work area during construction to minimize erosion. The channel (including bed and banks) must always be restabilized immediately after in-channel work is completed.

b. Where a live (wet) watercourse must be crossed by construction vehicles regularly during construction, or more than twice in any six-month period, a temporary stream crossing must be provided.

(11) Underground utility construction.

a. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:

1. No more than 100 feet of trench are to be opened at one time.

2. Excavated material is to be placed on the uphill side of trenches.

3. Trench dewatering devices shall discharge in a manner which will not adversely affect flowing streams, drainage systems or off-site property. Effluent from dewatering operations shall be filtered or passed through an approved sediment-trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.

4. Restabilization shall be accomplished in accordance with these regulations.

5. Applicable safety regulations shall be complied with.

(12) Construction access routes. Wherever construction vehicle access routes intersect paved pubic roads, provisions must be made to eliminate the transport of sediment (mud) by runoff or vehicle tracking onto the paved surface. Where sediment is transported onto a public road surface, the roads shall be cleaned thoroughly at the end of each day. Sediment shall be removed from roads by shoveling or sweeping and be transported to a sediment controlled disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual subdivision lots as well as to larger land-disturbing activity.

(13) Disposition of temporary measures. All temporary erosion and sediment control measures shall be disposed of within 30 days after final site stabilization is achieved or after the temporary measures are no longer needed, unless otherwise authorized by the director. Trapped sediment and other disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

(14) Maintenance. All temporary and permanent erosion and sediment control practices must be maintained and repaired as needed to assure continued performance of their intended function.

(c) The "Virginia Erosion and Sediment Control Handbook, Second Edition, 1980" and the tree planting and preservation regulations hereinafter promulgated by the city manager which are concurrent with this ordinance shall be used by any applicant making a submittal under this chapter and by the director in his or her review and consideration of the adequacy of any erosion and sediment control plan submitted.

(d) This chapter and the "Virginia Erosion and Sediment Control Handbook, Second Edition, 1980" shall be an integral part of the city's erosion and sediment control program and shall comprise the city's "Erosion and Sediment Control Handbook." The erosion and sediment control regulations of the Virginia Soil and Water Conservation Board, effective September 13, 1990, and as subsequently amended, are incorporated herein by reference. The text of these regulations is on file in the office of the director.

Section 3. That Section 5-4-11 of The Code of the City of Alexandria, Virginia, 1981, as amended, be and the same hereby is amended and reordained to read as follows:

Sec. 5-4-11 Inspections and amendments of plans.

(a) The plan-approving authority or, where a grading, building or other permit is issued in connection with land-disturbing activities, the permit-issuing authority, shall

provide for periodic inspections of the authorized land-disturbing activity or activities and may, in addition, require monitoring and reports from the person responsible for carrying out the approved plan to ensure compliance with the plan and to enable the authority to determine whether the measures required in the plan are effective in controlling erosion and sediment. The owner, occupier or operator shall be given an opportunity to accompany an inspector during an inspection. If the plan-approving or permit-issuing authority determines that there is a failure to comply with the plan, notice shall be served upon the permittee or person responsible for carrying out the plan by registered or certified mail to the address specified in the permit application or in the plan certification, or by delivery at the site of the land-disturbing activities to the agent or employee supervising such activities. Where the plan-approving authority serves such a notice, a copy of the notice shall be sent to the permit-issuing authority. The notice shall specify the measures needed to comply with the plan and shall specify the time within which such measures shall be completed. In cases where the director determines that immediate compliance is required to preclude damage to state waters or lower-lying property or drainage systems, the director may issue a stop-work order. Upon failure to comply with such measures within the time specified, the permit may be revoked, and the permittee or person responsible for carrying out the plan shall be deemed to be in violation of this chapter and upon conviction shall be subject to the penalties provided in section 5-4-18.

(b) The director may authorize amendments to an approved plan when he has determined that an inadequacy exists or that the plan cannot be carried out effectively because of changed circumstances.

Section 4. That Section 5-4-20.1 of The Code of the City of Alexandria, Virginia, 1981, as amended, be and the same hereby is repealed.

Section 5. That this ordinance shall become effective upon the date and at the time of its final passage.

PATRICIA S. TICER
Mayor

Final Passage: June 13, 1992