

# MISSION HILLS

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K A N S A S

## Stormwater Drainage Study Requirements

Updated December 21, 2021

**5-1314.1. Stormwater Drainage Study.** No Land Disturbance Activity or Construction shall increase the quantity and/or rate, or change the direction of Runoff from any property except in accordance with an approved Stormwater Drainage Study.

A. **When Required.** At a minimum, a Stormwater Drainage Study is required for any project that meets one or more of the following criteria:

1. Adds one thousand square feet (1,000 sq. ft.) or more of impervious surface to a Site.
2. Causes the total greenspace on a Site to fall below the minimum greenspace recommendation set forth in the Design Guidelines, except that a Stormwater Drainage Study shall not be required for a project that involves a Site with an existing condition that does not meet the minimum greenspace recommendation if the project meets both of the following requirements:
  - (a) the project involves replacing existing impervious surface in approximately the same footprint; and
  - (b) the project will not decrease the existing greenspace on the Site.
3. Involves a Site with a documented drainage issue (e.g., historical testimony or letters, Engineer report, etc.).

The provisions of this Section 5-1314.1.A shall not limit the City Administrator's authority to require a Stormwater Drainage Study under other provisions of Chapter V. When a Stormwater Drainage Study is required, no building permit or Land Disturbance Permit shall issue until the City Administrator approves the Stormwater Drainage Study.

B. **Submission.** A Stormwater Drainage Study prepared and sealed by an Engineer shall contain the following information and data:

1. A Site Plan with scale of either one inch (1") to twenty feet (20') or one inch (1") to forty feet (40'), and contour intervals of one foot (1') for every one

foot (1') of Grade change of the Site and adjoining land whose topography may affect the proposed layout or drainage patterns of the Site.

2. A general plan showing final contours of the Site following completion of the Land Disturbance Activity and/or Construction, as well as all existing Watercourses and the extent of the established Floodplain and date of Floodplain map used.
3. A drainage map showing the location and calculated flow rates of all adjacent drainage facilities.
4. A hydraulic and hydrologic summary table showing the ten (10) and one hundred (100) year flows.
5. A summary of the type and characteristics of Soil on the Site.
6. Basic information regarding the effects the project will have on the receiving Watercourses for a distance as far downstream as the Runoff will have a noticeable effect.
7. A summary of the possible effects that the proposed project could have on downstream drainage facilities and areas adjoining the Site, and proposed solutions.
8. A summary of the concepts to be considered to handle anticipated Runoff including the methods to be utilized to detain or control increased Runoff generated by the proposed project during and after completion.
9. A preliminary plan of at least three (3) alternative drainage facilities (unless the Engineer indicates that three (3) alternatives are not possible), including preliminary calculations of Runoff to be handled by each. The plan should also include the proposed routing of one hundred (100) year flood. If the plan includes underground drainage facilities, the Engineer must demonstrate that sufficient permeable Soil exists at the proposed location of the drainage facility by providing information obtained from borings.

C. **Review.** Following receipt of the Stormwater Drainage Study, a general review shall be conducted by the City Administrator to determine whether the conceptual methods proposed to be utilized and the possible effects meet the requirements of Chapter V. Underground drainage facilities will be evaluated on a case-by-case basis.

**5-1325.1. Required Certification for Drainage Facilities.** Within one year following installation of drainage facilities in connection with an approved Stormwater Drainage Study, and every two (2) years thereafter, the Owner shall furnish certification by an Engineer that such drainage facilities are fully functional. The certification shall contain the following information:

A. Owner's name and address;

- B. Recorded book and page number of the Site;
- C. Statement that inspection was made of all drainage facilities on the Site;
- D. Date of inspection;
- E. Statement that all inspected drainage facilities are performing properly and are in compliance with the terms and conditions of the approved Stormwater Drainage Study; and
- F. Engineer's original signature and seal.

In the event that any inspection in connection with the required certifications indicates that a drainage facility is not performing properly, then annual certifications are required until the drainage facility passes for three (3) consecutive years, at which time the Owner may resume biennial certifications.