AN ACT amending provisions related to nonresidential construction in a floodplain in order to require that certain equipment and systems be elevated at least 2 feet above the 100-year flood level; prohibiting the placement of certain equipment and systems below the elevation of the lowest floor; and generally related to floodproofing in Howard County.
Section 1. Be It Enacted by the County Council of Howard County, Maryland that the Howard County Code is amended as follows:

By amending:

Title 3, Buildings.


(b) Local Amendments. the following amendments modify certain provisions of the adopted code.

(77) Section 3114 Floodplain.

Delete Section 3114, Public Use Restroom Buildings in Flood Hazard Areas, and substitute the following:

Section 3114 Floodplain.

3114.1 General. For the purpose of this Section, the floodplain is delineated in title 16, subtitle 7 of the Howard County Code.

3114.2 Within designated floodplain.

The construction, reconstruction, modification, alteration, repair, or improvement of buildings, manufactured homes, or other structures located within a designated floodplain shall be done in accordance with the requirements set forth in this section.

3114.2.1 New construction. New residential or nonresidential construction shall not occur within a designated floodplain.

Exception 1: An existing nonconforming structure located within a designated floodplain which is destroyed by fire or flood, or that sustains substantial damage may
be restored to the same size and dimension and in the same location on the same lot as the destroyed structure, provided construction begins within 12 months of the date of destruction. Construction shall comply with the elevating and floodproofing requirements of subsection 3114.4 for new construction adjacent to a floodplain. A person shall not intentionally demolish or reconstruct any nonconforming structure. This exception does not apply to manufactured homes. A manufactured home cannot be restored under any condition within a designated floodplain.

**Exception 2:** Transportation networks, utility installations, piers, open pier structures, and open decks approved by the Department of Public works. Streets, sidewalks, pathways, and utility systems in accordance with the Howard County Design Manual and all other applicable codes, ordinances, resolutions, and regulations.

**3114.2.2 Additions and enlargements.** Existing nonconforming structures located within a designated floodplain shall not be expanded or enlarged.

**3114.2.3 Modifications, alterations, and repairs.** Modifications, alterations, repairs, or improvements that cost less than 50% of the fair market value of the structure may be made to existing nonconforming structures located within a designated floodplain without floodproofing or elevating if the owner demonstrates through a Maryland State registered professional engineer that floodproofing or elevating is impractical.

**3114.3 Substantial improvements within a designated floodplain.** Substantial improvements within a designated floodplain shall meet the standards set forth in this subsection and Title 16, Subtitle 7 of the Howard County Code.

**3114.3.1 Residential.** The lowest floor, including a basement, of substantial improvements to existing nonconforming residential structures located within a designated floodplain shall be elevated to at least 2 feet above the 100-year flood elevation.

**3114.3.2 Nonresidential.** The lowest floor, including a basement, of substantial improvements to existing nonconforming nonresidential structures shall be elevated to at least 2 feet above the 100-year flood elevation or shall be designed so that any area of the building which is lower than 2 feet above the 100-year flood elevation, as determined or approved by the Department of Public Works, is watertight with walls substantially impermeable to the passage of water and with structural components...
having the capability of withstanding applicable hydrostatic, hydrodynamic, impact, soil, and, when applicable, hurricane and tidal wave loading conditions. The watertightness and structural capabilities shall be those described in floodproofing regulations published by the Office of the Chief of Engineers, U.S. Army, Washington, D.C., December 1995, or subsequent revisions, and section 16.705(c) of the Howard County Code.

3114.4 Construction adjacent to a designated floodplain. Where buildings are located adjacent to a designated floodplain the following subsections and title 16, subtitle 7 of the Howard County Code shall apply:

3114.4.1 Residential. In new construction of residential buildings or additions or substantial improvements to residential buildings, all floors, including those of basement and storage areas, shall be elevated at least 2 feet above the 100-year flood level.

3114.4.2 Nonresidential. In new construction of nonresidential buildings or additions or substantial improvements to nonresidential buildings, either:

(i) All floors (including those of basement and storage areas) AND ALL ELECTRICAL, HEATING, VENTILATION, PLUMBING, AIR CONDITIONING EQUIPMENT, AND OTHER SERVICE FACILITIES ASSOCIATED WITH THE BUILDINGS shall be elevated at least 2 feet above the 100-year flood level, as determined or approved by the Department of Public Works; or

(ii) The construction or improvement [[(including attendant utility or sanitary facilities)]] shall be designed so that any areas of the building that are lower than 2 feet above the 100-year flood elevation, as determined or approved by the Department of Public Works, are watertight with walls substantially impermeable to the passage of water and with structural components having the capability of withstanding applicable hydrostatic, hydrodynamic, impact, soil, and, when applicable, hurricane and tidal wave loading conditions. [[Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities associated with the buildings shall be designed or located to prevent water from entering or accumulating within the components during flood conditions.]] The watertightness and structural capabilities shall be those described in

3114.3. Modifications, alterations or repairs. Modifications, alterations, repairs, or improvements that costs less than 50% of the fair market value of the structure may be made to existing nonconforming structures located adjacent to a designated floodplain without floodproofing or elevating.

3114.4. Variances. Variances to the requirements set forth in this subsection may be granted by the Building Official in accordance with section 16.711 of the Howard County Code.

3114.5 Substantial improvements adjacent to a designated floodplain. Substantial improvements adjacent to a designated floodplain shall meet the standards set forth in this subsection and title 16, subtitle 7 of the Howard County Code.

3114.5.1 Residential. The lowest floor, including a basement, of substantial improvements to existing nonconforming residential structures located adjacent to a designated floodplain shall be elevated to at least 2 feet above the 100-year flood elevation.

3114.5.2 Nonresidential. The lowest floor, including a basement, of substantial improvements to existing nonconforming nonresidential structures AND ALL ELECTRICAL, HEATING, VENTILATION, PLUMBING, AIR CONDITIONING EQUIPMENT, AND OTHER SERVICE FACILITIES ASSOCIATED WITH THE BUILDINGS SHALL BE located adjacent to a designated floodplain shall be elevated to at least 2 feet above the 100-year flood elevation or shall be designed so that any area of the building which is lower than 2 feet above the 100-year flood elevation, as determined or approved by the Department of Public Works, is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of withstanding applicable hydrostatic, hydrodynamic impact, soil, and, when applicable, hurricane and tidal wave loading conditions. [[Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities associated with the buildings shall be designed or located so as to prevent water from entering or accumulating within the components during conditions of flooding.]] The water tightness and structural capabilities shall be
those described in floodproofing regulations published by the Office of the Chief of
Engineers, U.S. Army, Washington, D.C., December 1995, or subsequent revisions,
and section 16.705(c) of the Howard County Code.

3114.6 Verification. For the purpose of verifying compliance with Section 3114.4 for
construction adjacent to a designated floodplain, the following shall apply:
(i) When floodproofing by means other than elevating, a document stating that the
proposed construction has been adequately designed to withstand the loading
conditions stated in subsection 3114.4.2(ii) shall be certified by a professional
engineer or architect currently registered in Maryland. This document shall be
required prior to issuance of a building permit.
(ii) When floodproofing by elevating is used, the owner shall agree, in writing, to
provide a FEMA elevation certificate form 086-0-33, completed by a professional
engineer or professional land surveyor currently registered in Maryland, certifying
that the as-built lowest floor of the structure is elevated at least 2 feet above the
100-year floodplain elevation. The agreement shall be made prior to the issuance
of the building permit and the completed certification shall be submitted prior to
foundation approval by the Building Official.
(iii) Fair market value of a structure shall be established by a recent (within 6 months)
formal appraisal from a qualified appraiser. Fair market value shall not include
land value.
(iv) Cost to repair or improve a structure shall be established by a recent (within 6
months) written estimate from a licensed contractor and shall include the
complete cost of repairs or improvements to the point of use or occupancy.

3114.7 Definitions. Notwithstanding Chapter 2 of the International Building Code, the
following definitions shall apply to Section 3114.0, Floodplain, of this Code:
Accessory structure. A detached structure on the same parcel or property as the
principal structure that has a use that is incidental to the principal structure including,
but not limited to, a shed or detached garage.
Adjacent to a floodplain. Sharing a common border with a floodplain.
Basement. An enclosed area that is below grade on all sides.
Floodplain. Shall be as delineated in title 16, subtitle 7 of the Howard County Code.
**Floodproofing.** Any combination of additions, changes, or adjustments to a structure which reduce or eliminate flood damage to real estate or improved real property, water or sanitary facilities, or structures and their contents, such that the buildings or structures are 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.

**Historic structure.** A building listed on the national register of historic places, a state inventory of historic places, or an inventory of historic structures adopted by resolution of the County Council. A historic structure also includes a structure that is certified or preliminarily determined by the United States 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.

**Lowest floor.** The lowest floor or the lowest enclosed area, including a basement. Lowest floor does not include an unfinished or flood resistant enclosure used solely for parking vehicles, building access, or storage in an area other than a basement area. The enclosure shall not be built so as to render the structure in violation of the applicable non-elevation design requirements of subsections 3114.4 and 3114.6 of this Code.

**Manufactured home.** A manufactured home shall have the meaning set forth in title 16, subtitle 7 of the Howard County Code.

**New construction.** Structures, including additions and improvements, and the placement of manufactured homes, for which the start of construction commenced on or after 3/15/1977, the initial effective date of the Howard County Flood Insurance Rate Map, including any subsequent improvements, alterations, modifications, and additions to such structures.

The repair or replacement of a manufactured home because of substantial damage is considered to be new construction and is prohibited in accordance with Section 3114.2.1 of this Code.

**Structure.** For purposes of this Subsection 3114 to this Code, shall have the meaning set forth in title 16, subtitle 7 of the Howard County Code.
Substantial damage. Damage of any origin sustained by a structure where the cost of returning the structure to its condition prior to damage would equal or exceed 50% of the structure's fair market value before the damage occurred.

Substantial improvement. The repair, reconstruction, or improvement of a building or structure, the cost of which is equal to or greater than 50% of the fair market value of the building or structure prior to damage, improvement, or repair. For the purpose of this definition, "substantial improvement" occurs when the first alteration of a wall, ceiling, floor, or other structural part of the building begins, whether or not that alteration affects the external dimensions of the building or structure. The term does not include any project for improving a building or structure to comply with existing State or local health, sanitary, or housing code requirements which are necessary to assure safe living conditions. This term does not include an alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

Variance. The grant of relief from a term of this subtitle.

3114.8 Variances and waivers. Except as provided in Section 3114.4 of this Code, a variance or waiver of this section is not allowed. The building official shall consider a variance in accordance with the provisions of section 16.711 of the Howard County Code.

3114.9 Other agencies. A permit issued by the Building Official under this subtitle is not valid until all necessary permits for the development are obtained. Receipt of federal or State permits do not exempt a development from the provisions of this subtitle.

Subtitle 7. Floodplain.

Section 16.705. Requirements and restrictions applicable to the floodplain.
(a) Within the floodplain, no development shall be permitted except as provided in this subtitle, the Howard County Building Code adopted at title 3, subtitle 1 of the Howard County Code and the Subdivision Regulations adopted at title 16, subtitle 1 of the Howard County Code.
(b) Within the approximate floodplain for new subdivisions, site development plans, or single lots, the 100-year flood elevations (base flood elevations) shall be certified by a qualified design professional as determined by the Director of the Department of Public Works based on hydrologic and hydraulic analyses which include a floodway analysis. For a single lot, if no data are available, methods described in Federal Emergency Management Agency Publication No. 265, "Managing Floodplain Development in Approximate Zone A Areas", or a method approved by the Department of Planning and Zoning shall be used to determine the BASE flood elevation.

(c) Buildings and Structures. In addition to the requirements set forth in the Howard County Building Code, new buildings and structures (including the placement and replacement of manufactured homes) and substantial improvement of existing structures (including manufactured homes) that are located, in whole or in part, in any special flood hazard area shall:

1. Be designed (or modified) and constructed to safely support flood loads. The construction shall provide a complete load path capable of transferring all loads from their point of origin through the load-resisting elements to the foundation. Structures shall be designed, connected and anchored to resist flotation, collapse or permanent lateral movement due to structural loads and stresses, including hydrodynamic and hydrostatic loads and the effects of buoyancy, from flooding equal to the flood protection elevation or the elevation required by these regulations or the Howard County Building Code, whichever is higher.

2. Be constructed by methods and practices that minimize flood damage.

3. Use flood damage-resistant materials below the elevation of the lowest floor required in section [[3112]]3114 of the Howard County Building Code.

4. Have electrical systems, equipment and components, and mechanical, heating, ventilating, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment located at or above the elevation of the lowest floor required in section [[3112]]3114 of the Howard County Building Code. Electrical wiring systems are permitted to be located below elevation of the lowest floor provided they conform to the provisions of the electrical part of the Howard County Building Code for wet locations. If replaced as part of a substantial improvement, electrical
systems, equipment and components, and heating, ventilation, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment shall meet the requirements of this section.

[(5) As an alternative to paragraph (4), electrical systems, equipment and components, and heating, ventilating, air conditioning, and plumbing appliances, plumbing fixtures, duct systems, and other service equipment are permitted to be located below the elevation of the lowest floor provided they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to that elevation.]

((5)) Have the electric panelboard elevated at least three feet above the BFE.

((6)) Comply with the requirements of the most restrictive designation if located on a site that has more than one flood zone designation (a zone, designated floodway).

(d) Recreational Vehicles. Recreational vehicles shall not be parked or stored in special flood hazard areas.

(e) Protection of Water Supply and Sanitary Sewage Systems.

(1) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems.

(2) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into systems and discharges from systems into floodwaters.

(3) In addition to the requirements of section 3.808 of this Code, on-site waste disposal systems shall be located to avoid impairment to or contamination from them during conditions of flooding.

Section 2. And Be It Further Enacted by the County Council of Howard County, Maryland that this Act shall become effective 61 days after its enactment.
Date: May 25, 2022

To: Lonnie Robbins, Chief Administrative Officer
Department of County Administration

From: Robert Frances, P.E., Director
Department of Inspections, Licenses & Permits

Subject: Testimony Regarding Floodplain Changes to Titles 3 and 16

The Departments of Inspections, Licenses, & Permits (DILP) and Planning & Zoning (DPZ), in coordination with the Department of Public Works (DPW) have proposed legislation changes to the County’s floodplain regulations. This is being done to be compliant with revised FEMA flood proofing requirements, as well as requirements of the National Flood Insurance Program (NFIP). The proposed changes are needed to maintain the County’s current rating under the Community Rating System (CRS). The CRS is used by insurance companies to set flood insurance rates in the County, where applicable.

The proposed changes involve eliminating the ability to protect electrical, heating, ventilation, plumbing, air conditioning equipment and other associated building service facilities and utilities by water tightness and structural floodproofing methods, as previously allowed under FEMA. These methods are no longer recognized and the only permitted way to protect service equipment is by elevation. Since Howard County requires a two foot (2') freeboard, all service equipment will be required to be elevated two feet (2') above the flood elevation.

The proposed changes are being made to both Titles 3 and 16 of the County Code to be consistent.

Fiscal Impact:
There is no fiscal impact to these code changes and review of this new requirement can be absorbed by current staff.

If you have any questions, I can be reached at extension x3946.

Copy: Don Mock, P.E., Chief of Plan Review, DILP
Amy Gowan, Director, DPZ
Mark Richmond, P.E., Bureau of Environmental Services, DPW
Thomas Meunier, P.E., Director, DPW
Jennifer Sager, County Administration
BY THE COUNCIL

This Bill, having been approved by the Executive and returned to the Council, stands enacted on [Signature]

Michelle Harrod, Administrator to the County Council

BY THE COUNCIL

This Bill, having been passed by the yeas and nays of two-thirds of the members of the Council notwithstanding the objections of the Executive, stands enacted on [Date], 2022.

Michelle Harrod, Administrator to the County Council

BY THE COUNCIL

This Bill, having received neither the approval nor the disapproval of the Executive within ten days of its presentation, stands enacted on [Date], 2022.

Michelle Harrod, Administrator to the County Council

BY THE COUNCIL

This Bill, not having been considered on final reading within the time required by Charter, stands failed for want of consideration on [Date], 2022.

Michelle Harrod, Administrator to the County Council

BY THE COUNCIL

This Bill, having been disapproved by the Executive and having failed on passage upon consideration by the Council stands failed on [Date], 2022.

Michelle Harrod, Administrator to the County Council

BY THE COUNCIL

This Bill, the withdrawal of which received a vote of two-thirds (2/3) of the members of the Council, is withdrawn from further consideration on [Date], 2022.

Michelle Harrod, Administrator to the County Council