



*Taney County, Missouri*  
**Stormwater and Erosion Control Regulations**



**Taney County Commission Order dated April 21, 2021.**

# Stormwater and Erosion Control Regulations

## *Taney County, Missouri*

### Table of Contents

<b>Section 01.00</b>	<b>Purpose.....</b>	<b>4</b>
<b>Section 02.00</b>	<b>Definitions.....</b>	<b>4</b>
<b>Section 03.00</b>	<b>General Provisions.....</b>	<b>6</b>
03.01	<b>Inspection and Violation.....</b>	<b>6</b>
<b>Section 04.00</b>	<b>Land Disturbance Plan Provisions.....</b>	<b>7</b>
04.01	General Requirements.....	7
04.10	Site Development Plan.....	8
04.20	Conformance with Permit and Plan.....	9
04.30	Exemptions.....	9
04.40	Design Criteria.....	9
<b>Section 05.00</b>	<b>Sediment and Erosion Control Plan Provisions.....</b>	<b>10</b>
05.01	Principles and Standards.....	10
05.10	Sediment and Erosion Control Plan Approval.....	12
05.20	Erosion and Sedimentation Control Plan Content.....	12
<b>Section 06.00</b>	<b>Stormwater Management Plan Provisions.....</b>	<b>14</b>
06.01	General Requirements.....	14
06.10	Stormwater Management Plan.....	16
06.20	Stormwater Management Plan Content.....	17
06.30	Stormwater Detention Requirements.....	19
06.40	Exemptions.....	19
06.50	Maintenance of Storm Drainage Facilities.....	19

Taney County, Missouri  
Stormwater & Erosion Control Regulations

06.60	Failure to Maintain: Abatement Procedure.....	19
<b>Section 07.00</b>	<b>General Stormwater and Erosion Control Plans Submittal Requirements.....</b>	<b>20</b>
<b>Section 08.00</b>	<b>Comments from the Conservation District.....</b>	<b>21</b>
<b>Section 09.00</b>	<b>Conditions of Approval.....</b>	<b>21</b>
<b>Section 10.00</b>	<b>Inspection and Compliance.....</b>	<b>22</b>
<b>Section 11.00</b>	<b>Modification of Plan.....</b>	<b>23</b>
<b>Section 12.00</b>	<b>Land Disturbance Permit Application Requirements.....</b>	<b>23</b>
12.01	Filing.....	23
12.10	Action.....	23
<b>Section 13.00</b>	<b>Performance Guarantees.....</b>	<b>24</b>
13.01	Sediment and Erosion, Stormwater Management, Re-Vegetation Bonds.....	24
13.10	Land Disturbance Bonds.....	25

## **Storm Water and Erosion Control Regulations**

### SECTION 01.00      **PURPOSE**

This appendix details the requirements for Technical Plans that may, depending upon the development project, be required as part of a permit application and approval. A Technical Plan is comprised of one or more of the following individual plans:

- Land Disturbance Plan
- Sediment and Erosion Control Plan
- Stormwater Management Plan
- Re-vegetation Plan

Based on the specific development project, one or more these plans may be required. It should be noted that these are to be appropriately engineered plans provided by recognized and certified engineering entities.

### SECTION 02.00      **DEFINITIONS**

#### Agriculture

The production, keeping, or maintenance, for sale, lease, or personal use, of plants and animals useful to man.

#### Grading and Conservation Plan

More information on grading and conservation plans may be obtained from the local offices of the Natural Resource Conservation Service or a professional landscape architect.

#### Impervious Cover

The principal measure of development density, it is the coverage within a development of all rooftops, roads, drives, walks or hard-surfaced trails, parking lots, and other hard-surfaced areas. Impervious cover is expressed as a percentage of the total development site for projects in which all structures or buildings and other elements of impervious cover are approved in the permit. For new developments, impervious cover shall be expressed as a percentage of the unimproved area.

#### Land Disturbance

Any activity involving the clearing, cutting, excavating, filling, or grading of land or any other activity that alters land topography or vegetative cover.

#### Mulching

The application of plant or other suitable materials on the soil surface to conserve moisture, reduce erosion, and aid in establishing plant cover.

Performance Guarantee

Posting of a {performance} bond with good and sufficient sureties (as set out in sections 64.825 and 107.080 RSMo 1996), having such provisions that will guarantee the faithful performance of all required work to be done under the submitted plan.

Sediment

Rock, sand, gravel, silt, or other material deposited by action of wind, water, or gravity.

Sediment Basin

A barrier or dam built across a waterway or at other suitable locations to retain rock, sand, gravel, silt, or other material deposited by action of wind, water, or gravity.

Sediment Control Plan

The plan required before a grading permit may be issued. The plan may be included as part of a preliminary plan required under any other applicable county codes or a separate plan following the specifications set out in the Taney County Zoning Regulations.

Slope

The angular measurement of the steepness, incline, gradient, or grade.

Soil Loss Tolerance

The soil loss tolerance of all soil series in Taney County has been established by the Natural Resource Conservation Service. It is the rate of erosion, measured in tons per acre per year that soil can withstand without permanent damage to its fertility.

Stop Work Order

An official posting placed at a job site instructing that all work activities are to cease and remain inactive until the conditions for the Stop Work have been resolved.

Surety Bond

A bond given to protect against loss in case the terms of a contract are not filled. The money deposited, or the promissory arrangement entered into, under any such agreement.

Technical Plan

A professionally engineered and certified plan of work to be performed. Such plans include, but are not limited to, sediment and erosion control, stormwater management, land grading, etc. Based on the type of permit desired, one or more Technical Plans may be required before approval and issuance of the permit.

Tract

A plot or area of land planned for development.

Universal Soil Loss Equation

A method developed by the Agricultural Research Service, United States Department of Agriculture, and used by Conservation Districts to estimate soil erosion based on rainfall, soil erodibility, slope of the land, length of slope, and plant cover.

SECTION 03.00      **GENERAL PROVISIONS**

03.01    **Inspection and Violation**

A. Inspections

Permitted developments are subject to inspection;

B. Corrections

All infractions and corrections shall be completed within the time limit specified in the issuance of a written notice to correct. All persons failing to comply with such notice shall be deemed in violation of this regulation. A “Stop Work” order can, but is not required, to accompany the notice to correct and if so shall be adhered to entirely until all required corrections are completed and the “Stop Work” order is lifted.

C. Revocation of Plans and Permits

Permits may be revoked and will not be reinstated until the cause for revocation has been corrected or a plan for correction has been submitted and approved.

D. Stop Work Orders

A Stop Work Order will be issued whenever land disturbance, construction, or development activity, which constitutes a violation of the Zoning Regulations, occurs.

E. Violations

In the event that all required work under the submitted plan is not completed as required, the Performance Guarantee will be used by the county to correct or complete the work as deemed necessary and as funds allow. A violation will result in the revocation of permits, as applicable, until the developer corrects the violation(s) or an appeal is made to the Board of Adjustment and a variance is granted.

**F. Penalties**

Any person violating any provision of these regulations and found guilty of such violation shall be subjected to applicable. It shall be the duty of the Designated Official to enforce these regulations and to bring to the attention of the Taney County Prosecuting Attorney and violations or lack of compliance herewith. Any person, firm, or corporation that fails to comply with or violates any of these regulations shall be deemed guilty of a misdemeanor and be subject to a fine of not more than one thousand dollars (\$1,000) or imprisonment in the county jail for a period not exceeding one (1) year, or both.

**G. Appeals**

Any person aggrieved by any decision during the administration or enforcement of this appendix may appeal to the Board of Adjustment. During such appeals, however, no work other than that required by the Designated Official can continue.

**H. Variances**

Any required variances shall follow the Taney County Zoning Regulations.

**I. Conflict**

Where any provision of this appendix imposes restrictions that differ from those imposed by any other law or regulation, whether state, federal, or local, whichever is more restrictive or imposes a higher standard shall prevail.

**J. Liability**

Compliance with the requirements of this Stormwater and Erosion Control County Regulations does not implicitly or explicitly guarantee that facilities constructed to the minimum standards defined herein will ensure properties remain free from sediment, erosion, or storm water damage. This Stormwater and Erosion County Regulations shall not create liability on the part of or cause legal action against the county, any county officer, or employee of the county for such damages.

**SECTION 04.00      LAND DISTURBANCE PLAN PROVISIONS**

**04.01      General Requirements**

- A.**      Land Disturbance permits are required for any development site where the affected land area exceeds one (1) acre.

- B. Developments consisting of lots or tracts, whether phased or not, that are smaller than one (1) acre in area typically do not require a Land Disturbance permit. However, when the affected area is part of a larger development and the Designated Official determines that an excessive sedimentation hazard exists, a permit will then be required.
- C. Prior to issuing a Land Disturbance permit, a Sediment and Erosion Control Plan must be provided that defines how soil erosion will be prevented.
- D. Agricultural activities are exempted from these provisions.

04.10 **Site Development Plan**

In determining compliance of the sediment control element of the Sediment and Erosion Control Plan with acceptable practice, the following shall be shown:

- A. An average of three (3) tons of soil loss per acre per year shall be deemed the maximum tolerable level of sediment leaving the site during development. The universal soil loss equation shall be used in predicting average soil loss.
- B. The calculation of the above tolerable level of soil loss shall be based on average anticipated losses during the year or years of development and in a one (1) year period immediately following development.
- C. A Best Management Practices plan shall be implemented and maintained in accordance with the concepts and methods described in the following documents:
  - 1. ***Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices***, (Document number EPA 832-R-92-005) published by the United States Environmental Protection Agency (USEPA) in 1992. This manual is available at the USEPA internet site.
  - 2. ***Protecting Water quality: A field guide to erosion, sediment and Stormwater Best Management Practices for development sites in Missouri***, published by the Missouri Department of Natural Resources in November 1995.

*Note:* Other commonly accepted publications may be used for guidance but must be referenced in the application if used.

04.20 **Conformance with Permit and Plan**

All and disturbance activity on property for which a Land Disturbance permit has been issued shall conform to the requirements of the permit and to the provisions of the approved site development plan. This plan shall meet the requirements defined in Article 003.000, Section 003.001 General Provisions, of the Taney County Zoning Regulations.

04.30 **Exemptions**

A land disturbance permit shall not be required for sites equal to or less than one (1) acre or for individual residential lots. Agricultural activities are exempted from the provisions of this Stormwater and Erosion Control Regulations.

04.40 **Design Criteria**

- A. Cut or fill slopes shall be left not steeper than two (2) horizontal to one (1) vertical, unless such slopes can and will be stabilized with properly designed retaining walls or other mechanical means.
- B. Provisions shall be made to safely collect and discharge surfaced water to storm drains or suitable natural water course and to prevent surface runoff from damaging cut faces and fill slopes.
- C. Subsurface drainage shall be provided in areas having a high water table. Drains shall intercept seepage that would affect slope stability or building foundation or create undesirable wetness.
- D. Excavations or fills made near property boundaries shall be supported to protect the adjoining property from erosion, sliding, settling, or cracking.
- E. No fill is to be placed where excess sediment may erode upon the premises of another or so placed adjacent to the bank or a channel as to create bank failure or reduce the natural capacity of the stream.
- F. Timber, logs, brush, rubbish, and vegetative matter that will interfere with the grading operation or affect the planned stability of fill areas shall be removed and disposed of properly.
- G. Topsoil is to be stripped and stockpiled in amounts necessary to complete finish grading of all exposed areas requiring topsoil for the establishment of vegetation.

- H. Cut slopes that are to be top soiled shall be scarified to a minimum depth of three (3) inches prior to placement of topsoil.
- I. Frozen materials or soft, musky, or easily compressible materials are not to be incorporated in fills intended to support buildings, parking lots, road structures, sewers, or conduits.
- J. Maximum thickness of layers of fills to be compacted shall not exceed eight (8) inches.

SECTION 05.00 **SEDIMENT AND EROSION CONTROL PLAN PROVISIONS**

05.01 **Principles and Standards**

- A. All excavations, grading, or filling shall result in a finished grade not to exceed a 3:1 slope (33%). Steeper grades may be approved if the excavation is through rock or if the excavation or fill is adequately protected (i.e., a designed head wall or toe wall may be required), or if the original grade exceeded the 3:1 slope requirement.
- B. Sites that involve less than one acre of grading shall provide for sediment and erosion control. The measures should be sufficient to retain the majority of sediment on site. Appropriate facilities can be required if it determined by an onsite inspection that a sediment and/or erosion control problem exists.
- C. Sediment and Erosion Control Plans for sites that exceed one are of grading shall provide for sediment or debris basins, silt traps or filters, staked straw bales, or other approved measures to remove sediment from run-off waters. Temporary siltation control measures shall be designed to assure that sediment is not transported from the site by a storm even of a 10-year frequency. Temporary siltation control measures (i.e., structural) shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site.
- D. When natural vegetation is removed during grading, vegetation shall be reestablished in such a density as to prevent erosion. Permanent type grasses shall be established as soon as possible or during the next seeding period after grading has been completed. Re-vegetation shall be provided for at a base rate of \$250.00 per acre or at a sufficient rate to cover the work required, whichever is greater.

Taney County, Missouri  
Stormwater & Erosion Control Regulations

- E.** When grading operations are completed or suspended for more than 30 calendar days, permanent grass must be established at sufficient density to provide for erosion control on the site. Within 48 hours of any completion or suspension of grading operations, temporary cover shall be provided according to the Designated Official's recommendation. All finished grades (areas not to be disturbed by future improvement) in excess of 20% slopes (5:1) shall be mulched and tacked at the rate of 100 pounds per 1,000 square feet when seeded.
- F.** Provisions shall be made to accommodate the increased water runoff caused by changed soil and surface conditions during and after grading. Open channels shall be designed so that gradients result in velocities of 2 fps (feet per second) or less. Open channels with velocities more than 2 fps and less than 5 fps shall be established in permanent vegetation by use of commercial erosion control blankets or lined with rock riprap as approved. Detention basins, diversions, or other appropriate structures shall be constructed to prevent velocities above 5 fps.
- G.** Land adjoining a development site shall be protected from accelerated and/or increased surface water flow, silt from erosion, and any other adverse consequences of erosion. Runoff water from developed areas (parking lots, paved sites and buildings) above the area to be developed shall be directed to diversions, detention basins, concrete gutters and/or underground outlet systems. Sufficiently anchored straw bales may be temporarily substituted.
- H.** Development along natural watercourses shall have residential, commercial or industrial improvements, parking areas, and driveways set back a minimum of 25 ft. from the top of the existing stream bank. The watercourse shall be maintained by and made the responsibility of the subdivision trustees or, in the case of a site plan, by the property owner. Permanent vegetation should be left intact. The submitted plan shall include any designed stream bank erosion control measures. FEMA and US Army Corps of Engineers guidelines shall be followed where applicable regarding site development areas designated as flood plains and wetlands.
- I.** All lots shall be seeded and mulched at rates specified in these Codes or sodded.
- J.** Maintenance of all sediment and erosion control facilities will be considered an integral part of the plan. Within 24 hours of a storm event,

inspection and maintenance of the facilities shall take place at the developer's responsibility.

- K.** During periods of dry windy weather, wind erosion in the form of dust can be a problem. Efforts shall be made to minimize the problems of dust. Corrective procedures will be required if problems with dust become apparent.
- L.** Phasing of clearing and grading operations is one of the most effective methods to control the creation of sedimentation. Project clearing and grading operations should be phased in no more than 5-acre increments of disturbed area. It is possible to work using larger increments, however, a phasing plan shall be part of any clearing or grading plan exceeding ten (10) acres of disturbed area.

#### **05.10 Sediment and Erosion Control Plan Approval**

- A.** The Sediment and Erosion Control Plan must define the measures to be taken to meet erosion control principles and standards as defined in the following paragraph. The plan must assure that sediment is not transported from the development site at an annual rate that exceeds the erosion factor "T" from the Soil Survey of Taney County, Missouri.
- B.** When a Sediment and Erosion Control Plan is submitted to the Soil & Water Conservation District for comments and recommendations, the Soil & Water Conservation District shall have fifteen (15) days to respond. Comments and recommendations shall pertain to, but not be limited to, the following:
  - 1. Erosion and Sedimentation Control
  - 2. Soil Use Limitations
  - 3. Environmental Considerations

#### **05.20 Erosion and Sedimentation Control Plan Content**

Erosion and Sediment Control Plans submitted to the Planning Commission shall include two sets of maps and plans, with specifications showing proposed excavation, grading, and/or filling and will include, along with the general plan information requirements (section 08.00 below), the following:

- 1.** The portion of the property that is to be excavated, graded, and/or filled with excavated material.

Taney County, Missouri  
Stormwater & Erosion Control Regulations

2. Identification of any portions of the property that are to remain as natural areas; these are areas to be protected and untouched by clearing, grading, or construction.
3. The location of any sewerage disposal system or underground utility line, any part of which is within 50 feet of the proposed excavation, grading, and/or filling area, and the location of any pipe line operated at a maximum service pressure in excess of 200 p.s.i.g., any part of which is within 100 feet of the proposed excavation, grading, and/or filling area.
4. Existing grade and topography of the premises and the proposed finished grade and final contour elevation at a contour interval of not more than two (2) feet on United States Geological Survey datum.
5. The location and present status of any previous permitted grading operations on the property.
6. Details of any temporary drainage systems proposed to be installed and maintained by the applicant and a comprehensive drainage plan designed to safely handle surface water, streams or other natural drains following heavy rains during grading operations.
7. Details of proposed water impoundment structures, embankments, sediment or debris basins, grass or lined waterways, and diversions, with the details and locations of proposed stable outlets and the location of any downstream impoundment's which could be affected by the proposed grading.
8. Details of soil preparation and re-vegetation of the finished grade and of other methods of soil erosion control.
9. Proposed truck and equipment access ways to the work site.
10. Delineation of the 100-year flood plain and floodway.
11. A statement from the property owner or their agent assuming full responsibility for the performance of the operation as stated in the application; this statement shall also contain assurance that all County property or roads will be adequately protected.
12. The proposed phasing of development of the site, including clearing, rough grading and construction, and final grading and landscaping. Phasing will identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas and the sequence of clearing, installation of temporary sediment control measures, installation of storm drainage, paving streets and parking areas, and establishment of temporary and permanent vegetative cover. The specific requirements for the content of submissions may be partially waived upon finding that the information submitted is sufficient to show that the work will comply with the objectives and principles of these regulations.

SECTION 06.00      **STORMWATER MANAGEMENT PLAN PROVISIONS**

06.01      **General Requirements**

- A.      Stormwater Management Plans must provide for the collection and conveyance of surface water through and from the area encompassed by the land disturbance permit in such a manner as to avoid increasing the potential for damage to developed properties downstream from the site.
  
- B.      The general criteria for stormwater management shall be that all conduits and channels be designed to accommodate the peak flow from the design storm event (100-year 24-hour duration). All detention facilities shall contain the runoff from a 25-year return frequency, 24-hour duration storm. Such facilities shall be designed to release the retained surface water runoff such that the peak rate of runoff from the tract after development shall not exceed the peak rate of runoff from the tract prior to development for a 2, 10, and 25-year return frequency, 24-hour duration storm. The site and all facilities shall be developed to protect against runoff of a 100-year return frequency, 24-hour duration storm if a down slope flooding problem is identified. The design and sizing of stormwater facilities shall use the Hydrograph Method for all developments of ten (10) acres or larger. The Rational Equation and the Simplified Volume Formula may be used for developments less than 10 acres in size, although the Hydrograph Method is preferred.

Stormwater conveyance systems shall be designed to transport concentrated stormwater runoff to detention basins or stable channels (not subject to erosion) under fully developed conditions. The stormwater conveyance system shall be designed to carry both on-site and off-site runoff. Concentrated runoff from upstream shall be carried by stormwater facilities on the subject property. The requirements outlined in these standards are only minimum requirements.

- C.      Open channels shall be located in drainage easements designed to provide a 100-year floodplain and shall be designed and constructed in such a manner as to provide easy maintainability of the channel and side slopes and to prevent erosion from the design flows. If the channel extends between buildings, consideration must be given to provide adequate protective measures, such as paving the channel invert and side slopes, bank protection or fencing. Open channels in residential areas should generally be located along the rear or side lot lines.

- D.** Where storm drainage along the side lot lines of residential property is to be in a conduit, the conduit shall extend to a point at least thirty (30) feet to the rear of the front building line or ten (10) feet beyond the rear line of the structure, whichever is greater. A surface swale shall be provided over this area to contain at least a 100-year storm. At the point of intersection with the open channel, some type of facility shall be provided to disperse flow and minimize erosion.
- E.** When culverts and stormwater facilities are placed under roadways, they shall extend as necessary to the toe of the roadway embankment, which, if required, will extend past the limits of right-of-way, and proper hydraulic structures shall be provided for dissipation of velocity to prevent erosion. Embankments shall be protected to prevent erosion against a 100-year storm.
- F.** Pipe drains or culverts constructed to intercept the flow of ditches or channels, which may be enclosed in a conduit at a future time, shall be installed at adequate depth to permit their extension at the same required depth.
- G.** On curbed streets, curb inlets shall be installed at or near intersections where they are deemed necessary for the safety of pedestrian and vehicular traffic. Curb inlets shall be placed to intercept the stormwater before it reaches the crosswalks. No curb inlet shall be located within a crosswalk.
- H.** Tributary areas that drain across public sidewalks must not exceed three thousand (3,000) square feet of impervious area, including roofs discharging upon paved areas, or nine thousand (9,000) square feet of sodded areas, or in proportional amounts for a combination of such areas. Paved, roofed, or impervious areas exceeding three thousand (3,000) square feet shall be provided with drains for discharge into storm conduits, channels, or street gutters.
- I.** Any concentration of surface flow in excess of 2.0 cfs for a 10-year frequency rain event shall be intercepted before reaching the street right-of-way and shall be carried by an enclosed storm drain to connect with a drainage structure at the low point in the street right-of-way or to discharge to a watercourse.
- J.** All detention facilities shall include an emergency or overflow spillway that will pass excess flows greater than those of the 25-year frequency and overflows resulting from obstructions of the principal outlets. The

emergency spillway shall be designed to safely pass the flow resulting from a 100-year frequency, 24-hour duration storm.

**06.10 Stormwater Management Plan**

- A.** A Stormwater Management Plan, as prepared and certified by a registered professional engineer licensed in the State of Missouri, shall accompany all applications for Land Disturbance and Commercial permits, unless 5.2.1.1, 5.2.1.2, or 5.2.1.3, below, apply. A Stormwater Management Plan may be prepared in conjunction with or as a supplement the Sediment and Erosion Control Plan.
- 1.** The Taney County Planning Commission may partially or completely waive the requirement for a certified Stormwater Management Plan if it is determined that stormwater facilities are unnecessary. If the requirement is completely waived the Impervious Cover Limitations Table will automatically apply.
  - 2.** Projects that are approved through the administrative process and that are of a limited nature and do not require stormwater facilities may have the requirement for a certified Stormwater Management Plan waived by the Designated Official based on policy set by the Planning Commission. These kinds of developments include minor subdivisions of property, Conditional-Use Permits, etc.
  - 3.** A developer may choose to substitute the requirements of the Impervious Cover Limitations Table H-1 for the required Stormwater Management Plan. This substitution does not negate the need to address stormwater runoff issues and any other provisions of this section.

**Impervious Cover Limitations Table**

<b>SITE CHARACTERISTICS</b>	<b>ALLOWED COVERAGE</b>
0 – 5% slopes Hydrologic Class A-B	60%
0 – 5% slopes Hydrologic Class C-D	55%
5 – 10% slopes Hydrologic Class A-B	50%
5 – 10% slopes Hydrologic Class C-D	45%
10 – 15% slopes	40%

Hydrologic Class A-B	
10 – 15% slopes	35%
Hydrologic Class C-D	
15 – 25% slopes	30%
Hydrologic Class A-B	
15 – 20% slopes	25%
Hydrologic Class C-D	
25% or greater slopes	25%
All Hydrologic Classes	

- B. The slope of an area may be determined from topographic maps. Soil hydrologic classes, which have been established for all soil series in Taney County by the Natural Resource Conservation Service, may be determined from soil maps. Class A soils have characteristics that normally lead to slow stormwater runoff; Class B to moderately slow runoff; Class C to moderately rapid runoff; and Class I runoff. The use of the Impervious Coverage Limitations Table to determine development density does not exempt a development from complying with the intent of the standards for sediment and erosion control or stormwater requirements detailed in this section.
- C. No storm drainage facility shall be constructed, altered, or reconstructed without first obtaining a Land Disturbance or Commercial permit from the Planning & Zoning department. No such permit shall be issued unless the Planning Commission is satisfied that the proposed storm drainage facilities meet the requirements of this section. Approval of Land Disturbance permits that include the construction of storm drainage facilities shall constitute issuance of permits to construct those facilities in accordance with the approved Stormwater Management Plan.

06.20 **Stormwater Management Plan Content**

Stormwater Management Plans shall include, along with the general plan information requirements (section 08.00 below), the following information:

A. **EXISTING FEATURES**

- 1. A drainage area map showing topography of the entire drainage basin(s) contributing to the site. The scale of the map shall be no smaller than 1 inch = 200 feet for drainage areas up to five hundred (500) acres. A topographic map of appropriate scale shall be provided for larger areas upstream from the design area. The

drainage map is to show total acreage of the site and acreage of all drainage areas contributing to the site.

2. A site plan having a scale no smaller than 1 inch = 100 feet and existing contour intervals of not more than five (5) feet. The plan shall show topographic features such as highways, utilities, natural watercourses, existing drainage facilities and structures, adjacent property lines, north arrow, scale, and vicinity map. The site plan is to also show the limits of the adopted 100-year flood plain on the site and any critical environmental areas such as streams, lakes, ponds and wetlands. The nature and extent of existing vegetation shall also be shown on the plan.
- B.** Plans and profiles of each storm drain, showing location, size, design flow, flowline elevations, gradients, and materials; location, depths and sizes of adjacent or crossing sewer lines and utilities; and special construction requirements such as concrete cradle or encasement, backfill, size and class of pipe. All elevations shall be based upon USGS datum with location noted of benchmarks used.
- C.** Typical cross-sections of swales, ditches or channels.
- D.** Details of special structures, culverts, transitions, headwalls, aprons and junction chambers, all adequately detailed and dimensioned including placement of steel. Unless otherwise indicated, standard county structures are assumed where applicable.
- E.** For the design of detention facilities, calculations of peak runoff from 2, 10, 25, and 100-year frequency, 24-hour duration storms. Calculations shall be provided for all areas that are tributary to the subject under existing conditions and conditions after the planned development of the site. The information shall include the acreage of all areas contributing flow to the site and the present land use by acreage of those areas.
- F.** Basic design criteria including frequency of rainfall, percentage of imperviousness, runoff for drainage area, time of concentration, loadings, and any other pertinent design criteria.
- G.** Locations of all building areas and the minimum floor elevations for building to be constructed on the site.

06.30 **Stormwater Detention Requirements**

- A. Stormwater detention facilities that are constructed in the county must be constructed in accordance with the criteria of these Taney County Stormwater and Erosion Control Regulations.
- B. A stormwater detention facility shall be located only on the lot or tract it is intended to serve unless otherwise approved by the Planning Commission as provided in this section.
- C. The Planning Commission may permit the construction of a stormwater detention facility on a lot or tract other than the lot or tract it is intended to serve when the facility is designed to serve more than one lot or tract and the other requirements of this section have been met. In such cases, the Designated Official must first determine that there are sufficient easements and covenants filed of record imposing the duty to maintain the facilities upon the owners of each of the lots served by the facility. Such covenants must provide that the assessed cost of any repairs and maintenance work done by the County shall be a lien enforceable by foreclosure against each of the lots so served.

06.40 **Exemptions**

On-site stormwater detention is not required in low-density single-family residential subdivisions where the overall density is equal to or less than one unit per acre.

06.50 **Maintenance of Storm Drainage Facilities**

Storm drainage facilities that have not been dedicated to and accepted by the county shall be maintained by the owner of the land on which they are located. Stormwater detention facilities that serve more than one lot or tract shall be maintained by the owners of the lots or tracts served.

06.60 **Failure to Maintain: Abatement Procedure**

- A. Failure to adequately maintain a storm drainage facility is hereby declared a violation of the Taney County Stormwater and Erosion Control Regulations
- B. Whenever it is determined that a storm drainage facility is inadequately maintained or is in violation of the Taney County Stormwater and Erosion Control Regulations, notice of this determination shall be given to the property owner(s) with an order for the violation to be abated. The

abatement order shall state the number of calendar days within which the violation must be abated. The Planning Commission shall also give notice of the right of the property owner(s) to appeal the abatement order.

- C. The notice shall be provided in writing and shall either be personally served or mailed by certified or registered mail with return receipt requested. When service cannot be had by either of the above two methods, then service may be made by publication. Notice by publication shall be made by inserting the required notice in a newspaper of general circulation and published in the county at least once.
- D. A property owner may appeal any administrative abatement order by filing a written demand for a hearing with the Board of Adjustment. The Planning Commission must receive the demand for a hearing within ten (10) calendar days after the notice was issued.
- E. After receiving the written demand for a hearing, the Board of Adjustment shall designate a date to conduct the hearing. The hearing shall be conducted in accordance with the Variances and Appeals section of the Taney County Stormwater and Erosion Control Regulations.
- F. If the owner or owners fail to comply with the order of abatement, the Planning Commission may cause the violation to be abated and shall certify the cost of such abatement to the County Commissioners. The Commissioners may levy the cost thereof as a special tax bill against the property. The tax bill shall be collected in the same manner as other special tax bills and shall be a lien on the property until paid.

SECTION 07.00      **GENERAL STORMWATER AND EROSION CONTROL PLANS  
SUBMITTAL REQUIREMENTS**

All Stormwater and Erosion Control Plans shall include, but not be limited to, the following information:

- Full name, address, and phone number of the owner of record
- Name and address of designated agent or contractor, if any
- Property address and a location map showing property location
- Summary or index of plan content
- Site plan including property boundary and internal lot lines, existing and proposed structures and facilities, location of open space, buffers, natural areas, etc., and topographic information

SECTION 08.00      **COMMENTS FROM THE CONSERVATION DISTRICT**

The Designated Official may submit a Stormwater and Erosion Control plans to the Conservation District for comments and/or recommendations. The Conservation District shall provide any comments and recommendations within fifteen (15) calendar days of receipt of the Stormwater and Erosion Control Plan. Such comments may pertain but need not be limited to:

- Erosion and sedimentation control
- Soil use limitations
- Environmental considerations
- Water management

SECTION 09.00      **CONDITIONS OF APPROVAL**

The developer shall plan necessary sedimentation prevention practices to ensure effective control of soil losses within the tolerable limits prescribed in these Taney County Stormwater and Erosion Control Regulations. It shall be the developer's option to select a specific practice or combination of practices that will provide effective control of sediment within the prescribed limits in his specific area of development.

- A. The sediment control plan should be fitted to the topography and soils so as to create the least potential for soil loss, and maximum use may be made of vegetation to minimize the inevitable soil loss through land-disturbing activity, such as:
  - 1. Natural vegetation should be retained wherever possible.
  - 2. Where inadequate natural vegetation exists, or where it becomes necessary to remove existing natural vegetation, temporary vegetation or mulching should be installed promptly to minimize inevitable soil loss and to ensure that soil losses are kept below the tolerable limits prescribed in these Taney County Stormwater and Erosion Control Regulations.
  - 3. Sediment control elements should be implemented as soon as practical in the development process, except that the time elapsed shall not exceed the time limits prescribed in these Taney County Stormwater and Erosion Control Regulations.
- B. Exposure of the soil through land-disturbing activity should be held to the smallest practical area over and above the exempt limits prescribed in these Taney County Stormwater and Erosion Control Regulations, and to

the shortest practical period of time consistent with maximum tolerable soil loss levels.

- C. Appropriate provisions will be made to accommodate increased stormwater runoff and consequential soil loss occasioned by changed soil and surface conditions during and after development. Plans and specifications to be based on retention of water for a 10 year flood. Plans and specifications to be based on minimal soil loss not to exceed one ton per acre for a 24-hour time period with a maximum loss of 3 ton per acre per year. Such provisions will include in addition to the use of vegetation and limitations on soil exposure, but not be limited to:
  - 1. Scheduling permanent improvements, such as streets, storm sewers, curb and gutters, and other features for control of storm runoff, before removing vegetative cover from the area.
  - 2. Installing and maintaining sediment basins, debris basins, de-silting basins, or silt traps to substantially reduce sediment from runoff water.

## SECTION 10.00 **INSPECTION AND COMPLIANCE**

The Designated Official shall be responsible for determining whether the sediment control element of the plan is in conformance with requirements specified and whether development is proceeding in accordance with the sediment control element of the approved plan.

- A. Periodic inspection of the development site shall be performed by the Designated Official and/or a Conservation District representative. In applying for a Land Grading Permit, the developer shall be deemed to have consented to such inspections
- B. The Designated Official, through such periodic inspections, shall ensure that sediment control elements are implemented within six (6) months after cessation, termination, or completion of grading, whichever occurs first. In the event weather conditions or other factors beyond the control of the developer dictate that the above conditions cannot be met, the developer shall be allowed sufficient time for compliance.
- C. Any erosion or sedimentation control structure or vegetative practice rendered ineffective by an act of God shall not be considered non-compliant with the provisions of these Taney County Stormwater and

Erosion Control Regulations if such structure or practice is restored to its original level of effectiveness within a reasonable length of time as determined by the Designated Official.

SECTION 11.00      **MODIFICATION OF PLAN**

An approved Technical Plan may be modified by submitting an application for modification to the Designated Official. In examining such application, the Designated Official may require additional reports and data sufficient to validate the need for the requested modification.

SECTION 12.00      **LAND DISTURBANCE PERMIT APPLICATION REQUIREMENTS**

No land grading, except hand clearing or brush-hogging, shall commence on any property before all proper permits have been obtained.

12.01      **Filing**

An application for a Land Disturbance permit may be filed with the Staff at any time during regular business hours. The applicant shall complete the permit application with following information:

- Applicant's name, address and phone number
- Property information, including location, proof of ownership, floodplain, etc.
- Description of work to be performed
- Applicable Technical Plans

12.10      **Action**

A.      **Technical Plans**

The developer shall provide a Land Disturbance Plan and Erosion and Sediment Control Plan (see the Taney County Stormwater and Erosion Control Regulations).

B.      **Approvals**

Following the review and comment by the Designated Official and any other qualified authority, such as the Conservation District, as needed, the Designated Official shall approve, deny, or recommend modification of the plans.

C.      **Issuance of Land Disturbance Permit**

Upon approval of the final plans, the Designated Official shall issue a Land Disturbance permit. Such permit may be revoked by the Designated Official if,

upon periodic inspection, it is determined that the work is not progressing in accordance with specifications of the approved plan.

SECTION 13.00      **PERFORMANCE GUARANTEES**

Upon approval of one or more required Technical Plans and before the issuance of an associated permit, the developer may, as a good-faith Performance Guarantee, be required to post a bond with good and sufficient sureties (as set out in sections 64.825 and 107.080 RSMo 1996 incorporated herein by reference with such provisions) as will guarantee the faithful performance of all required work to be done in accordance with the submitted plans.

13.01      **Sediment and Erosion, Stormwater Management, Re-Vegetation Bonds**

A.      **POSTING REQUIREMENTS**

The developer shall provide the necessary surety through certified check, establishment of an escrow account, or one-hundred (100) percent bond for the estimated cost of the required improvements, plus twenty (20) percent, as a guarantee that all improvements will be installed in accordance the Technical Plan submitted (at most within two years) in the amount of all required work to be done under the submitted Plan(s). Any work shown in the submitted plans that is considered above and beyond minimum county standards may be deducted from the required financial posting.

*Note:* Bonds for land grading are addressed in Section 13.10 below

B.      **AMOUNT OF BOND**

The amount of the surety for the Performance Guarantee is specific to the type of work to be performed and will be based on cost estimates provided by a certified engineer.

C.      **RELEASE OF FUNDS**

Prior to a release of funds, either partial or in full, a statement of plan compliance shall be submitted. The statement of compliance shall establish what portions of the plan have been met and to what standard. Up to ninety (90) percent of the funds can be released after all code requirements are met and approved by the Designated Official. Ten (10) percent will be held until the public improvements are accepted by the County to ensure that the required control measures are satisfied.

D.      **FAILURE TO PERFORM**

If all planned improvements are not been completed on time and in compliance with the submitted and approved plan(s), the County will call the account or bond for completion. The Commission may, with sufficient proof of cause, extend the

completion deadline, however no additional phase of the development shall be permitted to begin if an extension has been granted.

13.10 **Land Disturbance Bonds**

**A. POSTING REQUIREMENTS**

Upon approval of a Land Disturbance Plan and the issuance of the Land Disturbance Permit, the developer shall post a performance bond, or submit cash or a certified check, in the amount of work to be done under the permit.

**B. AMOUNT OF BOND**

The amount of the surety for the bond is specific to the type of work to be performed and typically be in the range of \$500 to \$1,000 per acre, with a maximum of \$1,000 per acre. Planning & Zoning Staff shall determine the applicable bond amount.

**C. RELEASE OF FUNDS**

Once the planned work has been completed, the developer shall contact the Planning & Zoning office in writing. Upon review and approval of the work performed (in accordance with the plan), the funds will be released back to the developer.

**D. FAILURE TO PERFORM**

If the planned work has not been completed in compliance with the submitted and approved plan, the County will call the bond for completion. Planning & Zoning Staff, at their discretion, may work with the developer to correct any discrepancies necessary to ensure compliance with the approved plan.