

**Title 1 – Zoning Ordinance
Chapter 8: Overlay Districts**

Article II. Floodplain Zone Overlay

Section 1. Statutory Authorization.

- A. This Article is adopted pursuant to the following Statutory Authorization wherein: The Legislature of the State of Alabama has in Title 11, Chapter 19, Sections 1-24, Chapter 45, Sections 1-11, Chapter 52, Sections 1-84, and Title 41, Chapter 9, Section 166 of the Code of Alabama, 1975, authorized local government units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry.

Section 2. Findings of Fact.

- A. The flood hazard areas of Birmingham, Alabama are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood relief and protection, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
- B. These flood losses are caused by the occupancy in flood hazard areas of uses vulnerable to floods, which are inadequately elevated, flood proofed, or otherwise unprotected from flood damages, and by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities.

Section 3. Statement of Purpose.

- A. It is the purpose of these regulations to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by the following provisions designed to:
1. Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which increase flood heights, velocities or erosion;
 2. Require that uses vulnerable to floods, including facilities which 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 flood waters;
 4. Control filling, grading, dredging and other development which may increase erosion or flood damage; and
 5. Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

Section 4. Objectives.

- A. The basic underlying objectives that guided the preparation of these regulations are:
1. To protect human life and health;
 2. To balance the benefits of reduced flood damages with the impacts on property values and economic development;
 3. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in

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floodplains;

4. To help maintain a stable tax base by providing for the sound use and development of flood prone areas in such a manner as to minimize blight;
5. To minimize expenditure of public money for costly flood control projects;
6. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
7. To minimize prolonged business interruptions; and
8. Through public education and outreach that potential purchasers of private property subject to flooding are aware that such property is in a Special Flood Hazard Area.

Section 5. Definitions.

A. Any other provision in this Ordinance to the contrary notwithstanding for the purposes of this Article, the following words, terms and phrases shall have the meanings ascribed to them in this Section. Unless specifically defined herein or in Chapter 1, Article III of this Ordinance, words or phrases used in these provisions shall be interpreted so as to give them the meaning they have in common usage and to give this Article it's most reasonable application. When not inconsistent with the context, words used in the present tense shall include the future tense, words in the plural number shall include the singular number, and words in the singular number shall include the plural number.

1. **A Zone.** The Area of Special Flood Hazard without base flood elevations determined.
2. **AE Zone.** The Area of Special Flood Hazard with base flood elevations determined.
3. **Accessory Structure (Appurtenant structure).** A structure, which is 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. Accessory structures should constitute a minimal initial investment, may not be used for human habitation, and be designed to have minimal flood damage potential. Examples of accessory structures are detached garages, carports, storage sheds, pole barns, and hay sheds and similar buildings.
4. **Actual Cash Value (ACV).** The cost to replace an insured item of property at the time of loss, less the value of physical depreciation.
5. **Addition (to an existing building).** Any walled and roofed expansion to the perimeter of a building in which the addition is connected by a common load-bearing wall other than a fire wall. Any walled and roofed addition which is connected by a fire wall or is separated by independent perimeter load-bearing walls is new construction.

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6. **Administrative Officer.** The person(s) appointed to administer, interpret and implement the provisions of this Article in accordance with the provisions of Section 7 of this Article.
7. **Appeal.** A request for a review of the Administrative Officers' interpretation of any provision of this Article or a request for a variance.
8. **Area of shallow flooding.** A designated AO or AH Zone on a community's Flood Insurance Rate Map (FIRM) with base flood depths from one to three feet, and/or where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.
9. **Area of special flood hazard.** The land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year.
10. **Base Flood Elevation (BFE).** The elevation of surface water resulting from a flood that has a 1 percent chance of equaling or exceeding that level in any given year. The BFE is shown on the Flood Insurance Rate Map (FIRM) for zones AE, AH, A1–A30, AR, AR/A, AR/AE, AR/A1– A30, AR/AH, AR/AO, V1–V30, and VE.
11. **Base flood.** Means the flood having a one percent chance of being equaled or exceeded in any given year.
12. **Basement.** Any area of a building having its floor subgrade (below ground level) on all sides.
13. **Breakaway wall.** A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or the supporting foundation system.
14. **Building.** A structure with two or more outside rigid walls and a fully secured roof, that is affixed to a permanent site; or A manufactured home (a "manufactured home," also known as a mobile home, is a structure built on a permanent chassis, transported to its site in one or more sections, and affixed to a permanent foundation); or a travel trailer without wheels built on a chassis and affixed to a permanent foundation, that is regulated under the community's floodplain management and building ordinances or laws.
15. **Building Official.** The Building Official shall be appointed by the Mayor of the City of Birmingham and shall have all of the authority and carry out all of the duties of the Building Official pursuant to the City of Birmingham Technical Code 2010, as amended.
16. **Community Number.** A 6-digit designation identifying each NFIP community. The first 2 numbers are the state code. The next 4 are the FEMA-assigned community number. An alphabetical suffix is added to a community number to identify revisions in the Flood Insurance Rate Map (FIRM) for that community.

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17. **Community Floodplain Management Map.** Any map produced by the City utilizing best available base flood elevation and floodway data that is from a federal, state, or other accepted technical source.
18. **Community Rating System (CRS).** A program developed by the Federal Insurance Administration to provide incentives for those communities in the Regular Program that have gone beyond the minimum floodplain management requirements to develop extra measures to provide protection from flooding.
19. **Community Flood Hazard Area (CFHA).** An area that has been determined by the Floodplain Administrator (or other delegated, designated, or qualified City Official from available technical studies, historical information, and other available and reliable sources, which may be subject to periodic inundation by floodwaters that can adversely affect the public health, safety and general welfare. This includes areas downstream from dams.
20. **Critical Facility.** Means facilities for which the effects of even a slight chance of flooding would be too great. The minimum floodplain of concern for critical facilities is the 0.2 percent chance flood level. Critical facilities include, but are not limited to facilities critical to the health and safety of the public such as: emergency operations centers, designated public shelters, schools, nursing homes, hospitals, police, fire and emergency response installations, vital data storage centers, power generation and water and other utilities (including related infrastructure such as principal points of utility systems) and installations which produce, use or store hazardous materials or hazardous waste (as defined under the *Clean Water Act* and other Federal statutes and regulations).
21. **Cumulative Substantial Improvement.** Occurs when cumulative improvements to a structure triggers substantial improvements. **See *Substantial Improvements*.**
22. **Dam.** Any artificial barrier, including appurtenant works, constructed to impound or divert water, waste water, liquid borne materials, or solids that may flow if saturated. All structures necessary to maintain the water level in an impoundment or to divert a stream from its course will be considered a dam.
23. **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, excavating or drilling operations, or storage of materials or equipment.
24. **Doublewide Manufactured (Mobile) Home.** A manufactured (mobile) home that, when assembled as a non-movable, permanent building, is at least 16 feet wide and has an area within its perimeter walls of at least 600 square feet.
25. **Elevated Building.** A non-basement building (1) built to have the top of the elevated floor elevated above the ground level by means of pilings, columns (posts and piers), or shear walls parallel to the flow of the water and (2) adequately

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anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. "Elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters.

26. **Elevation Certificate.** A FEMA form used as a certified statement that verifies a building's elevation information.
27. **Enclosure.** That portion of an elevated building below the lowest elevated floor that is either partially or fully shut-in by rigid walls.
28. **Encroachment.** The advance or infringement of uses, plant growth, fill, excavation, buildings, structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.
29. **Executive Order 11988 (Floodplain Management).** This order requires that no federally assisted activities be conducted in or have the potential to affect identified Special Flood Hazard Areas, unless there is no practicable alternative.
30. **Executive Order 11990 (Wetlands Protection).** This order requires the avoidance of adverse impacts associated with the destruction or modification of wetlands.
31. **Existing construction.** Means structures for which the "start of construction" commenced before May 5, 1981, the effective date of the initial flood plain management ordinance adopted by the City. "Existing construction" may also be referred to as "existing structures."
32. **Existing manufactured home park or 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) is completed before May 5, 1981, the effective date of the initial flood plain management ordinance adopted by the City.
33. **Expansion to an existing manufactured home park or subdivision.** The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).
34. **Finished Floor.** A floor that can be inhabited, not a storage area like a garage.
35. **Flood or flooding.** A general and temporary condition of partial or complete inundation of normally dry land areas from:
 - a) Overflow of inland or tidal waters.
 - b) Unusual and rapid accumulation or runoff of surface waters from any source.
 - c) Mudflow.

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36. **Flood Disaster Protection Act (FDPA) of 1973.** A Federal Act that made the purchase of flood insurance mandatory for the protection of property located in Special Flood Hazard Areas.
37. **Flood Insurance Rate Map (FIRM).** Official map of a community on which FEMA has delineated the Special Flood Hazard Areas (SFHAs), the Base Flood Elevations (BFEs), and the risk premium zones applicable to the community.
38. **Flood Insurance Study (FIS).** The document which provides an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide and/or flood-related erosion hazards.
39. **Floodplain.** Any land area susceptible to being inundated by water from any source.
40. **Floodplain Administrator.** The Floodplain Administrator for the City of Birmingham, or his designee, who is designated by the Director, approves all floodplain permits and maintains all official records regarding development within the floodplain overlay zone.
41. **Floodplain Management.** The operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood-control works, and floodplain management regulations.
42. **Flood proofing.** Any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.
43. **Floodway (Regulatory).** 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 foot.
44. **Flood Protection Elevation (FPE).** Is equal to the elevation that is one foot higher than the Base Flood Elevation.
45. **Freeboard.** An additional amount of height above the Base Flood Elevation used as a factor of safety (e.g., 1 foot above the Base Flood) in determining the level at which a structure's lowest floor must be elevated or floodproofed to be in accordance with the City's floodplain management regulations.
46. **Functionally Dependent Facility or Use.** A facility or use which cannot perform its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, ship repair, or seafood processing facilities. The term does not include long-term storage, manufacture, sales, or service facilities.

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47. **Highest Adjacent Grade (HAG).** The highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a structure.
48. **Historic Structure.** Any structure that meets one or more of the following criteria:
- A. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
 - B. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
 - C. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
 - D. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - 1. By an approved state program as determined by the Secretary of the Interior; or
 - 2. Directly by the Secretary of the Interior in states without approved programs.
49. **Improvement Cost.** A method used to determine "substantial improvement" that includes the value of all costs for improvements and/or repairs to a structure. Cost shall include all structural costs for labor and materials, as well as all finish materials, built-in appliances, hardware, profit and overhead but excluding plans, surveys, permit fees, debris removal and clean-up, items not considered real property, and accessory structures. The improvement cost shall be determined by the latest edition of "Building Valuation Data" of current average construction value per square foot published by the International Code Council or a written estimate of labor and materials prepared and certified by the contractor.
50. **Increased Cost of Compliance.** Coverage for expenses a property owner must incur, above and beyond the cost to repair the physical damage the structure actually sustained from a flooding event, to comply with mitigation requirements of state or local floodplain management ordinances or laws. Acceptable mitigation measures are elevation, floodproofing, relocation, demolition or any combination thereof.
51. **Letter of Map Change (LOMC).** An official FEMA determination, by letter, to amend or revise effective Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, and Flood Insurance Studies. LOMC's are broken down into the following categories:
- a.) **Letter of Map Amendment (LOMA):** An amendment based on technical data

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showing that a property was incorrectly included in a designated SFHA, was not elevated by fill (only by a natural grade elevation), and will not be inundated by the one percent chance flood. A LOMA amends the current effective FIRM and establishes that a specific property is not located in a SFHA.

- b.) **Letter of Map Revision (LOMR):** A revision based on technical data that, usually due to manmade changes, shows changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric features. One common type of LOMR, a LOMR-F, is a determination concerning whether a structure or parcel has been elevated by fill above the BFE and is, therefore, excluded from the SFHA.
 - c.) **Conditional Letter of Map Revision (CLOMR):** A formal review and comment by FEMA as to whether a proposed project complies with the minimum NFIP floodplain management criteria. A CLOMR does not revise effective Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, or Flood Insurance Studies.
- 52. **Lowest Adjacent Grade (LAG).** The elevation of the sidewalk, patio, deck support, or basement entryway immediately next to the structure and after the completion of construction. It does not include earth that is placed for aesthetic or landscape reasons around a foundation wall. It does include natural ground or properly compacted fill that comprises a component of a building's foundation system.
 - 53. **Lowest Floor Elevation (LFE).** The measured distance of a building's lowest floor above the National Geodetic Vertical Datum (NGVD) or other datum specified on the FIRM for that location.
 - 54. **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 storage in an area other than a basement area is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirement of Section 10 of this Article.
 - 55. **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 also includes park trailers, travel trailers and similar transportable structures placed on a site for 180 consecutive days or longer and intended to be improved property.
 - 56. **Manufactured Home Park or Subdivision.** A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.
 - 57. **Market Value of the Building.** A method used to determine "substantial improvement", and includes the market value of the building only, excluding land.

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Market value shall be determined by the most recent appraisal by the County tax assessor or by a certified appraisal report using the comparable sales method, whichever is the greater value.

58. **Mean Sea Level.** The average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the flood plain. For purposes of this Article, the term is synonymous with National Geodetic Vertical Datum (NGVD).
59. **National Geodetic Vertical Datum (NGVD).** As corrected in 1929, is a vertical control used as a reference for establishing various elevations within the flood plain.
60. **Natural Grade.** The grade unaffected by construction techniques such as fill, landscaping, or berming.
61. **New Construction.** Means structures for which the "start of construction" commenced on or after May 5, 1981, the effective date of the initial flood plain management ordinance adopted by the City. The term also includes any subsequent improvements to such structures.
62. **New Manufactured Home Park or Subdivision.** Means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after May 5, 1981, the effective date of the initial flood plain management ordinance adopted by the City.
63. **North American Vertical Datum (NAVD) of 1988.** The vertical control datum established for vertical control surveying in the United States of America based upon the General Adjustment of the North American Datum of 1988. It replaces the National Geodetic Vertical Datum (NGVD) of 1929.
64. **Recreational Vehicle.** Is 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; and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.
65. **Remedy of Violation.** Means to bring the structure or other development into compliance with State or local 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 this Ordinance or otherwise deterring future similar violations, or reducing Federal financial exposure with regard to the structure or other development.
66. **Repetitive Loss.** Means flood-related damages sustained by a structure on two

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separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damages occurred.

67. **Repetitive Loss Structure.** Any insurable building for which two or more claims of more than \$1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling 10-year period, since 1978. At least two of the claims must be more than ten days apart but, within ten years of each other. A RL property may or may not be currently insured by the NFIP.
68. **Replacement Cost Value (RCV).** The cost to replace property with the same kind of material and construction without deduction for depreciation.
69. **Residential Condominium Building.** A building owned and administered as a condominium, containing one or more family units and in which at least 75 percent of the floor area is residential.
70. **Section 1316.** Section of the *National Flood Insurance Act of 1968, as amended*, which states that no new flood insurance coverage shall be provided for any property that FEMA finds has been declared by a duly constituted state or local zoning authority or other authorized public body to be in violation of state or local laws, regulations, or ordinances that are intended to discourage or otherwise restrict land development or occupancy in flood-prone areas.
71. **Severe Repetitive Loss (SRL) Properties.** Any insured property that has met at least one of the following paid flood loss criteria since 1978, regardless of ownership:
 - a) Four or more separate claim payments of more than \$5,000 each (including building and contents payments); or
 - b) Two or more separate claim payments (building payments only) where the total of the payments exceeds the current market value of the property.
72. **Special Flood Hazard Area (SFHA).** An area having special flood, mudflow, or flood-related erosion hazards, and shown on a Flood Hazard Boundary Map or a Flood Insurance Rate Map as Zone A, AO, A1-A30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1-A30, V1-V30, VE, or V. For the purpose of determining Community Rating System premium discounts, all AR and A99 zones are treated as non-SFHAs.
73. **Significant Hazard Dam.** A dam assigned the significant hazard potential classification where failure may cause damage to main roads, minor railroads, or cause interruption of use, or service of relatively important public utilities.
74. **Start of Construction.** Means the date the development permit was issued provided the actual Start of Construction, repair, reconstruction, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of the structure such as the pouring of slabs or footings, installation of piles, construction of columns, or any work

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beyond the stage of excavation, and includes the placement of a Manufactured Home on a foundation. Permanent construction does not include initial land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of buildings appurtenant to the permitted structure, such as garages or sheds not occupied as dwelling units or part of the main structure. (NOTE: accessory structures are not exempt from any Ordinance requirements). For a Substantial Improvement, the actual Start of Construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

75. **Structure.** For floodplain management purposes, is a walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a recreational vehicle, a parked trailer, manufactured home or some similar vehicle.
76. **Subrogation.** An action brought by FEMA when flood damages have occurred, a flood insurance claim has been paid, and all or part of the damage can be attributed to acts or omissions by a community or other third party.
77. **Substantial Damage.** Damage of any origin sustained by a structure 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. Substantial damage also means flood-related damages sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.
78. **Substantial Improvement.** Any combination of addition, expansion, enlargement, or modification of a structure taking place over a designated 10-year period in which the cumulative percentage of improvement equals or exceeds 50 percent of the current market value of the structure before the "start of construction" of the improvement. The designated 10-year period begins at the date of the initial improvement to the structure. The costs for determining substantial improvement include the costs of additions. This term includes structures which have incurred repetitive loss or substantial damage, regardless of the actual repair work performed. The term does not apply to:
 - a.) Any project for improvement of a building required to comply with existing health, sanitary, or safety code specifications which have been identified by the Code Enforcement Official and which are solely necessary to assure safe living conditions, provided that said code deficiencies were not caused by neglect or lack of maintenance on the part of the current or previous owners or;
 - b.) Any alteration of a "historic structure" provided that the alteration will not preclude the structure's continued designation as a "historic structure."
79. **Substantially improved existing manufactured home parks or subdivisions.**

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Means where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement commenced.

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80. **Suspension.** Means the removal, with or without probation, of a participating community from the NFIP because the community failed to adopt and enforce the compliant floodplain management regulations required for participation in the NFIP.
81. **Variance.** A grant of relief by the Board from the requirements of this Article which permits construction in a manner otherwise prohibited by this Article where specific enforcement would result in practical difficulty.
82. **Violation.** The failure of a structure or other development to be fully compliant with this Ordinance. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this ordinance is presumed to be in violation until such time as that documentation is provided.
83. **Watercourse.** Any flowing body of water including a river, creek, stream, or a branch.
84. **Water surface elevation.** The height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, the North American Vertical Datum (NAVD) of 1988, (or other datum, where specified) of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.
85. **Wet floodproofing.** A method of construction which allows water to enter a structure in such a way that will minimize damage to the structure and its contents. Wet floodproofing is appropriate for functionally dependent use and uses that facilitate open space use by variance only, structures utilized for parking or limited storage, or when all other techniques are not technically feasible. Wet floodproofing shall not be utilized as a method to satisfy the requirements of this ordinance for bringing substantially damaged or improved structures into compliance. Wet floodproofing is not allowed in lieu of complying with the lowest floor elevation requirements for new residential buildings.
86. **X Zones (shaded).** Areas of 0.2 percent chance flood that are outside of the SFHA subject to the one percent chance flood with average depths of less than one foot, or with contributing drainage area less than one square mile, and areas protected by certified levees from the base flood.
87. **X Zones (unshaded).** Areas determined to be outside the 0.2 percent chance floodplain.
88. **Zone.** A geographical area shown on a Flood Hazard Boundary Map or a Flood Insurance Rate Map that reflects the severity or type of flooding in the area.

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Section 6. General Provisions.

- A. **Lands to which this Article applies.** In addition to the other requirements of this Article and other Ordinances in the City of Birmingham, this Article shall apply to all. These provisions shall apply to all Special Flood Hazard Areas within the municipal limits of Birmingham, Alabama.
- B. **Basis for special flood hazard areas.** The Special Flood Hazard Areas identified by the Federal Emergency Management Agency(FEMA) in its Flood Insurance Study (FIS) for Jefferson County, Alabama and incorporated areas, revised September 3, 2010 and the Special Flood Hazard Areas identified by the Federal Emergency Management Agency(FEMA) in its Flood Insurance Study (FIS) for Shelby County, Alabama and incorporated areas, revised February 3, 2013, with accompanying maps and other supporting data and any revision thereto, are adopted by reference and declared a part of this Ordinance. Special Flood Hazard Areas may also include those areas known to have flooded repetitively, or defined through standard engineering analysis by governmental agencies or private parties but not yet incorporated into the FIS. As soon as practicable, but not later than six months after the date such information becomes available, the City's Floodplain Administrator shall notify FEMA of the changes by submitting a Letter of Map Revision with supporting technical or scientific data.
- C. **Use of preliminary flood hazard data.** When Flood Insurance Studies and Preliminary Flood Insurance Rate Maps have been provided by FEMA:
1. Prior to the issuance of a Letter of Final Determination (LFD) by FEMA, the use of the preliminary flood hazard data shall only be required where no base flood elevations and/or floodway areas exist or where the preliminary base flood elevations or floodway area exceed the base flood elevations and/or floodway widths in the effective flood hazard data provided by FEMA. Such preliminary data may be subject to revision through valid appeals.
 2. Upon the issuance of a Letter of Final Determination (LFD) by FEMA, the revised flood hazard data shall be used and replace all previously effective flood hazard data provided by FEMA for the purposes of administrating these regulations.

Where adopted regulatory standards conflict, the more stringent base flood elevation shall prevail. Preliminary FIS data may be subject to change by a valid appeal.

- D. **Floodplain Development Permit.** A completed Floodplain Development Permit Application shall be required in conformance with the provisions of this Article prior to the commencement of any development activities, within the municipal limits of the City of Birmingham, including but not limited to construction of or improvements to buildings or other structures, utilities, roads, bridges, infrastructure, mining, dredging, filling, grading, paving, excavation, drilling

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operations, and storage of vehicles, equipment or materials, whether conducted by a private individual, business, or firm, a non-profit agency, or a Federal, State, or local public agency.

- E. **Compliance.** No structure or land shall hereafter be located, extended, converted or structurally altered and no development shall be undertaken without full compliance with the terms of this Article and other applicable regulations. Compliance with this Article shall be deemed protective for all zoning classifications.
- F. **Non-conforming structures located within the special flood hazard area.**
The lawful use of a structure existing at the Effective Date of this Ordinance may be continued although such structure or use does not conform to this Ordinance, except any expansion, damage or enlargement of a nonconforming structure shall comply with applicable requirements of Chapter 9, Article VII of this Ordinance.
- G. **Maintenance Required.**
1. The storage, disposal or dumping of debris, brush, trash, garbage, litter, or similar materials within a Municipal Separate Storm Sewer System (MS4) and the disposal, accumulation, or dumping of debris, brush, trash, garbage, litter, or other materials which can obstruct or interfere with the discharge of flood waters within the Floodway shall be prohibited.
 2. The City shall have the right to cross private property for the purposes of inspecting and maintaining all publicly-maintained drainage ways and all Floodways.
- H. **Abrogation and Greater Restrictions.** This Article is not intended to repeal, abrogate, or impair any existing ordinance, easements, covenants, or deed restrictions. However, where this Article and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail. This Article shall not abrogate the rights obtained under any State or Federal permit.
- I. **Interpretation.**
1. In the interpretation and application of this Article all provisions shall be:
 - a. considered as minimum requirements; and
 - b. liberally construed in favor of the governing body, and;
 - c. deemed neither to limit nor repeal any other powers granted under State statutes.
 2. Where Base Flood Elevations have been established and there appears to be a discrepancy between actual field conditions or best available topographic data and the flood zone boundaries shown on the Flood Insurance Rate Map (FIRM), the more restrictive boundary interpretation may govern for the purpose of delineating Special Flood Hazard Areas (SFHAs) regulated by this Ordinance. Where best available topographic data indicates a property or any portion of a property should be excluded from the FIRM flood zone designation, a Letter of Map Amendment may be filed with FEMA to remove such area from the Special Flood Hazard Areas regulated by this Ordinance.

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- J. **Repetitive Loss Structures.** The City’s Floodplain Administrator may declare any existing structure as a repetitive loss structure as required to qualify the structure for Increased Cost of Compliance (ICC) benefits allowed by a National Flood Insurance Program flood policy claim. To be declared a repetitive loss structure, the following conditions must be met:
1. The structure must have a flood insurance policy that includes the increased cost of compliance coverage and;
 2. The structure must have been flooded twice during a ten-year period with each flood event causing damage for which the repair cost equaled or exceeded 25% of the market value of the structure.
- K. **Warning and disclaimer of liability.** The degree of flood protection required by this Article is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This Article does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This Article shall not create liability on the part of the City of Birmingham or by any officer or employee thereof for any flood damages that results from reliance on this Article or any administrative decision lawfully made thereunder.
- L. **Enforcement, Penalties, and Violations.** Violation of the provisions of this ordinance or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a misdemeanor.
1. Notice of Violation. If the Building Official or other authorized city official determines that an applicant or other responsible person has failed to comply with the terms and conditions of a permit, or the provisions of this ordinance, it shall issue a written notice of violation to such applicant or other responsible person. Where the person is engaged in activity covered by this ordinance without having first secured a permit, the notice shall be served on the owner or the responsible person in charge of the activity being conducted on the site. The notice of violation shall contain:
 - a. The name and address of the owner or the applicant or the responsible person;
 - b. The address or other description of the site upon which the violation is occurring;
 - c. A statement specifying the nature of the violation;
 - d. A description of the remedial measures necessary to bring the action or inaction into compliance with the permit or this ordinance and the date for the completion of such remedial action; and
 - e. A statement of the penalty or penalties that may be assessed against the person to whom the notice of violation is directed.

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2. **Penalties.** In the event the remedial measures described in the notice of violation have not been completed by the date set forth for such completion in the notice of violation, any one or more of the following actions or penalties may be assessed against the person to whom the notice of violation was directed. Before taking any of the following actions or imposing any of the following penalties, the Building Official or other authorized city official shall first notify the applicant or other responsible person in writing of its intended action, and shall provide reasonable opportunity, of not less than ten days (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24 hours notice shall be sufficient) to cure such violation. In the event the applicant or other responsible person fails to cure such violation after such notice and cure period, the Building Official or other authorized city official may take any one or more of the following actions or impose any one or more of the following penalties:
 - a. **Stop Work Order.** The Building Official or other authorized city official may issue a stop work order, which shall be served on the applicant or other responsible person. The stop work order shall remain in effect until the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violation or violations described therein, provided the stop work order may be withdrawn or modified to enable the applicant or other responsible person to take the necessary remedial measures to cure such violation or violations.
 - b. **Suspension, revocation, or modifications of permit.** The Building Official or other authorized city official may suspend, revoke, or modify the permit authorizing the development project. A suspended, revoked, or modified permit may be reinstated after the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein, provided such permit may be reinstated (upon such conditions as the Floodplain Administrator may deem necessary) to enable the applicant or other responsible person to take the necessary remedial measures to cure such violations.
 - c. **Penalties.** Any person who violates this ordinance or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than \$500 or imprisoned for not more than 180 days, or both, and in addition, shall pay all costs and expenses involved in the case. Each act of violation and each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the Floodplain Administrator from taking such other lawful actions as are necessary to prevent or remedy any violation.

3. **Appeals.** When an applicant believes that an interpretation, notice of violation, stop work order, suspension, revocation, or modification of permit has been issued in error, they may appeal the decision by filing a written notice of appeal to the Director within thirty days after the Building Official or other authorized

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city official has notified the applicant of his decision. Appeals of the Building Official's decisions shall be heard by the Board.

Section 7. Designations Duties and Responsibilities of the Floodplain Administrator.

- A. Designation of Administrative Officers.** The Director shall designate a Floodplain Administrator who shall be responsible for administering, interpreting and implementing the provisions of this Article jointly with the Director (for general application to the Zoning Ordinance, see Chapter 9, Article III, Sections 2 and 5).
- B. Duties of the Floodplain Administrator shall include, but not be limited to:**
1. Review all Floodplain Development Permit Applications and accompanying submittal to determine whether proposed building sites will be reasonably safe from flooding and assure that the permit requirements of this Ordinance have been satisfied.
 2. Advise permittee that additional Federal or State permits may be required, and if specific Federal or State permits are known, require that copies of such permits be provided and maintained on file with the Floodplain Development Permit Application.
 3. When Base Flood Elevation data or Floodway data have not been provided in accordance with Section 6(B), then the Floodplain Administrator shall obtain, review and reasonably utilize any Base Flood Elevation and Floodway data available from a Federal, State, or other sources so as to administer the provisions of Section 10 of this Article.
 4. Establish, verify and record the actual Flood Protection Elevation (FPE) elevation in relation to Mean Sea Level (or Highest Adjacent Grade) to which any New Construction or Substantially Improved structures have been elevated.
 5. When elevation is utilized for a structure, the Floodplain Administrator shall require certification of foundation design compliance from a Registered Professional Engineer or Architect.
 6. Establish, verify and record the actual elevation in relation to Mean Sea Level (or Highest Adjacent Grade) to which any New Construction or Substantially Improved structures have been flood-proofed.
 7. When floodproofing is utilized for a structure, the Floodplain Administrator shall obtain certification of floodproofing design compliance from a Registered Professional Engineer or Architect.
 8. Determine when a structure is subject to the "Substantial Damage," "Repetitive Loss" and "Substantial Improvement" provisions of this Ordinance.
 9. Notify adjacent communities and the Alabama Department of Natural Resources prior to any alteration or relocation of a watercourse and submit evidence of such notification to the Federal Emergency Management Agency

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- (FEMA), and the Alabama Department of Economic and Community Affairs/Office of Water Resources (OWR).
10. For any altered or relocated watercourse, submit engineering data/analysis within six (6) months to FEMA and OWR to ensure accuracy of the City's flood maps through the Letter of Map Revision process. Assure flood carrying capacity of any altered or relocated watercourse is maintained.
 11. Where interpretation is needed as to the exact location of boundaries of Special Flood Hazard Areas, the Floodplain Administrator shall make the necessary interpretation. Where there appears to be a conflict between a mapped boundary as shown on the FIRM and actual field conditions or best available topographic data, the Floodplain Administrator may determine the boundary according to the more restrictive boundary interpretation. Any person contesting the location of the boundary determination of the Floodplain Administrator may be given a reasonable opportunity to appeal the interpretation as provided in this Article. Where best available topographic data indicates a property or any portion of a property should be excluded from the FIRM flood zone designation, a Letter of Map Amendment may be filed with FEMA to remove such area from the Special Flood Hazard Areas regulated by this Ordinance.
 12. Provide written notice to subject property owners of the existence of a violation of the provisions of this Article and inform said owner of available means to Remedy a Violation.
 13. Maintain all records pertaining to the provisions of this Article in the office of the Floodplain Administrator.
 14. Assure all Conditional Letters of Map Change and Letters of Map Change are filed with FEMA for applications that would result in changes to Floodway boundaries, Base Flood Elevations, Special Flood Hazard Area boundaries and provide a signature on behalf of the City of Birmingham, if acceptable as required, on all Community Acknowledgments of such applications.
 15. Maintain the Flood Insurance Study database, incorporating all FEMA-issued Letters of Map Change.
 16. Review and provide a Letter of Comment for all appeals to the Board.
 17. Review any application submissions requiring an engineering certification of hydrologic or hydraulic studies.

Section 8. Permit Application and Plan Submittal Requirements.

- A. An Application to develop in the Special Flood Hazard Area shall accompany an application for any development related permits, subdivision plat or other development approval and shall be made to the Floodplain Administrator on forms furnished by the Floodplain Administrator, prior to any development activities, and may include, but not be limited to plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing and/or proposed structures, fill, storage of materials; drainage facilities, and the location of the foregoing. All drawings that are for assembly must be sealed by an Alabama licensed architect or engineer. Specifically, the following information is required:

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1. A site plan (including all required flood protection information and dry floodproofing certification when using dry-flooding for flood protection);
2. An emergency response plan when using dry floodproofing for flood protection;
3. No-Rise Certification/Analysis for floodway developments only;
4. Base Flood Elevation determination for Approximate Zone developments only;
5. If applicable, a copy of the variance resolution for flood-related granted variances.

B. Construction Stage and Completion.

1. **As-Built Plans and Elevation/Floodproofing Certificate(s) required.** For all New Construction, and Substantial Improvements or Cumulative Substantial Improvement the permit holder shall provide to the Floodplain Administrator as-built certifications of compliance with this Article, including the Flood Protection Elevation using the appropriate FEMA Elevation and/or Floodproofing Certificate:
2. **Immediately after the Lowest Floor or floodproofing is completed.** Where elevation is required, the FEMA Elevation and/or Floodproofing Certificate shall be supplemented by certification by a Registered Professional Engineer or Architect that the as-built foundation design complies with all requirements of this Article; and
3. **Upon completion of New Construction, and Substantial Improvements or Cumulative Substantial Improvements prior to occupancy.** Additionally, the permit holder shall provide to the Floodplain Administrator an as-built certification and supporting data by a Registered Professional Engineer or Architect that the development has been inspected and fully complies with all of the applicable flood hazard reduction standards of this Article.

Section 9. Variances.

- A. The Board of the City as established in Chapter 9 of this Ordinance shall hear and decide on appeals and request for variances from the requirements of this Article.
- B. The Board shall hear and decide appeals when it is alleged there is an error in any requirement, decision or determination made by the Administrative Officer in the enforcement or administration of this Article.
- C. Any person aggrieved by the decision of the Board may appeal such decision in accordance with Chapter 9, Article V, Section 6 of this Ordinance.
- D. Variances may be issued for the following:
 1. **Structures Functionally Dependent on Close Proximity to Water:** Certain structures that must be located near water are functionally dependent uses and are permitted to be wet floodproofed after the issuance of a variance from NFIP elevation and dry floodproofing requirements. These structures may include certain types of docking, seafood processing, and port facilities associated with marine activities.
 2. **Historic Buildings:** For the repair and rehabilitation of historic structures upon the determination that the proposed repair or rehabilitation will not preclude the structure's continued designation of a historic structure and the

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variance is the minimum necessary to preserve the historic character and design of the structure.

3. **Accessory Structures:** Used solely for parking (two-car detached garages or smaller), or limited storage (small, low-cost sheds) and non-habitable. This low cost should not exceed 10,000 dollars.
- E. In passing upon such applications, the Board shall consider all technical evaluations, all relevant factors, all standards specified in other parts of this Article and:
1. Danger that materials may be swept into other lands to the injury of others;
 2. Danger to life and property due to flooding or erosion damage;
 3. Susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 4. Importance of the services provided by the proposed facility to the community;
 5. Necessity to the facility of a waterfront location, where applicable;
 6. Availability of alternative locations, not subject to flooding or erosion damage for the proposed use;
 7. Compatibility of the proposed use with existing and anticipated development;
 8. Relationship of the proposed use to the comprehensive plan and flood plain management program for that area;
 9. Safety of access to the property in times of flood for ordinary and emergency vehicles;
 10. Expected heights, velocity, duration, rate of rise and sediment transport of the flood waters expected at the site;
 11. Costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.
- F. Upon consideration of the factors listed above and the purposes of this Article, the Board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this Article.
- G. Variances shall not be issued within any designated floodway if any increase in flood level during the base flood discharge would result.
- H. Variances shall only be issued upon a determination that the variance is the minimum necessary considering the flood hazard to afford relief and in the instance of a historical building, a determination that the variance is the minimum necessary so as not to destroy the historic character and design of the building.
- I. Variances shall only be issued upon:
1. A showing of good and sufficient cause;
 2. A determination that failure to grant the variance would result in exceptional hardship; and
 3. A determination that the granting of the variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public or conflict with existing laws or ordinances of the City.

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- J. Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and stating the cost of flood insurance will be commensurable with the increased risk resulting from the reduced lowest floor elevation.
- K. The Floodplain Administrator shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency upon request.

Section 10. Provisions for Flood Hazard Reduction.

- A. **General Standards.** In all Special Flood Hazard Areas the following provisions apply:
 - 1. New Construction and Substantial Improvements of existing structures shall be anchored to prevent flotation, collapse or lateral movement of the structure and surrounding soils. A Registered Professional Engineer or Architect shall develop or review the structural design, specifications and plans for the foundation of the building and certify that the design and methods of construction are in accordance with accepted practices to withstand flotation, collapse, lateral movement, erosion and scour, undermining, and the effects of water and wind acting simultaneously on all building components during the Base Flood.
 - 2. New Construction and Substantial Improvements shall be constructed with materials and utility equipment resistant to flood damage to the required Flood Protection Elevation.
 - 3. New Construction and Substantial Improvements shall be constructed by methods and practices that minimize flood damage to the required Flood Protection Elevation.
 - 4. **Elevated Buildings.** All New Construction and Substantial Improvements shall be elevated at or above the Flood Protection Elevation and be resistant to flood damage to or above the Flood Protection Elevation, in accordance with the following criteria:
 - a. Where flood protection is provided by elevation on fill, the building shall be constructed on properly designed and compacted fill (ASTM D-698 or equivalent) that extends beyond the building walls before dropping below the Flood Protection Elevation and has appropriate protection from erosion and scour. A Registered Professional Engineer must approve the design of the fill.
 - b. Where elevated buildings include fully enclosed areas formed by foundation and other exterior walls below the Flood Protection Elevation, such areas shall be designed to preclude finished living space below the Base Flood Elevation. The enclosure shall be restricted to an unfinished and flood-resistant enclosure and shall only be used for parking of vehicles, limited storage of maintenance equipment used in connection with the premises, or entry to the elevated area. The enclosure shall be designed to equalize hydrostatic flood forces on exterior walls by allowing

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for the automatic entry and exit of floodwaters. **{Total enclosed areas shall be limited to 299 square feet or greater and to areas where the lowest floor is less than four feet high}.**

- c. Designs for complying with this requirement must be certified by a Registered Professional Engineer and meet the following minimum criteria:
 - i. Provide a minimum of two openings, on different sides of each enclosed area; if a structure has more than one enclosed area below the base flood elevation, each shall have openings on exterior walls;
 - ii. The total net area of all openings shall be at least one square inch for each square foot of enclosed area, or the openings shall be designed and the construction documents shall include a statement that the design and installation will provide for equalization of hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwaters;
 - iii. The bottom of all openings shall be no higher than one foot above interior grade (which must be equal to in elevation or higher than the exterior grade); Openings shall allow the passage of a three inch sphere.
 - iv. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwaters in both directions and automatically equalize hydrostatic flood loads on exterior walls, and;
 - v. Access to the enclosed area shall be minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator); and,
 - vi. The interior portion of such enclosed area shall not be finished or partitioned into separate rooms.
5. All heating and air conditioning equipment and components, all electrical, ventilation, plumbing, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding to the Flood Protection Elevation.
6. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
7. New and replacement sanitary sewage systems, including septic systems, shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters.
8. Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This standard shall be in addition to and consistent with applicable State requirements for resisting wind forces.
9. Any development, use, or activity within the Special Flood Hazard Area floodplain that may be hazardous to public health or water quality is prohibited. These prohibited developments and activities include: non-

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residential structures or facilities that produce, use, or store highly volatile, flammable, explosive, toxic and/or water-reactive materials; and similar uses deemed hazardous by the Floodplain Administrator. However, replacement of existing underground fuel storage tanks may be permitted provided the tanks are designed by a Registered Professional Engineer to be anchored to resist the buoyancy effects of a rising water table and comply with all applicable safety code standards.

10. All New and Substantially Improved critical facilities, as defined in **Section 5** of this Article shall be elevated at or above the 500-year flood elevation or the flood of record, whichever is higher, or flood proofed in lieu of elevation, except as necessary for operation of wastewater treatment plants and facilities, and utility distribution and collection systems. The critical facility must be connected to a public road outside the 500-year floodplain by at least one access drive or road that is, to the maximum extent practicable, elevated no lower than six (6) inches below the 500-year flood elevation, except a lower elevation may be required for grade transitions and traffic visibility.
11. Outdoor storage of unsecured, floatable materials, such as dumpsters, storage bins, barrels, lumber, debris, and other materials which may float and cause damage to property during flood conditions is prohibited. All such materials must be elevated to the Flood Protection Elevation or be adequately secured to prevent floatation.
12. Any alteration, repair, reconstruction or improvement to a development, which is not compliant with the provisions of this Article and determined not to be a Substantial Improvement, shall be undertaken only if the non-conformity is not furthered, extended or replaced. Any Addition to a non-conforming structure, regardless of the costs of such improvements, shall fully comply with the provisions of this Article.

Section 11. Specific Standards.

In all areas of special flood hazard where base flood elevation data has been provided, the following provisions are required:

- A. **Residential Construction** - New construction or substantial improvement of any residential structure (or manufactured home) shall have the lowest floor, including basement, elevated no lower than one foot above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movement of flood waters shall be provided in accordance with standards of Section 10 (A.4)
- B. **Non-residential Construction** - New construction and substantial improvement of any non-residential structure located in a Special Flood Hazard Area may be flood-proofed in lieu of elevation. The structure, together with attendant utility and sanitary facilities, must be designed to be water tight to one (1) foot above the base flood elevation, with walls substantially impermeable to the passage of water, and structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the design and methods of construction are

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in accordance with accepted standards of practice for meeting the provisions above, and shall provide such certification to the official as set forth above and in Section 8(B).

C. Standards for Manufactured Homes and Recreational Vehicles

1. All manufactured homes placed, or substantially improved, on individual lots or parcels, in expansions to existing manufactured home parks or subdivisions, or in substantially improved manufactured home parks or subdivisions, must meet all the requirements for new construction, including elevation and anchoring requirements.
2. All manufactured homes placed or substantially improved in an existing manufactured home park or subdivision must be elevated so that:
3. The lowest floor of the manufactured home is elevated no lower than one foot above the base flood elevation, or
4. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least an equivalent strength, of no less than 36 inches in height above grade.
5. The manufactured home must be securely anchored to the adequately anchored foundation system to resist flotation, collapse and lateral movement.
6. In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood, any manufactured home placed or substantially improved must meet the standards of this section.

D. All temporary structures (i.e. recreational vehicles) placed on sites must either:

1. Be on the site for fewer than 180 consecutive days and be fully licensed and ready for highway use and
2. All applicants for a temporary structure in an SFHA must submit to the City's Building Official, prior to the issuance of a building permit, a specified time period for which the temporary use will be permitted and a plan for the removal of such structures in the event of a hurricane or flood warning notification:
3. The name, address and phone number of the individual responsible for the removal of the temporary structure.
4. The time at which the structure will be removed (i.e., minimum of 72 hours before landfall of a hurricane or immediately upon flood warning notification).
5. A copy of a contract or other suitable instrument of agreement with a trucking company to ensure the availability of removal for removal of the structure when needed.
6. The recreational vehicle must meet all the requirements for new construction, including anchoring and elevation requirements of Section (A.8)11(B). 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 security devices and has no permanently attached structures.

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Section 12. Standards for Floodways and Encroachments.

- A. Encroachments within the *Regulatory Floodway*, including earthen *fill*, *New Construction*, *Substantial Improvements* or other *development* are permitted, provided it is demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the *encroachment* shall not result in any increase in *flood levels* or *Floodway* widths during a *Base Flood* discharge. A *Registered Professional Engineer* must provide a no-rise certification with applicable supporting technical data and analysis thereof. This restriction complies with the Federal requirements of 44 CFR 60.3 (d) (3).
1. Notwithstanding any other provisions of this Ordinance, *encroachments* within the *Regulatory Floodway* that would result in an increase in *Base Flood Elevations* are permitted in accordance with 44 CFR 60.3 (d)(4), provided: (1) an application for a Conditional Letter of Map Revision (CLOMR) is first submitted to FEMA for a conditional *FIRM* and *Floodway* revision, (2) the application fulfills the requirements for such revisions as established under the provisions 44 CFR 65.12, and (3) the application is approved by FEMA.
- B. *Encroachments* within the *Floodway Fringe* area are permitted.
1. A FEMA application for Conditional *Letter of Map Revision* (CLOMR) or Conditional *Letter of Map Revision Based on Fill* (CLOMR-F) shall be required prior to the issuance of a Floodplain Development Permit for any *development* which will result in the modification of the *Floodway*. After completion of all work within the *Special Flood Hazard Area* or the *Floodway*, a *Letter of Map Revision* (LOMR) or *Letter of Map Revision Based on Fill* (LOMR-F) shall be filed with FEMA with the Community Acknowledgement of the Floodplain Administrator. Where an applicant for a *Letter of Map Revision* is unable to obtain a Community Acknowledgement from the Floodplain Administrator, the applicant may still file the application with FEMA, provided written evidence is provided indicating the Floodplain Administrator has been requested to sign a Community Acknowledgement, as provided by 44 CFR 65.4(b).
 2. When unable to fully comply with the above-listed requirements, *functionally dependent uses* and activities, such as marinas, boat launches, docks, piers, and the like, are permitted but subject to the *encroachment* provisions of this Section.

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Section 13. Standards for streams without established base flood elevations and/or floodway (A-Zones).

The following provisions apply to areas located within the Special Flood Hazard Areas established in Subsection 2(b), where streams exist but no Base Flood data have been provided (A-Zones), or where Base Flood data have been provided but a Floodway has not been delineated:

- A. When Base Flood Elevation data or Floodway data have not been provided, then the Floodplain Administrator shall obtain, review, and reasonably utilize any scientific or historic Base Flood Elevation and Floodway data available from any Federal, State, or other source, in order to administer the provisions of Section 10. Additionally, a permit applicant may have prepared an engineering analysis to establish Base Flood Elevation and Floodway data. Only if data are not available from these sources, then the provisions in paragraphs **B**, and **C**, below shall apply.
- B. In Special Flood Hazard Areas without Base Flood Elevation data and where a Floodway cannot be established by the Floodplain Administrator or engineering analysis, as provided in paragraph A. above, an area on each side of the stream equal to 25 feet shall be measured from the top of each stream bank. This measured area shall be subject to the Floodway restrictions of Section 12.
 1. The area on each side of the stream subject to the *Floodway* restrictions shall be measured from the top of the steam bank under base flow conditions.
 2. In no event shall the area on each side of the stream subject to the above-listed Floodway restrictions be greater than the limits of the Special Flood Hazard Area.
- C. In Special Flood Hazard Areas without Base Flood Elevation data and where Base Flood Elevations cannot be established by the Floodplain Administrator, as provided in paragraph A. above, the Flood Protection Elevation shall be three feet above the Highest Adjacent Grade at the building site.
- D. The applicant shall provide to the Floodplain Administrator certification from a registered land surveyor of the Highest Adjacent Grade at the building site and the Lowest Floor elevation level. The certification shall become a permanent part of the permit file.
 1. Where required, elevation of the Lowest Floor shall be provided in accordance with the standards of Section 10(A.4).
 2. Where allowed, floodproofing of the Lowest Floor shall be provided in accordance with Section 10(A.4).

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Section 14. Standards For Areas Of Shallow Flooding (AO ZONES)

Special Flood Hazard Areas established in Section 6(B) may include designated “AO” shallow *flooding* areas. These areas have *Base Flood* depths of one to three feet above ground, with no clearly defined channel. The following provisions apply:

- A. All New Construction and Substantial Improvements of residential and non-residential structures shall have the Lowest Floor, including basement, elevated to the flood depth number specified on the Flood Insurance Rate Map (FIRM) above the Highest Adjacent Grade. If no flood depth number is specified, the Lowest Floor, including basement, shall be elevated at least three feet above the Highest Adjacent Grade. Openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of Section 10(A.4), "Elevated buildings." In lieu of elevation, Substantial Improvements and Additions to existing non-residential buildings may be floodproofed to the Flood Protection Elevation in accordance with the standards of Section 10(A.4) and Section 11(B).

The Floodplain Administrator shall certify the Lowest Floor elevation level, and the record shall become a permanent part of the permit file.

- B. Drainage paths shall be provided to guide floodwater around and away from any proposed structure.

Section 15. Standards for Subdivision Proposals for Subdivision and Other New Developments

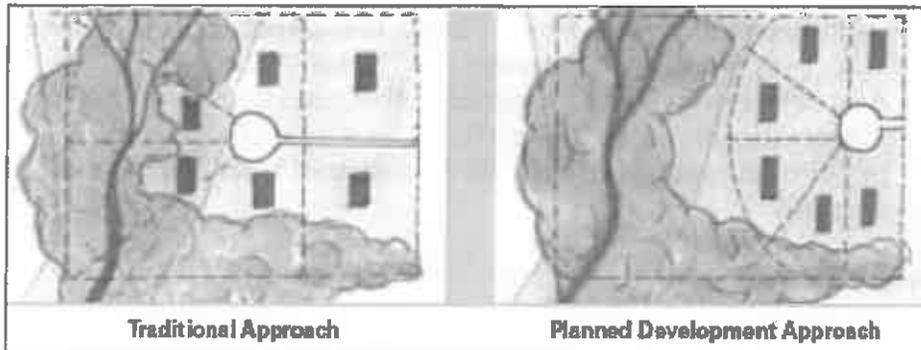
- A. In the interest of public safety and so as to avoid property owners being subject to the federally mandated purchase of *flood* insurance it is strongly encouraged that all *Special Flood Hazard Areas* within a *Subdivision* be set aside as a common open space for recreational, aesthetic and environmental uses. The creation of such common open spaces may allow for increased density pursuant to Chapter 3, Article II of this Ordinance. Where such open space is set aside, ownership by a neighborhood association, land trust, or other responsible entity, and attendant maintenance obligations shall be addressed as part of the *Subdivision* proposal. All *Subdivision* proposals shall comply with the following minimum requirements:

1. All *Subdivision* proposals shall be consistent with the need to minimize *flood* damage.
2. All *Subdivision* proposals shall have *Public Utilities* and facilities such as sewer, gas, electrical and water systems located and constructed to minimize *flood* damage.
3. All *Subdivision* proposals shall have adequate drainage provided to reduce exposure to *flood* hazards.

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4. The *Subdivision* of a *Special Flood Hazard Area* shall require a minimum lot size of ten (10) acres. However, clustering of lots within a planned *residential Subdivision* to preserve open space, as depicted in Figure 1.08.201, is encouraged and may be credited toward open space required by other ordinances or regulations. For all *residential subdivisions* of six (6) or more lots, where any portion of a *Special Flood Hazard Area* has been set aside as permanent open space and dedicated to a public agency, land trust, homeowner association or other entity, lots within the area(s) remaining outside of the *Special Flood Hazard Area* may be clustered. The minimum lot area for clustered lots may be reduced below the minimum zoning requirement, provided the overall density (measured by average lot area per unit) of the clustered lots does not exceed the density of the traditional subdivision without clustering and preservation of common open space. Clustering of lots shall otherwise be in accordance with this Ordinance and Subdivision Regulations of the City.

Figure 1.08.201



5. All subdivision and other development proposals must meet the City of Birmingham's Engineering Design Guidelines for Subdivisions or Commercial Developments, 2008, as amended. Plans shall include a Drainage Plan which is designed to limit peak runoff from the site to predevelopment levels for the one, ten, and 100-year rainfall event. These plans shall be designed to limit adverse impacts to downstream channels and floodplains. Single residential lots involving less than one acre of land disturbance are not subject to this regulation. A Maintenance Plan will be required for all flood control structures.
6. All streets, drives, and parking areas constructed within a *Subdivision* after the *Effective Date of this Ordinance* shall be elevated to the maximum extent practicable, as determined by the *Registered Professional Engineer*, based upon site conditions and proposed land use. Transitions in grade may be required to tie into existing streets, drives, and parking areas or for traffic safety and

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visibility purposes.

7. Where Base Flood data is available (AE zones), the Special Flood Hazard Area, including all FIRM zones and Floodway boundaries, where applicable, FIRM panel reference, and Base Flood Elevations for each affected lot shall be clearly shown on all preliminary plats and final plats submitted for approval.
8. Where Base Flood Elevation and Floodway data is not available (A zones), Base Flood Elevation and Floodway data shall be provided for Subdivision proposals and all other proposed developments, including Manufactured Home Parks and Subdivisions, greater than fifty (50) lots or five (5) acres, whichever is less. The Base Flood Elevation and Floodway data shall be certified by a Registered Professional Engineer and be developed using FEMA-approved models and methodologies. The regulatory FIRM flood zone and Floodway delineations, Special Flood Hazard Areas, FIRM panel reference, and Base Flood Elevations for each affected lot shall be clearly shown on all plans, preliminary plats and final plats submitted for approval. Base Flood data and flood zone delineations shall be submitted to FEMA through a Letter of Map Revision.
9. Base Flood Elevation and Floodway data may be developed for Subdivisions and developments within an A zone of smaller size than that specified in paragraph 8 above, in which case, the reporting requirements of paragraph 8 above shall apply. Where no Base Flood Elevation and Floodway data is available for a proposed development or Subdivision in an A zone, the Floodplain Administrator shall estimate the Base Flood Elevations and Floodway delineations in accordance the provisions of Section 13, and such data shall be shown and marked as “estimated” on all plans and plats submitted for approval.

Section 16. Severability

If any section or provision of this Ordinance be declared by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the Ordinance as a whole or any part thereof other than the part so declared to be invalid.