



Erosion and Sedimentation Control Requirements

INFORMATION BULLETIN NO. 128

(February 26, 1999 – Revised September 11, 2007)

City Planning & Development – Development Services (CPD-DS)

City of Kansas City, Missouri

<http://www.kcmo.org/codes/>

The Departments of Environmental Management, Neighborhood and Community Services, and City Planning & Development (CPD-DS) are all involved in enforcing erosion control provisions; however, each department has its own area of authority, depending on the size of the disturbed area. Please see the Erosion and Sediment Control Chart on page 5 for further clarification.

The following scenarios will provide guidance to the applicant/permit holder and to the CPD-DS) enforcement personnel as to the application of erosion control requirements on projects requiring building permits where the disturbed area is 300 sq.ft. or greater but less than 1 acre. The examples given below relate to Chapter 18, Code of Ordinances, better known as the Kansas City Building and Rehabilitation Code (KCBRC), regarding erosion and sedimentation control requirements. Additional erosion and sedimentation control requirements and permits may apply within the development where the building lot is located.

1. QUESTION: What types of devices may I use in preventing the silt and erosion from leaving my permit site?

ANSWER: The most common forms of siltation and erosion control devices are sediment fences, straw bale sediment traps, earth diversion berms with gravel filters, and erosion control blankets. The proper installation of these devices and other acceptable practices shall be in accordance with standards as adopted by the City Planning & Development - Development Services, Land Development Division (CPD-DS, LD). Currently, CPD-DS, LD has adopted the *Erosion and Sediment Control Specifications* approved by the Missouri Department of Natural Resources (MDNR) on November 23, 1992, and amended by CPD-DS, LD. (See attachment for CPD-DS, LD amendments to Section 10.03.7.3 of this document.) Another helpful resource is the MDNR field guide, *Protecting Water Quality*. The MDNR can be reached at (573) 526-7687.

2. QUESTION: If no required erosion control devices have been properly installed, can the inspector just give a warning and perform the inspection anyway?

ANSWER: No, if devices are required due to the site conditions, the initial installation shall be in place at the start of the project.

3. QUESTION: If there has been a very bad storm and some of my required siltation and erosion control devices have washed out, or if devices have become ineffective due to lack of maintenance over time, will the inspector proceed with the required inspection that has been scheduled?

ANSWER: If the required erosion and sedimentation control devices have been installed properly, even though some areas may be in need of restoration, the inspector will proceed with the requested inspection at the job site. The inspector will notify the building permit holder in

writing that the erosion and siltation control measures are either “ineffective” or “are not being maintained properly”. Subsequent inspections will not be performed if the erosion and siltation control measures are still found to be ineffective or in need of repair at future site visits. Notice will also be given that a stop work order or summons may be issued if the corrections are not completed within a specified time period. (See Question #9.)

4. QUESTION: Can required erosion control devices be temporarily removed to allow concrete trucks or other delivery vehicles access to the building or site?

ANSWER: Yes, a minimum amount of the required erosion control devices may be temporarily removed in order for the concrete truck or other delivery vehicles to approach the foundation or building. These devices, however, must be reinstalled at the earliest possible time after their breach but no later than at the end of the same day. Contractors may wish to establish a temporary gravel driveway that can permanently breach the erosion control perimeter. The gravel driveway, if placed properly, will serve as a gravel filter.

5. QUESTION: If one of my subcontractors temporarily removes some of my required erosion control devices in order to perform some of the required groundwork (i.e. plumbing subcontractor trenches from foundation to property line for building sewer and water service piping installation), will the CPD-DS inspector proceed with the required inspection that I have requested?

ANSWER: Yes, if only the minimum amount of devices has been removed in order to perform the required work. These devices, however, must be reinstalled at the end of the day and as soon as possible after the backfilling of trenches has been completed. An open trench, however, will not be cause for refusing to perform a scheduled inspection unless the request is for the final inspection. Please note that it is the general contractor’s responsibility to inform his/her subcontractors of siltation and erosion control requirements and to know the status of his/her construction site.

6. QUESTION: If the erosion control devices are temporarily removed in order to perform final grading on the site, will the inspector perform a requested inspection anyway?

ANSWER: Obviously, erosion control devices, such as silt fences and straw bales, must be removed in order to perform final grading of an individual lot. Should final grading activity be taking place when an inspector arrives for an inspection, he/she will proceed with the inspection. If final grading has been completed, the disturbed area shall have one of the following accomplished within 48 hours:

- 1) sodding,
- 2) seeding and mulching, or
- 3) reestablishment of temporary erosion control devices.

A temporary certificate of occupancy may be issued before the above is accomplished; however, final approval will require that the disturbed area be either sodded, or seeded and mulched.

7. QUESTION: Can I group multiple lots under one erosion and siltation control plan so that the required devices will address the siltation and erosion control for all lots at once?

ANSWER: Yes, if each of the following elements is met:

- **All of the lots are contiguous to each other.**
- All of the lots are under the same ownership or have the same building permit holder. Lots under different ownership or different permit holders may be combined under a common zone plan provided that the owners or permit holders sign an “Erosion Control Zone Plan Agreement.” This agreement documents that the involved parties agree to maintain the erosion and sediment control for the lots in accordance with the plan and ordinance.
- The total area of all of the lots is less than one acre (exceptions to the one-acre limit will be evaluated by CPD-DS on a case by case basis).
- An erosion control zone plan is submitted to and approved by CPD-DS’s Residential Plans Review Branch. The zone plan is to be a plot plan drawn to scale. The plan is to show all lots included in the zone, the total square footage of the zone, the location and type of devices proposed, and the direction(s) of runoff flow for the entire zone. The erosion control zone plan does not have to be prepared by a professional engineer, licensed architect, or registered land surveyor.

NOTE: For other than electric service, plumbing groundwork, and gas piping inspections, a copy of the CPD-DS approved erosion control zone plan is to be present at each of the individual building sites at the time of inspection. Failure to have a copy of the plan at the site may result in the inspection not being performed. In addition, each permit that is under a zone plan will be so identified on the permit for the inspectors’ knowledge. Should individual lots contained in the zone become occupied, the zone plan may have to be revised and resubmitted to CPD-DS for approval if the lots in question are lower in elevation to adjacent lots in the zone. Approval of the zone plan may be revoked if the erosion and sediment control devices are not maintained in accordance with the ordinance.

8. QUESTION: If my building site is on a large piece of property, and the disturbed area is surrounded by substantial areas with solid vegetative cover on the same property, is this natural erosion control buffer sufficient, or are artificial devices needed?

ANSWER: If the width of the natural buffer is sufficient to contain the sediment on the property, then additional devices will not be required. Specifics regarding the required width of buffer zones for different slopes are found in the field guide, *Protecting Water Quality*. (See answer to Question #1.)

9. QUESTION: How will I know if my requested inspection is not being made because of noncompliance with siltation and erosion control requirements of the building code?

ANSWER: As with all CPD-DS inspections that are currently conducted, a written or typed inspection report will be left at the job site and a history of the action taken will be recorded on the CPD-DS computer system . The report left by the inspector on the job site will read something to the effect, “NO INSPECTION CONDUCTED – EROSION CONTROL DEVICES NEED TO BE INSTALLED ON SITE. NO FURTHER INSPECTIONS WILL BE CONDUCTED UNTIL DEVICES ARE PROPERLY INSTALLED. A STOP WORK ORDER OR A SUMMONS MAY BE ISSUED IF CORRECTIONS ARE NOT MADE WITHIN 5 DAYS.”

10. QUESTION: If an inspection request is refused, will a reinspection fee be applied due to the wasted trip?

ANSWER: Not on the first notice regarding the lack of erosion control compliance. If, however, the builder had previously been notified of the corrections needed, and an additional inspection was requested prior to the corrections being made, then a reinspection fee would be assessed, as the site was not ready for the inspection. All comments regarding erosion control will be addressed, and all reinspection fees due to these comments will be assessed, to the building permit holder.

11. QUESTION: The KCBRC authorizes CPD-DS to either refuse a requested inspection or to issue a stop work order or a summons on the project. Under what circumstances will a stop work order or a summons be issued?

ANSWER: A stop work order or a summons will be issued only when other available options have been exhausted and have failed to bring the site into compliance with the ordinance, or where due to the severity of the siltation leaving the site immediate remedial action is needed. For clarification purposes, work need not stop on a job site when an inspector refuses to make an inspection because of noncompliance with the erosion control requirements of the KCBRC. Work requiring inspection, however, shall not be covered or concealed without approval by CPD-DS. It is only when a written stop work order has been issued that work on a job site must stop in accordance with that order. A stop work order or a summons may be issued for siltation and erosion control noncompliance. These will only be given when the building permit holder fails to comply with requirements within the allowable time frame provided in the written notice.

12. QUESTION: If optional 3rd Party Residential Inspectors, are authorized for some of my required inspections, will they be enforcing the erosion and sediment control requirements of the building code?

ANSWER: All CPD-DS authorized personnel performing 3rd party residential inspections are extensions of the Building Official. All 3rd party inspection personnel will be trained on the new requirements at a training/education session that they will be required to attend prior to these regulations taking effect. All participants will be given a copy of the scenarios listed in this document. In addition, the certification form that CPD-DS authorized 3rd party inspectors are required to use will have specific language added to address erosion and sedimentation control requirements. Certified statements regarding erosion control requirements will be required to be made by the professional certifying the form. Failure of the 3rd party inspector to comply with program requirements will result in their removal from the authorized list.

13. QUESTION: May I use prefabricated silt fence that is available with the posts already attached, if the posts are smaller than that required by the standard (typically 1-1/4" x 1-1/4" hardwood)?

ANSWER: Yes, provided that the smaller posts are installed at a spacing of 3 feet on center.

Should you have any questions regarding this information bulletin, please contact the Duty Supervisor at 513-1500 (Option 2).

Erosion and Sediment Control Chart

Disturbed Areas	Less than or equal to 300 sq. ft.	Greater than 300 sq. ft. But less than 1 acre.	Greater than 300 sq. ft. But less than 1 acre.	One acre or Greater
		If work DOES NOT require a building permit.	If work REQUIRES a building permit.	
Department	Department of Neighborhood and Community Services 816-513-9010	City Planning & Development – Development Services Investigation Division 816-513-1500, Select Option 2	Department of Neighborhood and Community Services 816-513-9010	City Planning & Development – Development Services Land Development Division 816-513-0651
Ordinances	Chapter 62, Solid Wastes ----- Chapter 48 Nuisances	Chapter 62, Solid Wastes ----- Chapter 48, Nuisances	Chapter 18, Kansas City Building and Rehabilitation Code	Chapter 63, Art II Erosion & Sediment Control Regulations
Erosion Control Plan Required	NO	NO	NO	YES
Erosion Control Devices Required	REQUIRED AS NEEDED TO PREVENT SILTATION FROM LEAVING THE WORK SITE	YES	YES	YES

Missouri Department of Natural Resources
Erosion and Sediment Control Specifications

Section 10.03.7.3 - Sediment (Silt) Fence

Definition

A temporary sediment barrier consisting of filter fabric buried at the bottom, stretched, and supported by posts.

Purpose

To retain sediment from small disturbed areas by reducing the velocity of sheet flows to allow sediment deposition.

Conditions Where Practice Applies

Below small disturbed areas.

Where runoff can be stored behind the sediment fence without damaging the fence or the submerged area behind the fence.

Do not install sediment fences across streams, ditches, or waterways.

Planning Considerations

A sediment fence is a permeable barrier that should be planned as a system to retain sediment on the construction site. The fence retains sediment primarily by retarding flow and promoting deposition. In operation, generally the fence becomes clogged with fine particles, which reduce flow rate. This causes a pond to develop more quickly behind the fence. Anticipate ponding and provide sufficient storage areas and overflow outlets to prevent flows from overtopping the fence. Since sediment fences are not designed to withstand high heads, locate them so that only shallow pools can form. Tie the ends of a sediment fence into the landscape to prevent flow around the end of the fence before the pool reaches design level. Provide stabilized outlets to protect the fence system and release storm flows that exceed the design storm.

Deposition occurs as the storage pool forms behind the fence. Plan deposition areas at accessible points to promote routine cleanout and maintenance.

Design Criteria

1. Ensure that the drainage area is no greater than 1/4 acre per 100 ft of fence.
2. Make the fence stable for the 10-year peak storm runoff.
3. Ensure that the depth of impounded water does not exceed 1.5 ft at any point along the fence.
4. Provide a riprap splash pad or other outlet protection device for any point where flow may overtop the sediment fence, such as natural depressions or swales. Ensure that the maximum height of the fence at a protected, reinforced outlet does not exceed 1 ft and that support post spacing does not exceed 4 ft.

5. The design life of a synthetic sediment fence should be 6 months.

Construction Specifications

A. MATERIALS

1. Use a synthetic filter fabric or a pervious sheet of polypropylene, nylon, polyester, or polyethylene yard, which is certified by the manufacturer or supplier, as conforming to the requirements shown in Table 7.3A.
2. Synthetic filter fabric should contain ultraviolet ray inhibitors and stabilizers to provide a minimum of 6 months of expected usable construction life at a temperature range of 0 to 1200F.
3. Ensure that posts for sediment fences are either 1-1/4 inch by 1-1/4 inch oak when placed on 6-foot centers, 1-1/2 inch by 1-1/2 inch oak when on 8-foot centers, or 1.33 lb/linear ft steel. Minimum post length shall be 3 ft. Make sure that steel posts have projections to facilitate fastening the fabric.
4. For reinforcement of standard strength filter fabric, use wire fence with a minimum 14 gauge and a maximum mesh spacing of 6 inches.

TABLE 7.3A
SEDIMENT FENCE FABRIC SPECIFICATIONS

Physical Property	Minimum Requirements
Filtering Efficiency	85 percent
Tensile Strength as 20 percent (max.) Elongation	Standard Strength – 30 lb/lin in Extra Strength – 50 lb/lin in
Slurry Flow Rate	0.3 gal/sq ft/min

B. CONSTRUCTION

1. Construct the sediment barrier of standard strength or extra strength synthetic filter fabrics.
2. Ensure that the height of the sediment fence does not exceed 18 inches above the ground surface. (Higher fences may impound volumes of water sufficient to cause failure of the structure.)
3. Construct the filter fabric from a continuous roll cut to the length of the barrier to avoid joints. When joints are necessary, securely fasten the filter cloth only at a support post with overlap to the next post.

4. Support standard strength filter fabric by wire mesh fastened securely to the upslope side of the posts using heavy duty wire staples at least 1 inch long, or tie wires. Extend the wire mesh support to the bottom of the trench.
5. When a wire mesh support fence is used, space posts a maximum of 8 ft apart. Support posts should be driven securely into the ground to a minimum of 18 inches.
6. Extra strength filter fabric with 1-1/4 inch by 1-1/4 inch post with 6-foot post spacing or 1-1/2 inch by 1-1/2 inch post with 8-foot spacing does not require wire mesh support fence. Staple (3/8-inch minimum and 4 per post face) or wire the filter fabric directly to the posts.
7. Excavate a trench approximately 4 inches wide and 8 inches deep along the proposed line of posts and upslope from the barrier.
8. Backfill the trench with compacted soil or gravel placed over the filter fabric.
9. Do not attach filter fabric to existing trees.

Maintenance

Inspect sediment fences at least once a week and after each rainfall. Make any required repairs immediately.

Should the fabric of a sediment fence collapse, tear, decompose, or become ineffective, replace it promptly.

Remove sediment deposits as necessary to provide adequate storage volume for the next rain and to reduce pressure on the fence. Take care to avoid undermining the fence during cleanout.

Remove all fencing materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.



**CITY OF KANSAS CITY, MISSOURI
 CITY PLANNING & DEVELOPMENT - DEVELOPMENT SERVICES
 EROSION & SEDIMENT CONTROL ZONE PLAN AGREEMENT**

324 E. 11th Street, 2nd floor
 Kansas City, Missouri 64106

(816) 513-1500
 FAX (816) 513-1505

The undersigned request that the properties listed below be considered as a single zone for the purpose of developing an erosion and sediment control zone plan. The intent of the attached plan is to protect the public way, the natural and artificial storm water drainage system, and all adjoining properties from siltation. Although these lots are under separate ownership or separate permit holders, we agree to maintain all devices in accordance with the approved plan and ordinance. It is understood that failure to comply with the approved plan, ordinance or Information Bulletin IB128 on any of the lots in the zone may result in refusal to perform inspections on all of the lots in the zone. Approval of the zone plan may be revoked for failure to comply.

ADDRESS #1: _____

OWNER/PERMIT HOLDER NAME: _____

SIGNATURE: _____ DATE: _____

ADDRESS #2: _____

OWNER/PERMIT HOLDER NAME: _____

SIGNATURE: _____ DATE: _____

ADDRESS #3: _____

OWNER/PERMIT HOLDER NAME: _____

SIGNATURE: _____ DATE: _____

ADDRESS #4: _____

OWNER/PERMIT HOLDER NAME: _____

SIGNATURE: _____ DATE: _____