COMMUNITY DEVELOPMENT
333 Broadalbin Street SW, PO Box 490, Albany, Oregon 97321-0144 | BUILDING 541-917-7553 | PLANNING 541-917-7550

Staff Report

Article 6 Floodplain Development Code Amendments

Planning File: DC-02-24 May 6, 2024

HEARING BODIES:	Planning Commission	City Council
HEARING DATES:	Monday, May 13, 2024	Wednesday, June 12, 2024
HEARING TIMES:	5:15 p.m.	6:00 p.m.
HEARING LOCATION:	Council Chambers, Albany City Hall, 333 Broadalbin Street SW	
VIRTUAL OPTIONS:	Instructions to attend the hearings and provide comments will be provided on the applicable agenda.	
STAFF REPORT PREPARED BY:	Jennifer Cepello, Planner III	

Application Information

Proposal: The proposed legislative amendments would amend Article 6 of the Albany Development Code to become compliant with the State's minimum regulations.

Applicant: Albany Community Development Department, 333 Broadalbin Street SW, Albany, OR 97321

Location: Legislative amendments; not site specific

Overview

The Oregon Model Flood Hazard Ordinance was developed in cooperation with FEMA to help communities achieve compliance with the minimum NFIP and state standards for floodplain management. FEMA approved the model ordinance in August of 2019 with updates approved in October 2020. In 2019 the City of Albany participated in a Community Assistance Visit (CAV) with Oregon Department of Land Conservation and Development's NFIP coordinator in which it was determined that Albany's Floodplain Ordinance was no longer complaint with the State's minimum requirements. The proposed amendments will align the City's Floodplain ordinance with Oregon's Model Flood Hazard Ordinance.

Summary of Proposed Changes

The City of Albany is proposing to amend its floodplain ordinance to comply with FEMA approved Oregon Model Flood Hazard Ordinance.

The specific proposed amendments are attached as Exhibits and areas of amendments are listed below. In the exhibits, proposed new text is shown in red underline print and proposed deleted text is ~~in black strike-out font~~.

Commentary boxes in the attached exhibits provide context for the proposed amendments. Should the proposed amendments be approved, the text boxes with the explanations will be removed and the approved amendments made part of the ADC.

Exhibit A: Albany Development Code

- Article 6, Natural Resource Districts: Floodplain

Notice Information

Public notice was issued in accordance with legislative amendment requirements in the ADC Section 1.260. Specifically,

- Notice was provided to the Oregon Department of Land Conservation and Development (DLCD) on March 25, 2023, at least 35 days before the first evidentiary hearing, in accordance with Oregon Administrative Rule (OAR) 660-018-0020 and the ADC.
- Notice of the proposed amendments was emailed on April 29, 2024, to Linn County, Benton County, and Cascades West Council of Governments.
- Notice of the public hearings was published in the *Albany Democrat-Herald* on April 27, 2024, two weeks before the first public hearing on May 13, 2024.

As of the date of this report, the Community Development Department has not received any written testimony.

Analysis of Development Code Criteria

The ADC includes the following review criteria in Section 2.290, which must be met for these legislative amendments to be approved. Code criteria are written in ***bold italics*** and are followed by findings and conclusions.

Development Code Amendments Review Criteria (ADC 2.290)

Criterion 1: The proposed amendments better achieve the goals and policies of the Comprehensive Plan than the existing language.

Findings of Fact

1.1 The applicable Albany Comprehensive Plan and Statewide Planning goals and policies are provided below in **bold** print and are followed by findings of fact and conclusions.

Goal 1, Citizen Involvement: **To develop a citizen involvement program that ensures the opportunity for citizens to be involved in all phases of the planning process.**

Goal: Ensure that local citizens and other affected groups, neighborhoods, agencies, and jurisdictions are involved in every phase of the planning process.

Applicable Policies:

2. When making land use and other planning decisions:

a. Actively seek input from all points of view from citizens and agencies and assure that interested parties from all areas of the Urban Growth Boundary have the opportunity to participate.

b. Utilize all criteria relevant to the issue.

c. Ensure the long-range interests of the general public are considered.

d. Give particular attention to input provided by the public.

e. Where opposing viewpoints are expressed, attempt to reach consensus where possible.

4. Ensure information is made available to the public concerning development regulations, land use, and other planning matters including ways they can effectively participate in the planning process.

1.2 Public notice and hearings were held in accordance with Oregon Administrative Rules (OAR) and ADC 1.260. Public involvement for the amendments in planning file DC-02-24, included public notice as required in the OAR and in ADC Section 1.260. Specifically, notice was sent to the Department of Land Conservation and Development on March 25, 2024; notice of public hearings was mailed April 29, 2024, to Benton County and

Linn County, and notice was published in the Albany Democrat Herald on April 27, 2027. Two public hearings are scheduled – May 13, 2024 (planning commission), and June 12, 2024 (city council).

1.3 Information was made available to the public regarding the proposed development code amendments to enable public participation in the planning process by posting the staff report on the City's website on May 6, 2024, at least seven days before the first public hearing.

Statewide Planning Goal 2, Land Use Planning: **To establish a land use planning process and policy framework as a basis for all decisions and actions related to the use of land and to assure an adequate factual bases for such decisions.**

Goal 3: Incorporates the most recent and reliable information.

Goal 4: Remains consistent with state laws and administrative rules.

1.4 The Albany Development Code serves as the principal vehicle for implementing the Comprehensive Plan.

1.5 The Oregon Model Flood Hazard Ordinance was developed in cooperation with FEMA to help communities achieve compliance with the minimum NFIP and state standards for floodplain management. FEMA approved the model ordinance in August of 2019 with additional updates approved in October 2020.

1.6 The proposed amendments to Section 6 of Albany Development Code (ADC) will align existing floodplain ordinance with the Oregon Model Flood Hazard Ordinance.

1.7 The proposed amendments are based upon the most recent Department of Land Conservation and Development's Oregon Model Flood Hazard Ordinance and are intended to ensure consistency with state and federal laws.

Goal 7, Flood Hazards & Hillsides: Protect life and property from natural disasters and hazards.

Policy 1: Continue to participate in the National Flood Insurance Program and comply with applicable standards.

Policy 2: Review any development that could potentially affect the floodway or increase the area subject to Special Flood Hazard Area (100-year floodplain), unless otherwise exempted.

Policy 3: Restrict new development (including fencing, grading, fill, excavation, and paving) form locating within floodways that would result in an increase in base-year flood levels. If it can be determined that there will be no increase in base-year flood levels, then the following uses may be considered;

a. Public and private parks and recreational uses.

b. Other uses, which would not involve the construction of permanent or habitable structures.

c. Water-dependent structures such as docks, piers, bridges, and floating marinas.

Policy 4: Concurrent with new development, and when appropriate, secure dedications and easements adequate for channel maintenance and conveyance of storm water along natural drainageways and where identified on adopted master plans, secure easements for public open space, and future recreation use along all floodways and natural permanent drainageways.

Policy 5: Recognize that development within areas subject to flooding is subject to regulations to protect life and property and that certain types of development may not be allowed.

Policy 6: Ensure that development proposals in the flood fringe and adjacent to drainageways are consistent with Federal Emergency Management Agency (FEMA) and other applicable local regulations in order to minimize potential flood damage. Development proposals in areas subject to flooding may be reviewed according to the following criteria:

a. Proposed development activities shall not change the flow of surface water during flooding so as to endanger property in the area. Special engineering reports on the changes in water flow and potential damage which may be caused as a result of proposed activities may be required. If necessary, local

drainage shall be improved to control increased runoff that might increase the danger of flooding to other property.

b. Impacts on significant fish and wildlife habitat have been considered and appropriate protection measures included in project design.

c. Problems of ponding, poor drainage, high water table, soil instability, or exposure to other flood hazards have been identified and mitigated. Evaluations and mitigating measures shall be based on a base year flood and wet seasons characteristics.

d. If adjacent to a designated floodway, the development shall be designed to use the natural amenities of the floodway including open space, scenic views, and vegetation in accordance with an approved site plan.

Policy 9: Ensure that any filing or construction within the floodplain meets the following criteria:

a. Require that a floodplain development permit is issued prior to any grading, fill, excavation, or paving activity, unless otherwise exempted, and that all grading, fill, excavation, or paving is engineered and compacted to applicable standards. Grading, fill, excavation, or paving areas for dwellings shall have engineering certification that loading rates are adequate for dwellings.

b. The lowest finished floor elevation shall be built at least one (1) foot above the base-year flood level. Special engineering reports or structural work may be required.

c. Require property owners or developers to file an elevation certification approved by the local community permit official, registered professional engineer, architect, or surveyor indicating elevation of the surrounding grade or lowest habitable floor (including basement) of all new residential structures. This information shall be maintained to indicate compliance with Federal Emergency Management Agency (FEMA) regulations.

Policy 10: For construction, remodeling, or major repairs to structures (including prefabricated and mobile homes) within the floodplain, review building permits to ensure that:

a. Building location and grading are designed to protect the structure during the base year flood;

b. Construction materials and utility equipment are resistant to flood damage.

c. Construction methods and practices will minimize flood damage.

d. Where appropriate, structures are designed or modified to prevent flotation, collapse, or lateral movement of the structure.

Policy 11: Development approval within the flood fringe shall be reviewed to protect property and public safety and significant natural values.

1.8 In 2019 the City of Albany participated in a Community Assistance Visit (CAV) with DLCD to ensure compliance with the State's and the NFIP floodplain requirements. It was through this process that it was found that the ADC was out of compliance with the most recent floodplain requirements.

1.9 The proposed amendments will update the existing floodplain regulations in Article 6 to meet the standards set by the State of Oregon and the NFIP, by aligning the ADC with the Oregon Model Floodplain Ordinance.

1.10 In general, the proposed amendments to the development code are intended to improve the land use process rather than significantly change the outcomes. The proposed amendments are intended to ensure consistency with state law by providing the most recent and reliable information.

Conclusions: Development Code Amendments Criterion 1

1.1 The proposed ADC amendments are consistent with the applicable Comprehensive Plan goals and policies in the Comprehensive Plan related to citizen involvement, land use planning, flood hazards, and urbanization.

1.2 The proposed text amendment will update the ADC's floodplain ordinance to be consistent with Federal Emergency Management Agency's (FEMA) minimum NFIP and State floodplain requirements.

1.3 This review criterion is met.

Criterion 2: The proposed amendments are consistent with Development Code policies on purpose and with the purpose statements for the base zone, special purpose districts, or development regulation where the amendment is proposed.

Findings of Fact

2.1 ADC amendments must be consistent with the policies and purpose statements for the affected base zones or development regulations where the amendments are proposed.

2.2 Section 1.020, the general purpose of the Albany Development Code is to: *set forth and coordinate City regulations governing the development and use of land. The Code is more specifically intended to do the following (applicable listed):*

1. *Serve as the principal vehicle for implementation of the City's Comprehensive Plan in a manner that protects the health, safety, and welfare of the citizens of Albany.*
2. *Satisfy relevant requirements of federal law, state law, statewide goals, and administrative rules.*
3. *Facilitate prompt review of development proposals and the application of clear and specific standards.*
8. *Require that permitted uses and development designs provide reasonable protection from fire, flood, landslide, erosion, or other natural hazards, asl well as prevent the spread of blight, and help prevent crime.*

2.3 The purpose of the Floodplain overlay district (/FP) standards in the ADC are to "*manage development in the floodplain in a way that promotes public and environmental health and safety and minimize the economic loss and social disruption caused by impending flood events."*

2.4 The proposed text amendments will bring the City of Albany's floodplain ordinance into alignment with the Oregon Model Floodplain Ordinance and the NFIP standards and requirements.

2.5 The following amendments are proposed for the floodplain ordinance to comply with the Oregon Model Floodplain Ordinance:
<u>Addition of:</u>

- Statutory Authority
- Methods of Reducing Flood Losses
- New definitions
- Coordination with State of Oregon Specialty Codes
- Compliance
- Penalties for Noncompliance
- Severability
- Interpretation
- Variance Procedure
- Tanks
- Uses of Other Base Flood Data
- Structures Located in Multiple or Partial Flood Zones
- Flood Openings
- Garages
- Before Regulatory Floodway
- Standards for Shallow Flooding Areas
- Standards for AH Zones

- Standards for AO Zones

Updates of:

- Statement of Purpose
- Basis of Establishing the Special Flood Hazard Areas
- Designation of the Floodplain Administrator
- Duties and Responsibilities of the Floodplain Administrator
- Permit Review
- Information to be Obtained and Maintained
- Community Boundary Alterations
- Watercourse Alterations
- Requirement to Submit New Technical Data
- Substantial Improvement and Substantial Damage Assessments and Determinations
- Floodplain Development Permit Required
- Application for Development Permit
- Anchoring
- Electrical, Mechanical, Plumbing, and Other Equipment
- Land Divisions/Subdivisions
- Residential Construction
- Non-Residential Construction
- Manufactured Dwellings
- Accessory Structures

2.4 The proposed amendments are consistent with the FEMA's minimum NFIP and State floodplain requirements.

2.5 The proposed amendments comply with state law and are consistent with the Plan. Thus, they are consistent with the provisions of ADC 1.050 – Consistency with Plan and Laws.

2.6 Amendments to the ADC are needed to comply with state floodplain regulations and align with the Oregon Model Floodplain Ordinance.

Conclusions: Development Code Amendment Criterion 2

2-1 The proposed Development Code amendments are consistent with applicable purpose statements, special purpose districts, or development regulations where amendments are proposed in Article 6.

2-2 Based on the above analysis, this criterion is satisfied.

Overall Conclusions

Based on the analysis in this report, the proposed Development Code amendments meet the applicable review criteria as outlined in this report.

The Planning Commission has two options with respect to the proposed Development Code amendments:

Option 1: Recommend that the City Council approve the amendment requests as presented; or

Option 2: Recommend the City Council approve the proposed amendments as modified by the Planning Commission.

Staff Recommendation

Based on the staff recommendation, the following motion is suggested:

I move that the Planning Commission recommend that the City Council approve the proposed Albany Development Code amendments detailed in planning file DC-02-24.

This motion is based on the findings and conclusions in the May 6, 2024, staff report, and the findings in support of the application made by the Planning Commission during deliberations on this matter.

Attachments

Exhibit A: Albany Development Code Amendments
Exhibit B: Oregon Model Floodplain Ordinance

Acronyms

ADC	Albany Development Code
AMC	Albany Municipal Code
CAV	Community Assistance Visit
DC	Development Code Text Amendment File Designation
DLCD	Oregon Department of Land Conservation and Development
FEMA	Federal Emergency Management Agency
FIS	Flood Insurance Study
/FP	Floodplain Overlay
LUBA	Oregon Land Use Board of Appeals
NFIP	National Flood Insurance Program
OAR	Oregon Administrative Rule
ORS	Oregon Revised Statutes

Proposed additions to the Albany Development Code are shown in red underline and deletions in ~~strike-out~~. Sections not being amended are not shown unless needed for context.

ARTICLE 6
NATURAL RESOURCE DISTRICTS

6.010 Overview. The natural resource districts are intended to protect valuable natural resources within the City of Albany while allowing reasonable economic use of property.

The Open Space zoning district is a base zone that specifies allowed land uses adjacent to some water resources in Albany.

The Natural Resource overlay districts address development activities within specific natural resource areas and are applied over a base zone. The overlay district requirements are in addition to the requirements of the base zone and other City of Albany ordinances.

The following zoning and overlay districts are included in this article:

- Open Space Zoning District (OS)
- Floodplain Overlay District (/FP)
- Hillside Development Overlay District (/HD)
- Significant Natural Resource Overlay Districts
  - Riparian Corridor Overlay (/RC)
  - Significant Wetland Overlay (/SW)
  - Habitat Assessment Overlay (/HA)
- Willamette River Greenway Overlay District (/WG)

[Ord. 5562, 10/10/03; Ord. 5668, 4/11/07; Ord. 5764, 12/1/11]

Unless otherwise indicated, all amendments are to align the Floodplain Ordinance with the Oregon Model Floodplain Ordinance.

FLOODPLAIN

6.070 Statutory Authority. The State of Oregon has in ORS 197.175 delegated the responsibility to local governmental units to adopt floodplain management regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the City of Albany does recognize:

(a) The flood hazard areas of Albany are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

(b) These flood losses may be caused by the cumulative effect of obstructions in special flood hazard areas which increase flood heights and velocities, and when inadequately anchored, cause damage in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to flood loss.

~~6.070~~ 6.072 Purpose. The Floodplain overlay district (/FP) standards are intended to manage development in the floodplain in a way that promotes public health, safety, and general welfare, and to minimize public and private losses due to flooding in the flood hazard areas by provisions designed to: ~~public and environmental health and safety and minimizes the economic loss and social disruption caused by impending flood events~~.

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(a) Protect human life and health;

(b) Minimize expenditure of public money for costly flood control projects;

(c) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

(d) Minimize prolonged business interruptions;

(e) Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines; and streets and bridges located in special flood hazard areas;

(f) Help maintain a stable tax base by providing for the sound use and development of flood hazard areas so as to minimize blight areas caused by flooding;

(g) Notify potential buyers that the property is in a special flood hazard area;

(h) Notify those who occupy special flood hazard areas that they assume responsibility for their actions; and

(i) Participate in, and maintain eligibility for, flood insurance and disaster relief.

[Ord. 5746, 9/29/10]

6.074 Methods of Reducing Flood Losses. In order to accomplish its purposes, these regulations include methods and provisions for:

(a) Restricting or prohibiting development which is dangerous to health, safety, and property due to water or erosion hazards, or which result in increased damage due to erosion, flood heights or velocities;

(b) Requiring that development vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

(c) Regulating the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;

(d) Controlling filling, grading, dredging, and other development which may increase flood damage;

(e) Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or may increase flood hazards in other areas.

6.075 Definitions. As used in this Article the following words and phrases have the following meanings:

[Ord. 5746, 9/29/10]

Appeal: A request for a review of the interpretation of any provision of this ordinance or a request for a variance.

Area of Shallow Flooding: A designated Zone AO, AH, AR/AO or AR/AH 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.

Area of Special Flood Hazard: The land in the floodplain within a community subject to a one 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. "Special flood hazard area" is synonymous in meaning and definition with the phrase "area of special flood hazard."

Base Flood or 100-year Flood: The flood having a one percent chance of occurring in any given year. Also see "Flood Fringe"

Base Flood Elevation (BFE): The elevation to which floodwater is anticipated to rise during the base flood. ~~The BFE is the elevation, expressed in feet above sea level, that the base flood is expected to reach.~~

Basement: Any area of the building having its floor subgrade (below ground level) on all sides. ~~The portion of a structure with its floor sub-grade (below ground level) on all sides.~~

Below-Grade Crawl Space: An enclosed area below the based flood elevation in which: (a) the interior grade is not more than two feet below the lowest adjacent exterior grade and; (b) the height, measured from the interior

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grade of the crawl space to the top of the crawl space foundation, does not exceed four feet at any point.

Continuous Storage Operations: Operations that continuously store equipment or materials, including, but not limited to lumber yards, automobile junkyards, logging or sawmill operations, storage yards for heavy equipment, automobile dealership lots, and other storage operations with similar impacts. These operations are included in the definition of floodplain development.

Critical Facility: A facility that needs to be operable during a flood, or for which even a slight chance of flooding might pose unacceptable risk to health and safety. Critical facilities include, but are not limited to schools, nursing homes, hospitals, police, fire and other emergency responders, and installations that produce, use or store hazardous materials.

Datum: ~~Until recently~~ Previously the FIRMs have referenced the National Geodetic Vertical Datum of 1929 (NGVD 29). A newer more accurate vertical datum, the North American Vertical Datum of 1988 (NAVD 88), will be used for all FIRM updates. The 2010 Albany FIRMs reference the NAVD 88 datum.

NAVD 88 will be used for floodplain management purposes in the City of Albany. The conversion factor from NGVD 29 to NAVD 88 for all flooding sources in Albany is +3.38 feet. This represents an average conversion offset. This simplified uniform conversion procedure can be used for entire counties when the maximum error is not more than 0.25 feet (3 inches) for that county, which is the case for the City of Albany.

Federal Emergency Management Agency (FEMA): The federal agency charged with implementing the National Flood Insurance Program. FEMA provides floodplain maps to the City of Albany.

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

(a) the overflow of inland or tidal waters; and/or

(b) the unusual and rapid accumulation of runoff of surface waters from any source;

(c) Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (b) 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; and/or

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 waters or currents of water exceeding anticipated cyclical levels or suddenly caused by unusually high water level in 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) of this definition.

Flood Elevation Study: See "Flood Insurance Study"

Flood Fringe: Those areas on either side of the floodway within the Special Flood Hazard Area (100-year floodplain). This area is subject to inundation by the base flood but conveys little or no velocity flows. Zone designations on Flood Insurance Rate Maps for Albany include A and AE. Note Floodplain Relationships diagram (Figure 6.075-1). [Ord. 5947, 1/01/21]

Flood Insurance Rate Map (FIRM): The official map of a community, on which the Federal Insurance Administrator has delineated both the special hazard areas 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). ~~The official map on which FEMA has delineated the Base Flood Elevations, regulatory floodways, and Special Flood Hazard Areas.~~

Flood Insurance Study (FIS): An examination, evaluation, and determination of flood hazards and, if appropriate, corresponding water surface elevations, and/or an examination, evaluation, and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards. ~~The official report by the Federal Insurance Administration evaluating flood hazards and containing flood profiles, floodway boundaries and water surface elevations of the base flood.~~

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Floodplain: The combined area of the floodway and the flood fringe. Also known as the 100-year floodplain, and the Special Flood Hazard Area. Note Floodplain Relationships diagram in Figure 6.075-1.

[Ord. 5947, 1/01/21]

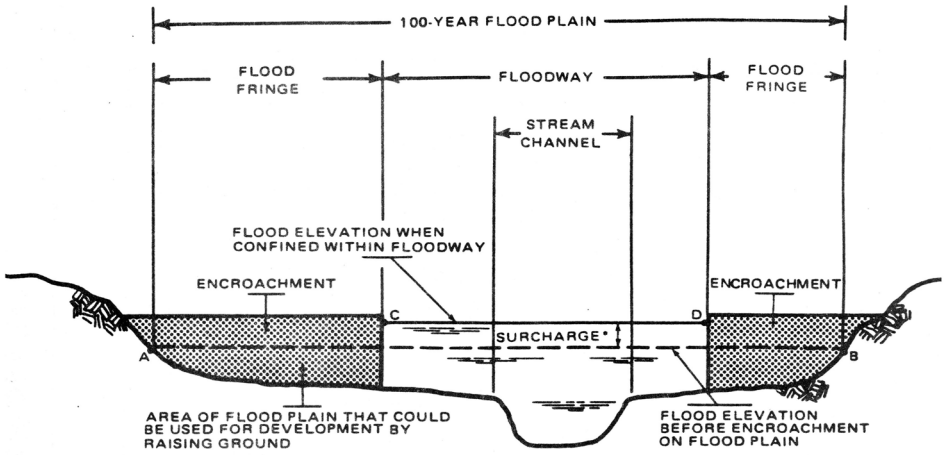

FIGURE 6.075-1 Floodplain Relationships

[Ord 5947; 1/01/21]

Floodplain Development: Any man-made change to real property, including but not limited to, construction or placement of buildings or other structures, fencing, mining, dredging, filling, grading, paving, excavating, land clearing, drilling, or Continuous Storage Operations in the Special Flood Hazard Area (100-year floodplain).

Floodproofing: Any combination of structural or nonstructural additions ~~provisions~~, changes or adjustments ~~to structures, land or waterway for the reduction or elimination of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents during a 100-year flood~~ to structures which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents.

Floodway: 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 a designated height. Also referred to as "Regulatory Floodway". ~~The regulatory floodway is the stream channel plus that portion of the overbanks that must be kept free from encroachment in order to discharge the 1-percent-annual-chance flood without increasing flood levels by more than 1.0 foot.~~ Note Floodplain Relationships diagram in Figure 6.075-1.

[Ord. 5947, 1/01/21]

Functionally Dependent Use: A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, and does not include long term storage or related manufacturing facilities.

Hazardous Material: The Oregon Department of Environmental Quality defines hazardous materials to include any of the following:

(a) Hazardous waste as defined in ORS 466.005;

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(b) Radioactive waste as defined in ORS 469.300, radioactive material identified by the Energy Facility Siting Council under 469.605 and radioactive substances as defined in 453.005;

(c) Communicable disease agents as regulated by the Health Division under ORS Chapter 431 and 433.010 to 433.045 and 433.106 to 433.990;

(d) Hazardous substances designated by the United States Environmental Protection Agency under section 311 of the Federal Water Pollution Control Act, P.L. 92-500, as amended;

(e) Substances listed by the United States Environmental Protection Agency in 40 Code of Federal Regulations Part 302 -- Table 302.4 (List of Hazardous Substances and Reportable Quantities) and amendments;

(f) Material regulated as a Chemical Agent under ORS 465.550;

(g) Material used as a weapon of mass destruction, or biological weapon;

(h) Pesticide residue;

(i) Dry cleaning solvent as defined by ORS 465.200(9).

Highest Adjacent Grade: The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic Structure: Any structure that is:

a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

c) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or

d) Individually listed on a local inventory of historic places in 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.

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

a) Letter of Map Amendment (LOMA): A revision based on technical data showing that a property was incorrectly included in a designated special flood hazard area. A LOMA amends the current effective Flood Insurance Rate Map and establishes that a specific ~~property~~ structure or area is not located in a special flood hazard area;

b) Letter of Map Revision (LOMR): A revision based on technical data ~~showing that~~, usually due to manmade changes, shows changes to flood zones, flood elevations, floodplain and floodway delineations, and planimetric (horizontal) features. 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; and

c) Conditional Letter of Map Revision (CLOMR): A formal review and comment by FEMA 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.

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Lowest Floor: The lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking vehicles, building access or storage, in any area other than a basement area, is not considered a building's lowest floor, provided that the enclosure is not built so as to render the structure in violation of the applicable design requirements of this Article found in Section 6.118(1).

Manufactured Dwelling: A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured dwelling" does not include a "recreational vehicle" and is synonymous with "manufactured home".

Manufactured Dwelling Park or Subdivision: A parcel (or contiguous) parcels of land divided into two or more manufactured dwelling lots for rent or sale.

Mean Sea Level: For purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929, 1988, or other datum, to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

National Flood Insurance Program (NFIP): FEMA's National Flood Insurance Program ~~(NFIP)~~ has three basic components: ~~—~~flood hazard mapping, flood insurance, and floodplain regulations. The combination of the three ~~all~~ work together to reduce flood damages. The NFIP is founded on a mutual agreement between the federal government and each participating community. Local, state and federal governments and private insurance companies must share roles and responsibilities to meet the goals and objectives of the NFIP. The City of Albany joined the NFIP in 1985. The community's role is of paramount importance. Residents and property owners can get federally-backed flood insurance only if the community carries out its responsibilities. The community enacts and implements the floodplain regulations required for participation in NFIP. The community's regulations must meet the regulations set by its state, as well as the NFIP criteria.

New Construction: 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 the City of Albany and includes any subsequent improvements to such structures.

Nonresidential: For the purposes of development in the floodplain, FEMA defines nonresidential construction to include structures not used for human habitation. This includes parking, limited storage, and building access ~~associated with residential uses~~, as well as commercial, industrial, and institutional uses. This differs from the definition of nonresidential in other Articles and Sections of this Code, and from the definition in the locally adopted State Building Codes.

Oregon Drainage Law: Oregon, through court decisions, has adopted a civil law doctrine of drainage. Generally, under this doctrine, adjoining landowners are entitled to have the normal course of natural drainage maintained. The lower landowner must accept water that naturally comes to his land from above, but he is entitled not to have the normal drainage changed or substantially increased. The lower landowner may not obstruct the runoff from the upper land, if the upper landowner is properly discharging the water. The drainage law has developed without legislative action; therefore, there are no Oregon Revised Statutes, rules, or other laws to cite. Note that this definition is intended to provide general information and should not be used as the basis for legal advice or legal decisions.

Permanent Foundation: A natural or manufactured support system to which a structure is anchored or attached. A permanent foundation is capable of resisting flood forces and may include posts, piles, poured concrete or reinforced block walls, properly compacted fill, or other systems of comparable flood resistivity and strength.

Recreational Vehicle: A vehicle that is:

(a) Built on a single chassis;
(b) 400 square feet or less when measured at the largest horizontal projection;
(c) Designed to be self-propelled or permanently 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.

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Residential: For the purposes of development in the floodplain, FEMA defines residential construction to include the entire habitable structure, including bathroom, laundry rooms, hobby rooms, workshops, etc. Residential accessory structures are considered residential construction. This differs from the definition of residential in other Articles and Sections of this Code, and from the definition of residential and habitable in the locally adopted State Building Codes.

Special Flood Hazard Area: See "Area of Special Food Hazard" for this definition. ~~Areas subject to inundation during the occurrence of the 1 percent annual flood. These areas include both the flood fringe and the floodway and are collectively commonly referred to as the "100-year floodplain."~~

Start of Construction: Includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, 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 dwelling ~~home~~ 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 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.

Structure: 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 dwelling.

Substantial Damage: Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 49 percent of the market value of the structure before the damage occurred.

Substantial Improvement: For the purposes of this section any and all repairs, reconstruction, additions or improvements of a structure occurring within the ten years prior to the date of the application for the current improvement, the cost of which, when cumulatively added to the costs of prior improvements, equals or exceeds 49 percent of the market value of the structure before the start of construction of the improvement. Cumulative value will be computed by adding the valuations of all improvements within the ten-year period as calculated on the associated building permit plus the valuations that would have applied for improvements requiring permits but for which no permit was actually issued. This cumulative value shall be used in comparing the value of improvements against the current market value of the structure before the start of construction of the new improvement. The market value determination shall be based upon the county assessor's most recent computation of real market value at the time of the current application. This term includes structures that 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 existing violations of state or local health, sanitary, or safety code specifications that have been identified by the local code enforcement official and are the minimum necessary to assure safe living conditions; or

(b) Any restoration or rehabilitation of a structure on the City's Local Historic Inventory or the National Register of Historic Places (additions and new construction are not exempt) and will not preclude the structure's continued designation as a 'historic structure'.

[Ord. 5875, 10/28/16]

~~(c) Maintenance, replacement, or repair of prior lawfully constructed improvements.~~

Variance: A grant of relief by the City from the terms of a floodplain management regulation.

Violation: The failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other

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certifications, or other evidence of compliance required in this ordinance is presumed to be in violation until such time as that documentation is provided.

Watercourse: Any natural or artificial stream, river, creek, ditch, channel, canal, conduit, culvert, drain, waterway, gully, ravine or wash in which water flows in a definite direction or course, either continuously or intermittently, and has a definite channel, bed and banks; including any adjacent area subject to inundation by reason of overflow or flood water. This also includes any topographic feature not meeting the above definition that is identified in the City's Stormwater Master Plan as needing preservation.

GENERAL PROVISIONS

6.080 Lands to Which These Regulations Apply. These regulations apply to all special flood hazard areas in the City of Albany that are subject to inundation from a 100-year flood. These areas have been identified by the Federal Emergency Management Agency (FEMA) in the Flood Insurance Study (FIS) for Linn County, Oregon and Incorporated Areas effective date September 29, 2010 and as revised effective date December 8, 2016 and associated Flood Insurance Rate Maps (FIRMs) with Community Number 410137. ~~These areas are depicted on the FIRMs by the letters A and AE.~~ The Flood Insurance Study and FIRMs are on file at the City of Albany, Community Development Department at 333 Broadalbin Street SW.

[Ord. 5875, 10/28/16]

In addition, the City Council may adopt by resolution more current floodplain studies or boundary information. If the new information conflicts with the current effective Flood Insurance Study of Flood Insurance Rate Maps, the more restrictive information will apply. [Ord. 5773, 02/08/12]

Precise Special Flood Hazard Area (100-year floodplain) boundaries may be difficult to determine from the maps referred to above due to their large scale and lack of site-specific ~~site specific~~ studies. In such instances, the Floodplain Administrator may apply FEMA base flood elevations to topographic maps or site surveys in order to determine actual boundaries. In the absence of FEMA base flood elevations, the Floodplain Administrator shall reasonably use other sources of floodplain and floodway data to determine base flood elevations and boundaries. However, when elevation data is not available through FEMA or another authoritative source and the development consists of 4 or more lots, 4 or more structures, or 4 or more acres, the applicant shall generate and have certified by a registered engineer the base flood elevation.

[Ord. 5146, 9/14/94; Ord. 5410, 7/28/99; Ord. 5746, 9/29/10]

6.081 Warning and Disclaimer of Liability. The degree of flood protection required by this article is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased as a result of failure of manmade structures and/or natural causes. This article does not imply that the land outside the Special Flood Hazard Areas or uses permitted within such areas will be free from flooding or flood damages. This article does not create any duty or liability on the part of the City of Albany or any officer or employee thereof for any flood damages that result from reliance on this article or any administrative decision lawfully made thereunder.

[Ord. 5746, 9/29/10]

6.083 Coordination with State of Oregon Specialty Codes: Pursuant to the requirement established in ORS 455 that the City of Albany administers and enforces the State of Oregon Specialty Codes, the City of Albany does hereby acknowledge that the Oregon Specialty Codes contain certain provisions that apply to the design and construction of buildings and structures located in special flood hazard areas. Therefore, this ordinance is intended to be administered and enforced in conjunction with the Oregon Specialty Codes.

6.084 Compliance: All development within special flood hazard areas is subject to the terms of this Code and is required to comply with its provisions and all other applicable regulations.

6.085 Penalties for Noncompliance: No structure or land shall hereafter be constructed, located, extended,

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converted, or altered without full compliance with the terms of this ordinance and other applicable regulations. Violations of the provisions of this ordinance by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a civil infraction. Nothing contained herein shall prevent the City from taking such other lawful action as is necessary to prevent or remedy any violation.

~~6.082~~ 6.086 Abrogation and Greater Restrictions. This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another ordinance, Building Codes, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. [Ord. 5746, 9/29/10]

6.087 Severability: This ordinance and the various parts thereof are hereby declared to be severable. If any section clause, sentence, or phrase of the Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way effect the validity of the remaining portions of this Ordinance.

6.088 Interpretation: In the interpretation and application of this ordinance, all provisions shall be:

(a) Considered as minimum requirements;

(b) Liberally construed in favor of the governing body; and

(c) Deemed neither to limit nor repeal any other powers granted under the state statutes.

ADMINISTRATION

6.089 Floodplain Administrator. The Community Development Director and their designee are ~~is~~ appointed to administer, implement, and enforce this Article in accordance with its provisions. The Floodplain Administrator may delegate authority to implement these provisions. Duties of the local floodplain administrator shall include but are not limited to Sections 6.090 through 6.099.

6.090 Permit Review. Review all development permit applications to determine that: [Ord. 5746, 9/29/10]

a) The permit requirements of this ordinance have been satisfied;

b) All other required local, state, and ~~And~~ federal permits have been obtained and approved.

c) Review all development permits to determine if the proposed development is located in a floodway. If located in the floodway assure that the floodway provisions of Section 6.100 are met; and

d) Review all development permits to determine if the proposed development is located in an area where Base Flood Elevation (BFE) data is available either through the Flood Insurance Study (FIS) or from another authoritative source. If BFE data is not available, then ensure compliance with the provisions of Section 6.107; and ~~whether proposed new development will be located in Areas of Special Flood Hazard.~~

~~e)~~ Provide the building official the Base Flood Elevation (BFE) with the additional one-foot freeboard applicable to any building requiring a development permit.

e) Review applications for modifications of any existing development in Areas of Special Flood Hazard for compliance with the requirements of this Article.

f) Interpret flood hazard area boundaries, provide available flood hazard information, and provide Base Flood Elevations, where they exist.

g) Review proposed development to assure that necessary permits have been received 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 U.S.C. 1334; the Endangered Species Act of 1973, 16 U.S.C. 1531-1544; and State of Oregon Removal-Fill permits. Copies of such permits shall be maintained on file.

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h) Review all development permit applications to determine if the proposed development is located in the floodway, and if so, ensure that the standards in Sections 6.100 through ~~6.110~~ 6.113 are met.

i) When Base Flood Elevation data or floodway data are not available, then 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 this Article.

j) When Base Flood Elevations or other engineering data are not available from an authoritative source, the Floodplain Administrator shall take into account the flood hazards, to the extent they are known, to determine whether a proposed building site or subdivision will be reasonably safe from flooding.

k) Where interpretation is needed of the exact location of the Special Flood Hazard Boundary, including regulatory floodway, the Floodplain Administrator shall make the interpretation. Any person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 6.095 ~~6.091~~.

l) Issue floodplain development permits when the provisions of this Article have been met, or disapprove the same in the event of noncompliance.

~~m) Obtain, verify and record the actual elevation in relation to the vertical datum used on the effective FIRM, or highest adjacent grade where no BFE is available, of the lowest floor level, including basement, of all new construction or substantially improved buildings and structures.~~

~~n) Obtain, verify and record the actual elevation, in relation to the vertical datum used on the effective FIRM, or highest adjacent grade where no BFE is available, to which any new or substantially improved buildings or structures have been flood-proofed. When flood-proofing is utilized for a structure, the Floodplain Administrator shall obtain certification of design criteria from a registered professional engineer or architect.~~

o) Ensure that all records pertaining to the provisions of this Article are permanently maintained in the Community Development Department and shall be open for public inspection.

p) Make inspections in Areas of Special Flood Hazard to determine whether development has been undertaken without issuance of a floodplain development permit, ensure that development is undertaken in accordance with the floodplain development permit and this Article, and verify that existing buildings and structures maintain compliance with this Article.

q) Coordinate with the Building Official to inspect areas where buildings and structures in flood hazard areas 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.

r) Review all development permit applications to determine if the proposed development qualifies as a substantial improvement as defined ~~in Make Substantial Improvement or Substantial Damage determinations based on the definitions described~~ in Section 6.075.

6.091 Information to be obtained and maintained. The following information shall be obtained and maintained and shall be made available for public inspection as needed:

(a) Obtain, record, and maintain the actual elevation (in relation to mean sea level) of the lowest floor (including basements) and all attendant utilities of all new or substantially improved structures where Base Flood Elevation (BFE) data is provided through the Flood Insurance Study (FIS), Flood Insurance Rate Map (FIRM), or obtained in accordance with Section 6.107.

(b) Obtain and record the elevation (in relation to mean sea level) of the natural grade of the building site for a structure prior to the start of construction and the placement of any fill and ensure that the requirements of Sections 6.100 and 6.091 are adhered to.

(c) Upon placement of the lowest floor of a structure (including basement) but prior to further vertical construction, obtain documentation, prepared, and sealed by a professional licensed surveyor or engineer,

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certifying the elevation (in relation to mean sea level) of the lowest floor (including basement).

(d) Where base flood elevation data are utilized, obtain as-built certification of the elevation (in relation to mean sea level) of the lowest floor (including basement) prepared and sealed by a professional licensed surveyor or engineer, prior to the final inspection;

(e) Maintain all Elevation Certificates (EC) submitted to the community;

(f) Obtain, record, and maintain the elevation (in relation to mean sea level) to which the structure and all attending utilities were floodproofed for all new or substantially improved floodproofed structures were allowed under this ordinance and where Base Flood Elevation (BFE) data is provided through the FIS, FIRM, or obtain in accordance with Section 6.107;

(g) Maintain all floodproofing certificates required under this ordinance;

(h) Record and maintain all variance actions, including justification for their issuance;

(i) Obtain and maintain all hydrologic and hydraulic analyses performed as required under Section 6.100

(j) Record and maintain all Substantial Improvement and Substantial Damage calculations and determinations as required under Section 6.095;

(k) Maintain for public inspection all records pertaining to the provisions of this ordinance.

6.092 Requirement to Notify Other Entities and Submit New Technical Data.

(1) Community Boundary Alterations: The Floodplain Administrator shall notify the Federal Insurance Administrator in writing whenever the boundaries of the community have been modified by annexation, or the community has otherwise assumed authority or no longer has authority to adopt and enforce floodplain management regulations for a particular area, to ensure that all Flood Hazard Boundary Maps (FHBM) and Flood Insurance Rate Maps (FIRM) accurately represent the community's boundaries. Include within such notification a copy of a map of the community suitable for reproduction, clearly delineating the new corporate limits or new area for which the community has assumed or relinquished floodplain management regulatory authority.

(2) Watercourse Alterations: Notify adjacent communities, the Department of Land Conservation and Development, and other appropriate state and federal agencies, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration. This notification shall be provided by the applicant to the Federal Insurance Administration as a Letter of Map Revision (LOMR) along with either:

(a) A proposed maintenance plan to assure the flood carrying capacity within the altered or relocated portion of the watercourse is maintained; or

(b) Certification by a registered professional engineer that the project has been designed to retain its flood carrying capacity without periodic maintenance.

The applicant shall be required to submit a Conditional Letter of Map Revision (CLOMR) when required under Section 6.093. Ensure compliance with all applicable requirements in Sections 6.093 and 6.101.

6.093 Requirement to Submit New Technical Data: A community's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community shall notify the Federal Insurance Administrator of the changes by submitting technical or scientific data in accordance with Title 44 of the Code of Federal Regulations (CFR), Section 65.3. The community may require the applicant to submit such data and review fees required for compliance with this section through the applicable FEMA Letter of Map Change (LOMC) process.

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(1) It is the responsibility of the applicant to have technical data prepared in a format required for a CLOMR or LOMR 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.

(2) Applicants shall be responsible for all costs associated with obtaining a CLOMR or LOMR from FEMA.

(3) The City of Albany shall be under no obligation to sign the Community Acknowledgement Form, which is part of the CLOMR/LOMR application, without evaluation and concurrence with the information presented.

(4) Within six months of project completion, an applicant who obtains an approved CLOMR from FEMA or whose development modifies floodplain boundaries or Base Flood Elevations shall obtain from FEMA a LOMR reflecting the as-built changes to the FIRM.

The Floodplain Administrator shall require a Conditional Letter of Map Revision prior to the issuance of a floodplain development permit for:

(a) Proposed floodway encroachments that increase the base flood elevation; and

(b) Proposed development which increases the base flood elevation by more than one foot in areas where FEMA has provided base flood elevations but no floodway.

An applicant shall notify FEMA within six months of project completion when an applicant has obtained a Conditional Letter of Map Revision (CLOMR) from FEMA. This notification to FEMA shall be provided as a Letter of Map Revision (LOMR).

6.094 Substantial Improvement and Substantial Damage Assessments and Determinations.

(a) Conduct Substantial Improvement (SI) (as defined in Section 6.075) reviews for all structural development proposal applications and maintain a record of SI calculations within permit files in accordance with Section 6.092.

(b) Conduct Substantial Damage (SD) (as defined in Section 6.075) assessments when structures are damaged due to a natural hazard event or other causes.

(c) Make SD determinations whenever structures within the special flood hazard area (as established in Section 6.080) are damaged to the extent that the cost of restoring the structure to its before damaged condition would equal or exceed 49 percent of the market value of the structure before the damage occurred.

~~6.091~~ 6.095 Appeals. Appeals to the interpretations of the Floodplain Administrator shall be reviewed by the Hearings Board as a Type II procedure in accordance with Sections 1.040 and 1.410 of this Code. Appeals to the land use decisions (Types I-L, II, and III) resulting from the Floodplain Development Permit applications shall be reviewed in accordance with Section 1.410 of this Code.

[Ord. 5746, 9/29/10; Ord. 5947, 01/01/21]

~~6.092~~ 6.096 Variances. Variances from the terms of this section shall be granted only, when because of special circumstances applicable to the property, including size, shape, topography, location or surroundings, the strict application of this section deprives such property of privileges enjoyed by other property in the vicinity and under identical zoning classifications. Variances as interpreted in the National Flood Insurance Program are based on the physical characteristics of the land and are not dependent upon the occupants, type, or use of a structure. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare. [Ord. 5746, 9/29/10]

The issuance of a variance is for floodplain management purposes only. Flood insurance premium rates are determined by federal statute according to actuarial risk and will not be modified by the granting of a variance.

No variance will be given to the standards for development in a floodway.

Variances from the floodplain management regulations of this section shall be reviewed using the Major

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Variance procedure (see Article 2) and shall be approved if the review body finds that all of the following criteria have been met: [Ord. 5746, 9/29/10; Ord. 5947, 1/01/21]

(1) The applicant can show good and sufficient cause; and

(2) Failure to grant the variance would result in exceptional hardship to the applicant; and

(3) Issuing the 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; and

(4) The variance is the minimum necessary, considering the flood hazard, to afford relief.

(5) Variances from the required lowest floor elevation for new construction and substantial improvements may be granted if the review body finds that the request meets criteria (1)-(4) and the parcel is one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level. As the lot size increases the technical justification required for issuing the variance increases.

(6) Variances may be granted for a functionally dependent use ~~water dependent use~~ provided that the structure or other development meets criteria (1)-(4) and is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

(7) Variances may be granted for the reconstruction, rehabilitation, or restoration of structures listed on Albany's Local Historic Inventory or the National Register of Historic Places, without regard to the procedures set forth in this section. [Ord. 5875, 10/28/16]

~~(8) 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 will have low damage potential, complies with all other variance criteria and otherwise complies with Building Codes.~~

Upon issuing the variance, the Floodplain Administrator will notify the applicant in writing that the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance, and that such construction below the base flood level increases risks to life and property. Such notification and a record of all variance actions, including justification for their issuance shall be maintained in accordance with Section 6.092.

[Ord. 5746, 9/29/10]

~~6.093~~ 6.097 Floodplain Development Permit Required. A Floodplain Development Permit is required prior to initiating floodplain development activities, as defined in Section 6.075, in the Special Flood Hazard Area. This Article cannot anticipate all development activities that may be located within the Special Flood Hazard Area. The floodplain development permit shall expire 180 days after issuance unless the permitted activity has been substantially begun and thereafter pursued to completion.

[Ord. 5746, 9/29/10]

All development activities ~~that~~ require a Floodplain Development Permit and shall be processed in accordance with ADC Section 1.100, Land Use Application Procedures. When ambiguity exists concerning the appropriate classification of a particular activity, the use may be reviewed as a conditional use when the Floodplain Administrator determines that the proposed activity is consistent with other activities allowable within the subject district due to similar characteristics and impacts. When a development proposal involves a combination of activities, the more restrictive provisions of this Code shall apply.

[Ord. 5746, 9/29/10; Ord. 5947, 1/01/21]

A. The following activities will be processed through a Type I procedure as established in ADC Section 1.210: [Ord. 5947, 1/01/21]

(1) The construction or placement of any structure 200 square feet or more.

(2) Any substantial improvement to an existing structure as defined in this code.

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(3) Placement of a recreational vehicle more than 180 consecutive days, as described in 6.124(2)-(3).

(4) Solid fences and walls that require a permit as listed in Section 6.125.

(5) Any site improvement for development in the floodplain pursuant to Section 6.110 ~~that is not exempt under Section 6.094 and~~ that does not already require a permit elsewhere in this Section of the Code. [Ord. 5875, 10/28/16]

B. The following activities will be processed through a Type I-L procedure as established in ADC 1.220: [Ord. 5947, 1/01/21]

(1) Any development in the floodway allowed by Sections 6.100-6.101.

(2) Grading, excavation, fill, and paving pursuant to Section 6.111 that cumulatively impacts more than 50 cubic yards of the native elevation and contours of the site or that otherwise requires a permit per this Article, and any associated retaining walls.

(3) Mining and drilling operations that result in sledge, slag, or other materials remaining in the Special Flood Hazard Area will be considered fill for the purposes of this Article and will be reviewed through the applicable criteria in Section 6.111.

(4) Additions or expansions of Continuous Storage Operations pursuant to Section 6.112.

(5) New Continuous Storage Operations pursuant to Section 6.112.

(6) Land Divisions of 19 lots or less pursuant to Section 6.110. [Ord. 5767, 12/7/11; Ord. 5875, 10/28/16]

C. The following activities will be processed through a Type II procedure as established in ADC 1.230: [Ord. 5947, 1/01/21]

(1) Any alteration of a watercourse, pursuant to 6.101 and the applicable criteria in Section 6.111.

D. The following will be processed through a Type III procedure as established in ADC 1.240: [Ord. 5947, 1/01/21

(1) Land Divisions of 20 or more lots, Cluster Developments and Planned Developments pursuant to Section 6.110. [Ord. 5875, 10/28/16]

(2) Manufactured home parks pursuant to Section 6.110 will be reviewed through the Manufactured Home Park application process.

~~6.094~~ 6.098 Floodplain Development Permit Exemptions. The following development activities in the flood fringe require application for a Floodplain Development Permit but may be deemed exempt from floodplain development regulations upon submission of the application form and appropriate supporting documentation. These exemptions do not apply to development in the floodway. ~~do not require a Floodplain Development Permit. These exemptions do not apply to development in the floodway.~~ *(Note: Federal and State laws and regulations, including Oregon Drainage Law, may still apply to exempted development activities.)* [Ord. 5746, 9/29/10]

~~(1) Structures less than 200 square feet that meet the provisions of 6.122.~~

(2) Grading, excavation, fill or paving less than 50 cubic yards (cumulative).

(3) Retaining walls not associated with a grading, fill, excavation, and paving review.

(4) Open barbless wire, pipe, rail, chain link, or wood fences that meet the design guidelines in Section 6.125 of this Article.

(5) Agricultural activities, not including structures.

(6) Short-term storage of equipment or materials that in time of flooding could either be removed from the area, or would not cause harm to property, humans, animals or the environment by becoming buoyant or hazardous.

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(7) Signs, markers, aids, etc., placed by a public agency to serve the public.

~~(8) Minor repairs or improvements to existing structures provided that the alterations do not increase the size or intensity of use, and do not constitute repair of substantial damage, or substantial improvement as defined in this Article.~~

(9) Customary dredging to maintain existing channel capacity consistent with State or Federal laws and permits.

(10) Replacement of utility facilities that are necessary to serve established and permitted uses, and that are of equal or lesser size and impact.

(11) Subsurface public utility projects that will not ultimately result in modification to existing topography.

(12) Transportation facility rehabilitation and maintenance projects that will not result in modifications to existing topography.

~~6.095~~ 6.099 General Information Requirements. 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, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required: ~~In addition to the information required in other sections of this code, the application for any development proposed in the Special Flood Hazard Area (100-year floodplain) must include the following information:~~

(1) Elevations of the original contours.

(2) Final elevations of proposed fills and excavations.

(3) Base flood (100-year flood) elevations of the site based on North American Vertical Datum (NAVD) 1988.

(4) Location of any designated floodway and base flood boundary. If no floodway is designated, estimate the location of the floodway boundary per Section 6.100

(5) Location of any designated wetlands and/or wildlife habitat (if applicable).

(6) In riverine flood zones, the proposed elevation (in relation to mean sea level), of the lowest floor (including basement) and all attending utilities of all new and substantially improved structures; in accordance with the requirements of Section 6.091. ~~Proposed elevation in relation to mean sea level of the lowest floor (including basement) of all structures (if applicable).~~

(7) Description of the extent to which a watercourse will be altered or relocated as a result of proposed development (if applicable).

(8) If floodproofing is required, the proposed description and elevation of floodproofing.

(9) Elevation certificate. The base flood elevation shall be determined based on the applicable flood insurance study and flood profile. A copy of the flood profile with the base flood elevation identified on the flood profile shall be included with the elevation certificate as evidence for determining the base flood elevation. [Ord. 5875, 10/28/16]

(10) Certification by a registered professional engineer or architect licensed in the State of Oregon that the floodproofing methods proposed for any non-residential structure meet the floodproofing criteria for non-residential structures in Section 6.118(2).

(11) Base Flood Elevation data for subdivision proposals or other development when required per Section 6.091 and 6.110.

(12) Substantial improvement calculation for any improvement, addition, reconstruction, renovation or rehabilitation of an existing structure.

(13) The amount and location of any fill or excavation activities proposed.

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~~6.096 Flood Insurance Rate Map (FIRM) Revisions. Requirements to Submit New Technical Data:~~ ~~[Ord. 5746, 9/29/10]~~

~~(c) It is the responsibility of the applicant to have technical data prepared in a format required for a CLOMR or LOMR 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.~~

~~(d) Applicants shall be responsible for all costs associated with obtaining a CLOMR or LOMR from FEMA.~~

~~(e) The City of Albany shall be under no obligation to sign the Community Acknowledgement Form, which is part of the CLOMR/LOMR application, without evaluation and concurrence with the information presented.~~

~~(f) Within six months of project completion, an applicant who obtains an approved CLOMR from FEMA or whose development modifies floodplain boundaries or Base Flood Elevations shall obtain from FEMA a LOMR reflecting the as-built changes to the FIRM.~~

PROVISIONS FOR FLOOD HAZARD REDUCTION

Staff Comments:

6.100(1) Floodway Restriction

- Clarification that all structures, as defined in Section 6.075, are prohibited in the floodway.

6.100 Floodway Restrictions. No development is allowed in any floodway except when the review body finds that the development will not result in any increase in flood levels during the occurrence of the 100-year flood. The finding shall be based upon applicant-supplied evidence prepared in accordance with standard engineering methodology approved by FEMA and certified by a registered professional engineer and upon documentation that one of the following criteria has been met: [Ord. 5875, 10/28/16]

(1) The development does not involve the construction of permanent ~~or habitable~~ structures as defined in Section 6.075. ~~(including fences).~~ [Ord. 5746, 9/29/10]

(2) The development is a public or private park or recreational use or municipal utility use.

(3) The development is a water-dependent structure such as a dock, pier, bridge, or floating marina.

For temporary storage of materials or equipment:

(4) The temporary storage or processing of materials will not become buoyant, flammable, hazardous explosive or otherwise potentially injurious to human, animal or plant life in times of flooding. [Ord. 5746, 9/29/10]

(5) The temporary storage of material or equipment are not subject to major damage by floods and is firmly anchored to prevent flotation or is readily removable from the area within the time available after flood warning. [Ord. 5746, 9/29/10]

If the requirements above are satisfied, all new construction, substantial improvements, and other development shall comply with all other applicable flood hazard reduction provisions of Section 6.118.

If a floodway boundary is not designated on an official FEMA map available to the City, the floodway boundary can be estimated from available data and new studies. No new construction, substantial improvement, or development (including fill) shall be permitted within Zones A1-30 and AE on the community's Flood Insurance Rate Map (FIRM), 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. ~~Proposed development along the estimated floodway boundary shall not result in an increase of the base flood level greater than one foot as certified by a registered professional engineer.~~

6.101 Alteration of a Watercourse. A watercourse is considered altered when any changes occur within its banks,

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including installation of new culverts and bridges, or size modifications to existing culverts and bridges. [Ord. 5746, 9/29/10]

(1) No development shall diminish the flood-carrying capacity of a watercourse.

(2) Subject to the foregoing regulation, no person shall alter or relocate a watercourse without necessary approval from the Floodplain Administrator. [Ord. 5746, 9/29/10]

(3) Prior to approval, the applicant shall provide a 30-day written notice to the City, any adjacent community, the Natural Hazards Program of the Oregon Department of Land Conservation and Development, and the DSL. [Ord. 5746, 9/29/10]

(4) The applicant shall be responsible for ensuring necessary maintenance of the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished. [Ord. 5746, 9/29/10]

(5) All alterations of a watercourse, with the exception of the installation of new culvers, bridges, or size modifications to existing culverts and bridges, must meet the requirements of Section 6.092.

6.107 Use of Other Base Flood Elevation Data. When Base Flood Elevation data has not been provided in accordance with Section 6.080 the local floodplain administrator shall obtain, review, and reasonably utilize any Base Flood Elevation data available from a federal, state, or other source, in order to administer Sections 6.100 through 6.125. All new subdivision proposals and other proposed new developments (including proposals for manufactured dwelling parks and subdivisions) must meet the requirements of Section 6.110.

Base Flood Elevations shall be determined for development proposals that are 4 acres or more in size or are 4 lots or more, or 4 units or more; whichever is lesser in any unnumbered A zone that does not have an established based flood elevation. Development proposals located within a riverine unnumbered A Zone shall be reasonably safe from flooding; the test of reasonableness includes use of historical data, high water marks, FEMA provided Base Level Engineering data, and photographs of past flooding. When no Base Flood Elevation data is available, the elevation requirement for development proposals within a riverine unnumbered A Zone is a minimum of two (2) feet above the highest adjacent grade, to be reasonably safe from flooding. Failure to elevate at least two feet above grade in these zones may result in higher insurance rates.

~~6.109~~ 6.108 Residential Development Standards. Applications proposing new residential dwelling units or the creation of residential lots or parcels on property with Special Flood Hazard Area (100-year floodplain) on it must comply with either the clear and objective standard in subsection (1) or the discretionary standard in subsection (2), below.

(1) Clear and objective standard. No new dwelling units or new residential lots or parcels are allowed within the floodplain. An application to develop property that has floodplain on it, but where no development is proposed within the boundaries of that floodplain will be processed as otherwise required in this Code. In case of land divisions, "no development" means the floodplain area has been excluded from the land division. This can be done by setting the property aside for some other purpose than later development (for example, as a public drainage right-of-way).

(2) Alternative review. Residential development is allowed within the floodplain subject to the provisions of this Floodplain overlay district and the standards in Sections 6.100 through 6.125. [Ord. 5947, 1/01/21]

6.109 Structures located in multiple or partial flood zones. In coordination with the State of Oregon Specialty Codes:

(1) When a structure is located in multiple flood zones on the community's Flood Insurance Rate Map (FIRM), the provisions for the more restrictive flood zone shall apply.

(2) When a structure is partially located in a special flood hazard area, the entire structure shall meet the requirements for new construction and substantial improvements.

6.110 Site Improvement, Land Division and Manufactured Home Park Standards. Site improvements, land divisions, and manufactured home parks in the Special Flood Hazard Area (100-year floodplain) shall be reviewed by the

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Planning Division as a part of the land use review process. An application to develop property that has floodplain on it, but where no development is proposed in that floodplain will be processed as otherwise required in this Code. In the case of a land division, "no actual development" means the floodplain area has been excluded from the land division. This can be done by setting the property aside for some other purpose than later development (for example, as a public drainage right-of-way).

[Ord. 5746, 9/29/10]

All new subdivision proposals, and other proposed new development (including proposals for manufactured dwelling parks and subdivisions), greater than four lots or four acres, whichever is the lesser, shall include Base Flood Elevation data.

In addition to the general review criteria for site improvements, land divisions and manufactured home parks, applications that propose actual development within the Special Flood Hazard Area shall also be subject to the following standards: [Ord. 5338, 1/28/98; Ord. 5746, 9/29/10]

(1) All proposed new development and land divisions shall be consistent with the need to minimize flood damage and ensure that building sites will be reasonably safe from flooding.

(2) All new development and land division proposals shall have utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.

(3) On-site waste disposal systems shall be located and constructed to avoid functional impairment, or contamination from them, during flooding.

(4) All development proposals shall have adequate drainage provided to reduce exposure to flood damage.

(5) Any lot created for development purposes must have adequate area created outside of the floodway to maintain a buildable site area meeting the minimum requirements of this Article.

(6) Any new public or private street providing access to a residential development shall have a roadway crown elevation not lower than one foot below the 100-year flood elevation.

(7) All development proposals shall show the location of the 100-year flood contour line followed by the date the flood elevation was established. When elevation data is not available, either through the Flood Insurance Study or from another authoritative source, and the development is four or more acres or results in four or more lots or structures, the elevation shall be determined and certified by a registered engineer. In addition, a statement located on or attached to the recorded map or plat shall read as follows: "Development of property within the Special Flood Hazard Area as most currently established by the Federal Emergency Management Agency or City of Albany may be restricted and subject to special regulations by the City." [Ord. 5338, 1/28/98]

(8) In addition to the general review criteria applicable to manufactured home parks in Article 10, applications that propose actual development within a Special Flood Hazard Area shall include an evacuation plan indicating alternate vehicular access and escape routes.

Staff Comments:
6.111(2) Grading, Fill, Excavation, and Paving.

- Provided updated language to align with updated stormwater requirements in the Albany Municipal Code.

6.111 Grading, Fill, Excavation, and Paving. A floodplain development permit is required for grading, fill, excavation, and paving in the Special Flood Hazard Area (100-year floodplain), ~~except activities exempted in Section 6.094 of this Article~~. No grading will be permitted in a floodway, except when the applicant has supplied evidence prepared by a professional engineer that demonstrates the proposal will not result in any increase in flood levels during the occurrence of the 100-year flood. The permit will be approved if the applicant has shown that each of the following criteria that are applicable have been met:

[Ord. 5746, 9/29/10; Ord. 5929, 7/26/19]

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(1) Provisions have been made to maintain adequate flood-carrying capacity of existing watercourses, including future maintenance of that capacity.

(2) The proposal will be approved only where adequate provisions for stormwater runoff to prevent and control nonpoint source pollution, land surface erosion, sedimentation, and stream channel erosion have been made that are consistent with the Public Works Engineering standards, or as otherwise approved by the City Engineer.

(3) No grading, fill, excavation, or paving will be permitted over an existing public storm drain, sanitary sewer, or water line unless it can be demonstrated to the satisfaction of the City Engineer that the proposed grading, fill, excavation, or paving will not be detrimental to the anticipated service life, operation and maintenance of the existing utility.

(4) ~~In areas where no floodway has been designated on the applicable FIRM, grading will not be permitted unless it is demonstrated by the applicant that the cumulative effect of the proposed grading, fill, excavation, or paving when combined with all other existing and planned development, will not increase the water surface elevation of the base flood more than a maximum of one foot (cumulative) at any point within the community.~~

(5) The applicant shall notify the City of Albany, any adjacent community, and the Natural Hazards Mitigation Office of the Oregon Department of Land Conservation and Development of any proposed grading, fill, excavation, or paving activity that will result in alteration or relocation of a watercourse (see Section 6.101).

(6) All drainage facilities shall be designed to carry waters to the nearest practicable watercourse approved by the designee as a safe place to deposit such waters. Erosion of ground in the area of discharge shall be prevented by installation of non-erosive down spouts and diffusers or other devices.

(7) Building pads shall have a drainage gradient of two percent toward approved drainage facilities, unless waived by the Building Official or designee.

6.112 Continuous Storage Operations. The regulation of storage in the flood fringe focuses on long-term storage activities associated with continuous operations as defined in this Article. [Ord. 5746, 9/29/10]

A continuous storage operation is allowed if it can be shown that:

(1) The materials or equipment will not be flammable, hazardous, explosive or otherwise potentially injurious to human, animal, or plant life in times of flooding; and

(2) The materials or equipment are not subject to major damage by flood and are firmly anchored to prevent flotation or are readily removable from the area within the time available after flood warning.

6.113 Critical Facility Standards. Construction of new critical facilities, and additions to critical facilities built after September 29, 2010, shall be, to the maximum extent feasible, located outside the limits of the Special Flood Hazard Area (100-year floodplain). [Ord. 5746, 9/29/10]

Construction of new critical facilities shall be permissible within the Special Flood Hazard Area if no feasible alternative site is available. Critical facilities constructed within the Special Flood Hazard Area 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 shall also be protected to the height utilized above. Floodproofing and sealing measures must be taken to ensure that hazardous materials 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 critical facilities to the extent possible. [Ord. 5746, 9/29/10]

6.114 Standards for Shallow Flooding Areas. Shallow flooding areas appear on FIRMs as AO Zones with depth designations or as AH Zones with Base Flood Elevations. For AO Zones the base flood depths range from one (1) to three (3) feet above the ground where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow.

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For both AO and AH Zones, adequate drainage paths are required around structures on slopes to guide floodwaters around and away from proposed structures.

(1) Standards for AH Zones. Development with AH Zones must comply with the standards found in Sections 6.100 through 6.125

(2) Standard for AO Zones. The following provisions apply in addition to the requirements in Section 6.100 through 6.125:

(a) New construction, conversion to, and substantial improvements of residential structures and manufactured dwellings within AO Zones shall have the lowest floor, including basement, elevated one foot above the highest grade adjacent to the building, at a minimum to or above the depth number specified on the Flood Insure Rate Map (FIRM) (at least two feet if no depth number is specified). For manufactured dwellings the lowest floor is considered to be the bottom of the longitudinal chassis frame beam.

(b) New construction, conversion to, and substantial improvements of non-residential structures within AO Zones shall either:

(i) Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, at minimum to or above one foot above the depth number specified on the Flood Insurance Rate Map (FIRM) (at least of two feet if no depth number above the highest adjacent grade if no depth number is specified); or

(ii) Together with attendant utility and sanitary facilities, be completely floodproofed to or above one foot above the depth number specified on the FIRM, or a minimum of two feet above the highest adjacent grade if no depth number is specified, so that any space below that level is water tight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrodynamic loads and the effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer or architect as stated in Section 6.118(2).

(c) Recreational vehicles placed on sites within AO Zones on the community's Flood Insurance Rate Maps (FIRM) shall either:

(i) Be on the site for fewer than 180 consecutive days, and

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

(iii) Meet the elevation requirements of Section 6.114(2)(a), and the anchoring and other requirements for manufactured dwellings of Section 6.123.

(d) In AO Zones, new and substantially improved accessory structures must comply with the standards in Section 6.121.

(e) In AO zones, enclosed areas beneath elevated structures must comply with the requirements in Section 6.115.

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6.115 Flood Openings. All new construction and substantial improvements with fully enclosed areas below the lowest floor (excluding basements) are subject to the following requirements. Enclosed areas below the Base Flood Elevation, including crawlspaces shall:

(1) Be designed to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters;

(2) Be used solely for parking, storage, or building access;

(3) Be certified by a registered professional engineer or architect or meet or exceed all of the following minimum criteria:

(a) A minimum of two openings,

(b) The total net area of non-engineered openings shall be not less than one (1) square inch for each square foot of enclosed area, where the enclosed area is measured on the exterior of the enclosure walls,

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

(d) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they shall allow the automatic flow of floodwater into and out of the enclosed areas and shall be accounted for in the determination of the net open area.

(e) All additional higher standards for flood openings in the State of Oregon Residential Specialty Codes Section R322.2.2 shall be complied with when applicable.

6.116 Below-Grade Crawlspaces: 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 flood openings stated in Section 6.115. Because of hydrodynamic loads, crawlspace construction is not allowed in areas with flood velocities greater than five feet per second unless the design in reviewed and approved by a qualified design professional, such as a registered architect or professional engineer. Other types of foundations are recommended for these areas.

(1) 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.

(2) 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 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 the BFE.

(3) Any building utility systems within the crawlspace must be elevated above to one foot above the BFE or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions. Ductwork, in particular, must either be placed one foot above the BFE or sealed from floodwaters.

(4) The interior grade of a crawlspace below the BFE must not be more than two feet below the lowest adjacent exterior grade.

(5) 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 allowed unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas.

(6) 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 or crushed stone drainage by gravity or mechanical means.

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(7) The velocity of floodwaters at the site shall not exceed five feet per second for any crawlspace. For velocities in excess of five feet per second, other foundation types are required be used.

~~6.120~~6.117 Building Standards. Applications for building permits within the Special Flood Hazard Area, as established in Section 6.080, shall be reviewed by the Building Official pursuant to locally adopted state building codes. In addition to building code criteria, all development in the Special Flood Hazard Area, ~~except that exempted in Section 6.094~~, is subject to the following building standards:

[Ord. 5746, 9/29/10]

(1) Property owners or developers shall file with the City three ~~two~~ elevation certificates in a format that is acceptable to FEMA. These certificates must be approved by the Building Official, prepared by a registered surveyor or professional engineer, architect or surveyor, and maintained for public inspection.

(a) A Pre-Construction Elevation Certificate shall be submitted and approved prior to setback and foundation inspection approval.

(b) A "Building Under Construction" Elevation Certificate shall be submitted and approved after the foundation is in place, but prior to further vertical construction. This allows the floodplain administrator the chance to review the lowest floor elevation and require any corrections before construction is finished.

(c) A Post-Construction Elevation Certificate shall be submitted and approved prior to final inspection approval for all building permits when the Pre-Construction Elevation Certificate shows the building site to be within a Special Flood Hazard Area and lowest adjacent grade to be at or below the base flood elevation (BFE). The Post-Construction certificate must contain: 1) the actual elevation (in relation to mean sea level) of the lowest floor including basement of all new or substantially improved structures; 2) the elevation of any flood proofing; and 3) whether or not the structure contains a basement.

(2) New construction, conversion to, and substantial improvement of any residential structure shall have the lowest floor (including basement) elevated to or above one foot above the Base Flood Elevation for the 100-year flood as determined by the effective Flood Insurance Study. ~~The lowest floor, including basement, of any proposed structure (including residential and non-residential structures) shall be placed at least one (1) foot above the 100-year flood as determined by the latest Flood Insurance Study.~~

(3) Enclosed areas below the lowest floor shall comply with the flood opening requirements in Section 6.115.

(4) When elevation data is not available either through the Flood Insurance Study, FIRM, or from other sources of floodplain and floodway data as described in Section 6.080, applications for building permits shall be reviewed 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., when available. When no base flood elevation data is available, the elevation requirement for development proposals within a riverine unnumbered A zone is a minimum of two (2) feet above the highest adjacent grade, to be reasonably safe from flooding.

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

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

(7) Electrical, heating, ventilation, plumbing, duct systems, and other ~~and air conditioning~~ equipment and ~~other~~ service facilities shall be ~~designed and/or otherwise~~ elevated to one foot above the base flood elevation or shall be designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during conditions of flooding. In addition, electrical, heating, ventilation, air-conditioning,

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plumbing, duct systems, and other equipment and service facilities shall meet all the requirements of this section if replaced as part of a substantial improvement. ~~or located so as to prevent water from entering or accumulating within the components during a flood~~.

(8) All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, and shall be installed or constructed using materials, methods, and practices that minimize flood damage.

(9) All manufactured dwellings shall be anchored per Section 6.123.

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

(11) All new and replacement ~~public~~ sanitary sewer systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharges from the system into flood water. On site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding consistent with Oregon Department of Environmental Quality requirements.

(12) If floodproofing methods are required as per Section 6.118(2) ~~6.121(2)~~, the property owners or developers shall file with the City a certification by a registered professional engineer or architect that the floodproofing methods meet or exceed FEMA standards. The City will maintain the certification available for public inspection. [Ord. 5146, 9/14/94; Ord. 5281, 3/26/97]

(13) Underground tanks shall be anchored to prevent flotation, collapse, and lateral movement under conditions of the base flood. Above-ground tanks shall be installed at or above one foot above the base flood elevation or shall be anchored to prevent flotation, collapse, and lateral movement under conditions of the base flood.

(14) In coordination with the State of Oregon Specialty Codes:

i. When a structure is located in multiple flood zones on the community's Flood Insurance Rate Maps (FIRM) the provisions for the more restrictive flood zone shall apply.

ii. When a structure is partially located in a special flood hazard area, the entire structure shall meet the requirements for new construction and substantial improvements.

~~6.121~~ 6.118 Flood Hazard Reduction Standards for Structures. All applicable flood hazard reduction measures are required and must be certified as required in Section 6.117(1) and (14) ~~6.120 (1) and (10)~~ above to at least meet the following standards ~~(these standards do not apply to structures exempted in Section 6.122)~~:

[Ord. 5746, 9/29/10]

(1) In all structures that will not be floodproofed, as described in 6.118(2) ~~6.121(2)~~, fully enclosed areas below the lowest floor (crawlspaces, parking areas or building access) and lower than ~~1~~ one foot above the 100-year flood level must meet or exceed the following criteria:

~~(a)~~ Provide flood openings per Section 6.115. ~~At least two openings, having a total net area of not less than one square inch for every square foot of enclosed area, subject to flooding, shall be provided.~~

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

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

(a) The interior grade below the BFE must not be more than two (2) feet below the lowest adjacent exterior grade.

(b) The height of the below-grade area, measured from the interior grade to the top of the foundation wall must not exceed four (4) feet at any point.

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(c) There must be an adequate drainage system that removes floodwaters from the interior area. The enclosed area should be drained within a reasonable time after a flood event.

(d) It will be used solely for parking vehicles, limited storage, or access to the building and will never be used for human habitation.

(e) The property owner of the building shall sign and record on the title to the property a non-conversion agreement, guaranteeing not to improve, finish, or otherwise convert the enclosed area below the lowest floor and lower than ~~1~~one-foot above the 100-year flood level and granting the City the right to inspect the enclosed area.

(2) Nonresidential new construction, conversion to, and substantial improvement of any commercial, industrial, or other non-residential structure ~~construction~~ meeting the certification requirements of Section 6.117 (1) and (14) ~~6.120 (1) and (10)~~ can have the lowest floor and attendant utility and sanitary facilities located lower than one foot above the 100-year flood elevation if all of the following is met:

(a) The structure is floodproofed so that areas lower than one foot above the 100-year flood level are watertight with walls substantially impermeable to the passage of water.

(b) The structure has structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

(c) ~~The applicant is notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level.~~ Applicants floodproofing non-residential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g. building floodproofed to the base flood level will be rated as one foot below.

(d) The applicant files a certification 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. The certification shall be provided to the Floodplain Administrator ~~Building Official~~ as set forth in Section 6.117(1) ~~6.120(1).~~ [Ord. 5146, 9/14/94; Ord. 5281, 3/26/97]

(e) Non-residential structures that are elevated, not floodproofed, shall comply with the standards for enclosed areas below the lowest floor in Section 6.115.

(f) Applicants floodproofing non-residential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g. building floodproofed to the base flood level will be rated as one foot below.

(g) Applicant supply a Maintenance Plan for the entire structure to include but not limited to: exterior envelope of structure; all penetrations to the exterior of the structure; all shields, gates, barriers, or components designed to provide floodproofing protection to the structure; all seals or gaskets for shields, gates, barriers, or components; and, the location of all shields, gates, barriers, and components as well as all associated hardware, and any materials or specialized tools necessary to seal the structure.

(h) Applicant supply an Emergency Action Plan (EAP) for the installation and sealing of the structure prior to a flooding event that clearly identifies what triggers the EAP and who is responsible for enacting the EAP. [Ord. 5875, 10/28/16]

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~~6.122~~6.121 Accessory Buildings. Accessory structures in Special Flood Hazard Areas (100-year floodplain) that represent a minimal investment are exempt from the standards of ~~ADC~~ Section 6.117 and 6.118 ~~6.120 and 6.121~~. The following standards and all other regulations that apply to development in floodplain areas apply to those buildings. The definition of "minimal investment" for the purposes of this section is a building that costs less than $10,000 in labor and materials to construct. The value of a proposed building will be the value stated on the application for building permits.

(1) Accessory structures shall not be used for human habitation, and must only be used for parking, access, and/or storage.
(2) Accessory structures shall be designed to have low flood damage potential.
(3) Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters.
(4) Accessory structures shall be firmly anchored to prevent flotation, collapse, and lateral movement of the structure from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood that may result in damage to other structures.
(5) Service facilities such as electrical, mechanical, and other service facilities ~~heating equipment~~ shall be elevated and/or floodproofed to at least one foot above the Base Flood Elevation.
(6) Accessory structures are limited to one-story structures less than 600 square feet.
(7) The portions of accessory structures located below the Base Flood Elevation must be built using flood resistant materials.
(8) Accessory structures must be designed and constructed to equalize hydrostatic flood forces on exterior walls and comply with the requirements for flood openings in Section 6.115.
(9) Accessory structures shall not be used to store toxic material, oil, or gasoline, or any priority persistent pollutant identified by the Oregon Department of Environmental Quality unless confined in a tank installed in compliance with Section 6.117.
(8) Accessory structures located partially or entirely within the floodway must comply with requirements for development within a floodway found in Section 6.100.

[Ord. 5281, 3/26/97]

6.122 Garages. Attached garages may be constructed with the garage floor slab below the Base Flood Elevation (BFE) in riverine flood zones if the following requirements are met:

(1) If located within a floodway the proposed garage must comply with the requirements of Section 6.100.
(2) The floor is at or above grade on at least one side;
(3) The garage is used solely for parking, building access, and/or storage
(4) The garage is constructed with flood openings in compliance with Section 6.115 to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwaters.
(5) The portions of the garage constructed below the BFE are constructed with materials resistant to flood damage;
(6) The garage is constructed in compliance with the standards of Sections 6.117 and 6.118; and
(7) The garage is constructed with electrical and other service facilities located and installed so as to prevent water from entering or accumulating within the components during conditions of the base flood, or be elevated to at least one foot above the Base Flood Elevation.

Detached garages must be constructed in compliance with the standards for accessory structures in Section 6.121 or non-residential structures in Section 6.118(2) depending on the square footage of the garage.

6.123 Manufactured ~~Homes~~ Dwellings. ~~New and replacement manufactured dwellings fall within the scope of the Building Codes. All new manufactured dwellings and replacement manufactured dwellings shall be installed using methods and practices that minimize flood damage and shall be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. Methods of anchoring include, but are not limited to, use of over the top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.~~ Manufactured dwellings to be placed (new or replacement) or substantially improved that are supported on solid foundation walls shall be constructed with flood openings that comply with Section 6.115.

Proposed additions to the Albany Development Code are shown in red underline and deletions in ~~strike-out~~. Sections not being amended are not shown unless needed for context.

The bottom of the longitudinal chassis frame beam shall be at or elevated one foot above the Base Flood Elevation.

Manufactured dwellings to be placed (new or replacement) or substantially improved shall be anchored to prevent flotation, collapse, and lateral movement during the base flood. 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); and

Electrical crossover connections shall be a minimum of one foot above Base Flood Elevation (BFE).

[Ord. 5338, 1/28/98; Ord. 5746, 9/29/10]

6.124 Recreational Vehicles. Recreational vehicles placed on sites within the Special Flood Hazard Area (all A Zones and floodway) ~~flood fringe~~ are required to either:

[Ord. 5746, 9/29/10]

(1) Be 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, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or

(3) Meet the requirements of Section 6.123, including the anchoring and elevation requirements ~~of Section 6.123~~ for manufactured dwellings ~~homes~~.

6.125 Flood Fringe Fencing and Wall Standards. Certain types of fences and garden walls may be allowed in the flood fringe of the Special Flood Hazard Area (100-year floodplain). All fences and garden walls constructed within the flood fringe must not obstruct the entry and exit of floodwater, through their design and construction. All fences and walls are prohibited in the floodway. [Ord. 5746, 9/29/10]

Table 6.125-1 below is provided to assist in selecting appropriate fencing in the flood fringe. All fences and walls also must meet the standards in other sections of the Code.

[Ord. 5746, 9/29/10; Ord. 5947, 1/01/21]

TABLE 6.125-1. Fence type selection for flood fringe areas.

Fence Type	Allowed in Flood Fringe Areas
Open barbless wire; Open pipe or rail; Other wire, pipe or rail (e.g. field fence, chicken wire, etc.); Chain link (1)	~~No permit required~~ Yes
Wood fences (2)	~~No permit required~~ Yes
Solid fences and freestanding walls, such as masonry (3)	Permit required, must have openings at and below BFE
Other fences (4)	Permit required, must have openings at and below BFE

[Ord. 5947, 1/01/21]

(1) Acceptable materials and installation methods that allow for the entry and exit of floodwater.

(2) Wood fence boards should be spaced to allow for the entry and exit of floodwater.

(3) Solid fences and freestanding walls must include a flap or opening in the areas at or below the Base Flood Elevation at least once every three fence panels or 24 feet, whichever is less. Fences less than 24 feet in length shall have at least one flap or opening in the areas at or below the Base Flood elevation. The minimum dimensions of the flap or opening shall not be less than 12"x12" or 8"x18". Openings shall not include any screening of any type or size. If flaps are used, they may be secured to allow closure during normal use, but must be capable of self-release and opening to full dimensions when under

Proposed additions to the Albany Development Code are shown in red underline and deletions in ~~strike-out~~. Sections not being amended are not shown unless needed for context.

pressure of no greater than 30 pounds per sq. ft. These standards do not apply to retaining walls which shall meet the same standards as other building, paving, and grading activities.

Solid fences and walls constructed within Zone A, where the base flood elevation has not been determined, can use other sources of floodplain and floodway data to determine base flood elevations and boundaries as described in Section 6.080, or the openings can be placed within one foot of the finished grade along the fence alignment.

(4) Other fence materials and construction that would restrict the flow of floodwaters will require a permit so they can be reviewed and adapted to meet the intent of this section of the Code.

State of Oregon Model Flood Hazard Management Ordinance

Current Version Effective: October 23, 2020

(Minor typo and reference corrections effective: Nov. 27, 2019)
(Last version effective: Aug. 9, 2019)

Introduction

The model flood hazard ordinance has been prepared by the State of Oregon Department of Land Conservation and Development (DLCD) and has been reviewed and approved by FEMA Region X. Adoption of the ordinance language provided will ensure compliance with the minimum standards for participation in the National Flood Insurance Program (NFIP).

The model flood hazard ordinance includes standards and provisions that encourage sound floodplain management. The language is based on the minimum requirements of the NFIP found in the Code of Federal Regulations (CFRs), Oregon's statewide land use planning Goal 7, and the Oregon specialty codes.

Instructions for How to Use this Document

This 2019 version of the model ordinance includes a Table of Contents and a Regulatory Crosswalk that identifies the federal and state standards that align to and are reflected in each section.

Ordinance Language Legend:

- Black: Represents the NFIP and state minimum requirements and must be included in your community's ordinance to ensure compliance.
- Red: Represents language that must be replaced with community specific information. Only include the appropriate language for your community.
- Purple: Represents language required for communities with Coastal High Hazard Areas mapped by FEMA (V Zones or Coastal A Zones).
  (DELETE ALL PURPLE LANGUAGE IF NOT A COASTAL COMMUNITY).
- Hyperlinks: Link to other sections of the document; including the Appendices, which contain optional and highly recommended language.

Note Regarding the Appendices:

Each community should review the optional language provided in Appendices A and B whenever a hyperlink is provided, and identify what language to include based on their community floodplain management goals. Adopting higher standards is recommended and can provide benefits to your community, including financial savings on individual flood insurance policies.

Summary of Changes from the 2014 version to the 2019 Version of the Oregon Model Flood Hazard Ordinance:

The 2019 version of the Oregon Model Flood Hazard Ordinance (to be referred to herein as the "2019 model ordinance"), varies from the previous version in its reorganization of some sections and subsections, as well as the modification of content to include new sections and revisions to existing sections.

In general, the content was revised to more closely match (verbatim) the language in the sections of Code of Federal Regulations (CFR), which contain the minimum requirements for the National Flood Insurance Program (NFIP). The content was also revised to incorporate relevant standards in the State of Oregon's Specialty Codes, and updates to those standards that have changed in the last 5 – 10 years. A breakdown of the primary changes found in the 2019 model ordinance is provided below:

1. Some definitions have been added, removed, or reworded to match the CFR definitions verbatim, as required by FEMA. There are additional optional and recommended definitions provided in Appendix A.

2. The 2019 model ordinance notes the requirement for coordination with State of Oregon Specialty Codes (section **3.3**) and incorporates relevant requirements (higher standards) from the Specialty Codes to ensure alignment between the model flood ordinance language and the building code language. For example, the 2019 model ordinance:
    a. Directly addresses "Garages" (section **5.2.2**) and "Tanks" (section **5.1.5**) by incorporating the relevant NFIP and State of Oregon Specialty Code requirements into the ordinance language.
    b. Incorporates the Specialty Codes additional standards for flood openings in residential structures that require a building permit (section **5.2.1)**.

3. The floodplain development permit and permit review requirements have been expanded in the 2019 model ordinance (sections **4.3.2** and **4.2.1**) to more accurately capture all of the information a community Floodplain Administrator is required to

obtain and review to ensure a floodplain development proposal complies with the standards of the 2019 model ordinance (minimum NFIP and state standards).

4. The 2019 model ordinance expands the requirements for "Information to be Obtained and Maintained" (section **4.2.2**). To reflect the NFIP minimum requirements and Oregon Specialty Code Requirements.

5. The 2019 model ordinance also has a new section, **4.2.3.1**, "Community Boundary Alterations", that reflects the NFIP minimum requirement for communities to notify FEMA when their boundaries change (i.e. when annexations occur).

6. The 2019 model ordinance clearly indicates that floodplain managers have a duty to conduct Substantial Improvement (SI) assessments and Substantial Damage (SD) determinations in a new section **4.2.4**. Both SI and SD are defined in section **2.0**. SI review is required for all structural development proposals and other development activities associated with or attached to a structure. This section is designed to help ensure that each floodplain development file includes SI calculations whenever appropriate, as well as the floodplain administrator's determination of whether the proposed development activity qualifies as SI. SD review is required whenever structures have been damaged due to natural or other events (i.e. house fire). Please refer FEMA Publication 758: *Substantial Improvement/Substantial Damage Desk Reference*, available for download at: https://www.fema.gov/media-library/assets/documents/18562 for additional details regarding SI and SD.

7. There is a change to the "Variance Conditions" section in the 2019 model ordinance. Per FEMA guidance, the variance condition related to historic structures has been removed. For more details, including an explanation of the reasons for this change, please see the note in Appendix B, for section **4.4.1**.

8. In the 2019 model ordinance, subdivisions and other development proposals (including manufactured dwelling parks and subdivisions) have been addressed directly in the new section **5.1.6**, and the language reflects the requirements minimum NFIP requirements in 44 CFR 60.3(a)(4), and 60.3(b)(3).

9. Section **5.1.7**, "Use of Other Base Flood Data" has been moved out of the administration section and the language has been updated to reflect the minimum state and NFIP standards.

10. Section **5.1.8**, "Structures Located in Multiple or Partial Flood Zones", has been added to reflect how the NFIP and State of Oregon Specialty Codes address structures that fall within multiple flood zones or are partially within one or more flood zones.

11. Section **5.2**, which addresses the specific standards for riverine flood zones has been re-organized slightly, but it is still broken down by the type of FEMA Flood Insurance Rate Map (FIRM) flood zone and the level of detail or information available. It has also been amended to add the following sections at the beginning:
    a. Section **5.2.1**, "Flood Openings," which covers the NFIP minimum requirements and additional Oregon Specialty Code requirements for residential structures requiring a building permit.

    b. Section **5.2.2**, "Garages," addresses the specific requirements for attached and detached garages under the NFIP minimum standards and Oregon Specialty Code requirements.

Summary of Changes Made Under October 2020 Revisions to the Model Ordinance Language:

1. Removal of optional language from Appendix B that reflected the FEMA Region X Fish Enhancement Policy that was rescinded in 2020.

2. Addition of the word "and" after the first bullet in Section **5.2.3.5**, the standards for recreational vehicles based on FEMA interpretation of the regulatory language for this standard in 44 CFR 60.3 as having an implied "and".

3. Addition of the words "conversion to" into the residential and non-residential development standards Sections **5.2.3.2** and **5.2.3.3**. This language was added to ensure that structures that are converted to different uses within the Special Flood Hazard Area are brought into compliance with residential standards for life, safety, and property damage prevention purposes.

4. Addition of "replacement" to the language in Section **5.2.3.4** standards for manufactured dwellings to ensure that the standards in this section are applied to replacement manufactured homes as well as new and substantially improved manufactured dwellings.

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*Link to Oregon Specialty Codes

1.0 STATUTORY AUTHORITY, FINDINGS OF FACT, PURPOSE, AND METHODS

1.1 STATUTORY AUTHORIZATION

The State of Oregon has in ORS 203.035 (COUNTIES) OR ORS 197.175 (CITIES) delegated the responsibility to local governmental units to adopt floodplain management regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the COMMUNITY NAME does ordain as follows:

1.2 FINDINGS OF FACT

A. The flood hazard areas of COMMUNITY NAME are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

B. These flood losses may be caused by the cumulative effect of obstructions in special flood hazard areas which increase flood heights and velocities, and when inadequately anchored, cause damage in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to flood loss.

1.3 STATEMENT OF PURPOSE

It is the purpose of this ordinance to promote public health, safety, and general welfare, and to minimize public and private losses due to flooding in flood hazard areas by provisions designed to:

A. Protect human life and health;

B. Minimize expenditure of public money for costly flood control projects;

C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

D. Minimize prolonged business interruptions;

E. Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines; and streets and bridges located in special flood hazard areas;

F. Help maintain a stable tax base by providing for the sound use and development of flood hazard areas so as to minimize blight areas caused by flooding;

G. Notify potential buyers that the property is in a special flood hazard area

H. Notify those who occupy special flood hazard areas that they assume responsibility for their actions

I. Participate in and maintain eligibility for flood insurance and disaster relief.

1.4 METHODS OF REDUCING FLOOD LOSSES

In order to accomplish its purposes, this ordinance includes methods and provisions for:

A. Restricting or prohibiting development which is dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

B. Requiring that development vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;

D. Controlling filling, grading, dredging, and other development which may increase flood damage;

E. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or may increase flood hazards in other areas.

2.0 DEFINITIONS

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage.

Appeal: A request for a review of the interpretation of any provision of this ordinance or a request for a variance.

Area of shallow flooding: A designated Zone AO, AH, AR/AO or AR/AH 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.

Area of special flood hazard: 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, V1-30, VE). "Special flood hazard area" is synonymous in meaning and definition with the phrase "area of special flood hazard".

Base flood: The flood having a one percent chance of being equaled or exceeded in any given year.

Base flood elevation (BFE): The elevation to which floodwater is anticipated to rise during the base flood.

Basement: Any area of the building having its floor subgrade (below ground level) on all sides.

Breakaway wall: A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

Coastal high hazard area: An area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources.

Development: Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

Flood or Flooding:

(a) A general and temporary condition of partial or complete inundation of normally dry land areas from:
    (1) The overflow of inland or tidal waters.
    (2) The unusual and rapid accumulation or runoff of surface waters from any source.
    (3) Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (a)(2) 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)(1) of this definition.

Flood elevation study: See "Flood Insurance Study".

Flood Insurance Rate Map (FIRM): The official map of a community, on which the Federal Insurance Administrator has delineated both the special hazard areas 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).

Flood Insurance Study (FIS): 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.

Flood proofing: Any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents.

Floodway: 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 a designated height. Also referred to as "Regulatory Floodway."

Functionally dependent use: A use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, and does not include long term storage or related manufacturing facilities.

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

Historic structure: Any structure that is:

1. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

2. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or

4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:

    a. By an approved state program as determined by the Secretary of the Interior or
    b. Directly by the Secretary of the Interior in states without approved programs.

Lowest floor: The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

Manufactured dwelling: A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured dwelling" does not include a "recreational vehicle" and is synonymous with "manufactured home".

Manufactured dwelling park or subdivision: A parcel (or contiguous parcels) of land divided into two or more manufactured dwelling lots for rent or sale.

Mean sea level: For purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which Base Flood Elevations shown on a community's Flood Insurance Rate Map are referenced.

New construction: 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 COMMUNITY NAME and includes any subsequent improvements to such structures.

Recreational vehicle: A vehicle which is:

1. Built on a single chassis;

2. 400 square feet or less when measured at the largest horizontal projection;

3. Designed to be self-propelled or permanently towable by a light duty truck; and

4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Special flood hazard area: See "Area of special flood hazard" for this definition.

Start of construction: Includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days from the date of the permit. 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 dwelling 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 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 that alteration affects the external dimensions of the building.

Structure: 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 dwelling.

Substantial damage: 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: 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:

1. 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

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

Variance: A grant of relief by COMMUNITY NAME from the terms of a flood plain management regulation.

Violation: The failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this ordinance is presumed to be in violation until such time as that documentation is provided.

Additional Optional Language Provided in Appendix A

3.0 GENERAL PROVISIONS

3.1 LANDS TO WHICH THIS ORDINANCE APPLIES

This ordinance shall apply to all special flood hazard areas within the jurisdiction of COMMUNITY NAME.

3.2 BASIS FOR ESTABLISHING THE SPECIAL FLOOD HAZARD AREAS

The special flood hazard areas identified by the Federal Insurance Administrator in a scientific and engineering report entitled "The Flood Insurance Study (FIS) for "EXACT TITLE OF FLOOD INSURANCE STUDY FOR COMMUNITY", dated DATE (MONTH DAY, FOUR DIGIT YEAR), with accompanying Flood Insurance Rate Maps (FIRMs) LIST ALL EFFECTIVE FIRM PANELS HERE (UNLESS ALL PANELS ARE BEING REPLACED THROUGH A NEW COUNTY_WIDE MAP THAT INCORPORATES ALL PREVIOUS PANELS/VERSIONS, IN THAT SITUATION PANELS DO NOT NEED TO BE INDIVIDUALLY LISTED) are hereby adopted by reference and declared to be a part of this ordinance. The FIS and FIRM panels are on file at INSERT THE LOCATION (I.E. COMMUNITY PLANNING DEPARTMENT LOCATED IN THE COMMUNITY ADMINISTRATIVE BUILDING).

3.3 COORDINATION WITH STATE OF OREGON SPECIALTY CODES

Pursuant to the requirement established in ORS 455 that the INSERT COMMUNITY NAME administers and enforces the State of Oregon Specialty Codes, the INSERT COMMUNITY NAME does hereby acknowledge that the Oregon Specialty Codes contain certain provisions that apply to the design and construction of buildings and structures located in special flood hazard areas. Therefore, this ordinance is intended to be administered and enforced in conjunction with the Oregon Specialty Codes.

3.4 COMPLIANCE AND PENALTIES FOR NONCOMPLIANCE

3.4.1 COMPLIANCE

All development within special flood hazard areas is subject to the terms of this ordinance and required to comply with its provisions and all other applicable regulations.

3.4.2 PENALTIES FOR NONCOMPLIANCE

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this ordinance and other applicable regulations. Violations of the provisions of this ordinance by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a (INSERT INFRACTION TYPE (I.E. MISDEMEANOR). INSERT PENALTIES PER STATE/LOCAL LAW ASSOCIATED WITH SPECIFIED INFRACTION TYPE (I.E. ANY PERSON WHO VIOLATES THE REQUIREMENTS OF THIS ORDINANCE SHALL UPON CONVICTION THEREOF BE FINED NOT MORE THAN A SPECIFIED AMOUNT OF MONEY…) Nothing contained herein shall prevent the COMMUNITY NAME from taking such other lawful action as is necessary to prevent or remedy any violation.

3.5 ABROGATION AND SEVERABILITY

3.5.1 ABROGATION

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

3.5.2 SEVERABILITY

This ordinance and the various parts thereof are hereby declared to be severable. If any section clause, sentence, or phrase of the Ordinance is held to be invalid or

unconstitutional by any court of competent jurisdiction, then said holding shall in no way effect the validity of the remaining portions of this Ordinance.

3.6 INTERPRETATION

In the interpretation and application of this ordinance, all provisions shall be:

A. Considered as minimum requirements;
B. Liberally construed in favor of the governing body; and
C. Deemed neither to limit nor repeal any other powers granted under state statutes.

3.7 WARNING AND DISCLAIMER OF LIABILITY

3.7.1 WARNING

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages.

3.7.2 DISCLAIMER OF LIABILITY

This ordinance shall not create liability on the part of the COMMUNITY NAME, any officer or employee thereof, or the Federal Insurance Administrator for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

4.0 ADMINISTRATION

4.1 DESIGNATION OF THE FLOODPLAIN ADMINISTRATOR

The INSERT INDIVIDUAL JOB TITLE is hereby appointed to administer, implement, and enforce this ordinance by granting or denying development permits in accordance with its provisions. The Floodplain Administrator may delegate authority to implement these provisions.

Additional Recommended Language Provided in Appendix B

4.2 DUTIES AND RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR

Duties of the floodplain administrator, or their designee, shall include, but not be limited to:

4.2.1 PERMIT REVIEW

Review all development permits to determine that:

A. The permit requirements of this ordinance have been satisfied;
B. All other required local, state, and federal permits have been obtained and approved.
C. Review all development permits to determine if the proposed development is located in a floodway. If located in the floodway assure that the floodway provisions of this ordinance in section **5.2.4** are met; and
D. Review all development permits to determine if the proposed development is located in an area where Base Flood Elevation (BFE) data is available either through the Flood Insurance Study (FIS) or from another authoritative source. If BFE data is not available then ensure compliance with the provisions of sections **5.1.7**; and
E. Provide to building officials the Base Flood Elevation (BFE) (ADD FREEBOARD IF COMMUNITY HAS HIGHER ELEVATION STANDARDS) applicable to any building requiring a development permit.
F. Review all development permit applications to determine if the proposed development qualifies as a substantial improvement as defined in section **2.0**.
G. Review all development permits to determine if the proposed development activity is a watercourse alteration. If a watercourse alteration is proposed, ensure compliance with the provisions in section **5.1.1**.
H. Review all development permits to determine if the proposed development activity includes the placement of fill or excavation.

4.2.2 INFORMATION TO BE OBTAINED AND MAINTAINED

The following information shall be obtained and maintained and shall be made available for public inspection as needed:

A. Obtain, record, and maintain the actual elevation (in relation to mean sea level) of the lowest floor (including basements) and all attendant utilities of all new or substantially improved structures where Base Flood Elevation (BFE) data is provided through the Flood Insurance Study (FIS), Flood Insurance Rate Map (FIRM), or obtained in accordance with section **5.1.7**.
B. Obtain and record the elevation (in relation to mean sea level) of the natural grade of the building site for a structure prior to the start of construction and

the placement of any fill and ensure that the requirements of sections **5.2.4, 5.3.1(F), 4.2.1(B)** are adhered to.

C. Upon placement of the lowest floor of a structure (including basement) but prior to further vertical construction, obtain documentation, prepared and sealed by a professional licensed surveyor or engineer, certifying the elevation (in relation to mean sea level) of the lowest floor (including basement).
D. Where base flood elevation data are utilized, obtain As-built certification of the elevation (in relation to mean sea level) of the lowest floor (including basement) prepared and sealed by a professional licensed surveyor or engineer, prior to the final inspection.
E. Maintain all Elevation Certificates (EC) submitted to the community;
F. Obtain, record, and maintain the elevation (in relation to mean sea level) to which the structure and all attendant utilities were floodproofed for all new or substantially improved floodproofed structures where allowed under this ordinance and where Base Flood Elevation (BFE) data is provided through the FIS, FIRM, or obtained in accordance with section **5.1.7**.
G. Maintain all floodproofing certificates required under this ordinance;
H. Record and maintain all variance actions, including justification for their issuance;
I. Obtain and maintain all hydrologic and hydraulic analyses performed as required under section **5.2.4**.
J. Record and maintain all Substantial Improvement and Substantial Damage calculations and determinations as required under section **4.2.4**.
K. Maintain for public inspection all records pertaining to the provisions of this ordinance.

4.2.3 REQUIREMENT TO NOTIFY OTHER ENTITIES AND SUBMIT NEW TECHNICAL DATA

4.2.3.1 COMMUNITY BOUNDARY ALTERATIONS

The Floodplain Administrator shall notify the Federal Insurance Administrator in writing whenever the boundaries of the community have been modified by annexation or the community has otherwise assumed authority or no longer has authority to adopt and enforce floodplain management regulations for a particular area, to ensure that all Flood Hazard Boundary Maps (FHBM) and Flood Insurance Rate Maps (FIRM) accurately represent the community's boundaries. Include within such notification a copy of a map of the community suitable for reproduction, clearly delineating the new corporate limits or new area for which the community has assumed or relinquished floodplain management regulatory authority.

4.2.3.2 WATERCOURSE ALTERATIONS

Notify adjacent communities, the Department of Land Conservation and Development, and other appropriate state and federal agencies, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration. This notification shall be provided by the applicant to the Federal Insurance Administration as a Letter of Map Revision (LOMR) along with either:

A. A proposed maintenance plan to assure the flood carrying capacity within the altered or relocated portion of the watercourse is maintained; or
B. Certification by a registered professional engineer that the project has been designed to retain its flood carrying capacity without periodic maintenance.

The applicant shall be required to submit a Conditional Letter of Map Revision (CLOMR) when required under section **4.2.3.3**. Ensure compliance with all applicable requirements in sections **4.2.3.3** and **5.1.1**.

4.2.3.3 REQUIREMENT TO SUBMIT NEW TECHNICAL DATA

A community's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community shall notify the Federal Insurance Administrator of the changes by submitting technical or scientific data in accordance with Title 44 of the Code of Federal Regulations (CFR), Section 65.3. The community may require the applicant to submit such data and review fees required for compliance with this section through the applicable FEMA Letter of Map Change (LOMC) process.

The Floodplain Administrator shall require a Conditional Letter of Map Revision prior to the issuance of a floodplain development permit for:

A. Proposed floodway encroachments that increase the base flood elevation; and
B. Proposed development which increases the base flood elevation by more than one foot in areas where FEMA has provided base flood elevations but no floodway.

An applicant shall notify FEMA within six (6) months of project completion when an applicant has obtained a Conditional Letter of Map Revision (CLOMR) from FEMA. This notification to FEMA shall be provided as a Letter of Map Revision (LOMR).

Additional Recommended Language Provided in Appendix B

4.2.4 SUBSTANTIAL IMPROVEMENT AND SUBSTANTIAL DAMAGE ASSESSMENTS AND DETERMINATIONS

Conduct Substantial Improvement (SI) (as defined in section 2.0) reviews for all structural development proposal applications and maintain a record of SI calculations within permit files in accordance with section **4.2.2**. Conduct Substantial Damage (SD) (as defined in section 2.0) assessments when structures are damaged due to a natural hazard event or other causes. Make SD determinations whenever structures within the special flood hazard area (as established in section **3.2**) are damaged to the extent that 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.

4.3 ESTABLISHMENT OF DEVELOPMENT PERMIT

4.3.1 FLOODPLAIN DEVELOPMENT PERMIT REQUIRED

A development permit shall be obtained before construction or development begins within any area horizontally within the special flood hazard area established in section **3.2**. The development permit shall be required for all structures, including manufactured dwellings, and for all other development, as defined in section **2.0**, including fill and other development activities.

4.3.2 APPLICATION FOR DEVELOPMENT PERMIT

Application for a development permit may be made on forms furnished by the Floodplain Administrator and may include, but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically the following information is required:

A. In riverine flood zones, the proposed elevation (in relation to mean sea level), of the lowest floor (including basement) and all attendant utilities of all new and substantially improved structures; in accordance with the requirements of section **4.2.2**.
B. In coastal flood zones (V zones and coastal A zones), the proposed 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 structures, and whether such structures contain a basement;

C. Proposed elevation in relation to mean sea level to which any non-residential structure will be floodproofed.
D. Certification by a registered professional engineer or architect licensed in the State of Oregon that the floodproofing methods proposed for any non-residential structure meet the floodproofing criteria for non-residential structures in section **5.2.3.3**.
E. Description of the extent to which any watercourse will be altered or relocated.
F. Base Flood Elevation data for subdivision proposals or other development when required per sections **4.2.1 and 5.1.6**.
G. Substantial improvement calculation for any improvement, addition, reconstruction, renovation, or rehabilitation of an existing structure.
H. The amount and location of any fill or excavation activities proposed.

4.4 VARIANCE PROCEDURE

The issuance of a variance is for floodplain management purposes only. Flood insurance premium rates are determined by federal statute according to actuarial risk and will not be modified by the granting of a variance.

4.4.1 CONDITIONS FOR VARIANCES

A. Generally, variances may be issued 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 the base flood level, in conformance with the provisions of sections **4.4.1 (C) and (E), and 4.4.2**. As the lot size increases beyond one-half acre, the technical justification required for issuing a variance increases.
B. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
C. Variances shall not be issued within any floodway if any increase in flood levels during the base flood discharge would result.
D. Variances shall only be issued upon:
    1. A showing of good and sufficient cause;
    2. A determination that failure to grant the variance would result in exceptional hardship to the applicant;
    3. 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 laws or ordinances.
E. Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that the criteria of section **4.4.1 (B) – (D)**

are met, and the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

Additional Optional Language Provided in Appendix B

4.4.2 VARIANCE NOTIFICATION

Any applicant to whom a variance is granted shall be given written notice that the issuance of a variance to construct a structure below the Base Flood Elevation will result in increased premium rates for flood insurance and that such construction below the base flood elevation increases risks to life and property. Such notification and a record of all variance actions, including justification for their issuance shall be maintained in accordance with section **4.2.2**.

5.0 PROVISIONS FOR FLOOD HAZARD REDUCTION

5.1 GENERAL STANDARDS

In all special flood hazard areas, the following standards shall be adhered to:

5.1.1 ALTERATION OF WATERCOURSES

Require that the flood carrying capacity within the altered or relocated portion of said watercourse is maintained. Require that maintenance is provided within the altered or relocated portion of said watercourse to ensure that the flood carrying capacity is not diminished. Require compliance with sections **4.2.3.2 and 4.2.3.3**.

5.1.2 ANCHORING

A. All new construction and substantial improvements 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 dwellings shall be anchored per section **5.2.3.4**.

5.1.3 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.

5.1.4 UTILITIES AND EQUIPMENT

5.1.4.1 WATER SUPPLY, SANITARY SEWER, AND ON-SITE WASTE DISPOSAL SYSTEMS

A. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
B. 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.
C. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding consistent with the Oregon Department of Environmental Quality.

5.1.4.2 ELECTRICAL, MECHANICAL, PLUMBING, AND OTHER EQUIPMENT

Electrical, heating, ventilating, air-conditioning, plumbing, duct systems, and other equipment and service facilities shall be elevated at or above the base flood level (INSERT ANY COMMUNITY FREEBOARD REQUIREMENT HERE) or shall be designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during conditions of flooding. In addition, electrical, heating, ventilating, air-conditioning, plumbing, duct systems, and other equipment and service facilities shall:

A. If replaced as part of a substantial improvement shall meet all the requirements of this section.
B. Not be mounted on or penetrate through breakaway walls.

5.1.5 TANKS

A. Underground tanks shall be anchored to prevent flotation, collapse and lateral movement under conditions of the base flood.
B. Above-ground tanks shall be installed at or above the base flood level (INSERT COMMUNITY FREEBOARD REQUIREMENT HERE) or shall be anchored to prevent flotation, collapse, and lateral movement under conditions of the base flood.

C. In coastal flood zones (V Zones or coastal A Zones) when elevated on platforms, the platforms shall be cantilevered from or knee braced to the building or shall be supported on foundations that conform to the requirements of the State of Oregon Specialty Code.

5.1.6 SUBDIVISION PROPOSALS & OTHER PROPOSED DEVELOPMENTS

A. All new subdivision proposals and other proposed new developments (including proposals for manufactured dwelling parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, shall include within such proposals, Base Flood Elevation data.

B. All new subdivision proposals and other proposed new developments (including proposals for manufactured dwelling parks and subdivisions) shall:
   1. Be consistent with the need to minimize flood damage.
   2. Have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize or eliminate flood damage.
   3. Have adequate drainage provided to reduce exposure to flood hazards.

5.1.7 USE OF OTHER BASE FLOOD ELEVATION DATA

When Base Flood Elevation data has not been provided in accordance with section **3.2** the local floodplain administrator shall obtain, review, and reasonably utilize any Base Flood Elevation data available from a federal, state, or other source, in order to administer section **5.0**. All new subdivision proposals and other proposed new developments (including proposals for manufactured dwelling parks and subdivisions) must meet the requirements of section **5.1.6**.

Base Flood Elevations shall be determined for development proposals that are 5 acres or more in size or are 50 lots or more, whichever is lesser in any A zone that does not have an established base flood elevation. Development proposals located within a riverine unnumbered A Zone shall be reasonably safe from flooding; the test of reasonableness includes use of historical data, high water marks, FEMA provided Base Level Engineering data, and photographs of past flooding, etc… where available. (INSERT REFERENCE TO ANY OF THIS TYPE OF INFORMATION TO BE USED FOR REGULATORY PURPOSES BY YOUR COMMUNITY, I.E. BASE LEVEL ENGINEERING DATA, HIGH WATER MARKS, HISTORICAL OR OTHER DATA THAT WILL BE REGULATED TO. THIS MAY BE NECESSARY TO ENSURE THAT THE STANDARDS APPLIED TO RESIDENTIAL STRUCTURES ARE CLEAR AND OBJECTIVE. IF UNCERTAIN SEEK LEGAL ADVICE, **AT A MINIMUM REQUIRE THE ELEVATION OF RESIDENTIAL STRUCTURES AND NON-RESIDENTIAL STRUCTURES THAT ARE NOT DRY FLOODPROOFED TO BE**

2FEET ABOVE HIGHEST ADJACENT GRADE). Failure to elevate at least two feet above grade in these zones may result in higher insurance rates.

5.1.8 STRUCTURES LOCATED IN MULTIPLE OR PARTIAL FLOOD ZONES

In coordination with the State of Oregon Specialty Codes:

A. When a structure is located in multiple flood zones on the community's Flood Insurance Rate Maps (FIRM) the provisions for the more restrictive flood zone shall apply.
B. When a structure is partially located in a special flood hazard area, the entire structure shall meet the requirements for new construction and substantial improvements.

Additional Recommended Language Provided in Appendix B

5.2 SPECIFIC STANDARDS FOR RIVERINE (INCLUDING ALL NON-COASTAL) FLOOD ZONES

These specific standards shall apply to all new construction and substantial improvements in addition to the General Standards contained in section **5.1** of this ordinance.

5.2.1 FLOOD OPENINGS

All new construction and substantial improvements with fully enclosed areas below the lowest floor (excluding basements) are subject to the following requirements. Enclosed areas below the Base Flood Elevation, including crawl spaces shall:

A. Be designed to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters;
B. Be used solely for parking, storage, or building access;
C. Be certified by a registered professional engineer or architect or meet or exceed all of the following minimum criteria:
    1. A minimum of two openings,
    2. The total net area of non-engineered openings shall be not less than one (1) square inch for each square foot of enclosed area, where the enclosed area is measured on the exterior of the enclosure walls,
    3. The bottom of all openings shall be no higher than one foot above grade.
    4. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they shall allow the automatic flow of floodwater into and out of the enclosed areas and shall be accounted for in the determination of the net open area.

5. All additional higher standards for flood openings in the State of Oregon Residential Specialty Codes Section R322.2.2 shall be complied with when applicable.

5.2.2 GARAGES

A. Attached garages may be constructed with the garage floor slab below the Base Flood Elevation (BFE) in riverine flood zones, if the following requirements are met:
    1. If located within a floodway the proposed garage must comply with the requirements of section **5.2.4**.
    2. The floors are at or above grade on not less than one side;
    3. The garage is used solely for parking, building access, and/or storage;
    4. The garage is constructed with flood openings in compliance with section **5.2.1** to equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwater.
    5. The portions of the garage constructed below the BFE are constructed with materials resistant to flood damage;
    6. The garage is constructed in compliance with the standards in section **5.1**; and
    7. The garage is constructed with electrical, and other service facilities located and installed so as to prevent water from entering or accumulating within the components during conditions of the base flood.
B. Detached garages must be constructed in compliance with the standards for appurtenant structures in section **5.2.3.6** or non-residential structures in section **5.2.3.3** depending on the square footage of the garage.

5.2.3 FOR RIVERINE (NON-COASTAL) SPECIAL FLOOD HAZARD AREAS WITH BASE FLOOD ELEVATIONS

In addition to the general standards listed in section **5.1** the following specific standards shall apply in Riverine (non-coastal) special flood hazard areas with Base Flood Elevations (BFE): Zones A1-A30, AH, and AE.

5.2.3.1 BEFORE REGULATORY FLOODWAY

In areas where a regulatory floodway has not been designated, no new construction, substantial improvement, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's Flood Insurance Rate Map (FIRM), 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.

5.2.3.2 RESIDENTIAL CONSTRUCTION

A. New construction, conversion to, and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated at or above the Base Flood Elevation (BFE) (INSERT ADDITIONAL FREEBOARD FOR YOUR COMMUNITY – RECOMMEND MINIMUM OF 1FT ABOVE BFE).
B. Enclosed areas below the lowest floor shall comply with the flood opening requirements in section **5.2.1**.

Additional Recommended Language Provided in Appendix B

5.2.3.3 NON-RESIDENTIAL CONSTRUCTION

A. New construction, conversion to, and substantial improvement of any commercial, industrial, or other non-residential structure shall:
    1. Have the lowest floor, including basement elevated at or above the Base Flood Elevation (BFE) (INSERT ANY ADDITIONAL FREEBOARD REQUIREMENTS FOR YOUR COMMUNITY);
    Or, together with attendant utility and sanitary facilities:

    Additional Recommended Language Provided in Appendix B

        i. Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
        ii. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
        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 section based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the Floodplain Administrator as set forth section **4.2.2**.

B. Non-residential structures that are elevated, not floodproofed, shall comply with the standards for enclosed areas below the lowest floor in section **5.2.1**.
C. Applicants floodproofing non-residential buildings shall be notified that flood insurance premiums will be based on rates that are one (1) foot below the floodproofed level (e.g. a building floodproofed to the base flood level will be rated as one (1) foot below.

Additional Recommended Language Provided in Appendix B

5.2.3.4 MANUFACTURED DWELLINGS

A. Manufactured dwellings to be placed (new or replacement) or substantially improved that are supported on solid foundation walls shall be constructed with flood openings that comply with section **5.2.1**;
B. The bottom of the longitudinal chassis frame beam shall be at or above Base Flood Elevation;
C. Manufactured dwellings to be placed (new or replacement) or substantially improved shall be anchored to prevent flotation, collapse, and lateral movement during the base flood. 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), and;
D. Electrical crossover connections shall be a minimum of twelve (12) inches above Base Flood Elevation (BFE).

5.2.3.5 RECREATIONAL VEHICLES

Recreational vehicles placed on sites are required to:
A. Be on the site for fewer than 180 consecutive days, and
B. Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
C. Meet the requirements of section **5.2.3.4**, including the anchoring and elevation requirements for manufactured dwellings.

5.2.3.6 APPURTENANT (ACCESSORY) STRUCTURES

Relief from elevation or floodproofing requirements for residential and non-residential structures in Riverine (Non-Coastal) flood zones may be granted for appurtenant structures that meet the following requirements:

A. Appurtenant structures located partially or entirely within the floodway must comply with requirements for development within a floodway found in section **5.2.4**.
B. Appurtenant structures must only be used for parking, access, and/or storage and shall not be used for human habitation;
C. In compliance with State of Oregon Specialty Codes, appurtenant structures on properties that are zoned residential are limited to one-story structures less than 200 square feet, or 400 square feet if the property is greater than two (2) acres in area and the proposed appurtenant structure will be located a minimum of 20 feet from all property lines. Appurtenant structures on properties that are zoned as non-residential are limited in size to 120 square feet.
D. The portions of the appurtenant structure located below the Base Flood Elevation must be built using flood resistant materials;
E. The appurtenant structure must be adequately anchored to prevent flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, during conditions of the base flood.
F. The appurtenant structure must be designed and constructed to equalize hydrostatic flood forces on exterior walls and comply with the requirements for flood openings in section **5.2.1**;
G. Appurtenant structures shall be located and constructed to have low damage potential;
H. Appurtenant structures shall not be used to store toxic material, oil, or gasoline, or any priority persistent pollutant identified by the Oregon Department of Environmental Quality unless confined in a tank installed incompliance with section **5.1.5**.
I. Appurtenant structures shall be constructed with electrical, mechanical, and other service facilities located and installed so as to prevent water from entering or accumulating within the components during conditions of the base flood.

Additional Optional Language Provided in Appendix B

5.2.4 FLOODWAYS

Located within the special flood hazard areas established in section **3.2** are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of the floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

A. Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless:
    1. Certification by a registered professional civil engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment shall not result in any increase in flood levels within the community during the occurrence of the base flood discharge;
    Or,
    2. A community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that a Conditional Letter of Map Revision (CLOMR) is applied for and approved by the Federal Insurance Administrator, and the requirements for such revision as established under Volume 44 of the Code of Federal Regulations, section 65.12 are fulfilled.

B. If the requirements of section **5.2.4 (A)** are satisfied, all new construction, substantial improvements, and other development shall comply with all other applicable flood hazard reduction provisions of section **5.0**.

5.2.5 STANDARDS FOR SHALLOW FLOODING AREAS

Shallow flooding areas appear on FIRMs as AO zones with depth designations or as AH zones with Base Flood Elevations. For AO zones the base flood depths range from one (1) to three (3) feet above ground where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. For both AO and AH zones, adequate drainage paths are required around structures on slopes to guide floodwaters around and away from proposed structures.

5.2.5.1 STANDARDS FOR AH ZONES

Development within AH Zones must comply with the standards in sections **5.1, 5.2, and 5.2.5.**

5.2.5.2 STANDARDS FOR AO ZONES

In AO zones, the following provisions apply in addition to the requirements in sections **5.1** and **5.2.5**:

A. New construction, conversion to, and substantial improvement of residential structures and manufactured dwellings within AO zones shall have the lowest floor, including basement, elevated above the highest grade adjacent to the building, at minimum to or above the depth number specified on the Flood Insurance Rate Maps (FIRM) (INSERT COMMUNITY FREEBOARD REQUIREMENT HERE) (at least two (2) feet if no depth number is specified). For manufactured dwellings the lowest floor is considered to be the bottom of the longitudinal chassis frame beam.

B. New construction, conversion to, and substantial improvements of non-residential structures within AO zones shall either:
    1. Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, at minimum to or above the depth number specified on the Flood Insurance Rate Maps (FIRMS) (INSERT COMMUNITY FREE BOARD REQUIREMENT HERE) (at least two (2) feet if no depth number is specified); or
    2. Together with attendant utility and sanitary facilities, be completely floodproofed to or above the depth number specified on the FIRM (INSERT COMMUNITY FREEBOARD REQUIREMENT HERE) or a minimum of two (2) feet above the highest adjacent grade if no depth number is specified, so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer or architect as stated in section **5.2.3.3(A)(4)**.

C. Recreational vehicles placed on sites within AO Zones on the community's Flood Insurance Rate Maps (FIRM) shall either:
    1. Be on the site for fewer than 180 consecutive days, and
    2. Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
    3. Meet the elevation requirements of section **5.2.5.2(A)**, and the anchoring and other requirements for manufactured dwellings of section **5.2.3.4**.

D. In AO zones, new and substantially improved appurtenant structures must comply with the standards in section **5.2.3.6**.

E. In AO zones, enclosed areas beneath elevated structures shall comply with the requirements in section **5.2.1**.

5.3 SPECIFIC STANDARDS FOR COASTAL HIGH HAZARD FLOOD ZONES

Located within special flood hazard areas established in section **3.2** are Coastal High Hazard Areas, designated as Zones V1-V30, VE, V, or coastal A zones as identified on the FIRMs as the area between the Limit of Moderate Wave Action (LiMWA) and the Zone V boundary. These areas have special flood hazards associated with high velocity waters from surges and, therefore, in addition to meeting all provisions of this ordinance and the State of Oregon Specialty Codes, the following provisions shall apply in addition to the general standards provisions in section **5.1**.

5.3.1 DEVELOPMENT STANDARDS

A. All new construction and substantial improvements in Zones V1-V30 and VE, V, and coastal A zones (where base flood elevation data is available) shall be elevated on pilings and columns such that:
    1. The bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated a minimum of one foot above the base flood level; and

    2. 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. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those specified by the State of Oregon Specialty Codes;

B. 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 this section.

C. Obtain the elevation (in relation to mean sea level) of the bottom of the lowest horizontal structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures and whether or not such structures contain a basement. The floodplain administrator shall maintain a record of all such information in accordance with section **4.2.2**.

D. Provide that all new construction and substantial improvements have the space below the lowest floor either free of obstruction or constructed with non-supporting 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:

1. Breakaway wall collapse shall result from water load less than that which would occur during the base flood; and
2. If breakaway walls are utilized, such enclosed space shall be useable solely for parking of vehicles, building access, or storage. Such space shall not be used for human habitation.
3. Walls intended to break away under flood loads shall have flood openings that meet or exceed the criteria for flood openings in section **5.2.1**.

E. 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 water loading values to be used in this determination shall be those associated with the base flood. Maximum wind loading values used shall be those specified by the State of Oregon Specialty Codes.

F. Prohibit the use of fill for structural support of buildings.

G. All new construction shall be located landward of the reach of mean high tide.

H. Prohibit man-made alteration of sand dunes which would increase potential flood damage.

I. All structures, including but not limited to residential structures, non-residential structures, appurtenant structures, and attached garages shall comply with all the requirements of section **5.3.1** Floodproofing of non-residential structures is prohibited.

5.3.1.1 MANUFACTURED DWELLING STANDARDS FOR COASTAL HIGH HAZARD ZONES

All manufactured dwellings to be placed (new or replacement) or substantially improved within Coastal High Hazard Areas (Zones V, V1-30, VE, or Coastal A) shall meet the following requirements:

A. Comply with all of the standards within section **5.3**;
B. The bottom of the longitudinal chassis frame beam shall be elevated to a minimum of one foot above the Base Flood Elevation (BFE); and
C. Electrical crossover connections shall be a minimum of 12 inches above the BFE.

5.3.1.2 RECREATIONAL VEHICLE STANDARDS FOR COASTAL HIGH HAZARD ZONES

Recreational Vehicles within Coastal High Hazard Areas (Zones V, V1-30, VE, or Coastal A) shall either:

A. Be on the site for fewer than 180 consecutive days, and
B. Be fully licensed and ready for highway use, on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
C. Meet the permit requirements of section **4.0** and the requirements for manufactured dwellings in section **5.3.1.1**.

5.3.1.3 TANK STANDARDS FOR COASTAL HIGH HAZARD ZONES

Tanks shall meet the requirements of section **5.1.5.**

Appendix A – Optional Definitions

Building: See "Structure."

Below-grade crawl space: Means 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 4 feet at any point. *[Must add both this definition and the language in Appendix B, Section 5.2.3.7 to have a below-grade crawlspace foundation option in your community's ordinance.]*

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, installations which produce, use, or store hazardous materials or hazardous waste.

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

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

Floodplain administrator: The community official designated by title to administer and enforce the floodplain management regulations.

Floodplain management: The operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works, and floodplain management regulations.

Floodplain management regulations: Zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as floodplain ordinance, grading ordinance and erosion control ordinance) and other application of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

Hazardous material: The Oregon Department of Environmental Quality defines hazardous materials to include any of the following:

(a) Hazardous waste as defined in ORS 466.005;
(b) Radioactive waste as defined in ORS 469.300, radioactive material identified by the Energy Facility Siting Council under ORS 469.605 and radioactive substances defined in ORS 453.005
(c) Communicable disease agents as regulated by the Health Division under ORS Chapter 431 and 433.010 to 433.045 and 433.106 to 433.990;

(d) Hazardous substances designated by the United States Environmental Protection Agency (EPA) under section 311 of the Federal Water Pollution Control Act, P.L. 92-500, as amended;
(e) Substances listed by the United States EPA in section 40 of the Code of Federal Regulations, Part 302 – Table 302.4 (list of Hazardous Substances and Reportable Quantities) and amendments;
(f) Material regulated as a Chemical Agent under ORS 465.550;
(g) Material used as a weapon of mass destruction, or biological weapon;
(h) Pesticide residue;
(i) Dry cleaning solvent as defined by ORS 465.200(9).

Letter of Map Change (LOMC): Means an official FEMA determination, by letter, to amend or revise effective Flood Insurance Rate Maps and Flood Insurance Studies. The following are categories of LOMCs:

(a) **Conditional Letter of Map Amendment (CLOMA):** A CLOMA is FEMA's comment on a proposed structure or group of structures that would, upon construction, be located on existing natural ground above the base (1-percent-cannual-chane) flood elevation on a portion of a legally defined parcel of land that is partially inundated by the base flood.

(b) **Conditional Letter of Map Revision (CLOMR):** A CLOMR is FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective base flood elevations, or the special flood hazard area.

(c) **Conditional Letter of Map Revision based on Fill (CLOMR-F):** A CLOMR-F is FEMA's comment on a proposed project that would, upon construction, result in a modification of the special flood hazard area through the placement of fill outside the existing regulatory floodway.

(d) **Letter of Map Amendment (LOMA):** An official amendment, by letter, to the Flood Insurance Rate Maps (FIRMs) based on technical data showing that an existing structure, parcel of land or portion of a parcel of land that is naturally high ground, (i.e., has not been elevated by fill) above the base flood, that was inadvertently included in the special flood hazard area.

(e) **Letter of Map Revision (LOMR):** A LOMR is FEMA's modification to an effective Flood Insurance Rate Map (FIRM), or Flood Boundary and Floodway Map (FBFM), or both. LOMRs are generally based on the implementation of physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the

modification of the existing regulatory floodway, the effective base flood elevations, or the SFHA. The LMOR officially revises the FIRM or FBFM, and sometimes the Flood Insurance Study (FIS) report, and, when appropriate, includes a description of the modifications. The LOMR is generally accompanied by an annotated copy of the affected portions of the FIRM, FBFM, or FIS report.

(f) **Letter of Map Revision based on Fill (LOMR-F):** A LOMR-F is FEMA's modification of the special flood hazard area shown on the Flood Insurance Rate Map (FIRM) based on the placement of fill outside the existing regulatory floodway.

(g) **PMR:** A PMR is FEMA's physical revision and republication of an effective Flood Insurance Rate Map (FIRM) or Flood Insurance Study (FIS) report. PMRs are generally based on physical measures that affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective baes flood elevations, or the special flood hazard area.

Regulatory floodway: See "Floodway".

Sheet flow area: See "Area of shallow flooding".

Water dependent: Means a structure for commerce or industry which cannot exist in any other location and is dependent on the water by reason of intrinsic nature of its operations.

Water surface elevation: The height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, or other datum, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

Appendix B – Recommended and Optional Higher Standards

Section	Optional Higher Standard	Explanation	Highly Recommended
4.1	Add the following after the Job Title: "and their designee"	If a community designates a single position as the Floodplain Administrator (i.e. the Planning Director) this allows that position to designate others within the agency that can act as the Floodplain Administrator in case of vacation or other reasons. For example, the Planning Director can make the Senior Planner the designee, which will allow them to act as the Floodplain Administrator in their absence.	**YES**
4.2.3.3	The applicant shall be responsible for preparing all technical data to support CLOMR/LOMR applications and paying any processing or application fees associated with the CLOMR/LOMR. The Floodplain Administrator shall be under no obligation to sign the Community Acknowledgement Form, which is part of the CLOMR/LOMR application, until the applicant demonstrates that the project will or has met the requirements of this code and all applicable state and federal permits.	This additional language is not required under the NFIP but it makes it clear that applicants are required to develop the technical information and cover the costs associated with LOMR applications, and specifying this helps to manage community members' expectations. The second paragraph assists in conveying that a community does not have to sign-off on a CLOMR/LOMR if they find that the project does not meet the requirements of their local code, or any state or federal laws.	**YES**
4.4.1	Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a	Communities have the option of using either this language or the Substantial Improvement definition exemption to regulate historic structures.	

	historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.	Per FEMA P-467-2 (May 2008) *Floodplain Management Bulletin Historic Structures*, and FEMA P-993 (July 2014) *Floodplain Management Bulletin: Variances and the National Flood Insurance Program*. FEMA Region X advocates for the use of the Substantial Improvement Definition historic structure exclusion. The Region believes it may represent a less rigorous process for exclusion than the variance process. [Must current bullet E down to be bullet F and add this text as new bullet E, update citation in Bullet F to read (B – E) instead of default citation. Delete bullet 2 of the Substantial Improvement definition in section 2.0. Merge bullet 1 back into the definition by changing the last sentence of the SI definition to read: "The term does not, however, include: Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specification which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions."]	
5.1.9	**CRITICAL FACILITIES** Construction of new critical facilities shall be, to the extent possible, located outside the limits of the special flood hazard area.	Regulatory language to prevent the location of critical facilities within high risk flood hazard areas.	**YES**

	Construction of new critical facilities shall be permissible within the SFHA only if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three (3) feet above the Base Flood Elevation (BFE) or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility shall 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.	Critical facilities when damaged by flooding cause significant impacts to a community, risk to lives, and/or risks to critical infrastructure. Critical facilities like schools, hospitals, and fire stations often act as shelters and are required to provide aid during flood events, and should not be placed in special flood hazard area. [Must also adopt the definition of "critical facilities" in Appendix A, if this language is inserted into the ordinance.]	
5.2.3.2 (A)	Replace the default model ordinance language with the following: A. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to one (1) foot (CAN INCREASE TO UP TO 3 FEET) above the Base Flood Elevation (BFE).	For many years the State of Oregon Residential Specialty Code required that residential construction within riverine flood hazard areas had the lowest floor elevated to one (1) foot above the Base Flood Elevation (BFE). This was changed to allow for communities to go above one (1) foot or to just adopt the National Flood Insurance Program Minimum: "at or above the BFE". The insurance savings and protection from flood events is significant for homes that are elevated one (1) foot or more above the BFE.	**YES**
5.2.3.3 (A)(1)	Replace the default model ordinance language with the following: 1. Have the lowest floor, including basement elevated to one (1) foot (CAN	The State of Oregon Residential Specialty Code leaves it up to the community to determine if	**YES**

	INCREASE UP TO 3 FEET) above the Base Flood Elevation (BFE).	they wish to go above the NFIP minimum standard for elevating non-residential structures to be above the Base Flood Elevation. The more elevated a structure is the more it is protected from flood hazards. ASCE 24 provides recommended levels of elevation for different types of non-residential structures and these can provide guidance on the appropriate amount of freeboard (additional elevation) to be used for this section.	
5.2.3.3 (D) & (E)	D. Applicants shall supply a maintenance plan for the entire structure to include but not limited to: exterior envelop of structure; all penetrations to the exterior of the structure; all shields, gates, barriers, or components designed to provide floodproofing protection to the structure; all seals or gaskets for shields, gates, barriers, or components; and, the location of all shields, gates, barriers, and components, as well as all associated hardware, and any materials or specialized tools necessary to seal the structure E. Applicants shall supply an Emergency Action Plan (EAP) for the installation and sealing of the structure prior to a flooding event that clearly identifies what triggers the EAP and who is responsible for enacting the EAP.	The Flood Insurance Manual indicates that flood insurance companies are requiring both a Maintenance Plan and an Emergency Action Plan (EAP) for flood insurance policies to be rated based on floodproofing providing protection to the structure during the base flood event.	**YES**
5.2.3.7	**BELOW-GRADE CRAWL SPACES** A. 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	Below-grade crawlspaces are allowed subject to the standards in the optional language, as found, in FEMA Technical Bulletin 11-01, Crawlspace Construction for Buildings Located in special	

	effects of buoyancy can usually be addressed through the required flood openings stated in (INSERT CITATION FOR SECTION ADDRESSING FLOOD OPENING STANDARDS). Because of hydrodynamic loads, crawlspace construction is not allowed in areas with flood velocities greater than five (5) 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. B. 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 (1) foot above the lowest adjacent exterior grade. C. 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 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. D. 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.	flood hazard areas. These type of crawlspaces are common within Oregon. ASCE 24 also addresses this type of construction. [Your community must also add the definition for "Below-grade crawlspaces" in Appendix A to have a below grade crawlspace foundation option in your community's ordinance.]	

	E. The interior grade of a crawlspace below the BFE must not be more than two (2) feet below the lowest adjacent exterior grade. F. 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 (4) 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. G. 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 or crushed stone drainage by gravity or mechanical means. H. The velocity of floodwaters at the site shall not exceed five (5) feet per second for any crawlspace. For velocities in excess of five (5) feet per second, other foundation types should be used.		