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Chapter 8 - Land Development Activities

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ARTICLE 1. - PURPOSE OF CHAPTER 8

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[Sec. 8.1.1. - Purpose of Chapter.]

This Chapter contains the requirements that apply to carrying out the land development process, including site grading and land disturbance activities; addressing flood hazard areas; the installation of streets, drainage facilities and public utilities; and building construction.

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ARTICLE 2. - OVERVIEW OF PROJECT CONSTRUCTION

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Section 8.2.1. - Development Activity.

- A. *Preconstruction Activity.* Following the issuance of any permit authorizing clearing and grading of a site, areas required to be undisturbed, such as natural buffers or stream greenways, must be designated by survey stakes, flags, ribbon, or other appropriate markings and shall be inspected and approved by the Department of Engineering prior to the commencement of any clearing or grading activities.
- B. *Grading.*

1. *Grading Plan Required.* Grading shall be done in accordance with the lines and grades drawn on the approved grading plan.
2. *Erosion and Sedimentation Control.* Required erosion and sedimentation control measures and stormwater drainage facilities are to be installed in accordance with the approved plans as development progresses.

Section 8.2.2. - Permits Required.

- A. *Reserved.*
- B. *Utility Development Permit.* Utility construction, as part of a larger development such as a subdivision, industrial park or similar project, shall require a utility development permit (UDP).
- C. *Site Development Permits.* Site development permits (SDP) shall be required for all nonexempt land disturbing activities other than those requiring RDP or UDP permits.
- D. *Minor Land Disturbance Permits.* A Minor Land Disturbance Permit (MLD) may be issued for activities with durations of less than 2 weeks and disturbing less than $\frac{1}{8}$ acre.

(Ord. No. 09-4, § 1, 1-27-09)

Section 8.2.3. - Development Phase Inspections.

The owner or contractor shall make requests for inspections to the Engineering Department at least 24 hours prior to when the inspection is needed. Inspections shall be made and passed prior to continuation of further activity or proceeding into new phases. Inspections are required of each of the following phases, as applicable to the actual work to be performed under the development permit:

- A. *Preclearing Inspection Required.* Prior to clearing or clearing and grubbing of the property or any portion included under the development permit, inspection of erosion and sedimentation control measures and protective devices for undisturbed areas. Inspection of erosion and sedimentation control measures will be conducted on a continuing basis.
- B. *Inspection on Completion of Street Grading.* Upon completion of grading for each street section, inspection and approval shall be required prior to trenching or continuation with subgrade preparation.
- C. *Cover Inspection.* A cover inspection prior to burial of any underground drainage structure.
- D. *Stormwater Facilities Inspection.* Upon installation of storm drainage pipe, detention, or other stormwater facilities.
- E. *Street Curbing and Gutter Inspections.* Inspection shall be requested after the forms or string line have been set. Street width and vertical and horizontal alignment may be spot-checked.
- F. *Sub-grade of Streets.* After compaction, the sub-grade shall be roll tested with an 18-ton load on a tandem dump truck and shall pass to the satisfaction of the Engineering Director.
- G. *Street Base.* After receipt of compaction test reports by the Engineering Department, the base may be string-lined for depth and crown. The street base may be roll-tested with an 18-ton load on a tandem dump truck and shall pass to the satisfaction of the Engineering Director.
- H. *Paving.* An Engineering Department Inspector shall be on site during the paving process to check consistency, depth, and workmanship, as applicable. For asphalt paving, the temperature of the material will be monitored.
- I. *Failure to Notify.* If the contractor fails to make the proper notification, he shall be responsible for the expense of any operation or laboratory testing required by the Director of Engineering to ascertain compliance with the specifications.

Section 8.2.4. - Record Drawings or As-built Surveys.

- A. *Record Drawings or As-built Surveys.* Upon completion of the development activity as authorized by the development permit and prior to final development inspection of public and private improvements, the owner shall submit to the Department of Engineering for review and approval a complete set of record drawings showing "as-built" conditions prepared by a registered land surveyor. Sanitary sewers and the public water system are under the jurisdiction of the Columbus Water Works, and plans shall be submitted to that department. These drawings shall show the location, vertical and horizontal alignment, and finished elevations of the improvements listed below:
 1. Drainage system pipes and channels;
 2. Bridges or culverts;
 3. Stormwater detention facilities;
 4. Sanitary sewer system (as required by the Columbus Water Works, if any);
 5. Water system (as required by the Columbus Water Works, if any); and

6. Streets, including street centerlines showing angles of deflection and standard curve data of intersection, radii, length of tangents and arcs, and degree of curvature with basis of curve data.

- B. *Certification and Seal.* The record drawings or as-built surveys shall be certified and sealed by a registered Land Surveyor, subject to the tolerances of accuracy indicated in the survey certification.

Section 8.2.5. - Final Development Inspection.

- A. *Inspection Required.* Following submission and review of the as-built surveys, the Department of Engineering shall conduct a final development inspection of the project.
- B. *Certification of Improvements.* Prior to filing of a final plat, the subdivider shall be required to certify to the Department of Engineering in writing that all street, drainage and other improvements that are to be dedicated to the City have been completed in accordance with the construction plans previously approved by the Department of Engineering.
- C. *Correction of Deficiencies.* The owner shall be responsible for correcting any deficiencies identified in the final development inspection prior to approval of a final subdivision plat.

Section 8.2.6. - Maintenance Bond.

- A. *Maintenance Bond Required.* Prior to approval of a final subdivision plat or issuance of a certificate of occupancy, a maintenance bond in a form acceptable to the Department of Engineering is required for all public improvements shown on the as-built surveys. The owner shall be responsible for maintenance of all such public improvements for two years from the acceptance of the improvements by Council.
- B. *Value of Bond.* The value of the maintenance bond shall be equal to five percent of the actual cost of construction of the public improvements shown on the as-built surveys. The cost of construction shall be determined by the Director of Engineering or evidenced by copies of contractor agreements or actual invoices paid.

(Ord. No. 09-4, § 1, 1-27-09)

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ARTICLE 3. - SITE CLEARING AND GRADING

[Section 8.3.1. - Site Development Permit Required.](#)

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Section 8.3.1. - Site Development Permit Required.

- A. *Permit Required.* Clearing and grading shall not proceed until issuance of an approved site development permit by the Engineering Department, as provided in the Development Review Procedures and Permits Chapter of this Ordinance.
- B. *Grading.* Grading shall be done in accordance with the lines and grades drawn on the approved grading plan.

Section 8.3.2. - Erosion and Sedimentation Control Measures.

Required erosion and sedimentation control measures must be installed in accordance with the approved soil erosion and sedimentation control plan prior to any major development activity and as development progresses.

Section 8.3.3. - Stormwater Drainage Facilities.

Required stormwater drainage facilities are to be installed in accordance with the approved stormwater management site plan as development progresses.

Section 8.3.4. - Reserved.**Section 8.3.5. - Earthen Embankments.**

Earthen embankments shall be placed in uniform layers not to exceed a compacted thickness of six inches per layer and shall be compacted to a density of 95 percent of the maximum laboratory dry weight per cubic foot as determined by AASHTO Method T-99 in all areas where structures, parking lots and drives, streets, and utilities are to be placed. If necessary in order to obtain this compaction, the contractor shall add moisture to the material as it is placed. All other embankments are to be compacted to at least 90 percent. Floodproofing shall be accomplished prior to placement of embankments to detect soft spots.

Section 8.3.6. - Slopes.

The maximum slope for all cut or fill slopes shall be as provided in Table 8.3.1. The depth of cut referenced in the table shall be construed to be the maximum cut or fill occurring in any one section of cut or fill. The slope on cut or fill shall be uniform throughout for each section of cut or fill. When a cut is made in rock that requires blasting, slope may be changed to vertical slope upon the written approval of the Engineering Director.

Table 8.3.1
Maximum Cut or Fill Slopes

Depth of Cut on Fill	Cut Slopes ¹	Fill Slopes
2 feet or less	2 to 1	2 to 1
2 feet to 5 feet	2 to 1	2 to 1
Over 5 feet	2 to 1	2 to 1 ²
¹ Maximum distance of run to rise		
² Guardrails required.		

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ARTICLE 4. - SOIL EROSION AND SEDIMENTATION CONTROL

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Section 8.4.1. - Statement of Purpose.

Soil erosion and sediment deposition onto lands and into water within the Columbus, Georgia area are occurring as a result of failure to apply proper soil erosion and sedimentation control practices in land clearing, soil movement and construction activities. This sediment deposition results in pollution of waters and damage to domestic, agricultural, recreational, fish and wildlife and other resource uses. The purpose of this Article, as authorized by the legislature of the state of Georgia in the Erosion and Sedimentation Act of 1975, and as further amended, is to control and minimize the extent of erosion and sedimentation, to conserve and protect land, water, air and other resources and to promote the public health, safety, and general welfare. The Erosion and Sedimentation Act of 1975, and all amendments thereto, are hereby adopted as fully set forth and incorporated by reference herein into this UDO.

Section 8.4.2. - Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this Section, except where the context clearly indicates a different meaning.

Best management practices (BMP's) [means] a collection of structural measures and vegetative practices which, when properly designed, installed and maintained, will provide effective erosion and sedimentation control. The term "properly designed" means designed in accordance with the hydraulic design specifications contained in the "Manual for Erosion and Sediment Control in Georgia" specified in O.C.G.A. § 12-7-6(b).

Board means the Board of Natural Resources.

Buffer means the area of land immediately adjacent to the banks of state waters in its natural state of vegetation, which facilitates the protection of water quality and aquatic habitat.

Certified personnel means a person who has successfully completed the appropriate certification course approved by the Georgia Soil and Water Conservation Commission.

City Engineer shall mean the duly designated Director of the Department of Engineering of Columbus, Georgia licensed and registered in Georgia to perform the duties of Engineer, as herein specified, or his duly authorized agent.

Commission means the Georgia Soil and Water Conservation C Commission (GSWCC).

CPESC means certified professional in erosion and sediment control with current certification by Certified Profession in Erosion and Sediment Control Inc., a corporation registered in North Carolina, which is also referred to as CPESC or CPESC, Inc.

Cut means a portion of land surface or area from which earth has been removed or will be removed by excavation; the depth below original ground surface to excavated surface. Also know as "excavation."

Cutting means the removal of any soil or other solid material from a natural ground surface.

Department means the Georgia Department of Natural Resources (DNR).

Design professional means a professional licensed by the State of Georgia in the field of: engineering, architecture, landscape architecture, forestry, geology, or land surveying; or a person that is a certified professional in erosion and sediment control (CPESC) with a current certification by Certified Professional in Erosion and Sediment Control Inc.

Development permit [means] the authorization necessary to begin a land disturbing activity under the provisions of this ordinance. See also "site development permit."

Development project or "project" means the entire proposed development project regardless of the size of the area of land to be disturbed.

Director means the Director of the Environmental Protection Division or an authorized representative.

District means the Pine Mountain Soil and Water Conservation District.

Division means the Environmental Protection Division (EPD) of the Department of Natural Resources.

Drainage structure means a device composed of a virtually nonerodible material such as concrete, steel, plastic or other such material that conveys water from one place to another by intercepting the flow and carrying it to a release point for stormwater management, drainage control, or flood control purposes.

Ephemeral stream means a stream that under normal circumstances has water flowing only during and for a short duration after precipitation events; that has the channel located above the ground-water table year round; for which ground water is not a source of water; and for which runoff from precipitation is the primary source of water flow.

Erosion means the process by which land surface is worn away by the action of wind, water, ice or gravity.

Erosion, sedimentation and pollution control plan means a plan required by the Erosion and Sedimentation Act, O.C.G.A. Chapter 12-7, that includes, as a minimum protections at least as stringent as the state general permit, best management practices, and requirements in section IV.C. of this ordinance.

Existing grade [means] the vertical location of the existing ground surface prior to cutting or filling.

Fill means a portion of land surface to which soil or other solid material has been added; the depth above the original ground surface or an excavation.

Filling means the placement of any soil or other solid material, either organic or inorganic, on a natural ground surface or excavation.

Final stabilization means all soil disturbing activities at the site have been completed, and that for unpaved areas and areas not covered by permanent structures and areas located outside the waste disposal limits of a landfill cell that has been certified by EPD for waste disposal, 100 percent of the soil surface is uniformly covered in permanent vegetation with a density of 70 percent or greater, or equivalent permanent stabilization measures (such as the use of rip rap, gabions, permanent mulches or geotextiles) have been used. Permanent vegetation shall consist of: planted trees, shrubs, perennial vines; a crop of perennial vegetation appropriate for the time of year and region; or a crop of annual vegetation and a seeding of target crop perennials appropriate for the region. Final stabilization applies to each phase of construction.

Finished grade means the final elevation and contour of the ground after cutting or filling and conforming to the proposed design.

Flood plain, one-hundred-year means land in the floodplain subject to a 1 percent or greater statistical occurrence probability of flooding in any given year.

Grading means altering the shape of ground surfaces to a predetermined condition; this includes stripping, cutting, filling, stockpiling and shaping, or any combination thereof, and shall include the land in its cut or filled condition.

Ground elevation means the original elevation of the ground surface prior to cutting or filling.

Lake means a body of water one acre or more in surface area, created either by a manmade or natural dam or other means of water impoundment.

Land-disturbing activity means any activity which may result in soil erosion from water or wind and the movement of sediments into state waters or onto lands within the state, including, but not limited to, clearing, dredging, grading, excavating, transporting, and filling of land but not including agricultural practices as described in [Section 8.4.3](#).

Larger common plan of development or sale means a contiguous area where multiple separate and distinct construction activities are occurring under one plan of development or sale. For the purposes of this paragraph, "plan" means an announcement; piece of documentation such as a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, or computer design; or physical demarcations such as boundary signs, lot stakes, or surveyor markings, indicating that construction activities may occur on a specific plot.

Local issuing authority means the governing authority of any county or municipality, which is certified pursuant to subsection (a) O.C.G.A. § 12-7-8.

Manual for Erosion and Sediment Control in Georgia means that publication of the same name published by the Georgia Soil and Water Conservation Commission, and as amended or supplemented from time to time.

Metropolitan River Protection Act (MRPA) means a state law referenced as O.C.G.A. § 12-5-440 et seq., which addresses environmental and developmental matters certain metropolitan river corridors and their drainage basins.

Natural ground surface means the ground surface in its original state before any grading, excavation or filling.

Nephelometric turbidity units (NTU) means numerical units of measure based upon photometric analytical techniques for measuring the light scattered by finely divided particles of a substance in suspension. This technique is used to estimate the extent of turbidity in water in which colloiddally dispersed or suspended particles are present.

NOI means a notice of intent form provided by EPD for coverage under the State General Permit.

NOT means a notice of termination form provided by epd to terminate coverage under the state general permit.

Operator means the party or parties that have: (A) day-to-day operational control of those activities that are necessary to ensure compliance with a stormwater pollution prevention plan for the site or other permit conditions, such as a person authorized to direct works at a site to carry out activities required by the erosion, sedimentation and pollution control plan or to comply with other permit conditions.

Outfall means the location where stormwater in a discernible, confined and discrete conveyance, leaves a facility or site or, if there is a receiving water on site, becomes a point source discharging into that receiving water.

Owner means the legal titleholder to real property. For the purpose of erosion control, the owner is the legal titleholder of the real property on which is located the facility or site where the construction activity takes place.

Permit means the authorization necessary to conduct a land-disturbing activity under the provisions of this ordinance.

Person: Any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, state agency, municipality or other political subdivision of this State, any interstate body, or any other legal entity.

Phase or phased means sub-parts or segments of construction projects where the sub-part or segment is constructed and stabilized prior to completing construction activities on the entire construction site.

Pond means a body of standing water less than one acre in surface area, created either by a natural dam, or other means of water impoundment.

Primary Permittee means the Owner or Operator or both of a tract of land for a common development.

Project means the entire proposed development project regardless of the size of the area of land to be disturbed.

Properly designed means designed in accordance with the design requirements and specifications contained in the "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the Georgia Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted and amendments to the manual as approved by the commission up until the date of NOI submittal.

Qualified personnel means a person who has successfully completed an erosion and sedimentation control short course eligible for continuing education units, or an equivalent course approved by EPD and the State Soil and Water Conservation Commission which meets or exceeds the education and training requirements of O.C.G.A. § 12-7-19. After December 31, 2006, a qualified person means a person who has successfully completed the appropriate certification course approved by the State Soil and Water Conservation Commission.

Roadway drainage structure means a device such as a bridge, culvert or ditch, composed of a virtually nonerodible material such as concrete, steel, plastic or other such material that conveys water under a roadway by intercepting the flow on one side of a traveled way consisting of one or more defined lanes, with or without shoulder areas, and carrying water to a release point on the other side.

Secondary Permittee means an individual builder, utility company, or utility contractor that conducts a construction activity within a common development.

Sediment means solid material, both organic and inorganic, that is in suspension, is being transported or has been moved from its site of origin by air, water, ice or gravity as a product of erosion.

Sedimentation means the process by which eroded material is transported and deposited by the action of water, wind, ice, or gravity.

Site development permit means a permit issued giving authorization to begin land disturbing activities for all nonexempt land disturbing activities other than those requiring a Residential Development Permit (RDP) or UDP (Utility Development Permit) or MLD (Minor Land Disturbance Permit) as defined in Chapter 10 of this UDO.

Slope means the degree of deviation of a surface from the horizontal, usually expressed in percent or degrees.

Soil and Water Conservation District means the Pine Mountain Soil and Water Conservation District.

Soil and Water Conservation District approved plan means an erosion and sedimentation control plan approved in writing by the Pine Mountain Soil and Water Conservation District.

Stabilization means the process of establishing an enduring soil cover of vegetation by the installation of temporary or permanent structures for the purpose of reducing to a minimum the erosion process and the resultant transport of sediment by wind, water, ice or gravity.

State general permit means the National Pollution Discharge Elimination System general permit or permits for stormwater runoff from construction activities as is now in effect or as may be amended or reissued in the future pursuant to the state's authority to implement the same through federal delegation under the Federal Water Pollution Control Act, as amended, 33 U.S.C. Section 1251, et seq., and O.C.G.A. § 12-5-3(f).

State waters means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the

boundaries of the State which are not entirely confined and retained completely upon the property of a single individual, partnership or corporation.

Stream buffer [means] the area of land immediately adjacent to the banks along State waters to be maintained in an undisturbed and natural state of vegetation which facilitates the protection of water quality and aquatic habitat.

Structural erosion and sedimentation control measures means measures for the stabilization of erodible or sediment-producing areas by utilizing the mechanical properties of matter for the purpose of either changing the surface of the land or storing, regulating or disposing of runoff to prevent excessive sediment loss. Examples of structural erosion and sedimentation control practices are riprap, sediment basins, dikes, level spreaders, waterways or outlets, diversions, grade stabilization structures, sediment traps and land grading. Such measures can be found in the publication Manual for Erosion and Sediment Control in Georgia.

Trout streams means all streams or portions of streams within the watershed as designated by the Game and Fish Division of the Georgia Department of Natural Resources under the provisions of the Georgia Water Quality Control Act, O.C.G.A. § 12-5-20 et seq. Streams designated as primary trout waters are defined as water supporting a self-sustaining population of Rainbow, Brown or Brook trout. Streams designated as secondary trout waters are those in which there is no evidence of natural trout reproduction, but are capable of supporting trout throughout the year. First order trout waters are streams into which no other streams flow except springs.

Vegetative erosion and sedimentation control measures means measures for the stabilization of erodible or sediment-producing areas by covering the soil with: (1) permanent seeding, sprigging or planting, producing long-term vegetative cover; or (2) temporary seeding, producing short-term vegetative cover; or (3) sodding, covering areas with a turf of perennial sod-forming grass. Such practices can be found in the publication Manual for Erosion and Sediment Control in Georgia.

Watercourse means any natural or artificial watercourse, stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, gully, ravine, or wash in which water flows either continuously or intermittently and which has a definite channel, bed and banks, and including any area adjacent thereto subject to inundation by reason of overflow or floodwater.

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Wetlands, protected means those wetlands identified on the National Wetlands Inventory maps prepared by the U.S. Fish and Wildlife Service, or otherwise approved by the U.S. Army Corps of Engineers based on competent studies prepared by a registered and qualified professional engineer.

(Ord. No. 10-35, § 1, 7-13-10)

Section 8.4.3. - Exemptions.

- A. *Activities Exempt from Permitting Process.***
1. This Article applies to any land disturbing activity undertaken by any person on any land, including land disturbing activities associated with larger common plan of development or sale with land disturbance equaling to one acre or greater, except for those activities listed in this Section.
 2. Exemptions as contained in this Section do not authorize any such exempted person to violate the principal of the Soil Erosion and Sediment Act to control and minimize soil erosion and sedimentation. In any event in which significant soil erosion and sedimentation leave the boundary of any project, either by surface or by a storm water system, the issuing authority of this chapter may take such action as is authorized under Chapter 12 of this UDO.
 3. Further, no provision of this Section shall authorize any person to violate Article 2 of Chapter 5 of the "Georgia Water Quality Control Act" or the rules and regulations promulgated and approved thereunder or to pollute any water of State of Georgia as defined thereby.
 4. Where this Section requires compliance with the minimum requirements set forth in [Section 8.4.6.](#), the Department of Engineering shall enforce compliance with the minimum requirements as if a permit had been issued and violations shall be subject to the same penalties as violations by permit holders.
- B. *Exempt Activities.*** This Article shall apply to any land-disturbing activity undertaken by any person on any land except for the activities listed below.
1. *Surface Mining.* Surface mining, as the same is defined in O.C.G.A. § 12-4-72, Mineral Resources and Caves Act."
 2. *Granite Quarrying.* Granite quarrying and land clearing for such quarrying.
 3. *Minor Activities.* Such minor land-disturbing activities as home gardens and individual home landscaping,

- repairs, maintenance work, and other related activities, which result in minor soil erosion.
4. *Single-family Dwellings.* Single-family detached dwellings, as provided below:
- (A) *Owner Constructed Single-family Residences.* The construction of single-family residences, when such are constructed by or under contract with the owner for his or her own occupancy.
- (B) *Other Single-family Residences.*
- (1) The construction of single-family residences when such construction disturbs less than one acre and is not a part of a larger common plan of development or sale with a planned disturbance of equal to or greater than one acre and not otherwise exempted under this paragraph.
- (2) However, that construction of any residence shall conform to the minimum requirements as set forth in [Section 8.4.6.C](#) of this Article and this paragraph. For single-family residence construction covered by the provisions of this paragraph, there shall be a buffer zone between the residence and any state waters classified as trout streams pursuant to Article 2 of Chapter 5 of the Georgia Water Quality Control Act. In any such buffer zone, no land-disturbing activity shall be constructed between the residence and the point where vegetation has been wrested by normal stream flow or wave action from the banks of the trout waters. For primary trout waters, the buffer zone shall be at least 50 horizontal feet, and no variance to a small buffer shall be granted. For secondary trout waters, the buffer zone shall be at least 50 horizontal feet, but the Director may grant variances to no less than 25 feet. Regardless of whether a trout stream is primary or secondary, for first order trout waters, which are streams into which no other streams flow except for springs, the buffer shall be at least 25 horizontal feet, and no variance to a small buffer shall be granted. The minimum requirements of this Section of this UDO and the buffer zones provided by this Section shall be enforced by the issuing authority.
5. *Agricultural Operations.* Agricultural operations as defined in O.C.G.A. § 1-3-3 to include the following:
- (A) Raising, harvesting, or storing of products of the field or orchard;
- (B) Feeding, breeding, or managing livestock or poultry;
- (C) Producing or storing feed for use in the production of livestock, including but not limited to cattle, calves, swine, hogs, goats, sheep and rabbits or for use in the production of poultry, including but not limited to chicken, hens, and turkeys;
- (D) Producing plants, trees, fowl, or animals;
- (E) The production of aqua culture, horticultural, dairy, livestock, poultry, eggs, and apiarian products; and
- (F) Forestry land management practices, including harvesting and farm buildings and farm ponds.
6. *Forestry Practices.* Forestry land management practices, including harvesting; provided, however, that when such exempt forestry practices cause or result in land disturbing or other activities otherwise prohibited in a stream buffer, as established in the Environmental Protection Chapter of this UDO, no other land disturbing activities, except for normal forest management practices, shall be allowed on the entire property upon which the forestry practices were conducted for a period of three years after completion of such forestry practices.
7. *Natural Resources Conservation Service Projects.* Any project carried out under the technical supervision of the Natural Resources Conservation Service of the United States Department of Agriculture.
8. *State of Georgia Road Projects.* Construction or maintenance projects, or both, undertaken or financed in whole or in part, or both, by the Department of Transportation, the Georgia Highway Authority, or the State Tollway Authority; or any road construction or maintenance project, or both, undertaken by any county or municipality; provided, however, that construction or maintenance projects of the Department of Transportation or State Tollway Authority which disturb one or more contiguous acres of land shall be subject to provisions of O.C.G.A. § 12-7-7.1, except where the Department of Transportation, the Georgia Highway Authority, or the State Road and Tollway Authority is a secondary permittee for a project located within a larger common plan of development or sale under the state general permit, in which case a copy of a notice of intent under the state general permit shall be submitted to the local issuing authority, the local issuing authority shall enforce compliance with the minimum requirements set forth in O.C.G.A. § 12-7-6 as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders.
9. *Electrical Utilities.* Any land-disturbing activities conducted by any electric membership corporation or municipal electrical system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the regulatory jurisdiction of the Federal Energy Regulatory Commission, any cable television system as defined in O.C.G.A. § 36-18-1, or any agency or instrumentality of the United States engaged in the generation, transmission, or distribution of power; except where an electric membership corporation or municipal electric system or any public utility under the regulatory jurisdiction of the Public Service Commission, any utility under the Federal Energy Commission, any cable television system as defined in O.C.G.A. § 36-18-1, or any agency or instrumentality of the United States engaged in

the generation, transmission, or distribution of power is a secondary permittee for a project located within a larger common plan of development or sale under the state general permit, in which case the local issuing authority shall enforce compliance with the minimum requirements set in O.C.G.A. § 12-7-6 as if a permit had been issued, and violations shall be subject to the same penalties as violations by permit holders.

10. *Public Water System Reservoir.* Any public water system reservoir.

Section 8.4.4. - Application Procedures.

See Chapter 10, Article 4, for applications procedures for land-disturbing permits.

Section 8.4.5. - Plan Requirements.

See Chapter 10, Article 5, regarding Soil Erosion and Sediment Control plans.

Section 8.4.6. - Minimum Requirements for Erosion and Sedimentation Control.

- A. General Provisions.** Excessive soil erosion and resulting sedimentation can take place during land-disturbing activities.
- 1. Control Measures.** Plans for those land-disturbing activities that are not excluded by this Section shall contain provisions for application of soil erosion and sedimentation control measures. The provisions shall be incorporated into the erosion and sedimentation control plans.
 - 2. Compliance.** Soil erosion and sedimentation control measures and practices shall conform to the requirements of this Section. The application of measures shall apply to all features of the site, including street and utility installations, drainage facilities and other temporary and permanent improvements. Measures shall be installed to prevent or control erosion and sedimentation pollution during all stages of any land-disturbing activity.
- B. Best Management Practices.**
- 1. Required.** Best management practices as set forth in this Section shall be required for all land-disturbing activities. Proper design, installation and maintenance of best management practices shall constitute a complete defense to any action by the Director or to any other allegation of noncompliance with [Section 8.4.6.B.2](#) of this subsection or any substantially similar terms contained in a permit for the discharge of stormwater issued pursuant to O.C.G.A. § 12-5-30(f), the "Georgia Water Quality Control Act." As used in this subsection, the terms "proper design" and "properly designed" mean designed in accordance with the hydraulic design specifications contained in the "Manual for Erosion and Sediment Control in Georgia" specified in O.C.G.A. § 12-7-6(b).
 - 2. Violations.** A discharge of stormwater runoff from disturbed areas where best management practices have not been properly designed, installed, and maintained shall constitute a separate violation of any land-disturbing permit issued by a Local Issuing Authority or of any state general permit issued by the Division pursuant to O.C.G.A. § 12-5-30(f), the "Georgia Water Quality Control Act", for each day on said discharge results in the turbidity of receiving waters being increased by more than 25 nephelometric turbidity units for waters supporting warm water fisheries or by more than 10 nephelometric turbidity units for waters classified as trout waters. The turbidity of the receiving waters shall be measured in accordance with guidelines to be issued by the Director. This paragraph shall not apply to any land disturbance associated with the construction of single-family, which is not part of a larger common plan of development or sale unless the planned disturbance for such construction is equal to or greater than one acre.
 - 3. Determination of Violation.** Failure to properly design, install, or maintain best management practices shall constitute a violation of any land-disturbing permit issued by a Local Issuing Authority or of any state general permit issued by the Division pursuant to O.C.G.A. § 12-5-30(f), the "Georgia Water Quality Control Act", for each day on which such failure occurs.
 - 4. Monitoring.** The EPD Director may require, in accordance with regulations adopted by the Board of Natural Resources, reasonable and prudent monitoring of the turbidity level of receiving waters into which discharges from land-disturbing activities occur.
- C. Specific Minimum Requirements.** The permittee and exempt persons who are required to comply with this Article shall follow, as a minimum, best management practices, including sound conservation and engineering practices to prevent and minimize erosion and resultant sedimentation, which are consistent with, and no less stringent than, those practices contained in the Manual for Erosion and Sediment Control in Georgia in effect as of January 1 of the year in which the land-disturbing activity was permitted, as well as the following:
- 1. Vegetation Removal.** Stripping of vegetation, re-grading and other development activities shall be conducted in a manner so as to minimize erosion.
 - 2. Cut-fill Operations.** Cut-fill operations must be kept to a minimum.
 - 3. Topography and Soils.** Development plans must conform to topography and soil type so as to create the

- lowest practical erosion potential.
4. *Natural Vegetation.* Whenever feasible, natural vegetation shall be retained, protected and supplemented.
 5. *Exposure of Disturbed Area.* The disturbed area and the duration of exposure to erosive elements shall be kept to a practicable minimum.
 6. *Stabilization.* Disturbed soil shall be stabilized as quickly as practical.
 7. *Temporary Measures.* Temporary vegetation or mulching shall be employed to protect exposed critical areas during development.
 8. *Permanent Control Measures.* Permanent vegetation and structural erosion control measures shall be installed as soon as practical.
 9. *Trapping of Sediment.* To the extent necessary, sediment in run-off water must be trapped by the use of debris basins, sediment basins, silt traps or similar measures until the disturbed area is stabilized. As used in this paragraph, a disturbed area is stabilized when it is brought to a condition of continuous compliance with the requirements of O.C.G.A. § 12-7-1 et seq.
 10. *Surface Water Damage.* Adequate provisions must be provided to minimize damage from surface water to the cut face of excavations or the sloping surface of fills.
 11. *Protection of Adjoining Property.* Cuts and fills may not endanger adjoining property.
 12. *Encroachment of Fill.* Fills may not encroach upon natural watercourses or constructed channels in a manner so as to adversely affect other property owners.
 13. *Crossing of Flowing Streams.* Grading equipment must cross-flowing streams by means of bridges or culverts except when such methods are not feasible and provided, in any case, that such crossings are kept to a minimum.
- D. *Sediment Control Ponds.* When a pond, either new or existing, is incorporated into a development, the developer shall note on his plans if the pond is to be used for sediment control or retention during construction. If the pond is to be used for sediment control, the developer will be required to dredge, clean and grass the pond upon completion of construction of the project. Further, sediment control devices shall be required to protect downstream property during construction.
- E. *Reserved.*
- F. *Prohibited Land Disturbing Activities.* Land-disturbing activities shall not be conducted within the 100-year flood plain except in compliance with the Flood Damage Prevention Section of this Article.

(Ord. No. 09-4, § 1, 1-27-09)

Section 8.4.7. - Stream Buffers.

A buffer is established along the banks of any state waters, as measured from the point where vegetation has been wrested by normal stream flow or wave action. See the Environmental Protection chapter of this Ordinance for details.

Section 8.4.8. - Education and Certificate.

After December 31, 2006, all persons involved in land development design, review, permitting, construction, monitoring, or inspection or any land-disturbing activity shall meet the education and training certification requirements, dependent on their level of involvement with the process, as developed by the Commission in consultation with the division and the stakeholder advisory board created pursuant to O.C.G.A. § 12-7-20.

Section 8.4.9. - Inspection, Enforcement and Penalties.

See Chapter 12 for inspection, enforcement and penalties related to land development activities.

Columbus, Georgia, Code of Ordinances >> APPENDIX A - UNIFIED DEVELOPMENT ORDINANCE >> Chapter 8 - Land Development Activities >> ARTICLE 5. - FLOOD DAMAGE PREVENTION >>

ARTICLE 5. - FLOOD DAMAGE PREVENTION [157]

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Section 8.5.1. - Statutory Authorization, Findings of Fact, Statement of Purpose and Objectives.

- A. *Statutory Authorization.*** Article IX, Section II of the Constitution of the State of Georgia and Section 36-1-20(a) of the Official Code of Georgia Annotated have delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the Council of the Columbus Consolidated Government, of Columbus, Georgia, does ordain as follows:
- B. *Findings of fact.***
- (1) The flood hazard areas of Columbus-Muscogee County, Georgia are subject to periodic inundation, which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood relief and protection, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
 - (2) These flood losses are caused by the occupancy in flood hazard areas of uses vulnerable to floods, which are inadequately elevated, floodproofed, or otherwise unprotected from flood damages, and by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities.
- C. *Statement of Purpose.*** It is the purpose of this ordinance to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:
- (1) Require that uses vulnerable to floods, including facilities, which serve such uses, be protected against flood damage at the time of initial construction;
 - (2) Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which increase flood heights, velocities, or erosion;
 - (3) Control filling, grading, dredging and other development which may increase flood damage or erosion; and
 - (4) Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands;
 - (5) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters.
- D. *Objectives.*** The objectives of this ordinance are:
- (1) To protect human life and health;
 - (2) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;
 - (3) To help maintain a stable tax base by providing for the sound use and development of floodprone areas in such a manner as to minimize flood blight areas;
 - (4) To minimize expenditure of public money for costly flood control projects;
 - (5) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 - (6) To minimize prolonged business interruptions; and
 - (7) To insure that potential homebuyers are notified that property is in a flood area.

(Ord. No. 07-53, § 1, 8-21-07)

Section 8.5.2. - General Provisions.

- A. *Lands to Which this Ordinance Applies.*** This ordinance shall apply to all Areas of Special Flood Hazard within the jurisdiction of Columbus-Muscogee County, Georgia.
- B. *Basis for Area of Special Flood Hazard.*** The Areas of Special Flood Hazard identified by the Federal Emergency Management Agency in its Flood Insurance Study (FIS), dated September 5, 2007, with accompanying maps and other supporting data and any revision thereto, are adopted by reference and declared a part of this ordinance. For those land areas acquired by a municipality through annexation, the current effective FIS dated September 5, 2007, with accompanying maps and other supporting data and any revision thereto for Fort Benning are hereby adopted by reference.

Areas of Special Flood Hazard may also include those areas known to have flooded historically or defined through standard engineering analysis by governmental agencies or private parties but not yet incorporated in a FIS. The Repository for public inspection of the Flood Insurance Study (FIS), accompanying maps and other supporting data is located at:

Columbus Consolidated Government Center Annex

420 10th Street, 2nd Floor
Columbus, GA 31901

- C. *Establishment of Development Permit.* A Development Permit shall be required in conformance with the provisions of this ordinance PRIOR to the commencement of any Development activities.
- D. *Compliance.* No structure or land shall hereafter be located, extended, converted or altered without full compliance with the terms of this ordinance and other applicable regulations.
- E. *Abrogation and Greater Restrictions.* This ordinance is not intended to repeal, abrogate, or impair any existing ordinance, easements, covenants, or deed restrictions. However, where this ordinance and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
- F. *Interpretation.* In the interpretation and application of this ordinance all provisions shall be:
- (1) Considered as minimum requirements;
 - (2) Liberally construed in favor of the governing body, and;
 - (3) Deemed neither to limit nor repeal any other powers granted under state statutes.
- G. *Warning and Disclaimer of Liability.* The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur; flood heights may be increased by manmade or natural causes. This ordinance does not imply that land outside the Areas of Special Flood Hazard or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of the Columbus Consolidated Government or by any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.
- H. *Penalties for Violation.* Failure to comply with the provisions of this ordinance or with any of its requirements, including conditions and safeguards established in connection with grants of variance or special exceptions shall constitute a violation. Any person who violates this ordinance or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than \$1,000.00; and in addition, shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the Columbus Consolidated Government from taking such other lawful actions as is necessary to prevent or remedy any violation.

(Ord. No. 07-53, § 1, 8-21-07; Ord. No. 08-9, §§ 1, 2, 3-25-08)

Section 8.5.3. - Administration.

- A. *Designation of Ordinance Administrator.* The Director of Engineering is hereby appointed to administer and implement the provisions of this ordinance.
- B. *Permit Procedures.* Application for a Development Permit shall be made to the Director of Engineering on forms furnished by the community PRIOR to any development activities, and may include, but not be limited to the following: plans in duplicate drawn to scale showing the elevations of the area in question and the nature, location, dimensions, of existing or proposed structures, earthen fill placement, storage of materials or equipment, and drainage facilities. Specifically, the following information is required:
- (1) *Application Stage.*
 - (a) Elevation in relation to mean sea level (or highest adjacent grade) of the lowest floor, including basement, of all proposed structures;
 - (b) Elevation in relation to mean sea level to which any nonresidential structure will be floodproofed;
 - (c) Design certification from a registered professional engineer or architect that any proposed nonresidential floodproofed structure will meet the floodproofing criteria of Section 8.5.3.B(2);
 - (d) Description of the extent to which any watercourse will be altered or relocated as a result of a proposed development; and
 - (2) *Construction Stage.* For all new construction and substantial improvements, the permit holder shall provide to the Administrator an as-built certification of the regulatory floor elevation or floodproofing level immediately after the lowest floor or floodproofing is completed. Any lowest floor certification made relative to mean sea level shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by the same. When floodproofing is utilized for nonresidential structures, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by the same. Any work undertaken prior to submission of these certifications shall be at the permit holder's risk.

The Director of Engineering shall review the above-referenced certification data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being allowed to proceed. Failure to submit certification or failure to make said corrections required hereby, shall be cause to issue a stop-work order for the project.

- C. *Duties and Responsibilities of the Administrator.* Duties of the Director of Engineering shall include, but shall not be limited to:
- (1) Review proposed development to assure that the permit requirements of this ordinance have been

- satisfied.
- (2) Review proposed development to assure that all necessary permits have been received from governmental agencies from which approval is required by Federal or State law, including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334. Require that copies of such permits be provided and maintained on file.
 - (3) Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding.
 - (4) When Base Flood Elevation data or floodway data have not been provided in accordance with Section 8.5.2.B, then the Director of Engineering shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a Federal, State or other sources in order to administer the provisions of Section 8.5.4.
 - (5) Review and record the actual elevation in relation to mean sea level (or highest adjacent grade) of the lowest floor, including basement, of all new or substantially improved structures in accordance with Section 8.5.3.B(2).
 - (6) Review and record the actual elevation, in relation to mean sea level to which any new or substantially improved structures have been floodproofed, in accordance with 8.5.3.B(2).
 - (7) When floodproofing is utilized for a structure, the Director of Engineering shall obtain certification of design criteria from a registered professional engineer or architect in accordance with Section 8.5.3.B(1)(c) and Section 8.5.4.B(2) or D(2).
 - (8) Make substantial damage determinations following a flood event or any other event that causes damage to structures in flood hazard areas.
 - (9) Notify adjacent communities and the Georgia Department of Natural Resources prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Federal Emergency Management Agency (FEMA).
 - (10) For any altered or relocated watercourse, submit engineering data/analysis within six months to the FEMA to ensure accuracy of community flood maps through the Letter of Map Revision process. Assure flood carrying capacity of any altered or relocated watercourse is maintained.
 - (11) Where interpretation is needed as to the exact location of boundaries of the Areas of Special Flood Hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Director of Engineering shall make the necessary interpretation. Any person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this ordinance.
 - (12) All records pertaining to the provisions of this ordinance shall be maintained in the office of the Director of Engineering and shall be open for public inspection.

(Ord. No. 07-53, § 1, 8-21-07)

Section 8.5.4. - Provisions for Flood Hazard Reduction.

- A. General Standards.** In ALL Areas of Special Flood Hazard the following provisions are required:
- (1) New construction and substantial improvements of existing structures shall be anchored to prevent flotation, collapse or lateral movement of the structure;
 - (2) New construction and substantial improvements of existing structures shall be constructed with materials and utility equipment resistant to flood damage;
 - (3) New construction or substantial improvements of existing structures shall be constructed by methods and practices that minimize flood damage;
 - (4) Elevated Buildings. All new construction or substantial improvements of existing structures that include ANY fully enclosed area located below the lowest floor formed by foundation and other exterior walls shall be designed so as to be an unfinished or flood-resistant enclosure. The enclosure shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater.
 - (a) Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:
 - (i) Provide a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
 - (ii) The bottom of all openings shall be no higher than one foot above grade; and
 - (iii) Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwater in both direction.
 - (b) So as not to violate the "lowest floor" criteria of this ordinance, the unfinished or flood-resistant enclosure shall only be used for parking of vehicles, limited storage of maintenance equipment used in connection with the premises, or entry to the elevated area; and
 - (c) The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.
 - (5) All heating and air conditioning equipment and components (including ductwork), all electrical, ventilation,

plumbing, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

- (6) Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable State requirements for resisting wind forces.
- (7) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;
- (8) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters;
- (9) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding, and;
- (10) Any alteration, repair, reconstruction or improvement to a structure, which is not compliant with the provisions of this ordinance, shall be undertaken only if the nonconformity is not furthered, extended or replaced.

B. Specific Standards. In ALL Areas of Special Flood Hazard the following provisions are required:

- (1) *New residential construction and/or substantial improvements to residential structures.* Where base flood elevation data are available, new construction and/or substantial improvement of any structure or manufactured home shall have the lowest adjacent grade at an elevation higher than the base flood elevation and the lowest floor, including basement, elevated no lower than two feet above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate equalization of flood hydrostatic forces on both sides of exterior walls shall be provided in accordance with standards of Article 4, Section A (4), "Elevated Buildings".
 - (a) All heating and air conditioning equipment and components (including ductwork), all electrical, ventilation, plumbing, and other service facilities shall be elevated at or above the base flood elevation.
- (2) *Nonresidential Construction.* New construction and/or the substantial improvement of any structure located in A1-30, AE, or AH zones, may be floodproofed in lieu of elevation. The structure, together with attendant utility and sanitary facilities, must be designed to be watertight to two feet above the base flood elevation, with walls substantially impermeable to the passage of water, and structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the provisions above, and shall provide such certification to the official as set forth above and in Section 8.5.3.C(6).
- (3) *Standards for Manufactured Homes and Recreational Vehicles.* Where base flood elevation data are available:
 - (a) All manufactured homes placed and/or substantially improved on: (1) individual lots or parcels, (2) in new and/or substantially improved manufactured home parks or subdivisions, (3) in expansions to existing manufactured home parks or subdivisions, or (4) on a site in an existing manufactured home park or subdivision where a manufactured home has incurred "substantial damage" as the result of a flood, must have the lowest floor including basement, elevated no lower than one foot above the base flood elevation.
 - (b) Manufactured homes placed and/or substantially improved in an existing manufactured home park or subdivision may be elevated so that either:
 - (i) The lowest floor of the manufactured home is elevated no lower than one foot above the level of the base flood elevation; or
 - (ii) The manufactured home chassis is elevated and supported by reinforced piers (or other foundation elements of at least an equivalent strength) of no less than 36 inches in height above grade.
 - (c) All manufactured homes must be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. (Section 8.5.4.A(6) above.)
 - (d) All recreational vehicles placed on sites must either:
 - (i) Be on the site for fewer than 180 consecutive days;
 - (ii) Be fully licensed and ready for highway use, (a recreational vehicle is ready for highway use if it is licensed, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached structures or additions); or
 - (iii) The recreational vehicle must meet all the requirements for "new construction", including the anchoring and elevation requirements of Section 8.5.4.B(3)(a) [through] (c), above.
- (4) *Floodway.* Located within Areas of Special Flood Hazard established in Section 8.5.2.B, are areas designated as floodway. A floodway may be an extremely hazardous area due to velocity floodwaters, debris or erosion potential. In addition, the area must remain free of encroachment in order to allow for the

and shown on the FIRM shall be submitted to FEMA for review as a Conditional Letter of Map Revision (CLOMR) or Conditional Letter of Map Amendment (CLOMA), whichever is applicable. Upon completion of the project, the developer is responsible for submitting the "as-built" data to FEMA in order to obtain the final LOMR.

F. Standards for Placement of Critical Facilities.

- (1) Critical facilities shall not be located in the 100-year floodplain or the 500-year floodplain.
- (2) All ingress and egress from any critical facility must be protected to the 500-year flood elevation.

(Ord. No. 07-53, § 1, 8-21-07)

Section 8.5.4.1. - Variance Procedures.

- A. The Board of Zoning Appeals as established by the Columbus Consolidated Government shall hear and decide requests for appeals or variance from the requirements of this ordinance.
- B. The board shall hear and decide appeals when it is alleged an error in any requirement, decision, or determination is made by the Director of Engineering in the enforcement or administration of this ordinance.
- C. Any person aggrieved by the decision of the Board of Zoning Appeals may appeal such decision to the Superior Court of Muscogee County, Georgia, as provided in Section 5-4-1 of the Official Code of Georgia Annotated.
- D. Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum to preserve the historic character and design of the structure.
- E. Variances may be issued for development necessary for the conduct of a functionally dependent use, provided the criteria of this Article are met, no reasonable alternative exists, and the development is protected by methods that minimize flood damage during the base flood and create no additional threats to public safety.
- F. Variances shall not be issued within any designated floodway if ANY increase in flood levels during the base flood discharge would result.
- G. In reviewing such requests, the Board of Zoning Appeals shall consider all technical evaluations, relevant factors, and all standards specified in this and other sections of this ordinance.
- H. Conditions for Variances:
 - (1) A variance shall be issued ONLY when there is:
 - (i) A finding of good and sufficient cause;
 - (ii) A determination that failure to grant the variance would result in exceptional hardship; and
 - (iii) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
 - (2) The provisions of this ordinance are minimum standards for flood loss reduction; therefore any deviation from the standards must be weighed carefully. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief; and, in the instance of a historic structure, a determination that the variance is the minimum necessary so as not to destroy the historic character and design of the building.
 - (3) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation of the proposed lowest floor and stating that the cost of flood insurance will be commensurate with the increased risk to life and property resulting from the reduced lowest floor elevation.
 - (4) The Director of Engineering shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.
- I. Upon consideration of the factors listed above and the purposes of this ordinance, the Board of Zoning Appeals may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.

(Ord. No. 07-53, § 1, 8-21-07)

Section 8.5.5. - Definitions.

Accessory structure means a structure having minimal value and used for parking, storage and other non-habitable uses, such as garages, carports, storage sheds, pole barns, hay sheds and the like.

Addition (to an existing building) means any walled and roofed expansion to the perimeter of a building in which the addition is connected by a common load-bearing wall other than a firewall. Any walled and roofed addition, which is connected by a firewall or is separated by an independent perimeter load-bearing wall, shall be considered "new construction".

Appeal means a request for a review of the Director of Engineering's interpretation of any provision of this ordinance.

Area of shallow flooding means a designated AO or AH Zone on a community's Flood Insurance Rate Map (FIRM) with base flood depths from one to three feet, and, or where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

Area of special flood hazard is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. In the absence of official designation by the Federal Emergency Management Agency, Areas of Special Flood Hazard shall be those designated by the local community and referenced in Section 8.5.2.B.

Base flood means the flood having a one percent chance of being equaled or exceeded in any given year.

Basement means that portion of a building having its floor subgrade (below ground level) on all sides.

Building means any structure built for support, shelter, or enclosure for any occupancy or storage.

Critical facility means any public or private facility, which, if flooded, would create an added dimension to the disaster or would increase the hazard to life and health. Critical facilities include:

- (a) Structures or facilities that produce, use, or store highly volatile, flammable, explosive, toxic, or water-reactive materials;
- (b) Hospitals and nursing homes, and housing for the elderly, which are likely to contain occupants who may not be sufficiently mobile to avoid the loss of life or injury during flood and storm events;
- (c) Emergency operation centers or data storage centers which contain records or services that may become lost or inoperative during flood and storm events; and
- (d) Generating plants, and other principal points of utility lines.

Development means any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations, and permanent storage of materials or equipment.

Elevated building means a non-basement building built to have the lowest floor of the lowest enclosed area elevated above the ground level by means of fill, solid foundation perimeter walls, pilings, columns, piers, or shear walls adequately anchored so as not to impair the structural integrity of the building during a base flood event.

Existing construction means any structure for which the "start of construction" commenced before March 1, 1983. [i.e., the effective date of the FIRST floodplain management code or ordinance adopted by the community as a basis for that community's participation in the National Flood Insurance Program (NFIP)].

Existing manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum the installation of utilities, the construction of streets, and final site grading or the pouring of concrete pads) is completed before March 1, 1983. [i.e., the effective date of the FIRST floodplain management regulations adopted by a community].

Expansion to an existing manufactured home park or subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads.

Flood or flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (a) The overflow of inland or tidal waters; or
- (b) The unusual and rapid accumulation or runoff of surface waters from any source.

Flood Hazard Boundary Map (FHBM) means an official map of a community, issued by the Federal Insurance Administration, where the boundaries of areas of special flood hazard have been defined as Zone A.

Flood Insurance Rate Map (FIRM) means an official map of a community, issued by the Federal Insurance Administration, delineating the areas of special flood hazard and/or risk premium zones applicable to the community.

Flood Insurance Study means the official report by the Federal Insurance Administration evaluating flood hazards and containing flood profiles and water surface elevations of the base flood.

Floodplain means any land area susceptible to flooding.

Floodproofing means any combination of structural and nonstructural additions, changes, or adjustments to structures, which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

Freeboard means a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

Highest adjacent grade means the highest natural elevation of the ground surface, prior to construction, adjacent to the proposed foundation of a building.

Historic structure means any structure that is;

- a. Listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- b. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- c. Individually listed on a state inventory of historic places and determined as eligible by states with historic preservation programs which have been approved by the Secretary of the Interior; or
- d. Individually listed on a local inventory of historic places and determined as eligible by communities with historic preservation programs that have been certified either:
 1. By an approved state program as determined by the Secretary of the Interior; or
 2. Directly by the Secretary of the Interior in states without approved programs.

Lowest floor means the lowest floor of the lowest enclosed area, including basement. An unfinished or flood-resistant enclosure, used solely for parking of vehicles, building access, or storage, in an area other than a basement, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of other provisions of this code.

Manufactured home means a building, transportable in one or more sections, built on a permanent chassis and designed with or without a permanent foundation when connected to the required utilities. The term also includes park trailers, travel trailers, and similar transportable structures placed on a site for 180 consecutive days or longer and intended to be improved property.

Mean sea level means the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For purposes of this ordinance, the term is synonymous with National Geodetic Vertical Datum (NGVD).

National Geodetic Vertical Datum (NGVD) as corrected in 1929 is a vertical control used as a reference for establishing varying elevations within the floodplain.

New construction means any structure (see definition) for which the "start of construction" commenced on or after March 1, 1983 and includes any subsequent improvements to the structure [i.e., the effective date of the FIRST floodplain management ordinance adopted by the community as a basis for community participation in the (NFIP)].

New manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after March 1, 1983. [i.e., the effective date of the first floodplain management regulations adopted by a community].

North American Vertical Datum (NAVD) as corrected in 1988 is a vertical control used as a reference for establishing varying elevations within the floodplain.

Recreational vehicle means a vehicle, which is:

- a. Built on a single chassis;
- b. Four hundred square feet or less when measured at the largest horizontal projection;
- c. Designed to be self-propelled or permanently towable by a light-duty truck; and
- d. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Repetitive loss means flood-related damages sustained by a structure on two separate occasions during a ten-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25

percent of the market value of the structure before the damaged occurred.

Start of construction means the date the development permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of the structure such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation, and includes the placement of a manufactured home on a foundation. Permanent construction does not include initial land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of buildings appurtenant to the permitted structure, such as garages or sheds not occupied as dwelling units or part of the main structure. (NOTE: accessory structures are not exempt from any ordinance requirements) For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure means a walled and roofed building that is principally above ground, a manufactured home, a gas or liquid storage tank.

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial improvement means any reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during a 5-year period, in which the cumulative cost equals or exceeds 50 percent of the market value of the structure prior to the start of construction of the improvement. NOTE: The market value of the structure should be (1) the appraised value of the structure prior to the start of the initial repair or improvement, or (2) in the case of damage, the value of the structure prior to the damage occurring. This term includes structures, which have incurred substantial damage, regardless of the actual amount of repair work performed. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the building. The term does not, however, include:

- (1) Those improvements of a structure required to comply with existing violations of state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions and which have been identified by the Code Enforcement Official, and not solely triggered by an improvement or repair project, or
- (2) Any alteration of a "historic structure" provided that the alteration will not preclude the structure's continued designation as a historic structure.

Substantially improved existing manufactured home parks or subdivisions is where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

Variance is a grant of relief from the requirements of this ordinance, which permits construction in a manner otherwise prohibited by this ordinance.

Violation means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, or other certifications, or other evidence of compliance required by this ordinance is presumed to be in violation until such time as that documentation is provided.

(Ord. No. 07-53, § 1, 8-21-07)

FOOTNOTE(S):

⁽¹⁵⁷⁾ **Editor's note**— Ord. No. 07-53, adopted Aug. 21, 2007, amended art. 5 in its entirety to read as herein set out. Former art. 5 consisted of §§ 8.5.1—8.5.7, pertained to similar subject matter and derived from the original Unified Development Ordinance.

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ARTICLE 6. - INSTALLATION OF STORMWATER DRAINAGE FACILITIES

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Section 8.6.1. - Timing of Installation.

Construction of the stormwater system shall be initiated as part of the grading of the site. Stormwater detention facilities shall be constructed prior to the installation of any other site improvements, and may be utilized under proper design as sedimentation basins during development. Installation of all other storm drainage pipes, culverts, headwalls, and ditches, shall be coordinated with the construction of streets and other site improvements, as appropriate.

Section 8.6.2. - Location.

Drainage facilities shall be located in the street right-of-way where feasible, or in a perpetual unobstructed easement of appropriate width.

Section 8.6.3. - Off-site Drainage Facilities.

Stormwater runoff that otherwise is of unacceptable quality or which would be discharged in volumes or at rates in excess of those otherwise allowed by this Ordinance may be discharged into drainage facilities off site of the development, subject to the conditions listed below.

- A. *On-site Management.* It is not practicable to completely manage runoff on site in a manner that meets the design and performance standards found in the Georgia Stormwater Management Manual.
- B. *Design, Construction and Maintenance.* Off-site drainage facilities and channels leading to them are designed, constructed and maintained in accordance with the requirements of this Chapter.
- C. *Cost Sharing.* Adequate provision is made for sharing of construction, maintenance and operating costs of the facilities. The developer may be required to pay a portion of the cost of constructing facilities as a condition to receiving approval of the stormwater management site plan.

Section 8.6.4. - Maintenance and Ownership Responsibilities.

- A. *Ownership.*
 1. *Private Ownership Required.* Any stormwater management facility that services a single lot or commercial and industrial development shall be privately owned and maintained.
 2. *Residential Areas.* Developers of stormwater management facilities in residential areas may petition the City to accept maintenance of those private facilities if those facilities meet current standards. In order to consider acceptance, the City must determine compliance with the standards listed below.
 - (A) *Ownership.* The City is granted ownership of the parcel of land on which the stormwater management facility is located. Ownership is to include a minimum of a 20-foot right-of-way access to the facility.
 - (B) *Standards of Construction, Operation and Maintenance.* The facility meets current standards for acceptance at the time of petition.
 - (C) *Repair and Cleanliness.* The facility is in good repair and is clean prior to acceptance.
 - (D) *Ease of Maintenance.* The facility is easily accessible for maintenance.
- B. *Maintenance.*
 1. *Maintenance Responsibility.* It shall be the responsibility of the developer to maintain all facilities required by the stormwater management site plan during construction and for a two year maintenance period following approval of the final subdivision plat or issuance of a certificate of occupancy, as applicable. If the developer takes the extra measures defined in the Georgia Stormwater Management Manual, the maintenance period may be reduced to one year. The developer shall be responsible for removing temporary structures or facilities at the completion of the construction.
 2. *Maintenance Bond.* A continuous bond to cover maintenance and construction shall be provided at acceptance. The bond will remain in force until the criteria, described in the Georgia Stormwater Management Manual, have been complied with, as determined by the Department of Engineering.
 3. *Maintenance following Two Year Period.* The owners of the property shall be responsible for maintaining the permanent facilities identified by the stormwater management site plan to remain after construction is complete, following the two-year maintenance period.

4. *Failure to Maintain.* Should an owner or developer, whichever is the responsible party, fail to maintain the stormwater management facilities in a state of service intended by the stormwater management site plan, then the Department of Engineering shall notify the responsible party in writing within three days of the deficiencies and of specific minimum maintenance requirements to remedy such deficiencies.
 - (A) *Failure to Perform Maintenance.* If the responsible party fails to perform the required maintenance work within 10 days then the owner shall be in violation of the provisions of this Ordinance.
 - (B) *Liens.* Should it become necessary for the City to perform work in order to maintain a private facility then the City may place a lien against the property until full reimbursement for the work performed by City forces is recovered.
- C. *Inspections.*
1. *Schedule of Inspections.* A representative from the Department of Engineering shall determine inspection schedules necessary to enforce the stormwater requirements. Inspections may include, but are not limited to, the following:
 - (A) An initial inspection prior to stormwater management site plan approval;
 - (B) A bury inspection prior to burial of any underground drainage structure;
 - (C) Erosion control inspections as necessary;
 - (D) A finished inspection when all work, including installation of drainage facilities, has been completed; and
 - (E) A maintenance inspection of private facilities to insure their continued proper operation.
 2. *Entry for Inspections.* A representative from the Department of Engineering shall be permitted to enter all properties, including those for which the City holds a negotiated easement for repairs and maintenance, for regular inspections in accordance with this Chapter. The engineering representative shall duly notify the owner/operator of said property, or representative on site, except in the case of an emergency.
 3. *Inspection Reports.* Inspection reports shall be maintained in a permanent file located in the office of the Department of Engineering. All such records shall be open to the public.

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ARTICLE 7. - INSTALLATION OF STREETS AND UTILITIES

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Section 8.7.1. - Grading.

- A. *Grading Required.* All streets shall be graded to their full width by the developer so that pavement extensions or sidewalks, where required or if installed in the future, can be constructed on the same level plane.
- B. *Preparation of Roadway.* Before grading is started the entire area to be paved shall be first cleared of all stumps, roots, brush and other objectionable materials. In all areas to be graded or filled, the developer shall stockpile the topsoil later to be spread in all disturbed areas not paved.
- C. Grading shall be done in accordance with Article 3 of this Chapter.

Section 8.7.2. - Installation of Utilities; General Provisions.

Installation of utilities shall comply with the requirements of this Section.

- A. *Installation Schedule.* After grading is completed and approved, the curb lines shall be staked by the developer's registered land surveyor.
 - 1. *Underground Utilities.* All public utilities beneath pavement shall be installed and the ditch backfilled and thoroughly compacted before any pavement or base is installed, or the pipes shall be bored if installed after street construction.
 - 2. *Manholes and Valve Boxes.* All utility manholes and valve boxes shall be brought to the finished grade within the roadway section.
 - 3. *Private Utilities.* All private utilities that will cross under street pavement, driveways or sidewalks shall be installed completely throughout the subdivision prior to any roadway base being applied. Installation of approved utility sleeves shall be considered as an alternate in accordance with each utility company's sleeve requirements and the City's locational standards. See Chapter 7 regarding the location of utilities in streets and the City's Standard Utility Location Cross-Section.
 - 4. *Service Connections.* Service connections for sanitary sewer and water shall be extended to the right-of-way lines.
- B. *Manholes and Valve Boxes.* All utility manholes and valve boxes shall be brought to the finished grade within the roadway section.
- C. *Locations.* All utility locations shall correspond to the typical layout shown in the standard details.
- D. *Private Improvements.* Private improvements, such as private lawn sprinkler systems, yard lighting, and the like, shall not be installed within a public right-of-way except by authorization of the Engineering Director. Such authorization, if issued, shall require the owner to assume all repair costs of the owner's facilities should they become damaged.

Section 8.7.3. - Installation of Public Water System.

- A. *Requirement for Installation.* When installation of water mains and connection to a public water supply is required under Chapter 7, the installation of mains and connection to each lot shall be installed prior to the paving of the street.
- B. *Unavailability of Public Water Supply.* Where a public water supply is not available, each lot in a subdivision shall be furnished with a water supply system acceptable to and approved by the Health Department in accordance with Chapter 7, at a fire flow acceptable to the Fire Department.

Section 8.7.4. - Installation of Sanitary Sewerage.

- A. *Requirements for Installation.* When provision of sanitary sewer services to each lot within the bounds of the subdivision is required under Chapter 7, the subdivider shall install all street sewers serving lots in the subdivision prior to the paving of the street.
- B. *Unavailability of Sanitary Sewer Service.* When, in the written opinion of the Columbus Health Department and the Columbus Water Works, a public sanitary sewer is not accessible, an alternative method of sewage disposal for each lot or a community disposal system may be used provided it is in compliance with the standards of the Health Department in accordance with Chapter 7.

Section 8.7.5. - Location and Protection of Existing Underground Utilities.

It is the responsibility of the contractor to locate the underground utilities and to protect them. A contractor shall be responsible for payment of any costs repair to utility lines or services damaged during construction.

Section 8.7.6. - Street Installation.

- A. *Subgrade Installation.* After the earth work has been completed, all storm drainage and other underground utilities have been installed under the roadbed, and the backfill in all such ditches thoroughly compacted, the subgrade shall be brought to the lines, grades and cross section shown on the plans.
- B. *Subgrade Materials.* If any sections of the subgrade are composed of unsuitable or unstable material, such material shall be removed to the depth directed by the appropriate Engineering Department and replaced with suitable, thoroughly compacted material.
- C. *Preparation of Subgrade.*
 - 1. *Compaction.* Prior to placement of the street base, the subgrade shall be compacted to 95% density.
 - 2. *Construction Traffic.* When the street is to be used for construction traffic before the paving work is completed, a layer of Number 3 stone can be laid as a traffic surface if the developer so desires.
 - (A) *Use as Base Material.* This material shall not be used as part of the base material.
 - (B) *Use or Removal.* This material may be worked into the subgrade; or it shall be removed before the

base course is set up for paving.

3. *Delay in Paving.* Provision shall be made to drain low points in road construction when the final paving surface is delayed, subject to the criteria listed below.
 - (A) *Berm Sections.* A break in the berm section shall be provided when the curbing has not been constructed.
 - (B) *Piping.* Six-inch pipe sections shall be used to provide drainage under curb to side slopes.
 - (C) *Abutting Property.* Abutting property shall be suitably sloped to the right-of-way line.
- D. *Installation of Street Base, Curbing and Paving.* Street base, curbing and paving shall be installed by the developer in accordance with the requirements and standards of this UDO.

Section 8.7.7. - Protection of Shoulders.

- A. *Installation of Vegetative Cover.* Immediately after grading and filling and re-spreading of topsoil, all areas of disturbed soil shall be fertilized and seeded with suitable vegetative cover to retard erosion. Steep slope areas shall be sodded or otherwise appropriately treated.
- B. *Construction Completion.* When all construction is completed, all slopes and shoulders shall be cleared of all rubbish and shall have a stand of grass to prevent undue erosion, either by sprigging or seeding.

Section 8.7.8. - Traffic Control Devices and Street Lights.

- A. *Fees and Installation.* Street signs, traffic control signs, and devices such as striping and signalization, shall be provided through payment of fees to the Engineering Department. Traffic control devices may also be installed by the developer after receiving written approval from the Director of Engineering.
- B. *Approval of Fixtures.* The installation of all street lighting fixtures within the right-of-way must be approved by the Director of Engineering prior to such installation.

Section 8.7.9. - Foreign Material on Streets.

- A. *Removal of Foreign Materials.* The developer, builders, or homeowners shall be responsible for keeping dirt, mud, building materials, concrete, and related materials off the pavement and curbing of existing city or county roads during construction of buildings in all developments covered by this UDO.
- B. *Removal of Litter and Trash.* Before the streets are accepted by the City, all litter and trash shall be removed from the dedicated rights-of-way and surrounding areas.

Section 8.7.10. - Bridge Piling.

Bridge piling shall be driven to DOT load standards for loading. Certification of pile load shall be by registered professional engineer.

Section 8.7.11. - Burial of Construction Debris Prohibited.

Burial of construction debris or debris of any kind at the site of any construction or development is prohibited.

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ARTICLE 8. - REPAIR, INSTALLATION AND CONSTRUCTION ON ALL RIGHTS-OF-WAY

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Section 8.8.1. - Regulations Adopted.

The following regulations apply to all work done on all public rights-of-way. Said work shall be permitted through the Department of Engineering in accordance with the provisions and requirements of this Unified Development Ordinance (UDO). Work done on designated U.S. or Georgia State Highways shall be permitted through the Georgia Department of Transportation with a Courtesy Copy of the permit forwarded to the Engineering Department by the permittee, at least 24 hours prior to work beginning. All work done on any right-of-way in Muscogee County must comply with all local as well as state and federal regulations. After review by the Columbus Consolidated Government, other issues pertaining to the work may be cause for permits to be issued under different sections of this UDO.

Section 8.8.2. - Scope.

- A.** This Article applies to all work done within the limits of the right-of-way for what ever reason, including but not limited to maintenance, reconstruction, relocation or installation of structures or facilities whether above or below ground level, work done by utility companies or their designated representatives, citizens, developers or their contractors, landscaping services, tree trimming, yard maintenance and any other work done within the limits of the City right-of-way.
- B.** This Ordinance shall apply to all utility companies that have facilities and/or do work within the city including all utilities who currently hold "Franchise Agreements" with the Columbus Consolidated Government, and contractors working for utility companies or private companies.
- C.** Private contractors desiring to do work on the right-of-way shall:
 1. Be a Licensed Contractor;
 2. Have a valid Business License to work in Muscogee County;
 3. Be bonded and have appropriate insurance; and
 4. Obtain all proper permits from the Columbus Consolidated Government and or the Georgia Department of Transportation.
- D.** Private Citizens doing work for themselves at their place of residences may be exempted from being licensed and bonded, but a permit may be required, dependant upon the work to be done.

Section 8.8.3. - Application.

- A.** A Permit shall be required from the City Engineer to work on any public right-of-way within the city. A copy of the approved permit shall be kept on site by the permittee or his contractor. Upon completion of the work the permittee shall notify the Department of Engineering by either faxing or mailing a copy of the front sheet of the permit application to the Department.
- B.** Work done on Rights-of-Way that are not under the exclusive jurisdiction of the Columbus Consolidated Government from other agencies, when the following conditions apply:
 1. Work done on a designated State or Federal Highway shall obtain a permit from the Georgia Department of Transportation or other appropriate agency.
 2. Work done on roadways that are listed on the "Transportation Improvement Plan", or have received funds from the State or Federal Government for improvement, shall obtain permits from the Georgia Department of Transportation or other appropriate agency.
 3. A courtesy copy of the approved permit issued by the other agency shall be forwarded to the Department of Engineering by the permittee, prior to beginning work.
 4. All local and State Ordinances concerning construction practices, safety, erosion control, air quality and stormwater management shall be in effect regardless of whether the permit was issued by the Columbus

- Consolidated Government or another agency such as the Georgia Department of Transportation.
5. In some cases a separate permit over and above the permit for Work on Right of Way may be required by the Columbus Consolidated Government regardless of who has jurisdiction over the immediate Right of Way on which the work occurs because of the impact that the proposed work may have on other local ordinances. There are no exemptions from full compliance with all local ordinances regardless of whether a permit has been issued by the City.
- C. Work done within the limits of a new development, before the development is accepted by the City, shall be covered by the Development Permit. However should the work extend beyond the limits of that development onto existing public right-of-way, a Work on Right-of-Way Permit shall be required. The designer of the development has the option of indicating where work will extend beyond the limits of the development onto public right of way and thus have said work covered under the Development Permit. This coverage must be agreed to in advance of the issuance of a Development Permit.
 - D. When a new development is accepted by the City and the right-of-way is opened to the public, then subsequent work done by anyone on the newly opened right of way will require a Work on Right-of-Way Permit.
 - E. Application documents required are as follows:
 1. Completed application, including an emergency number and local point of contact from the permittee. The point of contacts shall be available 24 hours a day, 7 days a week, including weekends and holidays.
 2. The permittee shall provide a drawing showing the location of the proposed work with enough detail to quickly identify the exact limits of the proposed work. The application and the drawing must include a current address and distance from the nearest intersection. A database will be established using the address as one of the primary methods of location.
 - F. A Traffic Control Plan must be attached or made a part of the permit by reference of a previously approved Traffic Control Plan in accordance with the appropriate Manual on Uniform Traffic Control Devices (MUTCD) layout of Temporary Traffic Control Devices as discussed below.
 1. All temporary traffic control shall be set up in accordance with Part 6, of the MUTCD, current edition.
 2. All Traffic Control Personnel (flaggers) shall have a current certification of training from the Georgia Department of Transportation or the National Safety Council. Proof of certification shall be maintained on the flagger's person while on the job. The City may check for current certification at any time.
 3. The project foreman shall have a current certification of training from the Georgia Department of Transportation or the National Safety Council. Proof of certification shall be maintained on the foreman's person while on the job. The City may check for current certification at any time.
 4. The project foreman shall insure that all traffic control devices are set up in accordance with the MUTCD, Current edition. A copy of the MUTCD section covering the Traffic Control setup shall be on site and in the possession of the project foreman at all times.
 5. Improper setup of traffic control devices may result in citation of the project foreman or the permittee and immediate shut down of the project.
 - G. Additional information including, but not limited to profiles, cross sections or any other information needed by the City to make a proper assessment of the situation before issuing a permit may be asked for by the Department of Engineering at any time. Such information shall be provided before a permit will be issued.
 - H. The permittee shall note that coordination with the City Arborist has occurred and shall identify possible conflicts with existing trees on the drawing. It is the responsibility of the permittee to review the work site and indicate the presence of trees.
 - I. Permits for work on right-of-way shall become void if work has not started within 90 days of the issue date of the permit. Any work started after the 90 days shall require a new application for permit. If work is begun after the permit expires and no new permit has been applied for then the work is considered "work without a permit" and appropriate citations or other enforcement may apply.
 - J. Street Cuts Only. Work that is confined to the paved travel way shall require a separate Street Cut Permit describing the cut in the pavement. The minimum information shall be the size and location of each cut. (i.e. 10' X 6' cut in asphalt in front of 1212 12th Avenue). Work confined in the street may be permitted by using the "Street Cut Permit" application form, rather than the work on right-of-way application.

Section 8.8.4. - Exceptions.

Approved permits shall be required for any work done on the right-of-way. Permits should be approved at least 48 hours before the work is to begin, but in no case shall work begin without a minimum of 24-hour notice, with the following exceptions:

- A. *Emergency Work.* In case of an emergency, the permittee shall notify the City via telephone, fax or email the next working day if the emergency occurs after normal business hours or the same day during normal business hours. In addition the permittee shall begin the process of obtaining a written permit for the emergency work not later than one working day after emergency work begins.
 1. For the purpose of this UDO an emergency may be defined as a situation where there is an

- immediate threat to the health, safety or welfare of a person or property.
2. Needed repairs that were not previously part of an ongoing maintenance program, and area not acted on within the same working week as reported (Monday through Friday) will not be considered "emergency work" but shall be considered planned maintenance/repair. In these cases the standard permit procedure shall apply and the permit shall be obtained prior to commencement of work.
 3. Normal scheduled maintenance and planned projects by the permittee do not constitute emergency work and as such are not subject to this exception.
- B. Minor Work.** Written permits shall not be required for the work described in this paragraph. The permittee is exempted from the requirement of obtaining a permit only, but is not relieved from the responsibility of complying with all requirements of this Article and other ordinances governing work in the city. Violations of this and other ordinances shall be grounds for Stop Work Orders and/or Citations.
1. Traffic control and Erosion and Sediment control shall be established and maintained in accordance with this UDO and other ordinances to which they apply.
 2. The permittee shall notify the Engineering Department via telephone, fax or email of minor work done. Such notification should be done 48 hours prior to work commencing but shall be done no later than the close of business on Friday of the week in which the work occurs. Notification may be in the form of a copy of a company work order. The notification must include as a minimum the addresses of the work and a brief description of the work. (i.e. setting a meter or valve maintenance, etc). Examples of exempted work are as follows:
 - (A) Open cut work that is confined to one side of the street and does not require a street crossing or encroachment into the paved portion of the street or does not involve work running parallel to the right-of-way a distance of greater than 60 feet or does not extend beyond the limits of one lot in a subdivision, which ever is most restrictive is exempt.
 - (B) Tree trimming or aerial line maintenance along a roadway is exempt. When work is done to overhead lines special attention must be given to traffic control since in most cases the work crew are constantly moving along the roadway or are occupying a spot for a short duration of time.
 - (C) Routine maintenance to overhead and underground utilities that does not require cuts within the travel way is exempt.
 - (D) Valve or Manhole inspection or maintenance that does not require the cutting of the street and will only be in a location for 15 minutes or less.

(Ord. No. 09-4, § 1, 1-27-09)

Section 8.8.5. - Design Specifications.

Construction methods should be used that minimize disturbance and impact to the City's right-of-way and private property. All items pertaining to construction methods that are not specifically addressed in this Article shall comply with the Department of Transportation, State of Georgia Standard Specifications of Construction of Roads and Bridges, 1993, or most current edition.

Section 8.8.6. - Traffic Control.

The permittee as well as all parties involved, including the utility his contractor and paving contractor are responsible for installation and Traffic Control shall be maintained throughout the process of the work from the initial cutting of maintenance of proper traffic control in accordance with the MUTCD. A copy of the MUTCD current edition may be available on line.

- A. Two-lane Residential Streets.**
1. Two-lane Residential Streets having less than 1,000 vehicles per day will be allowed to post traffic controls per MUTCD for one lane traffic, provided 500 feet of sight distance is available at the road closure point. Traffic volumes shall be estimated at 6 trips/vehicles per day, per house along said street and/or subdivision streets blocked by road closure.
 2. Two-lane Residential Streets having more than 1,000 vehicles per day that have an open cut that must be left open overnight, shall have the cut covered with steel plates. Traffic volumes shall be estimated at 6 trips/vehicles per day, per house along said street and/or subdivision streets blocked by road closure. The plates shall be secured to prevent shifting.
 3. Two-lane streets where the abutting property is zoned and actively used as Commercial property shall require the use of steel plates to cover open trench/cut which have not been repaired with asphalt or backfilled as described in alternated method number 2. No exceptions. Plates shall be anchored to prevent movement.
- B. Multi-lane Streets.** Where street closure is required on multilane roadways, all traffic control in accordance with MUTCD including lighted arrow boards shall be used at all times during and after working hours.

1. The permittee is responsible for installing correct warning devices and for maintaining said warning devices and barricades on all work on right-of-way until the work is completed and the roadway is either permanently or temporarily repaired and opened to traffic. The traffic control shall be set up in accordance with the latest version of the Manual on Uniform Traffic Control Devices for Streets and Highways. If flaggers are required, then they must be Georgia DOT certified or certified by the National Safety Council. All flaggers shall have proof of certification on their person at all times when they are working on any part of the City right-of-way. The requirement for proper certification will be in effect the same day this ordinance is adopted by the Council of Columbus, Georgia.
 2. It is desirable that no trench/cut be left open through a weekend, however in the event this situation is unavoidable, appropriate traffic control including detours, flashing arrows or steel plates shall be provided. The contractor/owner shall make available a 24-hour contact to the City Engineer and all emergency services.
- C. Sidewalk.
1. During Working Hours—Proper walkways over cuts or bridges shall be used to allow pedestrian traffic through work area. The permittee shall use warning signs, barricades and constructed detours to control, warn and direct pedestrians through or around the work site. All pathways shall be accessible by wheel chair.
 2. After Working Hours—Cuts or openings in sidewalks shall not be left openings after working hours but shall be backfilled to the normal surface with compacted clean backfill material.

Section 8.8.7. - Open Cut Technology—Roadways.

Open Cut of a roadway is prohibited for new installations unless site conditions warrant it or as otherwise approved by the Department of Engineering. The open cut method may be used for repair of existing facilities. Repair of Open Cuts in paved roadways may be done one of the two methods described herein:

- A. *Alternate Method 1 (concrete cap) General Construction Procedure.*
1. The cut is to be made, the work on the buried structure completed then the cut shall be backfilled with good, dry local material from the original cut. If the material from the cut is wet or unsuitable then material approved by the City Engineer shall be used to backfill the hole.
 - (A) Permanent repair of the cut shall be an additional 6 inches wide on each side to a depth of 7½ inches to provide for the placement of a concrete bridge (cap) to reduce differential settlement. Refer to the current detail on file in the Department of Engineering.
 2. The backfill material shall be placed in 6 inch lifts and compacted to 100% of the SPD, beginning at the bottom of the cut and continuing to within 7½ inches below the finished surface of the roadway. The permittee shall take special care to maintain the optimum moisture content and control the thickness of each lift compacted.
 3. Compaction testing shall be done as directed by the City Engineer on a random basis or may be required when there is suspicion that there may be a problem with the backfill or that the compaction is not adequate or done in accordance with the specifications. Testing shall be done by a certified testing firm acceptable to the City. The City shall pay for initial random testing.
 4. Temporary Patch. A temporary patch material may be used in the cut to bring the roadway surface up to normal grade. In the event that weather prohibits a timely permanent repair from being completed, the permittee shall make permanent repair as soon as practical but in no cases longer than 45 days from placement of the temporary patch. All roadway cuts shall be permanently repaired within 45 calendar days as measured from the date that the hole is backfilled and compacted. The permittee is responsible for continuous maintenance of the cut and any claims of damage to vehicles or property while the temporary patch material is in place. The permittee shall continue to be responsible for maintenance of the cut and claims of damage to vehicles or property for the warranty period.
 5. Permanent Patch. Six (6) inches of class "A" concrete having a minimum compressive strength of 3,000 p.s.i. shall be placed in the trench/cut on the compacted backfill material. Sufficient curing times shall be allowed for the concrete before placement of the asphalt surface course but the final 1½ inches of permanent asphalt shall be placed within 5 working days after the concrete is placed. Allowances for additional time will be considered by the City Engineer when sufficient cause is given for the delay of placement of permanent asphalt. The permittee may elect to use a concrete mix design containing additives to produce accelerated curing. Mix designs shall be submitted to the Department of Engineering for approval prior to use. The permittee is responsible for having an approved testing laboratory design a mix design for an altered curing time.
 6. Specifications:
 - (A) *Specifications for Concrete.* Concrete used on city streets shall be "Class A" concrete with a minimum compressive strength of 3,000 p.s.i. Slump shall be within the range of 2 inches minimum to 4 inches, maximum. The top surface of the concrete shall be left a minimum of

1½ inches below the existing surface of the roadway to allow for placement of a permanent hot mix asphalt. A permanent hot mix asphalt patch 1½ inches thick shall be placed and compacted using approved compaction equipment over the concrete cap.

- (B) *Asphalt Specifications.* Asphalt will be 1½ inches thick or 165 lbs/square yard, Type E or other suitable mix approved by the City Engineer.
- (C) *Specifications for Point Repair Cuts.* Point repair cuts in the pavement shall be a minimum of 3 feet wide each way when alternate method 1 is used. The additional width on each side of the cut is to allow for placement of the concrete bridge. When alternate method 2 is used the cut shall be a minimum of 2 feet wide each way. The minimum width is to allow room for compaction equipment to be properly used during the backfilling of the hole.

B. Alternate Method 2 (select backfill) General Construction Procedure.

1. The trench/cut shall be backfilled in 6 inch lifts using M-10 stone as defined by the Georgia Crushed Stone Association. Alternate backfill materials may be substituted with prior written approval from the Engineer. All Backfill material shall be compacted to 100% of the SPD for the entire depth of the trench/cut. Moisture shall be added to each lift as the trench/cut is filled in order to achieve maximum compaction.
2. The trench/cut shall be filled and compacted to within 1½ inches of the street surface level with M-10 material. Temporary patch material shall be placed and compacted on the select backfill.
3. Once the trench/cut is filled and temporary patch material is placed, then the roadway may be opened for traffic.
4. Upon approval by the Engineer, the permittee may substitute Graded Aggregate Base material as defined in the Department of Transportation, State of Georgia, Standard Specifications construction of Roads and Bridges, 1993 or most current edition; Section 815—Graded Aggregate, in lieu of M-10 stone.

C. Temporary Patches.

1. The permittee shall fill the trench/cut to within 1½ inches of the roadway surface and place approved "cold mix" as a temporary patch, then open the roadway for traffic.
2. Within 45 days of placement of the temporary patch material, the permittee shall excavate the patch to a depth of 1½ inches below the surface of the roadway, and place 1½ inches of hot mix asphalt as a permanent patch.

(Ord. No. 09-4, § 1, 1-27-09)

Section 8.8.8. - Open Cut—General Specifications.

- A. When using concrete bridges (caps), the entire base area and sides shall be tack-coated prior to any placement of asphalt.
- B. Patching will be permitted on days when weather is satisfactory. When placing concrete, the temperature of the air shall be 40 degrees and rising. When placing asphalt, the temperature of the air shall be 40 degrees and rising.
- C. All trench/cut shall be excavated to the minimum size as specified in this ordinance, depending on the type of patching used for final closure. Refer to "Design Specifications" for Alternate Methods 1 and 2 for details. Narrower trench/cut may be approved by the Department of Engineering if smaller compaction equipment is available. All backfill shall be tamped in 6-inch lifts, to 100% of the s. Compaction testing shall be done in accordance with [Section 8.8.7](#); paragraph.
- D. All cuts shall be made to maintain a square or rectangular configurations. No round cuts will be accepted.
- E. Asphalt cuts. The preferred method of cutting streets is to saw the asphalt. However pneumatic tools such as jack hammers may be used if the appearance of the cuts are satisfactory to the Engineer. When cutting of asphalt is allowed by methods other than sawing, the requirement for straight cuts with vertical sides shall not be waived. All cuts shall be smooth, uniform cuts. If ragged or jagged edges are left or vertical sides are not apparent on the cut, then sawing or otherwise smoothing the face of the cut shall be done by the permittee. No cut shall be less than 2 feet by 2 feet on the surface, to allow for proper patching and compaction.
- F. Concrete cuts. All cuts in concrete paved surfaces shall be saw cut smoothly in a square or rectangular shape. No round cuts will be accepted.
- G. No cleated equipment is to be used on paved surfaces. Special care shall be taken to protect pavements from damage by equipment.
- H. Holes that are Drilled or bored in the roadway surface for the purpose of locating buried lines or other purposes shall be filled to the surface with a non shrink grout slurry mix having a compressive strength of 1,000 p.s.i. minimum.

Section 8.8.9. - Excavated Material.

Excavated material stored on the roadway surface shall be cleaned from pavement surfaces and the surface shall

- A. be swept to the satisfaction of the field inspector. Under no circumstances shall the roadway be washed clean. The permittee shall use all available means to protect inlets from the infiltration of sediment into the drainage system including the use of approved filter barriers placed to protect the openings of inlets and pipes.
- B. Excavated material stored on the shoulder of the roadway shall be removed completely and damaged vegetation shall be restored immediately. The method of restoration for vegetation shall be approved by the inspector and may include seeding and mulching, sod or placement of fiber or jute blankets.
- C. Under no circumstances shall excess material be placed in or obstruct a drainage way including curb and gutter, or block access (ingress and egress) to someone's property. Excavated material from a job site shall be removed by the permittee by the end of each business day.
- D. Drawing Number E-905 or current standard is on file in the Department of Engineering and shall be the standard detail for patching specifications.

Section 8.8.10. - Resurfacing.

- A. The permittee may be required to resurface all or portions of roadway where work has been performed. Roadways that are identified on the "Reconstruction List" for the City shall not require resurfacing by the permittee. Roadways that are not listed on the "Reconstruction List" shall be resurfaced by the permittee when they meet the following criteria:
 - 1. In a block where linear cuts, running parallel to the centerline of the street and where these cuts extend more than 30% of the entire block length, the permittee responsible for these cuts shall at their expense resurface the street within the block affected.
 - 2. In a block in which 3 or more street openings are made by a single permittee, owner, developer or their designated contractor. The permittee, owner or developer responsible for these cuts shall, at their expense, resurface the affected area. The exact limits shall be determined by the Engineering Department. This shall apply to all streets not on the "Reconstruction or Resurfacing List."
 - 3. The Reconstruction or Resurfacing List shall be furnished to all stake holders who request it annually. The list will contain a prioritized list of streets that the City hopes to resurface with in the coming 2 fiscal years. The list will for resurfacing at least 2 years in advance. Should priorities change the same stake holders will be notified by the City by receiving an updated list of the street priority.
- B. The resurfacing shall consist of a minimum of a one and one-half 1½ inch Type F (165 lbs/square yard) overlay of asphaltic concrete. Other mixes may be approved by the Engineer as needed. The resurfacing shall extend for the entire affected block length and shall be a minimum of one lane wide and a maximum the entire roadway width. The actual length of overlay may be adjusted at the discretion of the City Engineer. The resurfacing requirement may be waived if the street is programmed for Resurfacing or Reconstruction.
- C. Cutting of roadways within the first 2-year period following an overlay is prohibited without written permission of the City Engineer. Emergency cuts within a 2-year period on roadways that have been resurfaced may require the permittee to resurface a portion of that roadway at his expense. A cut shall be defined as excavation of the roadway surface that is a minimum of 2 feet by ½ the width of the travel lane. "Pot holing" for locations of underground utilities prior to trenchless installations are not considered cuts.

Section 8.8.11. - Responsibility for Utility Structures located on City Right-of-Way.

The Utility Company that owns the structure shall be responsible for the maintenance of all utility manholes, valve boxes, pipes, conduits etc. for the life of the structure.

- A. Warranty and Permittee Responsibilities. Trenches/cuts in roadways shall be warranted by the permittee for a period of 2 years after the permanent patch is accepted by the City. The permittee shall notify, in writing, the Department of Engineering that the permanent patch has been placed and is ready for inspection/acceptance.
- B. The Department of Engineering shall inspect the patch for quality of workmanship and acceptability of material. The inspection must take place before the warranty period can begin.
- C. The Department of Engineering shall keep a list of the date that permit work is completed as reported by the permittee. The date that the Department receives the notice of completion shall begin the 2-year warranty period for roadway patches. At the end of the warranty period the Department of Engineering will notify the permittee that the warranty has expired. The warranty shall expire on the last day of the month in which the permittee notifies the Department of Engineering that the work has been completed. The warranty period shall not begin until the Department receives notification in writing from the permittee of the work completion. Until such notification is received the permittee remains responsible for the roadway patch.
- D. Failure of a patch due to causes other than base and paving failure shall be addressed as noted below. If failures of the patch are caused by failures of a buried utility, then the owner of the utility is responsible as noted below:
 - 1. Failure of roadways due to failure of structures such as manholes, valve boxes, pipes, conduits,

etc., shall be the responsibility of the owner of the structures. The owner is expected to repair the damaged roadway as well as the structure to the satisfaction of the City Engineer.

2. Failure of patches after the 2-year warranty period that occur due to decay or failure of a utility structure, for what ever reason, shall be the responsibility of the owner of the structure to repair.

Section 8.8.12. - Trenchless Technology.

Directional Drilling - Backwash created by directional boring shall be controlled by use of proper erosion control measures including capture and proper disposal of backwash using a vacuum truck or other pre approved methods. Backwash shall not be discharged into any part of the storm sewer system including ditches, or onto the street, gutter or sidewalk. Boring, auguring or any other type subsurface means of utility installation shall be used for the following:

- A. Installation of new underground utilities in areas that have established vegetation, i.e., landscaping, established lawns, etc. Replacement or upgrading of existing utilities where the existing utility shall remain in place and/or abandoned.
- B. Road crossings except where conditions prohibit the process of directional drilling or boring.
- C. Installation of new underground utilities in areas that are within the drip line of any trees on the right-of-way. A minimum depth of 3 feet is required to protect the roadbed and critical root zone for trees unless otherwise approved due to subsurface conditions. The City Arborist shall be notified of any trenching/cutting done within the drip line of a tree before the work is begun. (Refer to Chapter 4 of this UDO for more detail.)

Section 8.8.13. - Driveways.

- A. *Replacement of Driveways.* Driveways are to be replaced in accordance with standard details for driveway installation. Details may be obtained from the Traffic Engineering Department. When an existing driveway must be cut and removed to access an existing utility, the driveway shall be replaced using the following standards:
 1. *Residential driveway.* Residential driveways shall be replaced with 5-inch, Class A, 3,000 p.s.i. concrete in accordance with current standards for driveways.
 2. *Commercial driveway.* Commercial driveways shall be replaced with 6-inch, Class A, 3,000 p.s.i. concrete in accordance with current standards for driveways.
 3. *Asphalt driveways.* Asphalt driveways shall be sawed and replaced in a uniform manner on a compacted base to match existing driveway cross section.
 4. *[Replacement.]* All driveways must be replaced with special care taken to satisfy property owners. Driveway removal shall be accomplished by saw cutting at the nearest joint. Driveways shall be replaced in accordance with standard driveway details used by the City.
- B. *Notification to City Arborist.* The City Arborist shall be notified when it becomes necessary to remove and replace driveways within the drip line of trees. The Arborist shall direct the best way to remove and replace the driveway in order to have the least negative affect on exiting trees. Should a tree be damaged to the extent that removal of the tree is required, then the permittee shall be responsible for its immediate removal and disposal.

Section 8.8.14. - Sidewalks.

- A. When a section of sidewalk has to be removed, the existing sidewalk shall be saw cut to a neat line, perpendicular to the centerline and the surface of the concrete slab. Existing concrete shall be cut along the nearest existing construction joint. The sidewalk shall be replaced with a minimum 4-inch thick, 3000 p.s.i. concrete. The concrete shall be reinforced with fiber mesh and match the width of adjoining existing sidewalks. In no case shall sidewalks be replaced to a width of less than 4 feet measured perpendicular to the centerline of the sidewalk. If the existing sidewalk has a thickness of greater than 4 inches, the new sidewalk thickness shall match the existing sidewalk thickness.
- B. When the work is done that requires the removal of an existing sidewalk within 20 feet of a roadway intersection, the Director of Engineering shall require that the sidewalks shall be replaced, including handicap ramps, in compliance with the Americans with Disabilities Act (ADA). Sidewalks that are replaced shall comply with the ADA concerning widths, access ramps, and driveway crossings.
- C. The City Arborist shall be notified when it becomes necessary to remove and replace sidewalk within the drip line of trees. The Arborist shall direct the best way to remove and replace the sidewalk in order to have the least negative affect on exiting trees. Should a tree be damaged to the extent that removal of the tree is required, then the permittee shall be responsible for its immediate removal and disposal.

(Ord. No. 09-4, § 1, 1-27-09)

Section 8.8.15. - Curb and Gutter.

- A. When the work is done that requires the removal of existing curb and gutter at roadway intersections, and there is

a sidewalk existing at that location, a handicap ramp shall be installed as part of the replacement of the curb and gutter. Sidewalks shall be reconstructed or modified in such a way as to accommodate the new handicap ramp. If there is no sidewalk at that location where the existing curb and gutter are removed, then a handicap ramp shall be installed and said ramp shall terminate at a logical connection to a sidewalk as determined by the Director of Engineering. All handicap ramps shall be built in compliance with the current Americans with Disabilities Act.

- B.** Curb and gutter shall be saw cut to a neat line, perpendicular to the centerline of the curb. The new work will be neatly joined to existing surfaces so as to form an even unbroken plane between the two. Curb and gutter shall be poured separately from concrete patches and driveway aprons. Joint material shall be provided as necessary. The linear dimension of a curb and/or gutter cut and replaced shall be a minimum of 5 feet.
- C.** The City Arborist shall be notified when it becomes necessary to remove and replace curb and gutter within the drip line of trees. The Arborist shall direct the best way to replace the driveway in order to have the least negative affect on exiting trees. Should a tree be damaged to the extent that removal of the tree is required, then the permittee shall be responsible for its immediate removal and disposal.

(Ord. No. 09-4, § 1, 1-27-09)

Section 8.8.16. - Grassed/Landscaped Areas.

- A.** No trenching/cutting should be done for new installations within the critical root zone of any tree on City right-of-way. The critical root zone is considered to be, the root system within the drip line. Any work within this area shall be coordinated with the City Arborist prior to commencement of work. When it is anticipated that the presence of trees will interfere with the planned work, the permittee shall furnish proof of coordination with the City Arborist at the time the application is submitted. The Arborist may require a plan showing the approximate location of trees located on City right-of-way. This plan should include size and species of trees and vegetation affected. A site visit by the City Arborist and a representative from the construction company/utility may be substituted in lieu of the detailed plan at the discretion of the City Arborist.
- B.** Trees that are damaged by work on the right-of-way shall become the responsibility of the permittee and shall be immediately removed and possibly replaced in accordance with the Tree Preservation and Replacement requirements of Chapter 4. Coordination with the City Arborist is required in all cases where trees are damaged.

Section 8.8.17. - Erosion Control.

Erosion control measures shall be maintained in place throughout the job and after completion of the work until permanent vegetation is established. The permittee shall be responsible for stabilization of all work areas by use of vegetation or other approved means. The permittee shall be responsible for replanting if vegetation does not begin growing within 30 days after the work has been completed. If temporary grassing is used then permanent grassing shall be provided at the earliest possible growing season. All permanent grassing shall be like kind for all disturbed areas to include sod where sod is located. The permittee may be required by the City Engineer to install ground cover material such as jute mesh or other matting in critical areas.

- A.** Linear Projects.
 - 1.** All work shall be completed as it progresses along the route. All trench/cut work shall be backfilled and compacted to a 100% of the Standard Proctor Density, (SPD) under the roadway and 90% along the shoulder not under the roadway. Trench/cut shall be kept backfilled and at no point be more than 1 day behind the installation of utility lines or pipes.
 - 2.** Linear Trenchless Projects that have excavated points along the route for tie in to existing utilities or have points of connection along the route shall backfill and compact these holes within 5 calendar days of the excavation unless a time extension is granted by the Director of Engineering. Final grassing is not required at this time however temporary erosion control measures shall be placed and maintained until permanent stabilization is completed.
- B.** Non-Linear Projects. As work progresses all holes shall be backfilled and compacted to 100% of the SPD under the roadway and 90% along the shoulder not under the roadway.
- C.** On all projects that disturb the City right-of-way the, permittee shall install temporary and/or permanent vegetative measures in accordance with the season, within 5 working days following backfill and compaction of the trench/cut. All debris and excess material shall be cleaned and hauled from the site prior to installing vegetation or within 5 working days of completion of the work which ever is sooner.
- D.** Spoil that is not hauled away by the end of each day may be left on the job for further use on the job if all spoil stockpiled on site is contained at the end of each working day in a manner satisfactory to the City Engineer. No spoil shall be left exposed or uncontained so that it may run into a drainage system during a rain event.
- E.** For underground construction and maintenance, the permittee and/or his contractor are responsible for restoring disturbed areas as close as possible to original condition. This includes the replacement of grassing, shrubs, trees, etc. with in kind species. Repairs and/or replacements of existing structures and irrigation systems that are located on the right-of-way are the responsibility of the permittee or their

designated contractor and shall also be replaced.

Section 8.8.18. - Responsibility and Liability.

- A. Progress and Completion on Work.**
1. The permittee shall repair all open cuts immediately following completion of construction with temporary patching material. Permanent patching material shall be placed no later than 45 days following completion of work. This includes repairs to existing driveways, sidewalks, roadways, etc. The Department of Engineering shall be notified in writing upon completion of permanent patching unless otherwise provided by the Director of Engineering.
 2. Variances on the required time of repair may be issued when in the judgment of the City Engineer, circumstances warrant a variance. The Department of Engineering shall be notified by the permittee when work is completed.
- B. Liability and Quality Control.**
1. Any damage or claim of damage from anyone due to work on right-of-way shall be the responsibility of the permittee.
 2. The permittee shall be held responsible for insuring that all cuts are satisfactorily completed. Failure to comply will result in non-issuance of further permits and/or issuance of a citation for violation of this Ordinance.
 3. The permittee shall be responsible for scope and quality of work performed by their subcontractors. Including, but not limited to compaction, erosion control and traffic control. Subcontractors shall be licensed in Columbus, bonded and insured.
 4. The permittee is required to notify affected parties and the Department of Engineering when extensive construction is going to be performed in the area. Notification shall be done at least 7 days prior to commencement of construction.
 5. Where necessary to temporarily close full operations of a roadway, the permittee/contractor shall notify Traffic Engineering Division at least 14 days in advance. When emergency repair work is required the notification requirement is waived. However the permittee shall be responsible for contacting and coordinating with all emergency services such as 911 and the emergency locate service, Metra for rerouting of bussess, Public Service Department for rerouting of Sanitation trucks, and Muscogee County School district for re routing of school busses. If emergency closure is required during the normal business day then the Department of Engineering and the Traffic Engineer shall be notified as well as all emergency services.

(Ord. No. 09-4, § 1, 1-27-09)

Section 8.8.19. - Penalties.

- A.** Upon determination that a violation of this Ordinance has occurred, the Department of Engineering may do one or more of the following:
1. Issue an oral or written warning that a violation has occurred and issue a timeline for the violation to be corrected.
 2. Issue a citation for the violation.
 3. Halt progress of a project immediately and have the permittee remove all equipment and personnel from the work site until such time as violations are corrected.
- B.** If after the verbal warning the violation is not corrected in the specified time then a written citation will be issued. A separate citation may be written for each day of violation.
- C.** Any violator shall be required to restore the disturbed area to an acceptable condition. If corrective action is not taken within 72 hours, the Department of Engineering may direct City forces be used to take corrective action with the cost of such action being charged to the appropriate party.
- D.** See Chapter 12, Administration and Enforcement, of this UDO for further details on penalties and fines for violations of these provisions.

Columbus, Georgia, Code of Ordinances >> APPENDIX A - UNIFIED DEVELOPMENT ORDINANCE >> Chapter 8 - Land Development Activities >> ARTICLE 9. - BUILDING CONSTRUCTION >>

ARTICLE 9. - BUILDING CONSTRUCTION

[Section 8.9.1. - Building Permit Required.](#)

[Section 8.9.2. - Building Inspection.](#)

[Section 8.9.3. - Construction in Flood Hazard Area.](#)

[Section 8.9.4. - Certificate of Occupancy Required.](#)

Section 8.9.1. - Building Permit Required.

- A. *Issuance of Permits.* Building permits for all structures or interior finishes are issued after complying with the applicable requirements of the fire prevention and/or life safety code and the various health and building codes.
- B. *Relocation or Movement of Structures.* A permit is required for the movement of any house, structure or building.
- C. *Airport Requirements and Building Permits.* Applicants for a building permit or for variances pertaining to airport requirements shall submit written approval from the Federal Aviation Administration (FAA) as required.
- D. *Changes to Historic Properties.* Material changes in the appearance of any historic property shall not be made until approval of a certificate of appropriateness.
- E. *Building Permits for Areas Served by On-site Sewage Disposal Systems.* For any structure served by an on-site sewage disposal system, a permit issued by the Muscogee County Health Department shall be required prior to issuance of a Building permit. Said permit may first require approval by the Muscogee County Health Department of a plan showing the location of the sewage disposal system and other on-site improvements, in accordance with their regulations.
- F. *Lots of Record.* Building permits shall only be issued on lots of record, as defined in this Development Ordinance. (Ord. No. 09-4, § 1, 1-27-09)

Section 8.9.2. - Building Inspection.

- A. *Scheduling a Building Inspection.* Inspections shall be scheduled with the Director of Inspections and Code Enforcement at least 24 hours before the inspection is needed. Requests for inspection should include the street address, lot number, building permit number, and type of inspection.
- B. *Required Inspections.* The following types of inspections are required by the City.
 - 1. *Foundation.* Verify minimum required building setbacks, footing, and trenches dug and reinforcing steel in place.
 - 2. *Plumbing Connections.* Water supply line and sewer lateral in slab foundation.
 - 3. *Framing.* Completion of all rough-ins and after insulation is installed.
 - 4. *Interior Walls.* Interior walls may not be covered until the inspections listed below are completed.
 - (A) *Mechanical.* Rough-ins complete with pressure test on gas line.
 - (B) *Electrical.* Rough-ins with neutral, ground, and service cable wired.
 - (C) *Plumbing.* Rough-ins complete and all fixtures installed.
 - 5. *Final Inspection.* Building is complete and ready to occupy.

Section 8.9.3. - Construction in Flood Hazard Area.

- A. *Requirements for Construction.* Construction of a structure within a flood hazard area for which a permit has been issued shall be governed by the following criteria.
 - 1. *Certification of Elevation.* Upon placement of the lowest floor, or floodproofing by whatever construction means, or upon placement of the horizontal structural members of the lowest floor, whichever is applicable, it shall be the duty of the permit holder to submit to the Director of Engineering a certification of the elevation of the lowest floor, floodproofed elevation, or the elevation of the lowest portion of the horizontal structural members of the lowest floor, whichever is applicable, as built, in relation to mean sea level.
 - 2. *Preparation.* Certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by such registered land surveyor or professional engineer.
 - 3. *Floodproofing.* When floodproofing is utilized for a particular building, the certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by the professional engineer or architect.
- B. *Work at Risk.* Any work undertaken prior to submission of the certification shall be at the development permit holder's risk.
- C. *Floor Elevation Survey.* The Director of Engineering shall review the floor elevation survey data submitted.
 - 1. *Deficiencies.* Deficiencies detected by such review shall be corrected by the development permit holder immediately and prior to further progressive work being permitted to proceed.
 - 2. *Failure to Submit.* Failure to submit the survey or failure to make the corrections shall be cause to issue a stop-work order for the project.

Section 8.9.4. - Certificate of Occupancy Required.

- A.** *Issuance Required.* A certificate of occupancy must be issued prior to the occupancy or use of any new or newly renovated building or structure, in accordance with the Development Review Procedures and Permits Chapter of this Ordinance.
- B.** *Temporary Certificates.* A temporary certificate of occupancy for a part of a building may be issued, provided no violation exists in the portion to be approved, under such rules and regulations as may be established by the Director of Inspections and Code Enforcement.