

TITLE 18

WATER AND STORM SEWERS¹

CHAPTER

1. WATER.
2. LAND DISTURBANCE REGULATIONS
3. POST CONSTRUCTION RUNOFF AND ILLICIT DISCHARGE AND CONNECTION TO STORMWATER REGULATIONS
4. NATIONAL FLOOD INSURANCE PROGRAM REGULATIONS

CHAPTER 1

WATER²

SECTION

- 18-101. Definitions.
- 18-102. Public nuisance declared.
- 18-103. Prohibition.
- 18-104. Abatement.
- 18-105. Appeals to board of mayor and aldermen.
- 18-106. Compliance required.
- 18-107. Obstruction of city building inspector.
- 18-108. Violation and penalty.

18-101. Definitions. For the purpose of this chapter, the following terms, phrases, words, and their derivation, shall have the meanings given herein:

- (1) "Aldermen:" "Aldermen", when used herein, shall mean the Board of Mayor and Aldermen of the City of Hendersonville, Sumner County, Tennessee.
- (2) "Certified mail:" "Certified mail may be used instead of registered mail whenever this chapter requires a notice to be given by Registered Mail.
- (3) "City:" "City", when used herein shall mean the City of Hendersonville, Sumner County, Tennessee.
- (4) "City building inspector:" The "city building inspector" shall be and mean that person designated as such by the mayor, or the city building inspector's designated representative.

¹Municipal code references

Building, utility and housing codes: title 12.
Refuse disposal: title 17.

²Municipal code reference

Plumbing code: title 12, chapter 2.

Rev. 9/2010

(5) "Computation of time:" The time within which any act is to be done shall be computed by excluding the first and including the last day, unless the last day is a Saturday, a Sunday, or a legal holiday, and then it shall also be excluded.

(6) "Gender: "Words importing the masculine gender shall include the feminine and neuter.

(7) "Number: "Words used in the singular include the plural and the plural includes the singular number.

(8) "Obstruction to the natural flow of water:" The term "obstruction to the natural flow of water", as used in this chapter, is hereby defined to mean and include any bridges, culverts, drainage structures, pipes, dams, spans, trestles, viaducts, causeways, artificial or man-made drains, or any other such or similar structure, and the depositing or dumping of any material, waste, refuse, garbage, or any other such or similar acts, that impede, impair, or hinder the natural flow of water so that injury or imminent danger, annoyance, hurt, harm, inconvenience, or damage to the general public or its property is likely to ensue, or the rights of the public generally or a considerable number of persons or inhabitants of this city are infringed, impaired, endangered, or placed in jeopardy, or threatened to be placed in jeopardy of harm, damage, or injury.

(9) "Person:" Person means any individual, firm, partnership, corporation, company, association, or joint stock association, and includes any trustee, receiver, assignee, or other similar representative thereof.

(10) "Shall; may: "The word "shall" is mandatory. The word "may" is permissive. (Ord. #1975-19, July 1975, modified)

18-102. Public nuisance declared. Any obstruction to the natural flow of water is hereby declared and proclaimed to be a public nuisance. (Ord. #1975-19, July 1975)

18-103. Prohibition. It shall be unlawful for any person to cause or to permit the construction, maintenance, or the existence of any obstruction to the natural flow of water within the area of this city or within this city's jurisdiction. (Ord. #1975-19, July 1975)

18-104. Abatement. (1) Whenever the city building inspector inspects or causes to be inspected any drains, streams, ditches, creeks, or any other bodies of water, or any places where water accumulates, or any structures, man-made or artificial, that affect the flow of any water by any means, directly or indirectly, when such structures are in, upon, near, or contiguous to the drains, streams, ditches, creeks, or any other bodies of water or any other places where water accumulates, and whenever the city building inspector shall find and be of the opinion that any bridge, dam, culvert, pipe, span, trestle, viaduct, causeway, artificial or man-made drain, or any such or similar structure, or the depositing or dumping of any material, waste, refuse, garbage, or

any other such or similar acts, are in a state of nuisance and that any such conation, structure, or activity, as aforesaid, obstructs the natural flow of water, as herein

Rev. 1/2004

defined, he shall notify or cause to be notified the person causing or permitting the construction, maintenance, or existence of said nuisance; and such person shall have such nuisance or the cause of such nuisance removed and abated within a reasonable time as prescribed in such written notice. Such notice shall be served by Registered Mail or Personal Service upon such person. Such notice may state that the obstruction has been declared to be a nuisance, and that such obstruction must be removed, or remedied by repairing, altering, or demolishing the same; and that in any event, the condition must be abated within the time prescribed herein. Such notice may set forth facts to show that the condition complained of constitutes a nuisance of a public character and that it is an "obstruction to the natural flow of water", as herein defined. Such notice may be in the following form or substantially, the following form:

"NOTICE AND DEMAND FOR REMOVAL TO: _____
(name of person, as

_____ herein defined, causing, or responsible for such obstruction)

You will please take notice that the City of Hendersonville, Sumner County, Tennessee, requires you to remedy or remove and to completely abate the nuisance and obstruction arising from

_____ (describe

_____ the condition complained of, the nuisance, and insert the

_____ facts as to the decision to proclaim such condition a nuisance)

at

_____ (describe the place and location of the obstruction)

You are further advised that upon default or upon your failure to remove, abate, or remedy such nuisance or obstruction by repairing, altering, or demolishing it within ___ days from the service of this notice, the city may proceed to abate and remove such nuisance and require you to pay all the expenses and costs incident thereto, or the city may pursue its other and various legal recourses, unless such time is extended by virtue of your taking an appeal to the aldermen from the findings and declarations of the city building inspector that such conditions, as aforesaid, constitute a nuisance, which appeal must be taken pursuant to Ordinance 1975-19, within seventy-two (72) hours from the service of this notice upon you. This notice is given without prejudice to any right of action for damages the city has already sustained or may sustain by reason of said nuisance and obstruction as aforesaid,

and without prejudice to any other right or relief or action to which the city may be entitled; all such rights the city has in this matter are hereby reserved.

Rev. 1/2004

Dated at _____, this _____
day of _____, 1975

THE CITY OF HENDERSONVILLE

By:

Title

(2) If such person or his agents shall neglect or refuse to comply with the terms of such notice and this chapter, the city building inspector, upon the expiration of the terms as set out in the said notice, is hereby empowered to remove such nuisance or the cause of such nuisance, utilizing either the services of some agency of this city or some private agency, at the expense of such person who is causing or responsible for said nuisance; such person's liability, if more than one, shall be joint and several. If the nuisance is abated by the city or its agents, public or private, the person causing or permitting the construction, maintenance, or existence of such nuisance shall be required to pay all of the reasonable expenses and costs of such abatement; such expenses and costs may be determined by the board of mayor and aldermen.

In the event that such person should feel aggrieved by any decision of the city building inspector in this regard, such aggrieved party shall, within seventy-two (72) hours from the receipt of the written or personal notice and demand for the abatement of the nuisance, file at the offices of the city building inspector and the city recorder, a request for a hearing by the aldermen, which request shall be in written form and shall contain the contentions of the aggrieved party. The aldermen shall hold a hearing to review the action of the city building inspector, and the aldermen shall affix a time and place for such hearing and shall notify such aggrieved person who is requesting a hearing. The aldermen, at such hearing or after such hearing, may affirm, amend, or set aside such action of the said city building inspector. No implementation of the order of the city building inspector for the abatement of the nuisance shall be effected, pending such hearing by the aldermen.

None of the remedies for the abatement of nuisances as set out in this chapter shall be deemed to be exclusive, or as precluding the city from seeking injunctive relief in equity or from seeking any other relief.

Nothing contained in this chapter shall be construed to affect, suspend, or delay any cause or right of action or actions that any other citizen or third party may have against such person causing such nuisance, nor will any action taken by the city affect any duty of such persons causing the nuisance to other citizens or third parties. (Ord. #1975-19, July 1975)

Rev. 1/2004

18-105. Appeals to board of mayor and aldermen. The aldermen shall hear and act upon such complaints filed by persons affected by decisions of the city building inspector, and may amend or set aside such decisions if contrary to the provisions of this chapter and the purpose and intent of this chapter. The concurring vote of a simple majority of those members present at such hearing shall be necessary to amend or set aside any order, requirement, decision, or determination of the city building inspector, provided, however, that a quorum of the board of mayor and aldermen is present at such hearing. A quorum constitutes a majority of all the members of said board of mayor and aldermen. Such an appeal shall only be perfected by the filing of an informal written request for a hearing before the aldermen and setting forth in such written request the contentions of the aggrieved party and explaining why the actions of the city building inspector should be set aside, modified, or vacated. Upon the perfecting of an appeal, the aggrieved party shall be granted a public hearing before the aldermen, as prescribed above, and he may appear on his own behalf or be represented by counsel. The aggrieved person's side of the matter shall first be heard, and subsequently, the city building inspector and the city attorney shall present their side, and both sides shall be permitted to introduce any relevant and competent evidence bearing on the issue. The notice of such hearing to which the aggrieved person shall be entitled shall be mailed to the said aggrieved person at least seven (7) days prior to the hearing date, unless in specific instances a shorter period of time is specified and agreed upon by the aldermen and the aggrieved person. Such notice of hearing shall be sent by Registered Mail to the address that shall be given by the aggrieved person in his written request for a hearing. The following disposition of any such complaint shall be in the form of a resolution, which shall affirm, amend, or set aside the decision of the city building inspector. No request to grant a rehearing of such decision of the aldermen shall be entertained unless new evidence is submitted that could not reasonably have been presented at the previous hearing. If justifiable grounds for a rehearing are alleged, they shall be made known, by a written communication to the aldermen, of which a copy of the same shall be filed with the city recorder; and if a motion to grant a rehearing shall receive the number of affirmative votes that is required to amend or set aside any decisions of the said city building inspector, as hereinabove prescribed, then a date for a rehearing shall be set. Such rehearing shall be conducted by the aldermen in substantially the same manner as required for the former hearing. (Ord. #1975-19, July 1975)

18-106. Compliance required. In lieu of enforcement of this chapter by way of prosecution, recovery of civil remedies, revocation of permits, condemnation, and other compulsory means, the city building inspector and the aldermen, either one or both, may seek to obtain the voluntary compliance with this chapter by way of notice, warning, or other educational means. This section does not, however, require that such non-compulsory methods be used before proceeding by way of a compulsory enforcement. (Ord. #1975-19, July 1975)

Rev. 1/2013

18-107. Obstruction of city building inspector. No person shall interfere with or obstruct the city building inspector or any of his designated representatives in carrying out any inspection, survey, or examination or the performance of any other duty for the office of the city building inspector. (Ord. #1975-19, July 1975)

18-108. Violation and penalty. Any person violating any provision of this chapter or permitting or causing any obstruction to the natural flow of water, as herein defined, shall be fined not more than fifty dollars (\$50.00) for each offense for each offense; and a separate offense shall be considered committed upon each day during or on which a violation occurs or continues. (Ord. #1975-19, July 1975, modified)

CHAPTER 2

LAND DISTURBANCE REGULATIONS

SECTION

1. General Provisions.
2. Definitions
3. Land Disturbance Permits.
4. Waivers.
5. Stormwater System Design and Management Standards.
6. Post Construction and Inspection.
7. Existing Locations and Developments.
8. Illicit Discharges Due to Land Disturbance.
9. Enforcement.
10. Penalties.

18-102. General provisions. (1). Purpose. It is the purpose of this ordinance to:

(a) Protect, maintain, and enhance the environment of the City of Hendersonville and the public health, safety and the general welfare of the citizens of the city, by controlling discharges of pollutants to the City's stormwater system and to maintain and improve the quality of the receiving waters into which the stormwater outfalls flow, including, without limitation, lakes, rivers, streams, ponds, wetlands, and groundwater of the city.

(b) Enable the City to comply with the National Pollution Discharge Elimination System (NPDES) permit and applicable regulations, 40 CFR 122.26

for

stormwater discharges.

(c) Allow the City to exercise the powers granted in Tennessee Code Annotated 68-221-1105, which provides that, among other powers municipalities have with respect to stormwater facilities, is the power by ordinance or resolution to:

(1) Exercise general regulation over the planning, location, construction, and operation and maintenance of stormwater facilities in the municipality, whether or not owned and operated by the municipality:

(2) Adopt any rules and regulations deemed necessary to accomplish the purposes of this statute, including the adoption of a system of fees for services and permits;

(3) Establish standards to regulate the quantity of stormwater discharged and to regulate stormwater contaminants as may be necessary to protect water quality:

Rev. 1/2004

- (4) Review and approve plans and plats for stormwater management in proposed subdivisions or commercial developments;
- (5) Issue permits for stormwater discharges, or for the construction, alteration, extension, or repair of stormwater facilities;
- (6) Suspend or revoke permits when it is determined that the permittee has violated any applicable ordinance, resolution, or condition of the permit;
- (7) Regulate and prohibit discharges into stormwater facilities of sanitary, industrial, or commercial sewage or waters that have otherwise been contaminated; and
- (8) Expend funds to remediate or mitigate the detrimental effects of contaminated land or other source of stormwater contamination, whether public or private.
- (9) In the case of conflicting Ordinances, this ordinance shall prevail.
- (2). Administering entity. The Director of Public Works shall administer the provisions of this ordinance.

18-202. Definitions. For the purpose of this chapter, the following definitions shall apply: Words used in the singular shall include the plural, and the plural shall include the singular; words used in the present tense shall include the future tense. The word "shall" is mandatory and not discretionary. The word "may" is permissive. Words not defined in this section shall be construed to have the meaning given by common and ordinary use as defined in the latest edition of Webster's Dictionary.

- (1) "As built plans" means drawings depicting conditions as they were actually constructed.
- (2) "Best management practices" or "BMPs" are physical, structural, and/or managerial practices that, when used singly or in combination, prevent or or reduce pollution of water, that have been approved by the City, and that have been incorporated by reference into this ordinance as if fully set out therein.
- (3) "Channel" means a natural or artificial watercourse with a definite bed and banks that conveys flowing water continuously or periodically.
- (4) "Community water" means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wetlands, wells and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the City.
- (5) "Contaminant" means any physical, chemical, biological, or radiological substance or matter in water.
- (6) "Days" or "Daily" shall mean calendar days.
- (7) "Design storm event" means a hypothetical storm event, of a given frequency interval and duration, used in the analysis and design of a stormwater facility.

Rev. 1/2004

(8) "Discharge" means dispose, deposit, spill, pour, inject, seep, dump, leak or place by any means, or that which is disposed, deposited, spilled, poured, injected, seeped, dumped, leaked, or placed by any means including any direct or indirect entry of any solid or liquid matter into the municipal separate storm sewer system.

(9) "Easement" means an acquired privilege or right of use or enjoyment that a person, party, firm, corporation, municipality or other legal entity has in the land of another.

(10) "Erosion" means the removal of soil particles by the action of water, wind, ice or other geological agents, whether naturally occurring or acting in conjunction with or promoted by anthropogenic activities or effects.

(11) "Erosion and sediment control plan" means a written plan (including drawings or other graphic representations) that is designed to minimize the accelerated erosion and sediment runoff at a site during construction activities.

(12) "Hotspot" ("priority area") means an area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater.

(13) "Illicit connection" means illegal and/or unauthorized connections to the municipal separate stormwater system whether or not such connections result in discharges into that system.

(14) "Illicit discharge" means any discharge to the municipal separate storm sewer system that is not composed entirely of stormwater and not specifically exempted under 3(3).

(15) "Land disturbing activity" means any activity on property that results in a change in the existing soil cover (both vegetative and non-vegetative) and/or the existing soil topography. Land-disturbing activities include, but are not limited to, development, re-development, demolition, construction, reconstruction, clearing, grading, filling, trench, and excavation.

(16) "Maintenance" means any activity that is necessary to keep a stormwater facility in good working order so as to function as designed. Maintenance shall include complete reconstruction of a stormwater facility if reconstruction is needed in order to restore the facility to its original operational design parameters. Maintenance shall also include the correction of any problem on the site property that may directly impair the functions of the stormwater facility.

(17) "Maintenance agreement" means a document recorded in the land records that acts as a property deed restriction, and which provides for long term maintenance of stormwater management practices.

Rev. 1/2004

(18) “Municipal separate storm sewer system (MS4)” (“Municipal separate stormwater system”) means the conveyances owned or operated by the municipality for the collection and transportation of stormwater, including the roads and streets and their drainage systems, catch basins, curbs, gutters, ditches, man-made channels, and storm drains.

(19) “National Pollutant Discharge Elimination System permit” or “NPDES permit” means a permit issued pursuant to 33 U.S.C. 1342.

(20) “Off-site facility” means a structural BMP located outside the subject property boundary described in the permit application for land development activity.

(21) “On-site facility” means a structural BMP located within the subject property boundary described in the permit application for land development activity.

(22) “Peak flow” means the maximum instantaneous rate of flow of water at a particular point resulting from a storm event.

(23) “Person” means any and all persons, natural or artificial, including any individual, firm or association and any municipal or private corporation organized or existing under the laws of this or any other state or country.

(24) “Priority area” means "hot spot" as defined in” 2(11).

(25) “Runoff” means that portion of the precipitation on a drainage area that is discharged from the area into the municipal separate stormwater system.

(26) “Sediment” means solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level

(27) “Sedimentation” means soil particles suspended in stormwater that can settle in stream beds and disrupt the natural flow of the stream.

(28) “Soils Report” means a study of soils on a subject property with the primary purpose of characterizing and describing the soils. The soils report shall be prepared by a qualified soils engineer, who shall be directly involved in the soil characterization either by performing the investigation or by directly supervising employees.

(29) “Stabilization” means providing adequate measures, vegetative and/or structural, that will prevent erosion from occurring.

(30) “Stormwater” means stormwater runoff, snow melt runoff, surface runoff, infiltration and drainage.

(31) “Stormwater management” means the programs to maintain quality and quantity of stormwater runoff to or below pre-development levels.

(32) “Stormwater management facilities” means the drainage structures, conduits, ditches, combined sewers, sewers, and all appurtenances by means of which stormwater is collected, transported, pumped, treated or disposed of.

Rev. 1/2004

(33) “Stormwater management plan” means the set of drawings and other documents that comprise all the information and specifications for the programs, drainage systems, structures, BMPs, concepts and techniques intended to maintain or restore quality and quantity of stormwater runoff to pre-development levels.

(34) “Stormwater runoff” means flow on the surface of the ground, resulting from precipitation.

(35) “Stormwater utility” means the Public Works Department that administers the stormwater management ordinance, and other stormwater rules and regulations adopted by the municipality.

(36) “Structural BMPs” means devices that are constructed to provide control of stormwater runoff.

(37) “Surface water” includes waters upon the surface of the earth in bounds created naturally or artificially including, but not limited to, streams, other water courses, lakes and reservoirs.

(38) “Watercourse” means a permanent or intermittent stream or other body of water, either natural or man-made, which gathers or carries surface water.

(39) “Watershed” means all the land area that contributes runoff to a particular point along a waterway.

18-203. Land disturbance permits. (1). When required. Every person will be required to obtain a land disturbance permit from the City in the following cases:

(a) Land disturbing activity disturbs one (1) or more acres of land

(b) Land disturbing activity of less than one (1) acre of land if such activity is part of a larger common plan of development that affects one (1) or more acre of land;

(c) Land disturbing activity of less than one (1) acre of land, it in the discretion of the City Engineer if such activity poses a unique threat to water, or public health or safety;

(d) The creation and use of borrow pits.

(2). Building permit. No building permit shall be issued until the applicant has obtained a land disturbance permit where the same is required by this ordinance.

(3). Exemptions. The following activities are exempt from the permit requirement:

(a) Any emergency activity that is immediately necessary for the

protection of life, property, or natural resources.

(b) Existing nursery and agricultural operations conducted as a permitted main or accessory use.

Rev. 1/2004

(c) Any logging or agricultural activity that is consistent with an approved farm conservation plan or a timber management plan prepared or approved by the appropriate state or federal agency.

(4). Application for a land disturbance permit.

(a) Each application shall include the following:

(1) Name of applicant;

(2) Business or residence address of applicant;

(3) Name, address and telephone number of the owner of the property of record in the office of the assessor of property;

(4) Address and legal description of subject property including the tax reference number and parcel number of the subject property;

(5) Name, address and telephone number of the contractor and any subcontractor(s) who shall perform the land disturbing activity and certified person who shall implement the erosion and sediment control plan;

(6) A statement indicating the nature, extent and purpose of the land disturbing activity including the size of the area for which the permit shall be applicable and a schedule for the starting and completion dates showing phasing of the land disturbing activity.

(7) Where the property includes a sinkhole, the applicant shall obtain from the Tennessee Department of Environment and Conservation appropriate permits.

(8) The applicant shall obtain from any other state or federal agency any other appropriate environmental permits that pertain to the property. However, the inclusion of those permits in the application shall not foreclose the City from imposing additional development requirements and conditions, commensurate with this ordinance, on the development of property covered by those permits.

(b) Each application shall be accompanied by:

(1) A sediment and erosion control plan as described in 5(5).

(2) A stormwater management plan as described in 5(4) providing for stormwater management during the land disturbing activity and after the activity has been completed.

(3) Each application for a land disturbance permit shall be accompanied by payment of land disturbance permit and other stormwater management fees, of \$50.00.

(5). Review and approval of application.

(a) The City will review each application for a land disturbance

Rev. 1/2004

determine its conformance with the provisions of this ordinance. Within thirty (30) days after receiving an application, the City shall provide one of the following responses in writing:

(1) Approval of the permit application;

(2) Approval of the permit application, subject to such reasonable conditions as may be necessary to secure substantially the objectives of this ordinance, and issue the permit subject to these conditions; or

(3) Denial of the permit application, indicating the reason(s) for the denial.

(b) If the City has granted conditional approval of the permit, the applicant shall submit a revised plan that conforms to the conditions established by the City. However, the applicant shall be allowed to proceed with his land disturbing activity so long as it conforms to conditions established by the City.

(c) No development plans will be released until the land disturbance permit has been approved and erosion and sediment control measures are in place.

(6). Permit duration. Every land disturbance permit shall expire and become null and void if substantial work authorized by such permit has not commenced within ninety (90) calendar days of issuance, or is not complete within twelve (12) months from the date of the commencement of construction.

(7). Notice of construction. The applicant must notify the City ten (10) working days in advance of the commencement of construction. The City shall conduct regular inspections of the stormwater management system construction. All inspections shall be documented and written reports prepared that contain the following information:

(1) The date and location of the inspection;

(2) Whether construction is in compliance with the approved

stormwater management plan;

(3) Variations from the approved construction specifications;

(4) Any violations that exist.

(8). Performance Surety.

(a) The City may, at its discretion, require the submittal of a performance surety prior in the form of a letter of credit or cashiers check to

issuance of a permit in order to ensure that the stormwater practices are installed

by the permit holder as required by the approved stormwater management plan.

The amount of the installation performance surety shall be the total estimated

construction cost determine by the City Engineer of the structural BMPs approved

under the permit plus any reasonably foreseeable additional related costs, e.g., for

damages or enforcement. The performance surety shall contain forfeiture

Rev. 1/2004

provisions for failure to complete work specified in the stormwater management plan.

(b) The performance surety shall be released in full only upon: 1) submission of as-built plans, 2) written detailed certification by a registered professional engineer licensed to practice in Tennessee that the structural BMPs have been installed in accordance with the approved plan and other applicable provisions of this ordinance, and 3) the City Engineer will make a final inspection of the structural BMPs to ensure that it is in compliance with the approved plan and provisions of this ordinance. Provisions for a partial pro-rata release of the performance surety based on the completion of various development stages can be made at the discretion of the City Engineer.

18-204. Waivers. (1). General. Every applicant shall provide for stormwater management as required by this ordinance. Requests to waive the stormwater management plan requirements shall be submitted to the City Engineer for approval.

(2). Conditions for waiver. The minimum requirements for stormwater management may be waived in whole or in part upon written request of the applicant, provided that at least one of the following conditions applies:

(a) It can be demonstrated that the proposed development is not likely to impair attainment of the objectives of this ordinance.

(b) Provisions are made to manage stormwater by an off-site facility. The off-site facility must be in place and designed to provide the level of

stormwater control that is equal to or greater than that which would be afforded by on-site practices. Further, the facility must be operated and maintained by an entity that is legally obligated to continue the operation and maintenance of the facility.

(3). Downstream damage, etc. prohibited. In order to receive a waiver, the applicant must demonstrate to the satisfaction of the City that the waiver will not lead to any of the following conditions downstream:

- (a) Deterioration of existing culverts, bridges, dams, and other structures;
- (b) Degradation of biological functions or habitat;
- (c) Accelerated stream bank or stream bed erosion or siltation;
- (d) Increased threat of flood damage to public health, life or property.

(4). Land disturbance permit not to be issued where waiver requested. No land disturbance permit shall be issued where a waiver has been requested until the waiver is granted. If no waiver is granted, the plans must be resubmitted with a stormwater management plan.

18-205. Stormwater system design and management standards. (1) Stormwater design or BMP manual.

Rev. 1/2004

(a) Adoption. The municipality adopts as its stormwater design and best

management practices (BMP) manual the following publications, which are incorporated by reference in this ordinance as is fully set out herein:

- (1) TDEC Sediment and Erosion Control Manual
- (2) TDEC Manual for Post Construction Runoff Control
- (3) Hendersonville Construction Manual
- (4) Metro Nashville Stormwater Management Manual

(b) This manual includes a list of acceptable BMPs including the specific design performance criteria and operation and maintenance requirements for each stormwater

practice. The manual may be updated and expanded from time to time upon the by the City Engineer, based on improvements in engineering, science, monitoring and local maintenance experience. Stormwater facilities that are designed, constructed, operated and maintained in accordance

with these BMP criteria will be presumed to meet the

minimum water quality performance standards. Failures to property design, install, or maintain BMPs shall constitute a violation of this ordinance

(2). General performance criteria for stormwater management. Unless granted a waiver or judged by the City Engineer to be exempt, the following performance criteria shall be addressed for stormwater management at all sites:

(a) All site designs shall control the peak flow rates of stormwater discharge associated with design storms specified in this ordinance or in the BMP manual and reduce the generation of post construction stormwater runoff to pre-construction levels. These practices should seek to utilize pervious areas for stormwater treatment and to infiltrate stormwater runoff from driveways, sidewalks, rooftops, parking lots, and landscaped areas to the maximum extent practical to provide treatment for both water quality and quantity.

(b) To protect stream channels from degradation, specific channel protection criteria shall be provided as prescribed in the BMP manual.

(c) Stormwater discharges to critical areas with sensitive resources (i.e., cold water fisheries, shellfish beds, swimming beaches, recharge areas, water supply reservoirs) may be subject to additional performance criteria, or may need to utilize or restrict certain stormwater management practices.

(d) Stormwater discharges from “hot spots” may require the application of specific structural BMPs and pollution prevention practices.

(e) Prior to or during the site design process, applicants for land disturbance permits shall consult with the City Engineer to determine if they are subject to additional stormwater design requirements.

Rev. 1/2004

(f) The calculations for determining peak flows as found in the BMP manual shall be used for sizing all stormwater facilities.

(3). Minimum control requirements.

(a) Design of stormwater facilities shall meet the multi-stage

storm frequency storage requirements as identified in the BMP manual unless the City has granted the applicant a full or partial waiver for a particular BMP under Section 4 (Waivers).

(b) If hydrologic or topographic conditions warrant greater control than that provided by the minimum control requirements, the City may impose any and all additional requirements deemed necessary to control the volume, timing, and rate of runoff.

(4). Stormwater management plan requirements. The stormwater management plan shall include sufficient information to allow the City Engineer to evaluate environmental characteristics of the project site, the potential impacts of all proposed development of the site, both present and future, on the water resources, and the effectiveness and acceptability of the measures proposed for managing stormwater generated at the project site. To accomplish this goal the stormwater management plan shall include the following:

(a) Topographic Base Map: A one (1) inch equals one hundred (100) topographic base map of the basin (5' contours) containing the site (2' contours) which extends a minimum of one hundred (100) feet beyond the limits of the basin of the proposed development and indicates:

(1) Existing surface water drainage including streams, ponds, culverts, ditches, sink holes, wetlands; and the type, size, elevation, etc., of the two (2) nearest upstream and downstream drainage structures;

(2) Current land use including all existing structures, locations of utilities, roads, and easements;

(3) All other existing significant natural and artificial features;

(4) Proposed land use with tabulation of the percentage of surface area to be adapted to various uses; drainage patterns; locations of utilities, roads and easements; the limits of

clearing and
grading;

(5) Proposed structural BMPs;

(6) A written description of the site plan and
justification

of proposed changes in natural conditions may also be
required.

(b) Calculations: Hydrologic and hydraulic design calculations prepared by a Tennessee Licensed Engineer for the pre-development and post-development conditions for the design storms specified in the BMP manual. These calculations must show that the proposed stormwater management

Rev. 1/2004

measures are capable of controlling the quantity and quality of runoff from the site in compliance with this ordinance and guidelines of the BMP manual. Such calculations shall include:

(1) A description of the design storm frequency,
duration,

and intensity where applicable;

(2) Time of concentration;

(3) Soil curve numbers or runoff coefficients
including

assumed pre-developed conditions being before any land
alteration,

i.e. grass or wooded, post-developed conditions and soil
moisture

conditions;

(4) Peak runoff rates and total runoff volumes for
each

watershed area;

(5) Infiltration rates, where applicable;

(6) Culvert, storm sewer, ditch and/or other
stormwater

conveyance capacities;

(7) Flow velocities;

(8) Data on the increase in rate

and volume of

runoff for the design storms referenced in the
BMP manual;

(9) Documentation of sources for all
computation methods

and field test results.

(c) Soils Information: If a stormwater management control measure depends on the hydrologic properties of soils (e.g., infiltration basins), then a soils report shall be submitted. The soils report shall be based on on-site boring logs or soil pit profiles and soil survey reports. The number and location of required soil borings or soil pits shall be determined based on what is needed to determine the suitability and distribution of soil types present at the location of the control measure.

(d) Maintenance and Repair Plan: The design and planning of all stormwater management facilities shall include detailed operation, maintenance, and repair procedures to ensure their continued performance. These plans will identify the parts or components of a stormwater management facility that need to be maintained and the equipment and skills or training necessary. Provisions for the periodic review and evaluation of the effectiveness of the maintenance program and the need for revisions or additional maintenance procedures shall be included in the plan. No area shall be disturbed over twenty (20) days without temporary seeding. A permanent elevation benchmark shall be identified in the plans to assist in the periodic inspection of the facility. An onsite inspection log of daily checking and repair is to be maintained weekly or after any rainfall of 0.5" or greater in a twenty-four (24) hour period, or during periods of prolonged rainfall.

(e) Landscaping Plan: The applicant must present a detailed plan for

Rev. 1/2004

management of vegetation at the site after construction is finished, including who will be responsible for the maintenance of vegetation at the site and what practices

will be employed to ensure that adequate vegetative cover is preserved. Where it is required by the BMP, a registered landscape architect licensed in Tennessee must prepare this plan.

(f) Maintenance Easements: The applicant must ensure access to the site for the purpose of inspection and repair by securing all the maintenance easements needed. These easements must be binding on the current property owner and all subsequent owners of the property and must be properly recorded in the land record.

(g) Maintenance Agreement:

(1) The owner of property to be served by an on-site stormwater management facility must execute an inspection, operation and maintenance agreement that shall operate as a deed restriction binding on the current property owner and all subsequent property owners.

(2) The maintenance agreement shall:

(a) Assign responsibility for the maintenance and repair of the stormwater facility to the owner of the property upon which the facility is located and be recorded as such on the plat for the property by appropriate notation.

(b) Provide for a periodic inspection by the property owner for the purpose of documenting maintenance and repair needs and ensure compliance with the purpose and requirements of this ordinance. The property owner will arrange for this inspection to be conducted by a registered professional engineer licensed to practice in the State

of
Tennessee who will submit a sealed report of the
inspection
to the City Engineer. It shall also grant permission
to the
City to enter the property at reasonable times and inspect
the
stormwater facility to ensure that it is being properly
maintained.

(c) Provide that the minimum
maintenance and
repair needs include, but are not limited to: removal of silt,
litter and other debris, cutting of grass, grass cuttings and
vegetation removal, and replacement of landscape
vegetation,
in detention and retention basins, and inlets and
drainage
pipes and any other stormwater facilities. It shall
also
provide that the property owner shall be responsible
for
additional maintenance and repair needs consistent
with the
needs and standards outlined in the BMP manual.

Rev. 1/2004

(d) Provide that maintenance needs must
be
addressed in a timely manner, on a schedule to be
determined
by the City Engineer.

(e) Provide that if the property is not
maintained
or repaired within the prescribed schedule, the City
shall
perform the maintenance and repair at its expense,
and bill
the same to the property owner. The maintenance
agreement
shall also provide that the City's cost of performing

facility
perpetual
to

the
maintenance shall be a lien against the property.
(3) The City shall have the discretion to accept the completion
of
any existing or future stormwater management facility, provided such
meets the requirements of this ordinance, and includes adequate and
access and sufficient areas, by easement or otherwise, for inspection and
regular maintenance. Any stormwater facility must also meet the City's
construction standards and any other standards and specifications that apply
the particular stormwater facility in question.

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the

(4) Sediment and Erosion Control Plans:
The applicant must
prepare a sediment and erosion control plan for all
construction activities that
complies with Section 5 (5) below.
(5). Sediment and erosion control plan requirements. The
sediment and erosion control plan shall accurately
describe the potential for
soil erosion and sedimentation problems resulting
from land disturbing
activity and shall explain and illustrate the measures
that are to be taken to
control these problems. The length and complexity of the plan is to be
commensurate with the size of the project, severity of the site condition, and
potential for off-site damage. A registered professional engineer licensed
the state of Tennessee shall seal the plan. The plan shall also conform to
requirements found in the BMP manual, and shall include at least the
following:

- (a) Project Description - Briefly describe the intended
project and proposed land disturbing activity
including number of
units and structures to be constructed and
infrastructure required.
- (b) A topographic map of the
basin with contour intervals
of five (5) feet or less and site contours of two

(2) feet showing present conditions and proposed contours resulting from land disturbing activity.

(c) All existing drainage conveyances, including intermittent and wet-weather. Include any designated floodways or flood plains.

(d) A general description of existing land cover. Individual trees and shrubs do not need to be identified unless

Rev. 1/2004

requested.

(e) Stands of existing trees, as they are to be preserved upon project completion, specifying their general location on the property. Differentiation shall be made between existing trees to be preserved, trees to be removed and proposed planted trees. Tree protection measures must be identified, and diameter of the area involved must also be identified on the plan and shown to scale. Information shall be supplied concerning the proposed destruction of exceptional and historic trees in setbacks and buffer strips, where they exist. Complete landscape plans may be submitted separately. The plan must include the sequence of implementation for tree protection measures.

(f) Approximate limits of proposed clearing, grading and filling.

(g) Approximate flows of existing stormwater leaving any portion of the site.

(h) A general description of existing soil types and characteristics and any anticipated soil erosion and sedimentation problems resulting from existing characteristics.

(i) Location, size and layout of proposed stormwater and sedimentation control improvements.

(j) Proposed drainage network.

(k) Proposed drain tile or waterway sizes.

(l) Approximate flows leaving site after construction and incorporating water run-off

mitigation measures. The evaluation must include projected effects on property adjoining the site and on existing drainage facilities and systems. The plan must address the adequacy of outfalls from the development: when water is concentrated, what is the capacity of waterways, if any, accepting stormwater off-site; and what measures, including infiltration, sheeting into buffers, etc., are going to be used to prevent the scouring of waterways and drainage areas off-site, etc.

(m) The projected sequence of work represented by the grading, drainage and sedimentation and erosion control plans as related to other major items of construction, beginning with the initiation of excavation and including the construction of any sediment basins or retention facilities or any other structural BMPs.

(n) Specific remediation measures to prevent erosion and sedimentation run-off. Plans shall include detailed drawings of all control measures used; stabilization measures including vegetation and non-vegetation measures, both temporary and permanent, will be detailed. Detailed construction notes and a maintenance schedule

Rev. 1/2004

shall be included for all control measures in the plan.

(o) Specific details for: the construction of rock pads, wash down pads, and settling basins for controlling

erosion; road access points; eliminating or keeping soil, sediment, and debris on streets and public ways at a level acceptable to the City. Soil, sediment, and debris brought onto streets and public ways must be removed by the end of the workday by machine, broom or shovel to the satisfaction of the City Engineer. Failure to remove the sediment, soil or debris shall be deemed a violation of this ordinance.

(p) Proposed structures; location (to the extent possible) and identification of any proposed additional buildings, structures or development on the site.

(q) A description of on-site measures to be taken to recharge surface water into the ground water system through infiltration.

18-206. Post Construction and Inspection. (1). As built plans - All applicants are required to submit actual as built plans for any structures located on-site after final construction is completed. The plan must show the final design specifications for all stormwater management facilities and must be sealed by a registered professional engineer licensed to practice in Tennessee. A final detailed inspection report by the engineer of record is required before any performance security will be released. The City Engineer shall have the discretion to adopt provisions for a partial pro-rata release of the performance security on the completion of various stages of development. In addition, occupation permits shall not be granted until corrections to all BMPs have been made and accepted by the City Engineer.

(2). Land Cover and stabilization requirements.

(a) Any area of land from which the natural vegetative cover has been either partially or wholly cleared by development activities shall be revegetated according to a schedule approved by the City Engineer. The following

criteria
shall apply to revegetation efforts:

- (1) Reseeding must be done with an annual or perennial cover crop accompanied by placement of straw mulch or its equivalent of sufficient coverage to control erosion until such time as the cover crop is established over ninety percent (90%) of the seeded area.
- (2) Replanting with native woody and herbaceous vegetation must be accompanied by placement of straw mulch or its equivalent of sufficient coverage to control erosion until the plantings are established and are capable of controlling erosion.

Rev. 1/2004

- (3) Any area of revegetation must exhibit survival of a minimum of ninety percent (90%) of the cover crop throughout the year immediately following revegetation. Revegetation must be repeated in successive years until the minimum ninety percent (90%) survival for one (1) year is achieved.
- (b) In addition to the above requirements, a landscaping plan must be submitted with the final design describing the vegetative stabilization and management techniques to be used at a site after construction is completed. This plan will explain not only how the site will be stabilized after construction, but who will be responsible for the maintenance of vegetation at the site and what practices will be employed to ensure that adequate vegetative cover is preserved.
- (3). Inspection of stormwater management facilities. Periodic inspections of facilities shall be performed as provided for in Section 5 of this ordinance and the

Hendersonville Construction Manual.

(4). Records of installation and maintenance activities. Parties responsible for the operation and maintenance of a stormwater management facility shall make weekly records during construction and monthly records after acceptance of the installation of the stormwater facility, and of all maintenance and repairs to the facility, and shall retain the records for at least three (3) years. These records shall be made available to the City during inspection of the facility and at other reasonable times upon request.

(5). Failure to meet or maintain design or maintenance standards. If a responsible party fails or refuses to meet the design or maintenance standards required for stormwater facilities under this ordinance, the City Engineer, after twenty days' (20) notice, may correct a violation of the design standards or maintenance needs by performing all necessary work to place the facility in proper working condition. In the event that the stormwater management facility becomes a danger to public safety or public health, the City Engineer shall notify in writing the party responsible for maintenance of the stormwater management facility. Upon receipt of that notice, the responsible person shall have ten (10) days to effect maintenance and repair of the facility in an approved manner. In the event that corrective action is not undertaken within that time, the City Engineer may take necessary corrective action. The cost of any action by the City under this section shall be charged to the responsible party and /or impose a minimum fine of five hundred (500) dollars per day up to ten thousand (10,000) per day.

18-207. Existing locations and developments. (1). Requirements for all existing locations and developments. The requirements of this ordinance shall apply to all locations and development at which land disturbing activities have occurred previous to the enactment of this ordinance including:

(a) Denuded areas must be vegetated or covered under the standards and guidelines specified in the BMP manual and on a schedule acceptable to the City Engineer.

(b) Cuts and slopes must be properly covered with appropriate vegetation and/or retaining walls constructed.

(c) Drainage ways shall be properly covered in vegetation or secured with rip-rap, channel lining, etc., to prevent erosion.

(d) Trash, junk, rubbish, etc. shall be cleared from drainage ways.

(e) Stormwater runoff shall be controlled to the extent reasonable to prevent pollution of local waters. Such control measures may include, but are not limited to, the following:

(1) Ponds

(a) Detention pond

(b) Extended detention pond

(c) Wet pond

(d) Alternative storage measures

(2) Constructed wetlands

(3) Infiltration systems

(a) Infiltration/percolation trench

(b) Infiltration basin

(c) Drainage (recharge) well

(d) Porous pavement

(4) Filtering systems

(a) Catch basin inserts/media filter

(b) Sand filter

(c) Filter/absorption bed

(d) Filter and buffer strips

(5) Open channel

(a) Swale

(2). Requirements for existing problem locations. The City Engineer shall in writing notify the owners of existing locations and developments of

specific drainage, erosion or sediment problem affecting such locations and developments, and the specific actions required to correct those problems. The

notice shall also specify a minimum of twenty (20) days for compliance.

(3). Inspection of existing facilities. The City Engineer may, to the extent authorized by state and federal law, establish inspection programs to verify

Rev. 1/2004

that all stormwater management facilities, including those built before as well as after the adoption of this ordinance, are functioning within design limits. These inspection programs may be established on any reasonable basis, including but not limited to: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; inspection of drainage basins or areas identified as higher than typical sources of sediment or other contaminants or pollutants; inspections of businesses or industries of a type associated with higher than usual discharges of contaminants or pollutants or with discharges of a type which are more likely than the typical discharge to cause violations of the municipality's NPDES stormwater permit; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to: reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in drainage control facilities; and evaluating the condition of drainage control facilities and other BMPs.

(4). Corrections of problems subject to appeal. Corrective measures imposed by the City are subject to appeal under this ordinance.

18-208. Illicit discharges due to land disturbance. (1). Scope. This section shall apply to all water generated on developed or undeveloped land entering the municipality's separate storm sewer system.

(2). Prohibition of illicit discharges. No person shall introduce or cause to be introduced into the municipal separate storm sewer system any discharge that is not composed entirely of stormwater. The commencement, conduct or continuance of any non-stormwater discharge to the municipal separate storm sewer system is prohibited except as described as follows:

- (a) Uncontaminated discharges from the following sources:
 - (1) Water line flushing or other potable water sources,
 - (2) Landscape irrigation or lawn watering with potable water,

- (3) Diverted stream flows,
- (4) Rising ground water,
- (5) Groundwater infiltration to storm drains,
- (6) Pumped groundwater,
- (7) Foundation or footing drains,
- (8) Crawl space pumps,
- (9) Air conditioning condensation,
- (10) Springs,
- (11) Non-commercial washing, for example vehicles
- (12) Natural riparian habitat or wet-land flows,
- (13) Swimming pools (if dechlorinated –

Rev. 1/2004

typically less than one PPM chlorine),

(14) Fire fighting activities, and

(15) Any other uncontaminated water source.

(b) Discharges specified in writing by the City as being necessary to protect public health and safety.

(c) Dye testing is an allowable discharge if the City Engineer pre-approves in writing.

(3). Prohibition of illicit connections.

(a) The construction, use, maintenance or continued existence of illicit connections to the separate municipal storm sewer system is prohibited.

(b) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

(4). Reduction of stormwater pollutants by the use of best management practices. Any person responsible for a property or premises, which is, or may be, the source of an illicit discharge, may be required to implement, at the person's expense, the BMPs necessary to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of stormwater associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section

(5). Notification of spills. Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting in, or may result in, illicit discharges or pollutants discharging into stormwater, the municipal separate storm sewer system, the person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of

hazardous materials the person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, the person shall notify the City Engineer in person or by telephone or facsimile no later than the next business day. Notifications in person or by telephone shall be confirmed by written notice addressed and mailed to the City Engineer within three (3) business days of the telephone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least five (5) years.

Rev. 1/2004

18-209. Enforcement (1). Enforcement authority. The City Engineer or his/her designees shall have the authority to issue notices of violation and citations, and to impose the civil penalties provided in this section.

(2). Notification of violation.

(a) Written Notice. Whenever the City finds that any permittee or any other person discharging stormwater has violated or is violating this ordinance or a permit or order issued hereunder, the City may serve upon such person written notice of the violation. Within ten (10) days of this notice, an explanation of the violation and a plan for the satisfactory correction and prevention thereof, to include specific required actions, shall be submitted to the City Engineer. Submission of this plan in no way relieves the discharger of liability for any violations occurring before or after receipt of the notice of violation.

(b) Consent Orders. The City Engineer is empowered to enter into consent orders, assurances of voluntary compliance, or other similar documents establishing an agreement with the person responsible for the noncompliance. Such orders will include specific action to be taken by the person to correct the noncompliance within a time period also

specified by the order. Consent orders shall have the same force and effect as administrative orders issued pursuant to paragraphs (d) and (e) below.

(c) Show Cause Hearing. The City Engineer may order any person who violates this ordinance or permit or order issued hereunder, to

show cause why a proposed enforcement action should not be taken.

Notice shall be served on the person specifying the time and place for the

meeting, the proposed enforcement action and the reasons for such action,

and a request that the violator show cause why this proposed enforcement

action should not be taken. The notice of the meeting shall be served

personally or by registered or certified mail (return receipt requested) at

least ten (10) days prior to the hearing.

(d) Compliance Order. When the City Engineer finds that any

person has violated or continues to violate this ordinance or a permit or

order issued there under, he may issue an order to the violator directing

that, following a specific time period, adequate structures, devices, be

installed or procedures implemented and properly operated.

Orders may

also contain such other requirements as might be reasonably necessary and

appropriate to address the noncompliance, including the construction of

appropriate structures, installation of devices, self-monitoring, and management practices.

(e) Cease and Desist Orders. When the City Engineer finds

That any person has violated or continues to violate this ordinance or any

Permit or order issued hereunder, the City Engineer may issue an order to

Rev. 1/2004

cease and desist all such violations and direct those persons in noncompliance to:

- (1) Comply forthwith; or
- (2) Take such appropriate remedial or preventive action as may be needed to properly address a continuing or threatened violation, including halting operations and terminating the discharge.
- (3). Conflicting standards. Whenever there is a conflict between any standard contained in this ordinance and in the BMP manual adopted by the municipality under this ordinance, the strictest standard shall prevail.

18-210. Penalties. (1). Violations. Any person who shall commit any act declared unlawful under this ordinance, who violates any provision of this ordinance, who violates the provisions of any permit issued pursuant to this ordinance, or who fails or refuses to comply with any lawful communication or notice to abate or take corrective action by the City, shall be guilty of a civil offense.

(2). Penalties. Under the authority provided in Tennessee Code Annotated Section 68-221-1106, the municipality declares that any person violating the provisions of this ordinance may be assessed a civil penalty by the City Engineer of not less than five hundred dollars (500) and not more than ten thousand dollars (10,000) per day or the maximum allow by law for each day of violation. Each day of violation shall constitute a separate violation.

(3). Measuring civil penalties. In assessing a civil penalty, the City Engineer may consider:

- (a) The harm done to the public health or the environment;
- (b) Whether the civil penalty imposed will be a substantial economic deterrent to the illegal activity;
- (c) The economic benefit gained by the violator;
- (d) The amount of effort put forth by the violator to

remedy this violation;

(e) Any unusual or extraordinary enforcement costs incurred by the municipality;

(f) The amount of penalty established by ordinance or resolution for specific categories of violations; and

(g) Any equities of the situation that outweigh the benefit of imposing any penalty or damage assessment.

(4). Recovery of damages and costs. In addition to the civil penalty in subsection (2) above, the City may recover; (a) all damages proximately caused by the violator to the City, which may include any reasonable expenses incurred in

Rev. 1/2004

investigating violations of, and enforcing compliance with, this ordinance, or any other actual damages caused by the violation.

(b) The costs of the City's maintenance of stormwater facilities when the user of such facilities fails to maintain them as required by this ordinance.

(5). Other remedies. The City may bring legal action to enjoin the continuing violation of this ordinance, and the existence of any other remedy, at law or equity, shall be no defense to any such actions.

(6). Remedies cumulative. The remedies set forth in this section shall be cumulative, not exclusive, and it shall not be a defense to any action, civil or criminal that one (1) or more of the remedies set forth herein has been sought or granted.

18-211. Appeals. There is created a Public Works Stormwater Advisory Committee which shall consist of seven members. One member from the Public Works Committee of the Board of Mayor and Aldermen, one representative from the

Hendersonville Utility District, the City Engineer, one builder or developer, three Hendersonville citizens of the general public appointed by the Public Works Committee..

(a) Term. Appointed members shall serve for a term of two years and can be reappointed for two addition consecutive terms.

(b) Organization. Within ten day after its appointment the Public Works Stormwater Committee shall organize itself by election of one chairman and vice chairman. The city engineer shall be the secretary of the committee to the committee and who shall be the custodian of the minutes and records of the proceedings of the committee.

(c) Compensation. All appointed members shall serve without compensation and be removed from the committee by the Public Works Committee for absence from meetings of the committee, physical disability, or other just cause.

(d) Replacement. Replacement of any appointed member of the committee resigning or dismissed form the committee shall be appointed by the Public Works Committee.

(e) Duties. The Public Works Stormwater Advisory Committee shall adopt such rules and regulations as it may deem necessary to conduct its business. The committee, in open meeting, shall hear all appeals, under the provisions of this ordinance and illicit discharges. The committee shall base its decisions on the written documentation presented before it. The committee shall meet at regular monthly intervals with the day and time to be determined by the committee's chairman. In the event no appeals have been filed and there is no business pending, the chairman may cancel the meeting five days before it scheduled date.

Rev. 1/2006

(f) Voting. Three members of the Public Works Stormwater Advisory Committee shall constitute a quorum. A majority vote of the members present shall be required for actions by the committee. No member of the committee shall act in any case in which he/she has a person financial interest.

Pursuant to Tennessee Code Annotated Section 68-221-1106(d), any person aggrieved by the imposition of a civil penalty or damage assessment as provided by this ordinance may appeal said penalty or damage assessment to the Public Works Stormwater Advisory Committee.

- (1). Appeals to be in writing. The appeal shall be in writing and filed with the Public Works secretary within fifteen (15) days after the civil penalty and/or damage assessment is served in any manner authorized by law.

(2). Public hearing. Upon receipt of an appeal, the Public Works Stormwater Advisory Committee shall hold a public hearing within thirty (30) days. Ten (10) days prior notice of the time, date, and location of said hearing shall be published in a daily newspaper of general circulation, place on the City's television channel, or place on the City's web page. Ten (10) days notice by registered mail shall also be provided to the aggrieved party, such notice to be sent to the address provided by the aggrieved party at the time of appeal. The decision of the Public Works Advisory Committee shall be final.

(3). Appealing decisions of the Public Works Stormwater Advisory Committee. Any alleged violator may appeal a decision of the Public Works Stormwater Advisory Committee pursuant to the provisions of Tennessee Code Annotated, Title 27, Chapter 9. (Ord. 2003-47, Oct. 2003)

CHAPTER 3

POST CONSTRUCTION RUNOFF AND ILLICIT DISCHARGE AND CONNECTIONS TO STORMWATER REGULATIONS**SECTION**

- 18-301. Purpose/Intent
- 18-302. Definitions
- 18-303. Applicability
- 18-304. Responsibility for administration
- 18-305. Severability
- 18-306. Ultimate responsibility
- 18-307. Post construction and inspection
- 18-308. Illicit discharges
- 18-309. Enforcement
- 18-310. Penalties
- 18-311. Appeals

18-301. Purpose/Intent. The language of this ordinance does not replace the Land Disturbance Ordinance; rather it is to be used in conjunction with the Land Disturbance Ordinance. The purpose of this ordinance is to provide for the health, safety, and general welfare of the citizens of the City of Hendersonville through the regulation of non-storm water discharges to the storm drainage system to the maximum extent practicable as required by federal and state law and to establish long term, post construction runoff management. This ordinance establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (NPDES) permit process. The objectives of this ordinance are:

- (1) to regulate the contribution of pollutants to the municipal separate storm sewer system (MS4) by stormwater discharges by any user;
- (2) to prohibit Illicit Connections and Discharges to the municipal separate storm sewer system;
- (3) to establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this ordinance;
- (4) minimize increases in stormwater runoff from any development in order to reduce flooding, siltation, increases in stream temperature, stream bank erosion, and maintain the integrity of stream channels;

Rev. 1/2005

- (5) minimize increases in non-point source pollution caused by stormwater runoff from development which would otherwise degrade local water quality;
- (6) minimize the total annual volume of surface water runoff which flows from any specific site during and following development to not exceed the pre-development hydrologic regime to the maximum extent practicable; and
- (7) reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management controls and to ensure that these management controls are properly maintained and pose no threat to public safety.

18-302. Definitions. For the purposes of this ordinance, the following shall mean:

- (1) Authorized Enforcement Agency: The Hendersonville Director of Public Works shall administer, and the City Engineer shall enforce the provisions of this ordinance.
- (2) Best Management Practices (BMPs): schedules of activities, prohibitions of practices, general good house keeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage include in the Hendersonville Construction Manual, Metro Nashville, Tennessee Department Environment Conservation and Environment Protection Agency Regulations.
- (3) BMP Treatment Train: A technique for progressively selecting various stormwater management practices to address water quality, by which groups of practices may be used to achieve a treatment goal while optimizing effectiveness, maintenance needs and space.
- (4) Clean Water Act: The federal Water Pollution Control Act (33 U.S.C. ' 1251 et seq.), and any subsequent amendments thereto.
- (5) Construction Activity: activities subject to NPDES Construction Permits. These include construction projects resulting in land disturbance. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.
- (6) Hazardous Materials: Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.
- (7) Hotspot ("priority area"): means an area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater.
- (8) Illegal Discharge: Any direct or indirect non-storm water discharge to the

Rev. 1/2005

storm drain system, except as exempted in Section 8 of this ordinance.

(9) **Illicit Connections:** An illicit connection is defined as either of the following: Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system including but not limited to any conveyances which allow any non-storm water discharge including sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency or, Any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

(10) **Industrial Activity:** Activities subject to NPDES Industrial Permits as defined in 40 CFR, Section 122.26 (b)(14).

(11) **Maintenance:** means any activity that is necessary to keep a stormwater facility in good working order so as to function as designed. Maintenance shall include complete reconstruction of a stormwater facility if reconstruction is needed in order to restore the facility to its original operational design parameters. Maintenance shall also include the correction of any problem on the site property that may directly impair the functions of the stormwater facility.

(12) **Maintenance agreement:** means a document recorded in the land records that acts as a property deed restriction, and which provides for long-term maintenance of stormwater management practices.

(13) **Municipal separate storm sewer system (MS4) ("Municipal separate stormwater system"):** means the conveyances owned or operated by the municipality for the collection and transportation of stormwater, including the roads and streets and their drainage systems, catch basins, curbs, gutters, ditches, man-made channels, and storm drains.

(14) **National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit.** means a permit issued by EPA (or by a State under authority delegated pursuant to 33 USC ' 1342(b)) that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis.

(15) **Non-Storm Water Discharge:** Any discharge to the storm drain system that is not composed entirely of storm water.

(16) **Person:** means any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner or as the owner's agent.

(17) **Pollutant:** Anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, and accumulations, so that same may

Rev. 1/2005

cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

(18) Premises: Any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

(19) Stormwater design or BMP manual: The City defines its stormwater design and best management practices (BMP) manual as the following publications, which are incorporated by reference in the Land Disturbance Ordinance as is fully set out herein: TDEC Sediment and Erosion Control Manual; TDEC Manual for Post Construction Runoff Control; Hendersonville Construction Manual; and the Metro Nashville Stormwater Management Manual. This manual includes a list of acceptable BMP's including the specific design performance criteria and operation and maintenance requirements for each stormwater practice. Stormwater facilities that are designed, constructed, operated and maintained in accordance with these BMP criteria will be presumed to meet the minimum water quality performance standards. Failures to properly design, install, or maintain BMP's shall constitute a violation of this ordinance.

(20) Storm Drainage System: Publicly-owned facilities by which storm water is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

(21) Storm Water: Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

(22) Stormwater Pollution Prevention Plan: A document which describes the Best Management Practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to Stormwater, Stormwater Conveyance Systems, and/or Receiving Waters to the Maximum Extent Practicable.

(23) Wastewater: means any water or other liquid, other than uncontaminated storm water, discharged from a facility.

18-303. Applicability. (1) This ordinance shall apply to all water entering the storm drain system generated on any developed and undeveloped lands unless explicitly exempted by an authorized enforcement agency.

(2) This ordinance shall be applicable to all subdivision or site plan applications, unless eligible for an exemption or granted a waiver by the City.

(3) The ordinance also applies to land development activities that are smaller than the minimum applicability criteria if such activities are part of a larger common plan of development that meets the following applicability criteria, even though multiple separate

and distinct land development activities may take place at different times on different schedules.

Rev. 1/2005

(4) In addition, all plans must also be reviewed by local environmental protection officials to ensure that established water quality standards will be maintained during and after development of the site and that post construction runoff levels are consistent with any local and regional watershed plans.

(5) To prevent the adverse impacts of stormwater runoff, the City has developed a set of performance standards that must be met at new development sites. These standards apply to any construction activity disturbing one acre or more of land. The following activities may be exempt from these stormwater performance criteria:

(a) Any logging and agricultural activity which is consistent with an approved soil conservation plan or a timber management plan prepared or approved by the appropriate state or federal agency as applicable.

(b) Additions or modifications to existing single family structures

(c) Developments that do not disturb more than one acre of land, provided they are not part of a larger common development plan and in the discretion of the City Engineer if such activity does not pose a unique threat to water, public health or safety.

(d) Repairs to any stormwater treatment practice deemed necessary by the City.

(6) When a site development plan is submitted that qualifies as a redevelopment project, decisions on permitting and on-site stormwater requirements shall be governed by special stormwater sizing criteria found in the current stormwater design manual as defined in Section 5 of the Land Disturbance Ordinance. This criteria is dependent on the amount of impervious area created by the redevelopment and its impact on water quality. Final authorization of all redevelopment projects will be determined after a review by the City.

18-304. Responsibility for Administration. The Hendersonville Director of Public Works shall administer, and the City Engineer shall enforce the provisions of this ordinance. Any powers granted or duties imposed upon the authorized enforcement agency may be delegated.

18-305. Severability. The provisions of this ordinance are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this Ordinance or the application thereof to any person, establishment, or circumstances shall be held invalid, such invalidity shall not affect the other provisions or application of this Ordinance.

18-306. Ultimate responsibility. The standards set forth herein and promulgated pursuant to this ordinance are minimum standards; therefore this ordinance does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, nor unauthorized discharge of pollutants.

Rev. 1/2005

18-307. Post construction and Inspection. (1). Permitting requirements, procedures and fees. Permitting shall be prepared and submitted as provided for in Section 3 of the City of Hendersonville Land Disturbance Ordinance. The Storm Water Management Plan and the Sediment and Erosion Control Plan shall be prepared to meet the requirements of Section 5 of the City of Hendersonville Land Disturbance Ordinance.

(2). Waivers. Waivers to the stormwater management plan requirements shall be in accordance with Section 4 of the City of Hendersonville Land Disturbance Ordinance.

(3). Performance Criteria for Stormwater Management. Unless granted a waiver or judged by the City Engineer to be exempt, the following performance criteria shall be addressed for stormwater management at all sites:

(a) All site designs shall control the peak flow rates of stormwater discharge associated with design storms specified in this ordinance or in the BMP manual as defined in Section 5 of the Land Disturbance Ordinance and reduce the generation of post construction stormwater runoff to pre-construction levels. These practices should seek to utilize pervious areas for stormwater treatment and to infiltrate stormwater runoff from driveways, sidewalks, rooftops, parking lots, and landscaped areas to the maximum extent practical to provide treatment for both water quality and quantity.

(b) Stormwater detention facilities shall be designed to control the rate at which flow is released over the entire runoff discharge period and the volume of discharge over the critical design-storm period to predevelopment conditions. This shall be applied for the 24 hour: 2-, 10-, 25-, and 100-year design-storm events.

(c) New development shall meet a stormwater quantity level of service defined by:

(1) Designing road catch basins and connecting culverts to convey the 25-year design-storm runoff.

(2) Designing bridges, culverts, channels and cross-drains to pass the 25-year design-storm runoff.

(d) Stormwater infrastructure shall be designed in a way that:

(1) Collector roads are not inundated by a 100-year design-storm event.

(2) Other existing roads (as impacted by new or existing development) shall be designed to have no overtopping the road under a 25-year design-storm event.

(3) Other new roads shall be designed to have no overtopping at the 25-year design-storm event.

(e) Development will be required to minimize the impact to stormwater quality by applying structural and/or nonstructural management practices selected to address site-specific conditions. The goal for water quality treatment shall be 90% total suspended solids removal of the first flush, defined

by land use characteristics or at least 0.5-inches where not defined, through a

Rev. 1/2005

BMP Treatment Train.

(f) To protect stream channels from degradation, specific channel protection criteria shall be provided as prescribed in the BMP manual.

(g) A waterway buffer shall be applied to all major waterways that are shown by F.E.M.A.

(1) Automatic exemptions are applied provided erosion protection and soil control, water quality and cut-fill policies are adequately addressed. They shall be permitted for: roads and utilities crossing waterways, and pedestrian trails and walkways proximate to waterways.

(2) The waterway buffer shall be defined as area contained within a boundary established 25-feet beyond the floodplain boundary as defined by F.E.M.A. or the City which ever is larger.

(h) The City may apply incentives for floodplain management strategies applied beyond those required by this ordinance.

(1) Strategies beyond those required may include, but not limited to:

(a) Extra (20-percent more than required) floodplain storage developed

(b) Greenways that are dedicated to the City

(c) Eroding waterways are restored or stabilized with bioengineering or "green" approaches

(d) New and innovative technologies are applied to address water quantity or quality.

(2) If the above management strategies are applied in a manner

acceptable to the City Engineer, then the City may apply incentives including, but not limited to: modification to the drainage plan or other development requirements acceptable to the City Engineer.

(i) Stormwater discharges to critical areas with sensitive resources (i.e., cold water fisheries, shellfish beds, swimming beaches, recharge areas, water supply reservoirs) may be subject to additional performance criteria, or may need to utilize or restrict certain stormwater management practices.

(j) Stormwater discharges from "hot spots" may require the application of specific structural BMPs and pollution prevention practices.

(k) Prior to or during the site design process, applicants for land disturbance permits shall consult with the City Engineer to determine if they are subject to additional stormwater design requirements.

(l) The calculations for determining peak flows as found in the BMP manual shall be used for sizing all stormwater facilities.

(4) Minimum control requirements. (a) Design of stormwater facilities shall meet the multi-stage storm frequency storage requirements as identified in the

Rev. 1/2005

BMP manual unless the City has granted the applicant a full or partial waiver for a particular BMP.

(b) If hydrologic or topographic conditions warrant greater control than that provided by the minimum control requirements, the City may impose any and all additional requirements deemed necessary to control the volume, timing, and rate of runoff.

(5) Site Design Feasibility. Stormwater management practices for a site shall be chosen based on the physical conditions of the site. Among the factors that should be considered:

- (a) Topography.
- (b) Maximum Drainage Area.
- (c) Depth to Water Table.
- (d) Soils.
- (e) Slopes.
- (f) Terrain.
- (g) Location in relation to environmentally sensitive features or urban areas

Applicants shall consult the Stormwater Design or BMPs as defined in Section 5 of the Land Disturbance Ordinance for guidance on the factors that determine site design feasibility when selecting a best management practice.

(6) Conveyance issues. All best management practices shall be designed to convey stormwater to allow for the maximum removal of pollutants and reduction in flow velocities. This shall include, but not be limited to:

- a. Maximizing of flowpaths from inflow points to outflow points.
- b. Protection of inlet and outfall structures.
- c. Elimination of erosive flow velocities.
- d. Providing of underdrain systems, where applicable.

The Stormwater Design Manual shall provide detailed guidance on the requirements for conveyance for each of the approved stormwater management practices.

(7) Pretreatment requirements. (1) Every BMP shall have an acceptable form of water quality pretreatment, in accordance with the pretreatment requirements found in the current stormwater design manual. Certain stormwater treatment practices, as specified in the Stormwater Design Manual, are prohibited even with pretreatment in the following circumstances:

- a. Stormwater is generated from highly contaminated source areas known as "hotspots".

Rev. 1/2005

b. Stormwater is carried in a conveyance system that also carries contaminated, non- stormwater discharges.

c. Stormwater is being managed in a designated groundwater recharge area.

d. Certain geologic conditions exist (e.g., karst) that prohibit the proper pretreatment of stormwater.

(8) Treatment/Geometry conditions. All BMP's shall be designed to capture and treat stormwater runoff according to the specifications outlined in the Stormwater Design Manual. These specifications will designate the water quantity and quality treatment criteria that apply to an approved stormwater management practice.

(9) Non-Structural Stormwater Practices. The use of non-structural stormwater treatment practices, such as increased green space, is encouraged in order to minimize the reliance on structural practices. Credit in the form of reductions in the amount of stormwater that must be managed can be earned through the use of non-structural practices that reduce the generation of stormwater from the site. These non-structural practices are explained in detail in the stormwater design manual and applicants wishing to obtain credit for use of non-structural practices must ensure that these practices are documented and remain unaltered by subsequent property owners.

(10). Notice of construction commencement. The applicant must notify the City ten (10) working days in advance of the commencement of construction. The City shall conduct regular inspections of the stormwater management system construction.

All

inspections shall be documented and written reports prepared that contain the following information:

- (1) The date and location of the inspection.
- (2) Whether construction is in compliance with the approved stormwater management plan.
- (3) Variations from the approved construction specifications.
- (4) Any violations that exist.

(11). As built plans. All applicants are required to submit actual as built plans for any structures located on-site after final construction is completed. The plan must show the final design specifications for all stormwater management facilities and must be sealed by a registered professional engineer licensed to practice in Tennessee. A final detailed inspection report by the engineer of record is required. The City Engineer shall have the discretion to adopt provisions for a partial pro-rata release of the performance security on the completion of various stages of development. In addition, occupation permits shall not be granted until corrections to all BMPs have been made and accepted

by the City Engineer.

(12). Land cover and stabilization requirements. (1) Any area of land from which the natural vegetative cover has been either partially or wholly cleared by

Rev. 1/2005

development activities shall be revegetated according to a schedule approved by the City Engineer. The following criteria shall apply to revegetation efforts:

a. Reseeding must be done with an annual or perennial cover crop accompanied by placement of straw mulch or its equivalent of sufficient coverage to control erosion until such time as the cover crop is established over ninety percent (90%) of the seeded area.

(b) Replanting with native woody and herbaceous vegetation must be accompanied by placement of straw mulch or its equivalent of sufficient coverage to control erosion until the plantings are established and are capable of controlling erosion.

(d) Any area of revegetation must exhibit survival of a minimum of ninety percent (90%) of the cover crop throughout the year immediately following revegetation. Revegetation must be repeated in successive years until the minimum ninety percent (90%) survival for one (1) year is achieved.

(2) In addition to the above requirements, a landscaping plan, in accordance to Section 5 of the City of Hendersonville Land Disturbance Ordinance, must be submitted to the City Engineer with the final design describing the vegetative stabilization and management techniques to be used at a site after construction is completed. This plan will explain not only how the site will be stabilized after construction, but who will be responsible for the maintenance of vegetation at the site and what practices will be employed to ensure that adequate cover. The plan shall include plant materials approved by the City Engineer that are in addition to grasses that ensure vegetative cover is preserved. All requirements of this ordinance shall be in addition to that required by other regulations and ordinances.

(13). Maintenance Easement. Prior to the issuance of any permit that has a stormwater management facility as one of the requirements of the permit, the applicant or owner of the site must execute a maintenance easement agreement that shall be binding on all subsequent owners of land served by the stormwater management facility. The agreement shall provide for access to the facility at reasonable times for periodic inspection by the City, or their contractor or agent, and for regular or special assessments of property owners to ensure that the facility is maintained in proper working condition to meet design standards and any other provisions established by this ordinance. The easement 14). agreement shall be recorded by the City in the land records.

(14.) Maintenance. Maintenance of all stormwater management facilities shall be ensured through the creation of a formal maintenance easement that must be approved

by the City and recorded into the land records as a final plat. As part of maintenance, a schedule shall be developed for when and how often maintenance will occur to ensure proper function of the stormwater management facility. The final plat shall include

Rev. 1/2005

notes for periodic inspections to ensure proper performance of the facility between scheduled cleanouts.

The City, in lieu of an maintenance plan, may accept dedication of any existing or future stormwater management facility for maintenance, provided such facility meets all the requirements of this chapter and includes adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance.

(14). Requirements for Maintenance. All stormwater management facilities must undergo, at the minimum, an annual inspection by owner to document maintenance and repair needs and ensure compliance with the requirements of this ordinance and accomplishment of its purposes. These needs may include; removal of silt, litter and other debris from all catch basins, inlets and drainage pipes, grass cutting and vegetation removal, and necessary replacement of landscape vegetation. Any maintenance needs found must be addressed in a timely manner, as determined by the City, and the inspection and maintenance requirement may be increased as deemed necessary to ensure proper functioning of the stormwater management facility.

(15). Inspection of Stormwater Facilities. Inspection programs may be established on any reasonable basis, including but not limited to: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; inspection of drainage basins or areas identified as higher than typical sources of sediment or other contaminants or pollutants; inspections of businesses or industries of a type associated with higher than usual discharges of contaminants or pollutants or with discharges of a type which are more likely than the typical discharge to cause violations of state or federal water or sediment quality standards or the NPDES stormwater permit; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to: reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in drainage control facilities; and evaluating the condition of drainage control facilities and other stormwater treatment practices.

(16). Right-of-Entry for Inspection. When any new drainage control facility is installed on private property, or when any new connection is made between private property and a public drainage control system or sanitary sewer, the property owner shall grant to the City the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection. This includes the right to enter a property when it has a reasonable basis to believe that a violation of this ordinance is occurring or has occurred, and to enter when necessary for abatement of a public nuisance or correction of a violation of this ordinance.

(17). Inspection of stormwater management facilities. Periodic inspections of facilities shall be performed as provided for in Section 6 of the City of Hendersonville Land Disturbance Ordinance and the Hendersonville Construction Manual.

Rev. 1/2005

(18). Records of installation and maintenance activities. Parties responsible for the operation and maintenance of a stormwater management facility shall make weekly records during construction and monthly records after acceptance of the installation of the stormwater facility, and of all maintenance and repairs to the facility, and shall retain the records for at least three (3) years. These records shall be made available to the City during inspection of the facility and at other reasonable times upon request.

(19). Failure to meet or maintain design or maintenance standards. If a responsible party fails or refuses to meet the design or maintenance standards required for stormwater facilities under this ordinance, the City Engineer, after twenty day (20) notice,

may correct a violation of the design standards or maintenance needs by performing all necessary work to place the facility in proper working condition. In the event that the stormwater management facility becomes a danger to public safety or public health, the City Engineer shall notify in writing the party responsible for maintenance of the stormwater management facility. Upon receipt of that notice, the responsible person shall have ten (10) days to effect maintenance and repair of the facility in an approved manner. In the event that corrective action is not undertaken within that time, the City Engineer may take necessary corrective action. The cost of any action by the City under this section shall be charged to the responsible party and /or impose a minimum fine of five hundred (500) dollars per day up to ten thousand (10,000) dollars per day.

13-308. Illicit discharges. (1). Prohibition of Illegal Discharges. No person shall discharge or cause to be discharged into the municipal storm drain system or watercourses any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than storm water.

The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited except as described as follows:

- (a) Uncontaminated discharges from the following sources:
 - (1) Water line flushing or other potable water sources,
 - (2) Lawn watering with potable water,
 - (3) Diverted stream flows,
 - (4) Rising ground water,
 - (5) Groundwater infiltration to storm drains,
 - (6) Pumped groundwater,
 - (7) Foundation or footing drains,

- (8) Crawl space pumps,
- (9) Air conditioning condensation,

Rev. 1/2005

- (10) Springs,
- (11) Non-commercial washing, for example vehicles,
- (12) Natural riparian habitat or wet-land flows,
- (13) Swimming pools (if de-chlorinated - typically less than one PPM chlorine),
- (14) Fire fighting activities such as hydrant testing, and
- (15) Any other uncontaminated water source.

(b) Discharges specified in writing by the authorized enforcement agency as being necessary to protect public health and safety.

(c) Biodegradable dye testing is an allowable discharge, but requires a verbal notification to the authorized enforcement agency prior to the time of the test and may require a permit from other agencies.

(d) The prohibition shall not apply to any non-storm water discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

(2). Prohibition of Illicit Connections.

(a) The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited.

(b) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

(c) A person is considered to be in violation of this ordinance if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.

(3). Reduction of stormwater pollutants by the use of best management practices. Any person responsible for a property or premises, which is, or may be, the source of an illicit discharge, may be required to implement, at the person's expense, the BMPs necessary to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of stormwater associated with industrial activity, to the extent

practicable, shall be deemed compliance with the provisions of this section.

(4). Notification of spills. Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting in, or may result in, illicit discharges or

Rev. 1/2005

pollutants discharging into stormwater, the municipal separate storm sewer system, the person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials the person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services and contact the City Engineer no later than the next business days. In the event of a release of non-hazardous materials, the person shall notify the City Engineer in person or by telephone or facsimile no later than the next business day. Notifications in person or by telephone shall be confirmed by written notice addressed and mailed to the City Engineer within three (3) business days of the telephone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least five (5) years.

(5). Suspension of MS4 Access. (a) Suspension due to Illicit Discharges in Emergency Situations. The City may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or Waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the authorized enforcement agency may take such steps as deemed necessary to prevent or minimize damage to the MS4 or Waters of the United States, or to minimize danger to persons.

(b) Suspension due to the Detection of Illicit Discharge. Any person discharging to the MS4 in violation of this ordinance may have their MS4 access terminated. The authorized enforcement agency will notify a violator of the proposed termination of its MS4 access. The violator may petition the authorized enforcement agency for reconsideration and hearing as outlined in the Land Disturbance Ordinance.

A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this Section, without the prior approval of the authorized enforcement agency.

(6). Industrial or construction activity discharge. Any person subject to an industrial or construction activity NPDES storm water discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the City prior to the allowing of discharges to the MS4.

(7). Monitoring of discharges. Applicability. This section applies to all facilities that have storm water discharges associated with industrial activity, including construction activity.

(b) Access to Facilities.

(1) The City shall be permitted to enter and inspect facilities subject to regulation under this ordinance as often as may be necessary to

Rev. 1/2005

determine compliance with this ordinance. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the authorized enforcement agency.

(2) Facility operators shall allow the City ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge storm water, and the performance of any additional duties as defined by state and federal law.

(3) The City shall have the right to set up on any permitted facility such devices as are necessary in the opinion of the authorized enforcement agency to conduct monitoring and/or sampling of the facility's storm water discharge.

(4) The City has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality shall be calibrated to ensure their accuracy.

(5) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the City and shall not be replaced unless otherwise notified by the City. The costs of clearing such access shall be borne by the operator.

(6) Unreasonable delays in allowing the City access to a permitted facility are a violation of a storm water discharge permit and of this ordinance. A person who is the operator of a facility with an NPDES permit to discharge storm water associated with industrial activity commits an offense if the person denies the authorized enforcement agency reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this ordinance.

(7) If the City has been refused access to any part of the premises from which stormwater is discharged, and is able to demonstrate probable cause to believe that there may be a violation of this ordinance, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this ordinance or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the authorized enforcement agency may seek issuance of a search warrant from any court of competent jurisdiction.

(8). Requirement to prevent, control and reduce storm water pollutants by the

Rev. 1/2005

use of best management practices. The City requires identifying Best Management Practices for any activity, operation, or facility which may cause or contribute to pollution or contamination of storm water, the storm drain system, or waters of the U.S. The owner or operator of a commercial or industrial establishment shall provide, at their own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses through the use of these structural and non-structural BMPs. Further, any person responsible for a property or premise, which is, or may be, the source of an illicit discharge, may be required to implement, at said person's expense, additional structural and non-structural BMPs to prevent the further discharge of pollutants to the MS4. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of storm water associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section. These BMPs shall be part of a stormwater pollution prevention plan (SWPPP) as necessary for compliance with requirements of the NPDES permit.

(9). Watercourse protection. Every person owning property through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

18-309. Enforcement. (1). Notice of Violation.

(a) Written Notice. Whenever the City finds that any permittee or any other person has violated or is violating this ordinance or a permit or order issued hereunder, the City may serve upon such person written notice of the violation. Within ten (10) days of this notice, an explanation of the violation and a plan for the satisfactory correction and prevention thereof, to include specific required actions, shall be submitted to the City Engineer. Submission of this plan in no way relieves the discharger of liability for any violations occurring before or after receipt of the notice of violation.

(b) Consent orders. The City Engineer is empowered to enter into consent orders, assurances of voluntary compliance, or other

similar documents establishing an agreement with the person responsible for the noncompliance. Such orders will include specific action to be taken by the person to correct the noncompliance within a time period also specified by the order. Consent orders shall have the same force and effect as administrative orders issued pursuant to paragraphs (d) and (e) below.

(c) Show cause hearing. The City Engineer may order any person who violates this ordinance or permit or order issued hereunder, to

Rev. 1/2005

show cause why a proposed enforcement action should not be taken.

Notice shall be served on the person specifying the time and place for the meeting, the proposed enforcement action and the reasons for such action, and a request that the violator show cause why this proposed enforcement action should not be taken. The notice of the meeting shall be served personally or by registered or certified mail (return receipt requested) at least ten (10) days prior to the hearing.

(d) Compliance order. When the City Engineer finds that any person has violated or continues to violate this ordinance or a permit or order issued there under, he may issue an order to the violator directing that, following a specific time period, adequate structures, devices, be installed or procedures implemented and properly operated. Orders may also contain such other requirements as might be reasonably necessary and appropriate to address the noncompliance, including the construction of appropriate structures, installation of devices, self-monitoring, and management practices.

(e) Cease and desist orders. When the City Engineer finds that any person has violated or continues to violate this ordinance or any permit or order issued hereunder, the City Engineer may issue an order to cease and desist all such violations and direct those persons in noncompliance to:

(1) Comply forthwith; or

(2) Take such appropriate remedial or preventive action as may be needed to properly address a continuing or threatened violation, including halting operations and terminating the discharge.

(2). Conflicting standards. Whenever there is a conflict between any standard contained in this ordinance and in the Land Disturbance Ordinance and the BMP practices adopted by the municipality under the Land Disturbance Ordinance, the strictest standard shall prevail.

18-310. Penalties. (1). Violations. Any person who shall commit any act declared unlawful under this ordinance, who violates any provision of this ordinance, who violates the provisions of any permit issued pursuant to this ordinance, or who fails or refuses to comply with any lawful communication or notice to abate or take corrective action by the City, shall be guilty of a civil offense.

(2). Penalties. Under the authority provided in The federal Water Pollution Control Act (33 U.S.C. ' 1251 et seq.), and Tennessee Code Annotated '68-221-1106, the municipality declares that any person violating the provisions of this ordinance may be assessed a civil penalty by the City Engineer of not less than five hundred dollars (500)

Rev. 1/2005

and not more than ten thousand dollars (10,000) per day or the maximum allowed by law for each day of violation. Each day of violation shall constitute a separate violation. Funds received by this ordinance and the Land Disturbance Ordinance shall be received and designate to the City's drainage improvements account unless specified by separate ordinance.

(3). Measuring civil penalties. In assessing a civil penalty, the City Engineer may consider:

- (a) The harm done to the public health or the environment;
- (b) Whether the civil penalty imposed will be a substantial economic deterrent to the illegal activity;
- (c) The economic benefit gained by the violator;
- (d) The amount of effort put forth by the violator to remedy this violation;
- (e) Any unusual or extraordinary enforcement costs incurred by the municipality;
- (f) The amount of penalty established by ordinance or resolution for specific categories of violations; and
- (g) Any equities of the situation that outweigh the benefit of imposing any penalty or damage assessment.

(4). Recovery of damages and costs. In addition to the civil penalty in subsection (2) above, the City may recover;

- (a) all damages proximately caused by the violator to the City, which may include any reasonable expenses incurred in investigating violations of, and enforcing compliance with, this ordinance, or any other actual damages caused by the violation.
- (b) The costs of the City's maintenance of stormwater facilities when the user of such facilities fails to maintain them as required by this ordinance.

(5). Other remedies. The City may bring legal action to enjoin the continuing violation of this ordinance, and the existence of any other remedy, at law or equity, shall be no defense to any such actions.

(6). Remedies cumulative. The remedies set forth in this section shall be cumulative, not exclusive, and it shall not be a defense to any action, civil or criminal that one (1) or more of the remedies set forth herein has been sought or granted.

18-311. Appeals. There is created a Public Works Stormwater Advisory Committee which shall consist of seven members. One member from the public works committee, one person from the utility district, the city engineer, one builder or developer, three Hendersonville citizens of the general public appointed by the Public Works Committee.

(1) Term. Appointed members shall serve for a term of two years and

Rev. 1/2005

can be reappointed for two addition consecutive terms.

(2) Organization. Within ten (10) days after its appointment the Public Works Stormwater Committee shall organize itself by election of one chairman and vice chairman. The City Engineer shall be the secretary to the committee and who shall be the custodian of the minutes and records of the proceedings of the committee.

(3) Compensation. All appointed members shall serve without compensation and be removed from the committee by the Public Works Committee for absence from meetings of the committee, or other just cause.

(4) Replacement. Replacement of any appointed member of the committee resigning or dismissed from the committee shall be appointed by the Public Works Committee.

(5) Duties. The Public Works Stormwater Advisory Committee shall adopt such rules and regulations as it may deem necessary to conduct its business. The committee, in open meeting, shall hear all appeals, under the provisions of this ordinance and the Land Disturbance Ordinance. The committee shall base its decisions on the written documentation presented before it. The committee shall meet at regular monthly intervals with the day and time to be determined by the committee's chairman. In the event no appeals have been filed and there is no business pending, the chairman may cancel the meeting five days before its scheduled date.

(6) Voting. Three members of the Public Works Stormwater Advisory Committee shall constitute a quorum. A majority vote of the members present shall be required for actions by the committee. No member of the committee shall act in any case in which he/she has a person financial interest.

(7) Pursuant to Tennessee Code Annotated §68-221-1106(d) any person aggrieved by the imposition of a civil penalty or damage assessment as provided by this ordinance may appeal said penalty or damage assessment to the Public Works Stormwater Advisory Committee.

(a). Appeals to be in writing. The appeal shall be in writing and

filed with the Public Works secretary within fifteen (15) days after the civil penalty and/or damage assessment is served in any manner authorized by law.

(b). Public hearing. Upon receipt of an appeal, the Public Works Stormwater Advisory Committee should hold a public hearing within thirty (30) days. Ten (10) days prior notice of the time, date, and location of said hearing shall be published in a daily newspaper of general circulation, placed on the City's television channel, or placed on the City's web page. Ten (10) days notice by registered mail shall also be provided to the aggrieved party, such notice to be sent to the address provided by the aggrieved party at the time of appeal. The decision of the Public Works Advisory Committee shall be final.

Rev. 1/2006

(8). Appealing decisions of the Public Works Stormwater Advisory Committee. Any alleged violator may appeal a decision of the Public Works Stormwater Advisory Committee pursuant to the provisions of Tennessee Code Annotated, Title 27, Chapter 9 and the federal Water Pollution Control Act (33 U.S.C. 1251 et seq.). (Ord. 2004-27, August 2004)

CHAPTER 4

NATIONAL FLOOD INSURANCE PROGRAM REGULATIONS

SECTION

- 18-401. Statutory Authorization.
- 18-402. Findings of Fact.
- 18-403. Statement of Purpose
- 18.404. Objectives.
- 18.405. Definitions.
- 18-406. Application.
- 18-407. Basis for Establishing the Areas of Special Flood Hazard.
- 18-408. Requirement for Development Permit.
- 18-409. Compliance.
- 18-410. Abrogation and Greater Restrictions.
- 18-411. Interpretation.
- 18-412. Warning and Disclaimer of Liability.
- 18-413. Penalties for Violation.
- 18-414. Designation of Ordinance Administrator.
- 18-415. Permit Procedures.
- 18-416. Duties and Responsibilities of the Administrator.
- 18-417. General Standards.
- 18-418. Specific Standards.
- 18-419. Standards for Special Flood Hazard Areas with Established Base Flood Elevations and with Floodways Designated.
- 18-420. Standards for Areas of special Flood Hazard Zones AE with Established Base Flood Elevations but Without Floodways Designated.
- 18-421. Standards for Streams Without Established Base Flood Elevations and Floodways (A Zones).
- 18-422. Standards for Areas of Shallow Flooding (AO and AH Zones).
- 18-423. Standards for Areas Protected by Flood Protection System (A-99 Zones).
- 18-424. Standards for Unmapped Streams.
- 18-425. Municipal Board of Zoning Appeals.
- 18-426. Conditions for Variances.
- 18-427. Legal Status Provisions.

18-401. Statutory Authorizations. The Legislature of the State of Tennessee has in Section 13-70201 through 13-7-210, Tennessee Code Annotated delegated the responsibility

to local governmental units to adopt regulations designed to promote the public health, safety and general welfare of its citizenry.

18-402. Findings of Fact. (1) The City wishes to maintain eligibility in the National Flood Insurance Program (NFIP) and in order to do so must meet the NFIP regulations found in Title 44 of the Code of Federal Regulations (CFR), Ch.1, Section 60.3

(2) Areas of the City of Hendersonville, Tennessee are subject to periodic inundation which could result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

(3) Flood losses are caused by the cumulative effect of obstructions in floodplains, causing increases in flood heights and velocities; by uses in flood hazard areas which are vulnerable to floods; or construction which is inadequately elevated, floodproofed, or otherwise unprotected from flood damages.

18-403. 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. This Ordinance is designed to:

(1) Restrict or prohibit uses which are vulnerable to flooding or erosion hazards, or which result in damaging increases in erosion, flood heights, or velocities;

(2) Require that uses vulnerable to floods, including community facilities, be protected against flood damage at the time of initial construction;

(3) Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters;

(4) Control filling, grading, dredging and other development which may increase flood

(5) Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

18.404. Objectives. The objectives of this Ordinance are:

(1) To protect human life, health, safety and property;

(2) To minimize expenditure of public funds for costly flood control projects;

(3) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

(4) To minimize prolonged business interruptions;

(5) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodprone areas;

(6) To help maintain a stable tax base by providing for the sound use and development of floodprone areas to minimize blight in flood areas;

(7) To ensure that potential homebuyers are notified that property is in a floodprone area;

(8) To maintain eligibility for participation in the NFIP.

18-405. Definitions. Unless specifically defined below, words or phrases used in this Ordinance shall be interpreted as to give them the meaning they have in common usage and to give this Ordinance its most reasonable application given its stated purpose and objectives.

- (1) "Accessory Structure" means a subordinate structure to the principal structure on the same lot and, for the purpose of this Ordinance, shall conform to the following:
 - (a) Accessory structures shall only be used for parking of vehicles and storage.
 - (b) Accessory structures shall be designed to have low flood damage potential.
 - (c) Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters.
 - (d) Accessory structures shall be firmly anchored to prevent flotation, collapse, and lateral movement, which otherwise may result in damage to other structures.
 - (e) Utilities and service facilities such as electrical and heating equipment shall be elevated or otherwise protected from intrusion of floodwaters.
- (2) "Addition (to an existing building)" means any walled and roofed expansion to the perimeter or height of a building.
- (3) "Appeal" means a request for a review of the local enforcement officer's interpretation of any provision of this Ordinance or a request for a variance.
- (4) "Area of Shallow Flooding" means a designated AO or AH Zone on a community's Flood Insurance Rate Map (FIRM) with one percent or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate; and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.
- (5) "Area of Special Flood-related Erosion Hazard" is the land within a community which is most likely to be subject to severe flood-related erosion losses. The area may be designated as Zone E on the Flood Hazard Boundary Map (FHBM). After the detailed evaluation of the special flood-related erosion hazard area in preparation for publication of the FIRM, Zone E may be further refined.
- (6) "Area of Special Flood Hazard" see "Special Flood Hazard Area".
- (7) "Base Flood" means the flood having a one percent chance of being equaled or exceeded in any given year. This term is also referred to as the 100-year flood or the one (1)-percent annual chance flood.
- (8) "Basement" means any portion of a building having its floor subgrade (below ground level) on all sides.
- (9) "Building" see "Structure".
- (10) "Development" means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations, or storage of equipment or materials.
- (11) "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 solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement

of floodwater, pilings, columns, piers, or shear walls adequately anchored so as not to impair the structural integrity of the building during a base flood event.

(12) "Emergency Flood Insurance Program" or "Emergency Program" means the program as implemented on an emergency basis in accordance with Section 1336 of the Act. It is intended as a program to provide a first layer amount of insurance on all insurable structures before the effective date of the initial FIRM.

(13) "Erosion" means the process of the gradual wearing away of land masses. This peril is not "per se" covered under the Program.

(14) "Exception" means a waiver from the provisions of this Ordinance which relieves the applicant from the requirements of a rule, regulation, order or other determination made or issued pursuant to this Ordinance.

(15) "Existing Construction" means any structure for which the "start of construction" commenced before the effective date of the initial floodplain management code or ordinance adopted by the community as a basis for that community's participation in the NFIP.

(16) "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, final site grading or the pouring of concrete pads) is completed before 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 NFIP.

(17) "Existing Structures" see "Existing Construction".

(18) "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).

(19) "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.

(b) The unusual and rapid accumulation or runoff of surface waters from any source.

(20) "Flood Elevation Determination" means a determination by the Federal Emergency Management Agency (FEMA) of the water surface elevations of the base flood, that is, the flood level that has a one percent or greater chance of occurrence in any given year.

(21) "Flood Elevation Study" means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) or flood-related erosion hazards.

(22) "Flood Hazard Boundary Map (FHBM)" means an official map of a community, issued by FEMA, where the boundaries of areas of special flood hazard have been designated as Zone A.

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

(24) "Flood Insurance Study" is the official report provided by FEMA, evaluating flood hazards and containing flood profiles and water surface elevation of the base flood.

(25) "Floodplain" or "Floodprone Area" means any land area susceptible to being inundated by water from any source (see definition of "flooding").

(26) "Floodplain Management" means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

(27) "Flood Protection System" means those physical structural works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the area within a community subject to a "special flood hazard" and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

(28) "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 and structures and their contents.

(29) "Flood-related Erosion" means the collapse or subsidence of land along the shore of a lake or other body of water as a result of undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a flash flood, or by some similarly unusual and unforeseeable event which results in flooding.

(30) "Flood-related Erosion Area" or "Flood-related Erosion Prone Area" means a land area adjoining the shore of a lake or other body of water, which due to the composition of the shoreline or bank and high water levels or wind-driven currents, is likely to suffer flood-related erosion damage.

(31) "Flood-related Erosion Area Management" means the operation of an overall program of corrective and preventive measures for reducing flood-related erosion damage, including but not limited to emergency preparedness plans, flood-related erosion control works and floodplain management regulations.

(32) "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.

(33) "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, blockage of bridge or culvert openings, and the hydrological effect of urbanization of the watershed.

(34) "Functionally Dependent Use" means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

(35) "Highest Adjacent Grade" means the highest natural elevation of the ground surface, prior to construction, adjacent to the proposed walls of a structure.

(36) "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 the Tennessee 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 the City of Hendersonville, Tennessee inventory of historic places and determined as eligible by communities with historic preservation programs that have been certified either:

(i.) By the approved Tennessee program as determined by the Secretary of the Interior or

(ii) Directly by the Secretary of the Interior.

(37) "Levee" means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide protection from temporary flooding.

(38) "Levee System" means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

(39) "Lowest Floor" means the lowest floor of the lowest enclosed area, including a basement. An unfinished or flood resistant enclosure used solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this Ordinance.

(40) "Manufactured Home" means a structure, transportable in one or more sections, which is built on a permanent chassis and designed for use with or without a permanent foundation when attached to the required utilities. The term "Manufactured Home" does not include a "Recreational Vehicle".

(41) "Manufactured Home Park or Subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

(42) "Map" means the Flood Hazard Boundary Map (FHBM) or the Flood Insurance Rate Map (FIRM) for a community issued by FEMA.

(43) "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 the purposes of this Ordinance, the term is synonymous with the National Geodetic Vertical Datum (NGVD) of 1929, the North American Vertical Datum (NAVD) of 1988, or other datum, to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

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

(45) "New Construction" means any structure for which the "start of construction" commenced on or after the effective date of the initial floodplain management Ordinance and includes any subsequent improvements to such structure.

(46) "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 the effective date of this ordinance or the effective date of the initial floodplain management ordinance and includes any subsequent improvements to such structure.

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

(48) "100-year Flood" see "Base Flood".

(49) "Person" includes any individual or group of individuals, corporation, partnership, association, or any other entity, including State and local governments and agencies.

(50) "Reasonably Safe from Flooding" means base flood waters will not inundate the land or damage structures to be removed from the Special Flood Hazard Area and that any subsurface waters related to the base flood will not damage existing or proposed structures.

(51) "Recreational Vehicle" means a vehicle which is:

- (a) Built on a single chassis;
- (b) 400 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;
- (d) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

(52) "Regulatory 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.

(53) "Riverine" means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

(54) "Special Flood Hazard Area" is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. The area may be designated as Zone A on the FHBM. After detailed ratemaking has been completed in preparation for publication of the FIRM, Zone A usually is refined into Zones A, AO, AH, A1-30, AE or A99.

(55) "Special Hazard Area" means an area having special flood, mudslide (i.e., mudflow) and/or flood-related erosion hazards, and shown on an FHBM or FIRM as Zone A, AO, A1-30, AE, A99, or AH.

(56) "Start of Construction" includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, the installation of piles, the 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 accessory buildings, such as garages or sheds, not occupied as dwelling units or not part of the main structure. 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.

(57) "State Coordinating Agency" the Tennessee Department of Economic and Community Development, as designated by the Governor of the State of Tennessee at the request of FEMA to assist in the implementation of the NFIP for the State.

(58) "Structure" for purposes of this Ordinance, means a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.

(59) "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 fifty percent (50%) of the market value of the structure before the damage occurred.

(60) "Substantial Improvement" means any reconstruction, rehabilitation, addition, alteration or other improvement of a structure in which the cost equals or exceeds fifty percent (50%) of the market value of the structure before the "start of construction" of the initial improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The market value of the structure should be:

(1) the appraised value of the structure prior to the start of the initial improvement, or

(2) in the case of substantial damage, the value of the structure prior to the damage occurring.

The term does not, however, include either:

(1) Any project for improvement of a structure to correct existing violations of State or local health, sanitary, or safety code specifications which have been pre-identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions 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".

(61) "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 fifty percent (50%) of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

(62) "Variance" is a grant of relief from the requirements of this Ordinance.

(63) "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, other certification, or other evidence of compliance required in this Ordinance is presumed to be in violation until such time as that documentation is provided.

(64) "Water Surface Elevation" means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, the North American Vertical Datum (NAVD)

of 1988, or other datum, where specified, of floods of various magnitudes and frequencies in the floodplains of riverine areas.

18-406. Application. This Ordinance shall apply to all areas within the incorporated area of the City of Hendersonville, Tennessee.

18-407. Basis for Establishing the Areas of Special Flood Hazard. The Areas of Special Flood Hazard identified on the City of Hendersonville, Tennessee, as identified by FEMA, and in its Flood Insurance Study (FIS) dated April 17, 2012 and Flood Insurance Rate Map (FIRM), Community Panel Numbers 47165C0383G, 47165C0384G, 47165C0391G, 47165C0392G, 47165C0394G, 47165C0401G, 47165C0402G, 47165C0403G, 47165C0404G, 47165C0406G, 47165C0407G, 47165C0408G, 47165C0409G, 47165C0411G, 47165C0412G, 47165C0413G, 47165C0414G, 47165C0416G, 47165C0418G, 47165C0476G and 47165C0477G, dated April 17, 2012, along with all supporting technical data, are adopted by reference and declared to be a part of this Ordinance.

18-408. Requirement for Development Permit. A development permit shall be required in conformity with this Ordinance prior to the commencement of any development activities.

18-409. Compliance. No land, structure or use shall hereafter be located, extended, converted or structurally altered without full compliance with the terms of this Ordinance and other applicable regulations.

18-410. Abrogation and Greater Restrictions. This Ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants or deed restrictions. However, where this Ordinance conflicts or overlaps with another regulatory instrument, whichever imposes the more stringent restrictions shall prevail.

18-411. 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 Tennessee statutes.

18-412. 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 on rare occasions. Flood heights may be increased by man-made 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 City of Hendersonville, Tennessee 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.

18-413. Penalties for Violation. Violation of the provisions of this Ordinance or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance shall constitute an offense

punishable as other offenses as provided by law. Any person who violates this ordinance or fails to comply with any of its requirements shall, upon adjudication therefore, be fined as prescribed by Tennessee statutes, 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 City of Hendersonville, Tennessee from taking such other lawful actions to prevent or remedy any violation.

18-414. Designation of Ordinance Administrator. The City Engineer is hereby appointed as the Administrator to implement the provisions of this Ordinance.

18-415. Permit Procedures. Application for a development permit shall be made to the Administrator on forms furnished by the community prior to any development activities. The development permit may include, but is not limited to the following: plans in duplicate drawn to scale and showing the nature, location, dimensions, and elevations of the area in question; 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 of the proposed lowest floor, including basement, of all buildings where Base Flood Elevations are available, or to certain height above the highest adjacent grade when applicable under this Ordinance.

(b) Elevation in relation to mean sea level to which any non residential building will be floodproofed where Base Flood Elevations are available, or to certain height above the highest adjacent grade when applicable under this Ordinance.

(c) A FEMA Floodproofing Certificate from a Tennessee registered professional engineer or architect that the proposed non-residential floodproofed building will meet the floodproofing criteria in Article V, Sections A and B.

(d) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

(2) Construction Stage. Within AE Zones, where Base Flood Elevation data is available, any lowest floor certification made relative to mean sea level shall be prepared by or under the direct supervision of, a Tennessee registered land surveyor and certified by same. The Administrator shall record the elevation of the lowest floor on the development permit. When floodproofing is utilized for a non-residential building, said certification shall be prepared by, or under the direct supervision of, a Tennessee registered professional engineer or architect and certified by same.

Within approximate A Zones, where Base Flood Elevation data is not available, the elevation of the lowest floor shall be determined as the measurement of the lowest floor of the building relative to the highest adjacent grade. The Administrator shall record the elevation of the lowest floor on the development permit. When floodproofing is utilized for a non-residential building, said certification shall be prepared by, or under the direct supervision of, a Tennessee registered professional engineer or architect and certified by same.

For all new construction and substantial improvements, the permit holder shall provide to the Administrator an as-built certification of the lowest floor elevation or floodproofing level upon the completion of the lowest floor or floodproofing.

Any work undertaken prior to submission of the certification shall be at the permit holder's risk. The Administrator shall review the above-referenced certification data. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further work being allowed to proceed. Failure to submit the certification or failure to make said corrections required hereby, shall be cause to issue a stop-work order for the project.

18-416. Duties and Responsibilities of the Administrator. Duties of the Administrator shall include, but not be limited to, the following:

(1) Review all development permits to assure that the permit requirements of this Ordinance have been satisfied, and that proposed building sites will be reasonably safe from flooding.

(2) Review proposed development to assure that all necessary permits have been received from those 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.

(3) Notify adjacent communities and the Tennessee Department of Economic and Community Development, Local Planning Assistance Office, prior to any alteration or relocation of a watercourse and submit evidence of such notification to FEMA.

(4) For any altered or relocated watercourse, submit engineering data/analysis within six (6) months to FEMA to ensure accuracy of community FIRM's through the Letter of Map Revision process.

(5) Assure that the flood carrying capacity within an altered or relocated portion of any watercourse is maintained.

(6) Record the elevation, in relation to mean sea level or the highest adjacent grade, where applicable, of the lowest floor (including basement) of all new and substantially improved buildings, in accordance with Article IV, Section B.

(7) Record the actual elevation, in relation to mean sea level or the highest adjacent grade, where applicable to which the new and substantially improved buildings have been floodproofed, in accordance with Article IV, Section B.

(8) When floodproofing is utilized for a nonresidential structure, obtain certification of design criteria from a Tennessee registered professional engineer or architect, in accordance with Article IV, Section B.

(9) 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), 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.

(10) When Base Flood Elevation data and floodway data have not been provided by FEMA, obtain, review, and reasonably utilize any Base Flood Elevation and floodway data available from a Federal, State, or other sources, including data developed as a result of these regulations, as criteria for requiring that new construction, substantial

improvements, or other development in Zone A on the City of Hendersonville, Tennessee FIRM meet the requirements of this Ordinance.

(11) Maintain all records pertaining to the provisions of this Ordinance in the office of the Administrator and shall be open for public inspection. Permits issued under the provisions of this Ordinance shall be maintained in a separate file or marked for expedited retrieval within combined files.

18-417. General Standards. In all areas of special flood hazard, the following provisions are required:

(1) New construction and substantial improvements shall be anchored to prevent flotation, collapse and lateral movement of the structure;

(2) Manufactured homes shall be installed using methods and practices that minimize flood damage. They must be elevated and anchored to prevent flotation, collapse and lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State of Tennessee and local anchoring requirements for resisting wind forces.

(3) New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;

(4) New construction and substantial improvements shall be constructed by methods and practices that minimize flood damage;

(5) All electrical, heating, ventilation, plumbing, air conditioning equipment, 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) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;

(7) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters;

(8) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding;

(9) Any alteration, repair, reconstruction or improvements to a building that is in compliance with the provisions of this Ordinance, shall meet the requirements of "new construction" as contained in this Ordinance;

(10) Any alteration, repair, reconstruction or improvements to a building that is not in compliance with the provision of this Ordinance, shall be undertaken only if said non-conformity is not further extended or replaced;

(11) All new construction and substantial improvement proposals shall provide copies of all necessary Federal and State permits, including Section 404 of the Federal Water Pollution Control Act amendments of 1972, 33 U.S.C. 1334;

(12) All subdivision proposals and other proposed new development proposals shall meet the standards of Article V, Section B;

(13) When proposed new construction and substantial improvements are partially located in an area of special flood hazard, the entire structure shall meet the standards for new construction;

(14) When proposed new construction and substantial improvements are located in multiple flood hazard risk zones or in a flood hazard risk zone with multiple Base Flood Elevations, the entire structure shall meet the standards for the most hazardous flood hazard risk zone and the highest Base Flood Elevation.

18.418. Specific Standards. In all Areas of Special Flood Hazard, the following provisions, in addition to those set forth in Article V, Section A, are required:

(1) Residential Structures.

In AE Zones where Base Flood Elevation data is available, new construction and substantial improvement of any residential building (or manufactured home) shall have the lowest floor, including basement, elevated to no lower than two (2) 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 the standards of this section: "Enclosures".

Within approximate A Zones where Base Flood Elevations have not been established and where alternative data is not available, the administrator shall require the lowest floor of a building to be elevated to a level of at least three (3) feet above the highest adjacent grade (as defined in Article II). 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 the standards of this section: "Enclosures"

(2) Non-Residential Structures

In AE Zones, where Base Flood Elevation data is available, new construction and substantial improvement of any commercial, industrial, or non-residential building, shall have the lowest floor, including basement, elevated or floodproofed to no lower than two (2) feet above the level of 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 the standards of this section: "Enclosures"

In approximate A Zones, where Base Flood Elevations have not been established and where alternative data is not available, new construction and substantial improvement of any commercial, industrial, or non-residential building, shall have the lowest floor, including basement, elevated or floodproofed to no lower than three (3) feet above the highest adjacent grade (as defined in Article II). 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 the standards of this section: "Enclosures"

Non-Residential buildings located in all A Zones may be floodproofed, in lieu of being elevated, provided that all areas of the building below the required elevation are watertight, with walls substantially impermeable to the passage of water, and are built with structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. A Tennessee 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 Administrator as set forth in Article IV, Section B.

(3) Enclosures.

All new construction and substantial improvements that include fully

enclosed areas formed by foundation and other exterior walls below the lowest floor that are subject to flooding, shall be designed to preclude finished living space and designed to allow for the entry and exit of flood waters to automatically equalize hydrostatic flood forces on exterior walls.

(a) Designs for complying with this requirement must either be certified by a Tennessee professional engineer or architect or meet or exceed the following minimum criteria.

(i) Provide a minimum of two openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding;

(ii) The bottom of all openings shall be no higher than one (1) foot above the finished grade;

(iii) Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwaters in both directions.

(b) The enclosed area shall be the minimum necessary to allow for parking of vehicles, storage or building access.

(c) The interior portion of such enclosed area shall not be finished or partitioned into separate rooms in such a way as to impede the movement of floodwaters and all such partitions shall comply with the provisions of Article V, Section B.

(4) Standards for Manufactured Homes and Recreational Vehicles

(a) All manufactured homes placed, or substantially improved, on: (1) individual lots or parcels, (2) in expansions to existing manufactured home parks or subdivisions, or (3) in new or substantially improved manufactured home parks or subdivisions, must meet all the requirements of new construction.

(b) All manufactured homes placed or substantially improved in an existing manufactured home park or subdivision must be elevated so that either:

(i) In AE Zones, with Base Flood Elevations, the lowest floor of the manufactured home is elevated on a permanent foundation to no lower than two (2) feet above the level of the Base Flood Elevation or

(ii) In approximate A Zones, without Base Flood Elevations, the manufactured home chassis is elevated and supported by reinforced piers (or other foundation elements of at least equivalent strength) that are at least three (3) feet in height above the highest adjacent grade (as defined in Article II).

(c) Any manufactured home, which has incurred "substantial damage" as the result of a flood, must meet the standards of Article V, Sections A and B.

(d) All manufactured homes must be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

(e) All recreational vehicles placed in an identified Special Flood Hazard

Area 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.

(5) Standards for Subdivisions and Other Proposed New Development Proposals.

Subdivisions and other proposed new developments, including manufactured home parks, shall be reviewed to determine whether such proposals will be reasonably safe from flooding. All subdivision and other proposed new development proposals shall be consistent with the need to minimize flood damage.

(a) All subdivision and other proposed new development proposals shall

have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.

(b) All subdivision and other proposed new development proposals shall

have adequate drainage provided to reduce exposure to flood hazards.

(c) In all approximate A Zones require that all new subdivision proposals

and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals Base Flood Elevation data (See Article V, Section E).

18-419. Standards for Special Flood Hazard Areas with Established Base Flood

Elevations and With Floodways Designated. Located within the Special Flood Hazard Areas established in Article III, Section B, are areas designated as floodways. A floodway may be an extremely hazardous area due to the velocity of floodwaters, debris or erosion potential. In addition, the area must remain free of encroachment in order to allow for the discharge of the base flood without increased flood heights and velocities. Therefore, the following provisions shall apply:

(1) Encroachments are prohibited, including earthen fill material, new construction, substantial improvements or other development within the regulatory floodway. Development may be permitted however, provided it is demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practices that the cumulative effect of the proposed encroachments or new development shall not result in any increase in the water surface elevation of the Base Flood Elevation, velocities, or floodway widths during the occurrence of a base flood discharge at any point within the community. A

Tennessee registered professional engineer must provide supporting technical data, using the same methodologies as in the effective Flood Insurance Study for the City of Hendersonville, Tennessee and certification, thereof.

(2) New construction and substantial improvements of buildings, where

permitted, shall comply with all applicable flood hazard reduction provisions of Article V, Sections A and B.

18-420. Standards for Areas of Special Flood Hazard Zones AE with Established Base Flood Elevations but Without Floodways Designated. Located within the Special Flood Hazard Areas established in Article III, Section B, where streams exist with base flood data provided but where no floodways have been designated (Zones AE), the following provisions apply:

(1) No encroachments, including fill material, new construction and substantial improvements shall be located within areas of special flood hazard, unless certification by a Tennessee registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles.

(2) New construction and substantial improvements of buildings, where permitted, shall comply with all applicable flood hazard reduction provisions of Article V, Sections A and B.

18-421. Standards for Streams without Established Base Flood Elevations and Floodways (A Zones). Located within the Special Flood Hazard Areas established in Article III, Section B, where streams exist, but no base flood data has been provided and where a Floodway has not been delineated, the following provisions shall apply:

(1) The Administrator shall obtain, review, and reasonably utilize any Base Flood Elevation and floodway data available from any Federal, State, or other sources, including data developed as a result of these regulations (see 2 below), as criteria for requiring that new construction, substantial improvements, or other development in approximate A Zones meet the requirements of Article V, Sections A and B.

(2) Require that all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals Base Flood Elevation data.

(3) Within approximate A Zones, where Base Flood Elevations have not been established and where such data is not available from other sources, require the lowest floor of a building to be elevated or floodproofed to a level of at least three (3) feet above the highest adjacent grade (as defined in Article II). All applicable data including elevations or floodproofing certifications shall be recorded as set forth in Article IV, Section B. Openings sufficient to facilitate automatic equalization of hydrostatic flood forces on exterior walls shall be provided in accordance with the standards of Article V, Section B.

(4) Within approximate A Zones, where Base Flood Elevations have not been established and where such data is not available from other sources, no encroachments, including structures or fill material, shall be located within an area equal to the width of the stream or twenty feet (20), whichever is greater, measured from the top of the stream bank, unless certification by a Tennessee registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface

elevation of the base flood more than one (1) foot at any point within the City of Hendersonville, Tennessee. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles.

(5) New construction and substantial improvements of buildings, where permitted, shall comply with all applicable flood hazard reduction provisions of Article V, Sections A and B. Within approximate A Zones, require that those subsections of Article V Section B dealing with the alteration or relocation of a watercourse, assuring watercourse carrying capacities are maintained and manufactured homes provisions are complied with as required.

18-422. Standards For Areas of Shallow Flooding (AO and AH Zones).

Located within the Special Flood Hazard Areas established in Article III, Section B, are areas designated as shallow flooding areas. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate; therefore, the following provisions, in addition to those set forth in Article V, Sections A and B, apply:

(1) All new construction and substantial improvements of residential and non-residential buildings shall have the lowest floor, including basement, elevated to at least two (2) feet above as many feet as the depth number specified on the FIRM's, in feet, above the highest adjacent grade. If no flood depth number is specified on the FIRM, the lowest floor, including basement, shall be elevated to at least three (3) feet above the highest adjacent grade. Openings sufficient to facilitate automatic equalization of hydrostatic flood forces on exterior walls shall be provided in accordance with standards of Article V, Section B.

(2) All new construction and substantial improvements of non-residential buildings may be floodproofed in lieu of elevation. The structure together with attendant utility and sanitary facilities must be floodproofed and designed watertight to be completely floodproofed to at least two (2) feet above the flood depth number specified on the FIRM, with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. If no depth number is specified on the FIRM, the structure shall be floodproofed to at least three (3) feet above the highest adjacent grade. A Tennessee 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 of this Ordinance and shall provide such certification to the Administrator as set forth above and as required in accordance with Article IV, Section B.

(3) Adequate drainage paths shall be provided around slopes to guide floodwaters around and away from proposed structures.

18-423. Standards For Areas Protected by Flood Protection System (A-99 Zones). Located within the Areas of Special Flood Hazard established in Article III, Section B, are areas of the 100-year floodplain protected by a flood protection system but where Base Flood Elevations have not been determined. Within these areas (A-99 Zones) all provisions of Article IV and Article V shall apply.

18-424. Standards for Unmapped Streams. Located within the Hendersonville, Tennessee, are unmapped streams where areas of special flood hazard are neither indicated nor identified. Adjacent to such streams, the following provisions shall apply:

(1) No encroachments including fill material or other development including structures shall be located within an area of at least equal to twice the width of the stream, measured from the top of each stream bank, unless certification by a Tennessee registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the locality.

(2) When a new flood hazard risk zone, and Base Flood Elevation and floodway data is available, new construction and substantial improvements shall meet the standards established in accordance with Articles IV and V.

18-425. Municipal Board of Zoning Appeals.

(1) Authority. The City's Municipal Board of Zoning Appeals shall hear and decide appeals and requests for variances from the requirements of this Ordinance.

(2) Procedure. Meetings of the Municipal Board of Zoning Appeals shall be held at such times, as the Board shall determine. All meetings of the Municipal Board of Zoning Appeals shall be open to the public. The Municipal Board of Zoning Appeals shall adopt rules of procedure and shall keep records of applications and actions thereof, which shall be a public record. Compensation of the members of the Municipal Board of Zoning Appeals, if any, shall be set by the Legislative Body.

(3) Appeals: How Taken. An appeal to the Municipal Board of Zoning Appeals may be taken by any person, firm or corporation aggrieved or by any governmental officer, department, or bureau affected by any decision of the Administrator based in whole or in part upon the provisions of this Ordinance. Such appeal shall be taken by filing with the Municipal Board of Zoning Appeals a notice of appeal, specifying the grounds thereof. In all cases where an appeal is made by a property owner or other interested party, a fee of One Hundred Dollars (\$100.00) shall be paid by the appellant for the costs of publishing a notice of the hearing. The Administrator shall transmit to the Municipal Board of Zoning Appeals all papers constituting the record upon which the appeal action was taken. The Municipal Board of Zoning Appeals shall fix a reasonable time for the hearing of the appeal, give public notice thereof, as well as due notice to parties in interest and decide the same within a reasonable time which shall not be more than thirty (30) days from the date of the hearing. At the hearing, any person or party may appear and be heard in person or by agent or by attorney.

(3) Powers. The Municipal Board of Zoning Appeals shall have the following powers:

(a) Administrative Review. To hear and decide appeals where it is alleged by the applicant that there is error in any order, requirement, permit, decision, determination, or refusal made by the Administrator or other administrative official in carrying out or enforcement of any provisions of this Ordinance.

(b) Variance Procedures. In the case of a request for a variance the following shall apply:

(i) The City of Hendersonville, Tennessee Municipal Board of

Zoning Appeals shall hear and decide appeals and requests for variances from the requirements of this Ordinance.

(ii) Variances may be issued for the repair or rehabilitation of historic structures as defined, herein, 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 necessary deviation from the requirements of this Ordinance to preserve the historic character and design of the structure.

(iii) In passing upon such applications, the Municipal Board of Zoning Appeals shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this Ordinance, and:

- a) The danger that materials may be swept onto other property to the injury of others;
- b) The danger to life and property due to flooding or erosion;
- c) The susceptibility of the proposed facility and its contents to flood damage;
- d) The importance of the services provided by the proposed facility to the community;
- e) The necessity of the facility to a waterfront location, in the case of a functionally dependent use;
- f) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
- g) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
- h) The safety of access to the property in times of flood for ordinary and emergency vehicles;
- i) The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site;
- j) The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, water systems, and streets and bridges.

(iv) Upon consideration of the factors listed above, and the purposes of this Ordinance, the Municipal Board of Zoning Appeals may attach such conditions to the granting of variances, as it deems necessary to effectuate the purposes of this Ordinance.

(v) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would

result.

14-426. Conditions for Variances. (1) Variances shall be issued upon a determination that the variance is the minimum relief necessary, considering the flood hazard and the factors listed in Article VI, Section A.

(2) Variances shall only be issued upon: a showing of good and sufficient cause, a determination that failure to grant the variance would result in exceptional hardship; or 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.

(3) Any applicant to whom a variance is granted shall be given written notice that

the issuance of a variance to construct a structure below the Base Flood Elevation will result in increased premium rates for flood insurance (as high as \$25 for \$100) coverage, and that such construction below the Base Flood Elevation increases risks to life and property.

(4) The Administrator shall maintain the records of all appeal actions and report any variances to FEMA upon request.

14-427. Legal Status Provisions. (1) Conflict with Other Ordinances. In case of conflict between this Ordinance or any part thereof, and the whole or part of any existing or future Ordinance of the City of Hendersonville, Tennessee, the most restrictive shall in all cases apply.

(2) Severability. If any section, clause, provision, or portion of this Ordinance shall be held to be invalid or unconstitutional by any court of competent jurisdiction, such holding shall not affect any other section, clause, provision, or portion of this Ordinance which is not of itself invalid or unconstitutional.

(Ord. 2017-16, April 2017)