

**ORDINANCE NO. 1738**

**AN ORDINANCE OF THE CITY OF DES MOINES, WASHINGTON** relating to the Environment Code and the regulation of flood hazard areas, amending chapters 16.01 and 16.15 of the Des Moines Municipal Code (DMMC), adding and amending definitions in DMMC 16.01.050, and adding new sections to chapter 16.15 DMMC to comply with the Federal Emergency Management Agency's National Flood Insurance Program Flood Damage Prevention Ordinance and Washington State Department of Ecology's Model Ordinance.

**WHEREAS**, the Federal Emergency Management Agency (FEMA) requires compliance with the National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance prior to August 19, 2020, when the new Flood Insurance Study (FIS) and Flood Insurance Rate Maps (FIRM) become effective nationwide, and

**WHEREAS**, failure to adopt the FIS and FIRM through revision of local regulations by this date will result in immediate suspension from the NFIP, and

**WHEREAS**, the Washington State Department of Ecology provided guidance for complying with the NFIP Flood Damage Prevention Ordinance with a unique model ordinance for Washington State and with specific guidance customized for the City of Des Moines, and

**WHEREAS**, RCW 36.70A.130(1) requires the City of Des Moines to take legislative action to periodically review and, if needed, revise its development regulations, and

**WHEREAS**, the changes proposed by this ordinance have been processed in accordance with the requirements of the State Environmental Policy Act (SEPA), a final determination of non-significance was issued by the responsible official, and the appropriate comment and appeal periods have expired, and

**WHEREAS**, the textual code amendments proposed in this Draft Ordinance were provided to the Department of Commerce as required by RCW 36.70A.106, and

**WHEREAS**, notice of the public hearing was provided on June 10, 2020 in accordance with the DMMC, and

**WHEREAS**, a public hearing was held on June 25, 2020 and all persons wishing to be heard were heard, and

**WHEREAS**, the City Council finds that the Title 16 DMMC amendments contained in this Ordinance comply with the requirements of chapter 36.70A RCW and are appropriate and necessary; now therefore,

**THE CITY COUNCIL OF THE CITY OF DES MOINES ORDAINS AS FOLLOWS:**

**Sec. 1.** DMMC 16.01.050 and section 5 of Ordinance No. 1583 as amended by section 13 of Ordinance No. 1611 as amended by section 1 of Ordinance No. 1649 shall be amended to amend or add the following definitions:

"Alteration of Watercourse" means any action that will change the location of the channel occupied by water within the banks of any portion of a riverine waterbody.

"Area of shallow flooding" means a designated zone AO, AH, AR/AO or AR/AH (or VO) on a community's Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow. Also referred to as the sheet flow area.

"Area of special flood hazard" or "Special Flood Hazard Area (SFHA)" means the land in the floodplain within a community subject to a 1 percent or greater chance of flooding in any given year. It is shown on the Flood Insurance Rate Map (FIRM) as zone A, AO, AH, A1-30, AE, A99, AR (V, VO, V1-30, VE). "Special flood hazard area" is synonymous in meaning with the phrase "area of special flood hazard".

"Base Flood Elevation (BFE)" means the elevation to which floodwater is anticipated to rise during the base flood.

"Critical facility" means a facility for which even a slight chance of flooding might be too great. Critical facilities include (but are not limited to) schools, nursing homes, hospitals, police, fire and emergency response installations, and installations which produce, use, or store hazardous materials or hazardous waste.

"Elevation certificate" means an administrative tool of the National Flood Insurance Program (NFIP) that can be used to provide elevation information, to determine the proper insurance premium rate, and to support a request for a Letter of Map Amendment (LOMA) or Letter of Map Revision based on fill (LOMR-F).

"Elevated building" means, for insurance purposes, a non-basement building that has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

"Flood" or "flooding" means:

(a) A general and temporary condition of partial or complete inundation of normally dry land areas from:

(i) The overflow of inland or tidal waters.

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

(iii) Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (a)(ii) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by

a current of water and deposited along the path of the current.

(b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (a)(i) of this definition.

"Flood elevation study" means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards. Also known as a Flood Insurance Study (FIS).

"Flood Insurance Rate Map (FIRM)" means the official map of a community on which the Federal Insurance Administrator has delineated both the areas of special flood hazards and the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

"Floodplain Administrator" means the community official designated by title to administer and enforce the floodplain management regulations.

"Floodplain or flood prone area" means any land area susceptible to being inundated by water from any source. See "Flood or flooding."

"Highest adjacent grade" means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

"Increased cost of compliance" means a flood insurance claim payment up to \$30,000 directly to a property owner for the cost to comply with floodplain management regulations after a direct physical loss caused by a flood. Eligibility for an ICC claim can be through a single instance of "substantial damage" or as a result of a "cumulative substantial damage." (More information can be found in FEMA ICC Manual 301.)

"Mean sea level" means, for purposes of the National Flood Insurance Program, the vertical datum to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

"New construction" means, for the purposes of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial Flood Insurance Rate Map or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, "new construction" means structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

"Structure" means, for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.

"Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

"Substantial improvement" means any reconstruction, rehabilitation, addition, or other improvement of a

structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

(a) Any project for improvement of a structure to correct previously identified existing violations of state or local health, sanitary, or safety code specifications that have been identified by the local code enforcement official and that are the minimum necessary to assure safe living conditions; or

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

"Variance" means a grant of relief from the requirements of this Title that permits construction in a manner that would otherwise be prohibited by this Title.

**Sec. 2.** DMMC 16.15.050 and section 93 of Ordinance No. 1583 are amended to read as follows:

**Basis for establishing the areas of special flood hazard.**

The special flood hazard areas identified by the Federal Insurance Administrator in a scientific and engineering report entitled "The Flood Insurance Study (FIS) for King County, Washington and Incorporated Areas" dated August 19, 2020, and any revisions thereto, with accompanying Flood Insurance Rate Maps (FIRMs), and any revisions thereto, are hereby adopted by reference and declared to be a part of this Title. The FIS and the FIRM are on file at 21630 11th Ave. S., Suite D, Des Moines, WA 98198. The best available information for flood hazard area

identification as outlined in DMMC 16.15.110 shall be the basis for regulation until a new FIRM is issued that incorporates data utilized under DMMC 16.15.110.

**Sec. 3.** DMMC 16.15.060 and section 94 of Ordinance No. 1583 are amended to read as follows:

**Abrogation and greater restrictions.**

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

**Sec. 4.** DMMC 16.15.090 and section 97 of Ordinance No. 1583 are amended to read as follows:

**Establishment of development permit.**

A development permit shall be obtained before construction or development begins within any area of flood hazard established in DMMC 16.15.050. The permit shall be for all structures including manufactured homes and for all other development including fill and other activities. Application for a development permit shall be made on forms furnished by the Floodplain Administrator and shall include, but not be limited to: plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, on-site storage of materials, drainage facilities; and the location of the foregoing. Specifically, the following information shall be furnished by the applicant:

(1) Elevation, in relation to mean sea level of the lowest floor (including basement) of all structures; and

(2) Elevation in relation to mean sea level to which any structure has been floodproofed; and

(3) Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in DMMC 16.15.180(2); and

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

(5) Where a structure is proposed in a V, V1-30, or VE zone, a V-zone design certificate is required; and

(6) Where development is proposed in a floodway, an engineering analysis indicating no rise of the Base Flood Elevation; and

(7) A report which identifies and assesses habitat impacts, if any, and proposes conservation methods consistent with federal permitting requirements. Preparation of the report shall be the responsibility of the applicant and shall utilize the expertise of a biologist specializing in wetland, riverine, or coastal zone ecology; and

(8) Any other such information that may be reasonably required by the Floodplain Administrator in order to review the application.

**Sec. 5.** DMMC 16.15.100 and section 98 of Ordinance No. 1583 are amended to read as follows:

**Designation and duties and responsibilities of the Floodplain Administrator.**

The Floodplain Administrator is hereby appointed to administer and implement this Title by granting or denying development permit applications in accordance with its provisions.

Duties of the Floodplain Administrator shall include, but not be limited to:

(1) Reviewing all development permits to determine that the permit requirements of this chapter have been satisfied; and

(2) Reviewing all development permits to determine that all necessary permits have been obtained from those federal, state, or local governmental agencies from which prior approval is required; and

(3) The site is reasonably safe from flooding; and

(4) Notify FEMA when annexations occur in the Special Flood Hazard Area; and

(5) Reviewing all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of DMMC 16.15.200(1) are met.

**Sec. 6.** DMMC 16.15.110 and section 99 of Ordinance No. 1583 are amended to read as follows:

**Use of other base flood data (in A and V Zones).**

When base flood elevation data has not been provided (in A or V Zones) in accordance with DMMC 16.15.050, the Floodplain Administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source, in order to administer DMMC 16.15.180 and 16.15.200.

**Sec. 7.** DMMC 16.15.120 and section 100 of Ordinance No. 1583 are amended to read as follows:

**Information to be obtained and maintained.**

(1) Where base flood elevation data is provided through flood insurance studies, FIRMs, or as in DMMC 16.15.110, obtain and record the actual (as-built) elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.

(2) Documentation of the elevation of the bottom of the lowest horizontal structural member in V or VE zones.

(3) For all new or substantially improved floodproofed nonresidential structures where base flood elevation data is provided through the FIS, FIRM, or as required in DMMC 16.15.110:

(a) Obtain and record the actual elevation (in relation to mean sea level) to which the structure was floodproofed; and

(b) Maintain the floodproofing certifications required in DMMC 16.15.090(3).

(4) Certification required by DMMC 16.15.200(1) (floodway encroachments).

(5) Records of all variance actions, including justification for their issuance.

(6) Improvement and damage calculations.

(7) Maintain for public inspection all records pertaining to the provisions of this chapter.

(8) In coastal high hazard areas, certification shall be obtained from a registered professional engineer or architect that the structure is securely anchored to adequately anchored pilings or columns in order to withstand high velocity waters, storm surges, and tsunamis.

**Sec. 8.** DMMC 16.15.150 and section 103 of Ordinance No. 1583 are amended to read as follows:

**Appeal and variances.**

Appeals of administrative orders, decisions or determinations under this chapter shall be processed pursuant to chapter 18.20 DMMC.

**Sec. 9.** DMMC 16.15.160 and section 104 of Ordinance No. 1583 are amended to read as follows:

**Variance criteria and conditions.**

(1) When considering an application for a variance to any provisions of this chapter, the Hearing Examiner shall consider all technical evaluations, all relevant factors and standards specified in other sections of this chapter, and:

(a) The danger that materials may be swept onto other lands to the injury of others; and

(b) The danger to life and property due to flooding or erosion damage; and

(c) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner; and

(d) The importance of the services provided by the proposed facility to the community; and

(e) The necessity to the facility of a waterfront location, where applicable; and

(f) The availability of alternate locations for the proposed use which are not subject to flooding or erosion damage; and

(g) The compatibility of the proposed use with existing and anticipated development; and

(h) The relationship of the proposed use to the Comprehensive Plan and floodplain management program for that area; and

(i) The safety of access to the property in times of flood for ordinary and emergency vehicles; and

(j) The expected height, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and

(k) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

(2) Conditions for Variances.

(a) Generally, the only condition under which a variance from the elevation standard may be granted shall be for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below base flood level; provided, that the variance criteria listed above have been fully considered.

(b) Variances may be granted for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.

(c) Variances shall not be granted within a designated floodway if any increase in flood levels during the base flood discharge would result.

(d) Variances shall only be granted upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(e) Variances shall only be granted upon:

(i) A showing of good and sufficient cause; and

(ii) A determination that failure to grant the variance would result in exceptional hardship to the applicant; and

(iii) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.

(f) Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that such variances pertain to a physical piece of property; such variances are not personal in nature and do not pertain to a structure, inhabitants thereof, or economic or financial circumstances.

(g) Variances may be granted for nonresidential buildings in very limited circumstances to allow a lesser degree of floodproofing than watertight or dry-floodproofing where it can be determined that such action has a low damage potential, complies with all other variance criteria except DMMC 16.15.180(2)(a)(iv), and otherwise complies with the general standards of this chapter.

(h) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

**Sec. 10.** DMMC 16.15.170 and section 105 of Ordinance No. 1583 are amended to read as follows:

**Provisions for flood hazard protection - General standards.**

In all areas of special flood hazards, the following standards are required:

(1) Anchoring.

(a) All new construction and substantial improvements, including those related to manufactured homes, shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads including the effects of buoyancy.

(b) All manufactured homes must likewise be anchored to prevent flotation, collapse, or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors (reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques, FEMA 85).

(2) Construction Materials and Methods.

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

(b) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

(c) Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(3) Utilities.

(a) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

(b) Water wells shall be located on high ground that is not in the floodway.

(c) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.

(d) On-site waste disposal systems shall be located to avoid impairment to such systems or contamination from such systems during flooding. Locating such equipment below the base flood elevation may cause annual flood insurance premiums to be increased.

(4) Subdivision Proposals.

(a) All subdivision proposals shall be consistent with the need to minimize flood damage.

(b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage.

(c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.

(d) Base flood elevation data shall be provided for subdivision proposals and other proposed developments which contain at least 10 lots or 1 acre, whichever is less. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least 50 lots or 5 acres (whichever is less).

(5) Review of Building Permits. Where elevation data is not available either through the flood insurance study, FIRM, or from another authoritative source, applications for building permits shall be reviewed by the Building Official to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above grade in these zones may result in higher insurance rates.

**Sec. 11.** DMMC 16.15.180 and section 106 of Ordinance No. 1583 are amended to read as follows:

**Specific standards.**

In all areas of special flood hazards where base flood elevation data has been provided as set forth in DMMC 16.15.050 or 16.15.110, the following provisions are required:

(1) Residential Construction.

(a) In AE and A1-30 zones or other A zoned areas where the BFE has been determined or can be reasonably obtained, new construction and substantial improvement of any residential structure

shall have the lowest floor, including basement, elevated one foot or more above the BFE. Mechanical equipment and utilities shall be waterproof or elevated at least one foot above the BFE.

(b) New construction and substantial improvement of any residential structure in an Unnumbered A zone for which a BFE is not available and cannot be reasonably obtained shall be reasonably safe from flooding, but in all cases the lowest floor shall be at least two feet above the Highest Adjacent Grade.

(c) New construction and substantial improvement of any residential structure in a V, V1-30, or VE zone shall meet the requirements in DMMC 16.15.240.

(d) Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of flood waters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

(i) A minimum of two openings having a total net area of not less than one square inch for every one square foot of enclosed area subject to flooding shall be provided.

(ii) The bottom of all openings shall be no higher than one foot above grade.

(iii) Openings may be equipped with screens, louvers, valves, or other coverings or devices; provided, that they permit the automatic entry and exit of flood waters.

(iv) A garage attached to a residential structure, constructed with the garage

floor slab below the BFE, must be designed to allow for the automatic entry and exit of flood waters.

(2) Nonresidential Construction. New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall meet the requirements of subsection (a) or (b), below:

(a) New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall meet all of the following requirements:

(i) In AE and A1-30 zones or other A zoned areas where the BFE has been determined or can be reasonably obtained:

(A) New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall have the lowest floor, including basement, elevated one foot or more above the BFE, or elevated as required by ASCE 24, whichever is greater.

(B) Mechanical equipment and utilities shall be waterproofed or elevated least one foot above the BFE, or as required by ASCE 24, whichever is greater.

(ii) If located in an Unnumbered A zone for which a BFE is not available and cannot be reasonably obtained, the structure shall be reasonably safe from flooding, but in all cases the lowest floor shall be at least two feet above the Highest Adjacent Grade.

(iii) If located in a V, V1-30, or VE zone, the structure shall meet the requirements in DMMC 16.15.240.

(iv) Fully enclosed areas below the lowest floor that are subject to flooding are

prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

(A) Have a minimum of two openings with a total net area of not less than one square inch for every square foot of enclosed area subject to flooding.

(B) The bottom of all openings shall be no higher than one foot above grade.

(C) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwater.

(D) A garage attached to a structure, constructed with the garage floor slab below the BFE, must be designed to allow for the automatic entry and exit of floodwaters.

(b) If the requirements of subsection (a) are not met, then new construction and substantial improvement of any commercial, industrial or other nonresidential structure shall meet all of the following requirements:

(i) Be dry floodproofed so that below one foot or more above the base flood level the structure is watertight with walls substantially impermeable to the passage of water or dry flood proofed to the elevation required by ASCE 24, whichever is greater; and

(ii) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

(iii) Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the Floodplain Administrator;

(iv) Nonresidential structures that are elevated, but not flood proofed, must meet the same standards for space below the lowest floor as described in subsection (2)(a)(iv) of this section;

(v) Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g., a building floodproofed to the base flood level will be rated as one foot below). Flood proofing the building an additional foot will reduce insurance premiums.

(3) Manufactured Homes. All manufactured homes in the floodplain to be placed or substantially improved on sites shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one foot or more above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement. This subsection applies to new manufactured homes placed on any site, manufactured homes in a new or expanded manufactured home park or subdivision, and new manufactured homes in an existing manufactured home park and subdivision.

(4) Recreational Vehicles. (44 CFR 60.3(c)(14)) Recreational vehicles placed on sites are required to either:

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

(b) Be fully licensed and ready for highway use, on wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or

(c) Meet the requirements of DMMC 16.15.170 and this section and the elevation and anchoring requirements for manufactured homes.

(5) New Enclosed Area Below the Lowest Floor. If buildings or manufactured homes are constructed or substantially improved with fully enclosed areas below the lowest floor, the areas shall be used solely for parking of vehicles, building access, or storage.

(6) New Appurtenant Structures (Detached Garages & Small Storage Structures). For A Zones (A, AE, A1-30, AH, AO):

(a) Appurtenant structures used solely for parking of vehicles or limited storage may be constructed such that the floor is below the BFE, provided the structure is designed and constructed in accordance with the following requirements:

(i) Use of the appurtenant structure must be limited to parking of vehicles or limited storage;

(ii) The portions of the appurtenant structure located below the BFE must be built using flood resistant materials;

(iii) The appurtenant structure must be adequately anchored to prevent flotation, collapse, and lateral movement;

(iv) Any machinery or equipment servicing the appurtenant structure must be elevated or flood proofed to or above the BFE;

(v) The appurtenant structure must comply with floodway encroachment provisions in DMMC 16.15.200(1);

(vi) The appurtenant structure must be designed to allow for the automatic entry and exit of floodwaters in accordance with DMMC 16.15.180(1)(d);

(vii) The structure shall have low damage potential;

(viii) If the structure is converted to another use, it must be brought into full compliance with the standards governing such use; and

(ix) The structure shall not be used for human habitation.

(b) Detached garages, storage structures, and other appurtenant structures not meeting the above standards must be constructed in accordance with all applicable standards in DMMC 16.15.180(1).

(c) Upon completion of the structure, certification that the requirement of this section have been satisfied shall be provided to the Floodplain Administrator for verification.

**Sec. 12.** DMMC 16.15.200 and section 108 of Ordinance No. 1583 are amended to read as follows:

**Floodways.**

Located within areas of special flood hazard established in DMMC 16.15.050 are areas designated as floodways. Since the floodway is an extremely

hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

(1) Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels during the occurrence of the base flood discharge.

(2) Construction or reconstruction of residential structures is prohibited within designated floodways, except for:

(a) Repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and

(b) Repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50 percent of the market value of the structure either:

(i) Before the repair, or reconstruction is started; or

(ii) If the structure has been damaged, and is being restored, before the damage occurred. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or to structures identified as historic places, may be excluded in the 50 percent.

(3) If subsection (1) of this section is satisfied, all new construction and substantial

improvements shall comply with all applicable flood hazard reduction provisions of DMMC 16.15.170 through 16.15.200.

**Sec. 13.** DMMC 16.15.240 and section 111 of Ordinance No. 1583 are amended to read as follows:

**Standards for coastal high hazard areas (V Zones).**

Located within areas of special flood hazard established in DMMC 16.15.050 are coastal high hazard areas, which are designated as Zones V1-V30, VE, and V. These areas have special flood hazards associated with high velocity waters from surges and, therefore, in addition to meeting all provisions in this chapter, the following provisions shall also apply:

(1) All new allowable construction and substantial improvement in Zones V1-V30 and VE (V if base flood elevation data is available) on the community's FIRM shall be elevated on pilings and columns so that:

(a) For residential buildings, the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated one foot or more above the base flood level; and

(b) For nonresidential buildings, the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated one foot or more above the base flood level or meets the elevation requirements of ASCE 24, whichever is higher; and

(c) The pile or column foundation and structure attached thereto is anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent

chance of being equaled or exceeded in any given year (100-year mean recurrence interval); and

(d) A registered professional engineer or architect shall develop or review the structural design, specifications, and plans for the construction and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of subsections (1)(a) and (b) of this section.

(2) Obtain the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures in Zones V1-V30, VE, and V on the community's FIRM, and whether or not such structures contain a basement. The Floodplain Administrator shall maintain a record of all such information.

(3) All new construction within zones V1-30, VE, and V on the community's FIRM shall be located landward of the reach of mean high tide.

(4) Provide that all new construction and substantial improvements within zones V1-30, VE, and V on the community's FIRM have the space below the lowest floor either free of obstruction or constructed with nonsupporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement or other structural damage to the elevated portion of the building or supporting foundation system. For the purpose of this section, a breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot (either by design or when so required by local or state codes) may be permitted only if a registered professional engineer or architect

certifies that the designs proposed meet the following conditions:

(a) Breakaway wall collapse shall result from a water load less than that which would occur during the base flood; and

(b) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and nonstructural). Maximum wind and water loading values to be used in this determination shall each have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval).

(5) If breakaway walls are utilized, such enclosed space shall be usable solely for parking of vehicles, building access, or storage. Such space shall not be used for human habitation.

(6) Prohibit the use of fill for structural support of buildings within zones V1-30, VE, and V on the community's FIRM.

(7) Prohibit manmade alteration of sand dunes within zones V1-30, VE, and V on the community's FIRM which would increase potential flood damage.

(8) Manufactured homes to be placed or substantially improved within zones V1-30, V, and VE on the community's FIRM on sites:

(a) Outside of a manufactured home park or subdivision,

(b) In a new manufactured home park or subdivision,

(c) In an expansion to an existing manufactured home park or subdivision, or

(d) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood;

shall meet the standards of paragraphs (1) through (6) of this section and manufactured homes placed or substantially improved on other sites in an existing manufactured home park or subdivision within zones V1-30, V, and VE on the FIRM shall meet the requirements of DMMC 16.15.180(3).

(9) Recreational vehicles placed on sites within V or VE zones on the community's FIRM shall either:

(a) Be on the site for fewer than 180 consecutive days, or

(b) Be fully licensed and ready for highway use, on its wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or

(c) Meet the requirements of subsections (1) and (3) above and the anchoring requirements for manufactured homes (DMMC 16.15.170(1)(b)).

**NEW SECTION. Sec. 14.** A new section is added to chapter 16.15 DMMC to read as follows:

**Changes to Special Flood Hazard Area.**

(1) If a project will alter the Base Flood Elevation (BFE) or boundaries of the Special Flood Hazard Area (SFHA), then the project proponent shall provide the community with engineering documentation and analysis regarding the proposed change. If the change to the BFE or boundaries of the SFHA would normally require a Letter of Map Change, then the project proponent shall initiate, and receive

approval of, a Conditional Letter of Map Revision (CLOMR) prior to approval of the development permit. The project shall be constructed in a manner consistent with the approved CLOMR.

(2) If a CLOMR application is made, then the project proponent shall also supply the full CLOMR documentation package to the Floodplain Administrator to be attached to the floodplain development permit, including all required property owner notifications.

**NEW SECTION. Sec. 15.** A new section is added to chapter 16.15 DMCC to read as follows:

**Critical Facility.**

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the SFHA (100-year floodplain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet above BFE or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the BFE shall be provided to all critical facilities to the extent possible.

**NEW SECTION. Sec. 16.** A new section is added to chapter 16.15 DMCC to read as follows:

**Compliance.**

All development within special flood hazard areas is subject to the terms of this Title and other applicable regulations.

**NEW SECTION. Sec. 17.** A new section is added to chapter 16.15 DMMC to read as follows:

**Penalties for Noncompliance.**

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this Title and other applicable regulations. Violations of the provisions of this Title by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions), shall constitute a misdemeanor. Any person who violates this chapter or fails to comply with any of its requirements shall upon conviction thereof be fined not more than \$1,000 or imprisoned for not more than 90 days, or both, for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent the City of Des Moines from taking such other lawful action as is necessary to prevent or remedy any violation.

**Sec. 18. Codification.** Section 14 of this Ordinance shall be codified as DMMC 16.15.145 entitled "Changes to Special Flood Hazard Area."

**Sec. 19. Codification.** Section 15 of this Ordinance shall be codified as DMMC 16.15.210 entitled "Critical Facility."

**Sec. 20. Severability - Construction.**

(1) If a section, subsection, paragraph, sentence, clause, or phrase of this Ordinance is declared unconstitutional or invalid for any reason by any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance.

(2) If the provisions of this Ordinance are found to be inconsistent with other provisions of the Des Moines Municipal Code, this Ordinance is deemed to control.

**Sec. 21. Effective date.** This Ordinance shall take effect and be in full force five (5) days after its final approval by the Des Moines City Council in accordance with law.

**PASSED BY** the City Council of the City of Des Moines this 25th day of June, 2020 and signed in authentication thereof this 25th day of June, 2020.



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M A Y O R

APPROVED AS TO FORM:

/s/ Timothy George  
City Attorney

ATTEST:



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City Clerk

Published: June 30, 2020