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5-1 Manufactured Housing Overlay District Requirements

A. Purpose and Intent

The Manufactured Housing Overlay District is intended to provide for alternative housing opportunities by allowing the placement of manufactured homes on individual lots within specific defined areas which overlay the R-10, Residential general zoning districts. Such overlay districts are designated R-10MH on the official zoning map. The Manufactured Housing Overlay District is established pursuant to Article 19, Section 160A-383.1 (e) of the North Carolina General Statutes and this Ordinance.

B. Minimum Criteria for Manufactured Dwellings on Single Family Lots

1. Class A manufactured dwellings may be permitted on single family lots in the R-10 residential zoning district provided overlay district zoning is approved by the City Council in accordance with the provisions of Ordinance. All requirements of this Ordinance applicable in the R-10 zoning district shall apply. In addition each manufactured dwelling shall be:

    (a) Occupied only as a single family dwelling;

    (b) Have a minimum width of 16 feet;

    (c) Have a length not exceeding four times its width, with length measured along the longest axis and width measured perpendicular to the longest axis at the narrowest part (towing apparatus, wheels, and transporting lights are not included in length and width measurements);

    (d) Have a minimum of 1,000 square feet of enclosed and heated space;

    (e) Have the towing apparatus, wheels, axis and transporting lights removed;

    (f) Have the longest axis oriented parallel or within a ten degree deflection of being parallel to the lot frontage, unless other orientation is permitted as a variance approved by the Board of Adjustment following a public hearing;

    (g) Set up in accordance with the standards established by the NC Department of Insurance. In addition, a continuous, permanent masonry foundation or masonry curtain wall constructed in accordance with the standards of the NC

Building Code for One-and Two-Family Dwellings, unpierced except for required ventilation and access, shall be installed under the perimeter;

(h) Have exterior siding comparable in composition, appearance, and durability to the exterior siding commonly used in standard residential construction, consisting of one or more of the following:

(1) Vinyl or aluminum lap siding (whose reflectivity does not exceed that of flat white paint);

(2) Cedar or other wood siding;

(3) Wood grain, weather-resistant press board siding;

(4) Stucco siding; or

(5) Brick or stone siding.

(i) Have a roof pitch minimum vertical rise of three feet for each twelve feet of horizontal run;

(j) Have the roof finished with a Class C or better roofing material that is commonly used in standard residential construction;

(k) Have an eave projection for all roof structures of no less than six inches, which may include a gutter;

(l) Have stairs, porches, entrance platforms, ramps, and other means of entrance and exit installed or constructed in accordance with the standards set forth in the NC Building Code, anchored securely to the ground. Wood stairs shall only be used in conjunction with a porch or entrance platform with a minimum of 24 square feet; and

(m) Be connected to the municipal water and sewer system.

C. Minimum Development Size

1. Ten existing contiguous lots in single-ownership covering at least 90,000 square feet, excluding public street right-of-way; or

2. 120,000 square feet of land, excluding public street right-of-way.

5-2 Watershed Overlay District Regulations

A. Purpose and Intent

The watershed protection overlay districts, as described in Section 3-1, C, 2, (b) and (c) are designed to protect designated public water supply

watershed from activities which could degrade water quality. The following separate watershed protection overlay districts have been established:

1. WCA, Watershed Critical Area Overlay District and

2. GWA, General Watershed Area Overlay District.

Both of these watershed overlay districts are within a public water supply watershed that has been classified by the State of North Carolina as a WS-II watershed. The WCA Overlay District represents the Graham-Mebane Lake Public Water Supply Watershed WS-II Critical Area and the GWA Overlay District represents the Graham-Mebane Lake Public Water Supply Watershed WS-II Balance of Watershed Area as designated by the NC Environmental Management Commission. The purpose of this Section is to implement the provisions of the Water Supply Watershed Protection Act (NCGS 143-214.5) which requires the City of Mebane to adopt minimum land use regulations, consistent with the WS-II Critical Area and Balance of Watershed management rules as adopted by the North Carolina Environmental Management Commission, to protect the water quality of the Graham-Mebane Lake Watershed located within the city's planning and zoning jurisdictional area.

B. General Provisions Applicable to Both Watershed Overlay Districts

1. The construction of new roads and bridges and non-residential development should minimize built-upon area, divert stormwater away from surface water supply waters as much as possible, and employ best management practices (BMPs) to minimize water quality impacts. To the extent practicable, construction of new roads in the critical area should be avoided. The Department of Transportation BMPs as outlined in their document entitled *Best Management Practices for the Protection of Surface Waters* shall be used in all road and bridge construction projects in the Watershed Overlay Districts.

2. All development activities within Watershed Overlay Districts, in addition to those activities specifically regulated by these provisions, are subject to the standards, usage conditions and other regulations contained in the Rules and Requirements of the Surface Water Supply Protection Rules adopted by the North Carolina Environmental Management Commission.

3. A minimum 30-foot vegetative buffer for development activities is required along all perennial waters, including streams, rivers and impoundments, indicated on the most recent versions of the United States Geodetic Survey (USGS) 1:24,000 scale topographic maps; provided, that a 50-foot buffer shall be required along Graham-Mebane Lake. Nothing in this subsection shall prevent artificial streambank or shoreline stabilization. No new development is allowed in the buffer, except that water-dependent structures and public works projects such as road

crossings and greenways, may be allowed where no practicable alternative exists. These activities shall minimize built-upon surface area, direct runoff away from the surface water, and maximize the utilization of BMPs. The City's Riparian Buffer Protection Ordinance shall have precedence over all other stream or riparian buffer regulations within the City of Mebane's jurisdiction.

4. Existing development, as defined in this Ordinance, is not subject to the requirements of the overlay provisions. Expansions to structures, other than single-family, classified as existing development must meet the requirements of these provisions, provided however, the built-upon area of the existing development is not required to be included in the density calculations. In determining expansions to existing development, the maximum permitted additional built-upon area is derived by multiplying the area of the portion of the property that is not built-upon by the appropriate percent built-upon limitation for the Overlay District in which the property is located.

5. A pre-existing lot created prior to the effective date of this Ordinance, regardless of whether or not a vested right has been established, may be developed or redeveloped for single-family residential purposes without being subject to the restrictions of these overlay provisions.

6. Any existing building or built-upon area not in conformance with the limitations of these provisions that has been damaged or removed for any reason may be repaired and/or reconstructed, provided:

   (a) Repair or reconstruction is initiated within 12 months and completed within 2 years of such damage or removal.

   (b) The total amount of space devoted to built-upon area may not be increased.

   (c) The repair or reconstruction is otherwise permitted under the provisions of this Ordinance.

7. Clustering of development if permitted by the underlying use district is allowed on a project by project basis as follows: overall density of the project meets associated density or stormwater control requirements; built upon areas are designed and sited to minimize stormwater runoff impact to the receiving waters and minimizes concentrated stormwater flow; remainder of tract to remain in vegetated or natural state.

8. No activity, situation, structure or land use shall be permitted or allowed to operate within a watershed which poses a threat to water quality and the public health, safety and welfare. Such conditions may arise from inadequate on-site sewage systems which utilize ground absorption; inadequate sedimentation and

erosion control measures; the improper storage or disposal of junk, trash or other refuse within a buffer area; the absence or improper implementation of a spill containment plan for toxic and hazardous materials; the improper management of stormwater runoff; or any other situation found to pose a threat to water quality.

9. The Zoning Administrator may require such information on subdivision plat, zoning and special use permit and site development plan applications, including density/built-upon area calculations, as he/she may deem necessary to determine compliance with Watershed Overlay District provisions. Preliminary and final subdivision plat approval and other such plan approvals may be required to note density/built-upon limitations on the plat. For example, plats may be required to show such information as total area of the development, the amount and percent of impervious area in streets and sidewalks, the amount and percent of impervious area in other public improvements, and the amount and percent of impervious area that is allocated to the various lots for future development. Such information shall be displayed in such a manner that the Zoning Administrator can readily determine compliance with these provisions on a project by project basis.

10. The Zoning Administrator may, prior to the issuance of any permit in a Watershed Overlay District, require evidence of a valid Sedimentation Control Permit issued by the State of North Carolina or evidence satisfactory to the Zoning Administrator that no permit is required.

11. The Zoning Administrator shall maintain records of the administration of the Watershed Overlay District regulations and shall submit any modifications of the regulations and/or Map to the Division of Community Assistance. The Zoning Administrator shall also maintain a record of variances issued pursuant to Article 8, Section 8-2, C of this Ordinance and shall submit an annual report of each project receiving a variance and the reason for the variance to the Division of Environmental Management.

C. WCA, Watershed Critical Area Overlay District (Graham-Mebane Lake Watershed Critical Area) Regulations

1. General Development Standards:

(a) No new sites for land application of sludge/residual or petroleum contaminated soils are allowed.

(b) No new landfills are allowed.

(c) Existing non-residential development shall maintain an inventory of all toxic and hazardous materials and shall implement a spill/failure containment plan approved by the Fire Chief or his designated agent.

(d) No new use which uses, stores or manufactures hazardous or toxic materials on the premises shall be allowed.

(e) No new use which is first permitted in either the M-1 or M-2 manufacturing zoning districts shall be allowed.

(f) No new underground fuel or chemical storage tanks are allowed.

2. Density-Built-upon Limitations:

(a) Residential development shall not exceed one dwelling unit per two acres or, optionally, 6 percent built-upon area, on a project by project basis.

(b) Non-residential development shall not exceed 6 percent built-upon area, on a project by project basis.

D. GWA, General Watershed Area Overlay District (Graham-Mebane Lake Watershed Balance of Watershed) Regulations

1. General Development Standards:

(a) No new discharging landfills are allowed.

(b) Existing non-residential development shall maintain an inventory of all toxic and hazardous materials and shall implement a spill/failure containment plan approved by the Fire Chief or his designated agent.

2. Density/Built-Upon Limitations:

(a) Residential development shall not exceed one dwelling unit per acre or, optionally 12 percent built-upon area, on a project by project basis.

(b) Non-residential development shall not exceed 12 percent built-upon area, on a project by project basis.

(c) Notwithstanding the limitations of subsection (b) above, 10 percent (334 acres) of the GWA area (3340 acres) may be developed with new projects of up to 70 percent built-upon area as Special Intensity Allocations (SIAs). SIAs shall be allocated and developed in accordance with the following rules:

(1) SIAs shall be allocated by the Zoning Administrator through the Zoning Permit/Development Plan process. The Zoning Administrator shall maintain a record of the total acreage in the GWA area eligible for SIAs, the acreage that has been allocated and

the acreage that has been used as of the latest date. In no case shall allocated acreage exceed the acreage eligible for allocation.

(2) SIAs shall be allocated on a 'first come, first served' basis upon the approval and issuance of the appropriate permit, provided that no SIA shall be allocated to a development unless it is served by or is to be served by City of Mebane water and sewer service.

(3) The right to develop a SIA shall terminate with the loss of the right to develop due to the expiration of a zoning permit, zoning permit with vested right, or building permit. In such a case, the allocated acreage, or unused allocated acreage, shall be returned to the unallocated total acreage eligible for allocation.

(4) All SIA development shall be located so that all stormwater from the development drains into an engineered stormwater control facility designed and constructed in accordance with all the requirements of subsection E, 5, (c) below.

E. Exceeding Basic Density/Built-upon Limitations; Permit to Exceed

Development in the Watershed Overlay Districts may exceed the basic density/built-upon limitations established in subsections C, 2 and D, 2 above upon the receipt of a Permit to Exceed from the Zoning Administrator. No Permit to Exceed shall be issued except for development which is in conformance with the following conditions and limitations:

1. Built-upon Limitations

In no case shall the built-upon area of any development, on a project by project basis, exceed the following limitations and all development shall be calculated on a built-upon area basis only:

(a) WCA 24% built-upon area

(b) GWA 30% built-upon area

Nothing in this Section, however, shall permit any development to exceed the maximum permissible lot coverage limitations for principal and accessory buildings as set forth in this Ordinance for Use Districts.

2. Buffer

A minimum 50 foot vegetative buffer is required for any new development activity which exceeds the basic density/built-upon limitations along all perennial waters indicated on the most recent versions of USGS 1:24,000 scale topographic maps. Nothing in

this subsection shall prevent artificial streambank or shoreline stabilization. No new development is allowed in the buffer, except that water dependent structures and public works projects such as road crossings, utilities and greenways may be allowed where no practicable alternatives exist. These activities shall minimize built-upon surface area, direct runoff away from surface water, and maximize the use of BMPs. The City's Riparian Buffer Protection Ordinance shall have precedence over all other stream or riparian buffer regulations within the City of Mebane's jurisdiction.

3. Development Location

All development which exceeds the basic density/built-upon limitations shall be located so that all stormwater from the development drains into an engineered stormwater control facility designed and constructed in conformance with the requirements of this Section.

4. Facility Approval

No Permit to Exceed shall be issued for any development until such facility is fully constructed and approved by the Zoning Administrator or his/her agent to be capable of functioning in accordance with the requirements of this Section. Prior to inspection by the Zoning Administrator or his/her agent to determine compliance, the developer shall furnish a certification sealed by an engineer or landscape architect stating that the facility is complete and consistent with the approved plans and specifications.

5. Facility Requirements

Engineered stormwater control facilities intended to serve development which exceeds the basic density/built-upon limitations of this Ordinance shall conform with the following requirements:

(a) Developer Responsible for Costs. The developer or his designee shall be responsible for all costs associated with the construction, operation, maintenance and repair of any such facility.

(b) Plans Required. No construction shall begin on any such facility until the construction, operation and maintenance and related plans have been submitted to and approved by the Zoning Administrator. The maintenance and operation plan shall specify a facility ownership plan and the entity to be responsible for maintenance, operation, and repair. The plan shall designate sufficient area and access to perform inspections maintenance, repairs and reconstruction. The plan shall also provide a cost estimate for routine and non-routine maintenance over a 20 year period. At the time the plans are submitted, the developer shall pay to the City of Mebane a plan review and construction inspection fee as set by the City Council.

(c) Design Standards. All stormwater control facilities shall use wet detention ponds as a primary treatment system unless alternative stormwater management measures, as outlined in subsection (f) below, are used. Wet detention ponds shall be designed for specific pollutant removal according to modeling techniques approved by the North Carolina Division of Environmental Management. Specific requirements for these systems shall be in accordance with the following design criteria:

(1) Wet detention ponds shall be designed to remove 85 percent of total suspended solids in the permanent pool and store runoff from a one inch rainfall from the watershed above the permanent pool, assuming maximum permitted development;

(2) The designed runoff storage volume shall be above the permanent pool;

(3) The discharge rate from these systems following the one inch rainfall design storm shall be such that the runoff does not draw down to the permanent pool level in less than 2 days and that the pond is drawn down to the permanent pool level within at least 5 days;

(4) The mean permanent pool depth shall be a minimum of 3 feet;

(5) The inlet structure shall be designed to minimize turbulence using baffles or other appropriate design features;

(6) Vegetative filters shall be constructed for the overflow and discharge of all stormwater wet detention ponds and shall be at least 30 feet in length. The slope and width of the vegetative filter shall be determined so as to provide a non-erosive velocity of flow through the filter for a 10-year, 24-hour storm with a slope of 5 percent or less. Vegetation in the filter shall be natural vegetation, grasses or artificially planted wetland vegetation appropriate for the site characteristics;

(7) In addition to the vegetative filters required in subsection (6) above, all disturbed land areas outside of the pond shall be provided with a ground cover sufficient to restrain erosion within 15 days after any land disturbance. Upon completion of the stormwater control structure, a permanent ground cover shall be established and maintained as part of the maintenance and operations plan.

(d) A description of the area containing the stormwater control structure shall be prepared and filed as a separate deed with the applicable county Register of Deeds along with any easements necessary for general access to the stormwater control structure. The deeded area shall include the stormwater control structure, vegetative filters, all pipes and water control structures, berms, dikes, etc., and sufficient area to perform inspections, maintenance, repairs, and reconstruction.

(e) Qualifying areas of the stormwater control structure may be considered pervious when computing total built-upon area. However, if the structure is used to compute the percentage built-upon area for one site, it shall not be used to compute built-upon are for any other site or area.

(f) Alternative Stormwater Management Measures. Alternative stormwater management systems, as detailed in the NC Stormwater Best Management Practices Manual, consisting of one treatment option or a combination of treatment options, may be used. The design criteria for approval shall be 85 percent average annual removal of Total Suspended Solids. Also, the discharge rate shall meet one of the following criteria;

(1) the discharge rate following the 1-inch design storm shall be such that the runoff draws down to the pre-storm design stage within five days, but not less that two days; or

(2) the post development peak discharge rate shall equal the predevelopment rate for the 1-year, 24-hour storm.

6. Finance Guarantee and Maintenance Agreement

Before the Zoning Administrator shall approve the completed facility and issue any Permit to Exceed, the developer and/or maintaining entity shall furnish the City of Mebane with a financial guarantee ensuring future maintenance, operation and repair of the facility. The financial guarantee shall be in the form of cash, an irrevocable letter of credit or other instrument readily convertible to cash at face value and shall be deposited and made payable to the City of Mebane. The amount of the deposit shall be equal to 40 percent of the total cost of constructing the facility. The initial cost estimates shall be the responsibility of the developer but the approval of the final cost estimate shall be made by the Zoning Administrator or his/her agent. At this time the developer and/or maintaining entity shall also pay to the City of Mebane a fee as set by the City Council to cover annual inspections by the City for 20 years.

The initial duration of the financial guarantee shall be for 20 years. At the end of that period the City of Mebane may, at its own option, require extension of the guarantee for an additional period of up to 20 years based upon future maintenance cost or take whatever lawful action it may deem appropriate at that time. The financial guarantee may be dissolved at any time in its lifetime by mutual agreement when the need for such guarantee no longer exists.

As part of the financial guarantee, the developer or maintaining entity shall enter into a binding Operation and Maintenance Agreement in a form acceptable to and enforceable by the City of Mebane. Such agreement shall require the responsible entity to maintain, repair and, if necessary, reconstruct the facility in accordance with the approved operation and maintenance plan. The plan shall clearly indicate the steps that will be taken for restoring a stormwater control structure to design specifications if a failure occurs.

Landscaping and grounds management shall be the responsibility of the owning entity. However, vegetation shall not be established or allowed to mature to the extent that the integrity of the control structure is diminished or threatened, or to the extent of interfering with any easement or access to the stormwater control structure.

The agreement shall pledge the financial guarantee in support of the agreement but also shall acknowledge that default does not release the entity from liability/responsibility for operation, maintenance and repair/reconstruction. The agreement shall provide that in case of default by the operating entity, the City of Mebane, at any time after default, may on its own motion assume actual maintenance and operation of the facility and convert for its use in maintenance and operation any and all funds remaining in the financial guarantee. The agreement shall be recorded with the appropriate County Register of Deeds by the Zoning Administrator after it is executed by both parties. No changes to the agreement or its terms including ownership and responsible entity shall be made except upon agreement of the parties.

Amendments to the plans and specifications of the stormwater control structure and/or the operation and maintenance plan shall be approved by the Zoning Administrator. Proposed changes shall be prepared by a North Carolina registered professional engineer or landscape architect (to the extent that the General Statutes, Chapter 89A, allow) and submitted to and reviewed by the City Engineer.

7. Inspections

The Zoning Administrator or his/her agent shall inspect all facilities at least on an annual basis to determine whether the controls are performing as designed or intended and whether maintenance is being performed as required. Records of inspections shall be

maintained on forms approved or supplied by the NC Division of Environmental Management. The first annual inspection shall be made during the 12 months following the date of certification.

8. Failure to Perform

In the event the Zoning Administrator should find that the facility is not performing as designed or intended or that maintenance and repairs are not being made as required or that any action is being done or not done that is in violation of this Ordinance or the agreement related to the facility, the Zoning Administrator shall notify the responsible entity who shall be given a reasonable time to correct the defect(s). Should the responsible entity fail to act, fail to act in a timely manner, or otherwise fail to correct the defect(s), the Zoning Administrator shall institute appropriate action to obtain compliance including criminal or civil penalties, or both. In addition, the City of Mebane may declare the responsible entity in default of the agreement and financial guarantee and use part or all of the proceeds of the guarantee to correct the defect(s) and may assume actual operation and maintenance. Default in the agreement does not release the responsible entity from liability/responsibility for the defect(s), nor release the entity from the agreement. Likewise, default in the agreement does not prevent the City of Mebane from taking criminal or civil action, or other.

F. Variances

Requests for variances from the watershed district overlay requirements of Section 5-2 shall be reviewed by the Board of Adjustment in accordance with the provisions of Section 8-2, C.

5.3 Flood Hazard Overlay District Requirements

5-3.1 Statutory Authorization, Purpose, Objectives, Legal Status Provisions

A. The Flood Hazard Overlay District (FHO), as established in Section 3-1, D, 2, (d), is designed for the purpose of protecting people and property from the hazards of flooding in accordance with the authority provided in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes.

B. Flood prone areas within the jurisdiction of the City of Mebane are subject to periodic inundation which results in loss of life, property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures of flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare. These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities and by the occupancy in flood prone areas of uses vulnerable to floods or other hazards.

C. It is the purpose of Section 5-3 to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions within flood prone areas by provisions designed to:

1. Restrict or prohibit uses that are dangerous to health, safety, and property due to water or erosion hazards or that result in damaging increases in erosion, flood heights or velocities;

2. Require that uses vulnerable to floods, including facilities that serve such uses, 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 all other development that may increase erosion or flood damage; and

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

D. The objectives of Section 5-3 are:

1. To protect human life and health;

2. To minimize expenditure of public money 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 losses and interruptions;

5. To minimize damage to public facilities and utilities (i.e. water and gas mains, electric, telephone, cable and sewer lines, streets, and bridges) that are located in flood prone areas;

6. To minimize damage to private and public property due to flooding;

7. To make flood insurance available to the community through the National Flood Insurance Program;

8. To maintain the natural and beneficial function of the floodplains;

9. To help maintain a stable tax base by providing for the sound use and development of flood prone areas; and

10. To ensure that potential buyers are aware that property is in a

Special Flood Hazard Area.

E. Legal Status Provisions associated with Section 5-3 are:

1. This Section in part comes forward by re-enactment of some of the provisions of the Flood Damage Prevention Ordinance enacted March 7, 1994 as amended, and it is not the intention to repeal but rather to re-enact and continue to enforce without interruption of such existing provisions, so that all rights and liabilities that have accrued thereunder are reserved and may be enforced. The enactment of this Section shall not affect any action, suit or proceeding instituted or pending. All provisions of the Flood Damage Prevention Ordinance of the City of Mebane enacted on March 7, 1994, as amended, which are not reenacted herein are repealed.

   The date of the initial Flood Damage Prevention Ordinance for Alamance County is August 15, 1994. The date of the initial Flood Damage Prevention Ordinance for Orange County is March 2, 1981.

2. Nothing herein contained shall require any change in the plans, construction, size, or designated use of any development or any part thereof for which a floodplain development permit has been granted by the Floodplain Administrator or his or her authorized agents before the time of passage of this Section; provided, however, that when construction is not begun under such outstanding permit within a period of six (6) months subsequent to the date of issuance of the outstanding permit, construction or use shall be in conformity with the provisions of this Section.

3. Section 5-3 as amended November 6, 2017 shall become effective November 17, 2017.

5-3.2 Definitions

A. Unless otherwise specifically provided, or unless clearly required by the context, the words and phrases defined below shall have the meaning indicated when used throughout Section 5-3.

1. **Accessory Structure (Appurtenant Structure).** A structure located on the same parcel of property as the principal structure and the use of which is incidental to the use of the principal structure. Garages, carports and storage sheds are common urban accessory structures. Pole barns, hay sheds and the like qualify as accessory structures on farms, and may or may not be located on the same parcel as the farm dwelling or shop building.

2. **Addition (to an existing building).** An extension or increase in the floor area or height of a building or structure.

3. **Alteration of a watercourse.** A dam, impoundment, channel

relocation, change in channel alignment, channelization, or change in cross-sectional area of the channel or the channel capacity, or any other form of modification which may alter, impede, retard or change the direction and/or velocity of the riverine flow of water during conditions of the base flood.

4. **Appeal.** A request for a review of the Zoning Administrator's interpretation of any provision of this Section.

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

6. **Area of Special Flood Hazard.** See 'Special Flood Hazard Area (SFHA)'.

7. **Basement.** Any area of the building having its floor subgrade (below ground level) on all sides.

8. **Base Flood.** The flood having a one percent chance of being equaled or exceeded in any given year.

9. **Base Flood Elevation (BFE).** A determination of the water surface elevations of the base flood as published in the Flood Insurance Study. When the BFE has not been provided in a 'Special Flood Hazard Area', it may be obtained from engineering studies available from a Federal, State, or other source using FEMA approved engineering methodologies. This elevation, when combined with the 'Freeboard', establishes the 'Regulatory Flood Protection Elevation'.

10. **Building.** See 'Structure'.

11. **Chemical Storage Facility.** A building, portion of a building, or exterior area adjacent to a building used for the storage of any chemical or chemically reactive products.

12. **Design Flood.** See "Regulatory Flood Protection Elevation."

13. **Development.** Any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

14. **Development Activity.** Any activity defined as Development which will necessitate a Floodplain Development Permit. This includes buildings, structures, and non-structural items, including (but not limited to) fill, bulkheads, piers, pools, docks, landings, ramps, and erosion control/stabilization measures.

15. **Digital Flood Insurance Rate Map (DFIRM).** The digital official map of a community, issued by the Federal Emergency Management Agency (FEMA), on which both the Special Flood Hazard Areas and the risk premium zones applicable to the community are delineated.

16. **Disposal.** As defined in NCGS 130A-290(a)(6), the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste into or on any land or water so that the solid waste or any constituent part of the solid waste may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

17. **Elevated Building.** A non-basement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

18. **Encroachment.** The advance or infringement of uses, fill, excavation, buildings, structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

19. **Existing building and existing structure.** Any building and/or structure for which the "start of construction" commenced before the initial effective date of the floodplain management regulations adopted by the community.

20. **Existing Manufactured Home Park or Manufactured Home Subdivision.** 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) was completed before the original effective date of the floodplain management regulations adopted by the community.

21. **Flood or Flooding.** A general and temporary condition of partial or complete inundation of normally dry land areas from:

    (a) The overflow of inland or tidal waters; and/or

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

22. **Flood Insurance.** Means the insurance coverage provided under the National Flood Insurance Program.

23. **Flood Insurance Rate Map (FIRM).** An official map of a community, issued by the Federal Emergency Management Agency, on which both the Special Flood Hazard Areas and the risk premium zones applicable to the community are delineated.

24. **Flood Insurance Study (FIS).** An examination, evaluation, and determination of flood hazards, corresponding water surface elevations (if appropriate), flood hazard risk zones, and other flood data in a community issued by the Federal Emergency Management Agency. The Flood Insurance Study report includes Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs), if published.

25. **Flood Prone Area.** See 'Floodplain'.

26. **Floodplain.** Any land area susceptible to being inundated by water from any source.

27. **Floodplain Administrator.** See Zoning Administrator.

28. **Floodplain Development Permit.** Any type of permit (zoning or special use permit) that is required in conformance with the provisions of Section 5-3 prior to the commencement of any development activity.

29. **Floodplain Management.** The operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including, but not limited to, emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.

30. **Floodplain Management Regulations.** This Section and other land development ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances, and other applications of police power which control development in flood-prone areas. This term describes federal, state or local regulations, in any combination thereof, which provide standards for preventing and reducing flood loss and damage.

31. **Floodproofing.** 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 sanitation facilities, structures, and their contents.

32. **Flood-resistant material**. Any building product [material, component or system] capable of withstanding direct and prolonged contact (minimum 72 hours) with floodwaters without sustaining damage that requires more than low-cost cosmetic repair. Any material that is water-soluble or is not resistant to alkali or acid in water, including normal adhesives for above-grade use, is not flood-resistant. Pressure-treated lumber or naturally decay-resistant lumbers are acceptable flooring materials. Sheet-type flooring coverings that restrict evaporation from below and materials that are impervious, but dimensionally unstable are not acceptable. Materials that absorb or retain water excessively after submergence are not

flood-resistant. Please refer to Technical Bulletin 2, *Flood Damage-Resistant Materials Requirements*, and available from the FEMA. Class 4 and 5 materials, referenced therein, are acceptable flood-resistant materials.

33. **Floodway.** The channel of a river or other watercourse, including the area above a bridge or culvert when applicable, 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 one foot.

34. **Floodway encroachment analysis.** An engineering analysis of the impact that a proposed encroachment into a floodway or non-encroachment area is expected to have on the floodway boundaries and flood levels during the occurrence of the base flood discharge. The evaluation shall be prepared by a qualified North Carolina licensed engineer using standard engineering methods and models.

35. **Flood Zone.** A geographical area shown on a Flood Hazard Boundary Map or Flood Insurance Rate Map that reflects the severity or type of flooding in the area.

36. **Freeboard.** The height added to the Base Flood Elevation (BFE) to account for the many unknown factors that could contribute to flood heights greater that the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization on the watershed. The Base Flood Elevation plus the freeboard establishes the 'Regulatory Flood Protection Elevation'.

37. **Functionally Dependent Facility.** A facility which cannot be used for its intended purpose unless it is located in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, or ship repair. The term does not include long-term storage, manufacture, sales, or service facilities.

38. **Hazardous Waste Facility.** As defined in NCGS 130A, Article 9, a facility for the collection, storage, processing, treatment, recycling, recovery, or disposal of hazardous waste.

39. **Highest Adjacent Grade (HAG).** The highest natural elevation of the ground surface, prior to construction, immediately next to the proposed walls of the structure.

40. **Historic Structure.** Any structure that is:

    (a) Listed individually in the National Register of Historic Places (a listing maintained by the US Department of Interior) or preliminarily determined by the Secretary of Interior as meeting the requirements for individual

listing on the National Register;

(b) Certified or preliminarily determined by the Secretary of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

(c) Individually listed on a local inventory of historic landmarks in communities with a 'Certified Local Government (CLG) Program'; or

(d) Certified as contributing to the historical significance of a historic district designated by a community with a 'Certified Local Government (CLG) Program'.

Certified Local Government (CLG) Programs are approved by the US Department of the Interior in cooperation with the North Carolina Department of Cultural Resources through the State Historic Preservation Officer as having met the requirements of the National Historic Preservation Act of 1966 as amended in 1980.

41. **Letter of Map Change (LOMC).** An official determination issued by FEMA that amends or revises an effective Flood Insurance Rate Map or Flood Insurance Study. Letters of Map Change include:

(a) **Letter of Map Amendment (LOMA):** An official amendment, by letter, to an effective National Flood Insurance Program map. A LOMA is based on technical data showing that a property had been inadvertently mapped as being in the floodplain, but is actually on natural high ground above the base flood elevation. A LOMA amends the current effective Flood Insurance Rate Map and establishes that a specific property, portion of a property, or structure is not located in a special flood hazard area.

(b) **Letter of Map Revision (LOMR):** A revision based on technical data that may show changes to flood zones, flood elevations, special flood hazard area boundaries and floodway delineations, and other planimetric features.

(c) **Letter of Map Revision Based on Fill (LOMR-F):** A determination that a structure or parcel of land has been elevated by fill above the BFE and is, therefore, no longer located within the special flood hazard area. In order to qualify for this determination, the fill must have been permitted and placed in accordance with the community's floodplain management regulations.

(d) **Conditional Letter of Map Revision (CLOMR):** A formal review and comment as to whether a proposed project complies with the minimum NFIP requirements for such projects with respect to delineation of special flood hazard areas. A CLOMR does not revise the effective Flood Insurance Rate Map or Flood Insurance Study; upon submission and approval of certified as-built documentation, a Letter of Map Revision may be issued by FEMA to revise the effective FIRM.

42. **Light Duty Truck.** Any motor vehicle rated at 8,500 pounds Gross Vehicular Weight Rating or less which has a vehicular curb weight of 6,000 pounds or less and which has a basic vehicle frontal area of 45 square feet or less as defined in 40 CFR 86.082-2 and is:

    (a) Designed primarily for purposes of transportation of property or is a derivation of such a vehicle, or

    (b) Designed primarily for transportation of persons and has a capacity of more than 12 persons; or

    (c) Available with special features enabling off-street or off-highway operation and use.

43. **Lowest Adjacent Grade (LAG).** The lowest elevation of the ground, sidewalk or patio slab immediately next to the building, or deck support, after completion of the building.

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

45. **Manufactured Home.** A structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term ‘manufactured home’ does not include a ‘recreational vehicle’.

46. **Manufactured Home Park or Subdivision.** A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

47. **Market Value.** The building value, not including the land value and that of any accessory structures or other improvements on the lot. Market value may be established by independent certified appraisal; replacement cost depreciated for age of

building and quality of construction (Actual Cash Value); or adjusted tax assessed values.

48. **New Construction.** Structures for which the 'start of construction' commenced on or after the effective date of the original version of the community's Flood Damage Prevention Ordinance and includes any subsequent improvements to such structures.

49. **Non-Encroachment Area.** 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 one (1) foot as designated in the Flood Insurance Study report.

53. **Post-FIRM.** Construction or other development for which the 'start of construction' occurred on or after the effective date of the initial Flood Insurance Rate Map for the area.

54. **Pre-FIRM.** Construction or other development for which the 'start of construction' occurred before the effective date of the initial Flood Insurance Rate Map for the area.

55. **Principally Above Ground.** At least 51% of the actual cash value of the structure is above ground.

56. **Public Safety and/or Nuisance.** Anything which is injurious to the safety or health of an entire community or neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin.

57. **Recreational Vehicle (RV).** 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; and

    (e) Is fully licensed and ready for highway use.

    For the purpose of this section, "Tiny Homes/Houses" and Park Models that do not meet the items listed above are not considered Recreational Vehicles and should meet the standards of and be permitted as Residential

Structures.

58. **Reference Level.** The top of the lowest floor for structures within Special Flood Hazard Areas designated as Zones A, AE, AH, AO, A99.

59. **Regulatory Flood Protection Elevation.** The 'Base Flood Elevation' plus the 'Freeboard'. In 'Special Flood Hazard Areas' where Base Flood Elevations (BFEs) have been determined, this elevation shall be the BFE plus two feet of freeboard. In 'Special Flood Hazard Areas' where no BFE has been established, this elevation shall be at least two feet above the highest adjacent grade.

60. **Remedy a Violation.** To bring the structure or other development into compliance with State and community floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the section or otherwise deterring future similar violations, or reducing Federal financial exposure with regard to the structure or other development.

61. **Riverine.** Relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

62. **Salvage Yard.** Any non-residential property used for the storage, collection, and/or recycling of any type of equipment, and including but not limited to vehicles, appliances and related machinery.

63. **Solid Waste Disposal Facility.** As defined in NCGS 130A-290 (a) (35), any facility involved in the disposal of solid waste.

64. **Solid Waste Disposal Site.** As defined in NCGS 130A-290 (a) (36), any place at which solid wastes are disposed of by incineration, sanitary landfill, or any other method.

65. **Special Flood Hazard Area (SFHA).** The land in the floodplain subject to a one percent or greater chance of being flooded in any given year, as determined Section 5-3.3, B.

66. **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 on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include 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 the building, whether or not that alteration affects the external dimensions of the building.

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

68. **Substantial Damage.** Damage of any origin sustained by a structure during any one-year period whereby the cost of restoring the structure to it's before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. See definition of 'substantial improvement'.

69. **Substantial Improvement.** Any combination of repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during any one-year period for which the cost equals or exceeds 50 percent of the market value of the structure before the 'start of construction' of the improvement. This term includes structures which have incurred 'substantial damage', regardless of the actual repair work performed. The term does not, however, include either:

    (a) Any correction of existing violations of State or community health, sanitary, or safety code specifications which have been identified by the community code enforcement official and which are the minimum necessary to assure safe living conditions; or,

    (b) Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

70. **Technical Bulletin and Technical Fact Sheet.** A FEMA publication that provides guidance concerning the building performance standards of the NFIP, which are contained in Title 44 of the U.S. Code of Federal Regulations at Section 60.3. The bulletins and fact sheets are intended for use primarily by State and local officials responsible for interpreting and enforcing NFIP regulations and by members of the development community, such as design professionals and builders. New bulletins, as well as updates of existing bulletins, are issued periodically as needed. The bulletins do not create regulations; rather they provide specific guidance for complying with the minimum requirements of existing NFIP regulations.

    It should be noted that Technical Bulletins and Technical Fact Sheets provide guidance on the minimum requirements of the NFIP regulations. State or community requirements that exceed those of the

NFIP take precedence. Design professionals should contact the community officials to determine whether more restrictive State or local regulations apply to the building or site in question. All applicable standards of the State or local building code must also be met for any building in a flood hazard area.

71. **Temperature Controlled.** Having the temperature regulated by a heating and/or cooling system, built-in or appliance.

72. **Variance.** A grant of relief from the requirements of this Section.

73. **Violation.** 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 certifications, or other evidence of compliance required in Sections 5-3.4 and 5-3.7 is presumed to be in violation until such time as that documentation is provided.

74. **Water Surface Elevation (WSE).** The height, in relation to NAVD 1988, of floods of various magnitudes and frequencies in the floodplains of riverine areas.

75. **Watercourse.** A lake, river, creek, stream, wash, channel or other topographic feature on or over which waters flow at least periodically. 'Watercourse' includes specifically designated areas in which substantial flood damage may occur.

76. **Zoning Administrator.** The individual appointed to administer and enforce the floodplain management regulations of this Section.

5-3.3 General Provisions

A. Applicability

The provisions of Section 5-3 shall apply to all Special Flood Hazard Areas within the planning and zoning jurisdiction of the City of Mebane.

B. Basis for Establishing the Special Flood Hazard Areas

The Special Flood Hazard Areas are those identified under the Cooperating Technical State (CTS) agreement between the State of North Carolina and FEMA in its ~~Flood Insurance Study~~ FIS and its accompanying DFIRM panels, for Alamance County dated November 17, 2017, and for Orange County dated November 17, 2017 which are adopted by reference and declared to be a part of this Section. Future revisions to the FIS and DFIRM panels that do not change flood hazard data within the jurisdictional authority of the City of Mebane are also adopted by reference and declared a part of this section. Subsequent Letter of Map Revisions (LOMRs) and/or Physical Map Revisions (PMRs) shall be adopted within 3 months.

C. Compliance

No structure or land shall hereafter be located, extended, converted, altered, or developed in any way without full compliance with the

terms of this Section and other applicable regulations.

D. Abrogation and Greater Restrictions

The provisions of this Section are not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where the provisions of this Section and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

E. Interpretation

In the interpretation and application of the provisions of this Section, all provisions shall be:

1. Considered as minimum requirements;

2. Liberally construed in favor of the governing body; and

3. Deemed neither to limit nor repeal any other powers granted under State statutes.

F. Warning and Disclaimer of Liability

The degree of flood protection required by this Section is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur. Actual flood heights may be increased by man-made or natural causes. This Section does not imply that land outside the Special Flood Hazard Areas or uses permitted within such areas will be free from flooding or flood damages. This Section shall not create liability on the part of the City of Mebane or by any officer or employee thereof for any flood damages that result from reliance on this Section or any administrative decision lawfully made hereunder.

G. Violations and Penalties

Violations of the provisions of Section 5-3 or failure to comply with any of its requirements shall be processed in accordance with the procedures delineated in Article 11, Enforcement and Judicial Review. Penalties and remedies for violations shall be as provided for in Article 11, Sections 11-4 and 11-5. Nothing herein contained shall prevent the City of Mebane from taking such other lawful action as is necessary to prevent or remedy any violation of the provisions of Section 5-3.

5-3.4 Plans, Application, and Permit Requirements

A. Designation of Floodplain Administrator

The Zoning Administrator is hereby appointed to administer and implement the provisions of this section. In instances where the Zoning Administrator receives assistance from others to complete tasks to administer and implement this section, the Zoning Administrator shall be responsible for the coordination and community's overall compliance with the National Flood Insurance Program and the provisions of this section.

B. General

A zoning or special use permit, as applicable, shall be required in conformance with the provisions of this Section prior to the commencement of any development activities within Special Flood Hazard Areas determined in accordance with Section 5-3.3, B.

C. Application Requirements

Applications for a zoning permit or special use permit which include property that is located within a Special Flood Hazard Area shall be submitted to the Zoning Administrator and shall include the following information:

1. A plot plan drawn to scale which shall include, but shall not be limited to, the following specific details of the proposed floodplain development:

(a) The nature, location, dimensions, and elevations of the area of development/disturbance; existing and proposed structures, utility systems, grading/pavement areas, fill materials, storage areas, drainage facilities, and other development;

(b) The boundary of the Special Flood Hazard Area as delineated on the FIRM or other flood map as determined in Section 5-3.3, B or a statement that the entire lot is within the Special Flood Hazard Area;

(c) Flood zone(s) designation of the proposed development area as determined on the FIRM or other flood map as determined in Section 5-3.3, B;

(d) The boundary of the floodway(s) or non-encroachment area(s) as determined in Section 5-3.3, B;

(e) The Base Flood Elevation (BFE) where provided as set forth in Section 5-3.3, B; Section 5-3.5, K and L; or Section 5-3.7, C;

(f) The old and new location of any watercourse that will be altered or relocated as a result of proposed development;

(g) Certification of the plot plan by a registered surveyor or professional engineer.

2. Proposed elevation, and method thereof, of all development within a Special Flood Hazard Area including but not limited to:

(a) Elevation in relation to NAVD 1988 of the proposed reference level (including basement) of all structures;

(b) Elevation in relation to NAVD 1988 to which any non-residential structure in Zones A, AE, AH, AO, A99 will be flood-proofed; and

(c) Elevation in relation to NAVD 1988 to which any proposed utility systems will be elevated or floodproofed;

3. If floodproofing, a Floodproofing Certificate (FEMA Form 086-0-34) with supporting data and an operational plan that includes, but is not limited to, installation, exercise, and maintenance of floodproofing measures.

4. A Foundation Plan, drawn to scale, which shall include details of the proposed foundation system to ensure all provisions of this Section are met. These details include but are not limited to:

(a) The proposed method of elevation, if applicable (i.e., fill, solid foundation perimeter wall, solid backfilled foundation, open foundation on columns/posts/piers/piles/shear walls) and

(b) Openings to facilitate equalization of hydrostatic flood forces on walls in accordance with Section 5-3.7, B, 4, (d), when solid foundation perimeter walls are used in Zones A, AE, AH, AO, A99.

5. Usage details of any enclosed areas below the regulatory flood protection elevation.

6. Plans and/or details for the protection of public utilities and facilities such as sewer, gas, electrical, and water systems to be located and constructed to minimize flood damage;

7. Copies of all other Local, State and Federal permits required prior to floodplain development permit issuance (Wetlands, Endangered Species, Erosion and Sedimentation Control, Riparian Buffers, Mining, etc.)

8. Documentation for placement of Recreational Vehicles and/or Temporary Structures, when applicable, to ensure Section 5-3.7, B, 6 and 7 are met.

9. A description of proposed watercourse alteration or relocation, when applicable, including an engineering report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map (if not shown on plot plan) showing the location of the proposed watercourse alteration or relocation.

D. Permit Data Requirements

The following information shall be provided on the approved permit to ensure compliance with the provisions of Section 5-3:

1. A complete description of the development to be permitted under the floodplain development permit (e.g. house, garage, pool, septic, bulkhead, cabana, pier, bridge, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials, etc.).

2. The Special Flood Hazard Area determination for the proposed development per available data specified in Section 5-3.3, B.

3. The regulatory flood protection elevation required for the reference level and all attendant utilities.

4. The regulatory flood protection elevation required for the protection of all public utilities.

5. All certification submittal requirements with timelines.

6. A statement that no fill material or other development shall encroach into the floodway or non-encroachment area of any watercourse, as applicable.

7. The flood openings requirements, if in Zones A, AE, AH, AO, A99.

8. Limitations of below BFE enclosure uses, if applicable (i.e., parking, building access and limited storage only).

9. A statement that all materials below BFE/RFPE must be flood resistant materials.

E. Certification Requirements

1. Elevation Certificates:

(a) An Elevation Certificate (FEMA Form 086-0-33) is required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the Zoning Administrator a certification of the elevation of the reference level, in relation to NAVD 1988. The Zoning Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder prior to the beginning of construction. Failure to submit the certification or failure to make required corrections shall be cause to deny a floodplain development permit.

(b) An Elevation Certificate (FEMA Form 086-0-33) is required after the reference level is established. Within seven calendar days of establishment of the reference level elevation, it shall be the duty of the permit holder

to submit to the Zoning Administrator a certification of the elevation of the reference level, in relation to NAVD 1988. Any work done within the seven-day calendar period and prior to submission of the certification shall be at the permit holder's risk. The Zoning Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further work being permitted to proceed. Failure to submit the certification or failure to make required corrections shall be cause to issue a stop-work order for the project.

(c) A final as-built Elevation Certificate (FEMA Form 086-0-33) is required after construction is completed and prior to Certificate of Compliance/Occupancy issuance. It shall be the duty of the permit holder to submit to the Zoning Administrator a certification of final as-built construction of the elevation of the reference level and all attendant utilities. The Zoning Administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to Certificate of Compliance/Occupancy issuance. In some instances, another certification may be required to certify corrected as-built construction. Failure to submit the certification or failure to make required corrections shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy. The Finished Construction Elevation Certificate certifier shall provide at least 2 photographs showing the front and rear of the building taken within 90 days from the date of certification. The photographs must be taken with views confirming the building description and diagram number provided in Section A. To the extent possible, these photographs should show the entire building including foundation. If the building has split-level or multi-level areas, provide at least 2 additional photographs showing side views of the building. In addition, when applicable, provide a photograph of the foundation showing a representative example of the flood openings or vents. All photographs must be in color and measure at least 3" × 3".

2. Floodproofing Certificate

(a) If non-residential floodproofing is used to meet the regulatory flood protection elevation requirements, a Floodproofing Certificate (FEMA Form 086-0-34), with supporting data and an operational plan, is required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the Zoning Administrator a certification of the floodproofed design elevation of the reference level and all attendant

utilities, in relation to NAVD 1988. Floodproofing certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The Zoning Administrator shall review the certificate data and plan. Deficiencies detected by such review shall be corrected by the applicant prior to permit approval. Failure to submit the certification or failure to make required corrections shall be cause to deny a floodplain development permit. Failure to construct in accordance with the certified design shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

(b) A final Finished Construction Floodproofing Certificate (FEMA Form 086-0-34), with supporting data, an operational plan, and an inspection and maintenance plan are required prior to the issuance of a Certificate of Compliance/Occupancy. It shall be the duty of the permit holder to submit to the Floodplain Administrator a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to NAVD 1988. Floodproofing certificate shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The Floodplain Administrator shall review the certificate data, the operational plan, and the inspection and maintenance plan. Deficiencies detected by such review shall be corrected by the applicant prior to Certificate of Occupancy. Failure to submit the certification or failure to make required corrections shall be cause to deny a Floodplain Development Permit. Failure to construct in accordance with the certified design shall be cause to deny a Certificate of Compliance/Occupancy.

3. If a manufactured home is placed within Zones A, AE, AH, AO, or A99 and the elevation of the chassis is more than 36 inches in height above grade, an engineered foundation certification is required per Section 5-3.7, B, 3, (b).

4. If a watercourse is to be altered or relocated, a description of the extent of watercourse alteration or relocation; a professional engineer's certified report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map showing the location of the proposed watercourse alteration or relocation shall all be submitted by the permit applicant prior to issuance of a permit.

5. Certification Exemptions. The following structures, if located within Zones A, AE, AH, AO, or A99, are exempt from the elevation/floodproofing certification requirements specified in items 1 and 2 above of this subsection:

a. Recreational Vehicles meeting requirements of Section 5-3.7, B, 6, (a);

b. Temporary Structures meeting requirements of Section 5-3.7, B, 7; and

c. Accessory Structures less than 150 square feet or less than $3,000 and meeting requirements of Section 5-3.7, B, 8.

F. Determinations for existing buildings and structures

For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, change of occupancy, additions, rehabilitations, renovations, substantial improvements, repairs of substantial damage, and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the Building Official, shall:

1. Estimate the market value, or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building or structure before the start of construction of the proposed work; in the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made;

2. Compare the cost to perform the improvement, the cost to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building or structure;

3. Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage; and

4. Notify the applicant if it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the NC Building Code and this section is required.

5-3.5 Duties and Responsibilities of the Zoning Administrator

The duties of the Zoning Administrator as they relate to the administration and enforcement of the provisions of Section 5-3 shall include, but not be limited to:

A. Review all floodplain development applications and issue permits for all proposed development within Special Flood Hazard Areas to assure that the requirements of this Section have been satisfied.

B. Review all proposed development within Special Flood Hazard Areas to assure that all necessary local, state and federal permits

have been received, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.

C. Notify adjacent communities and the North Carolina Department of Crime Control and Public Safety, Division of Emergency Management, State Coordinator for the National Flood Insurance Program prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency (FEMA).

D. Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

E. Prevent encroachments into floodways and non-encroachment areas unless the certification and flood hazard reduction provisions of Section 5-3.7, E are met.

F. Obtain actual elevation (in relation to NAVD 1988) of the reference level (including basement) and all attendant utilities of all new or substantially improved structures, in accordance with Section 5-3.4, E.

G. Obtain actual elevation (in relation to NAVD 1988) to which all new and substantially improved structures and utilities have been floodproofed, in accordance with Section 5-3.4, E.

H. Obtain actual elevation (in relation to NAVD 1988) of all public utilities in accordance with Section 5-3.4, E.

I. When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect in accordance with Section 5-3.4, E and Section 5-3.7, B, 2.

J. Where interpretation is needed as to the exact location of boundaries of the Special Flood Hazard Areas (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this Section.

K. When Base Flood Elevation (BFE) data has not been provided in accordance with Section 5-3.3, B obtain, review, and reasonably utilize any Base Flood Elevation (BFE) data, along with floodway data or non-encroachment area data available from a Federal, State, or other source, including data developed pursuant to Section 5-3.7, C, 2, (b), in order to administer the provisions of this Section.

L. When Base Flood Elevation (BFE) data is provided but no floodway nor non- encroachment area data has been provided in accordance with Section 5-3.3, B obtain, review, and reasonably utilize any floodway data or non-encroachment area data available from a

Federal, State, or other source in order to administer the provisions of this Section.

M. When the lowest ground elevation of a parcel or structure in a Special Flood Hazard Area is above the Base Flood Elevation, advise the property owner of the option to apply for a Letter of Map Amendment (LOMA) from FEMA. Maintain a copy of the Letter of Map Amendment (LOMA) issued by FEMA in the floodplain development permit file.

N. Permanently maintain all records that pertain to the administration of Section 5- 3 and make these records available for public inspection.

O. Make on-site inspections of work in progress. As the work pursuant to a permit progresses, the Zoning Administrator shall make as many inspections of the work as may be necessary to ensure that the work is being done according to the provisions of the local ordinance and the terms of the permit. In exercising this power, the Zoning Administrator has a right, upon presentation of proper credentials, to enter on any premises within the jurisdiction of the community at any reasonable hour for the purposes of inspection or other enforcement action.

P. Issue stop-work orders as required. Whenever a building or part thereof is being constructed, reconstructed, altered, or repaired in violation of this Section, the Zoning Administrator may order the work to be immediately stopped. The stop- work order shall be in writing and directed to the person doing the work. The stop-work order shall state the specific work to be stopped, the specific reason(s) for the stoppage, and the condition(s) under which the work may be resumed. Violation of a stop-work order constitutes a misdemeanor.

Q. Revoke floodplain development permits as required. The Zoning Administrator may revoke and require the return of the permit by notifying the permit holder in writing stating the reason(s) for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans, or specifications; for refusal or failure to comply with the requirements of State or local laws; or for false statements or misrepresentations made in securing the permit. Any permit mistakenly issued in violation of an applicable State or local law may also be revoked.

R. Make periodic inspections throughout all special flood hazard areas within the jurisdiction of the community. The Zoning Administrator and each member of his or her inspections department shall have a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action.

S. Follow through with corrective procedures of Section 5-3.3, G.

T. Review, provide input, and make recommendations for variance requests.

U. Maintain a current map repository to include, but not limited to, the FIS Report, FIRM and other official flood maps and studies adopted in accordance with Section 5-3.3, B, including any revisions thereto including Letters of Map Change, issued by FEMA. Notify State and FEMA of mapping needs.

V. Coordinate revisions to FIS reports and FIRMs, including Letters of Map Revision Based on Fill (LOMR-F) and Letters of Map Revision (LOMR).

5-3.6 Variance Procedures

Requests for variances from the Flood Hazard Overlay District requirements of Section 5-3 shall be reviewed by the board of adjustment in accordance with the procedures outlined in Section 8-2, B. Any person aggrieved by the decision of the board of adjustment may appeal such decision in accordance with the provisions of Section 11- 7, Judicial Review.

5-3.7 Provisions for Flood Hazard Reduction

A. General Standards

In all Special Flood Hazard Areas, the following provisions are required:

1. All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse, and lateral movement of the structure.

2. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

3. All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damages.

4. All new electrical, heating, ventilation, plumbing, air conditioning equipment, and other service equipment shall be located at or above the RFPE or designed and installed to prevent water from entering or accumulating within the components during the occurrence of the base flood. These include, but are not limited to, HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric/gas meter panels/boxes, utility/cable boxes, hot water heaters, and electric outlets/switches.

   (a) Replacements part of a substantial improvement, electrical, heating, ventilation, plumbing, air conditioning equipment, and other service equipment shall also meet the above provisions.

   (b) Replacements that are for maintenance and not part of a

substantial improvement, may be installed at the original location provided the addition and/or improvements only comply with the standards for new construction consistent with the code and requirements for the original structure.

5. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

6. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into flood waters.

7. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.

8. Nothing in this Section shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of this Section and located totally or partially within the floodway, non- encroachment area, or stream setback, provided there is no additional encroachment below the regulatory flood protection elevation in the floodway, non-encroachment area, or stream setback, and provided that such repair, reconstruction, or replacement meets all of the other requirements of this Section.

9. New solid waste disposal facilities and sites, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted, except by variance as specified in Section 5-3.6, I. A structure or tank for chemical or fuel storage incidental to an allowed use or to the operation of a water treatment plant or wastewater treatment facility may be located in a Special Flood Hazard Area only if the structure or tank is either elevated or floodproofed to at least the regulatory flood protection elevation and certified according to Section 5-3.4, E.

10. All subdivision proposals and other development proposals shall be consistent with the need to minimize flood damage.

11. All subdivision proposals and other development proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.

12. All subdivision proposals and other development proposals shall have adequate drainage provided to reduce exposure to flood hazards.

13. All subdivision proposals and other development proposals

shall have received all necessary permits from those governmental agencies for 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.

14. When a structure is partially located in a Special Flood Hazard Area, the entire structure shall meet the requirements for new construction and substantial improvements.

15. When a structure is located in multiple flood hazard zones or in a flood hazard risk zone with multiple base flood elevations, the provisions for the more restrictive flood hazard risk zone and the highest BFE shall apply.

B. Specific Standards

In all Special Flood Hazard Areas where Base Flood Elevation (BFE) data has been provided, as set forth in Section 5-3.3, B or Section 5-3.5, K and L, the following provisions, in addition to Section 5-3.7, A, are required:

1. Residential Construction

New construction and substantial improvement of any residential structure (including manufactured homes) shall have the reference level, including basement, elevated no lower than the regulatory flood protection elevation, as defined in Section 5-3.2.

2. Non-Residential Construction

New construction and substantial improvement of any commercial, industrial, or other non-residential structure shall have the reference level, including basement, elevated no lower than the regulatory flood protection elevation, as defined in Section 5-3.2. Structures located in Zones A, AE, AH, AO, A99 may be floodproofed to the regulatory flood protection elevation in lieu of elevation provided that all areas of the structure, together with attendant utility and sanitary facilities, below the regulatory flood protection elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. For AH and AO Zones, the floodproofing elevation shall be in accordance with Section 5-3.7, F. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the Zoning Administrator as set forth in Section 5-3.4, E along with the operational and maintenance plans.

3. Manufactured Homes:

(a) New or replacement manufactured homes shall be elevated so that the reference level of the manufactured home is no lower than the regulatory flood protection elevation, as defined in Section 5-3.2.

(b) Manufactured homes shall be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement, either by engineer certification, or in accordance with the most current edition of the State of North Carolina Regulations for Manufactured Homes adopted by the Commissioner of Insurance pursuant to NCGS 143-143.15. Additionally, when the elevation would be met by an elevation of the chassis thirty-six inches or less above the grade at the site, the chassis shall be supported by reinforced piers or engineered foundation. When the elevation of the chassis is above thirty-six inches in height, an engineering certification is required.

(c) All enclosures or skirting below the lowest floor shall meet the requirements of Section 3-5.7, B, 4.

(d) An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home parks or subdivisions located within flood prone areas. This plan shall be filed with and approved by the Zoning Administrator and the local Emergency Management coordinator.

4. Elevated Buildings

Fully enclosed area, of new construction and substantially improved structures, which is below the lowest floor:

(a) Shall not be designed or used for human habitation, but shall only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment (standard exterior door), or entry to the living area (stairway or elevator). The interior portion of such enclosed area shall not be finished or partitioned into separate rooms, except to enclose storage areas;

(b) Shall not be temperature controlled.

(c) Shall be constructed entirely of flood resistant materials below the regulatory flood protection elevation; and

(d) Shall include, in Zones A, AE, AH, AO, A99 flood openings to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. To meet this requirement, the openings must either be certified by a professional engineer or architect or meet or exceed the following minimum

design criteria;

(1) A minimum of two flood openings on different sides of each enclosed area subject to flooding;

(2) The total net area of all flood openings must be at least one square inch for each square foot of enclosed area subject to flooding;

(3) If a building has more than one enclosed area, each enclosed area must have flood openings to allow floodwaters to automatically enter and exit;

(4) The bottom of all required flood openings shall be no higher than one foot above the adjacent grade;

(5) Flood openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions; and

(6) Enclosures made of flexible skirting are not considered enclosures for regulatory purposes, and, therefore, do not require flood openings. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires flood openings as outlined above.

5. Additions/Improvements:

(a) Additions and/or improvements to pre-FIRM structures when the addition and/or improvements in combination with any interior modifications to the existing structure are:

(1) Not a substantial improvement, the addition and/or improvements must be designed to minimize flood damages and must not be any more non-conforming than the existing structure.

(2) A substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.

(b) Additions to post-FIRM structures with no modifications to the existing structure other than a standard door in the common wall shall require only the addition to comply with the standards for new construction.

(c) Additions and/or improvements to post-FIRM structures when the addition and/or improvements in combination

with any interior modifications to the existing structure are:

(3) Not a substantial improvement, the addition and/or improvements only must comply with the standards for new construction.

(4) A substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.

(d) Where an independent perimeter load-bearing wall is provided between the addition and the existing building, the addition(s) shall be considered a separate building and only the addition must comply with the standards for new construction.

6. Recreational Vehicles

Recreational vehicles shall either:

(a) **Temporary Placement**

(1) Be on site for fewer than 180 consecutive days; or

(2) Be fully licensed and ready for highway use (a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities, and has no permanently attached additions); or

(b) Permanent Placement. Recreational vehicles that do not meet the limitations of Temporary Placement shall meet all the requirements for new construction.

7. Temporary Non-Residential Structures

Prior to the issuance of a permit for a temporary structure, the applicant must submit to the Zoning Administrator a plan for the removal of such structure(s) in the event of a hurricane, flash flood or other type of flood warning notification. The following information shall be submitted in writing to the Zoning Administrator for review and written approval:

(a) A specified time period for which the temporary use will be permitted. Time specified may not exceed three months, renewable up to one year;

(b) The name, address, and phone number of the individual responsible for the removal of the temporary structure;

(c) The time frame prior to the event at which a structure

will be removed (i.e., minimum of 72 hours before landfall of a hurricane or immediately upon flood warning notification);

(d) A copy of the contract or other suitable instrument with the entity responsible for physical removal of the structure; and

(e) Designation, accompanied by documentation, of a location outside the Special Flood Hazard Area, to which the temporary structure will be moved.

8. Accessory Structures

When accessory structures (sheds, detached garages, etc.) are to be placed within a Special Flood Hazard Area, the following criteria shall be met:

(a) Accessory structures shall not be used for human habitation (including working, sleeping, living, cooking or restroom areas);

(b) Accessory structures shall not be temperature-controlled;

(c) Accessory structures shall be designed to have low flood damage potential;

(d) Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;

(e) Accessory structures shall be firmly anchored in accordance with Section 5-3.7, A, 1;

(f) All service facilities such as electrical shall be installed in accordance with Section 5-3.7, A, 4; and

(g) Flood openings to facilitate automatic equalization of hydrostatic flood forces shall be provided below regulatory flood protection elevation in conformance with Section 5-3.7, B, 4 (c).

An accessory structure with footprint less than 150 square feet, or that is a minimal investment of $3,000 or less, and that satisfies the criteria outlined above does not require an elevation or floodproofing certificate. Elevation or floodproofing certifications are required for all other accessory structures in accordance with Section 5- 3.4, D.

9. Tanks

When gas and liquid storage tanks are to be placed within a Special Flood Hazard Area, the following criteria shall be met:

(a) Underground Tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads during conditions of the design flood, including the effects of buoyancy assuming the tank is empty;

(b) Above-ground elevated tanks in flood hazard areas shall be elevated to or above the Regulatory Flood Protection Elevation on a supporting structure that is designed to prevent flotation, collapse or lateral movement during conditions of the design flood. Tank-supporting structures shall meet the foundation requirements of the applicable flood hazard area;

(c) Above-ground not elevated tanks that do not meet the elevation requirements of Section B (2) of this section shall be permitted in flood hazard areas provided the tanks are designed, constructed, installed, and anchored to resist all flood-related and other loads, including the effects of buoyancy, during conditions of the design flood and without release of contents in the floodwaters or infiltration by floodwaters into the tanks. Tanks shall be designed, constructed, installed, and anchored to resist the potential buoyant and other flood forces acting on an empty tank during design flood conditions.

(d) Tank inlets and vents. Tank inlets, fill openings, outlets and vents shall be:

(1) At or above the Regulatory Flood Protection Elevation or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the design flood; and

(2) Anchored to prevent lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the design flood.

10. Other Development

(a) Fences in regulated floodways and NEAs that have the potential to block the passage of floodwaters, such as stockade fences and wire mesh fences, shall meet the limitations of Section 5-3.7, E of this section.

(b) Retaining walls sidewalks and driveways in regulated floodways and NEAs. Retaining walls and sidewalks and driveways that involve the placement of fill in regulated floodways shall meet the limitations of Section 5-3.7, E of this section.

(c) Roads and watercourse crossings in regulated floodways and NEAs. Roads and watercourse crossings, including roads, bridges, culverts, low-water crossings and similar means for vehicles or pedestrians to travel from one side of a watercourse to the other side, that encroach into regulated floodways shall meet the limitations of Section 5-3.7, E of this section.

C. Standards for Floodplains without Established Base Flood Elevations

Within the Special Flood Hazard Areas designated as Approximate Zone A and established in Section 5-3.3, B, where no Base Flood Elevation (BFE) data has been provided by FEMA, the following provisions, in addition to Sections 5-3.7, A and B, shall apply:

1. No encroachments, including fill, new construction, substantial improvements or new development shall be permitted within a distance of twenty feet each side from top of bank or five times the width of the stream, whichever is greater, unless certification with supporting technical data by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

2. The BFE used in determining the regulatory flood protection elevation shall be determined based on one of the following criteria set in priority order:

   (a) If Base Flood Elevation (BFE) data is available from other sources, all new construction and substantial improvements within such areas shall also comply with all applicable provisions of this Section and shall be elevated or floodproofed in accordance with standards in Section 5-3.5, K and L.

   (b) When floodway or non-encroachment data is available from a Federal, State, or other source, all new construction and substantial improvements within floodway and non-encroachment areas shall also comply with the requirements of Section 5-3.7 B and E.

   (c) All subdivision, manufactured home park and other development proposals shall provide Base Flood Elevation (BFE) data if development is greater than five acres or has more than fifty lots/manufactured home sites. Such Base Flood Elevation (BFE) data shall be adopted by reference per Section 5-3.3, B to be utilized in implementing this Section.

   (d) When Base Flood Elevation (BFE) data is not available from a Federal, State, or other source as outlined

above, the reference level shall be elevated to or above the regulatory flood protection elevation, as defined in Section 5-3.2.

D. Standards for Riverine Floodplains with BFE but without Established Floodways or Non-Encroachment Areas

Along rivers and streams where BFE data is provided but neither floodway nor non-encroachment areas are identified for a Special Flood Hazard Area on the FIRM or in the FIS report, the following requirements shall apply to all development within such areas:

1. Standards outlined in Section 5-3.7, A and B; and

2. Until a regulatory floodway or non-encroachment area is designated, no encroachments, including fill, new construction, substantial improvements, or other development, shall be permitted unless certification with supporting technical data by a 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 foot at any point within the community.

E. Standards for Floodways and Non-Encroachment Areas

Areas designated as floodways or non-encroachment areas are located within the Special Flood Hazard Areas established in Section 5-3.3, B. The floodways and non-encroachment areas are extremely hazardous areas due to the velocity of floodwaters that have erosion potential and carry debris and potential projectiles. The following provisions, in addition to standards outlined in Section 5-3.7, A and B, shall apply to all development within such areas:

1. No encroachments, including fill, new construction, substantial improvements and other developments shall be permitted unless it has been demonstrated that:

   (a) The proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood, based on hydrologic and hydraulic analyses performed in accordance with standard engineering practice and presented to the Zoning Administrator prior to issuance of a permit, or

   (b) A Conditional Letter of Map Revision (CLOMR) has been approved by FEMA. A Letter of Map Revision (LOMR) must also be obtained upon completion of the proposed encroachment.

2. If Section 5-3.7, E, 1 is satisfied, all development shall comply with all applicable flood hazard reduction provisions of this Section.

3. No manufactured homes shall be permitted, except replacement manufactured homes in an existing manufactured home park or

subdivision, provided the following provisions are met:

(a) The anchoring and the elevation standards of Section 5-3.7. B, 3; and

(b) The no encroachment standard of Section 5-3.7, E, 1.

F. Standards for Areas of Shallow Flooding (Zone AO)

Located within the Special Flood Hazard Areas established in Section 5-3.3, B, are areas designated as shallow flooding areas. These areas have special flood hazards associated with base flood depths of one to three feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. In addition to Section 5-3.7, A, all new construction and substantial improvements shall meet the following requirements:

1. The reference level shall be elevated at least as high as the depth number specified on the Flood Insurance Rate Map (FIRM), in feet, plus a freeboard of two feet, above the highest adjacent grade; or at least two feet above the highest adjacent grade plus a freeboard of two feet if no depth number is specified.

2. Non-residential structures may, in lieu of elevation, be floodproofed to the same level as required in subsection 1 above so that the structure, together with attendant utility and sanitary facilities, below that level shall be watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Certification is required as per Section 5-3.4, D and Section 5-3.7, B, 2.

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

G. STANDARDS FOR AREAS OF SHALLOW FLOODING (ZONE AH)

Located within the Special Flood Hazard Areas established in Article 3, Section B, are areas designated as shallow flooding areas. These areas are subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are one (1) to three (3) feet. Base Flood Elevations are derived from detailed hydraulic analyses are shown in this zone.

In addition to Section 5-3.7, A and B, all new construction and substantial improvements shall meet the following requirements:

1. Adequate drainage paths shall be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

5-3.8 Effect upon Outstanding Permits

Nothing herein contained shall require any change in the plans, construction, size, or designated use of any development or any part thereof for which a permit has been granted by the Zoning Administrator or his or her authorized agents before the time of passage of this Ordinance; provided, however, that when construction

is not begun under such outstanding permit within a period of six months subsequent to the date of issuance of the outstanding permit, construction or use shall be in conformity with the provisions of this Ordinance.

5-4 Stormwater Management

The general standards contained in this Section shall apply throughout the planning jurisdiction. However, developments located within watershed protection overlay districts shall comply with the applicable additional stormwater management requirements of Section 5-2. All residential development disturbing one acre or more and all nonresidential development disturbing one-half acre or more shall prepare stormwater management plans in accordance with subsection F below.

A. Natural Drainage System Utilized to Extent Feasible

1. To the extent practicable, all development shall conform to the natural contours of the land and natural and pre-existing man-made drainage ways shall remain undisturbed.

2. To the extent practicable, lot boundaries shall be made to coincide with natural and pre-existing man-made drainage ways within subdivisions to avoid the creation of lots that can be built upon only by altering such drainage ways.

B. Developments Must Drain Properly

1. All developments shall be provided with a drainage system that is adequate to prevent the undue retention of surface water on the development site. Surface water shall not be regarded as unduly retained if:

   (a) The retention results from a technique, practice or device deliberately installed as part of an approved sedimentation or stormwater runoff control plan; or

   (b) The retention is not substantially different in location or degree than that experienced by the development site in its pre-development stage, unless such retention presents a danger to health or safety.

2. No surface water may be channeled or directed into a sanitary sewer.

3. Whenever practicable, the drainage system of a development shall coordinate with and connect to the drainage systems or drainage ways on surrounding properties or streets.

4. All developments shall be constructed and maintained so that adjacent properties are not unreasonably burdened with surface waters as a result of such developments. More specifically:

   (a) No development may be constructed or maintained so that such development unreasonably impedes the natural flow of water from higher adjacent properties across such development, thereby

unreasonably causing substantial damage to such higher adjacent properties; and

(b) No development may be constructed or maintained so that surface waters from such development are unreasonably collected and channeled onto lower adjacent properties at such locations or at such volumes as to cause substantial damage to such lower adjacent properties.

C. Design Standards

New and extended stormwater systems shall be designed to the specifications maintained by the City of Mebane City Engineer and calculated to accommodate ten-year design frequency stormwater runoff.

D. Construction of Systems by Developers; Responsibility for Maintenance

Storm drainage systems shall be constructed by developers as part of the public improvements of new subdivisions.

1. A site plan illustrating all drainage facilities shall be submitted to the City Engineer for approval prior to construction.

2. Street storm drains which discharge water onto lots within a development shall be extended by the developer to a point fifteen feet beyond any structure on or to be constructed on said subdivision lots.

3. The City maintenance responsibility for storm drainage systems is restricted to structures and piping within street rights-of-way and within dedicated public storm sewer easements.

4. Owners of private property containing stormwater channels, ditches, and drainageways in private drainage easements or private storm sewer easements shall be responsible for maintaining them open, clean, and properly functioning as parts of the stormwater runoff system. A property owners association may be established to assume this responsibility.

E. Installation and Maintenance by Private Property Owners

Private property owners are permitted to install storm piping in runoff channels, in accordance with specification and calculations of pipe and structure size approved by the City Engineer.

1. Property owners with stormwater runoff systems on their property will be responsible for maintaining these channels, systems and structures open to accommodate the free flow of stormwater away from the street right-of-way.

2. Culverts under driveway connections to public streets shall be maintained clear of obstructions and capable of freely carrying

stormwater flow by the private property owner owning and utilizing the driveway.

F. Stormwater Management Plans

1. All development disturbing one acre or more shall comply with the stormwater management provisions of the Mebane Post Construction Runoff Ordinance. (***Note:*** *developments within a Watershed Overlay District shall comply with the stormwater control requirements of Section 5-2, E*).

2. Structural stormwater controls must meet the following criteria:

   (a) Remove an 85% average annual amount of Total Suspended Solids (TSS).

   (b) For wet detention ponds draw down the treatment volume no faster than 48 hours, but no slower than 120 hours.

   (c) Discharge the storage volume at a rate equal or less than the pre-development discharge rate for the 1-year, 24-hour storm.

   (d) Meet the General Engineering Design Criteria set forth in 15A NCAC 02H.1008(c).

3. Setbacks for impervious surfaces from receiving waters shall be as follows:

   (a) All new impervious or partially pervious surfaces, except for streets, paths, and water-dependent structures, shall be located at least 30 feet landward of all perennial and intermittent surface waters.

4. In addition to all other requirements specified above, all development activities that are located within a NC Environmental Management Commission-designated Critical Area of a Water Supply Watershed shall be limited to a maximum impervious surface density of 24 percent.

5. Stormwater management plans shall be certified by a North Carolina registered stormwater professional to be in conformity with the North Carolina Stormwater Best Management Practices Manual. Stormwater management plans shall contain the information required in Appendix D for stormwater management plans.

6. A stormwater management and maintenance plan shall be submitted to the Zoning Administrator prior to the approval of a final subdivision plat. The plan shall identify the party or entity responsible for ownership and maintenance activities. Plans for the operation and maintenance of stormwater control structures

shall comply with the requirements of Section 5-2, E, 5 (b) and Section 5-2, E, 6. Recorded deed restrictions shall be required to ensure management and maintenance consistent with approved stormwater management plans. The operation and maintenance agreement shall require the owner of each stormwater control structure to submit a maintenance inspection report on each stormwater control structure annually to the Zoning Administrator.

7. All engineered stormwater control structures shall be designed by a North Carolina registered professional with qualifications appropriate for the type of system required; these registered professionals are defined as professional engineers, landscape architects, to the extent that the General Statutes, Chapter 89A allow, and land surveyors, to the extent that the design represents incidental drainage within a subdivision, as provided in General Statutes 89(C)-3(7).

8. All new stormwater control structures shall be conditioned on the posting, in accordance with provisions of Section 5-2, E, 6, of adequate financial assurance for the purpose of maintenance, repairs or reconstruction necessary for adequate performance of the stormwater control structures.

9. The storm drainage system shall follow existing topography as nearly as practical, shall divert stormwater away from surface waters, and shall incorporate stormwater Best Management Practices to minimize adverse water quality impacts. The banks of ditches shall be immediately seeded upon grading and installation of utilities and the ditch itself shall be improved with appropriate vegetative cover to retard erosion.

10. No surface water shall be channeled into a sanitary sewer.

5-5 Soil Erosion and Sedimentation Control

A. No final site plan approval and no final plat approval for subdivisions may be given with respect to any development that would cause land disturbing activity requiring prior approval of an erosion and sedimentation control plan by the Land Quality Section, Division of Land Resources, NC Department of Environment and Natural Resources under NCGS 113A-57(4) unless the Land Quality Section has certified to the City, either that:

1. An erosion control plan has been submitted to and approved by the Land Quality Section; or

2. The Land Quality Section has examined the preliminary plans for the development and it reasonably appears that an erosion control plan can be approved upon submission by the developer of more detailed construction or design drawings. However, in this case, construction of the development may not begin (and no building permits may be issued) until the Land Quality Section approves the erosion control plan.

B. For purposes of this Section, 'land disturbing activity' means any use of the land by any person in residential, industrial, educational, institutional or commercial development, highway and street construction and maintenance that results in a change in the natural cover or topography and that may cause or contribute to sedimentation except activities that are exempt under NCGS 113A-52(6)). Sedimentation occurs whenever solid particulate matter, mineral or organic, is transported by water, air, gravity, or ice from the site of its origin.

5-6 Highway Corridor Overlay District Requirements

The Highway Corridor Overlay (HCO) District, as described in Section 3-1, C., is established to provide specific appearance and operational standards for specifically designated highway corridors while accommodating development along the corridors. All uses, with the exception of single-family detached dwellings and two-family dwellings located on their own separate lots unless specifically provided for herein, proposed to be located in the Highway Corridor Overlay District are subject to the additional requirements of this Section. All buildings, parking and loading areas, or open uses of land which are expanded in excess of 3,000 square feet of their gross square footage after the effective date of this Ordinance are subject to the requirements of this Section. All other requirements of the underlying zoning districts shall also apply, with the more stringent regulations prevailing when standards conflict.

A. Procedures

1. The applicant shall submit a site plan of the parcel and the proposed use to the Zoning Administrator. The City Council shall review the site plan in accordance with the provisions of this Section. Approval of the site plan and the proposed uses by the City Council authorizes the issuance of a zoning permit or special use permit.

2. Permits are issued at each phase of development and only in accordance with the approved site plan.

3. If a site plan was approved and a use permit was issued for the development of a lot or lots, no subsequent change or expansion which was not shown on the site plan shall be allowed unless also approved by the City Council.

B. General Standards Applicable to All Highway Corridor Overlay Districts

1. Site development plan:

   (a) A site plan shall be prepared to provide a complete and accurate description of the proposed use; building footprint of existing and proposed structures; proposed landscaping and buffering areas; proposed points of ingress and egress; proposed pedestrian facilities, parking, loading, and trash

containment areas; proposed type and location of outdoor lighting; and proposed type and location of signs.

(b) Site plans shall also include building schematics showing proposed front and side elevations to scale with materials noted.

(c) All site plans shall be submitted to and reviewed by the Planning Director for completeness and accuracy prior to being forwarded to the City Council for approval.

2. A traffic analysis indicating the estimated effect of the proposed development on adjacent existing road traffic, including volume flows to and from the development prepared by a registered professional engineer may be required if, in the opinion of the Zoning Administrator and upon the recommendation of the City Engineer, such an analysis is warranted based upon the intensity of the proposed development.

3. A preliminary plan or engineering feasibility report providing for the site grading, landscaping, storm drainage, sanitary sewerage, and water supply prepared by a licensed professional engineer shall be submitted along with the site plan.

4. The maximum lot coverage by total impervious surfaces such as rooftops, paving, walkways, etc. shall be ~~50~~ 70 percent of the lot area except when stormwater is retained or detained on the site. Any additional runoff resulting from lot coverage in excess of ~~50~~ 70 percent must be compensated for by such on-site detention or retention measures.

5. All new driveway access shall be permitted in accordance with the NCDOT 'Policy on Street and Driveway Access to North Carolina Highways' Rev. Jul. 03'.

6. If the owners of two or more lots jointly provide a direct point of both ingress and egress to serve their lots, adequate provisions shall be made by dedication, covenants, restrictions, or other legal instruments for ensuring that such point of ingress and egress on such streets are provided and maintained consistent with the regulations and intent of this Section.

7. Loading docks, service areas, and trash facilities shall be located at the rear of structures, and shall not be visible from the street. Parking and loading areas shall be screened from abutting properties in accordance with the requirements of Section 6-4.8.

8. A required streetscape buffer yard shall comply with the requirements of Section 6-3, D, 4 except that the additional minimum standards shall also be applicable to properties in the HCO District:

(a) Two canopy trees for every 40 linear feet of highway frontage;

(b) Two understory trees for every 20 linear feet of highway frontage; and

(c) Thirty-four shrubs for every 100 linear feet of highway frontage.

9. Signs shall be architecturally compatible with the style, composition, materials, colors, and details of the structure as well as with other signs used on the structure.

10. General building design standards:

(a) No awnings or canopy fascias shall be internally lit.

(b) Building and roof colors shall consist of natural earth tones, white, black, or shades of gray. Primary colors or bright colors shall be limited to trim and signage. Day glow or neon colors shall be avoided.

(c) Building color schemes shall blend in with surroundings. Multiple colors and garish or unusual patterns or geometric shapes shall be avoided.

(d) Applicants are required to submit color renderings, color elevation drawings, or color photographs with the site plan or to place a note on the site plan indicating that compliance with subsections (b) and (c) above shall be achieved and approved by the City Council prior to installation.

(e) Appropriate screening shall be provided to obscure as much as reasonably possible all roof-mounted equipment, roof vents, or other unsightly building appurtenances from view from the highway corridor.

C. (Reserved) [deleted April 7, 2008]