

Section 10. Special Requirements for Utility Construction

Overview of Section 10

10.0

This section describes the GESC special requirements for utility construction.

*Section 10.1, **Utility Construction**, provides an overview of utility construction and the related GESC requirements.*

*Section 10.2, **Utility Construction Requiring a GESC Permit**, summarizes the requirements of any utility line construction which requires a GESC permit.*

*Section 10.3, **Utility Construction Covered Under a Street Cut and Right-of-Way Use Permit**, summarizes the requirements of any utility line construction which is covered under a Street Cut and Right-of-Way Use Permit.*

Section 10. Special Requirements for Utility Construction

Utility Construction

Utility Construction Requiring a GESC Permit

10.1

As Arapahoe County grows, so does the demand for installation of new underground utility lines, and upgrade and maintenance of existing lines. Many times this work is located in streets, where storm sewer inlets can be impacted, or along or across drainageways. Although the work is generally short lived, the close proximity to storm drainage systems provides an ample opportunity for contamination of stormwater runoff.

Section 2 of this Manual provides guidelines for determining whether a GESC permit is required for all types of construction activities. The installation or maintenance of utility lines in excess of 1000 linear feet requires a Standard GESC Permit. Installation and maintenance of utility lines less than 1000 linear feet within County right-of-way do not require a GESC permit, but must comply with the GESC requirements associated with a Street Cut and Right-of-Way Use Permit as issued by the County. Further discussion of these requirements follows later in this Section.

10.2

Utility line projects which require a GESC permit, as described in Section 2, must adhere to the permitting process and submittal requirements set forth in the previous sections of this Manual.

At a minimum, all utility line construction and maintenance which require a GESC permit shall comply with the following:

- ◆ All utility work within Arapahoe County right-of-way shall be required to obtain an Arapahoe County Street Cut and Right-of-Way Use Permit in accordance with the *Infrastructure Design and Construction Standards*, as amended.
- ◆ Provide adequate erosion and sediment controls.
- ◆ At the end of a work day, no trench shall be left open. The trench shall be either backfilled to grade, or a steel plate shall be placed over the open portion of the trench. The steel plate is not allowed in County ROW travel lanes. Steel plates that are utilized outside of ROW shall be positioned and anchored in accordance with all applicable safety criteria and such that stormwater will not enter the trench.
- ◆ Where consistent with safety and space considerations, excavated material is to be placed on the uphill side of trenches.
- ◆ At **NO** time shall excavated material be placed in the curb, gutter, sidewalk, or in the street within 6-feet of the flowline.



No utility trench shall be left open at the end of the work day.

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- ◆ Limits of construction shall be large enough for a work area, temporary storage of excavated material and imported material, and equipment access to the project.
- ◆ Downslope perimeter controls shall be installed per Section 4.10.
- ◆ Trench dewatering devices must discharge in a manner that will not affect streams, wetlands, drainage systems, or off-site property. Discharge from the trench shall be free of any sediment. A rock riprap pad shall be placed at the discharge end of hose to prevent any additional erosion. The **Dewatering (DW)** detail shall be complied with at the suction and discharge ends of the pumping facilities.
- ◆ **Inlet Protection (IP)** shall be provided whenever soil erosion from the excavated area has the potential of entering a storm sewer system.
- ◆ All disturbed areas shall be drill seeded and crimp mulched within seven days after utility work is completed. For larger projects, seeding and mulching shall be done in phases rather than at the end of construction, per Section 4.9.

Utility Construction Covered Under a Street Cut and Right-of-Way Use Permit

10.3

Utility line projects which do not require a GESC permit, as described in Section 2, must adhere to the GESC requirements associated with a Street Cut and Right-of-Way Use Permit as issued by the County. The following summarizes the requirements for utility projects covered under a Street Cut and Right-of-Way Use Permit (does not require an individual GESC Permit).

10.3.1 Drawings. GESC drawings will not be required unless the work to be performed is out of the ordinary or is located in a sensitive area. The contractor must use approved Arapahoe County BMPs, and maintain them throughout the construction process.

10.3.2 Collateral. The County will generally not require additional collateral for GESC requirements covered under a Street Cut and Right-of-Way Use Permit, as long as the contractor actively maintains their BMPs. If the County determines that the contractor is not maintaining their BMPs, and the site may negatively affect water quality in the area then the County will require additional collateral.

10.3.3 Enforcement. If the County finds the Permittee to be non-compliant with the GESC requirements under the Street Cut Right-of-Way Use Permit, the Permit may be revoked and a stop work order may be issued. When the contractor corrects the deficiencies, the County shall be notified and the Permittee will be required to attain new permits and pay a fee in accordance with the current County Penalty Fee Schedule and additional collateral will be collected. The County may require the contractor to obtain a Standard GESC Permit and shall submit all applicable plans and reports associated with this permit.



10.3.4 General Construction Site Best Management Practices. The Permittee must adhere to the list of requirements provided under Section 10.2 as well as the following list of Best Management Practices (BMPs)

Utility Construction Covered Under a Street Cut and Right-of-Way Use Permit, continued

while GESC requirements are being completed under a Street Cut and Right-of-Way Use Permit.

Pre-Construction Best Management Practices:

- ◆ Develop and implement erosion and sediment control plans/practices for the specific project that you are constructing.
- ◆ Schedule excavation and grading work for dry weather.
- ◆ Identify all storm drains, drainage swales and creeks located near the construction site and make sure all subcontractors are aware of their locations to prevent pollutants from entering them.
- ◆ Delineate clearing limits, easements, and setbacks. Sensitive or critical areas, trees, drainage courses, and buffer zones to prevent excessive or unnecessary disturbances and exposure. Phase in the process of clearing and grubbing the site on an as necessary basis rather than clearing and grubbing the entire work zone at one time, thus creating a maintenance item until such time that the area is under active construction.
- ◆ Designate a "Wash-out Area" on the job site in a grassy or graveled area where pooled water can soak into the ground. Use for all application and mixing equipment. If no "Wash-out Area" is available, washout into container, dispose in a posted "Wash-out Area" at another site (with owner permission) or return to the batch plant for disposal.
- ◆ Designate one area for parking, equipment/vehicle refueling, and routine maintenance. The designated area should be well away from gutter, storm drains, and creeks.

Construction Best Management Practices:

- ◆ Keep materials out of the rain. Store them under cover, with temporary roofs or plastic sheets protected from rainfall, runoff, run-on, and wind. Store all material away from creeks and storm drains. Cover stockpiles (road base, excavated material, etc.) and other materials with plastic tarps to protect from rain. Use berms/ 'rock socks' around the entire stockpile to prevent run-on and run-off.
- ◆ Clean up leaks, drips, and other spills immediately.
- ◆ Sweep and remove materials from surfaces that drain to storm drain inlets, creeks, or channels, throughout the workday. When precipitation is in the forecast increase the frequency of the sweeping.
- ◆ Make sure portable toilets are in good working order. Check frequently for leaks and service regularly.
- ◆ Designate one area for parking, equipment/vehicle refueling, and routine maintenance. The designated area should be well away from gutter, storm drains, and creeks.



The Permittee must adhere to all Construction Site BMPs listed while GESC requirements are completed under a Street Cut and Right-of-Way Use Permit.

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- ◆ Maintain all vehicles and heavy equipment. Inspect frequently for leaks and repair as necessary.
- ◆ After breaking up old pavement and concrete, remove all chunks and pieces to avoid contact with rainfall and runoff.
- ◆ Catch drips from paving equipment with drip pans, absorbent material (cloth, rags, etc.) heavy cardboard or plywood place under the machine when not in use.
- ◆ When making saw-cuts in pavement (asphalt or concrete), use as little water as possible. Cover each storm drain inlet per the inlet protection detail during saw operation and contain the slurry. After the liquid drains or evaporates, shovel or vacuum the slurry residue from the pavement or gutter and remove it from the site.
- ◆ Completely sweep the streets immediately following milling operations. All areas that are not accessible to the street sweeper must be hand broomed.
- ◆ Filter the water from concrete flow line sections that have been removed, left open and have collected rain/irrigation and then discharge. The inlet(s) that will receive the filtered water shall have the approved inlet protection installed.
- ◆ Delivered materials or excavated material shall not be placed in the flow-line.
- ◆ Diesel fuel shall not be used to lubricate equipment parts.
- ◆ Major equipment / vehicle repairs and washings shall not occur on site.
- ◆ Never hose down dirty pavement or surfaces. Clean up all spills and leaks using “dry” methods (with absorbent materials and/or rags). If spills occur on dirt areas, dig up and remove contaminated soil and dispose of properly.
- ◆ Concrete curing compound or tack oil shall not be sprayed if rain is on the “horizon.”
- ◆ Do not discharge any concrete, slurry or rinse water into street, flow line, storm drains, or drainage channels from concrete activities and concrete pumping equipment.