

*Appendix E*

**GESC Drawing and Report  
Checklist**

**ARAPAHOE COUNTY DRAWINGS AND REPORT CHECKLIST  
FOR STANDARD GESC PERMITS**

**A. DRAWINGS**

**I. COVER SHEET**

- yes  no
- yes  no
- yes  no
- yes  no
- yes  no
- yes  no
- yes  no

1. Project Name.
2. Project address (if applicable) to include zip code.
3. Owner address ( to include zip code \*).
4. Design firm's name and address (\*to include zip code\*).
5. Plan sheet index.
6. Designer's Signature Block.
7. Case Number in the lower left hand corner.
8. The following note:

**THE GRADING, EROSION AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PLACED IN THE ARAPAHOE COUNTY FILE FOR THIS PROJECT AND APPEARS TO FULFILL APPLICABLE ARAPAHOE COUNTY GRADING, EROSION AND SEDIMENT CONTROL CRITERIA, AS AMENDED. ADDITIONAL GRADING, EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED OF THE PERMITTEES DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL RUN WITH THE LAND AND BE THE OBLIGATION OF THE PERMITTEES, UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED, MODIFIED OR VOIDED.**

- yes  no

9. GESC Plan Designer's signature block with name, date, and Professional Engineer registration number. Signature block shall include the following note:

"I HEREBY ATTEST THAT THE ATTACHED GRADING, EROSION, AND SEDIMENT CONTROL (GESC) PLAN FOR (NAME OF SUBDIVISION/DEVELOPMENT) HAS BEEN PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, AND TO THE BEST OF MY KNOWLEDGE AND ABILITY HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST VERSION OF THE ARAPAHOE COUNTY GESC MANUAL. THE SIGNATURE AND STAMP AFFIXED HEREON CERTIFIES THAT THE GESC PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIRED REGULATIONS AND CRITERIA; HOWEVER, THE STAMP AND SIGNATURE DOES NOT CERTIFY OR GUARANTEE FUTURE PERFORMANCE OF THE EXECUTION OF THE PLAN BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR EXECUTING THE CONSTRUCTION WORK ACCORDING TO THE INFORMATION SET FORTH IN THE PLAN AND IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS."

Registered Professional Engineer \_\_\_\_\_  
State of Colorado No. \_\_\_\_\_  
Affix Seal

- yes  no
- yes  no

10. County Approval Block
11. General Location Map at a Scale of 1-inch to 1000 feet to 8000 feet indicating:
  - General vicinity of the site location
  - Major roadway names
  - North arrow and scale

## II. GESC DRAWING INDEX SHEET

For projects that require multiple plan-view sheets to adequately show the project area (based on the specified scale ranges), a single plan-view sheet shall be provided at a scale appropriate to show the entire site on one sheet. Areas of coverage of the multiple blow-up sheets are to be indicated as rectangles on the index sheet.

## III. INITIAL GESC DRAWING

This plan sheet shall provide grading, erosion and sediment controls for the initial clearing, grubbing and grading of a project. At a minimum, it shall contain:

- yes  no      1. Property lines.
- yes  no      2. Existing and proposed easements.
- yes  no      3. Existing topography at one or two foot contour intervals, extending a minimum of 100 feet beyond the property line.
- yes  no      4. Location of any existing structures or hydrologic features within the mapping limits.
- yes  no      5. USGS Benchmark used for project.
- yes  no      6. Limits of construction encompassing all areas of work access points, storage and staging areas, borrow areas, stockpiles, and utility tie-in locations in on-site and off-site locations. Stream corridors and other resource areas to be preserved and all other areas outside the limits of construction shall be lightly shaded to clearly show area not to be disturbed.
- yes  no      7. Location of stockpiles, including topsoil, imported aggregates, and excess material.
- yes  no      8. Location of storage and staging areas for equipment, fuel lubricant, chemical (and other materials) and waste storage.
- yes  no      9. Location of borrow or disposal areas.
- yes  no      10. Location of temporary roads, including haul roads.
- yes  no      11. Location, map symbol, and letter callouts of all initial erosion and sediment control BMPs.
- yes  no      12. Information to be specified for each BMP, such as type and dimensions as called for in the Standard Notes and Details.
- yes  no      13. The following notes:
  - SEE COVER SHEET OF ARAPAHOE COUNTY STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.
  - (WHERE APPLICABLE) ANY BMPS SHOWN THAT REQUIRE GRADING, I.E. SEDIMENT BASINS, SHALL NOT BE PLACED UNTIL AFTER THE PRE-CONSTRUCTION MEETING. IN ADDITION, THE SEDIMENT BASIN (OR OTHER BMP) SHALL NOT BE INSTALLED UNTIL AFTER THE GESC PRE-CONSTRUCTION MEETING AND ISSUANCE OF THE GESC PERMIT BUT MUST BE FULLY FUNCTIONAL PRIOR TO ANY LARGE SCALE GRADING. ALSO, THE INITIAL PLAN IS TO ILLUSTRATE EXISTING CONDITIONS, NO PROPOSED INFRASTRUCTURE SHOULD BE INCLUDED.
- yes  no      14. Other information as may be required by Arapahoe County.

**IV. INTERIM GESC DRAWING**

This plan sheet shows BMPs to control grading, erosion and sediment during the initial overlot grading, site construction and site re-vegetation process. At a minimum, it shall contain the following information:

The Interim GESC Plan shall show all the information included on the Initial GESC Plan, as noted below:

- yes  no      1. Existing topography at one or two foot contour intervals extending a minimum of 100 feet beyond the property line, as shown on Initial GESC Plan. **These contours shall be screened.**
- yes  no      2. Location of all existing erosion and sediment control measures on site, as shown on the **INITIAL** GESC Plan Sheet. **These control measures shall be screened. Dimension information for initial stage BMPs shall not be shown.**
- yes  no      3. Items 1, 2, and 4 through 14 from the Initial GESC Plan (see Section 4.1.3).
- yes  no      4. Proposed topography at one or two foot contour intervals, showing elevations, dimensions, locations, and slope of all proposed grading.
- yes  no      5. Outlines of cut and fill areas.
- yes  no      6. Location of all interim erosion and sediment controls designed in conjunction with the proposed site topography, but also considering the controls designed for the existing topography.
- yes  no      7. Locations of all buildings, drainage features and facilities, paved areas, retaining walls, cribbing, water quality facilities, or other permanent features to be constructed in connection with, or as a part of, the proposed work, per approved plat, FDP, or other improvement plan.
- yes  no      8. The following notes:
  - SEE COVER SHEET OF ARAPAHOE COUNTY STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.
  - SHADED BMPs WERE INSTALLED IN INITIAL STAGE AND SHALL BE LEFT IN PLACE IN INTERIM STAGE.
  - ALL INTERIM BMPs, INCLUDING SEEDING AND MULCHING OF DISTURBED AREAS, MUST BE COMPLETED PRIOR TO ISSUANCE OF ANY CURB AND GUTTER PERMITS.
  - ALL INTERIM BMPs, INCLUDING SEEDING AND MULCHING OF DISTURBED AREAS, MUST BE COMPLETED WITHIN 14 DAYS IF THE AREAS WILL REMAIN UNDISTURBED FOR A PERIOD GREATER THAN 30 DAYS AND PRIOR TO ISSUANCE OF ANY CURB AND GUTTER PERMITS.
  - ALL PROPOSED SLOPES ON THIS PLAN HAVE A MAXIMUM SLOPE OF 4:1. ANY SLOPES BETWEEN 3:1 AND 4:1 WILL REQUIRE THE USE OF EROSION CONTROL BLANKETS OR FLEXIBLE GROWTH MEDIUM.
  - SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, CULVERTS, STORM DRAINS, AND INLET AND OUTLET PROTECTION.
  - (WHERE APPLICABLE) AT NO TIME DURING THE DEVELOPMENT/CONSTRUCTION OF SITE RUNOFF BE ALLOWED TO ENTER THE POST-CONSTRUCTION PERMANENT BMPs WITHOUT FIRST HAVING BEEN TREATED IN A SEDIMENT BASIN. ALLOWING RUNOFF FROM THE SITE DURING CONSTRUCTION MAY RESULT IN THE POST-CONSTRUCTION PERMANENT BMPs HAVING TO BE RECONSTRUCTED IN ITS ENTIRETY. REMOVAL OF SEDIMENT PONDS ON SITE SHALL ONLY OCCUR AFTER ALL AREAS TRIBUTARY TO THE SEDIMENT POND HAVE BEEN FINAL LANDSCAPED AND ALL VEGETATION HAS BEEN ESTABLISHED IN THE OPINION OF THE COUNTY AND SEMSWA.
- yes  no      9. Summary of cut and fill volumes.
- yes  no      10. Other information or data as may be required by Arapahoe County.

## V. FINAL GESG DRAWING

This plan sheet shows controls for final completion of the site. At a minimum, this plan sheet shall contain the indicated information.

The Final GESG Plan shall include all information shown on the Initial and Interim Plans, as noted below:

- |  |   |
|--|---|
| <input type="checkbox"/> yes <input type="checkbox"/> no | 1. Existing topography in areas of proposed contours need not be shown.   |
| <input type="checkbox"/> yes <input type="checkbox"/> no | 2. Existing Initial and Interim BMPs shall be shown, ( <b>screened</b> ). Dimension information shall not be shown  |
| <input type="checkbox"/> yes <input type="checkbox"/> no | 3. Directional flow arrows on all drainage features.  |
| <input type="checkbox"/> yes <input type="checkbox"/> no | 4. Any Initial or Interim BMPs that are to be removed and any resulting disturbed area to be stabilized.  |
| <input type="checkbox"/> yes <input type="checkbox"/> no | 5. Location of all Final erosion and sediment control BMPs (including seeding and mulching of any areas not stabilized in the Interim Plan), permanent landscaping, and measures necessary to minimize the movement of sediment off site until permanent vegetation can be established.   |
| <input type="checkbox"/> yes <input type="checkbox"/> no | 6. Show area of buildings, pavement, sod and permanent landscaping (define types) per accepted plat, SIP, RSP, or other improvement plan.   |
| <input type="checkbox"/> yes <input type="checkbox"/> no | 7. Show seeding and mulching (SM) everywhere except buildings and pavement areas.   |
| <input type="checkbox"/> yes <input type="checkbox"/> no | 8. Show other BMPs considered by the designer to be appropriate.  |
| <input type="checkbox"/> yes <input type="checkbox"/> no | 9. Show the following BMPs to be removed prior to end of construction: <ul style="list-style-type: none"><li>• Indicate dewatering (DW) to be removed.</li><li>• Indicate temporary stream crossing (TSC) to be removed.</li><li>• Indicate stabilized staging area (SSA) to be removed.</li><li>• Indicate street inlet protection (IP) to be removed.</li><li>• Indicate vehicle tracking control (VTC) to be removed.</li><li>• Indicate construction fence (CF) to be removed.</li></ul>  |
| <input type="checkbox"/> yes <input type="checkbox"/> no | 10. The following notes: <ul style="list-style-type: none"><li>• SEE COVER SHEET OF ARAPAHOE COUNTY STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS.</li><li>• SHADED BMPS WERE INSTALLED IN INITIAL OR INTERIM GESG PLAN AND, UNLESS OTHERWISE INDICATED, SHALL BE LEFT IN PLACE UNTIL REVEGETATION ESTABLISHMENT IS APPROVED BY THE COUNTY.</li><li>• ALL INTERIM BMPS, INCLUDING SEEDING AND MULCHING OF DISTURBED AREAS, MUST BE COMPLETED WITHIN 14 DAYS IF THE AREAS WILL REMAIN UNDISTURBED FOR A PERIOD GREATER THAN 30 DAYS AND PRIOR TO ISSUANCE OF ANY CURB AND GUTTER PERMITS.</li><li>• ALL PROPOSED SLOPES ON THIS PLAN HAVE A MAXIMUM SLOPE OF 4:1. ANY SLOPES BETWEEN 3:1 AND 4:1 WILL REQUIRE THE USE OF EROSION CONTROL BLANKETS OR MECHANICALLY BONDED FIBER MATRIX.</li><li>• SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, CULVERTS, STORM DRAINS, AND INLET AND OUTLET PROTECTION.</li><li>• ACCEPTANCE OF THE POST-CONSTRUCTION PERMANENT BMPS WILL NOT OCCUR UNTIL ALL TRIBUTARY TO THE POST-CONSTRUCTION PERMANENT BMPS ARE COMPLETE AND FINAL LANDSCAPE HAS BEEN ESTABLISHED.</li></ul> |
| <input type="checkbox"/> yes <input type="checkbox"/> no | 11. Other information or data as may be required by Arapahoe County.  |

## VI. GESC DRAWING AND REPORT CHECKLIST

A copy of this GESC Drawing and Report Checklist must be completely filled out, signed by the designer, and submitted with the GESC Plan.

### B. REPORT REQUIREMENTS FOR STANDARD GESC PERMITS

The narrative report shall contain the following information:

- yes  no      1. Name, address (include zip code), and telephone number of the applicants - The name, address, and telephone number of the Professional Engineer preparing (or supervising the preparation of) the GESC Plan shall also be included, if different from the applicant.
- yes  no      2. Project description - A brief description of the nature and purpose of the land-disturbing activity, the total area of the site, the area of disturbance involved, and project location including township, range, section and quarter-section, or the latitude and longitude, of the approximate center of the project.
- yes  no      3. Existing site conditions – A description of the existing topography, vegetation, and drainage; a description of any wetlands on the site; and any other unique features of the property.
- yes  no      4. Adjacent areas - A description of neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance.
- yes  no      5. Soils – A brief description of the soils on the site including information on soil type and names, mapping unit, erodibility, permeability, hydrologic soil group, depth, texture, and soil structure (this information may be obtained from the soil report for the site, from adjacent sites if acceptable to the County, or the applicable Soil Survey prepared by the Natural Resources Conservation Service).
- yes  no      6. Areas and Volumes - An estimate of the quantity (in cubic yards) of excavation and fill involved (indicating a balance onsite), and the surface area (in acres) of the proposed disturbance.
- yes  no      7. Erosion and sediment control measures - A description of the methods presented in the GESC Criteria Manual that will be used to control erosion and sediment on the site.
- yes  no      8. Timing/Phasing schedule – A schedule indicating the anticipated starting and completion time periods of the site grading and/or construction sequence, including the installation and removal of erosion and sediment control BMPs. Indicate the anticipated starting and completion time periods of individual project phases.
- yes  no      9. Permanent stabilization - A brief description, including applicable specifications, of how the site will be stabilized after construction is completed.
- yes  no      10. The following note – “*This Grading, Erosion and Sediment Control Plan* has been placed in the Arapahoe County file for this project and appears to fulfill the applicable Arapahoe County *Grading, Erosion and Sediment Control Criteria*, as amended. I understand that additional grading, erosion and sediment control measures may be required of the Permittees, due to unforeseen erosion problems or if the submitted plan does not function as intended. The requirements of this plan shall run with the land and be the obligation of the Permittees until such time as the plan is properly completed, modified or voided.
- yes  no      11. Signature Page – for Permittees acknowledging the review and acceptance of responsibility, and a statement by the professional engineer acknowledging responsibility for the preparation of the GESC plan. Other information or data as may be required by Arapahoe County.
- yes  no      12. Stormwater management considerations – Explain how stormwater runoff from and through the site will be handled during construction.
- yes  no      13. Maintenance – Any special maintenance requirements over and above what is identified in the standard notes and details.

- yes  no 14. Engineer's Cost Estimate for installation and maintenance of controls – An Engineer's Cost Estimate, as a stand alone document for erosion and sediment control, including anticipated maintenance during the construction phase, shall be submitted with the GESC Plan. This will be reviewed by County staff and used as a basis for collateral. A copy of a spreadsheet to be used for preparing the Engineer's Cost Estimate for erosion and sediment control is included in Appendix F&G of the GESC Criteria Manual. An electronic copy of the spreadsheet is available from the Arapahoe County Engineering services Division of the Department of Public Works and Development.  
Unit costs used to develop probable erosion and sediment control costs shall be those shown in the spreadsheet.
- yes  no 15. Calculations – Any calculations made for the design of such items as sediment basins or erosion control blanket selection.
- yes  no 16. Other information or data as may be required by Arapahoe County.