

9.701. FLOOD DAMAGE PREVENTION—PURPOSE.

The purposes of Sections 9.701–9.707 are to:

Protect human life, health and property;

5 Minimize damage to public facilities and utilities, such as water purification and sewage treatment plants, water and gas mains, electric, telephone and sewer lines, and streets and bridges located in floodplains;

Help maintain a stable tax base by providing for the sound use and development of flood-prone areas;

10 Minimize expenditure of public money for costly flood-control projects;

Minimize the need for rescue, emergency services, and relief associated with flooding and generally undertaken at the expense of the general public;

Minimize prolonged business interruptions, unnecessary disruption of commerce, access and public service during times of flood;

15 Ensure that potential buyers are notified that property is in an Area of Special Flood Hazard;

Ensure that those who occupy the Areas of Special Flood Hazard assume responsibility for their actions, and;

20 Manage the alteration of Areas of Special Flood Hazard, stream channels and shorelines to minimize the impact of development on the natural and beneficial functions.

9.702. FLOOD DAMAGE PREVENTION—METHODS.

To accomplish its purposes, Sections 9.701–9.707 include methods and provisions to:

25 Require development that is vulnerable to floods, including structures and facilities necessary for the general health, safety and welfare of citizens, to be protected against flood damage at the time of initial construction;

Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which increase flood heights, velocities, or erosion;

30 Control filling, grading, dredging and other development which may increase flood damage or erosion;

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

Preserve and restore natural floodplains, stream channels, and natural protective barriers which carry and store floodwaters, and;

Coordinate with and supplement provisions of State of Oregon Specialty Codes enforced by the State of Oregon Building Codes Division.

5 **9.703. FLOOD DAMAGE PREVENTION— DEFINITIONS.**

When used in Sections 9.701–9.707, the terms below shall have the meanings herein ascribed. Unless specifically defined below, words or phrases used in Sections 9.701–9.707 shall be interpreted according to the meaning they have in common usage.

10 **Appeal.** A request for review of the Floodplain Administrator’s interpretation of provisions of Sections 9.701–9.707.

Basement. Any area of a building having its floor sub-grade (below ground level) on all sides.

15 **Certification, No-Rise.** A certification by a registered professional civil engineer that demonstrates, through hydrologic and hydraulic analyses performed in accordance with standard engineering practice, that an encroachment will not result in any increase in flood levels during the occurrence of the Base Flood discharge

Construction, New. A structure for which the “Start of Construction” commenced after May 3, 2011 and includes subsequent substantial improvements to the structure.

20 **Construction, Start of.** This includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home
25 on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not
30 part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not the alteration affects the external dimensions of a building.

35 **Crawlspace, Below-Grade.** An enclosed area below the Base Flood Elevation in which the interior grade is not more than two feet below the lowest adjacent exterior grade, and the height, measured from the interior grade of the crawlspace to the top of the crawlspace foundation, does not exceed four feet at any point.

Damage, Substantial. 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% of its market value before the damage occurred.

5 **Datum.** The vertical datum is a base measurement point (or set of points) from which all elevations are determined. Historically, that common set of points was the National Geodetic Vertical Datum of 1929 (NAVD29). The vertical datum now used by the federal government as a basis for measuring heights is the North American Vertical Datum of 1988 (NAVD88).

10 **Development.** Any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials located within the Area of Special Flood Hazard. Work exempt from Oregon Residential Specialty Code, Section R105.2 requires a Floodplain Development Permit unless specifically exempted by definition in Sections 9.701–9.707. Development does not include signs, markers, aids, etc. placed by a public agency to serve the public.

15 **Dwelling, Manufactured or Manufactured Home.** A structure, transportable in one or more sections, built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term “Manufactured Dwelling” does not include a “Recreational Vehicle.”

Elevation, Water Surface. The height, in relation to a specific datum, of floods of various magnitudes and frequencies in the floodplains of riverine areas.

20 **Encroachment.** The advancement or infringement of uses, fill, excavation, buildings, permanent structures, stream habitat restoration, or other development into a Floodway, which may impede or alter the flow capacity of a floodplain.

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

Facility, Critical. See “Facility, Essential”.

25 **Facility, Essential or Critical:**

- a. Hospitals and other medical facilities having surgery and emergency treatment areas;
- b. Fire and police stations;
- 30 c. Tanks or other structures containing, housing or supporting water or fire-suppression materials or equipment required for the protection of essential or hazardous facilities or special occupancy structures;
- d. Emergency vehicle shelters and garages;
- e. Structures and equipment in emergency-preparedness centers;
- f. Standby power generating equipment for essential facilities; and,
- 35 g. Structures and equipment in government communication centers and other facilities required for emergency response.

Flood or Flooding. A general and temporary condition of partial or complete inundation of normally dry land areas from (1) The overflow of inland or tidal waters; or (2) The unusual and rapid accumulation or runoff of surface waters from any source.

5 **Flood, Base.** The flood having a 1.0% chance of being equaled or exceeded in any given year.

Flood Elevation, Base (BFE). The water surface elevation during the base flood in relation to a specified datum. The Base Flood Elevation is depicted on the Flood Insurance Rate Maps to the nearest foot and in the Flood Insurance Study to the nearest 0.1 foot. Same as “Design Flood Elevation”.

10 **Flood Hazard, Area of Special.** The land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year (the area in which a base flood occurs). Zones designating Areas of Special Flood Hazard on Flood Insurance Rate Maps always include the letters A or V. Also known as the Special Flood Hazard Area.

15 **Flood Insurance Rate Map (FIRM).** An official map of a community, issued by the Federal Insurance Administration, delineating the Areas of Special Flood Hazard and/or risk premium zones applicable to the community.

Flood Insurance Rate Map, Digital (DFIRM). A map that depicts flood risk and zones, and flood risk information. The DFIRM presents the flood risk information in a format suitable for electronic mapping applications.

20 **Flood Insurance Study (FIS).** The official report by the Federal Insurance Administration evaluating flood hazards and containing flood profiles, Regulatory Floodway boundaries and water surface elevations of the Base Flood.

25 **Floodway.** The channel of a river or other watercourse and those portions of the floodplain adjoining the channel required to discharge the Base Flood without cumulatively increasing the water surface elevation more than one foot. For the City of Medford, Bear Creek is the only watercourse with a Regulatory Floodway defined herein.

30 **Floor, Lowest.** The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure used solely for parking of vehicles, building access, or storage, in an area other than a basement, is not considered a structure’s lowest floor, provided that the enclosed area is built and maintained in accordance with the applicable design requirements of the Specialty Codes and Sections 9.701–9.707. The lowest floor of a manufactured dwelling is the bottom of the longitudinal chassis frame beam in A zones.

35 **Grade, Highest Adjacent.** The highest natural elevation of the ground surface prior to construction, adjacent to the proposed walls of a structure. Refer to the Elevation Certificate (FEMA Form 81-31) for more information.

Improvement, Substantial. Reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50% 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 Market Value of the structure is

- a. the real market value of the structure prior to the start of the initial repair or improvement; or
- b. in the case of damage, the real market value of the structure prior to the damage occurring.

The term “Substantial Improvement” does not include either:

- a. a 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,
- b. alteration of a Historic Structure, provided that the alteration will not preclude the structure’s continued designation as a Historic Structure.

Letter of Map Change (LOMC). An official Federal Emergency Management Agency determination, by letter, to amend or revise effective Flood Insurance Rate Maps and Flood Insurance Studies. LOMCs are issued in the following categories:

Letter of Map Amendment (LOMA) A revision based on technical data showing that a property was inadvertently included in a designated Special Flood Hazard Area. A LOMA amends the current effective Flood Insurance Rate Map and establishes that a specific property is not located in a Special Flood Hazard Area;

Letter of Map Revision (LOMR) A revision based on technical data showing, due to manmade alterations, changes to flood zones, flood elevations, or floodplain and Regulatory Floodway delineations. One common type of LOMR, a LOMR-F, is a determination that a structure or parcel has been elevated by fill above the Base Flood Elevation and is excluded from the Special Flood Hazard Area;

Conditional Letter of Map Revision (CLOMR) A formal review and comment by the Federal Emergency Management Agency as to whether a proposed project complies with the minimum National Flood Insurance Program floodplain management criteria. A CLOMR does not amend or revise effective Flood Insurance Rate Maps, Flood Boundary and Floodway Maps, or Flood Insurance Studies.

Mean Sea Level. For purposes of the National Flood Insurance Program, the North American Vertical Datum of 1988 or other datum, to which Base Flood Elevations shown on a community’s Flood Insurance Rate Map are referenced.

Specialty Codes. The combined specialty codes adopted under ORS 446.062, 446.185, 447.020 (2), 455.020 (2), 455.496, 455.610, 455.680, 460.085, 460.360, 479.730 (1) or 480.545, but does not include regulations adopted by the State Fire Marshal pursuant to ORS chapter 476 or ORS 479.015 to 479.200 and 479.210 to 479.220. The combined specialty codes are often referred to as building codes.

Structure. A walled and roofed building, a manufactured dwelling, a modular or temporary building, or a gas or liquid storage tank that is principally above ground.

Structure, Accessory. Same as definition of “Building, accessory” under 10.012.

Structure, Historic. A structure that is:

- 5 a. Listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- 10 b. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or to a district preliminarily determined by the Secretary to qualify as a registered historic district;
- c. Individually listed on a state inventory of historic places and determined as eligible by states with historic preservation programs which have been approved by the Secretary of the Interior; or,
- 15 d. Individually listed on a local inventory of historic places and determined as eligible by communities with historic preservation programs that have been certified either:
 - i. By an approved state program as determined by the Secretary of the Interior, or;
 - ii. Directly by the Secretary of the Interior in states without approved programs.

20 **Use, Water-Dependent.** a facility that cannot be used for its intended purpose unless it is located or carried out in close proximity to water, such as a dam or irrigation canal. The term does not include long-term storage, manufacture, sales, or service facilities.

Variance. A grant of relief from a requirement of Sections 9.701–9.706 by permitting construction in a manner that would otherwise be prohibited by said Sections.

Vehicle, Recreational. A vehicle that is:

- 25 a. Built on a single chassis;
- b. 400 square feet or less when measured at the largest horizontal projection;
- c. Designed to be self-propelled or permanently towed by a light duty truck, and;
- d. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

30 **Violation.** The failure of a structure or other development to be fully compliant with the floodplain management regulations of Sections 9.701–9.707. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance is presumed to be in violation until such time as that documentation is provided.

Watercourse. A lake, river, creek, stream, wash, arroyo, channel or other topographic feature in, on, through, or over which water flows at least periodically.

9.704. FLOOD DAMAGE PREVENTION—GENERAL PROVISIONS.

A. Applicability.

5 Sections 9.701–9.707 shall apply to all Areas of Special Flood Hazard within the jurisdiction of the City of Medford. Nothing in Sections 9.701–9.707 is intended to allow uses or structures that are otherwise prohibited by the Land Development Code or Specialty Codes.

B. Basis for Area of Special Flood Hazard.

10 The Area of Special Flood Hazard identified by the Federal Emergency Management Agency (FEMA) in its Flood Insurance Study (FIS) for the City of Medford dated May 3, 2011, with accompanying Flood Insurance Rate Maps (FIRM) or Digital Flood Insurance Rate Maps (DFIRM), are adopted by reference and declared a part of Sections 9.701–9.707. The FIS and the FIRM are on file at the offices of the City of Medford, 200 South Ivy Street.

C. Coordination with Specialty Codes Adopted by the State of Oregon Building Codes Division.

15 Pursuant to the requirement established in ORS 455 that the City administers and enforces the State of Oregon Specialty Codes, the City of Medford does hereby acknowledge that the Specialty Codes contain certain provisions that apply to the design and construction of buildings and structures located in Areas of Special Flood Hazard. Therefore, Sections
20 9.701–9.707 is intended to be administered and enforced in conjunction with the Specialty Codes.

D. Requirement for a Floodplain Development Permit.

A Floodplain Development Permit shall be required prior to initiating development activities in any Areas of Special Flood Hazard established in Section 9.704.B.

E. Interpretation.

25 In the interpretation and application of Sections 9.701–9.707, all provisions shall be:

- (1) Considered as minimum requirements; and,
- (2) Deemed neither to limit nor repeal any other powers granted under state statutes, including state Specialty Codes.

F. Warning and Disclaimer of Liability

30 The degree of flood protection required by Sections 9.701–9.707 is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur. Flood heights may be increased by manmade or natural causes. This section does not imply that land outside Areas of Special Flood Hazard or uses
35 permitted within such areas will be free from flooding or flood damages. This section shall

not create liability on the part of the City of Medford or any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on Sections 9.701–9.707 or an administrative decision lawfully made hereunder.

9.705. FLOOD DAMAGE PREVENTION REGULATIONS—ADMINISTRATION.

5 **A. Designation of Floodplain Administrator.**

The Building Official is hereby appointed as the Floodplain Administrator who is responsible for administering and implementing the provisions of Sections 9.701–9.707.

B. Duties and Responsibilities of the Floodplain Administrator.

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

- 10 (1) Review all proposed development to determine whether it will be located in Areas of Special Flood Hazard or other flood-prone areas;
- (2) Review applications for new development or modifications of any existing development in Areas of Special Flood Hazard for compliance with the requirements of Sections 9.701–9.707;
- 15 (3) Review proposed development to ensure that necessary permits have been received from governmental agencies from which approval is required by Federal or state law. Copies of such permits shall be maintained on file.
- (4) Review all development permit applications to determine if proposed development is located in the Regulatory Floodway, and if so, ensure that the encroachment standards of Subsection 9.706.B, Development in Regulatory Floodways, are met.
- 20 (5) When Base Flood Elevation data have not been established in Subsection 9.704.B, Basis for Area of Special Flood Hazard, the Floodplain Administrator shall obtain, review and reasonably utilize any Base Flood Elevation and Floodway data available from a Federal, state or other authoritative source in order to administer the provisions of Sections 9.701–9.707.
- 25 (6) When Base Flood Elevations are not available from an authoritative source, the Floodplain Administrator shall require Base Flood Elevations to be developed in accordance with Paragraph 9.706.A(2).
- 30 (7) When a determination is needed of the exact location of boundaries of the Areas of Special Flood Hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), the Floodplain Administrator shall make a determination. Any person contesting the location of the boundary shall be given a reasonable opportunity to appeal the determination per Section 10.051.
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- (8) Issue Floodplain Development Permits when the provisions of Sections 9.701–9.707 have been met, or deny the same in the event of noncompliance;
- (9) Ensure that applications for building permits comply with the requirements of Sections 9.701–9.707;
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- (10) Obtain, verify and record the actual elevation in relation to the vertical datum used on the effective Flood Insurance Rate Map, or, in relation to the highest adjacent grade where no Base Flood Elevation is available, of the lowest floor level, including basement, of all new construction or substantially improved buildings and structures, including manufactured dwellings;
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- (11) Obtain, verify and record the actual elevation of finished construction, in relation to the vertical datum used on the effective Flood Insurance Rate Map, or highest adjacent grade where no Base Flood Elevation is available, to which any new or substantially improved non-residential buildings or structures have been flood proofed. When flood proofing is utilized for a structure, the Floodplain Administrator shall obtain certification of elevation to which the structure was flood proofed from a registered professional engineer or land surveyor.
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- (12) Ensure that all records and certifications pertaining to the provisions of Sections 9.701–9.707 are permanently maintained in the City of Medford Building Safety Department and available for public inspection.
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- (13) Make periodic inspections of Areas of Special Flood Hazard to establish that development activities are being performed in compliance with Sections 9.701–9.707, and to verify that existing buildings and structures maintain compliance with Sections 9.701–9.707;
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- (14) Inspect areas where buildings and structures in Areas of Special Flood Hazard have been damaged, regardless of the cause of damage, and notify owners that permits may be required prior to repair, rehabilitation, demolition, relocation, or reconstruction of the building or structure; and,
- (15) Make substantial improvement and substantial damage determinations for all structures located in Areas of Special Flood Hazard.

C. Floodplain Development—Permit Procedures.

35 Application for a Floodplain Development Permit shall be made to the Floodplain Administrator or designee on forms furnished by the Floodplain Administrator or designee prior to starting development activities. Specifically, the following information is required:

- 40
- (1) Application Stage.
- a. Plans drawn to scale, with elevations of the project area, and the nature, location, and dimensions of existing and proposed structures, earthen fill placement, storage of materials or equipment, and

drainage facilities;

b. Delineation of Areas of Special Flood Hazard, Regulatory Floodway boundaries including Base Flood Elevations, or flood depth in AO zones, where available;

5 c. For all proposed structures, elevation of the lowest enclosed area in relation to the highest adjacent grade and the Base Flood Elevation (or flood depth in AO zones), including crawlspace or basement, elevation of the top of the proposed garage slab, if any, and elevation of the next highest floor.

10 d. Locations and sizes of all flood openings, if required, in any proposed building;

e. Elevation to which a non-residential structure will be flood-proofed;

15 f. Certification from a registered professional engineer that any proposed non-residential flood-proofed structure will meet the flood-proofing criteria of the National Flood Insurance Program (NFIP) and Specialty Codes;

g. Description of the extent to which any watercourse will be altered or relocated as a result of a proposed development;

20 h. Proof that application has been made for necessary permits from other governmental agencies from which approval is required by Federal or state law.

(2) Construction Stage.

25 a. Copies of all necessary permits from other governmental agencies from which approval is required by Federal or state law shall be provided prior to start of construction.

b. Development activities shall not begin without an approved Floodplain Development Permit.

30 c. For all new construction and substantial improvements, the Floodplain Development permit holder shall provide to the Floodplain Administrator an as-built certification of the floor elevation or flood-proofing level immediately after the lowest floor or flood-proofing is placed and prior to further vertical construction; and,

35 d. Any deficiencies identified by the Floodplain Administrator shall be corrected by the Floodplain Development Permit holder immediately and prior to work proceeding. Failure to submit certification or failure to make the corrections shall be cause for the Floodplain Administrator to issue a stop-work order for the project.

(3) Certificate of Occupancy.

- 5 a. In addition to the requirements of the Specialty Codes pertaining to Certificate of Occupancy, and prior to the final inspection, the owner or authorized agent shall submit the following documentation for finished construction that has been signed and sealed by a registered surveyor or engineer:
- 10 i. For elevated buildings and structures in Areas of Special Flood Hazard (all A zones), the elevation of the lowest floor, including basement or, where no Base Flood Elevation is available, the height above highest adjacent grade of the lowest floor; and,
- 15 ii. For non-residential buildings and structures that have been flood proofed, the elevation to which the building or structure was flood proofed.
- b. Failure to submit certification or failure to correct violations shall be cause for the Floodplain Administrator to withhold a Certificate of Occupancy until such deficiencies are corrected.

20 (4) Expiration of Floodplain Development Permit. A Floodplain Development Permit shall become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the work commences. Extensions for periods of not more than 180 days each shall be requested in writing.

D. Watercourse Alterations.

- 25 (1) Development shall not diminish the flood-carrying capacity of a watercourse. If any watercourse will be altered or relocated as a result of the proposed development, the applicant must submit certification by a registered professional engineer that the flood-carrying capacity of the watercourse will not be diminished.
- 30 (2) The applicant shall be responsible for obtaining all necessary permits from governmental agencies from which approval is required by Federal or state law, including, but not limited to, section 404 of the Federal Water Pollution Control Act Amendments of 1972 (33 USC 1334); the Endangered Species Act of 1973 (16 USC 1531-1544); and State of Oregon Department of State Lands regulations.
- 35 (3) If the altered or relocated watercourse is part of an Area of Special Flood Hazard, the applicant shall notify other affected jurisdictions and Oregon Department of Land Conservation and Development (the NFIP Coordinating Agency for Oregon) prior to any alteration or relocation of the watercourse. Evidence of notification must be submitted to the Floodplain Administrator
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and to the Federal Emergency Management Agency as set forth in Section 9.705.E, below.

- (4) The applicant shall be responsible for ensuring necessary maintenance for the altered or relocated portion of the watercourse is provided so that the flood-carrying capacity will not be diminished.
- (5) The applicant shall meet the requirements to submit technical data in Section 9.705.E, below, when an alteration of a watercourse results in the expansion, relocation or elimination of the Special Flood Hazard Area.

E. Requirement to Submit New Technical Data.

- (1) Within six months of project completion, an applicant who obtains an approved Conditional Letter of Map Revision from the Federal Emergency Management Agency (FEMA), or whose development alters a watercourse that is part of an Area of Special Flood Hazard, or modifies floodplain boundaries or Base Flood Elevations, shall obtain from FEMA a Letter of Map Revision reflecting the as-built changes to the Flood Insurance Rate Map.
- (2) It is the responsibility of the applicant to have technical data prepared in a format required for a Conditional Letter of Map Revision or Letter of Map Revision and to submit such data to FEMA on the appropriate application forms. Submittal and processing fees for these map revisions shall be the responsibility of the applicant.
- (3) Applicants shall be responsible for all costs associated with obtaining a Conditional Letter of Map Amendment or Letter of Map Revision from FEMA.
- (4) When the applicant has demonstrated that the project will or has met all applicable requirements of this section, the Floodplain Administrator may sign the Community Acknowledgement Form, which is part of the Conditional Letter of Map Amendment or Letter of Map Revision application.

F. Non-Conversion of Enclosed Areas Below the Lowest Floor.

To ensure that enclosed areas below the lowest floor continue to be used solely for parking vehicles, limited storage, or access to the building, and not be finished for use as human habitation, the Floodplain Administrator shall:

- (1) Determine which applicants for new construction and/or substantial improvements have fully enclosed areas below the lowest floor that are five feet or higher; and
- (2) Require those applicants to enter into a “Non-Conversion Deed Declaration for Construction Within Flood Hazard Areas” or equivalent, with the City of Medford. The deed declaration shall be recorded with Jackson County. The deed declaration shall be in a form acceptable to the Floodplain Administrator and City Attorney.

9.706. FLOOD DAMAGE PREVENTION REGULATIONS—FLOOD HAZARD REDUCTION PROVISIONS.

A. Site Improvements and Subdivisions.

5 All plans and permits for new site improvements, subdivisions, and manufactured home parks shall be consistent with the need to minimize flood damage and ensure that building sites will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes such things as historical data, high water marks, and photographs of past flooding.

- (1) Building lots shall have adequate buildable area outside of Floodways.
- 10 (2) Where Base Flood Elevation data has not been provided or is not available from another authorized source, it shall be generated for land division proposals and other proposed developments.
- 15 (3) New site improvements, subdivisions, and manufactured home parks shall have public utilities and facilities, such as sewer, gas, electric and water systems, located and constructed to minimize or eliminate damage and infiltration of floodwaters. Replacement public utilities and facilities, such as sewer, gas, electric and water systems, likewise, shall be sited and designed to minimize or eliminate damage and infiltration of floodwaters.
- 20 (4) New and replacement onsite waste disposal systems and sanitary sewerage systems shall be located and constructed to avoid functional impairment, or discharges from them, during flooding.
- 25 (5) Subdivisions and manufactured home parks shall have adequate drainage provided to reduce exposure to flood hazards. In AO and AH zones, drainage paths shall be provided to guide floodwater around and away from all proposed and existing structures.

B. Development in Regulatory Floodway

- (1) Encroachments are prohibited in the Regulatory Floodway unless a registered professional civil engineer provides a No-Rise Certification.
- 30 (2) Any fill permitted to be placed in the Regulatory Floodway shall be designed to be stable under conditions of flooding, including rapid rise and rapid drawdown of floodwaters, prolonged inundation, and flood-related erosion and scour.
- 35 (3) Before the City will permit an encroachment in the Regulatory Floodway that will cause any increase in the base flood elevation, applicants shall obtain a Conditional Letter of Map Revision from the Federal Emergency Management Agency, unless the development causes a temporary encroachment and the conditions in (4), below, are satisfied.
- (4) Temporary encroachments in the Regulatory Floodway for the purposes of capital improvement projects (including bridges) require a Floodplain

Development Permit. A conditional or final Letter of Map Revision shall not be required. Up to a one-foot rise in the base flood elevation shall be allowed due to temporary encroachments associated with capital improvement projects, when:

- 5 a. The project is limited as to duration, with the days and dates that the structure or other development will be in the Regulatory Floodway specified in the Floodplain Development Permit;
- b. Accessory structures (i.e. construction trailers) are restricted from the Regulatory Floodway;
- 10 c. The project limits placement of equipment and material in the Regulatory Floodway to that which is absolutely necessary for the purposes of the project;
- d. The project includes a flood warning system sufficient to allow equipment to be evacuated from the Regulatory Floodway and placed outside the Area of Special Flood Hazard in the event of
15 imminent flood;
- e. The project applicant identifies any insurable structures affected by temporary changes to the Area of Special Flood Hazard or Base Flood Elevation and notifies owners of any increased risk of flooding; and,
- 20 f. The project applicant is provided with written notification that they may be liable for any flood damages resulting from the temporary encroachment.

C. Zones with Base Flood Elevations but No Regulatory Floodway.

- 25 (1) In areas within Zone AE on the community's FIRM where no Regulatory Floodway has been designated, the floodway is the channel of the stream. Encroachments shall be prohibited in the channel or floodway unless all the provisions of 9.706.B are satisfied.
- 30 (2) In Areas of Special Flood Hazard, encroachments shall be prohibited unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water-surface elevation of the base flood more than one foot at any point within the community.
- 35 (3) Applicants of proposed projects that increase the Base Flood Elevation more than one foot shall obtain from FEMA a Conditional Letter of Map Revision (CLOMR) before the project may be permitted. As soon as possible, but no later than six months after project completion, an application for a Letter of Map Revision (LOMR) shall be submitted by the applicant to FEMA. The applicant is responsible for paying any costs associated with the CLOMR and LOMR process.

D. Areas of Special Flood Hazard without Base Flood Elevations.

- 5 (1) When Areas of Special Flood Hazard have been provided, but Base Flood Elevation or floodway data have not been identified by FEMA in a Flood Insurance Study and/or Flood Insurance Rate Maps, the Floodplain Administrator shall obtain, review, and utilize scientific or historic Base Flood Elevation and Regulatory Floodway data available from a Federal, state, or other source, in order to administer these regulations. If Base Flood Elevations are not available, subsection (3) below shall apply.
- 10 (2) Where the Floodplain Administrator has obtained Base Flood Elevation data, Section 9.706.C and 9.706.E through K shall apply.
- 15 (3) In Areas of Special Flood Hazard without Base Flood Elevation data no encroachments shall be located in an Area of Special Flood Hazard within an area equal to the width of the stream or 50 feet, whichever is greater, measured from the ordinary high water mark of the stream, unless a Base Flood Elevation is developed by a licensed professional engineer.

E. Building Design and Construction

20 Buildings and structures, including manufactured dwellings, within the scope of the Building Codes, including repair of substantial damage and substantial improvement of such existing buildings and structures, shall be designed and constructed in accordance with the flood-resistant construction provisions of these codes.

F. Below-Grade Crawlspace.

Below-grade crawlspaces are allowed subject to the following standards as illustrated in FEMA Technical Bulletin 11-01, "Crawlspace Construction for Buildings Located in Special Flood Hazard Areas":

- 25 (1) The building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Hydrostatic loads and the effects of buoyancy can usually be addressed through the required openings stated in Subsection (2) below. Because of hydrodynamic loads, crawlspace construction is not allowed in areas with flood velocities greater than five feet per second unless the design is reviewed by a qualified design professional, such as a registered architect or professional engineer. Other types of foundations are recommended for these areas.
- 30 (2) The crawlspace is an enclosed area below the Base Flood Elevation (BFE) and, as such, must have openings that equalize hydrostatic pressures by allowing the automatic entry and exit of floodwaters. The bottom of each flood vent opening can be no more than one foot above the lowest adjacent exterior grade.
- 35 (3) Portions of the building below the BFE must be constructed with materials resistant to flood damage. This includes not only the foundation walls of the
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crawlspace used to elevate the building, but also any joists, insulation, or other materials that extend below the BFE. The recommended construction practice is to elevate the bottom of joists and all insulation above BFE.

- (4) Any building utility systems within the crawlspace must be elevated above BFE or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions. Ductwork, in particular, must either be placed above the BFE or sealed from floodwaters.
- (5) The interior grade of a crawlspace below the BFE must not be more than two feet below the lowest adjacent exterior grade.
- (6) The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall must not exceed four feet at any point. The height limitation is the maximum allowable unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas.
- (7) There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage characteristics, such as soil types. Possible options include natural drainage through porous, well-drained soils and drainage systems such as perforated pipes, drainage tiles, or gravel/crushed stone drainage by gravity or mechanical means.
- (8) The velocity of floodwaters at the site should not exceed five feet per second for any crawlspace. For velocities in excess of five feet per second, other foundation types should be used.

G. Recreational Vehicles.

In all Areas of Special Flood Hazard, Recreational Vehicles that are an allowed use or structure under the land development code must:

- (1) Be placed on the site for fewer than 180 consecutive days; or,
- (2) 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 structures or addition.

H. Essential Facilities.

Construction of new essential facilities shall be located outside the limits of the Area of Special Flood Hazard, except that construction of new essential facilities shall be permissible within the Area of Special Flood Hazard if no feasible alternative site is available. Flood proofing and sealing measures must be taken to ensure that toxic substances or priority organic pollutants as defined by the Oregon Department of Environmental Quality will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the Base Flood Elevation shall be provided to all essential facilities to the maximum extent possible.

I. Tanks.

New and replacement tanks in an Area of Special Flood Hazard shall either be elevated above the Base Flood Elevation on a supporting structure designed to prevent flotation, collapse or lateral movement during conditions of the base flood, or be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy assuming the tank is empty, during conditions of the Design Flood.

New and replacement tank inlets, fill openings, outlets and vents shall be placed a minimum of two feet above Base Flood Elevation or fitted with covers designed to prevent the inflow of floodwater or outflow of the contents of the tank during conditions of the Design Flood.

J. Fences and Walls

New and replacement fencing in an Area of Special Flood Hazard shall be designed to collapse under conditions of the Base Flood or to allow the passage of water by having flaps or openings in the areas at or below the Base Flood Elevation sufficient to allow flood water and associated debris to pass freely.

K. Other Development, including Accessory Structures, in High Hazard Areas.

All development in high hazard areas (all A zones) for which provisions are not specified in Sections 9.701–9.707 or building codes, shall:

- (1) Be located and constructed to minimize flood damage;
- (2) Be designed so as not to impede flow of floodwaters under Base Flood conditions;
- (3) If located in a Regulatory Floodway, meet the limitations of Section 9.706.B;
- (4) Be anchored to prevent flotation, collapse, or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the design flood;
- (5) Be constructed of flood damage-resistant materials;
- (6) Have electric service and or mechanical equipment elevated above the Base Flood Elevation (or depth number in AO zones), except for minimum electric service required to address life safety and electric code requirements.
- (7) Relief from elevation or dry flood-proofing standards may be granted for new and replacement, or substantially improved accessory structures containing no more than 200 square feet; larger than 200 square feet, building codes apply. Such a structure must meet (1) through (6) of this Subsection, and, in addition, shall meet the following standards:
 - a. It shall not be used for human habitation and may be used solely for parking of vehicles or storage of items having low damage potential when submerged;

5 b. Toxic material, oil or gasoline, or any priority persistent pollutant identified by the Oregon Department of Environmental Quality shall not be stored below Base Flood Elevation, or where no Base Flood Elevation is available, lower than three feet above grade, unless confined in a tank installed in compliance with this section;

 c. It shall be designed to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater. Designs for complying with this requirement must be certified by a licensed professional engineer or architect, or:

10 i. Provide 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;

 ii. The bottom of all openings shall be no higher than one foot above the higher of the exterior or interior grade or floor immediately below the opening; and,

15 iii. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwater in both directions without manual intervention.

20 **9.707. FLOOD DAMAGE PREVENTION—VARIANCE.**

 Variances from the provisions of Sections 9.701–9.706 may be permitted when there are practical difficulties or unnecessary hardships created in carrying out the provisions. The basis for a variance shall be the physical circumstances or characteristics of a lot; a variance shall not be based on the inhabitants or owners of the property, their economic or financial
25 circumstances, or the condition or situation of structures on the property. The burden is on the applicant to show that the variance is warranted and meets the approval criteria set out herein.

 The provisions of this Section are not the same as, nor to be confused with, provisions for Exceptions in the Land Development Code.

30 A variance may be issued for the reconstruction, rehabilitation, or restoration of structures listed on the National Register of Historic Places or the Statewide Inventory of Historic Properties without regard to the procedures set forth in this Section.

A. Variance—Procedure.

35 (1) An application for a variance from the Flood Damage Prevention regulations must be submitted to the Floodplain Administrator on the form provided by the City and shall include, at a minimum, the same information required for a Floodplain Development Permit, and an explanation of the basis for the request for a variance.

(2) Variance requests will be heard by the Planning Commission and be processed in the manner of a Class-C application, using the Class-C procedural requirements in Chapter 10, Article II of the Municipal Code. City will use the same referral agency notification list as is used for Exceptions (Section 10.146).

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(3) Upon consideration of the approval criteria in Subsection B, below, and the purposes of this Section, and finding that the approval criteria can be met, the City approving authority may approve the request and attach such conditions to the granting of a variance as it deems necessary to further the purposes of these regulations.

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(4) The Floodplain Administrator shall maintain a permanent record of all variances and report any variances to the Federal Emergency Management Agency upon request.

B. Variance—Approval Criteria.

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(1) A variance shall not be issued within a Floodway if any increase in flood levels during the Base Flood discharge would result.

(2) A variance shall only be issued upon the:

a. Determination that the variance is the minimum necessary, considering the flood hazard, to afford relief;

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b. Showing of good and sufficient cause;

c. Determination that failure to grant a variance from these regulations would result in exceptional hardship to the applicant; and,

d. Determination that the granting of a variance would not result in increased flood heights, additional threats to public safety, or extraordinary public expense; or create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

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(3) In approving a variance, the City approving authority shall consider all technical evaluations, all relevant factors, standards specified in other sections of this Code, and the:

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a. Danger that materials may be swept onto other lands to the injury of others;

b. Danger to life and property due to flooding or erosion damage;

c. Susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

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d. Importance of the services provided by the proposed facility to the community;

- e. Necessity to the facility of a waterfront location, where applicable;
- f. Availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
- g. Compatibility of the proposed use with existing and anticipated development;
- h. The relationship of the proposed use to the Comprehensive Plan and floodplain management program for that area;
- i. Safety of access to the property in times of flood for ordinary and emergency vehicles;
- j. Expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters, expected at the site; and,
- k. 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.

(4) A variance may be issued for a water-dependent use provided that:

- a. the criteria of subsections (1) through (3) of this section are met; and,
- b. the structure or other development is protected by methods that minimize flood damages during the Base Flood and that create no additional threats to public safety.

C. Variance—Decision.

The decision to either grant or deny a variance shall be in writing and shall set forth the reasons for such approval or denial. If the variance is granted, the property owner shall be put on notice, along with the written decision, that the permitted building will have its lowest floor below the Base Flood Elevation and that the cost of flood insurance likely will be commensurate with the increased flood damage risk.

FLOOD DAMAGE PREVENTION REGULATIONS

Part 2: Definitions to be **deleted** from Section 10.012, Definitions, of the Zoning Code, to eliminate redundancy.

Filling or Flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from: (1) The overflow of inland or tidal waters; and/or, (2) The unusual and rapid accumulation of runoff of surface waters from any source.

Flood, base. The flood having a one percent chance of being equaled or exceeded in any given year.

Flood, area of special flood hazard. Land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year.

Flood Insurance Rate Map (FIRM), means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

Flood Insurance Study, means the official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.

Floodway, means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

Habitable floor means any floor usable for living purposes, which includes working, sleeping, eating, cooking or recreation, or a combination thereof. A floor used only for storage purposes is not a "habitable floor".