



**GRADING PERMIT APPLICATION**  
**2020 Zoning Development Permit (ZDP)**  
**(For land disturbing activity over 7500 s.f.)**  
**(Revised 1/1/2020)**

Project # \_\_\_\_\_  
Fee \$137.00 (No fee if in  
conjunction with new Single Family  
Residence or new Commercial  
Development ZDP)

**1. Applicant Information**

- a. Applicant Name \_\_\_\_\_
- b. Excavator \_\_\_\_\_ Property Owner \_\_\_\_\_

**2. Property Owner Information**

- a. Name \_\_\_\_\_ Project Contact? Yes No
- b. Mailing Address \_\_\_\_\_
- c. E-mail Address \_\_\_\_\_
- d. Phone Numbers Home \_\_\_\_\_ Work \_\_\_\_\_ Mobile \_\_\_\_\_

**3. Excavator Information**

- a. Name \_\_\_\_\_
- b. Company Name \_\_\_\_\_
- c. Mailing Address \_\_\_\_\_
- d. Field Phone # \_\_\_\_\_ E-Mail Address \_\_\_\_\_
- e. Contractor License # \_\_\_\_\_ WP Business License # \_\_\_\_\_

**4. Site Information**

- a. Site Address \_\_\_\_\_
- b. Lot \_\_\_\_ Block \_\_\_\_ Subdivision \_\_\_\_\_
- c. Property Zoning \_\_\_\_\_ Lot Size \_\_\_\_\_ Acres Square Feet

**5. Project Information**

- a. Total Area of Disturbance (include ALL ground surface disruption area) \_\_\_\_\_ sq. ft.
- b. Type of Development:  
Commercial  
Infrastructure  
Single Family  
Other \_\_\_\_\_
- c. Erosion and Sediment Control Plan been filed with the City Planning Department?  
Yes No N/A Other \_\_\_\_\_
- d. Project Start Date \_\_\_\_\_ Project Completion Date \_\_\_\_\_


**6. Submittal Requirements**

The following items must be included at time of submittal (in addition to items on the submittal checklists) or the application will not be processed (additional copies may be requested).

| <b>Grading Plan</b><br>With all items on the Grading Permit Checklist attached to this application | <b>Grading &amp; Erosion and Sediment Control Plan or Stormwater Management Plan</b><br>At a scale no less than 1"=50' | <b>Written Description of the Project</b><br>Per the guidelines attached to application |
|--|--|---|
| (1) - 24" x 36" set<br>(1) - 11" x 17" set   | 1 copy   | 1 copy  |

**7. Certification**

The undersigned applicant certifies under oath and under penalties of perjury that the information found in the application is true and accurate to the best of their knowledge. I certify that I understand that the proposed development is in accordance with all provisions of the City of Woodland Park's Municipal Code and other applicable regulations.

 a. Applicant Signature \_\_\_\_\_ Date \_\_\_\_\_

 b. Property Owner Signature \_\_\_\_\_ Date \_\_\_\_\_

**8. Permit Issuance**

a. Permit Approved By \_\_\_\_\_ Date \_\_\_\_\_

b. Title \_\_\_\_\_

## Financial/Ownership Responsibility Form

### 1. Land Owner(s) of Record: Use blank page to list additional owners

|  |  |
|--|--|
| Name   | Name   |
| Address  | Address  |
| City                      State                      Zip | City                      State                      Zip |
| Phone Number   | Phone Number   |

### 2. Person(s) or Firm(s) Responsible for Land Disturbing Activity

|  |  |
|--|--|
| Name   | Name   |
| Address  | Address  |
| City                      State                      Zip | City                      State                      Zip |
| Phone Number   | Phone Number   |

### 3. Registered Agent, if any, for the person or firm who is financially responsible

|  |
|--|
| Name   |
| Address  |
| City                      State                      Zip |
| Phone Number   |

**The above information is true and correct to the best of my knowledge and belief.**

\_\_\_\_\_  
Type or Print Name



\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**GUIDELINES FOR DEVELOPING EROSION AND SEDIMENT CONTROL PLAN (ESCP)  
(a.k.a. Stormwater Management Plan (SWMP))  
FOR THE CITY OF WOODLAND PARK, COLORADO**

I. INTRODUCTION

A. Extensive amounts of sediment are produced from grading development sites, streets and roads in the mountain environments of Colorado if erosion control measures are not properly designed and installed. Irreversible damage to land, stream channels and lakes is occurring from acceleration of development in these areas. These guidelines are offered as a minimal guideline, but the contractor/developer must keep in mind that the City of Woodland Park Erosion and Sedimentation Control Section is performance oriented and the contractor/developer must do whatever is necessary to prevent offsite damage and the discharge of sediment.

B. These guidelines are developed to assist planners, contractors and developers to protect land and stream channels from sedimentation as required by the City of Woodland Park Soil Erosion and Sedimentation Control Section.

C. City code, Sections 18.40.020 and 18.40.140 require that for land disturbing activities of 7,500 SF or more, construction of a road, or for any commercial construction that an Erosion and Sediment Control Plan (ESCP) be prepared and the specified measures installed. To eliminate duplication of effort, the ESCP is to be prepared in the same manner as the Stormwater Management Plan (SWMP) required by the Colorado Department of Public Health and Environment (CDPHE), Water Quality Control Division, Construction Stormwater Permit <http://www.cdphe.state.co.us/wq/PermitsUnit/stormwater/index.html>. For projects required to have a CDPHE Construction Stormwater Permit (*i.e. construction activity that disturbs at least 1 acre of land or is part of a larger common plan of development that disturbs at least 1 acre*) the SWMP for that permit may be used as the ESCP required by the City of Woodland Park. A Zoning Development Permit is required for 1,500 SF of land disturbing activity in accordance with Section 18.72.020.

II. MANDATORY STANDARDS FOR LAND-DISTURBING ACTIVITY (18.40.040)

A. No land-disturbing activity subject to Section 18.40.040 shall be undertaken except in accordance with the following mandatory requirements:

1. Buffer Zone. No land-disturbing activity shall be permitted in proximity to a lake or natural watercourse channel unless a buffer zone is provided along the margin of the lake or natural watercourse channel of sufficient width to confine visible siltation within the 25 percent of the buffer zone near the land-disturbing activity.

2. Graded Slopes and Fills. The angle for graded slopes and fills shall be no greater than the angle, which can be retained by vegetative cover or other adequate erosion control devices or structures. In any event, slopes left exposed will, within 30 working days of completion of the rough grading phase or immediately after the final grading phase, be planted or otherwise provided with ground cover, devices or structures sufficient to restrain erosion.

3. Groundcover. Whenever land-disturbing activity is undertaken on a tract as defined in Section 18.40.140 is disturbed (*i.e. an area of 7,500 SF or more, construction of a public road or commercial construction*) the person conducting the land-disturbing activity shall install such sedimentation and erosion control devices and practices as are sufficient to retain the sediment generated by the land-disturbing activity within the boundaries of the tract during construction upon and development of said tract, and shall plant or otherwise provide a permanent ground cover sufficient to restrain erosion after completion of construction or development in accordance with the City of Woodland Park Soil Erosion and Sedimentation Control Ordinance.

4. Prior Plan Approval. Approval of an Erosion and Sediment Control Plan is required prior to commencement of land-disturbing activities. 1,500 SF of land-disturbing activity requires a Zoning Development Permit (ZDP).

### III. DESIGN AND PERFORMANCE STANDARD (18.40.050)

- A. Erosion and sedimentation control measures, structures, and devices shall be planned, designed, and constructed so as to provide protection from the calculated maximum peak rate of runoff from the 5-year storm.

### IV. EROSION AND SEDIMENT CONTROL PLAN (ESCP)/STORMWATER MANAGEMENT PLAN (SWMP) MINIMUM REQUIREMENTS

#### A. General Requirements

1. The ESCP/SWMP shall be prepared in accordance with good engineering, hydrologic and pollution control practices.
2. The ESCP/SWMP shall:
  - a) Identify all potential sources of pollution, which may reasonably be expected to affect the quality of stormwater discharges associated with construction activity from the facility.
  - b) Describe the practices to be used to reduce the pollutants in stormwater discharges associated with construction activity at the facility; and ensure the practices are selected and described in accordance with good engineering practices, including the installation, implementation and maintenance requirements.
  - c) Be kept up-to-date and a copy maintained on site for ready availability to the contractor/developer and City Inspector.

#### B. Site Description

1. The ESCP/SWMP shall clearly describe the construction activities, to include:
  - a) The nature of the construction activity at the site.
  - b) The proposed sequence for major activities.
  - c) Estimates of the total area of the site, and the area and location expected to be disturbed by clearing, excavation, grading, or other construction activities.
  - d) A summary of any existing data used in the development of the site construction plans or ESCP/SWMP that describe the soil or existing potential for soil erosion.
  - e) A description of the existing vegetation at the site and an estimate of the percent vegetative ground cover.
  - f) The location and description of all potential pollution sources, including ground surface disturbing activities, vehicle fueling, storage of fertilizers or chemicals, etc.
  - g) The location and description of any anticipated allowable sources of non-stormwater discharge at the site, e.g., uncontaminated springs, landscape irrigation return flow, construction dewatering, and concrete washout.
  - h) The name of the receiving water(s) and the size, type and location of any outfall(s). If the stormwater discharge is to a municipal separate storm sewer system, the name of that system, the location of the storm sewer discharge, and the ultimate receiving water(s).

#### C. Site Map

1. The ESCP/SWMP shall include a legible site map(s), showing the entire site, identifying:
  - a) Construction site boundaries;
  - b) All areas of ground surface disturbance;
  - c) Areas of cut and fill;
  - d) Areas used for storage of building materials, equipment, soil, or waste;
  - e) Locations of dedicated asphalt or concrete batch plants;
  - f) Locations of all structural Best Management Practices (BMPs);
  - g) Locations of non-structural BMPs as applicable; and
  - h) Locations of springs, streams, wetlands and other surface waters.

#### D. ESCP/SWMP Administrator

1. The ESCP/SWMP shall identify a specific individual(s), position or title that is responsible for developing, implementing, maintaining, and revising the ESCP/SWMP. The activities and responsibilities of the administrator shall address all aspects of the facility's ESCP/SWMP.

## **E. Identification of Potential Pollutant Sources**

1. All potential pollutant sources, including materials and activities, at a site must be evaluated for the potential to contribute pollutants to stormwater discharges. The ESCP/SWMP shall identify and describe those sources determined to have the potential to contribute pollutants to stormwater discharges, and the sources must be controlled through BMPs selection and implementation, as required in number E.3. (below).

2. At a minimum, each of the following sources and activities shall be evaluated for the potential to contribute pollutants to stormwater discharges, and identified in the ESCP/SWMP if found to have such potential:

- a) All disturbed and stored soils;
- b) Vehicle tracking of sediments;
- c) Management of contaminated soils;
- d) Loading and unloading operations;
- e) Outdoor storage activities (building materials, fertilizers, chemicals, etc.);
- f) Vehicle and equipment maintenance and fueling;
- g) Significant dust or particulate generating processes;
- h) Routine maintenance activities involving fertilizers, pesticides, detergents, fuels, solvents, oils, etc.
- i) On-site waste management practices (waste piles, liquid wastes, dumpsters, etc.);
- j) Concrete truck/equipment washing, including the concrete truck chute and associated fixtures and equipment;
- k) Dedicated asphalt and concrete batch plants;
- l) Non-industrial waste sources such as worker trash and portable toilets; and other areas or procedures where potential spills can occur.

3. Best Management Practices (BMPs) for Stormwater Pollution Prevention - The ESCP/SWMP shall identify and describe appropriate BMPs, including, but not limited to, those required by paragraphs a) through h) below, that will be implemented at the facility to reduce the potential of the sources identified above to contribute pollutants to stormwater discharges. The ESCP/SWMP shall clearly describe the installation and implementation specifications for each BMP identified in the ESCP/SWMP to ensure proper implementation, operation and maintenance of the BMP.

a) Structural Practices for Erosion and Sediment Control. The ESCP/SWMP shall clearly describe and locate all structural practices implemented at the site to minimize erosion and sediment transport. Practices may include, but are not limited to: wattles/sediment control logs, silt fences, earth dikes, drainage swales, sediment traps, subsurface drains, pipe slope drains, inlet protection, outlet protection, gabions, and temporary or permanent sediment basins.

b) Non-Structural Practices for Erosion and Sediment Control. The ESCP/SWMP shall clearly describe and locate, as applicable, all non-structural practices implemented at the site to minimize erosion and sediment transport. Description must include interim and permanent stabilization practices, and site-specific scheduling for implementation of the practices. The ESCP/SWMP should include practices to ensure that existing vegetation is preserved where possible. Non-structural practices may include, but are not limited to: temporary vegetation, permanent vegetation, mulching, geotextiles, sod stabilization, slope roughening, vegetative buffer strips, protection of trees, and preservation of mature vegetation.

c) Phased BMP Implementation. The ESCP/SWMP shall clearly describe the relationship between the phases of construction, and the implementation and maintenance of both structural and non-structural stormwater management controls. The ESCP/SWMP must identify the stormwater management controls to be implemented during the project phases, which can include, but are not limited to, clearing and grubbing; road construction; utility and infrastructure installation; vertical construction; final grading; and final stabilization.

d) Materials Handling and Spill Prevention. The ESCP/SWMP shall clearly describe and locate all practices implemented at the site to minimize impacts from procedures or

significant materials (include, but not limited to: raw materials; fuels; materials such as solvents, detergents, etc.) that could contribute pollutants to runoff. Such procedures or significant materials could include: exposed storage of building materials; paints and solvents; fertilizers or chemicals; waste material; and equipment maintenance or fueling procedures.

Areas or procedures where potential spills can occur must have spill prevention and response procedures identified in the ESCP/SWMP.

e) Dedicated Concrete or Asphalt Batch Plants. The ESCP/SWMP shall clearly describe and locate all practices implemented at the site to control stormwater pollution from dedicated concrete batch plants or dedicated asphalt batch plants covered by this plan.

f) Vehicle Tracking Control. The ESCP/SWMP shall clearly describe and locate all practices implemented at the site to control potential sediment discharges from vehicle tracking. Practices must be implemented for all areas of potential vehicle tracking, and can include: minimizing site access; street sweeping or scraping; tracking pads; graveled parking areas; requiring that vehicles stay on paved areas on-site; wash racks; contractor education; and/or sediment control BMPs, etc.

g) Waste Management and Disposal, Including Concrete washout.

i) The ESCP/SWMP shall clearly describe and locate the practices implemented at the site to control stormwater pollution from all construction site wastes (liquid and solid), including concrete washout activities.

ii) The practices used for concrete washout must ensure that these activities do not result in the contribution of pollutants associated with the washing activity to stormwater runoff.

iii) The ESCP/SWMP shall clearly describe and locate the practices to be used that will ensure that no washout water from concrete washout activities is discharged from the site as surface runoff or to surface waters.

h) Groundwater and Stormwater Dewatering.

i) The ESCP/SWMP shall clearly describe and locate the practices implemented at the site to control stormwater pollution from the dewatering of groundwater or stormwater from excavations, wells, etc.

ii) For any construction dewatering of groundwater not authorized under a separate State issued discharge permit, the ESCP/SWMP shall clearly describe and locate the practices to be used that will ensure that no groundwater from construction dewatering is discharged from the site as surface runoff or to surface waters.

4. Revising BMPs and the ESCP/SWMP: At nearly every site, the implemented BMPs will have to be modified to adapt to changing site conditions, or to ensure that potential pollutants are consistently and properly managed. The pollutant sources and management practices at a site must be reviewed on an ongoing basis. When BMPs or other site conditions change, the ESCP/SWMP must be modified to accurately reflect the actual field conditions. Examples include, but are not limited to, removal of BMPs, identification of new potential pollutant sources, addition of BMPs, modification of BMP installation and implementation criteria or maintenance procedures, and changes in items included in the site map and/or description. ESCP/SWMP revisions must be made prior to changes in site conditions. The ESCP/SWMP should be viewed as a "living document" that is continuously being reviewed and modified as part of the overall process of assessing and managing stormwater quality issues at the site. Legible, "Red-lined" plans modified in the field will be acceptable.

## **F. Final Stabilization and Long-term Stormwater Management**

1. The ESCP/SWMP shall clearly describe the practices used to achieve final stabilization of all disturbed areas at the site, and any planned practices to control pollutants in stormwater discharges that will occur after construction operations have been completed at the site.

2. Final stabilization practices for obtaining a vegetative cover should include, as appropriate: seed mix selection and application methods; soil preparation and amendments; soil stabilization practices (e.g., crimped straw, hydro mulch or rolled erosion control products); and appropriate sediment control BMPs as needed until final stabilization is achieved; etc.

3. Final stabilization is reached when all ground surface disturbing activities at the site have been completed, and uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed.

## **G. Inspection and Maintenance Procedures**

1. The ESCP/SWMP shall clearly describe the inspection and maintenance procedures implemented at the site to maintain all erosion and sediment control practices and other protective practices identified in the ESCP/SWMP, in good and effective operating condition.

a) Inspection Schedule: Site inspections shall be performed and documented at least every 14 days and within 24 hours of any precipitation or snowmelt event that causes surface erosion. If more frequent inspections are required to ensure that BMPs are properly maintained and operated, the inspection schedule must be modified to meet this need.

b) Inspection Procedures: The inspection must include observation of:

- ✓ The construction site perimeter and discharge points (including discharges into a storm sewer system);
- ✓ All disturbed areas;
- ✓ Areas used for material/waste storage that are exposed to precipitation;
- ✓ Other areas determined to have a significant potential for stormwater pollution, such as demolition areas or concrete washout locations, or locations where vehicles enter or leave the site;
- ✓ Erosion and sediment control measures identified in the SWMP; and
- ✓ Any other structural BMPs that may require maintenance, such as secondary containment around fuel tanks, or the condition of spill response kits.



# GRADING PERMIT CHECK LIST

Section 18.41.070

**A. Any land-disturbing activity whose design requires the grading of slopes shall meet the following specific standards:**

1. All unarmored and structurally unretained graded slopes and fills shall be limited to a maximum 3:1 grade. (Note: three feet horizontal to one foot vertical typical), (except where soil conditions may require up to 3:1 as deemed necessary by the city engineer).
2. Any graded or fill slope which exceeds a 3:1 grade shall be required to use universally accepted armoring techniques, or retaining structures as approved by the city engineer or, at the developers expense, certification by a licensed professional engineer stating that the slopes can be stabilized by plantings, vegetative seeding, mulching. In the instance of slope cuts that involve rock formations it may be required to be certified by a registered geologist.
- 3). Any retaining structures exceeding four feet (4') in height shall be certified by a licensed professional engineer to have been built in accordance with the approved plan. Such certification shall be submitted to the planning department and approved by the City Engineer.
- 4). Any graded or fill slope, which exceeds a 3:1 grade shall be terraced at twenty-foot vertical intervals. Slopes graded between 2:1 and 3:1 shall have a minimum bench width of five feet. Slopes steeper than 2:1 shall have a minimum bench width of five feet, and may be required to have wider benches upon staff review of grading plan.
- 5). Any graded slope, which exceeds a 3:1 grade, shall be grade staked before grading process begins. The City of Woodland Park Public Works shall be notified immediately after slope has been staked and prior to grading.
- 6). Maximum slopes proposed within a minimum of twenty feet of an established property line or any required setback adjacent to a property line shall be 3:1 tying into existing grades along perimeter or property line of the site or retained via retaining walls or other acceptable measures. Encroachment of grading onto adjacent lots will not be allowed except where easements have been obtained prior to the grading.
- 7). Field stakes sufficient to delineate property boundary shall be in place at the time the grading plan is submitted for review.

**B. Construction Sequence.** A construction sequence outlining the proposed timetable for completion of each phase of site grading work shall be required to be submitted in conjunction with the grading plan to the city planning department for review and approval.

Where practical, construction of all slopes and retaining structures shall be completed and approved by inspection and certification prior to initiating any approved building construction. Practicality shall be determined on a case specific basis by the planning director or his/her designee. (Ord. 709-1997 § 2 (part))

**C. Basic Survey Data. The following survey data must be obtained to correctly execute the grading plans. This information conveys the impact of the proposed development on the lot and adjacent area:**

1. Boundary information (metes and bounds, legal description) of the site if available. Also show existing and proposed street rights-of-way.
2. Location of existing curbing, walks, grass, utility or planting strips, edge of pavement, roadway medians (if any), and respective grades, widths, and alignments.
3. Location, size, and depths of all existing underground utilities when available, including gas, electric, water, sanitary sewer, storm drainage features and television cable and location and approximate height above existing grade of overhead utility lines and poles.
4. Location and description of all recorded public or private utility easements, building setbacks, and drainage easements encumbering the lot.
5. Location of all natural features, such as rock outcroppings, watersheds, streams, ponds, etc. on the lot or within one hundred feet of the "graded area."

6. Show existing structures such as buildings, retaining walls, fences, building foundations, underground storage tanks, etc. Also show or indicate the existence of any wells or septic fields within one hundred feet of the "graded area." Reference setbacks of other buildings on adjacent properties and adjacent property lines.

- D. **Grading Plan Format.** The grading plan shall show the existing and proposed shape of earth and surfaced areas. The method of portrayal shall be well thought out and systematized. The following information shall be included in all grading plans submitted to the City of Woodland Park for approval:
1. Show grades at corners of buildings, step landings, and first floor elevations.
  2. Show finished grades at the edges of surfaced areas and at such interior points as necessary to show the shaping of the area. Use a combination of proposed contours and spot elevations to convey this information.
  3. Show proposed roadway elevations by proposed contours and spot elevations where necessary. Depend on profiles, cross sections, and spot elevations to establish the grading of paved areas such as roadways.
  4. Show top-of-curb grades at all connecting walks, curb returns, and all catch basin locations.
  5. Show spot elevations along swale lines, using arrows to show direction of flow. Show slope gradients.
  6. Show top elevations of all storm and sanitary sewer manholes and other appurtenances.
  7. Lawn and earth grades can be shown by proposed contours and spot elevations where necessary.
  8. Existing contours are usually shown by broken lines and proposed finished contours by solid lines over surfaced, lawn and earth areas.
  9. Show the proposed location of stockpiled topsoil for future use in landscaped areas. This should be located outside the root zones of significant vegetation to be preserved to avoid root compaction.
  10. Reference the storage locations of construction materials outside the root zones of vegetation to be preserved to avoid root compaction.
  11. Show the location of existing significant vegetation such as specimen trees or the canopy limits of wooded areas intended for preservation.
  12. Note the elevations of any floodplains located on a lot, or directly affecting a lot, (i.e. drainage, sediment and erosion control considerations and/or watershed protection). (Ord. 709-1997 § 2 (part))

## EXAMPLE NARRATIVE

December 21, 2018

### **EROSION AND SEDIMENT CONTROL PLAN / STORMWATER MANAGEMENT PLAN NARRATIVE (ESCP / SWMP)**

1234 Drainage Lane  
Woodland Park, CO 80863  
THE CHIPMUNK RESIDENCE  
By PINE CONE CONSTRUCTION, INC.  
(719) 687-1234

Every effort will be made to comply with all aspects of the "Guidelines for Developing Erosion and Sediment Control Plan" for the City of Woodland Park. The ESCP/SWMP Plan is designed to address the minimum requirements as stated in the Design and Performance Standards. The following is further explanation of the erosion control measures that will be taken by the contractor.

This is a single family residence of 2,500 SF in finished area on three levels, with a drive under basement garage/shop area of 980 SF and a small unfinished basement area of 400 SF. The footprint of the house is 1,785 SF. The entire area of disturbance on the 1.20 acre lot will be 16,950 SF. There will be a future patio and deck areas off the east side of the house which will be rough graded during construction. The driveway will be gravel at the end of construction, and will probably remain gravel for some time. The construction of the residence will be the only potential source of any erosion hazards in a severe storm water discharge, but with the house located on the extreme uphill east side of the lot all drainage will be mitigated before reaching the street. It should also be noted this is the last house at the end of Grading Lane on the cul-de-sac, and existing drainage flow does not impact any other lots.

Mitigation practices will be Best Management Practices (BMP) for the entire construction sequences. Since the majority of the construction will be during the winter months, these mitigation proposals will be highly dependent upon cooperating weather. The plan calls for the use of waddles as necessary, silt fencing, and rough grading during the time of construction. During final grading and completion of the project, native grass seeding, armoring of certain earthen slopes (greater than 3:1 slope), native grass mix hydro- seeding, and restoring of native top soils will be made. The site is moderately wooded with ponderosa pine and aspen trees and some scrub oak and ground junipers. There is an existing drainage channel adjacent to the north property line and on the adjacent lot which picks up a very small amount of drainage from subject lot and discharges this water into the street R.O.W. The area of drainage into this drainage channel will not significantly be disturbed during construction so there will be no impact from construction drainage into this drainage. The existing slopes on the site vary from roughly 15% to 40%. The site becomes increasingly steeper as you go uphill (east). In the area of the house the existing slopes are 20% to 30%. Around the house site the majority of the retainage measures will be made with silt fencing and waddles.

Wherever it is possible to retain existing trees, an effort to save these will be made. All existing corners of the property are marked. There is an existing trail through the property in the area of the house, which will be removed, but a new trail around the property is already in use. The existing trail will be posted at the property lines as a construction zone and "No Trespassing."

The sequence of construction will be as follows:

1. Septic system and leach field to be reviewed and approved by Teller County Environmental Health Department.
2. House and driveway to be located and staked.
3. Existing trees to be saved will be identified and protected with orange tape and/or construction fence.
4. All existing utility taps or lines will be flagged.
5. Upon driveway rough grading (before house excavation) the gravel tracking area in the R.O.W. will be installed. The silt fence will also be installed on the downhill portion of the site.
6. After the house foundation is completed and the concrete forms are stripped, rough grading and backfilling will be performed. A review of the drainage mitigation to date is to be performed.
7. Site utilities are to be installed when weather permits during construction. Drainage mitigation is to be maintained at all times.
8. Toward the end of construction, and after all exterior construction on the house is completed, the installation of the septic system will commence. Upon completion of the septic system, final grading will begin. Restoration of the top soils will also commence at this time. Hydro-seeding and landscaping will occur when weather permits. Continual monitoring of the site will be done to insure final and permanent soil preservation. This will comply with all requirements of the regulations.
9. Gutters and downspout drainage pits shall be installed towards the end of the project.
10. Final site cleanup and removal of construction dumpster along the driveway will be the last items completed.

At this point in the project, there should be no further site hazards and historic drainage will be restored. The silt fencing and waddles may be retained for some time until all landscaping and grass seeding are established. Drainage and erosion control is performance based. A final review of the drainage measures will take place.

(Winter Example) The majority of the construction is to happen during the winter months, thus most of the precipitation will be in the form of snow which will be a low hazard situation. Snow stockpiling will be addressed during constructions as needed.

(Summer Example) The majority of the construction is to happen during spring, summer and/or fall months, thus precipitation can be in the form of heavy snow, rain, and/or hail, any of which could be a moderate to severe hazard situation. All methods will be addressed as necessary to ensure drainage is directed as shown on the site plan. All sediment will remain onsite.

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Construction Compliance Signature

Date

### **SUGGESTIONS:**

- Adding small detention/infiltration area(s) to capture and slow down runoff.
- Avoid the use of straw bales; they are poor "best management practice" for runoff. Waddles perform better.