Chapter 5 of the Rockville City Code

"Buildings and Building Regulations"

Table of Contents

Article	Title	Page
I	In General…….…...	1
II	Reserved ……...	6
III	Numbering of Buildings……..	6
IV	Dangerous Buildings…….…..	7
V	Basic Building Code…….…...	14
VI	One And Two Family Dwelling Code……	35
VII	Electrical Code……..……	61
VIII	Energy Conservation Code……..	73
IX	Gas Code…….	89
X	Mechanical Code…..…….	96
XI	Plumbing Code……..……...	101
XII	Property Maintenance Code….……	121
XIII	Existing Building Code…..……...	121
XIV	Green Building Regulations……	122

Ordinance No. ___ ORDINANCE: To revise and amend Chapter 5 of the Rockville City Code entitled "Buildings and Building Regulations," by adopting with certain additions, deletions and amendments the ICC International Building Code, (2012 Edition), the International Residential Code, (2012 Edition), the NFPA 70 National Electrical Code, (2011 Edition), the ICC International Energy Conservation Code, (2012 Edition), the ICC International Fuel Gas Code, (2012 Edition), the National Fire Protection Association Codes, 51, 54, and 58, the ICC International Mechanical Code, (2012 Edition), the ICC International Plumbing Code, (2012 Edition); the ICC International Existing Building Code, (2012 Edition), and Article XIV entitled "Green Building Regulations" and by making other minor technical changes

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BE IT ORDAINED BY THE MAYOR AND COUNCIL OF ROCKVILLE, MARYLAND, that Chapter 5 of the Rockville City Code entitled "Buildings and Building Regulations" is hereby amended as follows:

SECTION 1. That Article I, "In General", is hereby amended with the following changes:

Chapter 5. BUILDINGS AND BUILDING REGULATIONS

ARTICLE I. IN GENERAL

Sec. 5-1. Remedial intent.

This chapter is hereby declared to be remedial and shall be liberally construed to secure the beneficial purposes intended hereby. Any requirement essential for the structural, fire or sanitary safety of a proposed or existing building or structure, or essential for the health and safety of the occupants thereof, and which is not specifically covered by this chapter, shall be determined by the enforcing authority for this chapter on a basis consonant with the general tenor and objectives of this chapter.

Sec. 5-2. Definition.

The definition contained in this section apply throughout this chapter and is in addition to the definitions contained in the individual articles and any document referred to therein:

Administrative authority means the City Manager and the City Manager's designees and duly authorized agents.

Historic Building Catalog means inventory of properties that may meet the City's Historic District Designation Criteria and that must be reviewed according to the Criteria by the Historic District Commission before demolition may occur. Refer to Article 14 of City of Rockville Zoning Ordinance.

Sec. 5-3. Compliance with other applicable laws, ordinances, regulations.

(a) Nothing in this chapter shall be so construed so as to excuse compliance with any other applicable law or regulation.

(b) The owner of any property in a Historic District Zone must receive a Certificate of Approval from the City of Rockville Historic District Commission before exterior alterations or demolition may occur. Demolition of any property may not occur without Historic District Commission approval in accordance with the City of Rockville Zoning Ordinance Section 25.04.04.b.1. Exterior alterations to any building listed in the City's Historic Building Catalog may not occur without Historic District Commission approval if it is the subject of an application for nomination, historic evaluation, or demolition in accordance with the City of Rockville Zoning Ordinance Section 25.07.14 and 25.14.01.

Sec. 5-4. Administration.

The City Manager, as the administrative authority, may designate the Chief of Inspection Services Division or any other employee of the City to administer any or all of the provisions of this chapter. The person so authorized may delegate any or all of the powers and duties under this chapter to assistants, subordinates or other employees of the City.

Sec. 5-5. Entry powers.

The administrative authority shall, after proper identification, have the right to enter any premises at any time during normal working hours and at any time in cases of emergency, for the purpose of performing duties under this chapter in the interest of public safety and/or to enforce the provisions of this chapter.

Sec. 5-6. Authority to require exposure of installation.

Whenever any installation requiring a permit and/or inspection under any provision of this chapter is covered or concealed without having first been inspected, the administrative authority may require by written notice that such work shall be exposed for inspection. Any cost of such exposing and recovering shall be borne by the permittee or party responsible for the work requiring inspection.

Sec. 5-7. Authority to stop work.

(a) When any construction or installation work is being performed in violation of this chapter, any applicable permit, or approved plans and specifications, a written notice shall be issued to the responsible party to stop work on that portion of the work that is in violation. The notice shall state the nature of the violation and no work shall be continued on that portion until the administrative authority determines that the violation has been corrected.

(b) In addition to other provisions of this chapter relating to service of notice, a notice to stop work shall be posted at the job site if practicable.

Sec. 5-8. Service of orders and notices.

Except as otherwise specifically provided by this chapter, any order or notice issued pursuant to this chapter shall be served upon the owner, agent or occupant of the structure to which the order or notice relates or other person responsible for the condition of violation. Service shall be made either by personal service; by delivering the same to the subject premises or the office or usual place of abode of the person being served and leaving it with some person of suitable age and responsibility who shall be informed of the contents thereof; by mailing a copy thereof to such person by certified mail to the last known address with return receipt requested; or if the certified mail is returned without receipt or with receipt showing that it has not been delivered, by posting a copy of the order or notice in a conspicuous place in or about the structure affected by such order or notice. If service cannot be made by any of the foregoing methods, service may be made by publishing the substance of the order or notice in a newspaper of general circulation in the County.

Sec. 5-9. Administrative liability.

(a) No officer, agent, or employee of the City shall be personally liable for any damage that may accrue to persons or property as a result of any action required or permitted in the discharge of his duties under this chapter.

(b) The City shall not be liable under this chapter for any damage to persons or property by reason of the inspection or re-inspection of buildings or structures authorized hereunder, or failure to inspect or re-inspect such buildings or structures, or by reason of any permit issued hereunder or the approval or disapproval of any equipment authorized herein.

Sec. 5-10. Compliance required.

All permits or certificates issued under this chapter shall be presumed to contain the provision that the applicant and the applicant's agents and employees shall carry out the proposed activity in compliance with all the requirements of this chapter and any other applicable laws or regulations, whether specified or not, and in complete accord with any approved plans and specifications. Any permit or certificate which purports to sanction a violation of any provision of this chapter or any applicable law or regulation shall be void, and any approval of plans and specifications in the issuance of such permits or certificates shall likewise be void.

Sec. 5-11. License suspension and revocation.

(a) Licenses issued pursuant to this chapter may be suspended or revoked by the administrative authority for any of the following reasons:

(1) Work performed in violation of the applicable code;

(2) Failure to comply with any notice or order issued pursuant to this chapter;

(3) Where a license has been obtained through nondisclosure, misstatement, or misrepresentation of a material fact.

(b) Before any license shall be revoked or suspended, the licensee shall be given written notice of the proposed revocation or suspension, enumerating the charges against the licensee. The revocation or suspension shall become effective and final on the date set forth in the notice unless the licensee contests the revocation or suspension. A licensee desiring to contest the revocation or suspension shall submit a written request for a hearing before the administrative authority within ten (10) days from the date of the notice.

(c) The hearing shall be informal and the licensee shall have a reasonable opportunity to present relevant testimony and evidence. The administrative authority may conduct any investigation or research necessary to render a decision. Within fifteen (15) working days following the conclusion of the hearing, the administrative authority shall make a final decision, in writing, with respect to the suspension or revocation of the licensee. A copy of the decision and the reasons therefor shall be provided to the licensee.

(d) The decision of the administrative authority to suspend or revoke a license may be appealed to the Circuit Court of the County in accordance with the Maryland Rules as set forth in Title 7, Chapter 200; provided that the licensee first shall have exhausted the administrative remedy contained in this section.

Section 5-12 is amended to read as follows:

Sec. 5-12. Appeals from administrative decisions.

(a) *Grounds for appeals.* Any person aggrieved by and desirous of challenging a decision of the administrative authority in connection with the interpretation, application, or modification of any provision of this chapter relating to the manner of construction or materials used in connection with the erection, alteration, or repair of a building or structure or system installed therein, shall appeal such decision to a Board of Adjustments and Appeals. An appeal may be taken when it is claimed that:

(1) The true intent of the code or the rules legally adopted there under have been incorrectly interpreted; or

(2) The provisions of the code do not fully apply; or

(3) An equally good or better form of construction can be used.

(b) *Procedure for taking an appeal.* An appeal shall be filed with the City Clerk within seven (7) calendar days from the date of the administrative decision being appealed, and a copy thereof shall be submitted to the Chief of Inspection Services. The appeal shall be in writing and shall contain a detailed statement of the reasons in support of such appeal.

(c) *Board of Adjustments and Appeals; composition and compensation.*

(1) The Board of Adjustments and Appeals shall consist of three (3) persons:

a. A licensed professional engineer or architect chosen by the administrative authority;

b. A licensed professional engineer or architect chosen by the owner of the subject building or structure; and

c. A licensed professional engineer or architect to be jointly chosen by the other two (2) members.

(2) All fees charged by the licensed professional engineers or architects to serve on the Board shall be paid for by the person appealing the administrative decision.

(d) *Hearing.*

(1) The Board of Adjustments and Appeals shall conduct a hearing on the appeal, at which time the appellant, the appellant's representative, representatives of the City who have inspected the subject building or structure or applicable system installed therein, and any other person having knowledge of the matter or whose interests may be affected by the decision on the appeal shall be given an opportunity to be heard. The hearing shall be conducted informally, and the formal rules of evidence shall not apply. The Board may accept written testimony and shall give it such weight as it deserves.

(2) Interpretation given provisions of the applicable International Code Council, or National Fire Protection Association shall be given great deference.

(3) The Board may inspect the structure or building and conduct any other investigation or research necessary in order to render a decision.

(e) *Decision.*

(1) Within fifteen (15) working days of the hearing, the Board shall affirm, modify or reverse the decision of the administrative authority.

(2) The agreement of any two (2) members of the Board shall constitute the decision of the Board. Failure to obtain the agreement of any two (2) members of the Board shall constitute a denial of the appeal and an affirmation of the decision of the administrative authority. The Board's findings and decision shall be rendered in writing and copies thereof shall be provided to the appellant and any other party who has entered their appearance before the Board and requested a copy of the decision. The decision may contain recommendations for remedial steps to be taken to meet the intent of the applicable code.

(f) *Appeal from decision of Board.* Any person aggrieved by a decision of the Board of Adjustments and Appeals may appeal the decision to the Circuit Court for the County in accordance with the Maryland Rules as set forth in Title 7, Chapter 200.

Secs. 5-13 – 5-15. Reserved.

SECTION 2. That Article II, “Reserved,” is unchanged by this Ordinance.

ARTICLE II. Reserved

Secs. 5-16 – 5-35. Reserved.

SECTION 3. That Article III, "Numbering of Buildings" is unchanged by this ordinance and reads as follows:

ARTICLE III. NUMBERING OF BUILDINGS

Sec. 5-36. Assignment of numbers.

The City Manager, or his authorized representative, may assign or reassign building numbers to properties within the corporate limits of the City. All numbers so assigned shall, insofar as practicable, be a continuation of, or in conformance with, the present numbering system or any system hereafter adopted.

Sec. 5-37. Notice to property owners; compliance.

Subsequent to the assignment of numbers, the City Manager shall give written notice of the number assigned to the owner or owners of properties affected. Within sixty (60) days after receipt of the notice, the owners shall affix the proper numbers in conformance with the provisions of this article. In the event an owner refuses or neglects to properly affix the numbers within the period allowed, the City Manager may cause the property to be numbered and the expense thereof shall be charged against the property and collected as taxes are collected.

Sec. 5-38. Requirements for numbers.

(a) It shall be the responsibility of the owner of any single-family detached or attached residential structure to display, facing the front lot line, numerals at least five (5) inches in height designating the address assigned to the structure by the City. It shall be the responsibility of the owner of any commercial, industrial and multifamily residential structure to display, facing the front lot line and at all entrances facing parking areas, numerals at least six (6) inches in height designating the address assigned to the structure by the City.

(b) All address displays shall be posted on contrasting background displayed in a conspicuous place and in a manner as to be clearly visible from the nearest street, except that displays required at entrances facing parking areas shall be clearly visible from such parking areas. When a structure has more than one (1) address, numerals shall be used to designate the address in sequence.

Secs. 5-39 – 5-45. Reserved.

SECTION 4. That Article IV, "Dangerous Buildings" is unchanged by this ordinance and reads as follows:

ARTICLE IV. DANGEROUS BUILDINGS

Sec. 5-46. Defined.

All buildings or structures which may have any or all of the following defects shall be deemed dangerous buildings:

(1) Those whose interior walls or other vertical structural members list, lean or buckle to such an extent that a plumb line passing through the center of gravity falls outside of the middle third of its base;

(2) Those which, exclusive of the foundation, show thirty-three (33) percent or more, of damage or deterioration of the supporting member or members, or fifty (50) percent of damage or deterioration of the non-supporting enclosing or outside walls or covering;

(3) Those which have improperly distributed loads upon the floors or roofs or in which the same are overloaded, or which have insufficient strength to be reasonably safe for the purpose used;

(4) Those which have been damaged by fire, wind, or other causes so as to have become dangerous to life, safety, morals, or the general health and welfare of the occupants or the people of the City;

(5) Those which have become or are so dilapidated, decayed, unsafe, unsanitary or which so utterly fail to provide the amenities essential to decent living that they are unfit for human habitation, or are likely to cause sickness or disease, so as to work injury to the health, morals, safety or general welfare of those living therein;

(6) Those having light, air and sanitation facilities which are inadequate to protect the health, morals, safety or general welfare of human beings who live or may occupy therein;

(7) Those having inadequate facilities for egress in case of fire or panic or those having insufficient stairways, elevators, fire escapes or other means of communication;

(8) Those which have parts thereof which are so attached that they may fall and injure members of the public or their property;

(9) Those which because of their condition are unsafe, unsanitary or dangerous to health, morals, safety or general welfare of the people of the City;

(10) Those buildings existing in violation of any provision of the building code of the City, or any provision of the fire prevention code, or other ordinances of the City.

Sec. 5-47. Nuisance declared.

All dangerous buildings are hereby declared to be public nuisances, and shall be repaired, vacated or demolished as hereinbefore and hereinafter provided.

Sec. 5-48. Historic Buildings or Structures.

Under all circumstances, exterior alterations to a property, building or structure within a Historic District Zone, including demolition, must be approved by the Historic District Commission before demolition or exterior alterations that are not considered in-kind repairs may occur.

In addition, any building or structure that is not in a Historic District Zone but is identified in the Historic Building Catalog, as revised, that is the subject of an application for nomination, historic evaluation or demolition permit may not be demolished during the historic designation review period. Exterior alterations may not occur during this period unless the property owner receives a Certificate of Approval from the Historic District Commission as required by the City of Rockville Zoning Ordinance, Section 25.14.01.d.6.

Sec. 5-49. Violations.

(a) The owner of any dangerous building may not fail to comply with any notice or order to repair, vacate or demolish such building given by any person authorized by this article to give such notice or order. Each day such failure to comply continues beyond the date fixed for compliance shall be deemed a separate offense.

(b) The occupant or lessee in possession may not fail to comply with any notice to vacate and fail to repair the building in accordance with any notice given as provided for in this article. Each day such failure to comply continues beyond the date fixed for compliance shall be deemed a separate offense.

(c) A person may not remove the notice provided for in section 5-52, paragraph (8).

Sec. 5-50. Emergencies.

In cases where it reasonably appears that there is immediate danger to the life or safety of any person unless a dangerous building is immediately repaired, vacated or demolished, the Chief of Inspection Services Division shall report such facts to the City Manager and the City Manager shall cause the immediate repair, vacation or demolition of such dangerous building. The costs of such emergency repair, vacation or demolition of such dangerous building shall be collected in the same manner as provided in section 5-52, paragraph (8).

Sec. 5-51. Absence of owner from City.

In cases, except emergency cases, where the owner, occupant, lessee or mortgagee is absent from the City, all notices or orders provided for herein shall be sent by certified mail, return receipt requested, to the owner, occupant, mortgagee, lessee, and all other persons having an interest in the building as shown by the property tax or assessment records of the City to be the last known address of each, and a copy of such notice shall be posted in a conspicuous place on the dangerous building to which it relates. Such mailing and posting shall be deemed adequate service.

Sec. 5-52. Duties of Chief of Inspection Services Division.

The Chief of Inspection Services Division or his/her authorized representative shall:

(1) Inspect or cause to be inspected all public buildings, schools, halls, churches, theatres, hotels, tenements, commercial, manufacturing or loft buildings for the purpose of determining whether any condition exists which render such places a dangerous building;

(2) Inspect any building, wall or structure about which complaints are filed by any person to the effect that a building, wall or structure is or may be existing in violation of this article;

(3) Inspect any building, wall or structure reported (as hereinafter provided for) by the Volunteer Fire Department or the Police Department of this City as probably existing in violation of the terms of this article;

(4) Notify in writing the occupant, owner, and all other persons having interest in the property, as shown by the property tax or assessment records of the City, of any building found by him/her to be a dangerous building that the owner must vacate, or repair, or demolish such building or have such work or act done; provided, that any person notified under this subsection to repair, vacate or demolish any building shall be given such reasonable time, not exceeding sixty (60) days, as may be necessary to do, or have done, the work or act required by the notice provided for herein;

(5) Set forth in the notice provided for in paragraph (4) a description of the building or structure deemed unsafe, a statement of particulars which make the building or structure a dangerous building and an order requiring the same to be put in such condition as to comply with the terms of this article within such length of time, not exceeding sixty (60) days, as is reasonable;

(6) Report to the City Manager any noncompliance with the notice provided for in paragraphs (4), (5) and (8) of this section;

(7) Appear at all hearings conducted by the City Manager and testify as to the condition of dangerous buildings;

(8) Place a notice on all dangerous buildings reading as follows:

"This building has been found to be a dangerous building by the Chief of Inspection Service Division. This notice is to remain on this building until it is repaired, vacated or demolished in accordance with the notice which has been given the occupant, owner, and all other persons having interest in the said property as shown by the property tax or assessment records of the City of Rockville of this building. It is unlawful to remove this notice until such notice is complied with."

Sec. 5-53. Duties of the City Manager.

The City Manager shall:

(1) Upon receipt of a report of the Chief of Inspection Service Division or his/her authorized representative as provided for in section 5-52, paragraph (6), give

written notice to the occupant, owner, and all other persons having interest in the property as shown by the property tax or assessment records of the City to appear before him on the date specified in the notice to show cause why the building or structure reported to be a dangerous building should not be repaired, vacated or demolished in accordance with the statement of particulars set forth in the Chief's notice provided for herein in section 5-52, paragraph (5);

(2) Hold a hearing and hear such testimony as the Chief of Inspection Service Division or the occupant, owner, and all other persons having interest in the property as shown by the property tax or assessment records of the City shall offer relative to the dangerous building;

(3) Make written findings of fact from the testimony offered pursuant to paragraph (2) as to whether or not the building in question is a dangerous building;

(4) Issue an order based upon findings of fact made pursuant to paragraph (3) commanding the occupant, owner, and all other persons having interest in the property, as shown by the property tax or assessment records of the City, to repair, vacate or demolish any building found to be a dangerous building; provided that:

a. Any person so notified except the owners, shall have the privilege of either vacating or repairing the dangerous building; or

b. Any person not the owner of the dangerous building but having an interest in the building as shown by the property tax or assessment records of the City may demolish the dangerous building at his own risk to prevent the acquiring of a lien against the land upon which the dangerous building stands by the City as provided for in paragraph (5).

(5) If the occupant, owner, and all other persons having interest in the property as shown by the property tax or assessment records of the City fails to comply with the order provided for in paragraph (4) within ten (10) days, the City Manager shall cause such building or structure to be repaired, vacated, or demolished as the facts may warrant, under the standards hereinafter provided in section 5-57 and shall, with the assistance of the City Attorney, cause the cost of such repair, vacation or demolition to be charged against the land on which the building existed as a municipal lien or cause such cost to be added to the tax due as an assessment or to be levied as a special tax against the land upon which the building stands or did stand, or to be recovered in a suit of law against the owner; provided, that in cases where such procedure is desirable and any delay thereby caused will not be dangerous to the health, morale, safety or general welfare of the people of the City, the City Manager shall notify the City Attorney to take legal action to force the owner to make all necessary repairs or demolish the building;

(6) Report to the City Attorney the names of all persons not complying with the order provided for in paragraph (4).

Sec. 5-54. Duties of the City Attorney.

The City Attorney or his authorized representative shall:

(1) Prosecute all persons failing to comply with the terms of the notices provided for herein in section 5-52, paragraphs (4) and (5), and the order provided for in section 5-53, paragraph (4);

(2) Appear at all hearings before the City Manager in regard to dangerous buildings;

(3) Bring suit to collect all municipal liens, assessments, or costs incurred by the City Manager in repairing or causing to be vacated or demolished dangerous buildings;

(4) Take such other legal action as is necessary to carry out the terms and provisions of this article.

Sec. 5-55. Duties of Volunteer Fire Department.

The employees of the Volunteer Fire Department are requested to make a report in writing to the Chief of Inspection Service Division of all buildings or structures which are, may be, or are suspected to be dangerous buildings. Such reports should be delivered to the Chief of Inspection Service Division within twenty-four (24) hours of the discovery of such buildings by any employee of the Fire Department.

Sec. 5-56. Duties of Police Department.

All employees of the Police Department shall make a report in writing to the Chief of Inspection Services Division of any buildings or structures, which are, may be, or are suspected to be dangerous buildings. Such reports must be delivered to the Chief of Inspection Service Division within twenty-four (24) hours of the discovery of such buildings by any employee of the Police Department.

Sec. 5-57. Standards for repair, vacation or demolition.

The following standards shall be followed in substance by the Chief of Inspection Service Division and his authorized representative in ordering repair, vacation or demolition:

(1) If the dangerous building can reasonably be repaired so it will no longer exist in violation of the terms of this article, it shall be ordered repaired;

(2) If the dangerous building is in such condition as to make it dangerous to the health, morals, safety or general welfare of its occupants, it shall be ordered to be vacated;

(3) In any case where a dangerous building is fifty (50) percent damaged or decayed or deteriorated from its original value or structure, it shall be demolished or repaired and in all cases where a building cannot be repaired so that it will no longer exist in violation of the terms of this article, it shall be demolished;

(4) In all cases where a dangerous building is a fire hazard existing or erected in violation of the terms of this article or any ordinance of the City or statute of the State, it shall be demolished.

Secs. 5-58 – 5-65. Reserved.

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SECTION 5. That Article V, "Basic Building Code," hereby is repealed and re-enacted with amendments as follows:

ARTICLE V. BASIC BUILDING CODE

DIVISION 1. GENERALLY

Sec. 5-66. Purpose.

The purpose and intent of this article is to govern the design, construction, alteration, repair addition, removal, demolition, use, location, occupancy and maintenance of all buildings and structures and their service equipment as herein defined, except as some of such matters may be described in public, local or general laws of the State, zoning and other ordinances or regulations having legal precedence.

Sec. 5-67. Scope.

The provisions of this article shall apply to the construction of new buildings and structures. Construction involving buildings and structures existing at the time of adoption of or amendment of this Article shall comply with this Article or Article XIII. Applicable buildings must also comply with the provisions of Article XIV.

Sec. 5-68. Definitions.

Words defined in this article are intended only for use with sections of this article or any document referred to in this article. The following definitions are intended to be read in place of any definitions of the same words contained in the publication adopted in section 5-86.

Accessory structure means a building subordinate to, and located on the same lot with a main building, the use of which is clearly incidental to that of the main building, or to the use of the land, and which is not attached by any part of a common wall or common roof to the main building.

Accessory use means a use of a building, lot or portion thereof, which is customarily incidental and subordinate to the principal use of the main building or lot.

Alley means a passage or way open to public travel generally affording a secondary means of vehicular access to abutting lots and not intended for general traffic circulation.

Alteration, when applied to a building or structure or its service equipment, means:

(1) A change or rearrangement in the structural parts or in the exit facilities;
(2) A vital change in the service equipment;
(3) An enlargement whether by extending laterally or by increasing in height;
(4) The moving from one (1) location or position to another; or
(5) The change in occupancy from one (1) use group to another of different legal requirements.

Building means a structure having one (1) or more stories and a roof, designed primarily for the shelter, support, or enclosure of persons, animals, or property of any kind.

Building line means a line coincident with the foundation wall of any enclosed porch, vestibule or other enclosed portion of a building, except as provided in chapter 25 (zoning).

Code Official means the Chief of Inspection Services.

Cool Roof Rating Council means an independent, non-profit organization that maintains the third-party rating system for radiative properties of roof surfacing materials.

Demolition means the complete razing of a building or structure.

Demolition by Neglect of Historic Properties means failure to maintain property, or any component thereof, located within a designated Historic District Zone so as to jeopardize the historic integrity of the property.

Dwelling, single unit means a building containing not more than one (1) dwelling unit. A one-family dwelling may include an accessory apartment approved by special exception.

Dwelling, semi-detached means a building containing not more than two (2) dwelling units arranged one above the other or side-by-side.

Dwelling, multifamily / multiunit, apartment house means a building containing three (3) or more dwelling units (an apartment house).

Dwelling, townhouse means one (1) of a group of three (3) or more dwelling units separated from each other by a party wall without openings extending from the cellar floor to the highest point of the roof, along the dividing lot line, and having separate front and rear or front and side entrances from the outside.

Dwelling unit means a building or portion thereof arranged or designed for permanent occupancy by not more than one (1) family for living purposes and having cooking facilities.

Energy Star means the joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy designed to identify and promote energy-efficient products and practices.

~~*Fire Code Official* means the Chief of Inspection Services.~~

Garage, group means an accessory building or portion of a main building designed, arranged, or used for the housing of private motor vehicles, only one (1) of which may be a commercial vehicle. Not more than fifty (50) percent of the space in such a garage shall be used for housing vehicles other than those owned by occupants of the premises; except that all of the space in a garage of one (1) or two (2) car capacity may be so rented.

Garage, service-repair means a building, lot or both in or upon which the business of general motor vehicle repair and service is conducted, but excluding junk and/or auto wrecking business.

Garage, storage means a lot or portion thereof, other than an automobile sales lot, held out or used for the storage or parking of six (6) or more motor vehicles for a consideration, where service or repair facilities are not permitted. Such parking lot shall not be considered an accessory use, nor shall it be used for the storage of dismantled or wrecked motor vehicles, parts thereof or junk.

Hotel (including motel) means any building containing rooms or suites of rooms designed and intended for the temporary lodging of guests, and which are available to the general public for compensation.

Lot means a parcel of land occupied or to be occupied by a building and its accessory buildings or by group buildings and their accessory buildings, together with such open spaces as are required under the provisions of Chapter 25 (zoning), having at least the minimum area required by Chapter 25 (zoning) for a lot in the zone in which such lot is situated and having its principal frontage on a public street or public way.

Lot, corner means a lot abutting on two (2) or more streets at their intersections, where the interior angle of the intersection does not exceed one hundred thirty-five (135) degrees.

Lot, interior means any lot other than a corner lot, not including a through lot.

Lot line, front means the street line running along the front of the lot and separating it from the street. In a through lot, both lines abutting the street shall be deemed to be the front lot lines.

Lot line, rear means the lot line generally opposite or parallel to the front lot line, except in a through lot. If the rear lot line is less than ten (10) feet long or the lot comes to a point at the rear, the rear lot line is assumed to be a line not less than ten (10) feet long, lying wholly within the lot, parallel to the front lot line or, in the case of a curved front lot line, parallel to the chord of the arc of the front lot line.

Lot line, side means any lot line connecting the front and rear lot lines.

Lot, through means an interior lot fronting on two (2) or more streets that do not intersect adjacent to the lot.

Municipality means the Mayor and Council of Rockville.

Onsite renewable energy system includes, but is not limited to, photovoltaic panels, solar thermal collectors and wind systems located on or directly adjacent to the building site.

Record lot means the land designated as a separate and distinct parcel of land on a legally recorded subdivision plat filed among the land records of the County, but does not include land identified on any such plat as an out lot or an ownership lot shown on an ownership plat.

Setback means the minimum perpendicular distance required between a lot line and any building or structure constructed or which may be constructed thereon, consistent with the setback requirements of the zone in which such lot is located.

Skylight means any window, cover or enclosure, or any combination of them, placed in a roof opening for the admission of light and/or ventilation.

Story means that portion of a building included between the surface of any floor and the surface of the floor next above it or, if there is no floor above it, the space between such floor and the ceiling next above it. A basement shall be counted as a story, if it is used for business or dwelling purposes. A mezzanine floor shall be counted as a story if it covers over one-third of the area of the floor next below it or if the vertical distance between the floor next below it and the floor next above it is twenty (20) feet or more.

Story, half means a story under a gable, hip or gambrel roof, the wall plates of which on at least two (2) opposite exterior walls are not more than two (2) feet above the floor of such story.

Street means a public dedicated way which affords the principal means of access to abutting property, including street, avenue, place, drive, boulevard, highway, road, pike, cul-de-sac, court, and any other public way except an alley or driveway.

Street lot line means a line defining the edge of a street right-of-way and separating the street from the abutting property or lots. If, on a master plan of streets and highways duly adopted by the Planning Commission, a street is scheduled for future widening, the proposed right-of-way line shown on the master plan shall be the street line.

Structure means a combination of materials which requires permanent location on the ground or attachment to something having permanent location on the ground.

Structure, part thereof means a combination of materials forming a construction for occupancy or other purposes which requires permanent location on the ground or attached to something having permanent location on the ground.

Vegetated roof means a layer of vegetation growing in a medium on top of a drainage layer and a synthetic, waterproof membrane on the roof of a structure.

Volume of building means the actual cubical space occupied by the building, including exterior walls, basements, cellars and penthouses, but not open balconies, open porches or platforms.

Written notice, when required under the provisions of this article, means a written notice shall be considered to have been served, if delivered in person to the owner, agent or occupant of the structure to which the order or notice relates or other person responsible for the condition of violation. Service shall be made either by personal service; by delivering the same to the subject premises or the office or usual place of abode of the person being served and leaving it with some person of suitable age and responsibility who shall be informed of the contents thereof; by mailing a copy thereof to such person by certified mail to the last known address with return receipt requested; or if the certified mail is returned without receipt or with receipt showing that it has not been delivered, by posting a copy of the order or notice in a conspicuous place in or about the structure affected by such order or notice. If service cannot be made by any of the foregoing methods, service may be made by publishing the substance of the order or notice in a newspaper of general circulation in the County.

Yard means the undeveloped space created by the setback requirements, lying between the lot lines and any structure or building, and not occupied nor obstructed from the ground upward, except as provided in this Chapter.

Yard, front means the open space extending across the full width of a lot between the front lot line of the proposed front street line and nearest line of the building or any enclosed portion thereof. The depth of such yard shall be the shortest horizontal distance between front lot line or proposed front street line and the nearest point of the building or any enclosed portion thereof.

Yard, rear means the open space extending across the full width of a lot between the rear line of the lot and the nearest line of the building, porch or projection thereof. The depth of such yard is the shortest horizontal distance between the rear lot line and the nearest point of the building. When the rear lot line is less than ten (10) feet long or if the lot comes to a point at the rear, the depth of the rear yard is measured to an assumed rear lot line, as defined under "lot line, rear."

Yard, side means open space between side lot line, the side street line, or the proposed side street line, if such line falls within the lot, and the nearest line of the building, porch, or projection thereof, extending from the front yard to the rear yard, or, in the absence of either of such yards, to the front lot line or rear lot line. The width of a side yard shall be the shortest distance between the side lot line and the nearest point of the building, porch or projection thereof.

Secs. 5-69 – 5-75. Reserved.

DIVISION 2. ADMINISTRATION AND ENFORCEMENT

Sec. 5-76. Enforcement; violations.

(a) Any person who shall violate any of the provisions of this article; or shall fail to comply herewith or shall permit or maintain such a violation; or shall violate or fail to comply

with any order made hereunder; or shall build in violation of any details, statements, specifications or plans submitted or approved hereunder; or shall operate not in accordance with the provisions of any certificate, permit, or approval issued hereunder; or who shall fail to comply with such an order as affirmed or modified by the Board of Adjustments and Appeals within the time fixed therein, shall severally for each violation and noncompliance respectively, be guilty of a municipal infraction. The imposition of penalty for any violation shall not excuse the violation nor shall the violation be permitted to continue. Prosecution or lack thereof of either the owner, occupant, or the person in charge shall not be deemed to relieve any of the others.

(b) Any order or notice issued or served as provided in this article shall be complied with by the owner, operator, occupant or other person responsible for the condition or violation to which the order or notice pertains. Every order or notice shall set forth a time limit for compliance dependent upon the hazard and danger created by the violation. In cases of extreme danger to persons or property immediate compliance shall be required. If the building or other premises is owned by one (1) person and occupied by another, under lease or otherwise, and the order or notice requires additions or changes in the building or premises such as would immediately become real estate and be the property of the owner of the building or premises, such order or notice shall be complied with by the owner unless the owner and occupant have otherwise agreed between themselves, in which event the occupant shall comply.

Secs. 5-77 – 5-85. Reserved.

DIVISION 3. TECHNICAL STANDARDS

Sec. 5-86. International Building Code--Adopted.

The International Code Council (ICC) International Building Code, ~~2009~~ 2012 Edition, as modified herein, is hereby adopted as the building code for the City. One (1) copy of such publication as adopted shall be maintained by the ~~City Clerk in the office of the Council~~Inspection Services Division and made available for inspection by the public during regular office hours. Any amendment or change in such publication promulgated by the International Code Council shall not become a part of this article until adopted by ordinance. References to other ordinances and codes of the City shall be interpreted and applied in accordance with the terms and effect of such ordinances and codes at the time of such application and interpretation.

Sec. 5-87. Same--Amendments.

The *ICC International Building Code*, ~~2009~~ 2012 Edition (IBC), is amended in the following respects:

Section 101.1 of the IBC is amended to read as follows:

> **101.1 Title.** These regulations shall be known as the *Building Code of the City of Rockville*, hereinafter referred to as "this code".

Section 101.3.1 is added to the IBC to read as follows:

101.3.1 Application of references. References to the International Building Code shall mean the ~~2009~~ 2012 Edition of the International Building Code issued by the International Code Council Inc. Unless otherwise specified, all references to an article, section number, table, chart, etc., or to provisions not specifically identified by number and not set forth textually in this article but included by reference only, shall be construed to refer to such article, section number, table, chart, or provision as specified in the "International Building Code", which article, section or provision is hereby made part of this article and shall have the same force and effect as if set forth in this article in full.

The citing of the main number of an article or section of the International Building Code shall be taken to include all of its sections or subsections. Subject to changes by the council, the other standards and specifications, or recommended regulations, or parts thereof, which are included by reference to their title and date in various parts of the " International Building Code" and sometimes identified as an "appendix" thereof, are declared to be a part of this article to the full extent of the provisions of such "appendix" or "appendices"; provided, that in the case of conflict the provisions of this article shall govern.

Amendments to the International Building Codes may be promulgated from time to time by the International Code Council, shall be adopted pursuant to laws as are other ordinances or amendments thereto. Changes in the regulations or standards and specifications promulgated by the accredited authoritative agencies of the International Code Council shall be adopted as regulations, standards, and specifications of the City after being approved by ordinance of the council.

Section 101.4 of the IBC is deleted.

Section 105.2 of the IBC is amended to read as follows:

105.2 Work exempt from permit. Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following:

Building:

1. Oil derricks.
2. Retaining walls that are not over 2 feet in height as measured from the lower grade level to the grade level on the high side of the wall, unless supporting a surcharge or impounding Class I, II or IIIA liquids.
3. Water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons (18,927 L) and the ratio of height to diameter or width does not exceed 2 to 1.
4. Sidewalks and driveways not more than 30 inches (762 mm) above adjacent grade and not over any basement or story below.

5. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
6. Temporary motion picture, television and theater stage sets and scenery.
7. Prefabricated swimming pools that are less than 24 inches (610 mm) deep.
8. Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.
9. Swings and other playground equipment accessory to detached one- and two-family dwellings.
10. Window awnings supported by an exterior wall that do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support.
11. Nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753 mm) in height.
12. Re-roofing or residing an existing home without removing any structural components.
13. Patio/decks that are not greater than 4" in height above ground level, Height is measured from top of patio/decking to ground at lowest point.

Electrical:

1. Listed cord-and-plug connected temporary decorative lighting.
2. Reinstallation of attachment plug receptacles but not the outlet therefore.
3. Replacement of branch circuit overcurrent devices of the required capacity in the same location.
4. Electrical wiring, devices, appliances apparatus or equipment operating at less than 25 volts and not capable of supplying more than 50 watts of energy.
5. Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.
6. Removal and replacement of stoves, disposals, ranges. Lighting fixtures, or similar appliances and equipment, not to include base board heaters.

Radio and television transmitting stations: The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but do apply to equipment and wiring for a power supply and the installations of towers and antennas.

Temporary testing systems: A permit shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

Gas:

1. Portable heating, cooking or clothes drying appliances.
2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.
3. Portable-fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

Mechanical:

1. Portable heating appliances.
2. Portable ventilation appliances.
3. Portable cooling units.
4. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.
5. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.
6. Portable evaporative coolers.
7. Self-contained refrigeration systems containing 10 pounds (4.54 kg) or less of refrigerant or that are actuated by motors of 1 horsepower (746 W) or less. (Window AC units).
8. Portable-fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

Plumbing:

1. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.
2. The stopping of leaks in drains, water, soil, waste or vent pipe; provided, however, that if any concealed trap, drainpipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.

Section 105.5 of the IBC is amended to read as follows:

105.5. Expiration. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within six (6) months after its issuance, or if the work authorized by such permit does not continue to progress or is abandoned for a period of six (6) months after the last approved/valid inspection. Before such work recommences, a new permit shall be first obtained and the appropriate fees shall be paid. The code official can extend the time for action by the permittee if there is reasonable cause. A permittee holding an unexpired permit shall have the right to apply for an extension, in writing, for time to complete such work. The extension shall be requested for a justifiable cause. ~~A permit shall not be extended more than once.~~

The fees shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work. Any person who commences work before obtaining the necessary permits shall be subject to, an investigation fee as set forth by resolution, and 100 percent of the usual permit fee.

Section 105.6 of the IBC is amended to read as follows:

105.6 Suspension or Revocation of permits. Any permit or certificate issued under this article may be suspended or revoked when it is determined by the Chief of the Division of Inspection Services that:

(1) It is used by a person other than the person to whom the permit or certificate was issued;

(2) It is used for a location other than that for which it was issued;

(3) Any of the conditions or limitations set forth in the permit or certificate has been violated;

(4) The permittee fails, refuses or neglects to comply with any order or notice duly served upon the permittee under the provisions of this article within the time provided therein;

(5) There has been any false statement or misrepresentation as to a material fact in the application or plans on which the permit or application was based.

Revocation shall be in writing and shall state the reason for the revocation.

Section 107.2 of the IBC is amended to read as follows:

107.2 Construction Documents. Construction documents shall be in accordance with Sections 107.2.1 through 107.2.7

Section 107.2.1.1 of the IBC is amended to read as follows:

107.2.1.1 Building Height and Area Calculations. On the Code Data Sheet for a new structure or an addition to an existing structure, the design professional shall provide the height and area calculations used to determine if the structure meets the limitations of the building code.

Section 107.2.6 of the IBC is added to read as follows:

107.2.6 Fire Protection Engineering Design Evaluation (FPEDE). All plans and specifications for which a building permit is required for buildings of the Use Groups listed in Section 107.2.7 shall be evaluated in accordance with the requirements of this Section for design compliance with adopted fire related code requirements concerning:

(1) Documentation of the title and edition of all applicable State and local Building and Fire codes and standards, and amendments thereto, on which the design is based;

(2) Designated Use Group Classification(s) of all spaces;

(3) Type of Construction requirements identified, with supportive calculations;

(4) Documentation of fire endurance ratings of structural elements and fire rated components (walls, floors, roofs, parapets, opening protectives);

(5) Detailed discussion for protection of fire rated penetrations, systems joining fire rated assemblies, perimeter fire containment, etc.;

(6) Height and area limits compliance and required property line setback criteria;

(7) Occupant load calculations, egress capacity and travel distance analysis;

(8) Interior finishes analysis;

(9) Fire protection systems required (suppression, fire alarm, smoke detection, heat detection, smoke control, other required fire protection systems);

(10) Fire hydrant locations, fire department connection locations, and emergency fire and medical vehicle access;

(11) Emergency lighting and emergency power systems;

(12) Applicable provisions of Chapter 4 of the IBC, "Special Detailed Requirements Based on Use and Occupancy";

(13) Compliance with applicable NFPA Codes and Standards for specific processes, materials, or hazards which are referenced within the IBC, NFPA 101, Life Safety Code or NFPA 1, Fire Code;

(14) Integration, coordination and performance of fire protection systems (both active and passive) with detailed information of their features;

(15) Completion of the ~~2009~~ 2012 International Building Code Plan Review Record as published by the International Code Council.

A written Fire Protection Engineering Design Evaluation (FPEDE) concerning these items shall be submitted with the plans accompanying the application for a building permit. It shall be in a format established by the Fire Marshal and shall be signed and stamped by the preparer. If, in the course of performing the FPEDE, the evaluating fire protection engineer determines that there are fire related code deficiencies in the drawing or specifications, all such deficiencies shall be remedied prior to the submittal of the FPEDE and the building permit application and drawings. The FPEDE must include a signed and sealed statement by both the evaluating fire protection engineer and the engineer or architect of record attesting: "In my professional engineering opinion these drawings and specifications are in compliance with the fire safety provisions of all adopted State and local Building Code, Fire Codes, Mechanical Codes, local amendments and referenced codes and standards to the best of their knowledge and belief".

107.2.6.1 Shop Drawings. All fire protection shop drawings prepared by sub-contractors shall be reviewed ~~, signed and stamped~~ by the fire protection engineer who performed the FPEDE prior to submittal to the City of Rockville. Shop drawings include, but not limited to, fire sprinkler plans, non-aqueous fire protection systems, fire alarm submittals, smoke control systems. The fire protection engineer shall review the plans for coordination of components and the performance of integrated systems. The fire protection engineer will also verify that the systems are designed in accordance with the appropriate standard, all fire protection systems are coordinated together to work in concert, and that all information is presented for a review.

107.2.6.1.1 Required Statement. ~~The~~ Each fire protection shop drawings must have a signed and stamped statement attached to the plans by the evaluating fire protection engineer attesting: "In my professional engineering opinion these drawings and specifications have been reviewed, coordinated with other applicable fire protection systems, and are in compliance with the fire safety provisions of all adopted State and local Building Code, Fire Codes, Mechanical Codes, local amendments and referenced codes and standards to the best of their knowledge and belief."

107.2.6.2 FPEDE Finals. Prior to final inspection by city officials, the fire protection engineer shall personally inspect and verify that the systems are installed correctly and are prepared for an inspection. The fire protection engineer shall be present for the inspection by city officials.

Section 107.2.7 of the IBC is added to read as follows:

107.2.7 Use Groups Requiring a Fire Protection Engineering Design Evaluation (FPEDE). Except as permitted by the Chief of Inspection Services, an~~An~~ FPEDE is required for the following buildings or fire protection systems for which a building permit application is made:

(1) Use Group "A", Assembly, with an occupant load of One Thousand (1,000) persons or more;

(2) Use Group "E", Educational;

(3) Use Group "H", High Hazard;

(4) Use Groups "I-2 and I-3", Institutional;

(5) Use Group "M~~",~~ ": all malls of Type ~~one (1)~~I construction;

(6) All Use Groups with an estimated construction cost of Five Million Dollars ($5,000,000.00) or more;

107.2.7.1 Qualifications of Fire Protection Design Evaluation (FPEDE) Preparer. The FPEDE must be prepared by a Fire Protection Engineer who is a registered Professional Engineer in the State of Maryland. ~~The preparer must also possess a Bachelor of Science in Fire Protection Engineering from a Accreditation Board for~~

~~Engineering and Technology (ABET) accredited University.~~ The preparer must also possess~~,~~ a minimum of~~,~~ a Bachelor of Science in Fire Protection Engineering from an accredited University.

Section 107.3.3 of the IBC is amended to read as follows:

107.3.3 Phased approval. The Chief of Inspection Services is authorized to issue a permit for the construction of foundations of a building or structure provided the application for foundation permit includes all relative information, number of plans, applications, complies with the appropriate codes and fees. The holder of such permit for the foundation of a building or structure shall proceed at the holder's own risk with the building operation and without assurance that a permit for the entire structure will be granted.

Section 109.6 of the IBC is deleted.

Sections 111.1.1, *111.1.2*, and *111.1.3* are added to the IBC to read as follows:

111.1.1 New buildings. A building or structure hereafter erected shall not be used or occupied in whole or in part until the certificate of occupancy shall have been issued by the code official.

111.1.2 Buildings hereafter altered. A building or structure hereafter enlarged, extended or altered to change from one (1) use group to another or to a different use within the same use group in whole or in part, and a building or structure hereafter altered for which a certificate of occupancy has not been heretofore issued, shall not be occupied or used until the certificate shall have been issued by the code official, certifying that the work has been completed in accordance with the provisions of the approved permit. Any use or occupancy, which was not discontinued during the work of alteration, shall be discontinued within thirty (30) days after the completion of the alteration unless the required certificate is secured from the code official.

111.1.3 Change of tenant or ownership. Whenever a commercial, industrial, or business use or building changes ownership; or the tenancy of a commercial or industrial building or space changes, application must be made for a certificate of occupancy. Any violations of this Section or any applicable code as determined by the Code Official must be corrected prior to the issuance of the certificate of occupancy.

Section 113 of the IBC is amended to read as follows:

113.1 Administrative Appeals. Any person aggrieved by and desirous of challenging a decision of the administrative authority in connection with the interpretation, application, or modification of any provision of this chapter relating to the manner of construction or

materials used in connection with the erection, alteration, or repair of a building or structure or system installed therein, shall appeal such decision to a Board of Adjustments and Appeals. An appeal may be taken when it is claimed that:

(1) The true intent of the code or the rules legally adopted there under have been incorrectly interpreted; or
(2) The provisions of the code do not fully apply; or
(3) An equally good or better form of construction can be used.

113.2 Application for appeal. An appeal shall be filed with the City Clerk within seven (7) calendar days from the date of the administrative decision being appealed, and a copy thereof shall be submitted to the Chief of Inspection Services Division. The appeal shall be in writing and shall contain a detailed statement of the reasons in support of such appeal.

113.3 Membership.

113.3.1. Number. The Board of Adjustments and Appeals shall consist of three (3) persons:

a) A licensed professional engineer or architect chosen by the administrative authority;
b) A licensed professional engineer or architect chosen by the owner of the subject building or structure; and
c) A licensed professional engineer or architect to be jointly chosen by the other two (2) members.

113.3.2 Compensation. All fees charged by the licensed professional engineers or architects to serve on the Board shall be paid for by the person appealing the administrative decision.

113.4 Meetings and Hearings. The Board of Adjustments and Appeals shall conduct a hearing on the appeal, at which time the appellant, the appellant's representative, representatives of the City who have inspected the subject building or structure or applicable system installed therein, and any other person having knowledge of the matter or whose interests may be affected by the decision on the appeal shall be given an opportunity to be heard. The hearing shall be conducted informally, and the formal rules of evidence shall not apply. The Board may accept written testimony and shall give it such weight as it deserves.

113.4.1 Interpretation. Interpretation given provisions of the applicable ICC or NFPA Code by the International Code Council or National Fire Protection Association shall be given great deference.

113.4.2 Actions. The Board may inspect the structure or building and conduct any other investigation or research necessary in order to render a decision.

113.5 Decision. The following process shall be followed:

(1) Within fifteen (15) working days of the hearing, the Board shall affirm, modify or reverse the decision of the administrative authority.

(2) The agreement of any two (2) members of the Board shall constitute the decision of the Board. Failure to obtain the agreement of any two (2) members of the Board shall constitute a denial of the appeal and an affirmation of the decision of the administrative authority. The Board's findings and decision shall be rendered in writing and copies thereof shall be provided to the appellant and any other party who has entered their appearance before the Board and requested a copy of the decision. The decision may contain recommendations for remedial steps to be taken to meet the intent of the applicable code.

113.6 Appeal. Any person aggrieved by a decision of the Board of Adjustments and Appeals may appeal the decision to the Circuit Court for the County in accordance with the Maryland Rules as set forth in Title 7, Chapter 200.

Section 115.2.1 is added to the IBC to read as follows:

115.2.1 Notice to owner. Upon notice from the code official that work on any structure or building is being performed contrary to the provisions of this code or in an unsafe and dangerous manner, such work shall be immediately stopped. The stop work order may be verbal or in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work.

Section 115.3 of the IBC is amended to read as follows:

115.3 Unlawful Continuance. Any person who shall continue any work in or about the structure after having been issued a verbal or written stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine as set forth by resolution of the Mayor and Council.

Section 414.1.2.2 is added to the IBC to read as follows:

414.1.2.2 Laboratory chemicals. Upon application for construction permit, any structure with a laboratory shall provide a listing of chemicals to be stored and used. The applicant is responsible for the preparation and submittal of the chemical list, the quantity to be stored of each individual chemical, the Material Safety Data Sheets and the container storage type and arrangement for review.

Section 501.3 is added to read as follows:

501.3 Internal Fire Department Access in Complex Structures. In all complex structures, at least one entrance to a stair shall be provided immediately adjacent

to the main fire department access point, which accesses all levels of the structure. If a standpipe system is required in the building, this stair must be provided with that means of manual fire protection. The automatic fire sprinkler floor control valves shall also be located in this stair.

Section 702.1 A definition is added to the IBC section to read as follows:

Fire Rated Wall Identification. All walls that are rated for fire resistance or smoke barriers shall be marked at the highest point of the wall with six inch tall red, stencil paint letters, with a minimum of ¾" stroke width, stating the type of wall it serves as according to the International Building Code and "Protect all Penetrations". Such identification shall be above any decorative ceiling and in concealed spaces. If a wall transverses multiple floors, then the wall shall be marked at each level. The signage shall be repeated every 20 linear feet.

Section 711.9.1 is added to the IBC to read as follows:

711.9.1 Sealing Penetrations in Smoke Partition Construction. The manner to properly seal penetrations in a smoke partition wall is to fill the void opening around the item penetrating the wall with a noncombustible material such as mineral wool or another listed fill-void material. The fill void material shall have a coating of sealant applied and smoothened to close any gaps. The sealant shall be non-combustible or have a Class A flame spread combustibility rating.

Section 901.1 of the IBC is amended to read as follows:

901.1 Scope. The provisions of this chapter shall specify where fire protection systems are required and shall apply to the design, installation and operation of fire protection systems. These fire protection system requirements may be concurrently covered in the State of Maryland Fire Prevention Code, Public Safety Article 6-101 – 6-202 Annotated Code of Maryland and COMAR 29.06.01.

Section 903.1.2 is added to the IBC to read as follows:

903.1.2 Sprinkler Zones. Each floor shall be zoned separately. Where atrium smoke exhaust is used, ~~A~~atriums shall be separately zoned to work in concert with the fire alarm zone to activate the exhaust fans.

Exceptions:

(1) Where the building is not protected throughout by a fire alarm system in accordance with Section 907, a zone shall not exceed 52,000 square feet (2,090 m^2) for light hazard occupancies and 40,000 square feet for ordinary and extra hazard occupancies.

(2) Single unit dwellings designed in accordance with NFPA 13D.

Section 903.3.1.4 of the IBC is added to read as follows:

903.3.1.4 Manner for Calculation of Residential Bathroom Square Footage. When calculating the area of a residential bathroom for the purpose of determining if sprinkler coverage is required, any separate rooms with doors opening into the larger room contained within the larger footprint shall be counted. The area that a shower stall or bathtub uses shall also be incorporated into the overall area calculation. Rules governing smaller rooms shall continue to apply when determining if those smaller rooms need independent sprinkler heads.

Section 903.6 is added to the IBC to read as follows:

903.6 Fire Pump Room Design. Any room housing a fire pump shall be a minimum of 100 square feet in area with the smallest wall dimension of no less than 8 feet. Additional area will be required when more than the backflow preventer, fire pump and pump controller as proposed to be installed in the room.

903.6.1 Fire Pump Room Doorway. The room shall have a doorway directly to the exterior. The doorway shall encompass a double door with each door leaf measuring a minimum of 36 inches in width.

Exception: Fire pump rooms located below grade with direct access from a fire department and maintenance accessible area are exempt from the doorway directly to the exterior.

903.6.2 Fire Pump Room Protection. ~~If bollards or other vehicular protective devices are installed outside of the doors, the protective devices shall be located a minimum of 6 feet away from the door opening.~~ Access to fire pump shall be maintained at all times by bollards or other vehicular protective devices installed outside of the doors. The protective devices shall be located to prevent vehicles from parking in front of the doors.

903.6.3 Fire Pump Room Drains. Each fire pump room shall be provided with a minimum of two drains located near the fire pump. Each drain shall have a minimum of 4 inch diameter opening. One drain shall be dedicated to the main drain from the pump discharge piping and the second drain opening shall serve the accessory drain piping from the fire pump.

Section 903.7 is added to the IBC to read as follows:

903.7 Sprinkler Plan Preservation. All buildings equipped with a new sprinkler system shall have a copy of the plans permanently mounted in the Fire Command Center or Fire Pump room or main sprinkler valve room. The plans shall be protected from deformation and located in a dedicated, labeled storage cabinet permanently mounted to the wall adjacent to the main sprinkler riser and locked. Plans can be reduced in size but must remain legible. ~~Plans for tenant modifications do not need to meet this requirement.~~

Exception: Plans for tenant modifications do not need to meet this

requirement~~.~~

Section 903.8 is added to the IBC to read as follows:

903.8 Insulation Value for Sprinkler Piping Protection. All insulation installed near or on sprinkler piping shall have a minimum R-value of 30. R-30 insulation shall be used in the attic and in the exterior walls. Only batt insulation shall be used in the specific areas protecting sprinkler piping. Blown-in insulation shall not be used in the same channels as sprinkler piping. Appropriate width shall be provided to prevent the compaction of the insulation, thus decreasing the "R" value of the insulation.

~~*Section 904.2.2* is added to the IBC to read as follows:~~

~~**904.2.2 Placards for Kitchen Exhaust Extinguishing Systems.** Placards installed for the operating instructions of kitchen exhaust hood-extinguishing systems shall have bilingual language provided. The main language shall be English with a secondary language representative of the work force.~~

Section 907.2.13.2 of the IBC is amended to read as follows:

907.2.13.2 Fire department communication system. An approved two-way, fire department communication system designed and installed in accordance with NFPA 72 shall be provided for fire department use. It shall operate between a fire command center complying with Section 911, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. The fire department communication devices shall be provided on intermediate floor landings in stairwells and adjacent to fire department hose connections, unless otherwise permitted by the code official.

Sections 907.6.3.3 and *907.6.3.4* are added to the IBC to read as follows:

907.6.3.3 Fire Alarm Zones. Each floor shall be zoned separately. Where the building is protected by an automatic sprinkler system in accordance with Section 903, the area of the fire alarm zone shall coincide with the allowable area of the sprinkler system.

907.6.3.4 Fire Alarm Zones Unprotected areas. Where the building is not protected throughout by an automatic sprinkler system in accordance with Section 903, a zone shall not exceed 22,500 square feet (2090 m^2) and the length of any zone shall not exceed 300 feet (91440 mm) in any direction.

Section 909.2.1 is added to the IBC to read as follows:

909.2.1 Smoke Control Systems Design Report. All active mechanical smoke control systems shall be reviewed, signed and stamped by a Professional Engineer meeting the requirements of Section 107.2.7.1 prior to submission for review. The Professional Engineer shall submit a design report with supportive calculations to the Fire Marshal attesting to the design's compliance with Sections 909.8 and 909.9 of this Code, as well as applicable adopted NFPA Codes for smoke control systems.

Section 915 of the IBC is amended to read as follows:

Section 915

Radio Amplification System for Emergency Service Personnel

915.1 General. The provisions of this Section shall apply to all newly constructed below ground floors of a building, all floors in buildings greater than 25000 ft² per floor, and to all floors of buildings greater than 3 stories in height.

915.2 Where Required. Every floor area in a building or structures which cannot achieve the required level of radio coverage as established by Montgomery County Department of Technology Services (DTS) shall be provided with in-building public safety radio enhancement system in accordance with the Montgomery County Fire Safety Code.

915.3 Inspection and Testing. Emergency responder radio coverage and in-building public safety radio enhancement systems must be tested, and inspected by approved individuals. The results of the testing and inspection shall be certified to the code official and Montgomery County prior to issuance of an occupancy permit.

Section 916 is added to the IBC to read as follows:

Section 916

Fire Hydrants

916.1 Fire Hydrant Spacing. For all newly constructed buildings, fire hydrants shall be spaced at no greater than 300 feet from all points of the structure as the fire hose would lay on the ground. The perimeter distance shall be measured, as a hose line would be laid along paved streets, through parking lot entrances, and around obstructions, in accordance with the determination of the authority having jurisdiction. If publicly maintained hydrants do not meet this spacing, then privately owned and maintained hydrants shall be provided.

Exception: Fire hydrant perimeter spacing may be increased to 500 feet for a structure equipped with an automatic fire suppression installed completely throughout. The distance from a fire hydrant to the fire department connection shall remain 100 feet.

916.1.1 Fire Hydrant location. *S*tructures equipped with a sprinkler system and/or a standpipe system shall have a fire hydrant located within 100 feet of the fire department connection. The distance shall be measured along a path accessible to foot travel.

916.2 Fire Hydrant Location Markings. All new and relocated fire hydrants, either maintained by the City of Rockville, Washington Suburban Sanitary Commission or

privately owned, shall be provided with a marker installed in the roadway. The marker shall be reflective and blue in color. The location of the marker shall be dependent upon the roadway characteristics.

- On unstriped roadways, blue markers shall be set in the center of the roadway.
- On undivided striped roadways, blue markers shall be set 6" to the hydrant side of the center stripe.
- On divided roadways, the blue marker shall be set 6" to the side of the lane striping, which is closest to the hydrant.
- In locations where hydrants are situated on corners, blue markers shall be installed on both approaches, which front the hydrant.

In addition, all fire hydrants shall be equipped with a vertical visual indicator to be permanently attached to the bonnet of the fire hydrant to assist in locating the hydrant when surrounded by snow.

916.3 Fire Hydrant Color Coding. A reflective tape marker shall be placed on each fire hydrant indicative of the fire hydrant's flow characteristics. The color of the band of reflective tape shall be in accordance with NFPA 291, Recommended Practice for Fire Flow Testing and Marking of Hydrants. The band shall be at least 2 inches in width and shall be wrapped around the neck of the fire hydrant, which is immediately beneath the bonnet.

Exception: If the fire hydrant is manufactured where a band cannot be attached, a reflective self-adhesive tape shall be applied to the rim of the bonnet.

916.4 Fire Hydrant Protection Systems. When a fire hydrant is considered to be vulnerable to vehicular traffic by the Code Official, a protective system shall be installed to prevent any damage. The system can be composed of bollards or another accepted physical barriers capable of impact without causing damage to the fire hydrant.

Section 1001.1.1 is added to the IBC to read as follows:

1001.1.1 Scope. Means of egress requirements of Chapter 10 may be concurrently covered in the State of Maryland Fire Prevention Code, Public Safety Article 6-101 – 6-202 Annotated Code of Maryland and COMAR 29.06.01.

~~*Section 1020.2.3* of the IBC is added to read as follows:~~

~~**1020.2.3 Construction of Path to Egress Discharge.** Egress discharge paths shall be made of permanent, formed materials arranged in a manner to lead occupants to a public way. Grass lawns, gravel and other filler materials will not be an acceptable path base.~~

Section 1027.~~7~~ 6 is added to the IBC to read as follows:

1027.~~7~~ 6 Construction of Path to Egress Discharge. Egress discharge paths shall be made of permanent, formed materials arranged in a manner to lead occupants to a public way. Grass lawns, gravel and other filler materials will not be an acceptable path base.

Chapter 11 of the IBC is amended to read as follows:

Chapter 11

ACCESSIBILITY

Section 1101

General

1101.1 Scope. Chapter 11 is hereby replaced with the *Maryland Accessibility Code* set forth in *COMAR 05.02.02*.

Section 1209.2.1 of the IBC is added to read as follows:

1209.2.1 Dedicated Attic Walkways. When a commercial or multi-family residential structure is provided with a~~n~~ non-sprinklered attic, dedicated and permanent walkways shall be installed to provide an easy manner for maintenance personnel to transverse the structural spans. The walkway shall be of materials consistent with the construction of the building. The walkway shall be a maximum of 18 inches wide or meeting required widths as designated by other Codes and shall not be used for storage. The walkway shall be arranged so to prevent any contact with sprinkler piping or the insulation that protects the piping.

Sections 1507.1.1 and *1507.1.2* are added to the IBC to read as follows:

1507.1.1 Cool roof requirements. Roof coverings for roof slopes less than two units vertical in 12 units horizontal (less than 17-percent slope) for buildings and covered parking shall conform to Sections 1507.1.1 and 1507.1.2. Replacement, including any change to design or materials, of the roof of a building or structure in a Historic District Zone must be approved by the Historic District Commission. A minimum of 75% of the entire roof surface not used for roof penetrations, onsite renewable energy systems, or vegetated roofing systems shall be covered with products that comply with the following:

1. Have a minimum initial solar reflective index (SRI) of 78, as described in Section 1507.1.2; or
2. Comply with the criteria for the U.S. EPA's Energy Star Program Requirements for Roof Products – Eligibility Criteria.

Exceptions:

1. Roofs used to shade or cover parking and roofs over semi-heated spaces or used as outdoor recreation space by the occupants of the building shall be permitted to be either landscaped or have a minimum initial *SRI* of 29. A default *SRI* value of 35 for new concrete without added color pigment is allowed to be used in lieu of measurements.
2. Terraces on setbacks comprising less than 25% of the area of the largest floor plate in the building.

3. Roofs ballasted at a minimum weight of 17 pounds per square foot with limestone or a ballast with a solar reflectance of at least 30% shall be permitted to comprise part or all of the 75% required area coverage.
4. Roofs where a minimum of 75% of the roof area is shaded during the peak sun angle on June 21st by permanent features of the building.
5. Vegetated roofs and onsite renewable energy systems shall be permitted to comprise part or all of the 75 percent required area coverage.

1507.1.2 Solar Reflective Index. The solar reflective index (SRI*)* shall be calculated in accordance with ASTM E1980 for medium-speed wind conditions. The SRI shall be based upon solar reflectance as measured in accordance with ASTM E1918 or ASTM C1549, and the thermal emittance as measured in accordance with ASTM E408 or ASTM C1371. For roofing products, the values of a solar reflectance and thermal emittance shall be determined by a laboratory accredited by a nationally recognized accreditation organization, such as the Cool Roof Rating Council CRRC-1 Product Rating Program, and shall be labeled and certified by the manufacturer.

Chapter 34 of the IBC is amended to read as follows:

CHAPTER 34

EXISTING STRUCTURES

Section 3401

General

3401.1 Scope. Existing structures or buildings shall comply with the *Maryland Building Rehabilitation Code (COMAR 05.16.01)* as described in Article XIII of this Chapter.

Sec. 5-88. Adoption of Maryland Accessibility Code.

The *Maryland Accessibility Code (COMAR 05.02.02.)* is adopted by reference.

Secs. 5-89 – 5-95. Reserved.

SECTION 6. That Article VI, "One and Two Family Dwelling Code", is hereby repealed and re-enacted with amendments as follows:

ARTICLE VI. ONE AND TWO FAMILY DWELLING CODE

DIVISION 1. GENERALLY

Sec. 5-96. Scope.

This article shall govern the minimum requirements to safeguard the health, safety, and welfare of the public by regulating and controlling:

a) The design, construction, prefabrication, equipment or appliance installation, quality of materials, use and occupancy, and the repair of one (1) and two (2) family detached dwellings and townhouses not more than three (3) stories in height with or without a loft per Section R101.2.1; and
b) New Construction, Additions and Alterations as defined in Section R202.

Alterations to existing buildings that do not meet the definition of New Construction or Addition, shall comply with Article XIII. New Construction as defined in Section R202 shall also comply with the provisions of Article XIV.

Secs. 5-97 – 5-100. Reserved.

DIVISION 2. ADMINISTRATION AND ENFORCEMENT

Sec. 5-101. International Residential Code for One and Two-Family Dwellings--Adopted.

The International Code Council (ICC) International Residential Code for One and Two-Family Dwellings, ~~2009~~ 2012 Edition, as modified herein, is hereby adopted as the residential code for the City. One (1) copy of such publication as adopted shall be maintained by the ~~City Clerk in the office of the Council~~Inspection Services Division and made available for inspection by the public during regular office hours. Any amendment or change in such publication promulgated by the International Code Council shall not become a part of this article until adopted by ordinance. References to other ordinances and codes of the City shall be interpreted and applied in accordance with the terms and effect of such ordinances and codes at the time of such application and interpretation.

Sec. 5-102. Same—Amendments.

The ICC International Residential Code for One and Two-Family Dwellings, ~~2009~~ 2012 Edition (IRC), is amended as follows:

Section R101.1 of the IRC is amended to read as follows:

R101.1. Title. These provisions shall be known as the *Residential Code for One- and Two-family Dwellings of City of Rockville*, and shall be cited as such and will be referred to herein as "this code".

Section R101.2.1 is added to the IRC to read as follows:

R101.2.1 Additional scope and repairs. Accessory structures and townhouses with loft, not exceeding a total of four stories in height and meeting the requirements of

Sections R309, R310 and R311 and other applicable requirements of this Code. Repairs involving building structures existing at the time of adoption of or amendment of this Article shall comply with this Article or Article XIII.

Section R105.2 of the IRC is amended to read as follows:

R105.2 Work exempt from permit. Permits shall not be required for the following, however properties in Historic District Zones require "Certificates of Approval (permits)" for exterior alterations. Exemption from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

Building:

1. Retaining walls that support a surcharge of less than 2 feet in height, as measured from the lower grade level to the grade level on the high side of the wall.
2. Water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons (18,927 L) and the ratio of height to diameter or width does not exceed 2 to 1.
3. Sidewalks and driveways not more than 30 inches (762 mm) above adjacent grade and not over any basement or story below.
4. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
5. Prefabricated swimming pools that are less than 24 inches (610 mm) deep.
6. Swings and other playground equipment accessory to a one-or two- family dwelling.
7. Window awnings supported by an exterior wall which do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support.
8. Re-roofing or residing an existing home without removing any structural components.
9. Patio/decks that are not greater than 4" in height above ground level, Height is measured from top of patio/decking to ground at lowest point.

Electrical:

1. Listed cord-and-plug connected temporary decorative lighting.
2. Reinstallation of attachment plug receptacles but not the outlet therefore.
3. Replacement of branch circuit overcurrent devices of the required capacity in the same location.
4. Electrical wiring, devices, appliances apparatus or equipment operating at less than 25 volts and not capable of supplying more than 50 watts of energy.
5. Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.
6. Removal and replacement of stoves, disposals, ranges. Lighting fixtures, or similar appliances and equipment, not to include base board heaters.
7. Portable generators 10KW or less.

Gas:

1. Portable heating, cooking or clothes drying appliances.
2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.
3. Portable-fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

Mechanical:

1. Portable heating appliances.
2. Portable ventilation appliances.
3. Portable cooling units.
4. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.
5. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.
6. Portable evaporative coolers.
7. Self-contained refrigeration systems containing 10 pounds (4.54 kg) or less of refrigerant or that are actuated by motors of 1 horsepower (746 W) or less. (Window AC units).
8. Portable-fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

Plumbing:

1. The clearing of stoppages or the removal and reinstallation of fixtures (i.e.,water closets), provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.
2. The stopping of leaks in drains, water, soil, waste or vent pipe; provided, however, that if any concealed trap, drainpipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.

Section R105.3.1.1 of the IRC is deleted.

Section R105.5 of the IRC is amended to read as follows:

R105.5 Expiration. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within six (6) months after its issuance, or if the work authorized by such permit does not continue to progress or is abandoned for a period of six (6) months after the last approved/valid inspection. Before such work recommences, a new permit shall be first obtained and the appropriate fees shall be paid.

The fees shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work.

Section R105.5.1 ~~of~~ is added to the IRC ~~is amended~~ to read as follows:

R105.5.1 Extensions. The code official can extend the time for action by the permittee if there is reasonable cause. A permittee holding an unexpired permit shall have the right to apply for an extension, in writing, for time to complete such work. The extension shall be requested for a justifiable cause. ~~A permit shall not be extended more than once.~~

Sections R106.1.3 and *R106.3.3* of the IRC are deleted.

*Section R107.1*of the IRC is amended to read as follows:

R107.1 Temporary structures. The Building official is authorized to issue a permit for temporary structures. Temporary structures are those used for only limited duration events or outdoor recreational purposes, and not as carports, garages, or storage rooms. Temporary structures may be erected for a period not to exceed a total of 90 days in any 12-month period. The size and location of temporary structures must meet the requirements of Chapter 25 (Zoning) of the Rockville City Code. Temporary structures of less than 144 square feet in area are exempt from permit, but must meet all other requirements of this section and of Chapter 25 (Zoning) of the Rockville City Code.

Sections R109.1.1 and *R109.1.2* of the IRC are amended to read as follows:

R109.1.1 Foundation inspection. Includes footing inspection, foundation walls, waterproofing, drainage, and back-fill, and ground floor slab. A wall check (house location survey) must be prepared and certified by a Maryland Registered Land Surveyor and submitted for approval to the building official within ~~the time specified by the Division~~14 days of the footing inspection approval. ~~Framing~~ Slab inspections will not be conducted until such survey is received and approved.

R109.1.2 Plumbing, mechanical, gas and electrical systems inspection. Rough inspection of plumbing, mechanical, gas and electrical systems shall be made prior to concealment, to building framing/close-in inspection and as often as required by the applicable code document

Section R109.1.3 of the IRC is deleted.

Section R109.1.4 of the IRC is amended to read as follows:

R109.1.4 Frame and masonry inspection. Inspection of framing and masonry construction shall be made after the roof, masonry, all framing, fire stopping, draft stopping and bracing are in place and after the plumbing, mechanical and electrical rough inspections are approved. Floor framing located 36 inches or closer to the ground must be inspected prior to installing any flooring materials. An inspection is required for masonry fireplaces after the fireplace and first flue section are completed.

Section R109.1.5 of the IRC is amended to read as follows:

R109.1.5 Other inspections. In addition to the inspections listed above, the building official may make or require any other inspections to ascertain compliance with this code and other laws enforced by the Division.

Section R109.1.5.2 ~~of~~ is added to the IRC ~~is amended~~ to read as follows:

R109.1.5.2 Insulation and Radon Control. Inspections of all required insulation and radon control features must be conducted prior to concealment.

Section R109.1.6.1 of the IRC is deleted.

Section R109.2 of the IRC is deleted.

Section R109.4 of the IRC is amended to read as follows:

R109.4 Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the building official. The building official upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or shall notify the permit holder or an agent of the permit holder wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the building official. Any required inspections disapproved twice for the same violation will be subject to re-inspection fees adopted by resolution of the Mayor and Council. Re-inspection fees must be paid before any further inspections can be performed at the building site. Any work done without proper inspections will be subject to special inspection fees as adopted by resolution of the Mayor and Council.

Section R110.1 of the IRC is amended to read as follows:

R110.1 Use and occupancy. No building or structure shall be used or occupied, and no change in the existing occupancy classification of a building or structure or portion thereof shall be made until the building official has issued a certificate of occupancy. Issuance of a certificate of occupancy shall not occur until the building has been inspected and found to be in compliance with the provisions of this code and all other applicable laws and ordinances. Temporary certificates of occupancy will not be issued for one and two family dwellings.

Exceptions:

1. Certificates of occupancy are not required for work exempt from permits under Section R105.2.
2. Accessory buildings or structures.

Sections R110.2 and *R110.3* of the IRC are deleted.

Section R110.4 of the IRC is amended to read as follows:

R110.4 Temporary occupancy. Temporary certificates of occupancy will not be issued for one- and two-family dwellings.

Section R112 of the IRC is amended to read as follows:

R112.1 Administrative Appeals. Any person aggrieved by and desirous of challenging a decision of the administrative authority in connection with the interpretation, application, or modification of any provision of this chapter relating to the manner of construction or materials used in connection with the erection, alteration, or repair of a building or structure or system installed therein, shall appeal such decision to a Board of Adjustments and Appeals. An appeal may be taken when it is claimed that:

1) The true intent of the code or the rules legally adopted there under have been incorrectly interpreted; or
2) The provisions of the code do not fully apply; or
3) An equally good or better form of construction can be used.

R112.2 Application for appeal. An appeal shall be filed with the City Clerk within seven (7) calendar days from the date of the administrative decision being appealed, and a copy thereof shall be submitted to the Chief of Inspection Services Division. The appeal shall be in writing and shall contain a detailed statement of the reasons in support of such appeal.

R112.3 Membership.

R112.3.1. Number. The Board of Adjustments and Appeals shall consist of three (3) persons:

a) A licensed professional engineer or architect chosen by the administrative authority;
b) A licensed professional engineer or architect chosen by the owner of the subject building or structure; and
c) A licensed professional engineer or architect to be jointly chosen by the other two (2) members.

R112.3.2 Compensation. All fees charged by the licensed professional engineers or architects to serve on the Board shall be paid for by the person appealing the administrative decision.

R112.4 Meetings and Hearings. The Board of Adjustments and Appeals shall conduct a hearing on the appeal, at which time the appellant, the appellant's representative, representatives of the City who have inspected the subject building or structure or

applicable system installed therein, and any other person having knowledge of the matter or whose interests may be affected by the decision on the appeal shall be given an opportunity to be heard. The hearing shall be conducted informally, and the formal rules of evidence shall not apply. The Board may accept written testimony and shall give it such weight as it deserves.

R112.4.1 Interpretation. Interpretation given provisions of the applicable ICC or NFPA Code by the International Code Council or National Fire Protection Association, shall be given great deference.

R112.4.2 Actions. The Board may inspect the structure or building and conduct any other investigation or research necessary in order to render a decision.

R112.5 Decision. The following process shall be followed:

(1) Within fifteen (15) working days of the hearing, the Board shall affirm, modify or reverse the decision of the administrative authority.

(2) The agreement of any two (2) members of the Board shall constitute the decision of the Board. Failure to obtain the agreement of any two (2) members of the Board shall constitute a denial of the appeal and an affirmation of the decision of the administrative authority. The Board's findings and decision shall be rendered in writing and copies thereof shall be provided to the appellant and any other party who has entered their appearance before the Board and requested a copy of the decision. The decision may contain recommendations for remedial steps to be taken to meet the intent of the applicable code.

R112.6 Appeal. Any person aggrieved by a decision of the Board of Adjustments and Appeals may appeal the decision to the Circuit Court for the County in accordance with the Maryland Rules as set forth in Title 7, Chapter 200.

Section R114.1 of the IRC is amended to read as follows:

R114.1 Notice to owner. Upon notice from the building official that work on any building, structure, electrical, gas, mechanical or plumbing system is being done contrary to the provisions of this code or in an unsafe and dangerous manner, such work shall be immediately stopped. The stop work order shall be verbal or in writing and shall be given to the owner of the property, or to his agent, or to the person doing the work, and shall state the specific violations and the conditions under which work will be permitted to resume.

Section R202 Definitions of the IRC is hereby amended by adding and amending definitions as follows:

ACCESSORY BUILDING. A building subordinate to, and located on the same lot with a main building, the use of which is clearly incidental to that of the main building or to the use of the land, and which is not attached by any part of a common wall or common roof to the main building.

ACCESSORY STRUCTURE. A structure, the use of which is customarily accessory to and incidental to that of the dwelling(s) and which is located on the same lot. Coated fabric type materials, woven or non-woven cloth, or fabric/ textile materials cannot be used in the construction, installation and/or assembly of any permanent accessory structure for which a permit is required. This includes but is not limited in scope to the following materials: Polyvinyl (PVC) coated, polyester coated, rubber or neoprene coated, nylon coated, polyurethane coated, vinyl coated/laminated material.

ADDITION. A modification to an existing building which increases the gross floor area by not more than 2,000 gross square feet. Any increase in building height or lot coverage is subject to current zoning standards.

ALTERATION. Any construction or renovation to an existing structure other than repair or addition that requires a permit. Also, a change in a mechanical system that involves an extension, addition or change to the arrangement, type or purpose of the original installation that requires a permit. Properties in Historic District Zones require "Certificates of Approval" from the Historic District Commission for all exterior alterations.

COOL ROOF RATING COUNCIL. The independent, non-profit organization that maintains a third-party rating system for radiative properties of roof surfacing materials.

ENERGY STAR. The joint program of the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy designed to identify and promote energy-efficient products and practices.

FAMILY. An individual, or two (2) or more persons all of whom are related to each other by blood, marriage, domestic partnership, adoption, guardianship or other duly authorized custodial relationship, and not more than two (2) other unrelated persons as long as all of the occupants are living together as a single housekeeping group in a dwelling unit, or a group of not more than five (5) persons ~~all of whom are not~~who are not collectively related to each other by blood, marriage, domestic partnership, adoption, guardianship or other duly authorized custodial relationship, and are living together as a single housekeeping group in a dwelling unit.

NEW CONSTRUCTION. New construction and any change to an existing building which exceeds the definition of an Alteration or Addition as defined herein. Construction meeting the definition of 'New Construction' will require a Single Family Dwelling (SFD) permit.

ONSITE RENEWABLE ENERGY SYSTEM. Includes, but is not limited to, photovoltaic panels, solar thermal collectors and wind systems located on or directly adjacent to the building site.

TOWNHOUSE LOFT. An additional story in one-family townhouses contained between the roof eaves and ridge, which may contain habitable rooms and does not exceed sixty percent(60%) of the floor area below.

VEGETATED ROOF. A layer of vegetation growing in a medium on top of a drainage layer and a synthetic, waterproof membrane on the roof of a structure.

Table R301.2 (1) of the IRC is amended to read as follows:

TABLE R301.2(1)

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

	WIND DESIGN			SUBJECT TO DAMAGE FROM							
GROUND SNOW LOAD	SPEED (mph)	TOPIGRAPHICAL EFFECTS	SEISMIC DESIGN CATEGORY	WEATHERING	FROST LINE DEPTH	TERMITE	WINTER DESIGN TEMP	ICE BARRIER UNDERLAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEANS ANNUAL TEMP
~~25~~30	90	NO	B	SEVERE	24”	MODERATE TO HEAVY	13º F	~~NO~~YES	YES	1,000	50º F

Table No. R301.5 of the IRC is amended by changing the minimum uniformly distributed live load for decks to 60 pounds per square foot.

Section R302.1 Exception 3 of the IRC is amended to read as follows:

3. Detached tool sheds and storage sheds, playhouses and similar structures ~~exempted from permits~~ are not required to provide wall protection based on location on the lot provided the floor area does not exceed 200 square feet. Projections beyond the exterior wall shall not extend over the lot line.

Section R302.5.1 of the IRC is amended to read as follows:

R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with either solid wood doors not less than 1-3/4 inches in thickness, twenty-minute fire-rated doors, or equivalent. All doors between the garage and dwelling unit shall be self-closing and self-latching.

Section R302.6.1 of the IRC is added to read as follows:

R302.6.1 Separation required in townhouses with loft. The garage in a townhouse with loft totaling four floors, must be separated from the rest of the dwelling by one hour fire resistance rated assemblies supported by at least one-hour fire protected construction.

Section R303.3 of the IRC is amended to read as follows:

R303.3 Bathrooms. Bathroom, water closet compartments and other similar rooms shall be provided with a mechanical ventilation system, designed in accordance with the Mechanical Code. Ventilation air from the space shall be exhausted directly to the outside.

Section R305.1 of the IRC is amended to read as follows:

R305.1 Minimum height. Habitable space, hallways, corridors, bathrooms, toilet rooms, laundry rooms and basements containing these spaces shall have a ceiling height of not less than 7 feet (2134 mm). The required height shall be measured from the finished floor to the lowest projection from the ceiling.

Exceptions:

1. For rooms with sloped ceilings, at least 50 percent of the required floor area of the room must have a ceiling height of at least 7 feet (2134 mm) and no portion of the required floor area may have a ceiling height of less than 5 feet (1524 mm).
2. Bathrooms shall have a minimum ceiling height of 6 feet 8 inches (2032 mm) at the center of the front clearance area for fixtures as shown in Figure R307.1. The ceiling height above fixtures shall be such that the fixture is capable of being used for its intended purpose. A shower or tub equipped with a showerhead shall have a minimum ceiling height of 6 feet 8 inches (2032mm) above a minimum area 30 inches (762 mm) by 30 inches (762 mm) at the showerhead.

Section R306.3 of the IRC is amended to read as follows:

R306.3 Sewage disposal. All plumbing fixtures shall be connected to a sanitary sewer.

Exception: Bathtubs, showers, lavatories, clothes washers and laundry trays are not required to discharge to the sanitary drainage system where those fixtures discharge to an approved gray water recycling system as per ~~Appendix O~~Section P3009.

*Section~~s~~ R309.1 ~~and R309.2~~*of the IRC ~~are~~ is amended to read as follows:

R309.1 Floor surface. Garage floor surfaces shall be of approved noncombustible material. The garage floor must be at least four inches below combustible materials and adjacent dwelling floor. The floor must be sloped to facilitate the movement of liquids toward the main vehicle entry doorway.

~~**R309.2Carports.** Carports shall be open on at least two sides. Carport floor surfaces shall be of approved noncombustible material. Carports not open on at least two sides shall be considered a garage and shall comply with the provisions of this section for garages.~~

Section R309.2 of the IRC is amended by deleting the Exception.

~~*Section R311.2.1* of the~~is added to the IRC is amended to read as follows:

> ~~**R311.2.1 Exit door required.** Exit access from a townhouse loft to the exit door must not require vertical travel of more than two stories. Access to habitable levels not having an exit in accordance with this section shall be by a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.~~

Section~~s~~ R312.1.1.1 of the IRC is added to read as follows:

> **R312.1.1.1 Retaining wall guards.** Retaining walls with a difference in grade level on either side of the wall exceeding 4 feet and within 2 feet of a walk, path, parking lot or driveway on the high side shall have guards not less than thirty-six (36) inches in height.

Section R313 of the IRC is amended to read as follows:

SECTION R313

FIRE SUPPRESSION SYSTEMS

> **R313.1 Automatic Fire Suppression Systems Required**. Complete fire suppression systems shall be installed and maintained in full operating condition, in compliance with ~~the applicable~~ NFPA ~~Fire Code~~13D *Standard for the Installation of Sprinkler Systems in One and Two-FamilyDwelling and Manufacture Homes*, 2010 Edition in all attached or detached single family dwellings and townhouses for which building permit applications for new construction, as defined herein, have been submitted to the City of Rockville ~~after September 23, 2002~~.
>
> **R313.2 Insulation Value for Sprinkler Piping Protection.** Insulation installed on sprinkler piping, for the protection of freezing, shall have a minimum R-value of 30. Insulation shall not be blown-in or loose fill and shall be installed to prevent the compaction of the insulation.

Section R314.3 of the IRC is amended to read as follows:

> **R314.3 Location.** Smoke alarms shall be installed in the following locations:
>
> 1. In each sleeping room.
> 2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
> 3. On each additional story of the dwelling, including basements but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split-levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

4. In each townhouse loft.

~~When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.~~

~~*Sections R315* of the IRC is amended to read as follows:~~

~~**R315.1 Carbon monoxide detection and notification.** All carbon monoxide (CO) detectors shall be listed in accordance with UL 2034 and installed in accordance with the provisions of this code and provisions of NFPA 72. Carbon monoxide detectors will only be required when a new Single Family home, Hotel/Motel, Multi-Family Dwelling (Apartment/Condos) or Board and Care Facility, built after January 1, 2008, which relies on combustion of fossil fuel for heat, ventilation, water heaters, or clothes drying operation. Carbon monoxide detectors shall be hard wired (120 voltage) and contain a secondary battery back up.~~

~~**Exceptions:** CO detectors would not be required when only a gas cook top or decorative gas appliance is installed.~~

~~**R315.1.1 Location.** Carbon monoxide (CO) alarm shall be installed outside bedroom units. Where bedrooms are located on multiple floors the CO detectors shall be located in close proximity to the bedroom area on each floor level.~~

Section R319.1 of the IRC is amended to read as follows:

R319.1 ~~Premises identification~~Address numbers. Approved numbers not less than 5 inches in height and on a color contrasting background shall be provided for all buildings in such a position as to be plainly visible and legible from the street or road to which the property is addressed.

Section R401.4.1 of the IRC is deleted.

Section R403.1 of the IRC is amended to read as follows:

R403.1 General. All exterior walls, bearing walls, columns and piers shall be supported on ~~continuous~~ solid or fully grouted masonry or concrete footings, wood foundations, or other approved structural systems which shall be of sufficient design to support safely the loads imposed as determined from the character of the soil, and except when erected upon solid rock or otherwise protected from frost, shall extend below the frost line. Minimum concrete compressive strength shall be 2,000 psi. at 28 days. When existing carports and other unenclosed areas are enclosed with walls, ~~continuous~~ footings meeting the requirements of this section must be provided for all exposed slab sides. Accessory buildings over one hundred forty-four (144) square feet in area must be supported on ~~continuous~~ footings meeting the requirements of this section. Minimum sizes for concrete footings shall be as set forth in Table No. 403.1 and Figure 403.1(1). Footings for wood

foundations shall be in accordance with the details set forth in Figure Nos. 403.1(2) and 403.1(3). Concrete footings shall be designed and constructed in accordance with the provision of Section R403 or in accordance with ACI 332.

Section R403.1.8 of the IRC is amended by deleting the Exceptions.

Section R404.1.6 of the IRC is amended to read as follows:

R404.1.6 Height above finished grade. Concrete and masonry foundation walls shall extend above the finished grade adjacent to the foundation at all points a minimum of 4 inches (102 mm) where masonry veneer is used and a minimum of 8 inches elsewhere.

Section R406.2 of the IRC is amended to read as follows:

R406.2 Concrete and masonry foundation waterproofing. Exterior foundation walls enclosing habitable, usable, or storage space shall be waterproofed with a membrane extending from the top of the footing to the finished grade. The membrane shall consist of 2-ply hot mopped felts, 55-lb roll roofing, 6-mil polyvinyl chloride, 6-mil polyethylene or 40-mil polymer-modified asphalt. The joints in the membrane shall be lapped and sealed with an adhesive compatible with the waterproofing membrane. An engineered waterproofing design may be required by the building official in areas where soil reports would warrant such design.

Section R406.2.1 is added to the IRC to read as follows:

R406.2.1. Crawlspace damp proofing. Exterior foundation walls of concrete construction enclosing crawlspaces without finished floors shall be damp proofed by applying a coat of approved bituminous material to the wall from the footing to the finished grade at the recommended rate. Exterior foundation walls of masonry construction enclosing crawlspaces with finished floors must be made waterproof with membranes extending from the edge of the footing to the finished grade line. The membrane shall consist of either 2-ply hot-mopped felts, 6-mil polyvinyl chloride, 55-pound roll roofing or equivalent material. The laps in the waterproofing membrane shall be sealed and firmly affixed to the wall.

Section R506.2.3 of the IRC is amended to read as follows:

R506.2.3 Vapor retarder. A 6 mil (0.006 inch; 152 μm) polyethylene or approved vapor retarder with joints lapped not less than 12 inches (304 mm) shall be placed between the concrete floor slab and the base course or the prepared subgrade where no base course exists.

Exception: The vapor retarder may be omitted:

1. From garages, utility buildings and other unheated accessory structures.

2. From driveways, walks, patios and other flatwork not likely to be enclosed and heated at a later date.

Section R507.1. of ~~is added to~~ the IRC is amended to read as follows:

~~**SECTION R507**~~

~~**WOOD DECKS**~~

R507.1 ~~General~~Decks. ~~Construction of wood decks shall conform to the following requirements, in addition to other applicable requirements of this Chapter~~Where supported by attachment to an exterior wall, decks shall be positively anchored to the primary structure and designed for both vertical and lateral loads. Such attachment shall not be accomplished by the use of toenails or nails subject to withdrawl. Where positive connection to the primary building structure cannot be verified during inspection, decks shall be self-supporting. For decks with cantilevered framing members, connections to exterior walls or other framing members, shall be designed and constructed to resist uplift resulting from the full live load specified in Table R301.5 acting on the cantilevered portion of the deck. In the case of unusual or complex design, the stamp of a Maryland registered architect or engineer may be required.

Exception: Patio/decks that are not greater than 4" in height above ground level, height is measured from top of patio/decking to ground at lowest point.

~~**R507.2 Live Load.** The minimum uniformly distributed live load for wood frame decks shall be sixty (60) psf.~~

~~**R507.3 Footings.** The minimum footing size shall be sixteen (16) inches, by eight (8) inches in depth, with the bottom of the footing a minimum of twenty-four (24) inches below grade. Increased size or load factors may require a larger footing as determined by the code official.~~

~~**R507.4 Posts.** Four (4) x four (4) posts may be used for decks under ten (10) feet above grade. A minimum post size of six (6) x six (6) must be used for decks ten (10) feet or more above grade.~~

~~**R507.5 Attachment.** Decks may be attached to structures by the use of ledger boards bolted to solid dimension lumber, using one-half-inch diameter bolts at not more than sixteen (16) inch intervals. Ledger boards may not be attached directly to plywood, non-dimensional bands, or truss joists. Deck structures may not be attached to building cantilevers or to chimneys.~~

~~**R507.6 Joist Hangers.** Joist hangers shall be secured in accordance with the manufacturer's recommendations, including use of special nail type. Manufacturer's recommendations must be on the job site for review by the inspector.~~

~~**R507.7 Cantilevers.** Cantilevers shall be limited to a maximum of one-third (1/3) of the adjacent clear span, designed in accordance with standard engineering practices.~~

~~**R507.8 Flooring.** 5/4 decking shall be limited to a maximum joist spacing of sixteen (16) inches. Two (2) x four (4) and larger decking shall be limited to a joist spacing of not more than twenty-four (24) inches. Composite and vinyl decking must be installed as per the manufacture installation instructions for attachment and joist spacing.~~

~~**R507.9 Stairs.** Stairs shall be constructed using stringers every eighteen (18) inches. The maximum riser height shall be 7 3/4 inches (196mm), and minimum tread depth shall be 10 inches (254mm). The greatest riser height within any flight of stairs shall not exceed the smallest by more than three-eighths (3/8) inch. The greatest tread run within any flight of stairs shall not exceed the smallest by more than three-eighths (3/8) inch. When risers are closed, all treads may have a uniform projection not to exceed one and one-half (1 1/2) inches.~~

~~**R507.10 Handrails.** Handrails meeting the requirements of R311.7.7 shall be installed for all stairs with four (4) or more risers. Handrail posts shall be attached using a minimum of two (2) one-half (1/2") inch diameter bolts per post.~~

~~**R507.11 Guardrails.** Deck floor surfaces located more than thirty (30) inches above the floor or grade below shall have guardrails meeting the requirements of Section R312. Composite and vinyl railings shall be installed as per the manufacture installation instruction. Manufacturer information shall be provided on-site for the inspector.~~

~~**R507.12 Materials.** All fasteners, hangers, post chairs and other hardware shall be of the type recommended for the preservative wood used. Manufacturer information shall be provided on-site for the inspector.~~

~~*Sections R905.1.1* and *R905.1.2* are added to the IRC to read as follows:~~

~~**R905.1.1 Cool roof requirement.** Roof coverings for roof slopes less than two units vertical in 12 units horizontal (less than 17-percent slope) for buildings and covered parking shall conform to this section. Replacement, including any change to design or materials, of the roof of a building or structure in a Historic District Zone must be approved by the Historic District Commission. A minimum of 75% of the entire roof surface not used for roof penetrations, onsite renewable energy systems, or vegetated roofing systems shall be covered with products that comply with the following:~~

1. ~~Have a minimum initial solar reflective index (SRI) of 78, as described in Section R905.1.2; or~~
2. ~~Comply with the criteria for the U.S. EPA's Energy Star Program Requirements for Roof Products – Eligibility Criteria.~~

~~**Exception:**~~

1. ~~Roofs used to shade or cover parking and roofs over semi-heated spaces or used as outdoor recreation space by the occupants of the building shall be permitted to be either landscaped or have a minimum initial *SRI* of 29. A default *SRI* value of 35 for new concrete without added color pigment is allowed to be used in lieu of measurements.~~
2. ~~Terraces on setbacks comprising less than 25% of the area of the largest floor plate in the building.~~
3. ~~Roofs ballasted at a minimum weight of 17 pounds per square foot with limestone or ballast with a solar reflectance of at least 30% shall be permitted to comprise part or all of the 75% required area coverage.~~
4. ~~Vegetated roofs and onsite renewable energy systems shall be permitted to comprise part or all of the 75% required area coverage.~~

Section R507.2 of the IRC is amended to read as follows:

R507.2 Deck ledger connection to band joist. Decks may be attached to structures by the use of ledger boards bolted to solid dimension lumber, using one-half-inch diameter bolts at not more than sixteen (16) inch intervals. Ledger boards may not be attached directly to plywood, non-dimensional bands, or truss joists. Deck structures may not be attached to building cantilevers or to chimneys.

Sections R507.4 through R507.12 are added to the IRC to read as follows:

R507.4 Footings. The minimum footing size shall be sixteen (16) inches, by eight (8) inches in depth, with the bottom of the footing a minimum of twenty-four (24) inches below grade. Increased size or load factors may require a larger footing as determined by the code official.

R507.5 Support posts. Four (4) x four (4) posts may be used for decks under ten (10) feet above grade. A minimum post size of six (6) x six (6) must be used for decks ten (10) feet or more above grade.

R507.6 Joist Hangers. Joist hangers shall be secured in accordance with the manufacturer's recommendations, including use of special nail type. Manufacturer's recommendations must be on the job site for review by the inspector.

R507.7 Cantilevers. Cantilevers shall be limited to a maximum of one-third (1/3) of the adjacent clear span, designed in accordance with standard engineering practices.

R507.8 Flooring. 5/4 wood decking shall be limited to a maximum joist spacing of sixteen (16) inches. Two (2) x four (4) and larger wood decking shall be limited to a joist spacing of not more than twenty-four (24) inches.

R507.9 Stairs. Stairs shall be constructed using stringers spaced every eighteen (18) inches maximum or as required by the decking manufacture. The maximum riser height shall be $7^3/_4$ inches (196mm), and minimum tread depth shall be 10 inches (254mm). The greatest riser height within any flight of stairs shall not exceed the smallest by more than three-eighths (3/8) inch. The greatest tread run within any flight of stairs shall not exceed the smallest by more than three-eighths (3/8) inch. Open risers are permitted provided that the opening between treads does not permit the passage of a 4 inch- diameter (102mm) sphere.

> **Exception:** The opening between adjacent treads is not limited on stairs with a total rise of 30 inches (762mm) or less.

R507.10 Handrails. Handrails meeting the requirements of R311.7.8 shall be installed for all stairs with four (4) or more risers. Handrail posts shall be attached using a minimum of two (2) one-half (1/2") inch diameter bolts per post.

R507.11 Guardrails. Deck floor surfaces located more than thirty (30) inches above the floor or grade below shall have guardrails meeting the requirements of Section R312.1 Composite and vinyl railings shall be installed as per the manufacture installation instruction. Manufacturer information shall be provided on-site for the inspector.

R507.12 Materials. All fasteners, hangers, post chairs and other hardware shall be of the type recommended for the preservative wood used. Manufacturer information shall be provided on-site for the inspector.

Sections R905.1.1 and *R905.1.2* are added to the IRC to read as follows:

R905.1.1 Cool roof requirement. Roof coverings for roof slopes less than two units vertical in 12 units horizontal (less than 17-percent slope) for buildings and covered parking shall conform to this section. Replacement, including any change to design or materials, of the roof of a building or structure in a Historic District Zone must be approved by the Historic District Commission. A minimum of 75% of the entire roof surface not used for roof penetrations, onsite renewable energy systems, or vegetated roofing systems shall be covered with products that comply with the following:

~~3.~~1. Have a minimum initial solar reflective index (SRI) of 78, as described in Section R905.1.2; or

~~4.~~2. Comply with the criteria for the U.S. EPA's Energy Star Program Requirements for Roof Products – Eligibility Criteria.

Exception:

1. Roofs used to shade or cover parking and roofs over semi-heated spaces or used as outdoor recreation space by the occupants of the building shall be permitted to be either landscaped or have a minimum initial *SRI* of 29. A default *SRI* value of 35 for new concrete without added color pigment is allowed to be used in lieu of measurements.

2. Terraces on setbacks comprising less than 25% of the area of the largest floor plate in the building.
3. Roofs ballasted at a minimum weight of 17 pounds per square foot with limestone or ballast with a solar reflectance of at least 30% shall be permitted to comprise part or all of the 75% required area coverage.
4. Vegetated roofs and onsite renewable energy systems shall be permitted to comprise part or all of the 75% required area coverage.

R905.1.2 Solar Reflective Index. The solar reflective index (SRI) shall be calculated in accordance with ASTM E1980 for medium-speed wind conditions. The SRI shall be based upon solar reflectance as measured in accordance with ASTM E1918 or ASTM C1549, and the thermal emittance as measured in accordance with ASTM E408 or ASTM C1371. For roofing products, the values for solar reflectance and thermal emittance shall be determined by a laboratory accredited by a nationally recognized accreditation organization, such as the Cool Roof Rating Council CRRC-1 Product Rating Program, and shall be labeled and certified by the manufacturer.

Section R1001.~~5.2~~13 is added to the IRC to read as follows:

R1001.~~5.2~~13 Fireplaces. New wood-burning fireplaces shall have gasketed doors and outdoor combustion air.

Chapter 11 of the IRC is amended in its entirety to read as follows:

CHAPTER 11

ENERGY EFFICIENCY

Section N1101

General

N1101.1 Scope. This chapter governs the design and construction of residential buildings for energy efficiency. Residential buildings shall be designed and constructed in accordance with Chapters 1[RE], 2[RE], 3[RE] and 4[RE] of the International Energy Conservation Code, ~~2009~~ 2012 Edition as amended per Article VIII of this Chapter of the Rockville City Code.

Section M1401.1.1 is added to the IRC to read as follows:

M1401.1.1 Energy Star equipment. Installed appliances and heating and cooling equipment shall ~~be~~ meet or exceed U.S. EPA Energy Star ~~certified~~requirements.

Section M1502.4.2 of the IRC is amended to read as follows:

M1502.4.2 Duct installation. Exhaust ducts shall be supported at intervals not to exceed 12 feet (3658 mm) and shall be secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Exhaust duct joints shall be sealed in accordance with Section M1601.4.1 and shall be mechanically fastened. Ducts shall not be joined with screws or similar fasteners that protrude into the inside of the duct.

Sections P2601.1 and *P2601.2* of the IRC are amended to read as follows:

P2601.1 Scope. Plumbing materials and installation shall conform to the requirements of Chapters 25 through 32 of this Code, and to the requirements of Chapter 5, Article XI, Plumbing Code, of the Rockville City Code. Where there are conflicts between the two codes, the requirements of the Rockville City Code shall prevail.

P2601.2 Connections. Plumbing fixtures, drains and appliances used to receive or discharge liquid wastes or sewage shall be directly connected to the sanitary drainage system of the building or premises, in accordance with the requirements of this code. This section shall not be construed to prevent indirect waste systems.

Exception: Bathtubs, showers, lavatories, clothes washers and laundry trays are not required to discharge to the sanitary drainage system where those fixtures discharge to an approved gray water recycling system as per ~~Appendix O~~Section P3009.

Section P2601.3 of the IRC is deleted

Section P2602 of the IRC is deleted in its entirety.

Section P2705.1 of the IRC is amended to read as follows:

P2705.1 General. The installation of fixtures shall conform to the following:

1. Floor-outlet or floor-mounted fixtures shall be secured to the drainage connection and to the floor, where so designed, by screws, bolts, washers, nuts and similar fasteners of copper, brass or other corrosion-resistant material.
2. Wall-hung fixtures shall be rigidly supported so that strain is not transmitted to the plumbing system.
3. Where fixtures come in contact with walls and floors, the contact area shall be water tight.
4. Plumbing fixtures shall be usable and accessible.
5. The centerline of water closets, lavatories, and ~~or~~ bidets shall not be less than 15 inches (381 mm) from adjacent walls or partitions or not less than 30 inches (762 mm) center to center from an adjacent water closet or bidet. There shall be at least 21 inches (533 mm) clearance in front of the water closet, bidet or lavatory to any wall, fixture or door.

6. The location of piping, fixtures or equipment shall not interfere with the operation of windows or doors.
7. Integral fixture-fitting mounting surfaces on manufactured plumbing fixtures or plumbing fixtures constructed on site, shall meet the design requirements of ASME A112.19.2 or ASME A112.19.3.
8. Valves or stops shall be installed in an accessible location for each plumbing fixture to interrupt water supply to the fixture.

~~*Section P2903.1* of the IRC is amended to read as follows:~~

~~**P2903.1 Water supply system design criteria.** The water service and water distribution systems shall be designed and pipe sizes shall be selected such that under conditions of peak demand, the capacities at the point of outlet discharge shall not be less than shown in Table P2903.1. Minimum flow rate required by Table P-2903.1 will be confirmed with fixture faucet/fitting in full open position, at time of final inspection.~~

Table P2903.2 of the IRC is amended to read as follows:

TABLE P2903.2
MAXIMUM FLOW RATES AND CONSUMPTION FOR PLUMBING FIXTURES AND FIXURE FITTINGS[b]

PLUMBING FIXTURE OR FIXTURE FITTING	PLUMBING FIXTURE OR FIXTURE FITTING CONSUMPTION
Lavatory faucet	1.5 gpm at 60 psi
Shower head[a]	2.0 gpm at 80 psi
Sink faucet	1.5 gpm at 60 psi
Water closet[c]	1.28 gallons per flushing cycle

For SI: 1 gallon per minute = 3.785 L/m,
1 pound per square inch = 6.895 kPa

a. A handheld shower spray is also a shower head.

b. Consumption tolerances shall be determined from references standards.

c. Dual Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. Flush volumes will be tested in accordance with ASME A112.19.2 and ASME A112.19.14.

~~*Section P2903.3* of the IRC is amended to read as follows:~~

~~**P2903.3 Minimum pressure.** Minimum static pressure (as determined by the local water authority) at the building entrance for either public or private water service shall be 40 psi (276 kPa). Certification of pressure is required for new construction.~~

Section P2903.7 of the IRC is amended to read as follows:

P2903.7 Size of water-service mains, branch mains and risers. The minimum size water service pipe shall be 1 inch. The size of water service mains, branch mains and risers shall be determined according to water supply demand {gpm (L/m)}, available water pressure {psi (kPa)} and friction loss caused by the water meter and developed length of pipe {feet (m)}, including equivalent length of fittings. The size of each water distribution system shall be determined according to the procedure outlined in this section or by other design methods conforming to acceptable engineering practice and approved by the administrative authority:

1. Obtain the minimum daily static service pressure {psi (kPa)} available (as determined by the local water authority) at the water meter or other source of supply at the installation location. Adjust this minimum daily static pressure {psi (kPa)} for the following conditions:

    1.1 Determine the difference in elevation between the source of supply and the highest water supply outlet. Where the highest water supply outlet is located above the source of supply, deduct 0.5 psi (3.4 kPa) for each foot (305 mm) of difference in elevation. Where the highest water supply outlet is located below the source of supply, add 0.5 psi (3.4 kPa) for each foot (305 mm) of difference in elevation.

    1.2 Where a water pressure reducing valve is installed in the water distribution system, the minimum daily static water pressure available is 80 percent of the minimum daily static water pressure at the source of supply or the set pressure downstream of the pressure reducing valve, whichever is smaller.

    1.3 Deduct all pressure losses caused by special equipment such as a backflow preventer, water filter or water softener. Pressure loss data for each piece of equipment shall be obtained from the manufacturer of such devices.

    1.4 Deduct the pressure in excess of 8 psi (55 kPa) caused by installation of special plumbing fixtures, such as temperature controlled showers and flush-o-meter tank water closets. Using the resulting minimum available pressure, find the corresponding pressure range in Table P2903.7.

2. The maximum developed length for water piping is the actual length of pipe between the source of supply and the most remote fixture, including either hot (through the water heater) or cold water branches multiplied by a factor of 1.2 to compensate for pressure loss through fittings. Select the appropriate column in Table P2903.7 equal to or greater than the calculated maximum developed length.

3. To determine the size of water service pipe, meter and main distribution pipe to the building using the appropriate table, follow down the selected “maximum developed length” column to a fixture unit equal to, or greater than the total installation demand calculated by using the “combined” water supply fixture unit column of Table P2903.6. Read the water service pipe and meter sizes in the first left-hand column and the main distribution pipe to the building in the second left-hand column on the same row.

4. To determine the size of each water distribution pipe, start at the most remote outlet on each branch (either hot or cold branch) and, working back toward the main distribution pipe to the building, add up the water supply fixture unit demand passing through each segment of the distribution system using the related hot or cold column of Table P2903.6. Knowing demand, the size of each segment shall be read from the second left-hand column of the same table and a maximum developed length column selected in Steps 1 and 2, under the same or next smaller size meter row. In no case does the size of any branch or main need to be larger than the size of the main distribution pipe to the building established in Step 3.

Installation of additional fixtures at an existing building will require evaluation of the size of the water distribution system, as outlined in this section, and an increase in line and meter size if required by the additional fixture demand.

Section P2904 of the IRC is deleted in its entirety.

Section P2905.3 of the IRC is deleted in its entirety.

Section P2905.4 of the IRC is amended to read as follows:

P2905.4 Water service pipe. Water service pipe installed underground between the main and the property line and from the property line to the structure to be supplied shall be type "K" copper tubing with sillflox/brazed joints only for sizes up to and including two (2) inches. In case type "K" copper tubing is unavailable, type "L" copper tubing may be used in an emergency when authorized by the City. Water service pipe installed underground and outside of the structure, shall have a minimum working pressure rating of 160 psi at 73° F (1100 kPa at 23° C).

Table P2905.4 of the IRC is deleted.

Section P2905.4.2 of the IRC is amended to read as follows:

P2905.4.2 Water service installation. Trenching, pipe installation and backfilling shall be in accordance with Section P2604. Sewers and water servicing pipe shall be installed below the recorded frost penetration, but in no case less than two (2) feet two (2) inches for sewer and two (2) feet six (6) inches for water. Water-service pipe is permitted to be located in the same trench with a building sewer provided such sewer is constructed of materials listed for underground use within a building in Section P3002.1. When water-service pipes are laid in the same trench with a building sewer, the water-service pipe is placed on a solid ledge at least twelve (12) inches above and twelve (12) inches to one (1) side of the highest point in the sewer line. In no case shall the water-service pipe be less than two (2) feet six (6) inches below grade. If the building sewer is not constructed of materials listed in Section P3002.1, the water-service pipe shall be separated from the building sewer by a minimum of 5 feet (1524 mm), measured horizontally, of

undisturbed or compacted earth or placed on a solid ledge at least 12 inches (305 mm) above and to one side of the highest point in the sewer line.

Exception: The required separation distance shall not apply where a water service pipe crosses a sewer pipe, provided that the water service pipe is sleeved to at least 5 feet (1524 mm), horizontally from the sewer pipe centerline, on both sides of the crossing with pipe materials listed in Tables P3002.1(1), P3002.1(2) or P3002.2.

Section P2905.5.1 is added to the IRC to read as follows:

P2905.5.1 Under concrete slabs. Inaccessible water distribution piping under slabs shall be copper water tube Type M, brass, or cast-iron pressure pipe, all installed with approved fittings or bends. Any material subject to corrosion shall be protected when used in corrosive soils. Joints in copper pipe or tube installed in a concrete floor slab or under a concrete floor slab on grade shall be installed using wrought-copper fittings and brazed joints.

~~*Section P2905.15* of the IRC is deleted~~

Section P3001.1 of the IRC is amended to read as follows:

P3001.1 Scope. The provisions of this chapter shall govern the materials, design, construction and installation of sanitary drainage systems. Plumbing materials shall conform to the requirements of this chapter. The drainage, waste and vent (DWV) system shall consist of all piping for conveying wastes from plumbing fixtures, appliances and appurtenances, including fixture traps; above-grade drainage piping; below-grade drains within the building (building drain); below- and above-grade venting systems; and piping to the public sewer.

Chapter 34 and Section E3401.1 of the IRC is amended to read as follows:

E3401.1 Applicability. The electrical requirements shall conform to the most recently adopted edition of the NFPA National Electrical Code as provided for in Chapter 5, Article VII of the Rockville City Code.

Chapters 35 through *43* of the IRC are deleted in their entirety.

Appendix F Radon Control Methods of the IRC is adopted in its entirety.

Appendix G Swimming Pools, Spas and Hot Tubs of the IRC is adopted in its entirety.

Section AG105.2 of *Appendix G* of the IRC is amended to read as follows:

AG105.2 Outdoor swimming pool. An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa shall be surrounded by a barrier, which shall comply with the following:

1. The top of the barrier shall be at least 60 inches above grade measured on the side of the barrier, which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier, which faces away from the swimming pool. An above-ground pool structure may not serve as the required barrier, nor may the barrier be mounted on top of an above-ground pool structure.
2. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.
3. Solid barriers, which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.
4. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1-3/4 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1-3/4 inches (44 mm) in width.
5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1-3/4 inches (44 mm) in width.
6. Maximum mesh size for chain link fences shall be a 1-1/4-inch square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 1-3/4 inches (44 mm).
7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 13/4 inches (44 mm).
8. Access gates shall comply with the requirements of Section AG105.2, Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the gate, the release mechanism and openings shall comply with the following:

    8.1. The release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate; and 8.2. The gate and barrier shall have no opening larger than 1/2 inch (13 mm) within 18 inches (457 mm) of the release mechanism.

9. Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met:

    9.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346; or

    9.2. All doors with direct access to the pool through that wall must be equipped with an alarm that produces an audible warning when the door and its screen are opened. The alarm must be audible throughout the house during normal household activities. The alarm system may be equipped with a manual means to temporarily deactivate the system for a single opening. The deactivation switch(es) must be located at least 54 inches above the threshold of the door.

Appendix H Patio Covers of the IRC is adopted and amended to read as follows:

APPENDIX H

Patio Covers

Section AH101

General

AH101.1 Scope. Patio covers shall conform to the requirements of this appendix chapter.

Section AH102

Definitions

Patio covers. Permanent one-story structures not exceeding 13 feet (3657 mm) in height. Enclosure walls shall be permitted to be of any configuration, provided the open or glazed area of the longer wall and one additional wall is equal to at least 65 percent of the area below a minimum of 6 feet 8 inches (2032 mm) of each wall, measured from the floor. Openings shall be permitted to be enclosed with (1) insect screening, (2) glass conforming to the provisions of Section R308, or (3) any combination of the foregoing. Plastics (with the exception of multi-wall polycarbonate sheet products used as roofing), canvas, tarpaulin, and other type of fabric or pliable material may not be used in the construction of patio covers. Patio covers must meet the size and location requirements of Chapter 25 of the Rockville City Code.

Patio structure. A structure not greater than 3,000 square feet in floor area, and not over fifteen feet (15’) in height, the use of which is customarily accessory to and incidental to that of the dwelling(s) and which is located on the same lot. Coated fabric type materials,

woven or non-woven cloth, or fabric/ textile materials cannot be used in the construction, installation and/or assembly of any permanent accessory structure for which a permit is required. This includes but is not limited in scope to the following materials: Polyvinyl (PVC) coated, polyester coated, rubber or neoprene coated, nylon coated, polyurethane coated, vinyl coated/laminated material. Patio structures must meet the size and location requirements of Chapter 25 of the Rockville City Code.

Section AH103

Permitted Uses

AH103.1 General. Patio covers shall be permitted to be detached from or attached to dwelling units. Patio covers shall be used only for recreational, outdoor living purposes and not as carports, garages, storage rooms or habitable rooms.

Section AH104

Design Loads

AH104.1 General. Patio covers shall be designed and constructed to sustain, within the stress limits of this code, all dead loads plus a minimum vertical live load of 10 pounds per square foot (0.48 kN/m2) except that snow loads shall be used where such snow loads exceed this minimum. Such covers shall be designed to resist the minimum wind loads set forth in Table R301.2(1).

Appendix K Sound Transmission of the IRC is adopted in its entirety.

~~*Appendix O Gray Water Recycling Systems* of the IRC is adopted in its entirety.~~

Secs. 5-103 – 5-110. Reserved.

SECTION 7. That Article VII, “Electrical Code”, is hereby repealed and re-enacted with amendments as follows:

ARTICLE VII. ELECTRICAL CODE

DIVISION 1. GENERALLY

Sec. 5-111. Definitions.

Except as specifically set forth in this article or any document referred to in this article, terms as used shall have the same definitions as the NFPA 70, National Electrical Code, ~~2008~~ 2011 Edition.

Approved means accepted or acceptable under the applicable specification stated or cited in this article and/or the NFPA 70, National Electrical Code- ~~2008~~ 2011 Edition, or as accepted as suitable for the proposed use under procedures and powers of the administrative authority. Upon written request a certificate of approval may be issued indicating satisfactory completion of the electrical work.

Existing work means any electrical system or any part thereof, which has been lawfully installed prior to adoption of this ordinance.

Sec. 5-112. Purpose.

The purpose of this article is the practical safeguarding of persons and of buildings and their contents from electrical hazards arising from the use of electricity for light, heat, power, radio, signaling, and for other purposes.

Sec. 5-113. Scope.

(a) This article applies to:

(1) The electrical conductors and equipment installed within or on public and private buildings or other structures, and other premises such as yards, carnivals, parking and other lots, and industrial substations;

(2) The conductors that connect the installations to the supply of electricity; and

(3) Other outside conductors on the premises.

(b) This article does not apply to installations in cars, automotive equipment, or the installation of equipment employed by a railway, electrical or communication utility in the exercise of its function as a utility, and located outdoors or in buildings used exclusively for that purpose.

(c) All electrical work must also comply with relevant provisions of Article VIII, the Energy Conservation Code.

Secs. 5-114 – 5-120. Reserved.

DIVISION 2. ADMINISTRATION AND ENFORCEMENT

Sec. 5-121. Electrical permit.

(a) No electrical work shall be undertaken prior to the issuance of an electrical permit therefore by the administrative authority. Such permit shall be issued to a licensed master electrician or licensed master electrician (limited), except as otherwise provided. No permit shall

be required to repair portable electrical equipment or lighting fixtures, or to repair or replace sockets, or to repair motors, or to replace motors with motors of the same horsepower rating.

(b) Any permit required may be issued to any person to do electrical work in a single-family dwelling used exclusively for living purposes, including the usual accessory buildings and quarters in connection with such building, provided the person is the bona fide owner of such dwelling and that the same will be occupied by the owner and that the owner shall personally purchase all material and perform all labor in connection therewith; however, the administrative authority may require the homeowner to show that he is qualified to perform such work in a capable manner so as not to endanger the life and property of himself, persons in the neighborhood or property belonging to public utility suppliers. This subsection does not apply to work involving heavy-up or replacement of service equipment, or to any wiring associated with swimming pool installations.

(c) Applications for electrical permits shall be made on suitable forms provided by the administrative authority. The application shall be accompanied by the payment of a fee in accordance with the schedule of fees which has been established by resolution.

(d) No electrical permit shall be issued until plans and specifications showing the proposed work in necessary detail have been submitted to the administrative authority and it has been determined from examination of such plans and specifications that they give assurance that the work will conform to the provisions of this article. If a permit is denied, the applicant may submit revised plans and specifications without payment of additional fee.

(e) If, in the course of the work, it is found necessary to make any change from the plans and specifications on which a permit has been issued, amended plans and specifications shall be submitted and a supplemental permit, subject to the same conditions applicable to the original application for permit, shall be issued to cover the change.

Sec. 5-122. Inspections.

(a) It shall be the duty of the administrative authority to make necessary inspections under this article. Upon completion of all electrical installations the person holding the permit therefor shall be required to notify the administrative authority and request inspection of such installation. However, if such installation, or any part of such installation, is to be hidden from view due to permanent placement of part of a building, the permit holder shall request that this segment of the work be inspected before it is covered over.

(b) The administrative authority shall have the authority to require the removal of any structure that prevents proper inspection of any electrical installation. All requests for electrical inspections shall be made twenty-four (24) hours in advance.

(c) If, when inspection is made, the inspector shall find the installation to be in violation, the permit holder shall be notified and given ten (10) days, or other time period as may be designated by the administrative authority, in which to correct such violation.

Sec. 5-123. Cut-in certificate.

(a) The electric power company shall not supply electricity or power to any electrical equipment, for the installation of which a permit is required by this article, and no person shall

connect any such electrical equipment to a supply of electricity or power except in accordance with a cut-in certificate issued by the administrative authority.

(b) Temporary cut-in certificates shall be issued for temporary installation for construction or temporary pending final and such certificates shall be cancelled by the administrative authority at any time if the installation is not maintained or completed as required by this article.

(c) If, after the inspection, the City's electrical inspector finds the installation to be in conformity with the provisions of this article, he shall issue a cut-in certificate therefor, authorizing the use of the installation and connection to the supply of electricity and power, and shall send such certificate to the electric power company. Such certificates may be issued for an entire installation or part thereof.

Secs. 5-124 – 5-130. Reserved.

DIVISION 3. TECHNICAL STANDARD

Sec. 5-131. National Electrical Code -- Adopted.

The National Fire Protection Association (NFPA) NFPA 70, National Electrical Code-~~2008~~ 2011 Edition as modified herein, is hereby adopted as the electrical code for the City. One (1) copy of such publication as adopted shall be maintained by the ~~City Clerk in the office of the Council~~Inspection Services Division and made available for inspection by the public during regular office hours. Any amendment or change in such publication promulgated by the National Fire Protection Association shall not become a part of this article until adopted by ordinance. References to other ordinances and codes of the City shall be interpreted and applied in accordance with the terms and effect of such ordinances and codes at the time of such application and interpretation.

Sec. 5-132. Same--Definition.

In section 90-4 of the NFPA 70, National Electrical Code ~~2008~~ 2011 Edition, the phrase "authority having jurisdiction" shall mean the Chief of Inspection Service Division.

Sec. 5-133. Same--Amendments.

The NFPA 70, National Electrical Code, ~~2008~~ 2011 Edition (NEC), is amended in the following respects:

Section 90.1 (E) is added to the NEC to read as follows:

> **(E) Relation with the Rockville City Code, Article VIII.** The requirements in this code address the fundamental principles of protection for safety. The energy conservation requirements are addressed in Article VIII and Article XIV of the Rockville City Code.

Section 90.2 of the NEC is amended by adding the following:

(D) Homeowners.

Homeowner must take and pass an exam administered by the Inspection Services Division prior to allowing a homeowner to obtain an electrical permit for doing electrical wiring at their primary residence. This exam will be valid for two (2) years allowing the homeowner to apply for additional permits in that time frame for their primary residence.

Homeowner obtained electrical permits will allow electrical wiring at their primary residence, with the exclusion of the following work:

- Swimming pools, saunas or hot tubs
- Service equipment installation such as heavy-ups, panel replacements, sub-panels
- Replacement of SEC cable.
- Overhead service mast replacements.

Section 90.10 is added to the NEC to read as follows:

90.10 Appeals.

90.10.1 Administrative Appeals. Any person aggrieved by and desirous of challenging a decision of the administrative authority in connection with the interpretation, application, or modification of any provision of this chapter relating to the manner of construction or materials used in connection with the erection, alteration, or repair of a building or structure or system installed therein, shall appeal such decision to a Board of Adjustments and Appeals. An appeal may be taken when it is claimed that:

(1) The true intent of the code or the rules legally adopted there under have been incorrectly interpreted; or

(2) The provisions of the code do not fully apply; or

(3) An equally good or better form of construction can be used.

90.10.2 Application for appeal. An appeal shall be filed with the City Clerk within seven (7) calendar days from the date of the administrative decision being appealed, and a copy thereof shall be submitted to the Chief of Inspection Services Division. The appeal shall be in writing and shall contain a detailed statement of the reasons in support of such appeal.

90.10.3 Membership.

90.10.3.1 Number. The Board of Adjustments and Appeals shall consist of three (3) persons:

a) A licensed professional engineer or architect chosen by the administrative authority;

b) A licensed professional engineer or architect chosen by the owner of the subject building or structure; and

c) A licensed professional engineer or architect to be jointly chosen by the other two (2) members.

90.10.3.2 Compensation. All fees charged by the licensed professional engineers or architects to serve on the Board shall be paid for by the person appealing the administrative decision.

90.10.4 Meetings and Hearings. The Board of Adjustments and Appeals shall conduct a hearing on the appeal, at which time the appellant, the appellant's representative, representatives of the City who have inspected the subject building or structure or applicable system installed therein, and any other person having knowledge of the matter or whose interests may be affected by the decision on the appeal shall be given an opportunity to be heard. The hearing shall be conducted informally, and the formal rules of evidence shall not apply. The Board may accept written testimony and shall give it such weight as it deserves.

90.10.4.1 Interpretation. Interpretation given provisions of the applicable ICC or NFPA Code by the International Code Council or National Fire Protection Association, shall be given great deference.

90.10.4.2 Actions. The Board may inspect the structure or building and conduct any other investigation or research necessary in order to render a decision.

90.10.5 Decision. The following process shall be followed:

(1) Within fifteen (15) working days of the hearing, the Board shall affirm, modify or reverse the decision of the administrative authority.

(2) The agreement of any two (2) members of the Board shall constitute the decision of the Board. Failure to obtain the agreement of any two (2) members of the Board shall constitute a denial of the appeal and an affirmation of the decision of the administrative authority. The Board's findings and decision shall be rendered in writing and copies thereof shall be provided to the appellant and any other party who has entered their appearance before the Board and requested a copy of the decision. The decision may contain recommendations for remedial steps to be taken to meet the intent of the applicable code.

90.10.6 Appeal. Any person aggrieved by a decision of the Board of Adjustments and Appeals may appeal the decision to the Circuit Court for the County in accordance with the Maryland Rules as set forth in Title 7, Chapter 200.

Section 110-14(a) of the NEC is amended by adding the following:

In all cases, copper-clad aluminum wire must be terminated by means of wire binding screws. The use of any type of "quick-wire" terminals where the possibility of nicking the surface of copper-clad aluminum wire does exist shall not be permitted.

Section 210-5 of the NEC is amended by rewriting subsection (c) to read as follows:

(C) Ungrounded conductor. Where installed in raceways, as open work, or as concealed knob-and-tube work, the ungrounded conductor shall be identified by any color other than as specified in (a) and (b) above. All ungrounded conductors of the same color shall be connected to the same ungrounded feeder conductor and the conductors for systems of different voltages shall be of different colors.

Exception: As permitted in section 200-7, it is required that all multicable conductors are to be color coded as follows:

For 120/208/240 Volts

2 conductors--1 white and 1 black;

3 conductors--1 white, 1 black and 1 red;

4 conductors--1 white, 1 black, 1 red, and 1 blue.

For 227/480 Volts; The colors gray, brown, orange, and yellow must be use in accordance with commonly accepted trade practices.

~~*Section 210-8(A)(6)* is added to the NEC to read as follows:~~

~~(6) Kitchens where the receptacles are installed to serve the countertop surfaces and within six (6) feet of a sink~~

Section 210.52(A) of the NEC is amended by adding the following:

(5) Dwelling units. General lighting branch circuits in dwelling occupancies served by a fifteen-ampere branch circuit shall not have more than twelve (12) power consuming outlets. A duplex receptacle is considered one (1) outlet.

A small appliance branch circuit in dwelling occupancies served by a twenty-ampere branch circuit shall have not more than eight (8) receptacle outlets.

~~*Section 220.18* of the NEC is amended to read as follows:~~

~~**220.18 Maximum Loads.** The total load shall not exceed the rating of the branch circuit, and it shall not exceed the maximum loads specified in 220.18(A) through (D) under the conditions specified therein.~~

~~**(A) Motor-Operated and Combination Loads.** Where a circuit supplies only motor-operated loads, Article 430 shall apply. Where a circuit supplies only air-conditioning equipment, refrigerating equipment, or both, Article 440 shall apply. For circuits supplying loads consisting of motor-operated utilization equipment that is fastened in place and has a motor larger than hp in combination with other loads, the total calculated load shall be based on 125 percent of the largest motor load plus the sum of the other loads.~~

~~**(B) Inductive Lighting Loads.** For circuits supplying lighting units that have ballasts, transformers, or autotransformers, the calculated load shall be based on the total ampere ratings of such units and not on the total watts of the lamps.~~

~~**(C) Range Loads.** It shall be permissible to apply demand factors for range loads in accordance with Table 220.55, including Note 4.~~

~~**(D) Dwelling units**. General lighting branch circuits in dwelling occupancies served by a fifteen-ampere branch circuit shall not have more than twelve (12) power consuming outlets. A duplex receptacle is considered one (1) outlet.~~

~~A small appliance branch circuit in dwelling occupancies served by a twenty-ampere branch circuit shall have not more than eight (8) receptacle outlets.~~

Section 230.2 of the NEC is amended by adding the following Exception:

Exception: Individual meters to measure electrical consumption shall be provided for each dwelling unit of a multi-family group when such dwelling units have separate heating and/or cooling systems whose primary energy source is electricity.

Section 230.70 of the NEC is amended to read as follows:

230.70 General. Means shall be provided to disconnect all conductors in a building or other structure from the service-entrance conductors.

(A) Location. The service disconnecting means shall be installed in accordance with 230.70(A)(1), (A)(2), and (A)(3).

(1) Readily Accessible Location. The service disconnecting means shall be installed at a readily accessible location either outside of a building or structure or inside not to exceed 5 feet from the point of entrance of the service conductors.

(2) Bathrooms. Service disconnecting means shall not be installed in bathrooms.

(3) Remote Control. Where a remote control device(s) is used to actuate the service disconnecting means, the service disconnecting means shall be located in accordance with 230.70(A)(1).

(B) Marking. Each service disconnect shall be permanently marked to identify it as a service disconnect.

(C) Suitable for Use. Each service disconnecting means shall be suitable for the prevailing conditions. Service equipment installed in hazardous (classified) locations shall comply with the requirements of Articles 500 through 517.

Section 230.79, subsection (c) of the NEC is amended by deleting the value of "one hundred (100) amperes" and substituting therefore the value of "one hundred fifty (150) amperes" as the minimum service disconnecting means rating for single-family dwellings.

~~*Section 310.5* of the NEC is amended to read as follows:~~

~~The minimum size of conductors shall be solid or stranded, which shall not be smaller than No. 14 copper, No. 12 copper clad, or No. 4 aluminum or aluminum alloy. Exceptions shall not be allowed for the use of aluminum or aluminum alloy conductors.~~

Section 410.36~~, subsection~~ (B) of the NEC is amended to read as follows:

(B) Suspended Ceilings. ~~Framing members of suspended ceiling systems used to support luminaires shall be securely fastened to each other and shall be securely attached to the building structure at appropriate intervals. Attachment to the building structure shall be a tie wire size No. 12 or larger steel from opposing corners of the fixture. Luminaries shall be securely fastened to the ceiling framing member by mechanical means such as bolts, screws, or rivets. Listed clips identified for use with the type of ceiling framing member(s) and luminaire(s) shall also be permitted.~~ All luminaries installed in suspended ceilings shall be supported directly from the building structure. A minimum of 2 wires of size No. 12 steel or larger shall be used. These wires must be tied to opposite corners of the luminaire and attached independently to the building structure.

Exception: Circular luminaries with a diameter 12 inches or less may be supported with one wire of No. 12 steel or larger.

Section 424.11 of the NEC is amended to add the following:

Wiring for all fixed electric space heating equipment shall be copper wire only. Conductors shall terminate from the heating equipment terminals to the disconnect.

Section 424.19 of the NEC is amended to add the following:

The disconnect serving the equipment shall not be secured or fastened to the heating equipment.

Section 426.22 of the NEC is amended by adding subsection (F) to read as follows:

(F) Non-heating leads. Non-heating leads shall be of copper wire only.

Section 426.23 of the NEC is amended by adding subsection (C) to read as follows:

(C) Non-heating leads. Non-heating leads shall be of copper wire only.

~~*Section 440.62, subsection (C)* of the NEC is amended to read as follows:~~

~~Each individual room air-conditioning unit regardless of its current rating, shall be served by an individual circuit of not less than No. 12 copper wire.~~

~~*Section 440.63* of the NEC is amended by adding the following to the end of the section:~~

~~Duplex receptacles rated less than twenty (20) amperes are not permitted for use with air-conditioning units.~~

Section 500.5~~, subsection~~ (D), of the NEC is amended by adding (~~FPN~~ Informational Note No. 3) to read as follows:

(~~FPN~~ Informational Note No. 3): such locations as trash or incinerator rooms.

Section 503.10~~, subsection~~ (A) of the NEC is amended by adding a new paragraph (~~4~~5) to read as follows:

(4) **No conduits, busways, wireways, or feeder cables.** No conduits, busways, wireways, or feeder cables shall pass through trash or incinerator rooms. The only wiring permitted in such rooms may be circuit wiring with suitable insulation having to do with and terminating in such rooms. Conduit embedded in two (2) or more inches of concrete or masonry may be considered to be outside such rooms.

Section 700.18 of the NEC is amended to read as follows:

For branch circuits that supply equipment classed as emergency, there shall be an emergency supply source to which the load will be transferred automatically upon the failure of the normal supply.

Any building in which standpipes are installed must have one 30-ampere, 120-volt circuit installed for each standpipe riser, supplied from the emergency panel. The wiring method for exposed work must be galvanized, threaded metal conduit. Boxes must be metal, weatherproof types with gasketed flap-door covers and threaded hubs. The wiring method for concealed work must be metal conduit with appropriate galvanized boxes having gasketed flap-door covers suitable for fire department use. The weatherproof cover must be suitable for receiving the L5-20R NEMA type twist-lock receptacle without damage.

Supply wiring must be at least 75 degrees C-type wire. One single 20-ampere three-wire twist lock receptacle (NEMA L5-20R) must be installed at least as high as, and with a 2-

feet offset from each hose valve connection. Each outlet box must be painted "fire-alarm red" in color and be marked "Fire Department Use Only".

Note: This Section supersedes the requirements of Table 210.21(B) (2).

Secs. 5-134 – 5-140. Reserved.

DIVISION 4. LICENSING OF ELECTRICIANS

Sec. 5-141. Required; violation declared misdemeanor.

(a) Any person wishing to install, maintain, and/or repair any electrical circuits, equipment, or apparatus, or who wishes to supervise such work, within the corporate limits of the City shall obtain a master electrician's license from the administrative authority.

(b) Any person wishing to install, maintain, and/or repair, or supervise the installation, maintenance, and/or repair of a particular appliance, equipment, or apparatus, such as air conditioning equipment, oil and gas heating furnaces, electric signs, and similar specialties within the corporate limits of the City shall obtain a master electrician's (limited) license from the administrative authority.

(c) Any person wishing to work under the supervision of a master electrician to install, maintain, and/or repair any electrical circuits, equipment or apparatus within the corporate limits of the City shall obtain a journeyman electrician's license by any county or municipality in the state approved by the administrative authority. All work done under this license shall be done under the supervision of a master electrician or master electrician (limited), who is licensed by the City.

(d) Any person who shall perform any electrical work within the corporate limits of the City who is not by or under the supervision of a licensee as provided in this article or is not otherwise qualified as set forth in section 5-121, subsection (b), shall be guilty of a misdemeanor.

(e) All company vehicles, by July 1, 2010, shall have the City's license number conspicuously displayed ~~so to be visible from the street~~.

Sec. 5-142. Qualifications; examination.

(a) The administrative authority shall establish standards and procedures for the qualifications and licensing of master electricians and master electricians (limited). The administrative authority shall issue an appropriate license to each person who meets the qualifications and licensing requirements therefor.

(b) No additional examination will required by the administrative authority when an applicant presents a valid license issued by the State or County or any other municipality or County within the State, provided such City or County administers examinations and has qualification procedures equivalent to those required for licensing by the City.

(c) No license shall be granted to any person under the age of twenty-one (21) years.

(d) The examination fee shall be as set by the agency approved by the administrative authority to give the examination.

Sec. 5-143. Fee.

A license shall be issued under this division to qualified applicants only upon payment of a fee in the amount established by resolution.

Sec. 5-144. Term.

Licenses required by this division shall expire at the end of odd numbered~~the~~ calendar year~~ for which they were issued~~s.

Sec. 5-145. Bond or insurance.

Any person who has been issued a master electrician's license or master electrician's (limited) license shall execute and deposit with the administrative authority a bond in the sum of five thousand dollars ($5,000.00) or proof of insurance with a minimum of three hundred thousand dollars ($300,000.00) general liability and one hundred thousand dollars ($100,000.00) property damage coverage. Such bond shall be conditioned that all electrical work performed by the licensee or under his supervision shall be performed in accordance with this Code and that he will pay all fines and penalties properly imposed upon him for violation of the provisions of this article. A master electrician's license or a master electrician's (limited) license shall not be valid unless a bond is executed and deposited as herein stipulated, or proof of insurance submitted. No additional insurance or bond is required of persons who have a current, active and insured State Master Electrician License.

Sec. 5-146. Use of licensee's name by another; change of address, etc.

No person who has obtained a master electrician's license or master electrician's (limited) license shall allow his name to be used by another person either for the purpose of obtaining permits, or doing business or work under the license. Every person licensed shall notify the administrative authority of the address of his place of business and the name under which such business is carried on and shall give immediate notice to the administrative authority of any change in either.

Secs. 5-147 – 5-155. Reserved.

SECTION 8. That Article VIII, “Energy Conservation Code”, is hereby repealed and re-enacted with amendments as follows:

ARTICLE VIII. ENERGY CONSERVATION CODE

DIVISION 1. GENERALLY

Sec. 5-156. Scope.

This article regulates the design and construction of the thermal envelopes and selection of HVAC, service water heating, electrical distribution systems and equipment required for the purpose of effective use of energy and shall govern all buildings and structures, or portions thereof, hereafter erected that provide facilities or shelter for human occupancy.

Secs. 5-157 – 5-160. Reserved.

DIVISION 2. TECHNICAL STANDARDS

Sec. 5-161. International Energy Conservation Code--Adopted.

The International Code Council (ICC) International Energy Conservation Code, ~~2009~~ 2012 Edition, as modified herein, is hereby adopted as the energy conservation code for the City. One (1) copy of such publication as adopted shall be maintained by the ~~City Clerk in the office of the Council~~Inspection Services Division and made available for inspection by the public during regular office hours. Any amendment or change in such code promulgated by the International Code Council shall not become part of this article until the modifications have been duly adopted by ordinance. References to other ordinances and codes of the City shall be interpreted and applied in accordance with the terms and effect of such ordinances and codes at the time of such application and interpretation.

Sec. 5-162. Same--Amendments.

The ICC International Energy Conservation Code, ~~2009~~ 2012 Edition (IECC), is amended in the following respects:

Section C101.1 of the IECC is amended to read as follows:

> **C101.1 Title.** This code shall be known as the *International Energy Conservation Code of the City of Rockville*, and shall be cited as such. It is referred to herein as "this code".

Section C102.1.1 of the IECC is amended to read as follows:

> **C102.1.1 Above code programs.** The code official or other authority having jurisdiction shall be permitted to deem a national, state or local energy efficiency program to exceed the energy efficiency required by this code if the program provides a detailed written energy analysis study demonstrating that the requirements in the program exceed all requirements of this code and includes a requirement for inspections of each building by an accredited independent party to determine compliance. Buildings

approved in writing by such an energy efficiency program and that meet all mandatory provisions of this Article shall be considered in compliance with this code.

Section C107.1 of the IECC is amended as follows:

C107.1 Fees: The fees shall be as established by resolution of the Mayor and Council.

Sections C107.2, C107.3, C107.4 and C107.5 of the IECC are deleted.

Section C109 of the IECC is deleted in ~~it~~its entirety, and replaced with the following:

C109.1 Administrative Appeals. Any person aggrieved by and desirous of challenging a decision of the administrative authority in connection with the interpretation, application, or modification of any provision of this chapter relating to the manner of construction or materials used in connection with the erection, alteration, or repair of a building or structure or system installed therein, shall appeal such decision to a Board of Adjustments and Appeals. An appeal may be taken when it is claimed that:

(1) The true intent of the code or the rules legally adopted there under have been incorrectly interpreted; or

(2) The provisions of the code do not fully apply; or

(3) An equally good or better form of construction can be used.

C109.2 Application for appeal. An appeal shall be filed with the City Clerk within seven (7) calendar days from the date of the administrative decision being appealed, and a copy thereof shall be submitted to the Chief of Inspection Services Division. The appeal shall be in writing and shall contain a detailed statement of the reasons in support of such appeal.

C109.3 Membership.

C109.3.1. Number. The Board of Adjustments and Appeals shall consist of three (3) persons:

a) A licensed professional engineer or architect chosen by the administrative authority;

b) A licensed professional engineer or architect chosen by the owner of the subject building or structure; and

c) A licensed professional engineer or architect to be jointly chosen by the other two (2) members.

C109.3.2 Compensation. All fees charged by the licensed professional engineers or architects to serve on the Board shall be paid for by the person appealing the administrative decision.

C109.4 Meetings and Hearings. The Board of Adjustments and Appeals shall conduct a hearing on the appeal, at which time the appellant, the appellant's representative, representatives of the City who have inspected the subject building or structure or applicable system installed therein, and any other person having knowledge of the matter or whose interests may be affected by the decision on the appeal shall be given an opportunity to be heard. The hearing shall be conducted informally, and the formal rules of evidence shall not apply. The Board may accept written testimony and shall give it such weight as it deserves.

C109.4.1 Interpretation. Interpretation given provisions of the applicable ICC or NFPA Code by the International Code Council or National Fire Protection Association shall be given great deference.

C109.4.2 Actions. The Board may inspect the structure or building and conduct any other investigation or research necessary in order to render a decision.

C109.5 Decision. The following process shall be followed:

(1) Within fifteen (15) working days of the hearing, the Board shall affirm, modify or reverse the decision of the administrative authority.

(2) The agreement of any two (2) members of the Board shall constitute the decision of the Board. Failure to obtain the agreement of any two (2) members of the Board shall constitute a denial of the appeal and an affirmation of the decision of the administrative authority. The Board's findings and decision shall be rendered in writing and copies thereof shall be provided to the appellant and any other party who has entered their appearance before the Board and requested a copy of the decision. The decision may contain recommendations for remedial steps to be taken to meet the intent of the applicable code.

C109.6 Appeal. Any person aggrieved by a decision of the Board of Adjustments and Appeals may appeal the decision to the Circuit Court for the County in accordance with the Maryland Rules as set forth in Title 7, Chapter 200.

Section C301.1 of the IECC is amended to read as follows:

C301.1 General. Climate zone 4 shall be used for the City of Rockville in determining the applicable requirements. ~~from Chapters 4 and 5.~~

Section C301.2 and C301.3 of the IECC are deleted.

Section C402.1 of the IECC is amended to read as follows:

C402.1 General. (Prescriptive) The building thermal envelope shall comply with Section C402.1.1. Section C402.1.2 shall be permitted as an alternative to the R-values

specified in Section C402.1.1. Climate zone "4 Except Marine" shall be used when referring to the tables to determine the applicable requirements.

Section R101.1 of the IECC is amended to read as follows:

R101.1 Title. This code shall be known as the *International Energy Conservation Code of the City of Rockville*, and shall be cited as such. It is referred to herein as "this code".

Section R102.1.1 of the IECC is amended to read as follows:

R102.1.1 Above code programs. The code official or other authority having jurisdiction shall be permitted to deem a national, state or local energy efficiency program to exceed the energy efficiency required by this code if the program provides a detailed written energy analysis study demonstrating that the requirements in the program exceed all requirements of this code and includes a requirement for inspections of each building by an accredited independent party to determine compliance. Buildings approved in writing by such an energy efficiency program and that meet all mandatory provisions of this Article shall be considered in compliance with this code.

Section R107.1 of the IECC is amended as follows:

R107.1 Fees: The fees shall be as established by resolution of the Mayor and Council.

Sections R107.2, R107.3, R107.4 and R107.5 of the IECC are deleted.

Section R109 of the IECC is deleted in its entirety, and replaced with the following:

R109.1 Administrative Appeals. Any person aggrieved by and desirous of challenging a decision of the administrative authority in connection with the interpretation, application, or modification of any provision of this chapter relating to the manner of construction or materials used in connection with the erection, alteration, or repair of a building or structure or system installed therein, shall appeal such decision to a Board of Adjustments and Appeals. An appeal may be taken when it is claimed that:

(1) The true intent of the code or the rules legally adopted there under have been incorrectly interpreted; or

(2) The provisions of the code do not fully apply; or

(3) An equally good or better form of construction can be used.

R109.2 Application for appeal. An appeal shall be filed with the City Clerk within seven (7) calendar days from the date of the administrative decision being appealed, and a copy thereof shall be submitted to the Chief of Inspection Services Division. The appeal

shall be in writing and shall contain a detailed statement of the reasons in support of such appeal.

R109.3 Membership.

R109.3.1. Number. The Board of Adjustments and Appeals shall consist of three (3) persons:

d) A licensed professional engineer or architect chosen by the administrative authority;

e) A licensed professional engineer or architect chosen by the owner of the subject building or structure; and

f) A licensed professional engineer or architect to be jointly chosen by the other two (2) members.

R109.3.2 Compensation. All fees charged by the licensed professional engineers or architects to serve on the Board shall be paid for by the person appealing the administrative decision.

R109.4 Meetings and Hearings. The Board of Adjustments and Appeals shall conduct a hearing on the appeal, at which time the appellant, the appellant's representative, representatives of the City who have inspected the subject building or structure or applicable system installed therein, and any other person having knowledge of the matter or whose interests may be affected by the decision on the appeal shall be given an opportunity to be heard. The hearing shall be conducted informally, and the formal rules of evidence shall not apply. The Board may accept written testimony and shall give it such weight as it deserves.

R109.4.1 Interpretation. Interpretation given provisions of the applicable ICC or NFPA Code by the International Code Council or National Fire Protection Association shall be given great deference.

R109.4.2 Actions. The Board may inspect the structure or building and conduct any other investigation or research necessary in order to render a decision.

R109.5 Decision. The following process shall be followed:

(1) Within fifteen (15) working days of the hearing, the Board shall affirm, modify or reverse the decision of the administrative authority.

(2) The agreement of any two (2) members of the Board shall constitute the decision of the Board. Failure to obtain the agreement of any two (2) members of the Board shall constitute a denial of the appeal and an affirmation of the decision of the administrative authority. The Board's findings and decision shall be rendered in writing and copies thereof shall be provided to the appellant and any other party who has entered their appearance before the Board and requested a copy of the decision. The decision may contain

recommendations for remedial steps to be taken to meet the intent of the applicable code.

R109.6 Appeal. Any person aggrieved by a decision of the Board of Adjustments and Appeals may appeal the decision to the Circuit Court for the County in accordance with the Maryland Rules as set forth in Title 7, Chapter 200.

Section R301.1 of the IECC is amended to read as follows:

R301.1 General. Climate zone 4 shall be used for the City of Rockville in determining the applicable requirements. ~~from Chapters 4 and 5.~~

Section R301.2 and R301.3 of the IECC are deleted.

~~*Section 401.2* of the IECC is amended to read as follows:~~

~~**401.2 Compliance.** Projects shall comply with Sections 401, 402.4, 402.5, 402.6, 402.7, and 403 (referred to as the mandatory provisions) and either:~~

~~1. Sections 402.1 through 402.3 (prescriptive); or~~

~~2. Section 405 (performance).~~

Table R402.1.1 of the IECC is amended to read as follows:

TABLE R402.1.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT [a]

CLIMATE ZONE	FENES-TRATION U-FACTOR	SKY-LIGHT U-FACTOR [b]	GLAZED FENEST-RATION SHGC	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE [i]	FLOOR R-VALUE	BASEMENT[d] WALL R-VALUE	SLAB [d] R-VALUE & DEPTH	CRAWL SPACE [c] WALL R-VALUE
4	0.35	0.~~60~~55	~~NR~~0.40	~~38~~49	~~13~~20 or 13+5[h]	~~5/10~~8/13	19	10 / 13	10, 2ft	10 / 13

For SI: 1 foot = 304.8 mm.
a. *R*-values are minimums. *U*-factors and SHG Care maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.
b. The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
c. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall. "10/13" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall.
d. R-5 shall be added to the required slab edge *R*-values for heated slabs. Insulation depth shall be the depth of the footing or 2 feet, whichever is less in Zones 1 through 3 for heated slabs.
~~e. There are no SHGC requirements in the Marine Zone.~~
~~f. Basement wall insulation is not required in warm-humid locations as defined by Figure 301.1 and Table 301.1.~~
~~g. Or insulation sufficient to fill the framing cavity, R-19 minimum.~~
h. First value is cavity insulation, second is continuous insulation or insulated siding, so "13+5 means r-13 cavity insulation plus R-5 continuous insulation or insulated siding. If structural sheathing covers 40 percent of less of the exterior, continuous insulation R-value shall be permitted to be reduced by no more than R-3 in the locations where structural sheathing is used – to maintain a consistent total sheathing thickness.
i. The second *R*-value applies when more than half the insulation is on the interior of the mass wall.

Table R402.1.3 of the IECC is amended to read as follows:

TABLE R402.1.3
EQUIVALENT U-FACTORS [a]

CLIMATE ZONE	FENES-TRATION U-FACTOR	SKY-LIGHT U-FACTOR	CEILING U-FACTOR	FRAME WALL U-FACTOR	MASS WALL U-FACTOR[b]	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR	CRAWL SPACE WALL U-FACTOR
4	0.35	0.~~60~~55	0. ~~030~~026	0. ~~082~~057	0.~~141~~098	0.047	0.059	0.065

a. Nonfenestration *U*-factors shall be obtained from measurement, calculation or an approved source.
b. When more than half the insulation is on the interior, the mass wall U-factor shal be a maximum of 0.087 in climate zone 4.

Section R402.1.5 of the IECC is added to read as follows:

R402.1.5 Envelope component descriptions and default values. When calculating the U-factor of an assembly as part of Section R402.1.3, R402.1.4, or R404.5.2, the values in Tables R402.1.5.1 through R402.1.5.3 shall be used unless alternate values are approved by the code official. In addition, the U-factor of the assembly shall be calculated using a series-parallel calculation with the default framing fractions in Tables R402.1.5.1 through R402.1.5.3. Subject to approval by the code official, the frame fractions for the proposed design shall be permitted to be determined by the type of construction (Satisfactory, Intermediate or Advanced) as defined in Sections R402.1.5.1 through R402.1.5.3.

R402.1.5.1 Wood stud frame walls. The type of construction (Satisfactory, Intermediate or Advanced) for determination of default framing fractions in wood stud frame walls are defined as follows:

Satisfactory Insulation and Framing Fractions:

Satisfactory wood stud frame walls include studs framed on 16-inch centers with double top plate and single bottom plate. Corners use three studs and each opening is framed using two studs.

Studs and plates: 21%

Insulated cavity: 75%

Headers: 4%

Intermediate Insulation and Framing Fractions:

Intermediate wood stud frame walls include studs framed on 16-inch centers with double top plate and single bottom plate. Corners use two studs or other means of fully insulating corners, and each opening is framed by two studs.

Studs and plates: 18%

Insulated cavity: 78%

Headers: 4%

Advanced Insulation and Framing Fractions:

Advanced wood stud frame walls include studs framed on 24-inch centers with double top plate and single bottom plate. Corners use two studs or other means of fully insulating corners, and one stud is used to support each header.

Studs and plates: 13%

Insulated cavity: 83%

Headers: 4%

TABLE R402.1.5.1
FRAME WALL COMPONENT DEFAULT VALUES

Component	Default Value	
Interior Air Film R-Value	0.68	
Drywall Layer R-Value	0.45	
Cavity Layer R-Values	Insulation: As Specified	Framing: R-1.25 per inch of wood
Standard Reference Design Insulation / Framing Fraction	Insulation: 83 %	Framing: 17 %
Proposed Design Default Insulation / Framing Fraction	Insulation: 78%	Framing: 22%
Insulating Sheathing Layer R-Value	0 or as installed	
Structural Sheathing Layer R-Value	0.62	
Siding Layer R-Value	0.61	
Exterior Air Film R-Value	0.25	

R402.1.5.2 Wood frame floors. The type of construction (Satisfactory, Intermediate or Advanced) for determination of default framing fractions in wood frame floors are defined as follows:

Satisfactory Insulation and Framing Fractions: Satisfactory wood floors include open joist systems framed 12-inch centers or solid joists framed 16-inch centers.

Framing: 12%

Insulated cavity: 88%

Intermediate Insulation and Framing Fractions: Intermediate wood floors include open joist systems framed 16-inch centers or solid joists framed 20-inch centers.

Framing: 10%

Insulated cavity: 90%

Advanced Insulation and Framing Fractions: Advanced wood floors include open joist systems framed 20-inch centers or joists framed 24-inch centers.

Framing: 8%

Insulated cavity: 92%

TABLE R402.1.5.2
FLOOR COMPONENT DEFAULT VALUES

Component	Default Value	
Interior Air Film R-Value	0.92	
Floor Covering R-Value	1.23	
Floor Subfloor R-Value	0.94	
Cavity Layer R-Values	Insulation: As Specified	Framing: R-1.25 per inch of wood
Standard Reference Design Insulation / Framing Fraction	Insulation: 92%	Framing: 8%
Proposed Design Default Insulation / Framing Fraction	Insulation: 90%	Framing: 10%
Exterior Air Film R-Value	0.92	

R402.1.5.3 Wood frame ceilings. The type of construction (Satisfactory, Intermediate or Advanced) for determination of default framing fractions in wood frame ceilings are defined as follows:

Satisfactory Insulation and Framing Fractions:

Satisfactory ceiling insulation and framing assumes tapering of insulation depth around the perimeter with resultant decrease in thermal resistance. An increased R-value is assumed in the center of the ceiling due to the effect of piling leftover insulation.

Framing: 11%

Insulated cavity: 89%

Intermediate Insulation and Framing Fractions:

Intermediate ceiling insulation and framing assumes tapering of insulation depth around the perimeter with resultant decrease in thermal resistance. An increased R-value is assumed in the center of the ceiling due to the effect of piling leftover insulation.

Framing: 9%

Insulated cavity: 91%

Advanced Insulation and Framing Fractions:

Advanced ceiling insulation and framing assumes full and even depth of insulation extending to the outside edge of exterior perimeter of the ceiling.

Framing: 7%

Insulated cavity: 93%

TABLE R402.1.5.3
CEILING COMPONENT DEFAULT VALUES

Component	Default Value	
Interior Air Film R-Value	0.61	
Drywall Layer R-Value	0.45	
Cavity Layer R-Values	Insulation: As Specified	Framing: R-1.25 per inch of wood
Standard Reference Design Insulation / Framing Fraction	Insulation: 93%	Framing: 7%
Proposed Design Default Insulation / Framing Fraction	Insulation: 91%	Framing: 9%
Exterior Air Film R-Value	0.61	

~~*Sections 402.2.1, 402.2.2, 402.3.3 and 402.3.4* of the IECC are deleted.~~

~~*Section 402.6* of the IECC is added to read as follows:~~

~~**402.6 Minimum opaque envelope requirements (Mandatory).** The thermal requirements for individual opaque envelope components shall not be less than the requirements in Table 402.6 when determining alternatives to the R-values in Table 402.1.1 under Sections 402.1.3, 402.1.4, or 404.~~

~~*Table 402.6* of the IECC is added to read as follows:~~

~~**TABLE 402.6**~~
~~**MINIMUM INSULATION REQUIREMENTS BY COMPONENT**~~

~~CLIMATE ZONE~~	~~CEILING R-VALUE~~	~~WOOD FRAME WALL R-VALUE~~	~~MASS WALL R-VALUE~~	~~STEEL FRAME WALL R-VALUE[a]~~	~~FLOOR R-VALUE~~	~~BASEMENT WALL R-VALUE~~	~~SLAB R-VALUE AND DEPTH~~	~~CRAWL SPACE WALL R-VALUE~~
~~4~~	~~30~~	~~11~~	~~4~~	~~R-11+3~~	~~13~~	~~5/11[b]~~	~~5, 2ft~~	~~5/11[b]~~

~~a. Cavity Insulation R-value is listed first, followed by continuous insulation R-value.~~
~~b. The first R-value applies to continuous insulation, the second to framing cavity insulation; either insulation configuration meets the requirement.~~

Section R402.~~7~~ 6 of the IECC is added to read as follows:

R402.~~7~~ 6 Moisture control. (Mandatory). The building design shall not create conditions of accelerated deterioration from moisture condensation. Above-grade frame

walls, floors and ceilings not ventilated to allow moisture to escape shall be provided with an approved vapor retarder. The vapor retarder shall be installed on the warm-in-winter side of the thermal insulation.

Exceptions:

1. In construction where moisture or its freezing will not damage the materials.
2. Frame walls, floors and ceilings in jurisdictions in Zone 4. (Crawl space floor vapor retarders are not exempted.)
3. Where other approved means to avoid condensation are provided.

Section R403.4 of the IECC is ~~deleted in its entirety and replaced~~amended to read as follows:

R403.4. Service water heating. Service water heating systems and piping shall be installed in accordance with the applicable requirements of Sections R403.4.1~~.1~~ through R403.4.~~1.2~~3.

~~**403.4.1 Insulation.** All Service Hot Water piping shall be insulated to at least R-2 for pipes sized 1" in diameter or less and R-4 for pipes larger than 1" in diameter for the distance between the service water heater to within 5 feet of each fixture connected to the hot water pipe.~~

~~**Exception:** Hot water distribution systems not located below ground or located in a mass floor or mass wall in contact with ground that supply hot water from condensing gas service water heating equipment, from instantaneous service electric or gas water heating equipment or from heat pump electric service water heating equipment.~~

~~**403.4.2 Circulating hot water systems.** All circulating service hot water piping shall be insulated to at least R-2 for pipes sized 1" in diameter or less and R-4 for pipes larger than 1" in diameter. Circulating hot water systems shall include an automatic or readily accessible manual switch that can turn off the hot water circulating pump when the system is not in use.~~

Section R403.4.3 of the IECC is added to read as follows:

R403.4.3 Stub-in for solar water. All service water heating distribution systems for new work or renovations where interior finishes are to be removed shall have an identified stub-in connection point for future Solar Hot Water Systems in an accessible location with an access panel within 5 feet of the roof with an access panel and identified. Installation of solar hot water heating systems shall comply with Section M2301 of the International Residential Code.

~~*Section 403.6* of the IECC is amended to read as follows:~~

~~**403.6 Equipment sizing (Mandatory).** Heating and cooling equipment shall be sized in accordance with this section and Table 403.6.~~

~~*Table 403.6* is added to the IECC to read as follows:~~

~~TABLE 403.6~~
~~HEATING AND COOLING EQUIPMENT SIZING~~

~~UNIT~~	~~MAXIMUM OVERSIZING PERCENTAGE[1,2]~~	~~MINIMUM EFFICIENCY & TESTING PROCEDURE~~
~~Air Conditioners~~	~~15%~~	~~Table 503.2.3(1)~~
~~Multispeed[3] Air-Source Heat Pumps and Ground-Source Heat Pumps~~	~~15%~~	~~Table 503.2.3(2)~~
~~Single-speed Ground Source Heat Pumps~~	~~25%~~	~~Table 503.2.3(2) or Table 503.2.3(3)~~
~~All fuel-fired heating appliances~~	~~40%~~	~~Table 503.2.3(4) or Table 503.2.3(5)~~

~~Notes:~~
~~1. Equipment shall be sized in accordance with ACCA Manual J:~~
~~a. Indoor and outdoor coils shall be matched for size;~~
~~b. Outdoor temperatures shall be the 99.0% and 1.0% design temperatures as published in the ASHRAE Handbook of Fundamentals for the most representative city for which design temperature data are available;~~
~~c. Indoor temperatures shall be 75 F for cooling and 72 F for heating;~~
~~d. Infiltration rate shall be assumed as 0.00036 Specific Leakage Area (SLA).~~
~~2. Once the appropriate equipment size is determined, if that specific size does not exist, the next larger size of manufactured equipment shall be acceptable, regardless of the percentage listed.~~
~~3. Multi-speed units shall be permitted to exceed the listed percentage only to the cooling capacity necessary to control humidity levels.~~

~~*Section 404* of the IECC is deleted in it entirety, and replaced with the following:~~

~~404 Electrical power and lighting systems.~~

~~404.1 Scope.~~ ~~This section applies to lighting equipment, related controls and electric circuits serving the interior spaces and exterior building facades of all residential buildings including accessory structures and garages. Certification of fixture used shall be included on sticker per Section 401.3.~~

~~404.2 Lighting Equipment.~~ ~~A minimum of fifty percent (50%) of the lamps in permanently installed lighting fixtures shall be high efficacy lamps.~~

~~*Table 405.5.2 (1)* of the IECC is amended to read as follows:~~

~~TABLE 405.5.2(1)~~
~~SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS~~

~~BUILDING COMPONENT~~	~~STANDARD REFERENCE DESIGN~~	~~PROPOSED DESIGN~~

~~Above-grade walls~~	~~Type: mass wall if proposed wall is mass; otherwise wood frame~~ ~~Gross Area: same as proposed~~ ~~U-Factor: from Table 402.1.3~~ ~~Solar absorptions = 0.75~~ ~~Remittance = 0.90~~	~~As proposed~~ ~~As proposed~~ ~~As proposed, assuming gaps/missing insulation equal to 5%, unless otherwise verified~~ ~~As proposed~~ ~~As proposed~~
~~Basement and crawlspace walls~~	~~Type: same as proposed~~ ~~Gross Area: same as proposed~~ ~~U-Factor: from Table 402.1.3, with insulation layer on interior side of walls~~	~~As proposed~~ ~~As proposed~~ ~~As proposed, assuming gaps/missing insulation equal to 5%, unless otherwise verified~~
~~Above-grade floors~~	~~Type: wood frame~~ ~~Gross Area: same as proposed~~ ~~U-Factor: from Table 402.1.3~~	~~As proposed~~ ~~As proposed~~ ~~As proposed, assuming gaps/missing insulation equal to 5%, unless otherwise verified~~
~~Ceilings~~	~~Type: wood frame~~ ~~Gross Area: same as proposed~~ ~~U-Factor: from Table 402.1.3~~	~~As proposed~~ ~~As proposed~~ ~~As proposed, assuming gaps/missing insulation equal to 5%, unless otherwise verified~~
~~Roofs~~	~~Type: composition shingle on wood sheathing~~ ~~Gross area: same as proposed~~ ~~Solar absorptance = 0.75~~ ~~Emittance = 0.90~~	~~As proposed~~ ~~As proposed~~ ~~As proposed~~ ~~As proposed~~
~~Attics~~	~~Type: vented with aperture = 1 ft² per 300 ft² ceiling area~~	~~As proposed~~
~~Foundations~~	~~Type: same as proposed~~	~~As proposed~~
~~Doors~~	~~Area: 40 ft²~~ ~~Orientation: North~~ ~~*U*-factor: same as fenestration from Table 402.1.3~~	~~As proposed~~ ~~As proposed~~ ~~As proposed~~
~~Glazing[a]~~	~~Total area[b] =~~ ~~(a) The proposed glazing area; where the proposed glazing area is less than 15% of the conditioned floor area~~ ~~(b) 15% of the conditioned floor area; where the proposed glazing area is 15% or more of the conditioned floor area~~ ~~Orientation: equally distributed to four cardinal compass orientations (N, E, S, & W)~~ ~~U-factor: from Table 402.1.3~~ ~~SHGC: From Table 402.1 except that for climates with no requirement (NR) SHGC = 0.40 shall be used~~ ~~Interior shade fraction:~~ ~~Summer (all hours when cooling is required)~~	~~As proposed~~ ~~As proposed~~ ~~As proposed~~ ~~As proposed~~ ~~Same as standard reference design[c]~~

	~~= 0.70~~ ~~Winter (all hours when heating is required) = 0.85~~ ~~External shading: none~~	~~As proposed~~
~~Skylights~~	~~None~~	~~As proposed~~
~~Thermally isolated sunrooms~~	~~None~~	~~As proposed~~
~~Air exchange rate~~	~~Specific Leakage Area (SLA)[d] = 0.00036 assuming no energy recovery~~	~~For residences that are not tested, the same as the standard reference design~~ ~~For residences without mechanical ventilation that are tested in accordance with ASHRAE 119, Section 5.1, the measured air exchange rate[e] but not less than 0.35 ACH~~ ~~For residences with mechanical ventilation that are tested in accordance with ASHRAE 119, Section 5.1, the measured air exchange rate[e] combined with the mechanical ventilation rate,[f] which shall not be less than 0.01 × CFA + 7.5 × (N_{br}+1)~~ ~~where:~~ ~~CFA = conditioned floor area~~ ~~N_{br} = number of bedrooms~~
~~Mechanical ventilation~~	~~None, except where mechanical ventilation is specified by the proposed design, in which case:~~ ~~Annual vent fan energy use: kWh/yr = 0.03942 × CFA + 29.565 × (N_{br}+1)~~ ~~where:~~ ~~CFA = conditioned floor area~~ ~~N_{br} = number of bedrooms~~	~~As proposed~~
~~Internal gains~~	~~IGain = 17,900 + 23.8 × CFA + 4104 × N_{br} (Btu/day per dwelling unit)~~	~~Same as standard reference design~~
~~Internal mass~~	~~An internal mass for furniture and contents of 8 pounds per square foot of floor area~~	~~Same as standard reference design, plus any additional mass specifically designed as a thermal storage element[g] but not integral to the building envelope or structure~~
~~Structural mass~~	~~For masonry floor slabs, 80% of floor area covered by R-2 carpet and pad, and 20% of floor directly exposed to room air~~ ~~For masonry basement walls, as proposed, but with insulation required by Table 402.1.3 located on the interior side of the walls~~ ~~For other walls, for ceilings, floors, and interior~~	~~As proposed~~ ~~As proposed~~ ~~As proposed~~

	~~walls, wood frame construction~~	
~~Heating systems[h,i]~~	~~Fuel type: same as proposed design~~ ~~Efficiencies:~~ ~~Electric: air-source heat pump with prevailing federal minimum efficiency~~ ~~Nonelectric furnaces: natural gas furnace with prevailing federal minimum efficiency~~ ~~Nonelectric boilers: natural gas boiler with prevailing federal minimum efficiency~~ ~~Capacity: sized in accordance with Section M1401.3 of the *International Residential Code*~~	~~As proposed~~ ~~As proposed~~ ~~As proposed~~ ~~As proposed~~ ~~As proposed~~
~~Cooling systems[h,j]~~	~~Fuel type: Electric~~ ~~Efficiency: in accordance with prevailing federal minimum standards~~ ~~Capacity: sized in accordance with Section M1401.3 of the *International Residential Code*~~	~~As proposed~~ ~~As proposed~~ ~~As proposed~~
~~Service Water Heating[h,k]~~	~~Fuel type: same as proposed design~~ ~~Efficiency: in accordance with prevailing Federal minimum standards~~ ~~Use: gal/day = 30 + 10 × N_{br}~~ ~~Tank temperature: 120°F~~	~~As proposed~~ ~~As proposed~~ ~~Same as standard reference~~ ~~Same as standard reference~~
~~Thermal distribution systems~~	~~A thermal distribution system efficiency (DSE) of 0.88 shall be applied to both the heating and cooling system efficiencies for all systems other than tested duct systems. For tested duct systems, the leakage rate shall be the applicable maximum rate from Section 403.2.2.~~	~~As tested or as specified in Table 404.5.2(2) if not tested.~~
~~Thermostat~~	~~Type: Manual, cooling temperature setpoint = 75°F;Heating temperature set point = 70°F~~	~~Same as standard reference~~

~~For SI: 1 square foot = 0.93 m²; 1 British thermal unit = 1055 J; 1 pound per square foot = 4.88 kg/m²; 1 gallon (U.S.) = 3.785 L; °C = (°F-32)/1.8.~~
~~a. Glazing shall be defined as sunlight-transmitting fenestration, including the area of sash, curbing or other framing elements, that enclose conditioned space. Glazing includes the area of sunlight-transmitting fenestration assemblies in walls bounding conditioned basements. For doors where the sunlight-transmitting opening~~
~~is less than 50% of the door area, the glazing area is the sunlight transmitting opening area. For all other doors, the glazing area is the rough frame opening area for the door including the door and the frame.~~
~~b. For residences with conditioned basements, R-2 and R-4 residences and townhouses, the following formula shall be used to determine glazing area:~~
~~$AF = A_s _ FA _ F$~~
~~where:~~
~~AF = Total glazing area.~~
~~A_s = Standard reference design total glazing area.~~
~~FA = (Above-grade thermal boundary gross wall area)/(above-grade boundary wall area + 0.5 x below-grade boundary wall area).~~
~~F = (Above-grade thermal boundary wall area)/(above-grade thermal boundary wall area + common wall area) or 0.56, whichever is greater.~~
~~and where:~~
~~Thermal boundary wall is any wall that separates conditioned space from unconditioned space or ambient conditions.~~
~~Above-grade thermal boundary wall is any thermal boundary wall component not in contact with soil.~~
~~Below-grade boundary wall is any thermal boundary wall in soil contact.~~

~~Common wall area is the area of walls shared with an adjoining dwelling unit.~~
~~c. For fenestrations facing within 15 degrees (0.26 rad) of true south that are directly coupled to thermal storage mass, the winter interior shade fraction shall be permitted to be increased to 0.95 in the proposed design.~~
~~d. Where Leakage Area (*L*) is defined in accordance with Section 5.1 of ASHRAE 119 and where:~~
~~*SLA = L/CFA*~~
~~where *L* and *CFA* are in the same units.~~
~~e. Tested envelope leakage shall be determined and documented by an independent party approved by the code official. Hourly calculations as specified in the 2001 ASHRAE *Handbook of Fundamentals*, Chapter 26, page 26.21, Equation 40 (Sherman-Grimsrud model) or the equivalent shall be used to determine the energy loads resulting from infiltration.~~
~~f. The combined air exchange rate for infiltration and mechanical ventilation shall be determined in accordance with Equation 43 of 2001 ASHRAE *Handbook of Fundamentals* page 26.24 and the "Whole-house Ventilation" provisions of 2001 ASHRAE *Handbook of Fundamentals*, page 26.19 for intermittent mechanical ventilation.~~
~~g. Thermal Storage Element shall mean a component not part of the floors, walls or ceilings that is part of a passive solar system, and that provides thermal storage such as enclosed water columns, rock beds, or phase-change containers. A thermal storage element must be in the same room as fenestration that faces within 15 degrees (0.26 rad) of true south, or must be connected to such a room with pipes or ducts that allow the element to be actively charged.~~
~~h. For a proposed design with multiple heating, cooling or water heating systems using different fuel types, the applicable standard reference design system capacities and fuel types shall be weighted in accordance with their respective loads as calculated by accepted engineering practice for each equipment and fuel type present.~~
~~i. For a proposed design without a proposed heating system, a heating system with the prevailing federal minimum efficiency shall be assumed for both the standard reference design and proposed design. For electric heating systems, the prevailing federal minimum efficiency air-source heat pump shall be used for the standard reference design.~~
~~j. For a proposed design home without a proposed cooling system, an electric air conditioner with the prevailing federal minimum efficiency shall be assumed for both the standard reference design and the proposed design.~~
~~k. For a proposed design with a nonstorage-type water heater, a 40-gallon storage-type water heater with the prevailing federal minimum Energy Factor for the same fuel as the predominant heating fuel type shall be assumed. For the case of a proposed design without a proposed water heater, a 40-gallon storage-type water heater with the prevailing federal minimum efficiency for the same fuel as the predominant heating fuel type shall be assumed for both the proposed design and standard reference design.~~

~~*Section 501.1* and *501.2* of the IECC is amended to read as follows:~~

~~**501.1 Scope.** The requirements contained in this chapter are applicable to all commercial buildings, or portions of commercial buildings. These commercial buildings shall meet the requirements of ANSI/ASHRAE/IESNA Standard 90.1-2007, Energy Standard for Buildings Except Low-Rise Residential Buildings.~~

~~**Exception:** Low-rise residential buildings.~~

~~**501.2 Application.** Buildings less than 100,000 square feet shall have the alternative option to meet the requirements of the New Building Institute *Core Performance Guide*. Office buildings less than 20,000 square feet shall have the alternative option to meet the requirements of the *ASHRAE Advanced Energy Design Guide for Small Office Buildings*. Retail buildings less than 20,000 square feet shall have the alternative option to meet the requirements of the *ASHRAE Advanced Energy Design Guide for Small Retail Building*. K-12 Schools shall have the alternative option to meet the requirements of the *ASHRAE Advanced Energy Design Guide for K-12 School Building*. Warehouses and Self Storage buildings less than 50,000 square feet shall have the alternative option to meet the requirements of The ASHRAE 30% Advanced Energy Design Guide for Small Warehouses and Self Storage Buildings.~~

~~*Sections 502, 503, 504, 505* and *506* of the IECC are deleted in their entirety.~~

Secs. 5-163 – 5-170. Reserved.

SECTION 9. That Article IX, "Gas Code", is hereby repealed and re-enacted with amendments as follows:

ARTICLE IX. GAS CODE

DIVISION 1. GENERALLY

Sec. 5-171. Definitions.

Except as specifically set forth below and in Section 5-68, terms as used in this Article shall have the same definitions as the International Code Council (ICC) International Fuel Gas Code, ~~2009~~ 2012 Edition, and National Fire Protection Association NFPA 51, NFPA 54, and NFPA 58.

Administrative authority means the City Manager and the City Manager's designees and duly authorized agents.

Approved means accepted or acceptable under an applicable specification stated or cited in this Article and/or the ICC International Fuel Gas Code, ~~2009~~ 2012 Edition, or accepted as suitable for the proposed use under procedures and powers of the administrative authority. Oral approval by the administrative authority or his duly authorized agents shall constitute full and complete approval irrespective of the ICC International Fuel Gas Code, ~~2009~~ 2012 Edition for written approval, except under circumstances where the master plumber or master gasfitter specifically request the same be in writing.

Gas company means the utility company supplying gas.

Gasfitting means the work, beginning at the outlet of a meter, of putting together and installing piping systems which are to contain gas, including fixtures, attachments, and appurtenances; and the maintenance, repair and alteration of the systems, fixtures and appliances.

Sec. 5-172. Scope.

The provisions of this article apply to gasfitting from the outlet of a meter up to and including all appliances and their appurtenances.

Secs. 5-173 – 5-180. Reserved.

DIVISION 2. ADMINISTRATION AND ENFORCEMENT

Sec. 5-181. Permits for gasfitting--Required, application.

(a) No person shall do, or cause to be done, any gasfitting, except as hereinafter otherwise provided, without first obtaining a permit therefor from the administrative authority. Such permit shall be issued to a licensed plumber or licensed gasfitter except as provided elsewhere in this article.

(b) Application for a permit shall be made in such form as the administrative authority shall prescribe and shall be accompanied by such plans, specifications, or other information as the administrative authority shall require, to assure compliance with this article.

(c) No permit shall be required for adjustments to appliances, replacement of parts and repairing of leaks or of work performed by the gas company on any of its facilities, but such work shall be done only by a person permitted by section 5-203 to do gasfittings, and shall be done in accordance with this article.

Sec. 5-182. Same--Fees.

Fees for permits for gasfitting shall be as established by resolution of the Mayor and Council.

Sec. 5-183. Emergency repairs.

When observation by a person permitted by section 5-203 to do gasfitting discloses the necessity to correct leakage of any portion of the gas company's distribution system within the premises up to and including the meter, such person may make necessary temporary repairs without a permit, but must notify the gas company and the administrative authority immediately upon the completion of such temporary repairs.

Sec. 5-184. Unsafe conditions.

Upon written notice to the owner, or user, by the administrative authority, unsafe gas installations or any parts thereof shall be placed in a safe condition or use be discontinued within the time specified in such notice.

Sec. 5-185. Inspection, testing and approval--Generally.

(a) No gas piping system, including fixtures, appliances, attachments and appurtenances, which is hereafter installed, altered, or repaired in such manner that a permit is required therefor by this division, shall be put in service until it has been found acceptable by the administrative authority. Such system shall not be found acceptable by the administrative authority until it is tested in accordance with procedures established by the administrative authority to ensure that it is gastight and that all controls, if any, operate properly under normal conditions and unless inspection shows that it complies with all pertinent provisions of this article and any other applicable law, ordinance or regulation.

(b) The equipment, material and labor necessary for an inspection or test shall be furnished by the person by whom the inspection is requested.

Sec. 5-186. Same--Notice to City.

Where gasfitting is ready for inspection, the person who did such gasfitting or caused it to be done shall request an inspection by the Division of Inspection Services, following the procedure set by the Division for requesting and scheduling inspections.

Sec. 5-187. Same--Fee for additional inspection.

Where an additional inspection under this division is made necessary by failure to complete or properly perform the work inspected, or by failure of work tested to withstand tests, such additional inspection shall not be made until the person requesting such inspection shall pay to the administrative authority the fee established by resolution.

Secs. 5-187 – 5-195. Reserved.

DIVISION 3. TECHNICAL STANDARDS

Sec. 5-196. International Fuel Gas Code, ~~2009~~ 2012 Edition, and National Fire Protection Association Codes, NFPA 51, NFPA 54, and NFPA 58, --Adopted.

The International Code Council (ICC) International Fuel Gas Code, ~~2009~~ 2012 Edition, and National Fire Protection Association (NFPA) Codes NFPA 51, NFPA 54, and NFPA 58, as modified herein, is hereby adopted as the fuel gas code for the City. Additionally elevated pressure gas systems (two (2) PSIG and above) shall be installed in accordance with the guidelines for Copper Tubing Natural Gas Systems, published by the Washington Gas Light Company. One (1) copy of such publication as adopted shall be maintained by the ~~City Clerk in the office of the Council~~Inspection Services Division and made available for inspection by the public during regular office hours. Any amendment or change in such publication promulgated by the International Code Council shall not become a part of this article until adopted by ordinance. References to other ordinances and codes of the City shall be interpreted and applied in accordance with the terms and effect of such ordinances and codes at the time of such application and interpretation.

Sec. 5-197 Same-Amendments

The ICC International Fuel Gas Code, ~~2009~~ 2012 Edition (IFGC), is amended in the following respects:

Section 101.1 of the IFGC is amended to read as follows:

101.1 Title. These regulations shall be known as the *Fuel Gas Code of the City of Rockville*, hereinafter referred to as "this code".

Section 101.2 of the IFGC is amended to read as follows:

101.2 Scope. This code shall apply to the installation of fuel-gas piping systems, fuel-gas utilization equipment, gaseous hydrogen systems and related accessories in accordance with Sections 101.2.1 through 101.2.5, NFPA 51, NFPA 54, and NFPA 58.

Exceptions: Detached one- and two-family dwellings and multiple single-family structures (townhouses) not more than three stories high with separate means of egress and their accessory structures shall comply with the International Residential Code.

Section 106.5.3 of the IFGC is amended to read as follows:

106.5.3 Expiration. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within six (6) months after its issuance, or if the work authorized by such permit does not continue to progress or is abandoned for a period of six (6) months after the last approved/valid inspection. Before such work recommences, a new permit shall be first obtained and the appropriate fees shall be paid.

The fees shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work.

Section 106.5.4 of the IFGC is amended to read as follows:

106.5.4 Extension. The code official can extend the time for action by the permittee if there is reasonable cause. A permittee holding an unexpired permit shall have the right to apply for an extension, in writing, for time to complete such work. The extension shall be requested for a justifiable cause. ~~A permit shall not be extended more than once.~~

Section 106.6.2 of the IFGC is amended as follows:

106.6.2 Fee Schedule: The fees for fuel gas work shall be as established by resolution of the Mayor and Council.

Section 106.6.3 of the IFGC is deleted.

Section 107.2.1.1 is added to the IFGC to read as follows:

107.2.1.1 Soap Test Inspection. If the gas line is less than ten feet (10') in length and has less than four (4) bends/fittings, testing of the joints with soap will be permitted.

Section 109 of the IFGC is deleted in ~~it~~its entirety, and replaced with the following:

109.1 Administrative Appeals. Any person aggrieved by and desirous of challenging a decision of the administrative authority in connection with the interpretation, application, or modification of any provision of this chapter relating to the manner of construction or materials used in connection with the erection, alteration, or repair of a building or structure or system installed therein, shall appeal such decision to a Board of Adjustments and Appeals. An appeal may be taken when it is claimed that:

(1) The true intent of the code or the rules legally adopted there under have been incorrectly interpreted; or

(2) The provisions of the code do not fully apply; or

(3) An equally good or better form of construction can be used.

109.2 Application for appeal. An appeal shall be filed with the City Clerk within seven (7) calendar days from the date of the administrative decision being appealed, and a copy thereof shall be submitted to the Chief of Inspection Services Division. The appeal shall be in writing and shall contain a detailed statement of the reasons in support of such appeal.

109.3 Membership.

109.3.1. Number. The Board of Adjustments and Appeals shall consist of three (3) persons:

a) A licensed professional engineer or architect chosen by the administrative authority;

b) A licensed professional engineer or architect chosen by the owner of the subject building or structure; and

c) A licensed professional engineer or architect to be jointly chosen by the other two (2) members.

109.3.2 Compensation. All fees charged by the licensed professional engineers or architects to serve on the Board shall be paid for by the person appealing the administrative decision.

109.4 Meetings and Hearings. The Board of Adjustments and Appeals shall conduct a hearing on the appeal, at which time the appellant, the appellant's representative, representatives of the City who have inspected the subject building or structure or applicable system installed therein, and any other person having knowledge of the matter or whose interests may be affected by the decision on the appeal shall be given an opportunity to be heard. The hearing shall be conducted informally, and the formal rules

of evidence shall not apply. The Board may accept written testimony and shall give it such weight as it deserves.

109.4.1 Interpretation. Interpretation given provisions of the applicable ICC or NFPA Code by the International Code Council or National Fire Protection Association shall be given great deference.

109.4.2 Actions. The Board may inspect the structure or building and conduct any other investigation or research necessary in order to render a decision.

109.5 Decision. The following process shall be followed:

(1) Within fifteen (15) working days of the hearing, the Board shall affirm, modify or reverse the decision of the administrative authority.

(2) The agreement of any two (2) members of the Board shall constitute the decision of the Board. Failure to obtain the agreement of any two (2) members of the Board shall constitute a denial of the appeal and an affirmation of the decision of the administrative authority. The Board's findings and decision shall be rendered in writing and copies thereof shall be provided to the appellant and any other party who has entered their appearance before the Board and requested a copy of the decision. The decision may contain recommendations for remedial steps to be taken to meet the intent of the applicable code.

109.6 Appeal. Any person aggrieved by a decision of the Board of Adjustments and Appeals may appeal the decision to the Circuit Court for the County in accordance with the Maryland Rules as set forth in Title 7, Chapter 200.

Section 411.1.3 of the IFGC is amended as follows:

411.1.3 Connector installation. Where appliances are equipped with casters or are otherwise subject to periodic movement or relocation for purposes such as routine cleaning and maintenance, such appliances shall be connected to the supply system piping by means of an approved flexible connector designed and labeled for the application. Such flexible connectors shall be installed and protected against physical damage in accordance with the manufacturer's installation instructions. Appliances shall be chained in place to limit movement to within six inches of the length of the flexible connector.

Section 412.1 of the IFGC is amended as follows:

412.1 General. Motor fuel-dispensing facilities for LP-gas fuel shall be in accordance with this section NFPA 58. ~~The~~ NFPA 58, NFPA 54 and NFPA 51 shall regulate the operation of LP-gas motor fuel-dispensing facilities.

Secs. 5-198 – 5-200. Reserved.

DIVISION 4. MISCELLANEOUS REQUIREMENTS

Sec. 5-201. Reserved.

Sec. 5-202. Work done by gas company.

Only duly authorized representatives of the gas company shall install, repair or open a gas main, service pipe or service extension; or set, remove or change the location of a gas meter, or do any work on any part of its distribution system up to and including the meter, except as provided in sections 5-183 and 5-185.

Sec. 5-203. License required; gasfitting work by unqualified person declared misdemeanor.

(a) No person shall engage in the business of gasfitting in the City unless licensed as a master plumber or gasfitter under the provisions of this division, or employed as a qualified mechanic of the gas company.

(b) No person shall engage in the business of gasfitting unless the work performed in the course of such business is under the direct supervision of a licensed master plumber or licensed gasfitter.

(c) Any person who shall perform any gasfitting work within the City which is not by or under the supervision of a licensee as provided in this section or otherwise qualified pursuant to section 5-241 shall be guilty of a misdemeanor.

Sec. 5-204. Qualifications; examinations.

(a) The administrative authority shall establish standards and procedures for the qualifications, and licensing of gasfitters. The administrative authority shall issue an appropriate license to each person who meets the qualifications thereof. The administrative authority shall keep an official record of all licenses issued.

(b) The administrative authority shall issue a gasfitter's license when an applicant presents a valid license issued by the State of Maryland Plumbing License Board, or a valid gasfitter's license issued by the Washington Suburban Sanitary Commission.

(c) No license shall be granted to any person under the age of twenty-one (21) years.

(d) The examination fee shall be as set by the agency approved by the administrative authority to give the examination.

Sec. 5-205. Fee.

A license shall be issued under this division to qualified applicants only upon payment of a fee in the amount established by resolution of the Mayor and Council.

Sec. 5-206. Term.

Licenses required by this division shall expire at the end of the calendar year for which they were issued.

Sec. 5-207. Bond.

A person who has been issued a gasfitter's license shall execute and deposit with the administrative authority a bond in the sum of five thousand dollars ($5,000.00), or certificate of insurance with a minimum of three hundred thousand dollars ($300,000.00) personal injury coverage and one hundred thousand dollars ($100,000.00) property damage coverage. Such bond shall be conditioned that all gasfitting work performed by the licensee or under his supervision shall be performed in accordance with this article and that he will pay all fines and penalties properly imposed upon him for violation of the provisions of this article. A gasfitter's license shall not be valid unless a bond is executed and deposited as herein provided or specified insurance certificate presented. Individuals who hold a valid Maryland State Master Plumber's license are exempt from bond or insurance requirements.

Sec. 5-208. Use of licensee's name by another; change of address. etc.

No person who has obtained a gasfitter's license shall allow his name to be used by another person either for the purpose of obtaining permits, or for doing business or work under the license. Every person licensed shall notify the administrative authority of the address of his place of business, if any, and the name under which such business is carried on and shall give immediate notice to the administrative authority of any change in either.

SECTION 10. That Article X, “Mechanical Code”, is hereby repealed and re-enacted with amendments as follows:

ARTICLE X. MECHANICAL CODE

DIVISION 1. GENERALLY

Sec. 5-216. Scope.

This article shall govern the design and installation of mechanical systems, including heating systems, process piping, boilers and pressure vessels, appliances utilizing gas, liquid or solid fuel, chimneys and vents, mechanical refrigeration systems, fireplaces, barbecues, incinerators, crematories, fire protection systems, and air pollution control systems.

Secs. 5-217 – 5-220. Reserved.

DIVISION 2. ADMINISTRATION AND ENFORCEMENT

Sec. 5-221. International Mechanical Code--Adopted.

The International Code Council (ICC) International Mechanical Code, ~~2009~~ 2012 Edition, as modified herein, is hereby adopted as the mechanical code for the City. One (1) copy of such publication as adopted shall be maintained by the ~~City Clerk in the office of the Council~~Inspection Services Division and made available for inspection by the public during regular office hours. Any amendment or change in such publication hereafter promulgated by the International Code Council shall not become a part of this article until adopted by ordinance. References to other ordinances and codes of the City shall be interpreted and applied in accordance with the terms and effect of such ordinances and codes at the time of such application and interpretation.

Sec. 5-222. Same--Amendments.

The ICC International Mechanical Code, ~~2009~~ 2012 Edition (IMC), is amended in the following respects:

Section 101.1 of the IMC is amended to read as follows:

> **101.1 Title.** These regulations shall be known as the *Mechanical Code of the City of Rockville*, hereinafter referred to as "this code".

Section 106.1 of the IMC is amended to read as follows:

> **106.1 When required.** An owner, authorized agent or contractor who desires to erect, install, enlarge, alter, repair, remove, convert or replace a mechanical system, the installation of which is regulated by this code, or to cause such work to be done, shall first make application to the code official and obtain the required permit for the work. Such permit shall be issued to an HVACR contractor, licensed by the State of Maryland for the type of work covered under the permit.
>
> > **Exception:** Where equipment and appliance replacements or repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day of the department of mechanical inspection.

Section 106.2 of the IMC is amended to read as follows:

> **106.2 Permits not required.** Permits shall not be required for the following:
>
> 1. Portable heating appliances connected to fixed tanks up to 500 gallons;
> 2. Portable ventilation appliances and equipment;
> 3. Portable cooling units;
> 4. Steam, hot water or chilled water piping within any heating or cooling equipment or appliances regulated by this code;
> 5. The replacement of any minor part that does not alter the approval of equipment or an appliance or make such equipment or appliance unsafe; and
> 6. Portable evaporative coolers.

Exemption from the permit requirements of this code shall not be deemed to grant authorization for work to be done in violation of the provisions of this code or other laws or ordinances of this jurisdiction.

Sections 106.4.3 and *106.4.4* of the IMC are amended to read as follows:

106.4.3 Expiration. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within six (6) months after its issuance, or if the work authorized by such permit does not continue to progress or is abandoned for a period of six (6) months after the last approved/valid inspection. Before such work recommences, a new permit shall be first obtained and the appropriate fees shall be paid.

The fees shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work.

106.4.4 Extensions. The code official can extend the time for action by the permittee if there is reasonable cause. A permittee holding an unexpired permit shall have the right to apply for an extension, in writing, for time to complete such work. The extension shall be requested for a justifiable cause. ~~A permit shall not be extended more than once.~~

Sections 106.5.1 and *106.5.2* of the IMC are amended to read as follows:

106.5.1 Work commencing before permit issuance. Any person who commences work on a mechanical system, except as provided for in Section 106.1, before obtaining the necessary permits shall be subject to, an investigation fee as set forth by resolution, and 100 percent of the usual permit fee.

106.5.2 Fee Schedule. The fees for mechanical work shall be as established by resolution of the Mayor and Council.

Section 106.5.3 of the IMC is deleted in its entirety.

Section 107.2 of the IMC is amended to add No. 4 to read as follows:

4. Other inspections as deemed necessary by the Code Official.

Sections 108.4 and *108.5* of the IMC are amended to read as follows:

108.4 Violation penalties. Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter or repair mechanical work in violation of the approved construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be

guilty of a municipal infraction. Each day that a violation continues after notice has been served shall be deemed a separate offense.

108.5 Stop work orders. Upon notice from the code official that mechanical work is being done contrary to the provisions of this code or in a dangerous or unsafe manner, such work shall immediately cease. Such notice shall be verbal or in writing and shall be given to the owner of the property, or to the owners agent, or to the person doing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work on the system after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable for a fine as established by resolution.

Section 109 of the IMC is to be deleted in its entirety, and replaced to read as follows:

109.1 Administrative Appeals. Any person aggrieved by and desirous of challenging a decision of the administrative authority in connection with the interpretation, application, or modification of any provision of this chapter relating to the manner of construction or materials used in connection with the erection, alteration, or repair of a building or structure or system installed therein, shall appeal such decision to a Board of Adjustments and Appeals. An appeal may be taken when it is claimed that:

(1) The true intent of the code or the rules legally adopted there under have been incorrectly interpreted; or

(2) The provisions of the code do not fully apply; or

(3) An equally good or better form of construction can be used.

109.2 Application for appeal. An appeal shall be filed with the City Clerk within seven (7) calendar days from the date of the administrative decision being appealed, and a copy thereof shall be submitted to the Chief of Inspection Services Division. The appeal shall be in writing and shall contain a detailed statement of the reasons in support of such appeal.

109.3 Membership.

109.3.1. Number. The Board of Adjustments and Appeals shall consist of three (3) persons:

a) A licensed professional engineer or architect chosen by the administrative authority;

b) A licensed professional engineer or architect chosen by the owner of the subject building or structure; and

c) A licensed professional engineer or architect to be jointly chosen by the other two (2) members.

109.3.2 Compensation. All fees charged by the licensed professional engineers or architects to serve on the Board shall be paid for by the person appealing the administrative decision.

109.4 Meetings and Hearings. The Board of Adjustments and Appeals shall conduct a hearing on the appeal, at which time the appellant, the appellant's representative, representatives of the City who have inspected the subject building or structure or applicable system installed therein, and any other person having knowledge of the matter or whose interests may be affected by the decision on the appeal shall be given an opportunity to be heard. The hearing shall be conducted informally, and the formal rules of evidence shall not apply. The Board may accept written testimony and shall give it such weight as it deserves.

109.4.1 Interpretation. Interpretation given provisions of the applicable ICC or NFPA Code by the International Code Council or National Fire Protection Association shall be given great deference.

109.4.2 Actions. The Board may inspect the structure or building and conduct any other investigation or research necessary in order to render a decision.

109.5 Decision. The following process shall be followed:

(1) Within fifteen (15) working days of the hearing, the Board shall affirm, modify or reverse the decision of the administrative authority.

(2) The agreement of any two (2) members of the Board shall constitute the decision of the Board. Failure to obtain the agreement of any two (2) members of the Board shall constitute a denial of the appeal and an affirmation of the decision of the administrative authority. The Board's findings and decision shall be rendered in writing and copies thereof shall be provided to the appellant and any other party who has entered their appearance before the Board and requested a copy of the decision. The decision may contain recommendations for remedial steps to be taken to meet the intent of the applicable code.

109.6 Appeal. Any person aggrieved by a decision of the Board of Adjustments and Appeals may appeal the decision to the Circuit Court for the County in accordance with the Maryland Rules as set forth in Title 7, Chapter 200.

Section 303.3 of the IMC is amended by adding No. 6 and No. 7 to read as follows:

6. Under stairs.

7. Garages, repair garages or similar spaces.

Section 506.1 of the IMC is amended to read as follows:

506.1 General. Commercial kitchen hood ventilation ducts and exhaust equipment shall comply with the requirements of this section and the requirements of the ~~2008~~ 2011 NFPA 96. Commercial kitchen grease ducts shall be designed for the type of cooking appliance and hood served.

506.1.1 Placards for Kitchen Exhaust Extinguishing Systems. Placards installed for the operating instructions of kitchen exhaust hood-extinguishing systems shall have bilingual language provided. The main language shall be English with a secondary language representative of the work force of the restaurant.

Section 507.1 of the IMC is amended to delete *Exception No. 3*.

Section 507.2.1 of the IMC is amended to read as follows:

507.2.1 Type I hoods. Type I hoods shall be installed where cooking appliances produce grease or smoke, such as occurs with griddles, fryers, broilers, ovens, ranges and wok ranges. Installation and maintenance of commercial kitchen Type I hoods shall be governed by this code and the ~~2008~~ 2011 NFPA-96~~.~~, *Standard for Ventilation Control and Fire Protection of Commercial Operations*, 2011 Edition.

Section ~~603.17.3~~603.18.3 of the IMC is added to read as follows:

~~603.17.3~~603.18.3 Diffusers in suspended ceilings. Diffusers in suspended ceilings shall be adequately supported independent of the ceiling assembly and tied at opposite ends to the building structure with #12 wire or equivalent.

Secs. 5-223 – 5-230. Reserved.

SECTION 11. That Article XI, "Plumbing Code", is hereby repealed and re-enacted with amendments as follows:

ARTICLE XI. PLUMBING CODE

DIVISION 1. GENERALLY

Sec. 5-231. Definitions.

Except as set forth below and in Section 5-68, the terms used in this article shall have the same definitions as in the International Code Council (ICC) International Plumbing Code, ~~2009~~ 2012 Edition.

Approved means accepted or acceptable under an applicable specification stated or cited in this code and/or the ICC International Plumbing Code, ~~2009~~ 2012 Edition, as issued by the International Code Council, Inc., or accepted as suitable for the proposed use under the

procedures and powers of the administrative authority. Oral approval by the administrative authority or his duly authorized agents shall constitute full and complete approval irrespective of the requirements of the ICC International Plumbing Code, ~~2009~~ 2012 Edition, for written approval except those circumstances wherein the master plumber shall specifically request the same in writing.

Existing work means a plumbing system or any part thereof, which has been lawfully installed prior to the adoption of this ordinance.

Plumbing official means the Chief of the Division of Inspection Services.

Sec. 5-232. Scope.

The provisions of this article shall apply to and govern plumbing as defined in this article including the practice, materials, and fixtures used in the installation, maintenance, extension, and alteration of all piping, fixtures, appliances, and appurtenances in connection with any of the following: Sanitary drainage or storm drainage facilities, the venting system, and the public or private water supply systems, within or adjacent to any building or other structure, or conveyance, also the practice and material used in the installation, maintenance, extension, or alteration of the stormwater or sewage system of any premises to their connection with any point of public disposal or other terminal.

Secs. 5-233 – 5-240. Reserved.

DIVISION 2. ADMINISTRATION AND ENFORCEMENT

Sec. 5-241. Plumbing permit.

(a) No plumbing work shall be undertaken prior to the issuance of a permit therefor by the administrative authority. Such permit shall be issued to a licensed master plumber, except as provided otherwise in this article. Repairs involving only the working parts of a faucet or valve, clearance of stoppages, repairing of leaks, or replacement of defective faucets or valves may be made without a permit provided no changes are made in the piping to the fixtures.

(b) Any permit required by this section may be issued to any person to do any work regulated by this article in a single-family dwelling used exclusively for living purpose, including the usual accessory buildings and quarters in connection with such building, provided the person is the bona fide owner of such dwelling and that the same will be occupied by the owner and that the owner shall personally purchase all material and perform all labor in connection therewith.

(c) Application for a permit shall be made on suitable form provided by the administrative authority. The application shall be accompanied by the payment of fees in the amount established by resolution.

(d) No permit shall be issued until plans and specifications showing the proposed work in necessary detail have been submitted to the administrative authority and it has been determined from examination of such plans and specifications that they give assurance that the work will be conformed to the provisions of this article. If a permit is denied, the applicant may submit revised plans and specifications without payment of additional fee.

(e) If, in the course of the work it is found necessary to make any change from the plans and specifications on which a permit has been issued, amended plans and specifications shall be submitted and a supplement permit, subject to the same conditions applicable to the original application for permit shall be issued to cover the change. Any additional permit fees for the change in work must be paid prior to permit issuance.

Sec. 5-242. Certificates of approval.

Certificates of approval issued upon the satisfactory completion and testing of a plumbing system(s) shall be in writing.

Sec. 5-243. Inspections and tests.

(a) It shall be the duty of the administrative authority to make the inspections and tests required by this article. The master plumber or his representative shall request inspections and tests following the Division's established procedure for inspection scheduling.

(b) Nothing in this article shall be construed to require actual testing of facilities when in the judgment of the administrative authority such testing is unnecessary. No testing deemed necessary by the administrative authority shall be prohibited. In the case of discretionary action in determinations of the administrative authority under the provisions of this article, the relevant facts shall be considered and determinations made in the exercise of reasonable discretion and all such determinations shall be final in the absence of abuse of discretion.

(c) Where an additional inspection under this division is made necessary by failure to complete or properly perform the work inspected, or by failure of work tested to withstand tests, such additional inspection shall not be made until the person requesting such inspection shall pay to the administrative authority the fee established by the resolution.

Sec. 5-244. Rules for protection of water supply system authorized.

The administrative authority shall make such rules and regulations in furtherance of the purposes of this article and not inconsistent with the provisions of this administrative authority, for the installation, repair or alteration of air conditioning systems, water treatment equipment, and water-operated devices as may be deemed necessary to properly protect the water supply system.

Secs. 5-245 – 5-250. Reserved.

DIVISION 3. TECHNICAL STANDARDS

Sec. 5-251. International Plumbing Code--Adopted.

The International Code Council (ICC) International Plumbing Code, ~~2009~~ 2012 Edition, as modified herein, is hereby adopted as the plumbing code for the City. One (1) copy of such publication as adopted shall be maintained by the ~~City Clerk in the office of the Council~~Inspection Services Division and made available for inspection by the public during regular office hours. Any amendment or change in such publication promulgated by the International Code Council shall not become a part of this article until adopted by ordinance. References to other ordinances and codes of the City shall be interpreted and applied in accordance with the terms and effect of such ordinances and codes at the time of such application and interpretation.

Sec. 5-252. Same--Amendments.

The ICC International Plumbing Code, ~~2009~~ 2012 Edition (IPC), is amended in the following respects:

Section 101.1 of the IPC is amended to read as follows:

> **101.1 Title.** These regulations shall be known as the *Plumbing Code of the City of Rockville*, hereinafter referred to as "this code".

Section 103.1 of the IPC is deleted in its entirety.

Section ~~105.5.1~~105.4.1 of the IPC is amended to read as follows:

> **~~105.5.1~~105.4.1 Equipment reuse.** Equipment and devices shall not be reused unless such elements have been reconditioned, tested, placed in good and proper working condition and approved.

Section 106.3 of the IPC is amended to read as follows:

> **106.3 Application for permit.** Each application for a permit, with the required fee, shall be filed with the code official on a form furnished for that purpose and shall contain a general description of the proposed work. The application shall be signed by the City licensed Master Plumber or if residential work, that the International Residential Code allows the homeowner to do, the homeowner can sign the application.

Section 106.5.1 of the IPC is amended to read as follows:

> **106.5.1 Reviewed construction documents.** When the code official issues the permit where construction documents are required, the construction documents shall be endorsed in writing and stamped "REVIEWED." Such reviewed construction documents shall not

be changed, modified or altered without authorization from the code official. All work shall be done in accordance with the reviewed construction documents.

Section 106.5.3 of the IPC is amended to read as follows:

106.5.3 Expiration. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within six (6) months after its issuance, or if the work authorized by such permit does not continue to progress or is abandoned for a period of six (6) months after the last approved/valid inspection. Before such work recommences, a new permit shall be first obtained and the appropriate fees shall be paid.

The fees shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work.

Exception: Water and Sewer Contribution fees will not need to be repaid.

Section 106.5.4 of the IPC is amended to read as follows:

106.5.4 Extensions. The code official can extend the time for action by the permittee if there is reasonable cause. A permittee holding an unexpired permit shall have the right to apply for an extension, in writing, for time to complete such work. The extension shall be requested for a justifiable cause. ~~A permit shall not be extended more than once.~~

Section 106.6 of the IPC is amended to read as follows:

106.6 Fees. A permit shall not be issued until the fees prescribed in Section 106.6.2 have been paid.

106.6.1 Work commencing before permit issuance. Any person who commences any work on a plumbing system before obtaining the necessary permits shall be subject to 100 percent of the usual permit fee in addition to the investigation fees established by resolution of the Mayor and Council.

106.6.2 Fee schedule. The fees for all plumbing work shall be established by resolution of the Mayor and Council.

106.6.3 Fee refunds. The code official shall authorize the refunding of the full amount of any fee paid hereunder that was erroneously paid or collected.

Section 107.2 of the IPC is amended by adding No. 4 to read as follows:

4. Other inspections as deemed necessary by the Code Official.

Sections 107.2.4, 107.2.5.1, and *107.2.5.2* of the IPC are deleted.

Section 108.4 of the IPC is amended to read as follows:

108.4 Violation penalties. Any persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter or repair plumbing work in violation of the approved construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a municipal infraction. Each day that a violation continues after notice has been served shall be deemed a separate offense.

Section 109 of the IPC is to be deleted in its entirety, and replaced with the following:

109.1 Administrative Appeals. Any person aggrieved by and desirous of challenging a decision of the administrative authority in connection with the interpretation, application, or modification of any provision of this chapter relating to the manner of construction or materials used in connection with the erection, alteration, or repair of a building or structure or system installed therein, shall appeal such decision to a Board of Adjustments and Appeals. An appeal may be taken when it is claimed that:

(1) The true intent of the code or the rules legally adopted there under have been incorrectly interpreted; or

(2) The provisions of the code do not fully apply; or

(3) An equally good or better form of construction can be used.

109.2 Application for appeal. An appeal shall be filed with the City Clerk within seven (7) calendar days from the date of the administrative decision being appealed, and a copy thereof shall be submitted to the Chief of Inspection Service Division. The appeal shall be in writing and shall contain a detailed statement of the reasons in support of such appeal.

109.3 Membership.

109.3.1. Number. The Board of Adjustments and Appeals shall consist of three (3) persons:

a) A licensed professional engineer or architect chosen by the administrative authority;

b) A licensed professional engineer or architect chosen by the owner of the subject building or structure; and

c) A licensed professional engineer or architect to be jointly chosen by the other two (2) members.

109.3.2 Compensation. All fees charged by the licensed professional engineers or architects to serve on the Board shall be paid for by the person appealing the administrative decision.

109.4 Meetings and Hearings. The Board of Adjustments and Appeals shall conduct a hearing on the appeal, at which time the appellant, the appellant's representative, representatives of the City who have inspected the subject building or structure or applicable system installed therein, and any other person having knowledge of the matter or whose interests may be affected by the decision on the appeal shall be given an opportunity to be heard. The hearing shall be conducted informally, and the formal rules of evidence shall not apply. The Board may accept written testimony and shall give it such weight as it deserves.

109.4.1 Interpretation. Interpretation given provisions of the applicable ICC or NFPA Code by the International Code Council or National Fire Protection Association, shall be given great deference.

109.4.2 Actions. The Board may inspect the structure or building and conduct any other investigation or research necessary in order to render a decision.

109.5 Decision. The following process shall be followed:

(1) Within fifteen (15) working days of the hearing, the Board shall affirm, modify or reverse the decision of the administrative authority.

(2) The agreement of any two (2) members of the Board shall constitute the decision of the Board. Failure to obtain the agreement of any two (2) members of the Board shall constitute a denial of the appeal and an affirmation of the decision of the administrative authority. The Board's findings and decision shall be rendered in writing and copies thereof shall be provided to the appellant and any other party who has entered their appearance before the Board and requested a copy of the decision. The decision may contain recommendations for remedial steps to be taken to meet the intent of the applicable code.

109.6 Appeal. Any person aggrieved by a decision of the Board of Adjustments and Appeals may appeal the decision to the Circuit Court for the County in accordance with the Maryland Rules as set forth in Title 7, Chapter 200.

Section 202 of the IPC is amended by deleting the definition "Individual sewage disposal system."

Section 301.3 of the IPC is amended to read as follows:

301.3 Connections to the sanitary drainage system. All plumbing fixtures, drains, appurtenances and appliances used to receive or discharge liquid wastes or sewage shall be directly connected to the sanitary drainage system of the building or premises, in accordance with the requirements of this code. This section shall not be construed to prevent indirect waste systems required by Chapter 8 of the IPC.

Exception: Bathtubs, showers, lavatories, clothes washers and laundry trays shall not be required to discharge to the sanitary drainage system where such fixtures discharge to an approved gray water system, as per ~~Appendix C~~Chapter 13 of the IPC, for flushing of water closets and urinals or for subsurface landscape irrigation.

Sections ~~305.6~~305.4 and *~~305.6.1~~305.4.1* of the IPC are amended to read as follows:

~~305.6~~305.4 Freezing. Water, soil and waste pipes shall not be installed outside of a building, in attics or crawl spaces, concealed in outside walls, or in any other place subjected to freezing temperature unless adequate provision is made to protect such pipes from freezing by insulation or heat or both. Exterior water supply system piping shall be installed two (2) feet, six (6) inches below grade.

~~305.6.1~~305.4.1 Sewer depth. Building sewers shall be a minimum of two (2) feet two (2) inches (2' 2") below grade.

Section 312.11 is added to the IPC to read as follows:

312.11 Grease and Oil Interceptors. All establishments, which are required to have grease or oil interceptors, must maintain a log indicating frequency of waste retrieval by an appropriate contractor. The log and a copy of the waste removal contract must be available at all times for inspection by the administrative authority.

Section 404.1 of the IPC is amended to read as follows:

404.1 Where required. Accessible plumbing facilities and fixtures shall be provided in accordance with the State of Maryland's Accessibility Code (COMAR 05.02.02)

Section 412.2.1 is added to the IPC to read as follows:

412.2.1 Grease interceptor required. Floor drains located within a ten (10) foot diameter of grease producing equipment shall discharge through a grease interceptor.

Exception: Floor drains located inside walk in coolers.

Section 412.5 is added to the IPC to read as follows:

412.5 Fire Pump Room Drains. Each fire pump room shall be provided with a minimum of two drains located near the fire pump. Each drain shall have a minimum of 4 inch diameter opening. One drain shall be dedicated to the main drain from the pump discharge piping and the second drain opening shall serve the accessory drain piping from the fire pump.

Section 502.1.2 is added to the IPC to read as follows:

502.1.2 Prohibited location. Fuel-fired water heaters shall not be installed in a sleeping room, bathroom, under stairs, or in a closet accessed through a sleeping room or bathroom.

Exception: A sealed combustion chamber or direct vent water heater may be installed in those locations.

Section 502.3 of the IPC is amended to read as follows:

502.3 Water heaters installed in attics. Attics containing a water heater shall be provided with an opening and unobstructed passageway large enough to allow removal of the water heater. The passageway shall not be less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 feet (6096 mm) in length when measured along the centerline of the passageway from the opening to the water heater. The passageway shall have continuous solid flooring not less than 24 inches (610 mm) wide. A level service space at least 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present at the front or service side of the water heater. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm) where such dimensions are large enough to allow removal of the water heater. The floor/ceiling rafters supporting a water heater must be designed to accept the additional loading imposed by the water heater.

Section 603.1 of the IPC is amended to read as follows:

603.1 Size of water service pipe. The water service pipe shall be sized to supply water to the structure in the quantities and at the pressure required by this code. The minimum diameter of water service pipe shall be one (1) inch.

Exception: Repairs can be done in the existing pipe size as long as water service pipe is not completely replaced.

Table 604.4 of the IPC is amended to read as follows:

TABLE 604.4
MAXIMUM FLOW RATES AND CONSUMPTION FOR PLUMBING FIXTURES AND FIXTURE FITTINGS

PLUMBING FIXTURE OR FIXTURE FITTING	MAXIMUM FLOW RATE OR QUANTITY[b]
Lavatory, private	1.5 gpm at 60psi
Lavatory, public, (metering)	0.25 gallon per metering cycle
Lavatory, public (other than metering)	0.5 gpm at 60 psi
Shower head[a]	2.0 gpm at 80psi
Sink faucet	1.5 gpm at 60 psi
Urinal	0.5 gallon per flushing cycle

Water closet (tanktype)[c]	1.28 gallons per flushing cycle
Water closet (flushometer)	1.6 gallons per flushing cycle

For SI: 1 gallon per minute = 3.785 L/m,
1 pound per square inch = 6.895 kPa

a. A hand-held shower spray is a shower head.
b. Consumption tolerances shall be determined from referenced standards.
c. Dual Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. Flush volumes will be tested in accordance with ASME A112.19.2 and ASME A112.19.14.

Section 605.3 of the IPC is amended to read as follows:

605.3 Water service pipe. Water service pipe shall conform to NSF61 and the requirements of section 5-253(6) of the Rockville City Code. All water service pipe installed underground and outside of the structure, shall have a minimum working pressure rating of 160 psi (1100 kPa) at 73.4EF (23EC). Where the water pressure exceeds 160 psi (1100 kPa), piping material shall have a minimum rated working pressure equal to the highest available pressure. All ductile iron water pipe shall be cement mortar lined in accordance with AWWA C104.

Table 605.3 of the IPC is amended by deleting "asbestos cement pipe" as an approved materials for water service pipe.

Section 606.2 of the IPC is amended to read as follows:

606.2 Location of shutoff valves. Shutoff valves shall be installed in the following locations:

1. On the fixture supply to each plumbing fixture.
2. On the water supply pipe to each sillcock.
3. On the water supply pipe to each appliance or mechanical equipment.

Section 608.16.4 of the IPC is amended by deleting Exception No. 1.

Section 701.9.1 is added to the IPC to read as follows:

701.9.1 Marking of grease interceptor lines, No plumbing fixtures shall be connected to a dedicated plumbing line routed to the grease interceptor. These lines shall be labled "Grease Line" in a minimum two inch (2") high letters spaced a minimum of four feet (4') apart.

Section 708.2 of the IPC is amended to read as follows:

708.2 Cleanout plugs. Cleanout plugs shall be of brass, and shall have countersunk square heads. Cleanout plugs with borosilicate glass systems shall be of borosilicate glass.

Section 802.1.1 of the IPC is amended to read as follows:

802.1.1 Food handling. Equipment and fixtures utilized for the storage, preparation and handling of food shall discharge through an indirect waste pipe by means of an air gap. Three (3) compartment sinks required by the Montgomery Health Department that are used as a combination dishwashing and culinary sink shall discharge by means of an air gap.

Exception: This requirement shall not apply to dishwashing machines and sinks used solely for dishwashing.

Section 802.2 of the IPC is amended by to read as follows:

802.2 Installation. Indirect waste piping shall not be less than one (1) inch in diameter. All indirect waste piping shall discharge through an air gap or air break into a waste receptor or standpipe. Waste receptors and standpipes shall be trapped and vented and shall connect to the building drainage system. All indirect waste piping that exceeds 2 feet (610 mm) in developed length measured horizontally, or 4 feet (1219 mm) in total developed length, shall be trapped.

Section 1002.4.1 is added to the IPC to read as follows:

1002.4.1 Trap primers at floor drains. All floor drains with traps shall be required to have trap primers.

Section 1003 is deleted in its entirety, and replaced to read as follows:

SECTION 1003
INTERCEPTORS AND SEPARATORS

1003.1 Grease Abatement Systems - General. Grease abatement systems shall be provided to prevent the discharge of Fats, Oil, Grease, and other substances harmful or hazardous to the building drainage system, the public sewer, the private sewage disposal system or the sewage treatment plant or processes. This system shall be installed in accordance with the City's Fats, Oils, and Grease (FOG) ordinance.

1003.1.1 Applicability. The regulations in this Section shall apply to establishments where food is served to or provided for the public, with or without charge, including, but not limited to restaurants, cafeterias, hotel kitchens, church kitchens, school kitchens, hospital cafeterias, bars, or any other commercial

operation that has the potential to discharge grease laden wastewater; hereafter referred to as Food Service Establishments (FSE).

1003.1.2 Definitions

1003.1.2.1 Grease Abatement System: Any grease interceptor, grease trap, grease recovery device, or any treatment system designed to remove Fats, Oils and Grease (FOG) from FSE wastewater, with two general subcategories as follows:

1003.1.2.2 Volume-Based Grease Interceptor: Grease interceptor design based on volume and retention time with no specific requirement for upstream sink tail piece flow restrictions or a flow control device. Sizing is based on the number of drainage fixture units connected to the grease interceptor. Minimum size = 300 gallons. Typically - installed outdoors and underground. Typically - cleaned by pumping contractors. Sometimes - referred to as a gravity grease interceptor or outdoor grease interceptor.

1003.1.2.3 Flow-Based Grease Interceptor: Grease interceptor design based on flow rate with a specific requirement for upstream sink tailpiece flow restriction (for indirectly connected fixtures) and a flow control device. Solids screens or strainers with a maximum screen size of 1/8" perforations must be provided to capture the solids discharge from dish/pot washing sinks and floor sinks to avoid overloading the grease interceptor with solids. Sizing is based on the reasonable maximum flow anticipated from the fixtures connected to the grease interceptor based on the WSSC Tail Piece Flow Rate Table (new) for indirect connections, and IPC Chapter 10/ASME A112.14.3 for direct connections. Minimum size = 7 gallons per minute. Flow-based grease interceptors shall conform to ASME A112.14.3 or ASME A112.14.4 at the calculated flow rate. The following flow-based grease interceptors are differentiated based on whether or not there are mechanical grease removal features:

1003.1.2.3.1. Passive Flow Based Grease Interceptor: Grease interceptor design with no mechanical grease removal features. Typically -installed indoors under a sink or outdoors in-ground. Cleaned by the FSE or pumping contractors. Sometimes referred to as a hydro-mechanical grease interceptor (when designed and installed with a flow control device with air intake) or a grease trap (when designed and installed with a flow control device without air intake).

1003.1.2.3.2. Mechanical Flow Based Grease Interceptor: Grease interceptor design with mechanical grease removal features. Typically - installed indoors under a sink. Cleaned and maintained by the FSE, contractors, or specialty maintenance contractors. Sometimes - referred to as a grease removal (or recovery) device.

1003.2 Where Required.

1003.2.1 Grease abatement system required. A grease abatement system shall be required to receive the drainage from fixtures and equipment with potential grease-laden waste. Fixtures and equipment shall include, but not be limited to: pot sinks; pre-rinse sinks; soup kettles or similar devices; fresh meat cutting and prepping; wok stations; floor drains; floor sinks; automatic hood wash units; and dishwashers.

1003.2.2 Flow Based Grease Interceptors. Flow Based Grease Interceptors shall receive waste only from fixtures and equipment that allow fats, oils or grease to be discharged.

1003.2.3 Volume Based Grease Interceptors. Volume Based Grease Interceptors shall receive the discharge of the entire kitchen and shall be sized accordingly.

> **Exception:** Waste from sinks or fixtures with permitted food waste disposers shall discharge directly to the sanitary drainage system.

1003.2.4 Responsibility. Property owners of commercial properties, or their official designee(s), shall be responsible for the installation and maintenance of grease abatement systems serving multiple Food Service Establishments that are located on a single parcel.

1003.3 Where Not Required - Conditional Variance (Existing FSEs Only).

1003.3.1 Conditional Variance. At the request of the FSE, the Permitting Authority may grant a conditional variance of the grease abatement system requirements if, in the judgment of the Permitting Authority, there is limited potential for FOG in the discharge when considering, including but not limited to, the frequency of operation, the miscibility of the discharge, the volume of flow and the potential for fats, oils and grease discharge based upon the menu.

1003.3.1.2 Revocation. The conditional variance can be revoked due to an actual blockage or sanitary sewer overflow attributed to the FSEs FOG discharge.

1003.3.1.3 Additional requirements. This conditional variance applies to the requirement to install a grease abatement system only. FSEs granted this variance may still be required to obtain a wastewater discharge permit and will be subject to regular inspections.

1003.4 Prohibited Connections

1003.4.1 Human waste. Waste from bathrooms or similar fixtures conveying human waste shall connect directly to the building sanitary drain, and shall not connect through any grease abatement system.

1003.4.2 Signage required. Where fixtures not generally subject to grease, such as fruit and vegetable washing sinks, connect to the regular building drain, a permanent engraved sign shall be posted at such sinks indicating their limited use. (Example: “VEGETABLE WASHING ONLY” or “NO GREASE”).

1003.4.3 Food Waste Disposers. Food Waste Disposers shall not be installed on any fixture that requires grease abatement.

1003.4.4 Pumps. All grease abatement systems shall receive only stabilized flow from gravity-flow grease waste collection systems and shall not receive pressurized discharge such as from sewage pumps or lift stations. Where pumping is required, grease must be separated prior to the lift station.

1003.5 Flow Based Grease

1003.5.1 General

1003.5.1.1 Approval. The location, size and piping details shall require plan approval prior to installation.

1003.5.1.2 Specifications. Flow-based grease interceptors shall conform to ASME A112.14.3 and/or ASME A112.14.4 and shall be installed in accordance with manufacturer's specifications.

1003.5.1.3 Flow-control device. The manufacturer required flow control device shall be installed, sized to match the interceptors flow rate, and shall be readily accessible for inspection, cleaning and maintenance. The flow-control device shall be vented and terminate not less than 6 inches (152 mm) above the flood rim level or be installed in accordance with the manufacturer’s instructions.

1003.5.1.4 Solids screening. Solids screens or strainers with a maximum of 1/8" perforations shall be provided to capture the solids discharge from dish/pot washing sinks and floor sinks to minimize the solids loading on flow-based grease interceptors.

1003.5.2 Location And Installation

1003.5.2.1 Location. Flow-based grease interceptors shall be installed below grade, direct buried, where listed for such application or within a vault; or indoors within a conditioned space; or in accordance with manufacturer’s requirements. Mechanical flow-based interceptors shall not be installed in a vault.

1003.5.2.2 Access. Flow-based grease interceptors shall be readily accessible for daily maintenance, servicing and inspection.

1003.5.2.3 Headroom. Headroom above flow-based grease interceptors as well as solid sediment strainers shall be sufficient to fully open lid and easily remove internal components.

1003.5.2.4 Flow control device. The flow control device shall be accessible for maintenance.

1003.5.3 Sizing

1003.5.3.1 Directly Connected Fixtures. For sinks, fixtures and drains directly connected to a flow-based grease interceptor (no requirement for an air gap), flow-based grease interceptor sizing shall be determined pursuant to IPC 1003.3.4, and shall conform to ASME A112.14.3.

1003.5.3.2 Indirectly Connected Fixtures. For sinks, fixtures and drains indirectly connected to a flow-based grease interceptor (air gap required), a restricted flow tail piece is required and the flow-based grease interceptor shall be sized utilizing Table 1003.a and Table 1003.b.

1003.5.3.3 Single indirectly connected fixture flow rate. For a single indirectly connected fixture served by a flow-based grease interceptor, the full tail piece flow rate from Table 1003.a shall be used.

1003.5.3.4 Multiple indirectly connected fixtures flow rates. For multiple indirectly connected fixtures served by a single flow-based grease interceptor, fixtures with the highest flow rates shall be considered first, with the full tail piece flow rates for the two highest flow fixtures/drains, 1/2 of the tail piece flow rates for the next two highest flowing fixture/drains, and 1/4 of the tail piece flow rates for each subsequent fixtures/drains shall be used (see Table 1003.b below).

1003.5.3.5 Combination flow rates. Flow-based grease interceptors serving both indirectly and directly connected sinks, fixtures and/or drains shall be sized based on a proper combination of the methods listed above.

Table 1003.a
Flow Rates for Various Drain Tail Piece Sizes

Tail Piece Diameter	Flow Rate
1/2”	7 gpm
3/4”	12 gpm
1”	20 gpm
1-1/4”	30 gpm
1-1/2”	40 gpm
2”	65 gpm

Table 1003.b
Multiple Indirect Connection Flow Factor Table

Fixture/Drain #1	Full Tail Piece Flow Rate
Fixture/Drain #2	Full Tail Piece Flow Rate
Fixture/Drain #3	1/2 Tail Piece Flow Rate
Fixture/Drain #4	1/2 Tail Piece Flow Rate
All additional Fixtures/Drains	1/4 Tail Piece Flow Rate

Note: Each tub/basin of multi-compartment sinks shall be counted as individual fixtures.

1003.6 Volume Based Grease Interceptors

1003.6.1 General

1003.6.1.1 Volume-Based Grease interceptors. Volume-Based Grease interceptors shall be designed and installed in accordance with current City details.

1003.6.1.2 Approval. The location, size and piping details shall require plan approval prior to installation.

1003.6.1.3 Specifications. Precast Concrete interceptors shall conform to the structural requirements contained in ASTM 1613 Standard Specification for Precast Concrete Interceptor Tanks

1003.6.2. Location

1003.6.2.1 In general. In general, volume-based grease interceptors shall be located below grade outdoors or indoors; or above grade indoors where listed for such applications and within a conditioned space.

1003.6.2.2 Access. Volume-based grease interceptors shall be readily accessible for daily maintenance, servicing and inspection.

1003.6.2.3 Manholes and cleanouts. Manholes and cleanouts shall be readily accessible for convenient inspection and maintenance.

1003.6.2.4 Kept clear of structures. No structures shall be placed directly upon or over the Interceptor.

1003.6.2.5 Indoor installation. Where an outdoor location is not possible or is impractical, volume-based interceptors may be installed indoors within twenty (20) feet of an accessible service entrance, unless otherwise approved.

1003.6.3 Sizing. The volume of the interceptor shall be determined by using table 1003.c. If the drainage fixture units (DFUs) are not known, the interceptor shall be sized based on the maximum DFUs allowed for the pipe size connected to the inlet of the interceptor.

Table 1003.c
Volume-Based Grease Interceptor Sizing
(from 2006 Uniform Plumbing Code Table 10-3)

DFUs[1]	Interceptor Volume
8	500 gallons
21	750 gallons
35	1,000 gallons
90	1,250 gallons

172	1,500 gallons
216	2,000 gallons
307	2,500 gallons
342	3,000 gallons
428	4,000 gallons
576	5,000 gallons
720	7,500 gallons
2,112	10,000 gallons
2,640	15,000 gallons

Notes:
1. The maximum allowable DFUs plumbed to the kitchen drain lines that will be connected to the grease interceptor.

1003.7 Scale trap seafood prep sinks. Scale trap seafood prep sinks shall discharge through a local scale separator prior to entering any portion of the drainage system or grease abatement system.

1003.8 Oil & Sand Separators Required

1003.8.1 General. All oil and sand interceptor details shall be approved in writing prior to installation and shall meet industrial waste discharge limitations.

1003.8.2 Size. Oil and sand interceptor size shall be determined by application as follows:

Small Interceptor - 64 cu. ft.

Large Interceptor - 216 cu. ft.

1003.8.3 Parking Garages. Parking garages not open to the outdoors and protected from surface and storm water run-off may have inside floor and trough drains connected to the sanitary sewer through an interceptor. Parking garages without wash down facilities may be served by a small interceptor; those with wash down facilities shall be served by a large interceptor.

1003.8.4 Vehicle Washing Establishments. All vehicle washing facilities shall have required drains connected to the sanitary drainage system through a large interceptor.

1003.8.5 Vehicle Service Stations. Vehicle service stations, maintenance and service garages, etc., shall have all required inside floor and trough drains connected to the sanitary drainage system through an interceptor.

a. Up to four (4) bays may be served by a small interceptor.
   Up to sixteen (16) bays may be served by a large interceptor.

b. No more than one (1) business shall be served by an interceptor.

c. Facilities providing vehicle lubrication service shall be supplemented by a manufactured oil separator with a used oil holding tank.

1003.9 Laundries. Laundry facilities not installed within an individual dwelling unit or intended for individual family use shall be equipped with an interceptor with a wire basket or similar device, removable for cleaning, that prevents passage into the drainage system of solids 0.5 in (12.7 mm) or larger in size, string, rags, buttons or other materials detrimental to the public sewage system.

1003.10 Bottling Establishments. Bottling plants shall discharge process wastes into an interceptor that will provide for the separation of broken glass or other solids before discharging waste into the drainage system.

1003.11 Venting of interceptors and separators. Interceptors and separators shall be designed so as not to become air bound where tight covers are utilized. Each interceptor or separator shall be vented where subject to a loss of trap seal.

1003.12 Access and maintenance of interceptors and separators. Access shall be provided to each interceptor and separator for service and maintenance. Interceptors and separators shall be maintained by periodic removal of accumulated grease, scum, oil, or other floating substances and solids deposited in the interceptor or separator.

Section 1101.2 of the IPC is amended to read as follows:

1101.2 Where required. When approved, stormwater may be discharged from roofs, paved areas, yards, courts, courtyards, downspouts, rain barrels, cisterns or rooftop storage facilities to vegetated areas such as lawns, gardens, grassy swales or bioretention cells on the same single record lot. In such instances, the stormwater shall flow away from the building and shall not flow over property lines onto adjacent lots unless it runs into existing natural water courses; otherwise, stormwater shall discharge to an approved place of disposal or into a separate storm sewer.

Appendix A Plumbing Permit Fee Schedule of the IPC is deleted in its entirety.

~~*Appendix C Gray Water Recycling Systems* of the IPC is to be adopted in its entirety~~.

Appendix ~~*H*~~ *G* is added to the IPC to incorporate *The Washington Suburban Sanitary Commission (WSSC) Manual of Standards.*

Appendix ~~*I*~~ *H* is added to the IPC to incorporate *The City of Rockville standards for Identification of Storm and Sanitary Discharge Lines*

Sec. 5-253. Same--Exceptions and supplemental standards.

The following apply to all installations, repairs, and alterations of plumbing and subject to the provisions of this article, anything to the contrary contained in the ICC International Plumbing Code, ~~2009~~ 2012 Edition or the International Residential Code, ~~2009~~ 2012 Edition, notwithstanding. It is the intent of the City to provide supplemental regulations and exceptions to the ICC International Plumbing Code, ~~2009~~ 2012 Edition, and the International Residential Code, ~~2009~~ 2012 Edition.

(1) *Fittings.* No changes in direction in drainage piping shall be made by the use of short sweep bends without specific approval of the administrative authority having been first had and obtained;

(2) *Depth of building sewer and water service (outside of buildings).* Sewers and water servicing pipe shall be installed below the recorded frost penetration, but in no case less than two (2) feet, two (2) inches for sewer and two (2) feet, six (6) inches for water piping below grade;

(3) *Water heating equipment.* A shutoff valve shall be provided in the cold water branch line to each water storage tank or each water heater. The shutoff valve so provided shall be protected from accidental closing and tampering;

(4) *Subdrains and storm sewers.* No building wall sub-drains, areaway, driveway or roof leaders shall be connected to the sanitary sewer. Such drain systems shall be separately connected to an independent dry well drainage system, to a storm sewerage system, or drained by some other method approved by the administrative authority;

(5) *Building sewer and sanitary drainage system.* The administrative authority may require the use of cast-iron pipe for the installation of the sanitary drainage system and the building sewer if unstable soil or other conditions warrant such use. A cleanout and brass plug with a countersunk head shall be installed as near the property line as possible. A #12 copper wire, with the end accessible at the cleanout, shall be taped to all nonmetallic sewer laterals to provide a means of locating the lateral by a metal detector or other device. An approved adaptor shall be used to provide connection between piping of different size, weight, and material;

(6) *Water service pipe and water distribution pipe.* Water service pipe installed underground between the City's main and the property line and from the property line to the structure to be supplied shall be type "K" copper tubing with flare fittings only for sizes up to and including two (2) inches. In the event type "K" copper tubing is unavailable, type "L" copper tubing may be used in an emergency when authorized by the City. Sizes three (3) inches and above shall be of cast-iron pressure pipe, suitable for conditions to which it will be subjected;

(7) *Fixture shutoff valves.* Each plumbing fixture shall be equipped with an accessible shutoff valve to interrupt water supply for servicing.

(8) *Water-cooled air conditioning, refrigeration machinery and compressor installations.*

a) Rate and Use of Cooling Water. All water-cooled air conditioning, refrigeration machinery and compressor installations using water from the public water supply for cooling purposes or discharging water into the City's sewerage or drainage systems, shall be installed in accordance with these regulations, and shall be

subject to the City's inspection and approval. A written permit will be required for each installation. Such installations will be permitted to take water from the City's system at a rate not greater than 0.08 gallon per minute per ton of refrigeration. An approved type of economizer or cooling tower shall be installed if necessary to meet this limitation;

b) Rating of Water-Cooled Machinery. A ton of refrigeration shall be considered as the cooling effect of two hundred (200) BTU's per minute. The standard rating of refrigeration machines is expressed as the number of tons of refrigeration it can produce under certain conditions. For compressors, one (1) horsepower of rated capacity will be considered equivalent to one (1) ton of refrigeration;

c) Disposal of Cooling Water. Water from any such above installation, whether or not the water is taken from the City's system, shall not be discharged into the City's sanitary sewerage system at a rate greater than 0.08 gallon per minute per ton of refrigeration;

d) Cross-Connections. All such installations shall be installed without cross-connections and without possibility of back-siphonage;

e) Installation to Conform. All water-cooled air conditioning equipment, refrigeration machinery and compressor installations using water from, or discharging water into, the City's system, whether or not installed prior to the adoption of this section, where required, shall be modified to bring them into conformance with the provisions of these regulations;

f) Penalty for Nonconformance. Properties in which water-cooled air conditioning equipment, refrigeration machinery, and compressor installations are made contrary to the provisions of this section and which installations are not promptly modified as directed, will be disconnected from the City's system until the requirements of this section are complied with.

Secs. 5-254 – 5-260. Reserved

DIVISION 4. LICENSING OF PLUMBERS

Sec. 5-261. License required; plumbing work by unqualified person declared misdemeanor.

(a) No person shall engage in the business of plumbing in the City unless licensed as a master plumber under the provisions of this division.

(b) No person shall engage in the business of installing, repairing, or altering plumbing unless the plumbing work performed in the course of such business is under the direct supervision of a licensed master plumber.

(c) Any person who shall perform any plumbing work within the City which is not by or under the supervision of a licensee as provided in this section or otherwise qualified pursuant to section 5-241 shall be guilty of a misdemeanor.

(d) All company vehicles, by July 1, 2010, shall have the City's license number conspicuously displayed ~~so to be visible from the street~~.

Sec. 5-262. Qualifications; examinations.

(a) The administrative authority shall establish standards and procedures for the qualifications, and licensing of master plumbers. The administrative authority shall issue an appropriate license to each person who meets the qualifications thereof. The administrative authority shall keep an official record of all licenses issued.

(b) The administrative authority shall issue a Master Plumber license when an applicant presents a valid license issued by the State of Maryland Plumbing License Board. The applicant's license must indicate that a Master Plumber's license has been issued by the State and that the individual is insured for work.

(c) No license shall be granted to any person under the age of twenty-one (21) years.

Sec. 5-263. Fee.

A license shall be issued under this division to qualified applicants only upon payment of a fee in the amount established by resolution.

Sec. 5-264. Term.

Licenses required by this division shall expire at the end of ~~the~~ even numbered calendar years ~~for which they were issued~~.

Sec. 5-265. Bond.

Individuals who hold a valid Maryland State Master Plumber's license are exempt from bond or insurance requirements.

Sec. 5-266. Use of licensee's name by another; change of address, etc.

No person who has obtained a plumber's license shall allow his name to be used by another person either for the purpose of obtaining permits, or for doing business or work under the license. Every person licensed shall notify the administrative authority of the address of his place of business, if any, and the name under which such business is carried on and shall give immediate notice to the administrative authority of any change in either.

Secs. 5-267 – 5-270. Reserved.

SECTION 12. That Article XII, "Property Maintenance Code", is unchanged by this Ordinance.

SECTION 13. That Article XIII, "Existing Building Code", ~~is~~ hereby ~~added to read~~is repealed and re-enacted with amendments as follows:

ARTICLE XIII. EXISTING BUILDING CODE

DIVISION 1. GENERALLY

Sec. 5-281. Scope

The provisions of this article apply to Existing Buildings in accordance with the Maryland Building Rehabilitation Code (COMAR 05.16.01).

Secs. 5-282 – 5-290. Reserved.

DIVISION 2. TECHNICAL STANDARDS

Sec. 5-291. Maryland Building Rehabilitation Code (COMAR 05.16.01)

The Maryland Building Rehabilitation Code (COMAR 05.16.01) dated July 16, 2007, and as may hereby be amended, is adopted by reference. One (1) copy of such publication, as adopted, shall be maintained by the ~~City Clerk in the office of the council~~Inspection Services Division and made available for inspection by the public during regular office hours.

Secs. 5-292 – 5-300. Reserved.

SECTION 14. That Article XIV, "Green Building Regulations", ~~is~~ hereby ~~added to read~~is repealed and re-enacted with amendments as follows:

ARTICLE XIV. GREEN BUILDING REGULATIONS

DIVISION 1. GENERALLY

Sec. 5-301. Scope.

This article places additional "green building" requirements on certain sizes and various types of new construction and redevelopment activities within Rockville.

Sec. 5-302. Building Code Compliance Required.

Requirements of this ~~Article~~ article are meant to be cumulative and more stringent than Articles 1-13. In no case will this Article be interpreted to reduce the stringency of those requirements set out in Articles 1-13.

Sec. 5-303. Green Building Applicability.

(a) Except as provided in subsection (b) of this Section 5-303, for the purposes of this Article, these requirements shall apply to construction of all new buildings, and the following additions and alterations to buildings:

(1) Additions of 7,500 gsf or more to an existing non-residential or multi-unit residential building;

(2) Alterations of more than 50% of the gsf of a non-residential or multi-unit residential building if the altered area is 7,500 gsf or larger;

(3) Alterations to existing one and two family dwellings and additions meeting the criteria for "new construction" as defined in Article VI.

(b) The requirements of this Article XIV shall not be applicable to the following:

(1) Special Exceptions and any subsequent amendments thereto, and related site plans and any subsequent amendments thereto, where a Pre-application or formal application for the Special Exception has been made prior to July 1, 2010, and any related permits for construction;

(2) Site Plans (Level 1, 2, and 3), and any subsequent amendments thereto, and Project Plans and any subsequent amendments thereto, where a Pre-application, or formal application, has been made prior to July 1, 2010, and any related permits for construction.
Exception: Subsequent internal fit-out applications and related permits must comply with the provisions of this Article XIV;

(3) All permits applied for prior to July 1, 2010; and

(4) All trade permits associated with building permits or single-family dwelling permits, where application for the building permit or single-family dwelling permit has been made prior to July 1, 2010.

Sec. 5-304. Buildings and Structures Exempt.

The following construction is exempt from the requirements of this Article:

(a) Accessory buildings and structures, as defined by 25.09.03 of the Rockville City Code;

(b) Alterations of existing LEED®-certified or LEED®-equivalent certified, non-residential or multi-unit residential buildings.

(c) Additions and alterations to existing LEED®-certified or LEED® equivalent-certified one and two family dwellings.

Sec. 5-305. Certification Not Required.

Compliance with this Article does not require a construction project to obtain certification from the U.S. Green Building Council or any other "green" certification organization. The City, as described in Division 2 of this Article, shall perform evaluation for compliance with the provisions of this Article.

Secs. 5-306 - 5-310. Reserved.

DIVISION 2. ADMINISTRATION AND ENFORCEMENT

Sec. 5-311. Administration.

The Chief of Planning or his/her designee will review projects for compliance with this Article during the design phase of new construction. This includes:

(a) Reviewing the submitted LEED® or LEED®-equivalent credit checklists and supporting documentation for completeness and accuracy, as it pertains to site development;

(b) Ensuring that project teams contain individuals with appropriate credentials, such as a LEED® Accredited Professional;

The Chief of Inspection Services Division or his/her designee will review projects for compliance with this Article during the design phase of new construction. This includes:

(a) Reviewing the submitted LEED® or LEED®-equivalent credit checklist and supporting documentation for completeness and accuracy, as it pertains to building construction;

Sec. 5-312. Enforcement.

The Chief of Inspection Services Division or his/her designee will review projects for compliance with this Article during construction and prior to occupancy. This includes:

(a) Ensuring that buildings have been constructed to meet the appropriate green standards per their design;

(b) Ensuring appropriate materials, appliances and equipment are installed, as required;

(c) Reviewing required building/homeowner maintenance manuals, if required for credit;

(d) Ensuring waste management requirements have been fulfilled, if required for credit.

Sec. 5-313. Waivers and Modifications.

The Chief of Planning or the Chief of Inspection Services Division may modify the provisions of this Article as appropriate to accommodate historic preservation considerations.

Secs. 5-314 - 5-315. Reserved.

DIVISION 3. DEFINITIONS

Sec. 5-316. Definitions.

Words defined in this article are intended only for use with sections of this article or any document referred to in this article.

ANSI means the American National Standards Institute.

Building means a structure having one (1) or more stories and a roof, designed primarily for the shelter, support, or enclosure of persons, animals, or property of any kind; and is not an accessory building as defined in 25.09.03 of this Code.

City Manager means the City Manager for the City of Rockville, or his/her designee.

ENERGY STAR means the joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy designed to identify and promote energy-efficient products and practices.

EPA means the U.S. Environmental Protection Agency.

Green Building means a holistic approach to design, construction and demolition that minimizes the building's impact on the environment, the occupants and the community.

GSF means gross square footage. GSF is the sum of all areas on all floors of a building included within the outside faces of the exterior walls, including floor penetration areas, however insignificant, for circulation and shaft areas that connect one floor to another.

HERS Index means the relative energy use index created by RESNET, where a HERS Index of 100 represents the energy use of the "American Standard Building" (i.e., built to the 2009 International Energy Conservation Code) and an Index of 0 (zero) indicates that the Proposed Building uses no net purchased energy (a Zero Energy Building).

HERS Standards means the Home Energy Rating System Standards from RESNET.

LEED® means the Leadership in Energy and Environmental Design green building rating system, 2009 version, from the U.S. Green Building Council. Individual rating systems, and the associated checklists, have been created for several different building categories.

LEED® Accredited Professional (LEED® AP) means a green building industry professional certified by the Green Building Certification Institute as having demonstrated a thorough understanding of green building and the LEED® Green Building Rating System.

LEED® credit checklist means the checklist created by the USGBC detailing the total points possible for each of the LEED® rating systems.

LEED®-equivalent means energy and environmental design standards that the City Manager may approve as being equivalent to a corresponding LEED® rating of a given LEED® rating system.

Multi-Unit Residential means residential structures not governed by the provisions of Article VI of this Chapter.

National Green Building Standard (NGBS) means the ANSI-approved residential green building standard released by the National Association of Home Builders (NAHB) in coordination with the International Code Council (ICC). For multi-unit and low-rise residential buildings, the NGBS may be used as a LEED®-equivalent rating system.

National Performance Path means the set of requirements set forth by ENERGY STAR to achieve an ENERGY STAR Qualified Home designation by demonstrating home energy performance.

National Prescriptive Path means the set of requirements set forth by ENERGY STAR (also known as the Builder Option Package) as detailed on Table 5-352 for achieving an ENERGY STAR Qualified Home designation.

Non-Residential means commercial, industrial, institutional, governmental and the non-residential portions of mixed-use developments.

RESNET means the Residential Energy Services Network, a not-for-profit standards-making body for building energy efficiency rating systems.

RESNET certified rater means a certified home energy rater that has successfully completed training by a RESNET Accredited Rater Training Provider and has been certified by a RESNET Accredited Rating Provider.

USGBC means the U.S. Green Building Council, creator and maintainer of the LEED® green building rating system.

Secs. 5-317 - 5-320. Reserved.

DIVISION 4. NON-RESIDENTIAL AND MULTI-UNIT RESIDENTIAL GREEN BUILDINGS

Sec. 5-321. Applicability.

The requirements of this Division shall be applicable to non-residential and multi-unit residential buildings as indicated in Section 5-303 of this Article.

Sec. 5-322. LEED® AP on Project Team.

All construction meeting the requirements of Section 5-303 shall have a LEED® Accredited Professional (LEED® AP) on the project team from design of the project through construction to facilitate the requisite integrated design process. If a LEED®-equivalent rating system is used, a member of the project team must possess an equivalent certification for that rating system.

Sec. 5-323. LEED® Credit Checklist Required.

All non-residential and multi-unit residential buildings must submit a completed LEED® credit checklist with supporting documentation for the most appropriate LEED® rating system, or a LEED®-equivalent rating system with every submittal to the City.

Sec. 5-324. Compliance - New Construction and Core & Shell.

All new construction of non-residential and multi-unit residential buildings as indicated in Section 5-303 shall achieve at least 25 points in the appropriate LEED® 2009 rating system with at least five points earned from the following list:

(a) SS c5.1: Site Development - Protect or Restore Habitat
(b) SS c5.2: Site Development - Maximize Open Space
(c) SS c6.1: Stormwater Design - Quantity Control
(d) SS c6.2: Stormwater Design - Quality Control
(e) SS c7.1: Heat Island - Non-roof
(f) SS c7.2: Heat Island - Roof
(g) WE c2: Innovative Wastewater Technologies
(h) WE c3: Water Use Reduction
(i) EA c1: Optimize Energy Performance
(j) EA c2: On-site Renewable Energy
(k) EA c6: Green Power
(l) MR c1.1: Building Reuse - Maintain Existing Walls, Floors and Roof - Reuse 55%
(m) MR c2: Construction Waste Management – 50%

Sec. 5-325. Compliance - Commercial Interiors

All new construction meeting the scope of 2009 LEED® for Commercial Interiors Rating System (as detailed in "Overview and Process") shall obtain at least 10 points based upon the 2009 LEED® for Commercial Interiors Rating System. New construction meeting 2009 LEED® for Commercial Interiors Rating System that is taking place in an existing LEED® certified building shall not be required to meet the requirements of this Section.

Sec. 5-326. ENERGY STAR Appliances Required.

(a) The following types of appliances, fixtures, and/or building components used in the dwelling units of multi-family residential projects and portions of non-residential and multi-residential projects that are intended for use as break rooms and kitchenettes will have ~~earned the~~to meet or exceed U.S. EPA's Energy Star ~~label~~requirements: refrigerators, ovens and stoves, microwave ovens, water heaters, clothes washers, dryers (once certifications are available), dishwashers, ceiling fans, ventilation fans, programmable thermostats and exit signs.

(b) The lighting in common areas, including lobbies, corridors, stairwells, common rooms, fitness rooms, etc. will incorporate maximum day lighting and will install energy efficient fixtures including: light bulbs, light sensors, motion sensors, timers, and interior design (e.g., paint color) that maximizes energy efficiency. The guidelines outlined by the US Green Building Council's LEED® for Commercial Interiors (LEED-CI) credit entitled, Optimizing Energy Performance: Lighting Power will be used to evaluate the lighting efficiency.

Sec. 5-327. Building Manual(s) Required.

The builder must submit to the owner or occupant a manual that explains the intent, benefits, use and maintenance of any green building features. Multi-unit residential projects must also develop a guide for homeowners and tenants that explains the intent, benefits, use and maintenance of any green building features relevant to individual units.

Secs. 5-328 - 5-330. Reserved.

DIVISION 5. ONE AND TWO FAMILY DWELLING REQUIREMENTS

Sec. 5-331. Applicability.

The requirements of this Division shall be applicable to one and two family dwellings as indicated in Section 5-303 of this Article.

Sec. 5-332. Green Building Checklist Required.

All one- and two-family dwelling new construction, as defined in Article VI, must submit either the NGBS checklist, the LEED® for Homes credit checklist, or a LEED®-equivalent checklist with every submittal to the City.

Sec. 5-333. ENERGY STAR Appliances Required.

To the extent that the building includes the following building components, appliances and fixtures, these appliances and fixtures must have earned the U.S. EPA's Energy Star label: windows, hot water heaters, ovens, microwave ovens, refrigerators, clothes washers, dryers (once certifications are available), dishwashers, ceiling fans, ductwork, ventilation fans (including kitchen and bathroom fans), light fixtures, furnaces and programmable thermostats.

Sec. 5-334. Rockville Energy Efficient Homes required.

Homes must meet the Rockville Energy Efficient Homes criteria as specified in Table 5-334.

Exception: Homes may qualify for Rockville Energy Efficient Homes by achieving a HERS Index of 85 or lower, rather than follow the criteria in Table 5-334.

TABLE 5-334
ROCKVILLE ENERGY EFFICIENT HOMES CRITERIA

Envelope	Infiltration[1,] ~~[2]~~ ≤ ~~6~~ 3ACH50, and Completed Thermal Bypass Inspection ~~Checklist[3]~~ Checklist[2]
Windows[4,5]	≤ 0.~~35~~ 40SHGC
Lighting	Lighting packages must consist of a minimum of ~~60~~75% high efficiency efficacy, ENERGY STAR qualified hard-wired fixtures, and All installed ceiling fans must be ENERGY STAR qualified.

Notes

1. A RESNET-certified rater using a RESNET-approved testing protocol must determine envelope leakage.

~~2. To ensure consistent exchange of indoor air, whole-house mechanical ventilation is recommended, but not required.~~

~~3.~~2. The Thermal Bypass Checklist requires visual inspection of framing areas where air barriers are commonly missed and inspection of insulation to ensure proper alignment with air barriers, thus serving as an extra check that the air and thermal barriers are continuous and complete.

~~4.~~3. All windows and skylights must be ENERGY STAR qualified or meet all specifications for ENERGY STAR qualified windows. Windows must exceed and the SHGC ≤ 0.~~35~~40.

~~5. All decorative glass and skylight window area counts toward the total window area to above-grade conditioned floor area (WFA) ratio. For homes with a WFA ratio >18%, an improved window U-Value is required, and is determined by:~~

- ~~Required U-Value = [0.18 / WFA] x [ENERGY STAR U-Value]~~
- ~~Where the ENERGY STAR U-Value is the minimum required U-Value of window specified in these criteria. Up to 0.75% WFA may be used for decorative glass that does not meet ENERGY STAR requirements. For example, a home with total above-grade conditioned floor area of 2,000 sq. ft. may have up to 15 sq. ft. (0.75% of 2,000) of decorative glass.~~

Sec. 5-335. Indoor Air Package Required.

Homes must meet the Indoor Air Package specifications shown on Table 5-335.

TABLE 5-335
INDOOR AIR PACKAGE SPECIFICATIONS

1. Moisture Control	
Water Managed Foundations	
1.1	Surface water management shall be provided as follows: • Patio slabs, walks and driveway shall be sloped ¼ inch per foot away from house.
1.2	Install drain tile at footings below basement and crawlspace walls, level or sloped to discharge to outside grade (daylight) or to accessible sump pump. Top of drain tile pipe must always be below bottom of concrete slab or crawl space floor. Pipe shall be surrounded with min. 6 inches of ¾ inch washed or clean gravel that is fully wrapped with fabric cloth.
1.3	Crawl spaces shall be unvented and conditioned, as follows: • Crawl space floors shall be covered with a capillary break, using either: - Concrete slab over lapped polyethylene (i.e. a "rat slab"); OR. - 6 mil. polyethylene (10 mil. recommended) sheeting, lapped 6 to 12 inches and sealed or taped at seams. Sheeting shall be attached to walls and piers with adhesive and furring strips; AND • Crawl spaces shall be sealed to prevent outside air infiltration and be provided with conditioned air at a rate not less than 0.02 cfm per square foot of horizontal area; and • In areas designated by local jurisdiction as flood zones, a sump pit and pump shall be installed in the crawlspace, with discharge point at least 10 ft. outside foundation. **Exceptions:** • Raised pier foundation with no walls.
1.4	Do **not** install a continuous vapor barrier on interior or living space side of basement or crawlspace walls (semi-vapor permeable rigid insulation is not considered a vapor barrier).
Water Managed Wall Assemblies	
1.5	Install flashing or equivalent drainage system at the bottom of exterior walls to direct water away from drainage plane and foundation.
1.6	Prevent condensation problems (e.g. mold and rot) related to air leakage in exterior wall assemblies, by meeting all wall assembly requirements of the Thermal Bypass Checklist.
1.7	Fully flash all window and door openings, including pan flashing at sills, side flashing that extends over pan flashing and top flashing that extends over side flashing.
1.8	All deck ledger boards shall be attached to homes with either: • Minimum 3/8 inch spacers and full flashing shingle fashion from drainage plane to over framing; OR • Adhesive membrane strip taped to drainage plane running over ledger board and folded around joists over hanger with adhesive membrane cap patch over each joist. **Advisory:** If ledger is ACQ preservative-treated lumber, flashing material should be ACQ resistant to prevent corrosion.
Water Managed Roof Assemblies	
1.9	Prevent condensation problems (e.g. mold and ice dams) related to air leakage at attic/ceiling interfaces, by meeting all roof assembly requirements of the Thermal Bypass Checklist.
1.10	Direct roof water from house with guttering and downspouts that empty to lateral piping that deposit water on sloping finish grade a minimum of 5 ft. from foundation. When lot space limits or prevents required grading, direct roof water to underground catchment system (not connected to foundation drain system) that deposits water 10 ft. from foundation.
1.11	Install minimum No. 30 roof felt underlayment.
1.12	Install metal drip edge or equivalent at roof decking edges.

1.13	Install self-sealing bituminous membrane or equivalent at all valleys and roof decking penetrations for durability at failure points.
Plumbing Systems	
1.14	Minimize risk of water leakage & material damage in areas with high risk for plumbing leaks, including: • Install water heaters near floor drain and/or provide catch pan, piped to home exterior, AND • Install moisture resistant backing material behind tub and shower enclosures (i.e. cement board or equivalent).
2. Radon Control	
2.1	Provide owners of homes two radon test kits designed for 48-hour exposures, including instructions for use and guidance for follow-up actions to testing results.
3. HVAC Systems	
Heating and Cooling Equipment	
3.1	Heating & cooling design loads shall be determined for each room according to ACCA Man J, ASHRAE Handbooks, or equivalent software. Heating & cooling equipment shall be properly sized and selected to meet the design loads, including accommodation for pressure drop from specified filter (4.18). This requirement shall be verified by: • Documentation of design load calculations (i.e. load calculation worksheet or software report), AND • System design documentation (i.e. sizing calculations and equipment performance information), AND • Verification that outdoor and indoor coils match in accordance with ARI standards.
3.2	Air handling equipment shall not be located in garages.
3.3	No equipment is permitted that intentionally produces ozone (rather than as an incidental by-product).
3.4	Drain pans shall be sloped, corrosion resistant (e.g. stainless or plastic) with drains at the low point.
3.5	HVAC and duct systems shall be protected from dust/debris during construction activities: • If HVAC equipment is not used during construction, supply and return duct boots shall be covered with "duct mask" or similar sheeting to keep ductwork clean, OR • If HVAC equipment is used during construction, a properly fitting filter (see 4.18 & 4.19) must be installed during operation.
Ductwork	
3.6	Building cavities shall not be used as part of the forced air supply or return system.
Ventilation	
3.7	Provide mechanical whole-house ventilation meeting all ASHRAE 62.2 requirements. The following requirements shall be visually verified: • Whole house mechanical ventilation system & controls installed to deliver prescribed outdoor air ventilation rate (62.2 section 4); AND • Transfer air (i.e. air from adjacent dwelling units or other spaces such as garages, crawlspaces, or attics) shall not be used to meet ventilation requirements (62.2 section 6.1); AND • Air inlets shall be located a minimum of 10 ft. from contaminant sources (62.2 section 6.8), AND • Airflow tested to meet rated fan airflow (at 0.25 in. w.c.), or duct(s) sized per requirements of 62.2 Table 7.1 and/or manufacturer's design criteria (62.2 section 7.3). **Notes:** • Outdoor air ducts connected to the return side of an air handler shall be permitted as supply ventilation only if manufacturers' requirements for return air temperature are met (e.g., "air shall be tempered to maintain minimum 60 degree F continuous air flow across furnace heat exchanger").
Air Filtration	
3.8	There shall be no visible bypass between the filter, the filter rack, and the plenum/blower housing. In addition, the filter rack shall be designed to ensure the filter is in complete contact with the rack as follows: • The filter rack shall be fitted with flexible, air-tight (e.g. closed cell foam) gasketing on the surface that contacts the air-leaving (downstream) side of the filter, or equivalent method; AND • The filter shall be held firmly in place by friction fit, spring clips in the filter rack (installed on the upstream side of the filter), or equivalent method. **Note:** Manufacturer filter media boxes designed to accomplish these purposes meet these requirements.
3.9	If central vacuum system is installed, system shall be vented outdoors at least 10 ft. from ventilation system air inlets (see 4.15), or power/filtration unit installed in garage per manufacturer instructions.

4. Building Materials	
Preparation and Installation	
4.1	Building materials with visible signs of water damage or mold shall not be installed. In addition, interior walls shall not be enclosed (e.g. with drywall) if either the framing members or insulation products have a high moisture content.
Materials	
4.3	Structural plywood conforming to PS1 and PS2 and oriented strand board shall be made with exterior-type adhesives. Exterior-type adhesive is evidence by the appearance of "Exposure 1" or "Exterior" in the panel trademark.
4.4	Particleboard and medium density fiberboard (MDF) shall be certified compliant with ANSI A208.1 and A208.2, respectively.
4.5	Hardwood plywood shall be compliant with ANSI/HPVA HP-1-2004 and U.S. HUD Title 24, Part 3280.
4.7	Install concrete or water-resistant hard-surface flooring in kitchens, laundry areas, and utility rooms.
5. Owner's Documentation	
5.1	Provide owner or occupant with a checklist listing all required measures from this specification along with the signature of official representative of builder indicating full compliance with the checklist.

Sec. 5-336. Homeowner Manual Requirement.

The builder must develop and submit to owner or occupant a guide that explains the intent, benefits, use and maintenance of green building features. Compliance with NGBS 1001.1 is deemed to meet this requirement.

Secs. 5-338 - 5-340. Reserved.

NOTE: ~~Strikethroughs~~ indicate material deleted
Underlining indicates material added

I hereby certify that the foregoing is a true and correct copy of an ordinance adopted by the Mayor and Council at its meeting of

_____
City Clerk