

City Of Colorado Springs City Engineering Grading, Erosion Control And Stormwater Quality Plan Checklist

This checklist is to be used when a Grading Plan is required in accordance with Section 7.7.1503/2001 of the City Code (enacted as ordinance 82-56) per Drainage Criteria Manual Volumes I and II. This checklist is not meant to be all inclusive.

Plan Document

The site plan must show, at the minimum, the following:

1. The plan at a scale of 1-inch to 20 feet up to 1-inch to 100 feet. The plan must include:
 - General vicinity map Showing relationship of the site to existing and planned roadways, jurisdictional boundaries, major creeks, and streams.
 - Subdivision name – The name as it appears on the Final Subdivision Plat.
 - General Notes
 1. Any land disturbance by any owner, developer, builder, contractor, or other person shall comply with the Basic Grading, Erosion and Stormwater Quality Control Requirements and General Prohibitions noted in the Drainage Criteria Manual Volume II.
 2. No clearing, grading, excavation, filling or other land disturbing activities shall be permitted until signoff and acceptance of the Grading Plan and Erosion and Stormwater Quality Control Plan is received from City Engineering.
 3. The installation of the first level of temporary erosion control facilities and BMP's shall be installed and inspected prior to any earth disturbance operations taking place. Call City Stormwater Inspections, 385-5980, 48 hours prior to construction.
 4. Sediment (mud and dirt) transported onto a public road, regardless of the size of the site, shall be cleaned immediately.
 5. Concrete wash water shall not be discharged to or allowed to runoff to State Waters, including any surface or subsurface storm drainage system or facilities.
 6. Soil erosion control measures for all slopes, channels, ditches, or any disturbed land area shall be completed within twenty-one (21) calendar days after final grading or final earth disturbance has been completed. Disturbed areas and stockpiles which are not at final grade but will remain dormant for longer than 30 days shall also be mulched within 21 days after interim grading. An area that is going to remain in an interim state for more than 60 days shall also be seeded. All temporary soil erosion control measures and BMP's shall be maintained until permanent soil erosion control measures are implemented.
 7. The grading and erosion control plan will be subject to re-review and re-acceptance by the City of Colorado Springs Engineering should any of the following occur: grading does not commence within 12 months of the City Engineer's acceptance of the plan, a change in property ownership, proposed development changes, or proposed grading revisions.

8. The Plan shall not change the depth of cover, or access to utility lines. Acceptance of this plan does not constitute approval to grade in any utility easement or right-of-way. Approvals to grade within utility easements must be obtained from the appropriate utility company. It is not permissible for any person to modify the grade of the earth on any Colorado Springs Utilities easement or right-of-way without their written approval. The Plan shall not increase or divert water towards utility facilities. Any changes to utility facilities to accommodate the plan must be approved by the affected utility owner prior to implementing the plan. The cost to relocate or protect utilities or to provide interim access is the applicant's expense.

Timing Anticipated starting and completion time period of site grading:

Expected date on which the final stabilization will be complete:

Areas Total area of the site to be cleared, excavated or graded:

Receiving Waters Name of receiving waters:

- Cost Estimate of the temporary and permanent BMP's including installation and maintenance until final stabilization is achieved. A unit price list may be obtained from the SERT office if needed.
- Signature block for owner/developer acknowledging the review and acceptance of responsibility, a statement by the Professional Engineer acknowledging responsibility for the preparation of the document, a signature block for compliance with the Colorado Discharge Permit System (CDPS), and a review signature block for the City Engineer.
- North Arrow and Scale
- Property lines for the site on which the work will be performed.
- Areas of soil disturbance – anywhere the ground surface is disturbed.
- Cut and fill demarcation line.
- Construction site boundaries – area of soil disturbance and staging areas.
- Existing topography at one or two foot contour intervals. The map should extend a minimum of 50-feet beyond the property line or beyond the project's soil disturbance limits, whichever is larger.
- Proposed topography at one or two foot contour intervals. The map should show elevations and extent and the slope of all proposed grading, including building site and driveway grades.
- Location of any other proposed features and structures on this site.
- Location of all natural features which affect the site specific water quality or adjacent to the site. To include wetlands, highly permeable soils, etc...
- Adjacent existing and proposed development affected by the construction

- Location of soil stockpiles - Areas designated for topsoil and subsoil storage.
- Location of critical erosion areas – areas of highly erodable soils.
- Location of existing or proposed water courses – to include, but not limited to, groundwater springs, streams, wetland, or other surface waters.
- Location and plans for all drainage features, including, paved areas, retaining walls, cribbing, and plantings constructed as part of this proposed site.
- Location of temporary or permanent soil erosion and sediment control measures or other features to be constructed in connection with, or as a part of, the proposed work.
- Depict all erosion control measures using the standard map symbols given in the Drainage Criteria Manual Volume 2, Chapters 3 and 4.
- Location and description of any potential natural pollutant sources –practices implemented at the site to control stormwater pollution from the dewatering of uncontaminated groundwater or stormwater from excavations, wells, etc....
- Location of storage equipment maintenance and temporary disposal areas – for example, areas designated for equipment, building materials, fuel storage, fueling, lubricants, chemical, concrete truck washout, and all temporary construction waste storage.
- Vegetation – existing vegetation to remain and proposed seeding areas
- Location of any dedicated asphalt or concrete batch plants
- Boundaries of the 100-yr floodplain
- Is the site in the City's Streamside Zone - indicate how Streamside design requirements are being addressed.
- Soil Types
- Emergency overflow swales - located at all sump inlet locations and be sized for the 100-yr storm event.
- Flow route – flow through and overflow of permanent BMP's and temporary sediment basins.
- Existing utility locations and easements - grading over existing utilities or within dedicated easements is restricted in accordance with general note 8
- Detail Drawings of Temporary BMP's including installation and maintenance.
- Detail Drawings of Permanent BMP's per Drainage Criteria Manual Volume 2, chapter 4.

Narrative Report or SWMP Report

The narrative/SWMP report must contain, at the minimum, the following:

- Name, address, and telephone number of the owner/developer and, the name, address, and telephone number of the professional engineer preparing the *Grading, Erosion Control and Stormwater Quality Plan*.
- Subdivision Name – The name as it appears on the Final Subdivision Plat.
- Signature page for owner/developer acknowledging the review and acceptance of responsibility, a statement by the Professional Engineer acknowledging responsibility for the preparation of the document, and a review signature block for the City Engineer.

- Project description - A brief description of the nature and purpose of the land disturbing activity, and project location.
- Existing site conditions - A description of the existing topography, vegetation, drainage, and wetlands on the site to include estimate of percent existing vegetation cover. Also include non-stormwater discharges (e.g. springs, landscape irrigation return flow, construction dewatering, concrete washout areas, etc.)
- Receiving waters – name of receiving water and the size, type, and location of any outfalls. Indicate if discharge to existing MS4 and name of ultimate receiving waters.
- Adjacent areas - A description of neighboring areas such as streams, residential areas, roads, etc., which may be affected by the land disturbance.
- Soils - A brief description of the soils on the site including information on soil type and character.
- Description of potential pollutants – sources such as vehicle fueling, chemical/ fertilizer storage, etc.
- Soil Borings/Tests and Groundwater – Soil borings and tests, including groundwater analysis and plan for safe discharge must be included if appropriate.
- Areas and Volume Statement - The total area of the site, the area of disturbance (e.g. cleared, excavated, or graded) involved, and a statement that earthwork cut/fill operations are more or less than 500cy.
- Narrative description of appropriate controls and measures that will be implemented before and during construction activities at the facility. It shall clearly describe the relationship between the phases of construction the proposed sequencing of major activities, BMP's installed under each phase, and the implementation and maintenance of control measures. For example, what BMP's will be implemented during each of the following stages of construction:
 - Clearing and grubbing necessary for perimeter controls
 - Initiation of perimeter controls
 - Remaining clearing and grubbing
 - Road grading
 - Drainage facility installation
 - Utilities installation
 - Final grading
 - Stabilization
 - Removal of temporary control measures

The description of controls shall address the following areas:

- Erosion and Sediment Control. This includes:
 1. Structural Practices – A description of structural site management practices that will minimize erosion and sediment transport.
 2. Non-Structural Practices – A description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices.
- Potential pollutant sources - Identify the location, describe, and plans for waste disposal.
- Materials Handling, and Spill Prevention and Response. The plan shall identify any procedures of materials handled at the site that could contribute pollutants to runoff. Areas where potential spills can occur shall have spill prevention and response procedures identified.

- Timing schedule - indicating the anticipated starting and completion time periods of the site grading, construction sequencing of major activities, including the installation and removal time periods of temporary/construction erosion and sediment control measures, and the time of exposure prior to completion of temporary erosion control measures. Also, anticipated starting and completion dates for each stage of land-disturbing activities, BMP installation, and final stabilization.
- Permanent stabilization - A brief description, including specifications, of how the site will be stabilized after construction is completed. Includes procedures to repair and permanent measures to control pollutants post construction.
- Owner inspections and Maintenance of construction BMP's - A description of procedures and a schedule of regular inspections during construction for vegetation, erosion and sediment control measure repair, and other protective measures identified in the plan. A detailed description of the maintenance program for sediment control facilities, including inspection programs, vegetative establishment on exposed soils, method and frequency of removal and disposal of waste materials from control facilities, and disposition of temporary structural measures shall be included.

Standard Grading, Erosion, And Stormwater Quality Control Plan Notes And Signature Blocks

NOTES: The following plan notes may be used as a substitute for the 22 notes called out in DCM Volume II.

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2. No clearing, grading, excavation, filling, or other land disturbing activities shall be permitted until signoff and acceptance of the Grading Plan and Erosion and Stormwater Quality Control Plan is received from SERT.
3. The installation of the first level of temporary erosion control facilities and BMP's shall be installed and inspected prior to any earth disturbance operations taking place. Call City Stormwater Inspections, 385-5980, 48 hours prior to construction.
4. Sediment (mud and dirt) transported onto a public road, regardless of the size of the site, shall be cleaned immediately.
5. Concrete wash water shall not be discharged to or allowed to runoff to State Waters, including any surface or subsurface storm drainage system or facilities.
6. Soil erosion control measures for all slopes, channels, ditches, or any disturbed land area shall be completed within twenty-one (21) calendar days after final grading or final earth disturbance has been completed. Disturbed areas and stockpiles which are not at final grade but will remain dormant for longer than thirty (30) days shall also be mulched within twenty-one (21) days after interim grading. An area that is going to remain in an interim state for more than sixty (60) days shall also be seeded. All temporary soil erosion control measures and BMP's shall be maintained until permanent soil erosion control measures are implemented.

7. The grading and erosion control plan will be subject to re-review and re-acceptance by SERT should any of the following occur: grading does not commence within twelve (12) months of the City Engineer's acceptance of the plan, a change in property ownership, proposed development changes, or proposed grading revisions.
8. The Plan shall not substantially change the depth of cover, or access to utility facilities. Additionally, the Plan shall not increase or divert water towards utility facilities. Any changes to utility facilities to accommodate the plan, must be discussed and agreed to by the affected utility prior to implementing the plan. The resulting cost to relocate or protect utilities, or provide interim access is at the expense of the Plan applicant.

Description of construction activities:

Anticipated starting and completion time period of site grading:

Expected date on which the final stabilization will be completed:

Areas - Total area of the site to be cleared, excavated, or graded:

Receiving Waters - Name of receiving waters:

Soils information:

Signature Blocks

Engineer's Statement

This Erosion and Stormwater Quality Control/Grading Plan was prepared under my direction and supervision and is correct to the best of my knowledge and belief. If such work is performed in accordance with the grading and erosion control plan, the work will not become a hazard to life and limb, endanger property, or adversely affect the safety, use, or stability of a public way, drainage channel, or other property.

Signature: _____ Date: _____

Printed Name: _____ Seal

Developer's/Owner's Statement

The owner will comply with the requirements of the Erosion and Stormwater Quality Control Plan including temporary BMP inspection requirements and final stabilization requirements. I acknowledge the responsibility to determine whether the construction activities on these plans require Colorado Discharge Permit System (CDPS) permitting for Stormwater discharges associated with Construction Activity.