



## **DRAINAGE PLAN**

### **DRAINAGE PLAN REVIEW FEE \$ 150.00**

#### **15.28.030 - Contents of Drainage Plan.**

A drainage plan is a proposal for handling the water flowing through and falling on a site. The plan shall contain the following elements:

- A. Topographic Map. A topographic map drawn to scale showing the site, and all drainage areas from which water flows onto the site, with a calculation of the acreage of the drainage areas. The site shall be shown in detail, and grading and clearing plans shall be included;
- B. Proposed Drainage System. Plans drawn scale showing the improvements or other methods of handling the runoff in accordance with the requirements of Section 15.28.040, and cost estimates for the installation of the proposed system;
- C. Calculations. Calculations used to size the proposed drainage system, indicating the existing and proposed peak flow and amount of water entering and leaving the site. Calculations of proposed conditions shall be shown for each major on-site facility affecting flow rates;
- D. Erosion Control. Measures proposed to control erosion, or other pollution of off-site property and surface water, both temporarily during construction and permanently after construction;
- E. Open Channels. If use of open channels or ponds is proposed, plans shall show the extent and elevation of the designed maximum water flow. A cross-section shall be submitted, showing side wall construction and the designed maximum level of water flow, which shall be at least one foot below the edge of the channel;
- F. Preliminary Proposals. When a preliminary drainage proposal is required to be submitted, it shall consist of subsections A through E of this section, without final engineering design plans of facilities to be constructed.
- G. Schedule. A time schedule for construction and inspection of the system, including clearing and grading. (Ord. 419 § 3, 1988)

#### **15.28.040 - Design Requirements.**

All drainage plans shall conform to the following design requirements:

- A. Engineered Plans. All elements of a drainage plan shall be prepared by a registered civil engineer and certified to have been so prepared;
- B. Stormwater Management Manual Requirements. All drainage plans shall be prepared in accordance with the drainage requirements of the Snohomish County Engineering Design and Development Standards (EDDS), 2003 edition;
- C. Peak Discharge Rate. The rate of surface water leaving the property from the design storm after construction shall not exceed the rate before construction. This requirement may be met by retaining water for on-site disposal, by detaining water on-site for release off-site at the allowable rate, or by a combination of the two methods;

D. Critical Drainage Areas. In critical drainage areas, the town supervisor may require that the volume of water leaving the site over a period of time may not exceed the preconstruction volume for the same period of time, or may require other special measures related to the critical drainage problems. Critical drainage areas are areas with special drainage problems because of existing flood potential, soil instability or high erodibility of the soil. Critical drainage areas shall be identified by the engineer employed or used by the town;

E. Receiving Facilities. There shall be no change in location or capacity of existing facilities or natural features that receive off-site surface water entering the site

F. Discharge Facilities. Where possible, surface water discharge off-site shall be released at the same points that handled the runoff before construction, with no significant change in the proportion of water handled at each point. Where significant changes are necessary, downstream drainage facilities shall be improved to allow them to accommodate the increased drainage without damage to the drainage facilities, nearby property or water quality;

G. Design Basis. All drainage calculations shall be based upon a design rainstorm with a ten-year average return period. A twenty-five-year design rainstorm shall be used if the drainage area is more than fifty acres or if the drainage area produces runoff of more than twenty cubic feet per second during a twenty-five-year design rainstorm;

H. Setbacks. All structures on the site shall be set back at least ten feet from any closed drainage facility, and at least fifteen feet from the edge of any open drainage channel or pond;

I. Deviations. The town supervisor may approve minor deviations from the requirement of this section. The decision shall be written, shall state the reasons for the decision, and shall be based upon the following factors:

1. Capacity and condition of downstream facilities;
2. Effect on receiving bodies of water;
3. Significant damage from on-site disposal of water;
4. Existence of regional retention or detention facilities;
5. Major difficulties in maintaining the drainage system.

J. Water Quality. To the extent technically feasible, as determined by the engineer employed or used by the town, the quality of water released offsite or disposed of on-site shall be at least as high as the preconstruction water quality.

(Ord. No. 605, Att. A, 11-10-2004; Ord. 419 § 4, 1988)

### **15.28.050 - Review of Drainage Plans—Review fee.**

The engineer employed or used by the Town shall review all plans for compliance with this chapter. Resubmittal may be required. A review fee of \$150.00 (one hundred fifty dollars) shall be paid.

(Ord. 419 § 5, 1988)