



## Mesa County

### Micro-trench Policy and Specifications

#### I. General

Mesa County requires adherence to the Mesa County Design Standards, Chapter 9: Utility Location and Installation, which is derived from current industry standards for underground utilities. Standards for construction include width, depth, location in the right-of-way, clearance from other utilities, material cover, compaction requirements, and conduit specifications. MESA COUNTY Design Standards and Standard Construction Specifications may be found at:

<https://www.mesacounty.us/publicworks/engineering/>

This Micro-trench Policy and Specification is an amendment to Mesa County Design Standards, Chapter 9: Utility Location and Installation. If micro-trenching installation is requested as specified below, it will be evaluated based on several factors, including but not limited to: roadway classification (e.g., arterial, collector, or local), traffic volumes, signalized intersections, condition and age of the existing pavement, existing utility infrastructure, and other site specific circumstances. **Requests for micro-trench installations are required to include detailed drawings of the proposed route(s), location of micro-trench along route (including laterals), justification for the non-standard trench installation, and if approved, an electronic as-built file.**

#### II. Purpose & Background

This policy is established to describe the means and methods by which a Permittee will be permitted to work within the Mesa County right-of-way by micro-trenching.

**A.** The placement of utilities in Mesa County rights-of-way is at the discretion of Mesa County. Mesa County Design Standards Section 3.06.b states that: “No individual, company, corporation or public agency shall modify, install, or otherwise change any utility located within a County right-of-way without first obtaining an Underground and Utility Permit from Mesa County Road & Bridge.” The cost of the permit will vary depending on the location of work, the linear miles of installation, and the age of the pavement.

**B.** Mesa County will review and approve all routes, methods, and materials for installation on Mesa County roadways. Guidance is provided by the Micro-trenching Standard Details found in attached drawings.

#### III. Right-of-way Permits

Mesa County monitors utility work through the utility permitting process. This process allows Mesa County to coordinate activities between Mesa County forces and other

utilities to maintain a record of street cuts and repairs, and to identify specific Mesa County requirements. A list of permit requirements may be found at:

<https://www.mesacounty.us/publicworks/permits/>

### **A. Permit Requirements**

Any work within the right-of-way requires a permit. Before micro-trenching work may begin within the right-of-way, the necessary permit must be obtained from the MESA COUNTY ROAD & BRIDGE (R&B). Permits are usually issued for the time period requested by the Permittee. However, when situations warrant, the permit expiration date may be extended when prior notification is received. If work on an existing permit has not been started by the expiration date, the permit will be canceled, and a new permit will be required.

### **B. Responsibility**

The Permittee must:

1. Always have a copy of the permit on the job site.
2. Be solely responsible for the work performed. MESA COUNTY R&B will contact the Permittee for required adjustments or corrections regardless of whether the Permittee performed the work itself or subcontracted and assigned the work.
3. Be responsible for the condition of all right-of-way repairs. The restoration must be made with like materials or by approved methods to that which the street, alley, sidewalk, or highway is constructed. The micro-trench shall be backfilled with an approved flowable cementitious backfill consisting of an approved shrinkage compensating high early strength mortar or other materials approved by the MESA COUNTY R&B ROAD SUPERVISOR .
4. Within seven (7) days after the completion of the work allowed by such permit, report in writing to the MESA COUNTY R&B ROAD SUPERVISOR, or designee, that the work has been completed and request inspection.
5. Ensure that all micro-trench repair will be as shown in the Attached drawings, and the Contractor must warranty the repair for no less than **three (3) years**. If the micro-trench requires repair before the remainder of the roadway qualifies for resurfacing, then the Utility Owner will be responsible for making subsequent repairs by like methods. Should the condition of the restoration become such that additional pavement is in jeopardy of failure, then the Permittee may be held responsible for an area larger than the original repair. Should such owner fail to maintain, repair, or reconstruct any such

surface within 10 days after written notice, from the MESA COUNTY R&B ROAD SUPERVISOR, or designee, MESA COUNTY may have such surface repaired or reconstructed and will charge the cost of repair, including any costs associated with the use of any like materials used in restoration, to the owner or company responsible for the initial repair.

6. Notify the MESA COUNTY R&B ROAD SUPERVISOR in writing of any change in ownership of the micro-trench and utility system within the County ROW, including contact information for new utility owner. New utility owner shall be responsible for any remaining warranty period repairs. If the utility owner no longer intends to maintain the conduit in working order and good repair, the utility owner must either remove the conduit at its own expense, including any required road repairs.

#### **IV. Micro-trench Specification**

Micro-trenching is a low-impact slot-cut trenching method that enables quick installation of underground fiber in trenches that are narrower and shallower than typical open trenches currently used in the industry. When using a micro-trench, the Contractor shall use flowable backfill methods outlined in this section or other materials approved by the MESA COUNTY R&B ROAD SUPERVISOR. The Permit Applicant, Contractor, and/or Utility Owner must indemnify and hold harmless MESA COUNTY, its elected and appointed officials, employees, agents, and successors from any and all liabilities, losses, claims, settlement payments, costs and expenses, damages, penalties, fines, attorney's fees, and other amounts resulting from construction, operation, and maintenance activities of all infrastructure installed in a micro-trench inside the rights-of-way owned by MESA COUNTY.

**A.** The MESA COUNTY R&B ROAD SUPERVISOR, or designee, may approve use of micro-trenching requests for specifically approved areas. Micro-trenching will not be permitted in areas where an existing multi-purpose easement exists outside the roadway, in roadways paved within the past 5 years, or other areas deemed not appropriate by MESA COUNTY. Micro-trenching will only be approved for open-access fiber optic bundled conduit with only one micro-trench allowed on a roadway. Micro-trenching shall not be allowed in concrete paved streets, sidewalks, curbs and gutters. Micro-trenching must follow these specifications and the Standard Details in attached drawings. Any deviation from these specifications and Standard Details will be considered on a case-by-case basis by MESA COUNTY and approved in writing prior to commencing construction.

**B.** All requirements of the MESA COUNTY trench and utility cut guidelines, specifications, and details must be complied with except as specifically permitted in this section. Requests that involve placement of cable/conduit within the asphalt pavement at depths shallower than required in the trench and utility cut guidelines and specifications and as shown on the corresponding Standard Details

must comply with the following supplementary requirements for micro-trenching within pavement areas.

**C. Supplementary Requirements for Micro-trenching within the Right-of-Way:**

1. MESA COUNTY may allow micro-trenching construction in the right-of-way at a depth and configuration as shown in the Standard Details. The micro-trenching Contractor must acquire an Underground and Utility Permit from the MESA COUNTY R&B prior to commencing work per MESA COUNTY Design Standards Section 3.05.
2. The Applicant agrees to conform to the MESA COUNTY Standard Construction Specifications and the terms of the MESA COUNTY Design Standards Chapter 9: Utility Location and Installation, amended herein. Any changes will be at the sole discretion of MESA COUNTY.
3. In conjunction with the permit application, an additional drawing must be submitted, including lengths and locations of the proposed trench location, including laterals, prior to permit approval. The plans submitted shall also include a detail showing conduit from main micro-trench alignment to lateral surface connections, including any junction/pull box. Detail of proposed method for crossing existing curb, gutter and sidewalk also needs to be submitted for review. MESA COUNTY will approve these details on a case by case basis. Cut sheets shall be included of the proposed equipment particularly suitable for micro-trenching, including:
  - (a) Micro-trencher capable of meeting target depth and width in a single pass with an integral hood and associated vacuum system. Selection of cutting wheel shall be such that it minimizes damage to the adjacent asphalt surface.
  - (b) Mobile concrete/slurry placement with an on-board vibrator and narrow trough to match micro-trench width.
  - (c) Mobile ground penetrating radar system that is capable of locating both metallic and non-metallic pipes and cables to a depth of 24-inches.
4. After completion of construction, the contractor shall submit electronic as-built drawings of the installation. As-built drawings shall be surveyed vertically and horizontally at a minimum of fifty foot intervals, or where depths vary more than two inches; and shall include the location of all boxes, bends, laterals, and any other structures.
5. Micro-trenches are required to be installed at the edge of the gutter line where there is existing gutter, unless directed otherwise by Mesa County. In areas without curb and gutter, the micro-trench shall be installed in the center of the road or along a lane line if there are obstructions in the centerline. The trench

must be linear in nature and have a shape consistent with the roadway's horizontal alignment.

6. All micro-trenches installed in the roadway pavement, or adjacent to the curb and gutter, must be between one (1) inch to three (3) inches in width and a minimum of sixteen (16) inches in depth. The micro-trench must be filled with a flowable fill the same day the fiber conduit is installed. The flowable fill material covering the fiber must be installed from the bottom of the trench to the top of the trench. Sealant material, approved by the MESA COUNTY R&B ROAD SUPERVISOR, shall be used to seal the edges of the micro-trench in the roadway and next to the curb and gutter. Sealant will not be installed until the trench is 100% dry. The Contractor will be required to use a heat lance to dry the entire trench before any sealant material is installed.
7. Any curb, gutter, and sidewalk repair must be done to the nearest contraction joint with a 5-foot minimum wide section of concrete replaced at every crossing and no existing section of concrete being less than 5-feet wide.
8. Existing pavements, bases, and sidewalks must be cut and brought to a neat line by use of a saw, or other suitable equipment. All expansion joints removed must be replaced with like materials or an approved cementitious or asphaltic patch material.
9. The micro-trench conduit shall not be located within 5' horizontally of any public utility asset (manhole, sewer line, water line, fire hydrant, water meter, sewer lateral, storm line or inlet, etc.), except at utility crossings. If encroachment within 5' is unavoidable, this shall be clearly identified on the plans, and MESA COUNTY will review each occurrence on a case by case basis.
10. Lateral street crossings shall be between 45 to 90 degree angle to the street centerline and are limited to one at every other lot line or a minimum spacing of every 500 feet.
11. All micro-trench installed utilities must be able to be located by calling 811 or the CO One Call System.
12. Prior to placement of any backfill, the MESA COUNTY R&B must be notified and an inspection of the trench will be made by a representative of MESA COUNTY. At the completion of the backfill, the MESA COUNTY R&B must be notified and an inspection of the location will be performed to ensure compliance with this and all standard details, specifications, and procedures.
13. MESA COUNTY R&B inspection personnel must be notified by the Contractor Permittee no less than two (2) days prior to the request for inspection

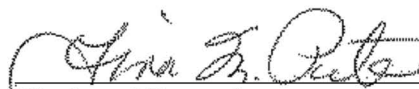
14. If requested in writing, MESA COUNTY will notify all micro-trench-installed Utility Owners of the upcoming year's paving and infrastructure maintenance plans, excluding emergency repairs, at least thirty (30) days prior to commencing work. This will allow the Utility Owner ample time to relocate or protect its utility prior to construction.
15. At no cost to MESA COUNTY, the Applicant must provide permanent on-going maintenance during the warranty period to the fiber conduit routes in the project areas. Maintenance must include providing materials and labor to properly maintain in good condition pavement, sidewalks, curbs, curbs and gutters, shoulders, and softscape areas (dirt and grass) affected by the fiber/conduit per MESA COUNTY standards.
16. At no cost to MESA COUNTY, the Applicant must relocate any fiber/conduit prior to construction of any County infrastructure or maintenance project. Applicant shall also replace, at no cost to MESA COUNTY any fiber/conduit that is damaged or destroyed due to any infrastructure maintenance or installation activities performed by any/all MESA COUNTY agencies, including in the shoulder of the roadway or ditch lines. This also includes those activities necessary to maintain stormwater infrastructure, water distribution, sanitary sewer, sidewalk, roadway, paving, signal installation, or other activities that may commence at the sole discretion of MESA COUNTY.
17. MESA COUNTY will not be responsible for any damage to, or resulting from, the installation of cable/conduit construction activities by the Applicant, its contractors, and/or others within project areas.
18. The Applicant agrees that it will not hold responsible the residents or its contractors that may damage the fiber conduit when installed by using the micro-trench alternative installation method.
19. The Contractor will be liable and responsible for all micro-trenching excavations in the roadway that are not filled, which may be a hazard to the pedestrian, bicycle, and non-vehicular community.
20. MESA COUNTY reserves the right to terminate the associated activities within each or all the Mesa County approved areas without cause after thirty (30) days written notice or for cause immediately at the sole discretion of MESA COUNTY. Any outstanding costs, debt, or other financial commitments, including restoration and repairs of existing infrastructure, related to the project will become the sole responsibility of the Applicant to address. Upon cancellation, the terms of this agreement, more specifically, the maintenance obligations of the Applicant, will survive in perpetuity and the bond will remain in place until the warranty period is completed.

Passed and adopted this 21st day of June, 2022

BOARD OF COUNTY COMMISSIONERS  
COUNTY OF MESA, COLORADO

  
\_\_\_\_\_  
Janet Rowland, Acting Chair

Attest:

  
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Clerk and Recorder

