

TITLE 14 FLOOD CONTROL

CHAPTER 1 FLOOD PLANNING MANAGEMENT AND FLOOD DAMAGE PREVENTION

14-1-1: STATUTORY AUTHORIZATION:

The legislature of the state of Washington has delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the city of Orting does hereby adopt the following floodplain management regulations. (Ord. 836, 10-11-2006)

14-1-2: FINDINGS OF FACT:

- A. The flood hazard areas of the city are subject to periodic inundation which results 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 are caused by the cumulative effect of obstructions in areas of special flood hazards that increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to the flood loss. (Ord. 836, 10-11-2006)

14-1-3: 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 provisions designed to:

- A. Protect human life, health, safety and welfare;
- B. Minimize expenditure of public money and 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, roadways, and bridges and culverts located in areas of special flood hazard;
- F. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
- G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and
- H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. (Ord. 821, 3-29-2006)

14-1-4: METHODS OF REDUCING FLOOD LOSSES:

In order to accomplish its purposes, this chapter includes methods and provisions 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 throughout their intended lifespan;
- C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;
- 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 floodwaters or may increase flood hazards in other areas. (Ord. 821, 3-29-2006)

14-1-5: DEFINITIONS:

Unless specifically defined below, 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. Other pertinent definitions are included in titles 12, 13, and 15 of this code.

APPEAL: A request for a review of the city of Orting's interpretation of any provision of this chapter or a request for a variance.

AREA OF SHALLOW FLOODING: A designated AO or AH zone on the flood insurance rate map (FIRM). The base flood depths range from one foot (1') to three feet (3'); a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. AO is characterized as sheet flow and AH indicates ponding.

AREA OF SPECIAL FLOOD HAZARD: The land in the floodplain within a community subject to a one percent (1%) or greater chance of flooding in any given year.

BASE FLOOD: The flood having a one percent (1%) chance of being equaled or exceeded in any given year.

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

CRITICAL FACILITY: 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.

DEVELOPMENT: Any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating or drilling operations, or storage of materials or equipment.

ELEVATED BUILDING: A nonbasement building built to have the lowest floor elevated above the ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

EXISTING CONSTRUCTION: For the purposes of determining insurance rates, structures for which the "start of construction" commenced before the effective date of the flood insurance rate map or before January 1, 1975, for flood insurance rate maps effective before that date September 27, 1985. This term may also be referred to as "existing structures".

EXISTING MANUFACTURED HOME PARK OR SUBDIVISION: 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) was completed before the effective date of the floodplain management regulations adopted by the city of Orting on September 27, 1985.

EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION: The preparation of additional sites by 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).

FLOOD OR FLOODING: 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.

FLOOD BOUNDARY AND FLOODWAY MAP (FBFM): The official map of a community, on which the federal emergency management agency (FEMA) has delineated the areas of flood hazards and regulatory floodway.

FLOOD HAZARD BOUNDARY MAP (FHBM): The official map of a community, issued by FEMA, where the boundaries of the special flood hazard area have been identified as zone A.

FLOOD INSURANCE RATE MAP (FIRM): The official map of a community on which FEMA has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

FLOOD INSURANCE STUDY: The official report provided by the federal insurance administration that includes flood profiles, the flood boundary-floodway map, and the water surface elevation of the base flood.

FLOODPLAIN: Any land area susceptible to being inundated by water from any source.

FLOODPROOFING: Any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate 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 one foot (1').

HIGHEST ADJACENT GRADE: The highest natural elevation of the ground surface prior to construction next to the proposed wall of a structure.

HISTORIC STRUCTURE: Any structure that is:

- A. Listed individually in the National Register of Historic Places 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 the states with historic preservation programs which have been approved by the secretary of the interior; or
- D. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - 1. By an approved state program as determined by the secretary of the interior, or
 - 2. 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 nonelevation design requirements of this chapter found at subsection 14-1-8B1a of this chapter.

MANUFACTURED HOME: 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 connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

MANUFACTURED HOME PARK OR SUBDIVISION: A parcel (or contiguous parcels) of land divided into two (2) or more manufactured home 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, structures for which the "start of construction" commenced on or after the effective date hereof and includes any subsequent improvements to such structures.

PARTICIPATING COMMUNITY: Also known as an eligible community, means a community in which FEMA has authorized the sale of flood insurance.

RECREATIONAL VEHICLE: A vehicle, which is:

- A. Built on a single chassis;
- B. Four hundred (400) square feet or less when measured at the largest horizontal projection;
- C. Designed to be self-propelled or permanently towable 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 and is road ready.

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 one hundred eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home 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 foundation 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 the building, whether or not that alteration affects the external dimensions of the building.

STRUCTURE: A walled and roofed building including a gas or liquid storage tank that is principally aboveground, as well as a manufactured home.

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 fifty percent (50%) of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT:

A. Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either:

1. Before the improvement or repair is started, or
2. If the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

B. The term does not, however, include either:

1. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which has been previously identified by the local code enforcement official and which is solely necessary to assure safe living conditions; or
2. Any alteration of a "historic structure" provided that the alteration would not preclude the structure's continued designation as a "historic structure".

VARIANCE: A grant of relief from the requirements of this chapter.

VIOLATION: The failure of a structure or other development to be fully compliant with this chapter. A structure or other development without the elevation certificate, or other certifications, or other evidence of compliance required in this chapter is presumed to be a violation until such time as that documentation is provided.

WATER DEPENDENT: A structure for commerce or industry which cannot exist in any other location and is dependent on the water by reason of the intrinsic nature of its operations. (Ord. 836, 10-11-2006)

14-1-6: GENERAL PROVISIONS:

A.Lands To Which This Chapter Applies: This chapter shall apply to all areas of special flood hazard within the jurisdiction of the city.

B.Basis For Establishing Areas Of Special Flood Hazard: The areas of special flood hazard identified in the FEMA flood insurance study (FIS) for the city of Orting, dated September 27, 1985, with accompanying flood insurance rate maps (FIRM), and other supporting data, and any subsequent revisions thereto, are hereby adopted by reference and declared to be a part of this chapter. The flood insurance study and FIRM are on file at Orting City Hall, 110 Train Street SE, Orting, WA 98360. The best available information for

flood hazard area identification as outlined in section 4.3-2 shall be the basis for regulation until a new FIRM is issued that incorporates data utilized under section 4.3-2.

C.Designation Of Flood Damage Prevention Chapter Administrator: The city of Orting hereby appoints the city administrator or his/her designee to administer and implement the provisions of this chapter, and is hereinafter referred to as the floodplain administrator.

D.Penalties For Noncompliance:

1. Compliance; Violation A Misdemeanor: 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. Violation 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.

2. Penalty Imposed: Any person who violates this chapter or fails to comply with any of its requirements shall, upon conviction thereof, be subject to penalty as provided in section [1-4-1](#) of this code, for each violation, and in addition shall pay all costs and expenses involved in the case.

3. Remedial Action: Nothing herein contained shall prevent the city from taking such other lawful action as is necessary to prevent or remedy any violation.

E.Abrogation Of 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.

F.Interpretation: In the interpretation and application of this chapter, all provisions shall be:

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

G.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 manmade 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 the city, any officer or employee thereof, or FEMA, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder. (Ord. 836, 10-11-2006)

14-1-7: ADMINISTRATION:

A. Development Permits: All required land use and building permits granted by the city shall be subject to the provisions of this chapter.

1. Establishment; Development Permit Required: A development permit shall be obtained before construction or development begins within any area of special flood hazard established in subsection 14-1-6B of this chapter. The permit shall be for all structures including manufactured homes, as set forth in section 14-1-5 of this chapter, and for all development including fill and other activities, also as set forth in section 14-1-5 of this chapter.

2. Application For Development Permit: Application for a development permit shall be made on forms furnished by the city 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. Elevations of the area of development in relation to mean sea level (such as a contour map) for both existing and proposed development;
- b. Elevation in relation to mean sea level, of the lowest floor (including basement) of all structures;
- c. Elevation in relation to mean sea level to which any structure has been floodproofed;
- d. Certification by a registered professional surveyor that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in subsection 14-1-8B2 of this chapter;
- e. Existing and proposed infrastructure; and
- f. Description of the extent to which a watercourse will be altered or relocated as a result of proposed development.

3. Construction Stage: If the floodplain encroaches five feet (5') into the subject property line, then a flood floor elevation certificate will be required. Upon placement of the lowest floor, or floodproofing by whatever means, it shall be the duty of the permit holder to submit to the floodplain management administrator a certification of the elevation of the lowest floor or floodproofed elevation, as built in relation to mean sea level. A registered land surveyor who is authorized to certify such information in the state of Washington shall prepare said certification. Any work undertaken prior to the submission of the certification shall be at the permit holder's risk.

The floodplain management administrator shall review the lowest floor elevation and floodproofing certificate. Should these documents be found not in conformance with the requirements of this chapter the permit holder shall immediately cease further work, and shall correct the deficiencies. Failure of the permit holder to submit the surveyed lowest floor elevation and floodproofing certificates, and failure to correct said deficiencies required, shall be the cause to issue a stop work order for the project.

B.Administration By City; Grant Or Deny Permits: The city is hereby appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions.

C.Duties And Responsibilities Of City: Duties of the city shall include, but not be limited to:

1. Permit Review:

a. Review all development permits to determine that the permit requirements of this chapter have been satisfied.

b. Review all development permits to determine that all necessary permits have been obtained from those federal, state, or local governmental agencies from which prior approval is required.

c. Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the provisions of subsection 14-1-8C of this chapter are met.

2. Uses Of Other Base Flood Data: When base flood elevation data has not been provided in accordance with subsection 14-1-6B of this chapter, the city 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 subsections 14-1-8B and C of this chapter.

3. Information To Be Obtained And Maintained:

a. Where base flood elevation data is provided through the flood insurance study, FIRM, or required as in subsection C2 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.

b. For all new or substantially improved floodproofed nonresidential structures:

(1) Verify and record the actual elevation (in relation to mean sea level); and

(2) Maintain the floodproofing certifications required in subsection A2d of this section.

c. Maintain for public inspection all records pertaining to the provisions of this chapter.

4. Alteration Of Watercourses:

a. Notify adjacent communities and the Washington state department of ecology prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the federal insurance administration.

b. Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

5. Interpretation Of FIRM Boundaries: The city may 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 as provided in subsection D of this section.

D.Variance Procedure: Variances from the provisions of this chapter shall be processed as described in title 15 of this code. Approved variances shall permit structures to be built with a lowest floor elevation below the base flood elevation and shall assert that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. The findings and conclusions of approved variances shall be recorded with the Pierce County auditor and shall run with the land.

1. Variance Considerations: In considering such variances, the hearings examiner shall consider the following factors:

- a. The danger that materials may be swept onto other lands at the risk of injury to 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 availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
- f. The safety of access to the property in times of flood for ordinary and emergency vehicles;
- g. The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
- h. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

2. Conditions For Variances:

- a. Upon a determination that the proposed repair or rehabilitation of a historic structure 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.
- b. Variances shall not be issued within a designated floodway if any increase in flood levels during the base flood discharge would result.
- c. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- d. A determination that failure to grant the variance would result in exceptional hardship to the applicant.
- e. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

f. Variances 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, complies with all other variance criteria except subsection D2a of this section and otherwise complies with subsections 14-1-8A1 and A2 of this chapter. (Ord. 836, 10-11-2006)

14-1-8: PROVISIONS FOR FLOOD HAZARD REDUCTION:

A. General Standards: In all areas of special flood hazards, the following standards are required:

1. Anchoring:

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

2. Construction Materials And Methods:

- a. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- b. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
- c. Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

3. Utilities:

- a. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system;
- b. Water wells shall be located on high ground that is not in the floodway;

c. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters; and

d. On site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

4. Subdivision Proposals ¹:

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

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

c. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and

d. 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 (50) lots or five (5) acres (whichever is less).

5. Review Of Building Permits: Where elevation data is not available either through the flood insurance study, FIRM, or from another authoritative source (subsection 14-1-7C2 of this chapter), 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., where available. Failure to elevate at least two feet (2') above the highest adjacent grade in these zones may result in higher insurance rates.

B. Specific Standards: In all areas of special flood hazards where base flood elevation data have been provided as set forth in subsections 14-1-6B and 14-1-7C2 of this chapter, the following provisions are required:

1. Residential Construction:

a. New construction and substantial improvements of any residential structure shall have the lowest floor, including basement, elevated one foot (1') or more above base flood elevation.

b. Fully enclosed areas below the lowest floor shall be used solely for parking of vehicles, building access, or storage. These enclosed areas shall be designed and constructed to allow 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:

(1) A minimum of two (2) 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.

(2) The bottom of all openings shall be no higher than one foot (1') above grade.

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

2. Nonresidential Construction: New construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated one foot (1') or more above the level of the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

a. Be floodproofed so that below one foot (1') above the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

c. 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 subsection 14-1-7C3b of this chapter;

d. Nonresidential structures that are elevated, not floodproofed, must meet the same standards for space below the lowest floor as described in subsection B1b of this section; and

e. Applicants floodproofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot (1') below the floodproofed level (e.g., a building floodproofed to 1 foot above the base flood level will be rated as at the base flood level).

3. Critical Facility: Construction of new critical facilities shall be, to the extent possible, located outside the limits of the SFHA. Construction of new critical

facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated to three feet (3') or more above the level of the base flood elevation at the site. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the maximum extent possible.

4. Manufactured Homes: All manufactured homes to be placed or substantially improved within zones A1-30, AH, and AE on the community's FIRM shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is one foot (1') or more above the base flood elevation; and be securely anchored to an adequately anchored foundation system in accordance with the provisions of subsection A1b of this section.

C. Floodways: Located within areas of special flood hazard established in subsection 14-1-6B of this chapter are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

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

2. Construction or reconstruction of residential structures is prohibited within designated floodways, except for: a) repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and b) repairs, reconstruction or improvements to a structure, the cost of which does not exceed fifty percent (50%) of the market value of the structure either: 1) before the repair, reconstruction, or improvement is started, or 2) 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 shall not be included in the fifty percent (50%).

3. If subsection B of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this section.

D. Wetlands Management: To the maximum extent possible avoid the short and long term adverse impacts associated with the destruction or modification of wetlands, especially those activities that limit or disrupt the ability of the wetland to alleviate flooding impacts. The following process should be implemented:

1. Review proposals for development within base floodplains for their possible impacts on wetlands located within the floodplain.
2. Ensure that development activities in or around wetlands do not negatively affect public safety, health, and welfare by disrupting the wetlands' ability to reduce flood and storm drainage.
3. Request technical assistance from the department of ecology in identifying wetland areas. Existing wetland map information from the national wetlands inventory (NWI) can be used in conjunction with the community's FIRM to prepare an overlay zone indicating critical wetland areas deserving special attention.

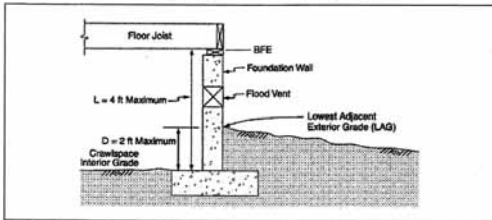
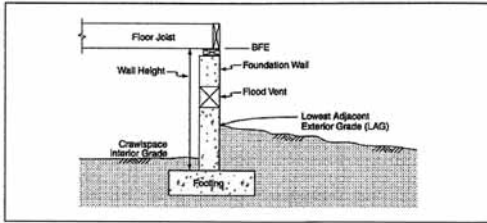
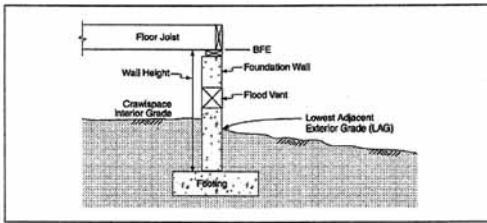
E. Additional Standards; Crawl Space Construction For Buildings Located In Special Flood Hazard Areas:

1. The interior grade of a crawl space below the BFE must not be more than two feet (2') below the lowest adjacent exterior grade (LAG), shown as D in figure 3 of this section.
2. The height of the below grade crawl space, measured from the interior grade of the crawl space to the top of the crawl space foundation wall must not exceed four feet (4') (shown as L in figure 3 of this section) 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.
3. There must be an adequate drainage system that removes floodwaters from the interior area of the crawl space. 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.
4. The velocity of floodwaters at the site should not exceed five feet (5') per second for any crawl space. For velocities in excess of five feet (5') per second, other foundation types should be used.

5. Any building utility systems within the crawl space 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.

6. 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 crawl space used to elevate the building, but also any joists, insulation, or other materials that extend below the BFE.

7. Below grade crawl space construction in accordance with the requirements listed above will not be considered basements.



(Ord. 836, 10-11-2006)