



City of Stevenson

Planning Department

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TO: Planning Commission
FROM: Ben Shumaker
DATE: March 11th, 2024
SUBJECT: Floodplain Management Program – Public Release Draft

Introduction

The Planning Commission is asked to engage with the public on Federal Emergency Management Agency (FEMA)-required amendments to Stevenson Municipal Code Chapter 15.24 – Flood Plain Management Regulations (Attachment 1). The amendments are necessary to stay in compliance with the National Flood Insurance Program (NFIP), a federal program initiated to stabilize/create the insurance market for property threatened by flood hazards. Property owners in the City seeking coverage under this program rely on the City’s compliance with the federal regulatory program. This compliance must occur by May 22nd, 2024.

The public is asked to engage with the Planning Commission to ensure the draft is as acceptable as possible and to understand next steps for all involved.

Draft Amendment

See Attachment 1. At its February meeting, the Planning Commission reviewed a draft amendment that had been prepared by FEMA to ensure consistency with their expectations. That draft was cleaned up for public release and sent to all current and new flood plain property owners. The draft highlighted areas believed to be voluntary changes. At the same time, staff asked FEMA some clarifying questions about the changes. The answers to those questions added some additional required changes and determined that some of the previously-considered voluntary changes were actually required. The draft presented tonight is the most recent draft. The primary change between the two involves an expanded definition of flood, which now includes some types of land movement. This expanded definition does not change the map where flood insurance is required. It does, however, expand the insurance coverage options available to property owners.

Yellow highlighting in the draft indicates new items from the previous FEMA draft. Blue highlighting indicates ordinance language that is optional but not mandatory. The optional language provides for a better functioning regulatory program and does not involve additional regulation.

Scope of Applicability

As noted at the previous meeting, the updated maps are based on recent scientific data and broadly reduce the area where these regulations apply.

	Current, 1980s-Era Maps	New, 2020s-Era Maps
Parcels in Special Flood Hazard Area	64	66
Structure in Special Flood Hazard Area	7	3

Source: FEMA Region X Mitigation Division

Public Involvement

As requested by the Planning Commission, staff provided all current floodplain property owners a notice of this potential change along with a copy of the initial public release draft. The notices included information about tonight's Planning Commission review and encouraged recipients to contact the City with questions. Two did. Both inquired about links to the changed maps. One also discussed how the regulations interact with the Shoreline Master Plan. NOTE: the Planning Commission requested, and the notices included a statement that tonight's meeting would be a public hearing. Unfortunately, no public notice was placed in the newspaper advertising the meeting tonight as a public hearing. The City Council will hold a public hearing on the ordinance.

Next Steps

No recommendation is expected tonight. The City Council will hold a public hearing on the current draft ordinance at their March meeting. Staff hope the Planning Commission will listen to the public tonight and request any necessary changes be added to a SEPA Review Draft ordinance. Once done, Staff will initiate Growth Management Act (GMA) and State Environmental Policy Act (SEPA) review procedures using the SEPA review draft. A recommendation of approval can be expected as early as the April regular meeting.

Prepared by,

Ben Shumaker
Community Development Director

Attachment

- 1- Updated Public Release Draft Amendment, SMC 15.24 – Floodplain Management Regulations

Chapter 15.24 FLOODPLAIN MANAGEMENT REGULATIONS

15.24.010 Statement of purpose.

It is the purpose of this chapter to promote the public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas by methods and provisions designed for:

- A. Restricting or prohibiting uses which are 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 uses 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; and
- E. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

15.24.020 Definitions.

Unless specifically defined in this section, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

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

"Appeal" means a request for a review of the floodplain administrator's interpretation of any provision of this chapter or a request for a variance.

"Area of special flood hazard" means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year.

"Base flood" means the flood having a one percent chance of being equalled or exceeded in any given year.

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

"Basement" means any area of the building having its floor sub-grade (below ground level) on all sides.

"Development" means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials located within the area of special flood hazard.

"Elevation certificate" means the official form used to track development, provide elevation information necessary to ensure compliance with community floodplain management ordinances, and determine the proper insurance premium rate with Section B completed by community officials.

"Existing manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

"Expansion to an existing manufactured home park or subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including

the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

"Flood or Flooding" means

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

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

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

"Flood Insurance Study" means see Flood Elevation Study.

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

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

"Floodproofing" means 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. Flood proofed structures are those that have the structural integrity and design to be impervious to floodwater below the Base Flood Elevation.

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

"Functionally dependent use" means 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" means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

"Historic structure" means 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

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- 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" means 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 chapter found at Section 15.24.090(A)(2) of this chapter.

"Manufactured home" means 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 home" does not include a "recreational vehicle."

"Manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

"New construction" means structures for which the start of construction commenced on or after the effective date of the ordinance codified in this chapter and includes any subsequent improvements to such structures.

"New manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by a community.

"Person" means a natural person, his heirs, executors, administrators and assigns; a firm, partnership, corporation or association, its or their successors or assigns, or the agent thereof; and state and local governments and agencies.

"Recreational vehicle" means a vehicle which is:

1. Built on a single chassis;
2. Four hundred square feet or less when measured at the largest horizontal projections;
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.

"Start of construction" includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement or other improvement was within one hundred eighty 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 state of excavation; or the placement of a manufactured 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 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" means ,for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.

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

"Substantial improvement" means any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds fifty 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. This term does not, however, include either:

1. A project for improvement of a structure to correct previously identified existing violations of state or local health, sanitary or safety code specifications that have been identified by the local code enforcement official and that are the minimum necessary to assure safe living conditions; or
2. Any alterations of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."

"Variance" means a grant of relief by a community from the terms of the floodplain management regulations.

15.24.030 Chapter applicability.

1. This chapter shall apply to all areas of special flood hazards within the jurisdiction of the city.
2. All development within special flood hazard areas is subject to the terms of this chapter and other applicable regulations.
3. In the interpretation and application of this chapter, 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.

15.24.040 Basis for establishing the areas of special flood hazard.

The areas of special flood hazard identified by the Federal Insurance Administrator in a scientific and engineering report entitled "The Flood Insurance Study (FIS) for Skamania County and Incorporated Areas" dated May 22, 2024, and any revisions thereto, with accompanying Flood Insurance Rate Maps (FIRMs) dated May 22, 2024, , including any revisions thereto, and any revisions hereafter, are adopted by reference and declared to be a part of this chapter. The FIS and FIRM are on file at City Hall, 7121 East Loop Road, Stevenson, WA.

15.24.044 Penalties for Noncompliance.

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

15.24.046 Abrogation and Greater Restrictions

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

15.24.048 Warning and Disclaimer of Liability.

The degree of flood protection required by this chapter 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 chapter 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. This chapter shall not create liability on the part of City of Stevenson, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

15.24.050 Establishment of development permit.

- A. A development permit shall be obtained before construction or development begins within any area of special flood hazard established in this chapter. The permit shall be for all structures including manufactured homes and for all other development, including fill and other activities.
- B. Application for a development permit shall 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:
 - 1. Elevation in relation to mean sea level, of the lowest floor (including basement) of all structures;
 - 2. Elevation in relation to mean sea level to which any structure has been floodproofed;
 - 3. Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in Section 15.24.080(B); and
 - 4. Description of the extent to which a watercourse will be altered or relocated as a result of proposed development.

15.24.060 Designation of the floodplain administrator.

The building official for the city is appointed as floodplain administrator to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions.

15.24.070 Duties and responsibilities of the floodplain administrator.

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

- A. Permit Review.
 - 1. Review all applications for development permits to determine that the permit requirements of this chapter have been satisfied;
 - 2. Review all applications for development permits to determine that all necessary permits have been obtained from those federal, state or local governmental agencies from which prior approval is required, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 USC 1334.
- B. Use of Other Base Flood Data. When base flood elevation data has not been provided in accordance with Section 15.24.040, the floodplain administrator shall obtain, review and reasonably utilize any

base flood elevation and floodway data available from a federal, state or other source, in order to administer Sections 15.24.090 and 15.24.100.

C. Information to be Obtained and Maintained.

1. Where base flood elevation data is provided through the Flood Insurance Study, FIRM, or required as in subsection B of this section, obtain and record the actual (as-built) elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement. Recorded on a current elevation certificate (FF 81-31) with Section B completed by the local official;
2. For all new or substantially improved floodproofed nonresidential structures where base flood elevation data is provided through the FIS, FIRM, or as required in Subsection B of this section:
 - a. Obtain and record the elevation (in relation to mean sea level) to which the structure was floodproofed; and
 - b. Maintain the floodproofing certifications required in Section 15.24.050(B)(3);
3. Maintain for public inspection all records pertaining to the provisions of this chapter.

D. Alteration of Watercourses.

1. Notify adjacent communities and the Department of Ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.
2. Assure that the flood carrying capacity of the altered or relocated portion of said watercourse is maintained..

E. Interpretation of FIRM Boundaries. Make interpretations where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation. Such appeals shall be granted consistent with the standards of Section 1910.6 of the rules and regulations of the National Flood Insurance Program (24 CFR 1909, etc.).

F. 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, the Floodplain Administrator shall notify the Federal Insurance Administrator of the changes by submitting technical or scientific data in accordance with Volume 44 Code of Federal Regulations Section 65.3. Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and floodplain management requirements will be based upon current data.

G. Notify the Federal Insurance Administrator in writing of acquisition by means of annexation, incorporation or otherwise, of additional areas of jurisdiction.

15.24.075 Variance procedure.

A. Appeal Board.

1. The appeal board as established by the city council shall hear and decide appeals and requests for variances from the requirements of this chapter.
2. The appeal board shall hear and decide appeals when it is alleged that there is an error in any requirement, decision, or determination made by the floodplain administrator in the enforcement or administration of this chapter.

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3. Those aggrieved by the decision of the appeal board, or any taxpayer, may appeal such decision to a court of competent jurisdiction.
 4. In passing upon such applications, the appeal board shall consider all technical evaluations, all relevant factors, standards specified in other sections of this chapter, and;
 - a. The danger that materials may be swept onto other lands to the injury of others;
 - b. The danger to life and property due to flooding or erosion damage;
 - c. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - d. The importance of the services provided by the proposed facility to the community;
 - e. The necessity to the facility of a waterfront location, where applicable;
 - f. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
 - g. The compatibility of the proposed use with existing and anticipated development;
 - h. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
 - i. The safety access to the property in times of flood for ordinary and emergency vehicles;
 - j. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and
 - k. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.
 5. Upon consideration of the factors set out in subsection (A)(4) of this section and the purposes of this chapter, the appeal board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter.
 6. The floodplain administrator shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request.
- B. Conditions for Variances.
1. Variances may be issued for the reconstruction, rehabilitation, or restoration of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure;
 2. Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.
 3. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 4. Variances shall only be issued upon:
 - a. A showing of good and sufficient cause;
 - b. A determination that failure to grant the variance would result in exceptional hardship to the applicant;

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- c. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
 - d. A showing that the use cannot perform its intended purpose unless it is located or carried out in close proximity to water. This includes only facilities defined in Section 2.0 {or the numbering system used by the community} of this ordinance in the definition of "Functionally Dependent Use."
5. Variances as interpreted in the National Flood Insurance Program are based on the general zoning law principle that they pertain to a physical piece of property; they are not personal in nature and do not pertain to the structure, its inhabitants, economic or financial circumstances. They primarily address small lots in densely populated residential neighborhoods. As such, variances from the flood elevations should be quite rare.
 6. Variances may be issued 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 and otherwise complies with Section 15.24.080.
 7. Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.
 8. Records of all variance actions, including justification for their issuance, shall be maintained.

15.24.080 General standards for flood hazard reduction.

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

- A. Anchoring.
 1. 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.
 2. All manufactured homes must likewise be anchored to prevent flotation, collapse or lateral movement, and shall be installed using methods and practices that minimize flood damage. Anchoring methods may include but are not limited to, use of over-the-top or frame ties to ground anchors (Reference FEMA's "Manufactured Home Installation in Flood Hazard Areas" guidebook for additional techniques).
- B. Construction Materials and Methods.
 1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
 2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
 3. Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- C. Utilities.
 1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;

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2. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters; and
 3. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- D. Subdivision Proposals.
1. All subdivision proposals shall be consistent with the need to minimize flood damage;
 2. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage;
 3. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and
 4. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least fifty lots or five acres (whichever is less).
- E. Review of Building Permits. Where elevation data is not available either through the Flood Insurance Study or from another authoritative source, 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 special consideration should be given to historical data, high water marks, and photographs of past flooding where available. **The lowest floor elevation of 2 feet above highest adjacent grade will be the minimum requirement.**

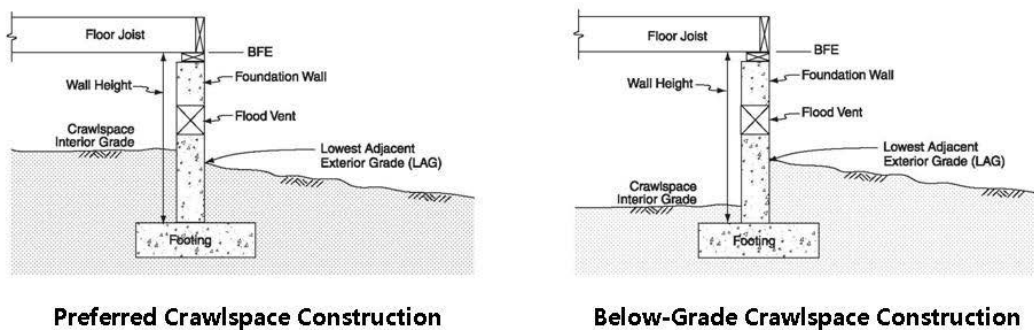
15.24.090 Specific standards for flood hazard reduction.

In all areas of special flood hazards where base flood elevation data has been provided as set forth in Section 15.24.080(B), the following provisions shall apply:

- A. Residential Construction.
1. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to or above base flood elevation.
 2. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or if used solely for parking, access or storage shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:
 - a. A minimum of 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.
- B. Nonresidential Construction. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated one foot or more above the base flood elevation; or, together with attendant utility and sanitary facilities, shall:
1. Be floodproofed so that below one foot or more above the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

2. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
 3. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this subsection based on their development and/or review of the structural design, specifications and plans. Such certifications shall be provided to the official as set forth in Section 15.24.070(C)(2).
 4. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in subsection (A)(2) of this section.
 5. Applicants who are floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the floodproofed level (e.g. a building constructed to the base flood level will be rated as one foot below that level). Floodproofing the building an additional foot will reduce insurance premiums significantly.
- C. **Manufactured Homes.**
1. All manufactured homes to be placed or substantially improved on sites shall be elevated one foot or more above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.
 2. A plan for evacuating residents of all manufactured home parks or subdivisions located within flood prone areas shall be developed and filed with and approved by appropriate community emergency management authorities.
- D. **Recreational Vehicles.** Recreational vehicles placed on sites within Zones A1—30, AH, and AE on the community's FIRM shall either be:
1. On the site for fewer than one hundred eighty consecutive days;
 2. Be fully licensed and ready for highway use; or;
 3. Meet the permit requirements of Section 15.24-.050 and the elevation and anchoring requirements for manufactured homes in Section 15.24.080(A).
- A recreational vehicle is ready for highway use if it is 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.
- E. **Below-Grade Crawlspace.**
1. The interior grade of a crawlspace below the BFE must not be more than 2 feet below the lowest adjacent exterior grade, as shown in FEMA Technical Bulletin 11-01 and SMC Figure 15.24.090-1.

Figure 15.24.090-1



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2. 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 4 feet at any point.
 - a. The height limitation is the maximum allowable unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas. This limitation will also prevent these crawlspaces from being converted into habitable spaces.
 3. There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area **should be adequately flood vented per SMC 15.24.090(A)(2) and** 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.
 4. The velocity of floodwaters at the site should not exceed 5 feet per second for any crawlspace. For velocities in excess of 5 feet per second, other foundation types should be used.
 5. Below-grade crawlspace construction in accordance with the requirements listed above will not be considered basements.
 6. Buildings constructed with subgrade crawlspace in the Special Flood Hazard Area may have a 20% increase in flood insurance premiums.

15.24.092 AE and A1—30 Zones with base flood elevation by no floodways.

In areas with base flood elevations (but a regulated floodway has not been designated), no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1—30 and AE on the 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.

15.24.094 Floodways.

Located within areas of special flood hazard established in SMC 15.24.040 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that can carry debris, and increase erosion potential, the following provisions apply:

- A. Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels during the occurrence of the base flood discharge.
- B. Construction or reconstruction of residential structures is prohibited within designated floodways, except for (i) repairs, reconstruction, or improvements to a structure which do not increase the ground floor area, and (ii) repairs, reconstruction or improvements to a structure, the cost of which does not exceed 50% of the market value of the structure either (A) before the repair, or reconstruction is started, or (B) if the structure has been damaged, and is being restored, before the damage occurred. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or to structures identified as historic places, may be excluded in the 50%.

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- C. If section A of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this chapter.

15.24.110 Repeal of conflicting ordinances and provisions.

All ordinances or provisions of this code which are inconsistent with the provisions of this chapter shall be and the same are repealed.