



Erosion, Sediment Control and Grading Policy

Introduction and Purpose

During the construction process, soil is the most vulnerable to erosion by wind and water. This eroded soil endangers water resources by reducing water quality and causing the siltation of aquatic habitat for fish and other desirable species. Eroded soil also necessitates repair of sewers and ditches, and the dredging of lakes. In addition, clearing and grading during construction causes the loss of native vegetation necessary for terrestrial and aquatic habitat.

The purpose of this directive is to safeguard persons, protect property, prevent damage to the environment and promote the public welfare by guiding, regulating, and controlling the design, construction, use, and maintenance of any development or other activity which disturbs or breaks the topsoil or results in the movement of earth on land within Arizona State University campuses; and to provide a healthy living/working environment for students, workers and residents at ASU.

Definitions

- **Certified Contractor:** An individual who has received training and is licensed by the State of Arizona to inspect and maintain erosion and sediment control practices.
- **Clearing:** Any activity which removes the vegetative surface cover.
- **Drainage Way:** Any channel that conveys surface runoff throughout the site.
- **Erosion Control:** Measures that prevent erosion.
- **Erosion and Sediment Control Plan:** A set of plans prepared by or under the direction of a licensed professional engineer indicating the specific measures and sequencing to be used to control sediment and erosion on a development site before, during and after construction.
- **Grading:** Excavation or fill of material, including the resulting conditions thereof.
- **Perimeter Control:** A barrier that prevents sediment from leaving a site either by filtering sediment- laden runoff or diverting it to a sediment trap or basin.
- **Phasing:** Clearing a parcel of land in distinct phases, with the stabilization of each phase before the clearing of the next.
- **Sediment Control:** Measures that prevent eroded sediment from leaving the site.
- **Site:** A parcel of land, or a contiguous combination thereof, where grading work is performed as a single unified operation.
- **Site Development Permit:** A permit issued by the Authority Having Jurisdiction for the construction or alteration of ground improvements and structures for the control of



erosion, runoff and grading.

- **Stabilization:** The use of practices that prevent exposed soil from eroding.
- **Start of Construction:** The first land-disturbing activity associated with development, including land preparation such as clearing, grading and filling; installation of streets and walkways; excavation for basements, footings, piers or foundations; erection of temporary forms; and installation of accessory buildings such as garages.
- **Watercourse:** Any body of water, including, but not limited to lakes, ponds, rivers, streams, and bodies of water delineated by ASU.
- **Waterway:** A channel that directs surface runoff to a watercourse, or to the public storm drain.

Permits

At ASU, site development permits are issued by ASU Facilities Development and Management, Construction Support Services according to the following requirements.

Site development permits may be issued in tandem with, or synonymously with, an issued building, civil, demolition, foundation or structural permit, as appropriate.

- A. No person shall be granted a site development permit for land-disturbing activity which would require the uncovering of 43,560 or more square feet without the approval of an Erosion and Sediment Control Plan by ASU FDM-Construction Support Services.
- B. No site development permit is required for the activities listed below. ASU may choose to exempt other activities at their discretion.
 - a. Any emergency activity which is immediately necessary for the protection of life, property or natural resources.
 - b. Existing nursery and agricultural operations conducted as a permitted main or accessory use.
- C. Each application shall bear the name(s) of the general contractor or developer of the site, and the superintendent's name and contact information, and shall be accompanied by a filing fee, as applicable.
- D. Any land clearing, construction, or development involving the movement of earth shall be in accordance with the Erosion and Sediment Control Plan, and a Certified Contractor shall be on site on all days where construction or grading activity takes place.
- E. Review and approval
 - a. ASU FDM-Construction Support Services or its designated delegate will review each application for a site development permit to determine its conformance with the provisions of this directive. Within thirty (30) days after receiving an



application, ASU shall, in writing:

- i. Approve the permit application;
- ii. Approve the permit application subject to such reasonable conditions as may be necessary to secure substantially the objectives of this directive, and issue the permit subject to these conditions; or
- iii. Disapprove the permit application, indicating the deficiencies and the procedure for submitting a revised application and/or submission.

Erosion and Sediment Control Plan

1. The Erosion and Sediment Control Plan shall include:
 - a. All erosion and sediment control measures necessary to meet the objectives of this directive throughout all phases of construction and after completion of development of the site. Depending upon the complexity of the project, the drafting of intermediate plans may be required.
 - b. Seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application, and kind and quantity of mulching for both temporary and permanent vegetative control measures, as applicable.
 - c. Provisions for maintenance of control facilities, including easements, as appropriate.
2. Modifications to the Plan:
 - a. Major amendments of the erosion and sediment control plan shall be submitted to ASU FDM-Construction Support Services and shall be processed and approved, or disapproved, in the same manner as the original plans.
 - b. Field modifications of a minor nature may be authorized by ASU FDM-Construction Support Services.

Design Requirements

Grading, erosion control practices, sediment control practices, and waterway crossings shall meet the design criteria set forth in the most recent version of the Flood Control District of Maricopa County (FCDMC) Drainage Design Manual — Erosion Control, the most recent ASU Project Guidelines Division 31 – Earthwork, and shall be adequate to prevent transportation of sediment and other pollutants from the site to the satisfaction of ASU.

1. Clearing and Grading
 - a. Clearing and grading of natural resources shall not be permitted, except when in compliance all other ASU Project Guidelines and applicable state laws.



- b. Clearing techniques that retain natural vegetation and retain natural drainage patterns, as described in the FCDMC Drainage Design Manual – Erosion Control, shall be used to the satisfaction of ASU.
- c. Phasing shall be required on all sites disturbing greater than thirty acres, with the size of each phase to be established at plan review and as approved by ASU.
- d. Clearing, except that necessary to establish sediment control devices, shall not begin until all sediment control devices have been installed and have been stabilized.
- e. Cut and fill slopes shall be no greater than 2:1, except as approved by ASU FDM- Construction Support Services to meet other community or environmental objectives.

2. Erosion Control

- a. Soil must be stabilized within fourteen days of clearing or inactivity in construction.
- b. On steep slopes or in drainage ways, special techniques that meet the design criteria outlined in the FCDMC Drainage Design Manual – Erosion Control shall be used to ensure stabilization.
- c. Soil stockpiles must be stabilized or covered at the end of each workday.
- d. Techniques shall be employed to prevent blowing dust or sediment from the site.
- e. Techniques that divert upland runoff past disturbed slopes shall be employed.

3. Sediment Controls

- a. Sediment controls shall be provided in the form of settling basins or sediment traps or tanks, and perimeter controls.
- b. Where possible, settling basins shall be designed in a manner that allows adaptation to provide long-term stormwater management.
- c. Adjacent properties shall be protected with perimeter controls.

4. Waterways and Watercourses

- a. When a wet watercourse must be crossed regularly during construction, a temporary stream crossing shall be provided, and an approval obtained from ADEQ.
- b. When in-channel work is conducted, the channel shall be stabilized before, during and after work.



- c. All on-site stormwater conveyance channels shall be designed according to the criteria outlined in the FCDMC Drainage Design Manual – Erosion Control.
 - d. Stabilization adequate to prevent erosion must be provided at the outlets of all pipes and paved channels.
- 5. Construction Site Access
 - a. A temporary access road shall be provided at all sites.
 - b. Other measures may be required at the discretion of ASU FDM-Construction Support Services in order to ensure that sediment is not tracked onto public streets by construction vehicles, or washed into storm drains.

Inspection

1. ASU FDM-Construction Support Services representative or designated agent shall make inspections as hereinafter required and shall either approve that portion of the work completed or shall notify the permittee wherein the work fails to comply with the erosion and sediment control plan as approved. Plans for grading, stripping, excavating, and filling work bearing the stamp of approval of ASU FDM-Construction Support Services shall be maintained at the site during the progress of the work. In order to obtain inspections, the permittee shall notify ASU FDM-Construction Support Services, at least two (2) working days before the following or in keeping with the most current ASU inspection protocols as directed by ASU FDM-Construction Support Services:
 - a. Erosion and sediment control measures are in place and stabilized.
 - b. Significant changes have been made in the location of erosion and sediment control measures.
 - c. Final grading has been completed.
 - d. Final landscaping.

The Stormwater Inspection Report form used by ASU inspectors is included as Attachment J.

- 2. The permittee or his/her agent shall make regular inspections of all control measures in accordance with the inspection schedule outlined on the approved erosion and sediment control plan(s) and any Stormwater Pollution Prevention Plan prepared to meet the requirements of the AZPDES Construction General Permit. The purpose of such inspections will be to determine the overall effectiveness of the control plan, and the need for additional control measures. All inspections shall be documented in written form and submitted to ASU FDM-Construction Support Services at the time interval specified in the approved permit.
 - 3. ASU FDM-Construction Support Services or its designated agent shall enter the property of the applicant as deemed necessary to make regular inspections to ensure the validity of the reports filed under Section B.



Enforcement

A. Stop-Work Order; Revocation of Permit

In the event that any person holding a site development permit pursuant to this directive violates the terms of the permit, or implements site development in such a manner as to materially adversely affect the health, welfare, or safety of persons residing or working in the neighborhood or development site so as to be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood, ASU FDM-Construction Support Services may suspend or revoke the site development permit.

B. Violation and Penalties

No person shall construct, enlarge, alter, repair, or maintain any grading, excavation, or fill, or cause the same to be done, contrary to or in violation of any terms of this directive. In addition to any other penalty authorized by this section, any person, partnership, or corporation convicted of violating any of the provisions of this directive shall be required to bear the expense of such restoration.

Separability

The provisions and sections of this directive shall be deemed to be separable, and the invalidity of any portion of this directive shall not affect the validity of the remainder.