

## Chapter 17.08

### FLOOD DAMAGE PREVENTION

Sections:

- 17.08.010 Statutory authorization.
- 17.08.020 Findings of fact.
- 17.08.030 Statement of purpose.
- 17.08.040 Objectives.
- 17.08.050 Definitions.
- 17.08.060 General provisions.
- 17.08.070 Administration.
- 17.08.080 Duties and responsibilities of the responsible official.
- 17.08.090 Variance procedures.
- 17.08.100 Conditions for variances – Application.
- 17.08.110 Provisions for flood hazard reduction.
- 17.08.120 Standards for subdivision proposals.
- 17.08.130 Recreational vehicles.
- 17.08.140 Critical facility.
- 17.08.150 Below-grade crawlspace construction.
- 17.08.160 Below-grade crawlspace construction design.

**17.08.010 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 Sultan does ordain as set forth in this chapter.

**17.08.020 Findings of fact.**

A. The flood hazard areas of the city of Sultan are subject to periodic inundation that may result in loss of life and property, health and safety hazards, disruption of commerce and government 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~~ may be caused by the cumulative effect of obstructions in floodplains resulting in increases in flood heights and velocities, and by the occupancy in flood hazard lands by structures that are inadequately elevated, flood proofed, or otherwise unprotected from flood damage.

**17.08.030 Statement of purpose.**

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

A. Restrict or prohibit uses that 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. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

C. Control the alteration of natural floodplains, stream channels, and natural protective barriers that are involved in the accommodation of floodwaters;

D. Control filling, grading, dredging and other development that may increase erosion or flood damage; and

E. Prevent or regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards to other lands.

#### 17.08.040 Objectives.

The objectives of this chapter are:

- A. To protect human life and health;
- B. To minimize expenditure of public money for costly flood control projects;
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. To minimize prolonged business interruptions;
- E. To help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize the number of blighted areas that could be created by floods;
- F. To ensure that potential homebuyers are notified that property is in a flood area; ~~and~~
- ~~G. To prevent the loss of federal assistance to the city of Sultan due to a violation of federal flood control requirements. (Ord. 1265-17 § 1 (Exh. A); Ord. 1019-09 § 1; Ord. 808-03)~~
- G. To minimize damage to public facilities and utilities, such as water and gas mains; electric, telephone, and sewer lines; and streets and bridges located in flood hazard areas; and-
- H. To notify those who occupy flood hazard areas that they assume responsibility for their actions.

#### 17.08.050 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.

- 1) “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.
- ~~1)2)~~ 1-“Appeal” means a request for a review of the interpretation of any provision of this chapter or a request for a variance.
- ~~2)3)~~ 2-“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. Designation on maps always includes the letter A or V. Special flood hazard area” is synonymous in meaning with the phrase “area of special flood hazard.
- ~~3)4)~~ 3-“Assessed valuation” means the value placed on a property by the Snohomish County assessor’s office.
- ~~4)5)~~ 4-“Base flood” means the flood having a one percent chance of being equaled or exceeded in any given year, also referred to as the “100-year flood.” Designation on maps always includes the letter A or V.
- 6) 5-“Base flood elevation” means the elevation to which floodwater is anticipated to rise during the base flood.
- ~~5)7)~~ 6-“Basement” means any area of the building having its floor subgrade (below ground level) on all sides. See Technical Bulletin 11-1.
- ~~6)8)~~ 7-“Breakaway wall” means 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.
- ~~7)9)~~ 8-“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.

~~8)10)~~ 8-“Design flood elevation” means at a minimum the base flood elevation plus freeboard.

~~9)11)~~ 9-“Development” means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, the storage of equipment and materials, mining, dredging, filling, grading, paving, excavation or drilling operations located within the area of special flood hazard.

~~10)12)~~ 10-“Elevated building” means, for insurance purposes, a nonbasement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, post, piers, pilings, or columns.

~~11)13)~~ 11-“Existing manufactured home park or subdivision” means a manufactured home park or subdivision for which the construction of the 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 adopted floodplain management regulations.

~~12)14)~~ 12-“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).

15) ~~13-~~“Flood or flooding” means either:

1) A 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 of 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.

~~1) “Flood or flooding” means a general and temporary condition of partial or complete inundation of normally dry land areas from:~~

~~2) a. The overflow of inland or tidal waters; and/or~~

~~3) b. The unusual and rapid accumulation of runoff of surface waters from any source.~~

16) “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).  
~~14-~~

~~13)17)~~ “Flood insurance rate map (FIRM)” means the official map on which the Federal Insurance Administration-Administrator has delineated both the areas of special flood hazard 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).

- 18) ~~15.~~ “Flood insurance study” means ~~the official report provided by the Federal Insurance Administration that includes flood profiles, the flood boundary floodway map, and the water surface elevation of the base flood. see “Flood Elevation Study”.~~
- 19) “Floodplain or flood-prone area” means any land area susceptible to being inundated by water from any source. See “Flood or flooding.”
- 20) “Floodplain administrator” means the community official designated by title to administer and enforce the floodplain management regulations.
- 14)21) “Flood-proofing” 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 have the structural integrity and design to be impervious to floodwater below the base flood elevation.
- 22) ~~16.~~ “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. Also referred to as “Regulatory Floodway.” ~~than one foot.~~
- 23) 21. “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 passengers, and ship building and ship repair facilities, and does not include long-term storage or related manufacturing facilities.
- 24) 22. “Highest adjacent grade” means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.
- 25) 23. “Historic structure” means any structure that is:
- 1) Listed individually in the National Register of Historic Places (a listing maintained by the Department of the 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 preliminary 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
    - a-b. Directly by the Secretary in states without approved programs.
- a)26) 17. “Freeboard” is a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. “Freeboard” tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed. Freeboard is not required by NFIP standards, but communities are encouraged to adopt at least a one-foot freeboard to account for the one-foot rise built into the concept of designating a floodway and the encroachment requirements where floodways have not been designated. Freeboard results in significantly lower flood insurance rates due to lower flood risk.
- b)27) 18. “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 no elevation design requirements of this chapter, SMC 17.08.110(B)(3). (i.e. provided there are adequate flood ventilation openings)

~~e)28)~~ 19. "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."

~~29)~~ 20. "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.

~~h)30)~~ 28. "Mean sea level" means for purposes of the National Flood Insurance Program, the vertical datum to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

~~e)31)~~ 21. "New construction" means for the purposes of determining insurance rates, structures for which the start of construction commenced on or after the effective date of an initial Flood Insurance Rate Map or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purpose, "new construction" means structures for which the start of construction commenced on or after the effective date of a floodplain management regulation and includes any subsequent improvements to such structures. ~~structures for which the "start of construction" commenced on or after the effective date of the ordinance codified in this chapter.~~

~~h)32)~~ 22. "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 adopted floodplain management regulations.

~~g)33)~~ 23. "Recreational vehicle" means a vehicle which is:

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

~~h)34)~~ 24. "Responsible official" is the community development director, building official, or other person designated by the mayor or city administrator to implement and administer the requirements of this chapter.

~~h)35)~~ 25. "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 180 days of the permit date. The "actual start" means either the first placement of permanent construction or a structure on the 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 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.

~~h)36)~~ 26. "Site plan" means per International Building Code Section 106.2 and IRC Sections R106.1 and R106.2 with references to Figure 1 and Technical Bulletin 10-01. The construction documents submitted with the application for a floodplain development permit shall be accompanied by a site plan showing to scale.

~~k)37)~~ 27. “Structure” means a walled and roofed building including a gas or liquid storage tank that is principally above ground, as well as manufactured homes.

~~h)38)~~ 28. “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 assessed value of the structure before the damage occurred.

~~m)39)~~ 29. “Substantial improvement” means:

~~a.~~ a. Any ~~repair~~, reconstruction, ~~rehabilitation~~ rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the assessed 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, either:

~~b.a. i.~~ i. Before the improvement or repair is started; or

~~n) ii.~~ ii. 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.~~ b. The term does not, however, include either:

~~i.~~ i. Any project for improvement of a structure to correct previously identified 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

~~e)b) ii.~~ ii. Any alteration of a “historic structure”; provided, that the alteration will not preclude the structure’s continued designation as a “historic structure.”

~~40)~~ 30. “Variance” means a grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter.

~~p)41)~~ “Violation” means 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.

~~e)42)~~ 31. “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 the intrinsic nature of its operations.

#### **17.08.060 General provisions.**

A. Lands to Which These Performance Standards Apply. These performance standards shall apply to all areas of the special flood hazards within the jurisdiction of the city of Sultan.

B. Basis for Establishing the Areas of Special Flood Hazard. The area of special flood hazard identified by the Federal ~~Emergency Management Agency~~ Insurance Administrator in a scientific and engineering report entitled “The Flood Insurance Study for Snohomish County, Washington and Incorporated Areas,” dated June 19, 2020, and any revisions thereto, with accompanying flood insurance rate maps (FIRMs) ~~November 8, 1999, and any revisions thereto, with accompanying flood insurance rate map (FIRM)~~ are adopted by reference and declared to be a part of these performance standards. The Flood Insurance Study and FIRMs are on file at 319 Main Street, Sultan WA. The best available information for flood hazard area identification as outlined in Section 17.08.080(A)(8) shall be the basis of regulation until a new FIRM is issued that incorporates data utilized under Section 17.08.080(A)(8).

C. Establishment of Permit. A floodplain development permit shall be required in conformance with the provisions of these standards prior to the commencement of any development activities within any area of special flood hazard established in Section 17.08.060(B). The permit shall be for all structures including manufactured homes, as set



forth in the “Definitions,” and for all development including fill and other activities, also as set forth in the “Definitions.”;

D. Compliance. All development within special flood hazard areas is subject to the terms of this ordinance and other applicable regulations. No structure or land shall hereafter be located, extended, constructed, converted, or structurally altered without full compliance with the terms of these standards and other applicable laws. 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 misdemeanor. Any person who violates this ordinance or fails to comply with any of its requirements shall upon conviction thereof be fined not more than \$1,000 or imprisoned for not more than 90 days, or both, for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent the City of Sultan from taking such other lawful action as is necessary to prevent or remedy any violation.

E. Abrogation and Greater Restrictions. These performance standards are 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 most stringent restrictions shall prevail.

F. Interpretation. In the interpretation and application of these standards, all provisions shall be:

1. Considered as minimum requirements;
2. Liberally constructed in favor of the governing body; and
3. Deemed neither to limit nor repeal any other laws.

G. Warning and Disclaimer of Liability. The degree of flood protection required by these performance standards is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. These standards do imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. These standards shall not create liability on the part of the city of Sultan or by any officer or employee thereof, or the Federal Insurance Administration, for Administrator, for any flood damages that result from reliance on these standards or any administrative decision lawfully made thereunder. ~~(Ord. 1265-17 § 1 (Exh. A); Ord. 1019-09 § 1; Ord. 808-03)~~

H. Severability. This ordinance and the various parts thereof are hereby declared to be severable. Should any section of this ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the ordinance as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

#### **17.08.070 Administration.**

A. Designation of the Responsible Official[§§1]. The Public Works Director 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. ~~The mayor or city administrator shall designate the responsible official. The duties of this position shall be to implement and administer the provisions of this chapter as specifically provided in SMC 17.08.080.~~

B. Permit Procedure. Application for a floodplain development permit shall be made to the ~~responsible official~~ Floodplain Administrator prior to any development activities, and shall include, but not be necessarily limited to, site plans drawn to scale showing the following:

1. The construction drawings and documents submitted with the application for a floodplain development permit shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site.
2. Distances from the lot lines, and front, side(s), rear, setbacks.
3. Established street grades and the proposed finished grades with quantities of cut/fill materials.

4. Zoning designation flood hazard areas, floodways, and “design flood elevations” drawn in accordance with an accurate boundary line survey and shall indicate elevation datum used for BFE (National Geodetic Vertical Datum 1929 – NGVD 1929) or North American Vertical Datum 1988 (NAVD 1988). Benchmark(s) set/used shall utilize this datum and conversion factors and comments.
5. North arrow and scale, the NFIP community name and number, the (FIRM) map/panel number and suffix, FIRM index date, FIRM panel effective/revised date, flood zone(s).
6. Base flood elevation(s), required freeboard of two feet, design flood elevation(s). Tax parcel number, plat name, lot number, street address.
7. Longitude and latitude if known.
8. Encroachments such as fences, driveways, roads, streets and rights-of-way.
9. Critical areas and their buffers, including wetlands, aquifer recharge, steep slopes, special flood hazard areas, floodway boundaries.
10. Known threatened or endangered species on or within 200 feet of the property.

An application for a floodplain development permit is also required to include the following information:

- 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 flood proofed;
- 3) Where a structure is to be flood proofed, certified by a registered professional engineer or architect that the flood proofing methods for any nonresidential structure meet the flood proofing criteria in Section 17.08.110(B)(2);
- 4) Description of the extent to which a watercourse will be altered or relocated as a result of a proposed development;
- 5) Where development is proposed in a floodway, an engineering analysis indicating no rise of the base flood elevation; and
- 6) Any other such information that may be reasonably required by the Floodplain Administrator in order to review the application.

C. The building official is authorized to waive or modify the requirement for a site plan when the application for permit is for alteration or repair or when otherwise warranted.

D. As a condition of floodplain development permits issuance, a benchmark or reference mark shall be set by a professional land surveyor licensed in the state of Washington and shall indicate:

1. The ground elevation;
2. Datum used for BFE (~~National Geodetic Vertical Datum 1929 — NVGD 1929~~) or North American Vertical Datum 1988 (NAVD 1988) located within site distance of the structure’s foundation;
3. If the property requesting a floodplain development permit has a floodway located on the property, the floodway boundary shall be permanently marked by a state licensed surveyor.

E. Construction Stage. In addition to standard requirements of the adopted building codes, structures subject to provisions of this chapter shall conform to the following standards, and building inspection processes shall certify compliance with these standards as a condition of issuance of certificate of occupancy.



1. At the foundation inspection stage the inspector shall confirm the location, elevation, and datum of the referenced benchmark and the inspector shall see that the benchmark is properly placed, and that the foundation is located as drawn on the site plan.
2. Prior to pouring concrete, the contractor/homeowner shall call for a foundation form inspection. The following shall be in place for this inspection:
  - a. Foundation footing and stem wall forms;
  - b. Rebar, steel, bolts, hold-downs, straps, vents, accesses, buck-outs, plates, mud seal;
  - c. Foundation grade height is established and marked on the foundation format.
3. At the time of the foundation inspection the contractor or his representative shall demonstrate and shall show proof positive that:
  - a. The lowest floor shall be at a minimum two feet above the base flood elevation and per Technical Bulletin 11-01;[SS2]
  - b. Flood venting [SS3]equals one square inch per square foot of floor area and the vents shall be one foot or less above the finish grade.
4. If all applicable codes have been met the inspector shall document:
  - a. The base flood elevation;
  - b. The projected amount of freeboard;
  - c. The projected lowest floor elevation, the number;
  - d. Square inches of flood vents[SS4];
  - e. The projected lowest adjacent grade.
5. After the concrete has been placed and form material has been removed, prior to the start of any framing work, the structure shall be inspected and shall be found to meet the following:
  - a. Foundation construction shall meet the National Flood Insurance Program (NFIP) minimum requirement for crawlspace construction in the special flood hazard area (SFHA) (see Technical Bulletin 11-01).
  - b. The interior of the foundation area shall be filled so that it is level with or higher than the lowest adjacent grade (LAG).[SS5]
  - c. All building materials at or below the base flood elevation (BFE) must be flood resistant; see Technical Bulletin 2-93[SS6]. This requirement includes:
    - i. Floor joist, insulation, HVAC systems.
    - ii. Ductwork can be elevated above the BFE or designed so that floodwaters cannot enter the system components during flood conditions.
    - iii. Ductwork systems designed so that floodwater cannot enter the system shall also be designed and anchored to resist displacement.
6. The exterior grade shall slope away from the building foundation at two percent or more for a minimum of five feet.

7. The interior under floor area shall slope to a positive drainage system terminating at an exterior drainage system. (Typical under floor drainage system four-inch pipe run under footing day-lighting five plus feet from building with a pest screen on the end. Also note the building code requires six-mill black plastic sheeting.)

8. If the building inspector finds the structure in compliance with the adopted regulations, he shall sign and date the inspection sheet and allow the work to proceed, or if he finds corrections are needed, he shall notify the permit holder or his agent of the actions/work needed to bring the project into compliance.

9. The inspector may require an elevation and/or a flood-proofing certificate at the permit holder's expense for the building under construction at this time if in his opinion it would benefit the project or help clarify an issue of concern.

10. Note that this is not the final elevation or flood-proofing certificate that will be required; a completed elevation and/or flood-proofing certificate is required at the finish of the project.

11. Elevation and flood-proofing certificates shall be signed, sealed, and dated by a Washington State licensed professional land surveyor.

F. It shall be the permit holder's responsibility to ensure that his structure/building/project is in compliance with the National Flood Insurance Program, Washington State adopted laws, city of Sultan adopted standards, regulations, and codes.

G. When flood-proofing is utilized for a particular building, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The project shall follow the flood-proofing requirements for structures located in special flood hazard areas in accordance with the National Flood Insurance Program (Technical Bulletin 3-93). Any work undertaken prior to submission of the certification shall be at the permit holder's risk. The building and zoning official shall review the floor elevation survey data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey, or failure to make said corrections required hereby, shall be cause to issue a stop work order for the project.

**17.08.080 Duties and responsibilities of the responsible official.**

The duties of the responsible official shall include, but not be limited to:

A. Permit Review.

1. ~~Review~~ Review all development permits to determine that:

a. ~~The permit requirements of this ordinance have been satisfied;~~

b. ~~All other required state and federal permits have been obtained;~~

c. ~~The site is reasonably safe from flooding;~~

d. ~~The proposed development is not located in the floodway. If located in the floodway, assure the encroachment provisions of Section 17.08.110(B)(5)(a) are met.~~

e. ~~Notify FEMA when annexations occur in the Special Flood Hazard Area. all permits to assure that the permit requirements of these standards have been satisfied.~~

~~a. Construction plan review;~~

~~b. Site plan review;~~

~~c. Construction document review including building applications, floodplain development applications, engineering calculations, review elevation certificated flood-proofing certificates, all letters of map amendments and make comments regarding the amendments and revisions on behalf of the city of Sultan back to FEMA;~~

~~d. Review the flood insurance study for the city of Sultan; and~~

~~e. Review the flood insurance rate maps for the city of Sultan.~~

2. Advise the permittee that additional federal (Army Corps of Engineers 404, 401), state of Washington or Snohomish County permits may be required, and if these specific permit requirements are known, require the copies of such permits be provided and maintained on file with the permit.

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

a. 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~~ Administrator.

4. Where base flood elevation data is provided through the FIS, FIRM, or required as in Section 17.08.080(A)(8), ~~Verify~~ obtain and maintain a record of 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.

~~5. Verify and record the actual elevation (in relation to mean sea level) to which the new or substantially improved structures have been flood-proofed.~~

5. For all new or substantially improved flood-proofed nonresidential structures where base flood elevation data is provided through the FIS, FIRM, or as required in Section 17.08.080(A)(8):

a) Obtain and maintain a record of the elevation (in relation to mean sea level) to which the structure was flood-proofed.

b) Maintain the flood-proofing certifications required in Section 17.08.070(B)(3).

6. When flood-proofing is utilized for a particular structure, the building and zoning official shall obtain certification from a professional engineer or architect registered in the state of Washington.

7. Where interpretation is needed to the exact location of boundaries of the areas of special flood hazard (for example, where there appears to be conflict between a mapped boundary and actual field conditions), the building and zoning official shall make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this section.

8. When base flood elevation data ~~has not been provided in accordance with Section 17.08.060(B) is not available either through the flood insurance study, FIRM, the~~ responsible official 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 SMC 17.08.110 through 17.08.130. Where elevation data is not available either through the flood insurance study, FIRM, or from another authoritative source, applications for building permits shall be reviewed 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, and photographs of past flooding acts, where available. Failure to elevate to at least two feet above the highest adjacent grade in these zones may result in higher insurance rates.

9. All records pertaining to the provisions of these performance standards shall be maintained in the office of the building and zoning official and shall be open for public inspection. (Ord. 1265-17 § 1 (Exh. A); Ord. 1019-09 § 1; Ord. 808-03)

10. Obtain and maintain certification required by Section 17.08.110(B)(5)(a) (floodway encroachments).

11. Obtain and maintain records of all variance actions, including justifications for their issuance.

12. Obtain and maintain improvement and damage calculations.

### 13. Changes to Special Flood Hazard Area

a. If a project will alter the BFE or boundaries of the SFHA, then the project proponent shall provide the community with engineering documentation and analysis regarding the proposed change. If the change to the BFE or boundaries of the SFHA would normally require a Letter of Map Change, then the project proponent shall initiate, and receive approval of, a Conditional Letter of Map Revision (CLOMR) prior to approval of the development permit. The project shall be constructed in a manner consistent with the approved CLOMR.

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

#### **17.08.090 Variance procedures.**

Variances to provisions of this chapter shall be processed by the city of Sultan hearing examiner according to provisions of SMC 2.26.090 through 2.26.140.

A. Appeal of a hearing examiner decision shall be to superior court or other appropriate body. The planning board and city council are not involved in quasi-judicial processing of any portion of this chapter.

B. Applications for variances shall be submitted on forms provided by the city and fees called for in the Sultan annual fee schedule shall be submitted at the time of application.

C. It shall be the burden of proof of the applicant to provide evidence that all conditions required in SMC 17.08.100 are met.

D. Staff shall assemble a staff report for review by the hearing examiner.

E. Public notice shall be provided as called for in Chapter 16.82 SMC.

F. The hearing examiner shall conduct a hearing and render a decision as provided in SMC 2.26.090 through 2.26.130.

G. Appeals of the hearing examiner decision shall be made to superior court as provided in SMC 2.26.140. (Ord. 1265-17 § 1 (Exh. A); Ord. 1019-09 § 1; Ord. 808-03)

#### **17.08.100 Conditions for variances – Application.**

The variance criteria set forth in this section of the ordinance are based on the general principle of zoning law that variances pertain to a piece of property and are not personal in nature. A variance may be granted for a parcel of property with physical characteristics so unusual that complying with the requirements of this ordinance would create an exceptional hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners.

It is the duty of the city of Sultan to help protect its citizens from flooding. This need is so compelling and the implications of the cost of ensuring a structure built below the base flood elevation are so serious that variances from the flood elevation or from other requirements in the flood ordinance are quite rare. The long-term goal of preventing and reducing flood loss and damage can only be met if variances are strictly limited. Therefore, the variance guidelines provided in this ordinance are more detailed and contain multiple provisions that must be met before a variance can be properly granted. The criteria are designed to screen out those situations in which alternatives other than a variance are more appropriate.

A. Variances shall only be issued upon a written finding indicating that all of the following standards, criteria, and conditions are met:

##### 1. General Variance Criteria.

a. The requested variance upon a determination that the variance is the minimum necessary considering the flood hazard to afford relief;

b. In the case of an historic building, a determination must be made 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 so as not to destroy the historic character, design, and designation of the building;

c. A showing of good and sufficient cause;

d. Failure to grant the variance would result in exceptional hardship to the applicant; and

e. Granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create a nuisance, cause fraud on or victimization of the public, or conflict with existing laws.

~~f. The necessity to the facility of waterfront location, where applicable.~~

~~g. The compatibility of the proposed use with existing and anticipated development.~~

2. Variance Criteria for New Construction. Generally, the only condition under which a variance from the elevation standard may be issued is for new construction and substantial improvements to be erected on a ~~small or irregularly shaped lot~~ lot one half acres 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.

3. Variance Criteria for Historic Structures. Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places without regard to procedures set forth in the remainder of this section, and provided the proposed reconstruction, rehabilitation, or restoration will not result in the structure losing its historical designation.

4. Variances may be issued for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that (i) the criteria of 1-3 of this section are met, and (ii) 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.

#### B. Conditions to Be Considered in Application of Variance Criteria.

1. The danger that materials may be swept into other lands to the injury of others;

2. The danger to life and property due to flooding or erosion damage;

3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

4. The importance of the services provided by the proposed facility to the community;

~~5. The necessity to the facility of waterfront location, where applicable;~~

~~6. The compatibility of the proposed use with existing and anticipated development;~~

~~7. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;~~

~~8. The relationship of the proposed use to the comprehensive plan to that area;~~

~~9. The safety of the access to the property in times of flood for ordinary and emergency vehicles;~~

~~10. The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters expected at the site; and~~

119. The cost of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, electrical, water system, and bridges.

C. Upon consideration of, but not limited to, the factors listed above, conditions may be attached to the granting of variances as is necessary to further the purposes of these standards.

D. Variances shall not be issued within any designated floodway, if any increase in flood levels during the base flood discharge would result.

E. Any applicant to whom a variance is granted shall be given written notice over the signature of a community official that the issuance of a variance to construct a structure below the base flood elevation will result in specifying the difference between the base flood elevation and the elevation to which the structure is to be built and stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage and that such construction below the base flood elevation increases risks to life and property.

F. The ~~office of the responsible official~~ Floodplain Administrator shall maintain ~~the a~~ records of all ~~appeal variance~~ actions, including justification for their issuance, and report any variances to the Federal ~~Emergency Management Agency Insurance Administrator~~ upon request.

#### **17.08.110 Provisions for flood hazard reduction.**

A. General Standards. In all areas of special flood hazard the following provisions are required:

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

2. The storage or processing of materials that could be injurious to human, animal, or plant life if released due to damage from flooding is prohibited in special flood hazard areas.

3. Storage of other material or equipment may be allowed if not subject to damage by floods and if firmly anchored to prevent flotation, or if readily removable from the area within the time available after flood warning.

4. Water wells shall be located on high ground that is not in the floodway.

25. All manufactured homes shall meet the anchoring standards of subsection (B)(4)(b)(ii) of this section.

36. New construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage. See Technical Bulletin 2-932 (August 2008), Flood-Resistant Materials Requirements.

47. New construction and substantial improvements shall be erected by methods and practices that minimize flood damage.

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

69. New or replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

710. New or replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into them and discharges from them into floodwaters.

811. On-site waste disposal systems (septic tanks) shall be located and constructed to avoid impairment to them or contamination from them during flooding.



9. Any alteration, repair, reconstruction or improvements to a structure that is in compliance with the provisions of this section shall meet the requirements of “new construction” as contained in this section.

B. Specific Standards. In all areas of special flood hazard where base flood elevation data have been provided, the following provisions are required:

1. Residential Construction. New construction and substantial improvements of any residential structure shall have the lowest floor, including basement, elevated no lower than two feet above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided per subsection (B)(3) of this section.

An attached garage, constructed with the garage floor slab below the BFE, must be designed to allow for the automatic entry and exit of floodwaters.

New construction and substantial improvement of any residential structure in an unnumbered A zone for which a BFE is not available and cannot be reasonably obtained shall be reasonably safe from flooding, but in all cases the lowest floor shall be at least two feet above the highest adjacent grade.

2. Nonresidential Construction. New construction and substantial improvements of any commercial, industrial, or nonresidential structure shall-

meet the requirements of subsection 1 or 2, below.

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

a. In AE and A1-30 zones or other A zoned areas where the BFE has been determined or can be reasonably obtained: The lowest floor, including basement, shall be elevated two feet or more above the BFE, or elevated as required by ASCE 24, whichever is greater. Mechanical equipment and utilities shall be waterproofed or elevated at least two feet above the BFE, or as required by ASCE 24, whichever is greater.

b. If located in an unnumbered A zone for which a BFE is not available and cannot be reasonably obtained, the structure shall be reasonably safe from flooding, but in all cases the lowest floor shall be at least two feet above the highest adjacent grade.

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

i. 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.

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

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

iv. An attached garage, constructed with the garage floor slab below the BFE, must be designed to allow for the automatic entry and exit of floodwaters.

2. If the requirements of subsection 1 are not met, then new construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall meet all of the following requirements: ~~either have~~

~~the lowest floor, including basement, elevated two feet or more above the base flood elevation, together with attendant utility and sanitary facilities, or shall:~~

- a. Be dry flood proofed to a point two feet or more above the base flood elevation so that the structure is watertight with walls substantially impermeable to the passage of water or dry flood proofed to the elevation required by ASCE 24, whichever is greater;
- b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;
- c. Be certified by a professional engineer or architect registered in the state of Washington, 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 SMC 17.08.070;
- d. Nonresidential structures that are elevated, not flood proofed, must meet the same standard for space below the lowest floor as described in subsection (B)(3) of this section;
- e. Applicants flood proofing nonresidential buildings shall be notified that flood insurance premiums will be based on rates that are one foot below the flood proofed level (e.g., a building flood proofed to the base flood level will be rated as one foot below).

3. Elevated Buildings. New construction and substantial improvements of elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space, shall be usable solely for parking, access or storage, and be designed to allow for the automatic entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls and shall be designed and built so that the interior finished grade will be at or above the exterior finished grade on at least the entire length of one foundation wall. See Technical Bulletin 11-01. [557]

- a. The applicant prior to issuance of the certificate of occupancy shall record a non-conversion agreement for livable enclosed areas exceeding 299 square feet below the base flood elevation. The agreement shall include the following language:
  - i. That the city has the authority to inspect the enclosed area at a minimum of one time a year; and
  - ii. The city shall be granted the right to inspect the enclosed area at any time to confirm it has not been altered.;
- b. Designs for complying with this requirement must either be certified by a professional engineer or architect registered in the state of Washington or meet the following minimum criteria:
  - i. Provide 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; note this includes attached garages;
  - ii. The bottom of all openings shall be no higher than one foot above the finished/landscaped exterior grade; and
  - iii. Opening may be equipped with screens, louvers, valves or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions;
- c. Electrical, plumbing, and other utility connections are prohibited below the base flood elevation;
- d. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator); and
- e. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.

#### 4. Manufactured Homes.

a. All manufactured homes to be placed or substantially improved on sites shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated two feet or more above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. This applies to manufactured homes: within A1-A30, AH, and AE on the community's FIRM on sites:

i. Outside of a manufactured home park or subdivision;

ii. In a new manufactured home park or subdivision;

iii. In an expansion to an existing manufactured home park or subdivision;

iv. In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood; ~~shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated two feet above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement; and~~

b. Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1-A30, AH, and AE on the community's FIRM that are not subject to the above provisions be elevated so that either:

i. The lowest floor of the manufactured home is elevated two feet or more above the base flood elevation; or

ii. The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

5. Floodways. Located within areas of special flood hazard are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters that carry debris and potential projectiles and has erosion potential, the following provisions shall apply:

a. Encroachments, including fill, new construction, substantial improvements, and other development, shall be prohibited, unless certification (with supporting technical data) by a professional engineer registered in the state of Washington is provided, demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that such encroachments shall not result in any increase in flood levels during 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 percent of the assessed 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 to 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 50 percent.

c. In areas with BFEs (when a regulatory 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 community's FIRM, unless it is ~~If no floodway is designated, then a setback of 30 feet from the banks of the watercourse, river, stream or pond that is reserved to discharge the base flood wherein encroachments shall be prohibited. Once a base flood elevation has been established, it must be demonstrated that the commutative effect of the proposed development, including substantial improvements and fill, 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.~~

d. If subsection (B)(5)(a) of this section is satisfied, or construction is allowed pursuant to subsection (B)(5)(b) of this section, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this section.

### 1. Replacement of Farmhouses in Floodway

Repairs, reconstruction, replacement, or improvements to existing farmhouse structures located in designated floodways and that are located on lands designated as agricultural lands of long-term commercial significance under RCW 36.70A.170 may be permitted subject to the following:

- a. The new farmhouse is a replacement for an existing farmhouse on the same farm site;
- b. There is no potential building site for a replacement farmhouse on the same farm outside the designated floodway;
- c. Repairs, reconstruction, or improvements to a farmhouse shall not increase the total square footage of encroachment of the existing farmhouse;
- d. A replacement farmhouse shall not exceed the total square footage of encroachment of the farmhouse it is replacing;
- e. A farmhouse being replaced shall be removed in its entirety, including foundation, from the floodway within 90 days after occupancy of a new farmhouse;
- f. For substantial improvements and replacement farmhouses, the elevation of the lowest floor of the improvement and farmhouse respectively, including basement, is a minimum of two feet higher than the BFE;
- g. New and replacement water supply systems are designed to eliminate or minimize infiltration of floodwaters into the system;
- h. New and replacement sanitary sewerage systems are designed and located to eliminate or minimize infiltration of floodwater into the system and discharge from the system into the floodwaters; and
- i. All other utilities and connections to public utilities are designed, constructed, and located to eliminate or minimize flood damage.

### 2. Substantially Damaged Residences in Floodway

- a. For all substantially damaged residential structures, other than farmhouses, located in a designated floodway, the Floodplain Administrator may make a written request that the Department of Ecology assess the risk of harm to life and property posed by the specific conditions of the floodway. Based on analysis of depth, velocity, flood-related erosion, channel migration, debris load potential, and flood warning capability, the Department of Ecology may exercise best professional judgment in recommending to the local permitting authority repair, replacement, or relocation of a substantially damaged structure consistent with WAC 173-158-076. The property owner shall be responsible for submitting to the local government and the Department of Ecology any information necessary to complete the assessment. Without a

favorable recommendation from the department for the repair or replacement of a substantially damaged residential structure located in the regulatory floodway, no repair or replacement is allowed per WAC 173-158-070(1).

b. Before the repair, replacement, or reconstruction is started, all requirements of the NFIP, the state requirements adopted pursuant to 86.16 RCW, and all applicable local regulations must be satisfied. In addition, the following conditions must be met:

i. There is no potential safe building location for the replacement residential structure on the same property outside the regulatory floodway.

ii. A replacement residential structure is a residential structure built as a substitute for a legally existing residential structure of equivalent use and size.

iii. Repairs, reconstruction, or replacement of a residential structure shall not increase the total square footage of floodway encroachment.

iv. The elevation of the lowest floor of the substantially damaged or replacement residential structure is a minimum of two feet higher than the BFE.

v. New and replacement water supply systems are designed to eliminate or minimize infiltration of floodwater into the system.

vi. New and replacement sanitary sewerage systems are designed and located to eliminate or minimize infiltration of floodwater into the system and discharge from the system into the floodwaters.

vii. All other utilities and connections to public utilities are designed, constructed, and located to eliminate or minimize flood damage.

**17.08.120 Standards for subdivision proposals.**

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

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

C. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards; and

D. Base flood elevation data shall be provided for subdivision proposals and other proposed development that is no less than three acres in size.[SS8]

**17.08.130 Recreational vehicles.**

A. Recreational vehicles placed on sites within Zones A1 A30, AH, and AE on the community's FIRM either are required to either:

A.1. Be on the site for fewer than 180 consecutive days; no recreational vehicles may be left in a flood zone during a flood warning or watch. Recreational vehicles may be towed to an impound yard and stored at the owner's expense, or-

B.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.

BC. No recreational vehicle may be used as a permanent residence.

C. No recreational [SS9] vehicles may be left in a flood zone during a flood warning or watch. Recreational vehicles may be towed to an impound yard and stored at the owner's expense.

**17.08.140 Critical facility.**

Construction of new critical facilities shall be, to the extent possible, located outside the limits of the special flood hazard area (SFHA) (100-year floodplain). Construction of new critical facilities shall be permissible within the SFHA if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor elevated three feet or more above the base flood elevation (100-year) at the site or to the height of the 500-year flood, whichever is higher. Access to and from the critical facility should also be protected to the height utilized above. Flood proofing 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 extent possible.

**17.08.150 Below-grade crawlspace construction.**

A. As provided in FEMA Technical Bulletin 11-01, below-grade crawlspaces are permitted subject to approval of the city of Sultan upon application and subject to the following criteria. FEMA Technical Bulletin 11-01 is the graphic reference for the provisions of this section.

1. The interior grade is not more than two feet below the lowest exterior adjacent grade.
2. The height of the below-grade crawlspace, as measured from the interior grade to the top of the crawlspace foundation wall, must not exceed four feet at any point, or five feet to the top of the next higher floor.
3. There must be adequate drainage that removes interior floodwaters and the velocity of the floodwaters must not be more than five feet per second.
4. Utility systems within the crawlspace, particularly ductwork, must be elevated above the BFE, or designed so that floodwaters cannot enter or accumulate within system components, or be damaged during flood conditions.
5. All insulation must be located above the BFE.
6. The building must be designed to resist flotation, collapse, and lateral movement resulting from hydrodynamic and hydrostatic loads including the effect of buoyancy.
7. Alternative crawlspace design in areas exceeding five feet per second flood velocity must be designed by a qualified architect or engineer.
8. Crawlspaces must have openings as described in 17.08.110(B)(2)(c) that ~~§§10~~equalize hydrostatic pressures by allowing for the automatic entry and exit of floodwaters.

B. Buildings that have below-grade crawlspaces may have higher flood insurance premiums than buildings that have the preferred crawlspace construction with the interior elevation at or above the lowest adjacent grade. Interpretation and application of these requirements shall be consistent with Official FEMA Technical Bulletin 11-01, Guidance on Crawlspace Construction.

**17.08.160 Below-grade crawlspace construction design.**

The FEMA Technical Bulletin 11-01 is to be used as the guide for design of below-grade crawlspaces. If it is documented that no soil, slope, or hydrostatic or hydrodynamic complications exist at the site, designers and contractors may use this design without modification when proposing below-grade crawlspaces. (~~Ord. 1265-17 § 1 (Exh. A); Ord. 1046-09 § 1~~)

**17.08.170 General Requirements for Other Development**

All development, including manmade changes to improved or unimproved real estate for which specific provisions are not specified in this ordinance or the state building codes with adopted amendments and any Sultan amendments, shall:

- A. Be located and constructed to minimize flood damage;
- B. Meet the encroachment limitations of this ordinance if located in a regulatory floodway;



- C. Be anchored to prevent flotation, collapse, or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the design flood;
- D. Be constructed of flood damage-resistant materials;
- E. Meet the flood opening requirements of section 17.08.110(B)(3); [SS11]and
- F. Have mechanical, plumbing, and electrical systems above the design flood elevation or meet the requirements of ASCE 24, except that minimum electric service required to address life safety and electric code requirements is permitted below the design flood elevation provided it conforms to the provisions of the electrical part of building code for wet locations.

#### **17.08.180 Enclosed Area below the Lowest Floor.**

If buildings or manufactured homes are constructed or substantially improved with fully enclosed areas below the lowest floor, the areas shall be used solely for parking of vehicles, building access, or storage.

#### **17.08.190 Appurtenant Structures (Detached Garages & Small Storage Structures).**

For A Zones (A, AE, A1-30, AH, AO):

1. Appurtenant structures used solely for parking of vehicles or limited storage may be constructed such that the floor is below the BFE, provided the structure is designed and constructed in accordance with the following requirements:
  - a. Use of the appurtenant structure must be limited to parking of vehicles or limited storage;
  - b. The portions of the appurtenant structure located below the BFE must be built using flood resistant materials;
  - c. The appurtenant structure must be adequately anchored to prevent flotation, collapse, and lateral movement.
  - d. Any machinery or equipment servicing the appurtenant structure must be elevated or flood proofed to or above the BFE;
  - e. The appurtenant structure must comply with the floodway encroachment provisions in section 17.08.110(B)(5)(a); [SS12]
  - f. The appurtenant structure must be designed to allow for the automatic entry and exit of floodwaters in accordance with section 17.08.110(B)(3); [SS13]
  - g. The structure shall have low damage potential;
  - h. If the structure is converted to another use, it must be brought into full compliance with the standards governing such use; and
  - i. The structure shall not be used for human habitation.
2. Detached garages, storage structures, and other appurtenant structures not meeting the above standards must be constructed in accordance with all applicable standards in section 17.08.110(B)(1); [SS14]
3. Upon completion of the structure, certification that the requirements of this section have been satisfied shall be provided to the Floodplain Administrator for verification.