



KITTITAS COUNTY FLOOD CONTROL ZONE DISTRICT

FLOOD DEVELOPMENT PERMIT

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Kittitas Co. CDS

Project: FD-19-00022 STREISSGUTH

Date: October 24, 2019

Description: Addition and alteration to existing house plan with kitchen relocation and major remodel. Add an attached garage to the house and a detached garage nearby. Remodel upper level of home and add media room over new attached garage. Maintain current level of flood protection, including engineered flood vents in new garages and remodeled area of home. Compensatory storage will be required if any fill is required during addition and remodel. A "No Net Loss of Floodplain Storage" Analysis may be required. (See Attachment).

Landowner: Mark W. Streissguth

Location: The project is located at 13270 North Thorp Hwy in a portion of Section 3; T18N; R17E, WM in Kittitas County, Washington State. Parcel number: 579133; Map Number is: 18-17-03010-0003

Watercourse: Yakima River
FIRM Panel: 530095 0409B
Zone: 100 Year and Floodway
Base Flood Elevation: 1660.5 NGVD29

Permission is granted under the provisions of RCW 86.16 and KCC 14.08 to complete the proposed project. This permit is subject to the flood hazard reduction provisions in Kittitas County Code 14.08. All construction materials shall be resistant to flood damage, and the project shall be constructed using methods and practices that minimize flood damage.

A Final Inspection is required prior to final approval. Please call Kittitas County Public Works at (509) 962-7523 to schedule the final inspection.

Relevant codes that **must** be followed are shown below:

14.08.115 Elevation certificates.

Flood elevation certificates will be **required** to be submitted to and be permanently maintained by the Public Works Department:

1. For construction drawings prior to issuance of a building permit
2. For a building under construction prior to scheduling of a framing inspection
3. For finished construction prior to issuance of a Certificate of Occupancy

14.08.200 Construction materials and methods.

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

14.08.210 Utilities.

1. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
2. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.
3. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
4. New water wells shall be constructed in compliance with [WAC 173-160-171](#).
5. Fuel storage tanks shall either be elevated or anchored using methods and practices that minimize flood damage. (consistent with FEMA's "Protecting Building Utilities From Flood Damage" guidebook for techniques). (Ord. 2007-22, 2007; Ord. 2001-03; Ord. 93-18 § 5.1.3, 1993).

14.08.240 Specific standards.

In all areas of special flood hazards where base flood elevation data has been provided (Zones A1-30, AH, and AE) as set forth in [KCC 14.08.040](#), Basis for establishing the areas of special flood hazard, or [KCC 14.08.120](#), Use of other base flood data, the following provisions are required. (Ord. 200103; Ord. 93-18 § 5.2, 1993).

14.08.250 Residential construction.

1. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one foot or more above the base flood elevation.
2. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic and hydrodynamic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

- a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
 - b. The bottom of all openings shall be no higher than one foot above grade.
 - c. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
 - d. Because of hydrodynamic loads, below grade crawlspace construction is not permitted in areas with flood velocities greater than 5 feet per second unless the design is approved by a registered architect or licensed engineer.
3. Any interior or exterior building utility systems must be elevated one-foot or more above the Base Flood Elevation (BFE) or be designed so that floodwaters cannot enter or accumulate within the system components during flood conditions. Ductwork, in particular must be located above the BFE or sealed to prevent the entry of floodwaters.
 4. Portions of buildings below the BFE must be constructed using methods and practices that minimize flood damages, and with materials resistant to flood damage. This includes any joists, pony walls, beams, posts, insulation, wall coverings, wall sheathing or other materials that extend below the BFE.
 5. The elevation of the interior crawlspace grade (inside of the foundation walls in crawlspace construction) must be at or above the lowest elevation of the exterior grade. Below-grade crawlspace foundations will be allowed only if all of the following conditions are met, in addition to the minimum criteria set forth above in this subsection: *(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 exterior grade).*
 - a. The interior grade of the crawlspace (below the BFE) must not be more than 2 feet below the lowest adjacent exterior grade.
 - b. The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall must not exceed 4 feet at any point.
 - c. There must be an adequate drainage system that removes floodwaters from the interior of the crawlspace. Possible options include natural drainage through porous, well drained soils and drainage systems such as perforated pipes, drainage tiles, gravel or crushed stone drainage by gravity, or mechanical means.
 6. Garages attached to a residential structure must have the floor elevated above the BFE or be constructed according to the following conditions:
 - a. The walls must have openings designed to automatically equalize hydrostatic and hydrodynamic flood forces by allowing for the entry and exit of floodwaters. (See the requirements listed above for the residential structure per 14.08.250).
 - b. All portions of the garage below the BFE must be constructed with materials resistant to flood damage. This includes any studs, walls, beams, posts, insulation, wall coverings, wall sheathing or other materials that extend below the BFE.
 - c. Any utility systems within the garage must be elevated one foot or more above the Base Flood Elevation (BFE) or be designed so that floodwaters cannot enter or accumulate within the system components during flood conditions.

14.08.260 Detached accessory buildings (garages and small storage sheds).

The following special provisions apply only to detached accessory structures used as garages or small storage sheds to single-family residences.

1. Detached accessory structures shall have the lowest floor elevated above the base flood elevation. When an accessory structure represents a minimal investment, the structure need not be elevated. However, the structure must have openings to allow floodwater in and out as required by KCC [14.08.250\(2\)](#) and be constructed using flood resistant materials below the BFE. A minimal investment shall be determined by the applicable guiding authority, or by appeal under the variance procedure and shall be determined, if necessary, on a case-to-case basis. As a general application, an expenditure for the accessory structure of not more than 10 percent of the value of the main structure shall be considered a minimal investment.
2. Accessory structures shall not be used for human habitation and must be limited to parking and storage.
3. Accessory structures shall comply with the foundation opening requirements in [KCC 14.08.250\(2\)](#).
4. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters.
5. Accessory structures must be adequately anchored to prevent flotation, collapse, or lateral movement of the structure which may result in damage to other structures.
6. Accessory structures must comply with floodway encroachment provisions in [KCC 14.08.300](#).
7. Service facilities such as electrical and heating equipment shall be elevated one foot or more above the base flood elevation.
8. Applicants that elect not to elevate the lowest floor of accessory structures under the provisions of this section shall be notified that flood insurance premium rates may be increased as a result of this practice. The applicant shall be aware that flood insurance rates may be increased as a result of this practice, and a note stating such shall be included in the issuance of related permits.

14.08.300 Floodways.

Located within areas of special flood hazard established in [KCC 14.08.300 Floodways](#). Located within areas of special flood hazard established in [KCC 14.08.040](#) are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris and 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 is provided demonstrating through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels during the occurrence of the base flood discharge.

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 50 percent of the market value of the structure either: (i) before the repair or reconstruction is started, or (ii) 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 codes 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.
3. If subsection (1) of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of KCC [14.08.180](#) through [14.08.310](#), provisions for flood hazard reduction, except for construction and reconstruction of residential structures that is prohibited by subsection (2) of this section.
4. Filling in the floodway is prohibited except for residential maintenance. Residential maintenance is considered the importing of bark or top soil for flower beds and gardens. The quantity of material must be able to be hauled in a pick-up truck and not require the use of a commercial dump truck. The total amount of material shall not exceed one load per calendar year.
5. Traditional agricultural practices are exempt.

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8. If subsection (1) of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of [KCC 14.08.180](#) through [14.08.310](#), provisions for flood hazard reduction, except for construction and reconstruction of residential structures that is prohibited by subsection (2) of this section.
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10. Traditional agricultural practices are exempt.

14.08.315 Standards for filling, grading in floodplain.

Filling, grading or other activity that would reduce the effective storage volume shall be mitigated by creating compensatory storage on-site, or off-site if legal arrangements can be made, to assure that the effective compensatory storage volume will be preserved over time; provided, however, that no increased upstream or downstream flood hazard shall be created by any fill authorized in the floodplain by this chapter or other applicable chapters.

14.08.320 Standards for AE and A1-30 Zones with Base Flood Elevations but No Floodways.

In areas with base flood elevations (but a regulatory flood way 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 county's FIRM unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood. ([Ord. 2012-009](#), 2012)

Signed: Karen L Hodges CFM Date: 10/24/2019

Karen Hodges, CFM,
Kittitas County Flood Control Zone District