

BOULDER COUNTY UTILITY PERMIT REQUIREMENTS

May 26, 2026

Contents

1. General Requirements.....	2
1.1. Authority.....	2
1.2. Definitions	2
1.3. Permit Application Process	3
1.4. Permit Application Fee(s).....	5
1.5. Bonding Requirements	5
1.6. Insurance Requirements.....	5
1.7. Special Mobile Machinery/ Registration Requirements.....	6
1.8. General Policies	6
1.9. Road Closure Policies and Requirements	8
1.10. Phasing of Installation and Multiple Permits	10
1.11. Safety and Public Convenience	10
1.12. Maintenance and Repair Responsibility, Warranty Period.....	10
1.13. Utility Relocations	11
1.14. Inspections, Final Release Requirements	12
2. Specifications.....	12
2.1. Quality Control.....	12
2.2. Trenching, Backfill and Pavement Restoration	13
2.3. Bridge, Culvert and Structure Crossings.....	14

1. GENERAL REQUIREMENTS

1.1. Authority

Authority for the administration and enforcement of Utility Permits is derived from the Colorado Revised Statutes (C.R.S.), Sections: 37-84-103; 38-5-101; 38-5.5-104.5; 38-5.5-106; 42-4-101 through 42-4-512; 43-2-111; 43-2-147; 43-5-301; 43-5-307; and 32-1-1006.

Failure to comply with the requirements set forth herein may constitute a civil infraction and cause the offender to be liable to any person, government, or corporation in a civil action for damages as provided by law. C.R.S. §§ 43-5-301, 307.

1.2. Definitions

- Applicant: Any person or entity, including but not limited to a contractor, developer, property owner, or government agency, applying for a permit hereunder to perform Construction within a Boulder County right of way.
- Boulder County right of way ("ROW"): All public highways, as defined in C.R.S. § 43-2-201, within unincorporated Boulder County excluding any state highway controlled and managed by the Transportation Commission of Colorado and Colorado Department of Transportation. Without limiting the foregoing, Boulder County ROW includes a portion of land that is dedicated or granted to, and accepted by, the County for transportation purposes, such as a roadway or highway, whether or not maintained by the County. See C.R.S. § 43-1-1-02(43) and (85) (defining highway and roadway). The term may be used in the singular or plural.
- Construction or Work: Any activity that builds, installs, erects, repairs, replaces, maintains, excavates, removes, or improves any new or existing utility facility located on, under, above, or across the Boulder County ROW. This includes routine maintenance as well as Construction-related activities that occupy the Boulder County ROW for preparation or restoration purposes.
- Contractor: A person or entity that has legally agreed to perform the permitted Construction activity on behalf of Applicant. A Contractor may be an Applicant.
- County: References to the "County" mean Boulder County.
- Utility Facilities or Facilities: All transmission lines and appurtenances, including but not limited to antennae, boxes, cabinets, coaxial and wire cable, conduit, controllers, fiber optics, pedestals, pipes, poles, structures, valves and other wires, whether overhead or underground or operational or abandoned, that are or have been used to provide, distribute, or transmit gas, electricity, water, sanitation, sewer, drainage, irrigation, telephone, telecommunications, broadband, internet, video, or other service.
- Utility Owner or Owner: The legal owner of the Facility, regardless of whether the Facility is leased, licensed, or rented to a third party.
- FDP: Flood Development Permit

- Utility Permit or Permit: County approval to perform approved Construction activity(ies) according to applicable laws, including without limitation local ordinances and codes, and Permit terms and conditions.

1.3. Permit Application Process

1.3.1. Utility Permit Request

An application for a Utility Permit, known as a Utility Permit Request, must be submitted to the County at least 10 business days before construction is scheduled to start. Applicant must include the following items with the Utility Permit Request in order to be considered:

1. CONSTRUCTION DOCUMENTS. Construction plans (plan and profile) and specifications prepared and stamped by a professional engineer actively registered by the State of Colorado, that clearly show the following:
 - Distance of the proposed Work from ROW line,
 - Profile cross section showing existing utilities,
 - Distance line will be within the ROW or if/how it crosses ROW,
 - Facility type (water, gas, phone, power, fiber optic cable, etc.)
 - Nature of installation (such as buried, overhead, or attached to roadway structure). If attached to roadway structure, must submit a separate drawing and associated details).

Minor projects may be exempt from submitting construction documents as determined by the County. For example, an 8.5" by 11" drawing may suffice for minor installations such as a service crossing.

Applicant's proposed plans for road construction and restoration on all permits are subject to the review and approval of the County. Applicant may not deviate from County-approved construction documents without prior written consent of the County. County approval does not mean that Applicant's proposed plans are legally compliant. Notwithstanding any County approval, Applicant is responsible for its means and methods and ensuring that they comply with all applicable laws, regulations, standards, codes, ordinances, and requirements.

Without limiting the foregoing, as applicable, Applicant must comply with C.R.S. § 40-2-132.5 and should provide to all ratepayers, including those who do not live in a jurisdiction with a franchise agreement, nondiscriminatory and equal access to benefit from investments in undergrounding power lines.

2. ENVIRONMENTAL CLEARANCE. Applicant must obtain a floodplain development permit ("FDP") issued by the Boulder County Floodplain Management Program for all Work

conducted in a ROW that is located within a federal, state, or locally designated floodplain. Applicant must also obtain a County Stormwater Quality Permit (SWQP) from the Boulder County Public Works Department for projects that:

- Disturb one acre or more in size;
- Are less than one acre and construction activity is part of a larger common plan of development that will ultimately disturb one acre or more, even if multiple, separate, and distinct land development activities may take place at different times; or
- Disturb less than one acre and are within 100 horizontal feet of a watercourse.

FDP and SWQP fees are designated by the department issuing the permit.

It is Applicant's responsibility to contact all agencies and authorities with jurisdiction and obtain all environmental clearances that apply to the proposed Construction activity(ies) prior to the start of Work. Such clearances may include, but are not necessarily limited to, Corp of Engineers 404 Permits, Colorado Discharge Permit System permits, and ecological, archaeological, historical, or cultural resource clearances.

3. **TRAFFIC CONTROL PLAN.** Traffic control plan prepared by a state-certified traffic control supervisor is required for all operations and must conform to the most recent version of the "Manual of Uniform Traffic Control Devices for Streets and Highways" adopted by the Transportation Commission of Colorado.
4. **SCHEDULE SEQUENCE.** Applicant must submit a written schedule covering the general sequence and staging of the Work to be performed.
5. **CERTIFICATION OF UTILITY OWNER APPROVAL.** As part of the required application materials, Applicant must certify that it has obtained the Utility Owner's approval to perform the proposed Work, as set forth in the Contract Documents, and Utility Owner is legally committed to assume responsibility for the Facilities following completion of the Work.

1.3.2. Issued Utility Permit

Once issued, a Permit must always be available at the Work site to be inspected upon demand by County personnel. A Permit expires on the approved scheduled end date as indicated on the Permit. A Permit may be extended if Applicant submits a renewal request to the County at least 5 business days before the approved scheduled end date.

If circumstances arise during Construction that risk public health or safety, Applicant must immediately notify the Boulder County Communications Center by calling 911 for emergencies and 303-441-4444 for non-emergencies. Applicant must also immediately notify the Boulder County Public Works Department by calling 303-441-3900. If the County

provides verbal authorization to Applicant in order to promptly address emergency conditions, Applicant must request written approval from County to ratify the verbal authorization within two business days of the verbal authorization.

1.4. Permit Application Fee(s)

Payment of a Utility Permit fee is required. The fee includes a base fee and correlating cost per linear foot of ROW impacted to defray the administrative and inspection costs of Utility Permits.

- Base Fee: \$300.00 per accepted Permit
- Length Fee: \$0.30 per linear foot of ROW impacted

1.5. Bonding Requirements

Upon demand from the County at its discretion, Applicant shall provide a bond or other acceptable surety by a qualified corporate surety or other qualified institution conditioned upon faithful performance of the Construction and restoration of the ROW for an amount based on material and labor prices for performing such work as proposed by Applicant, with supporting documentation, and approved by the County. Failure to complete the Construction and restore the ROW as approved by County will cause the bond or surety to be in default and enable the County to recover on same.

1.6. Insurance Requirements

Applicant must obtain and maintain insurance coverages as set forth below prior to commencing and during the performance of any Work. All insurance policies evidencing required coverage shall be issued by insurance companies satisfactory to the County. Applicant must ensure that each of its subcontractors responsible for performing any portion of the Work also complies with the insurance requirements of this section.

Boulder County as Additional Insured: Boulder County shall be named as an additional insured on the insurance policy for Commercial General Liability and Pollution Liability coverages listed below. Boulder County as an additional insured shall be endorsed to the policy in the form of a named additional insured endorsement or blanket additional insured endorsement.

THE ADDITIONAL INSURED WORDING SHOULD BE AS FOLLOWS: *County of Boulder, State of Colorado, a body corporate and politic, is named as Additional Insured.*

Proof of Insurance (Certificate of Insurance): Applicant must submit a current and valid Certificate of Insurance to the County for each type of insurance coverage listed below at least 30 days prior to starting the Work. A new Certificate of Insurance must be submitted to the County on an annual basis to evidence policy renewal. Applicant shall send Certificates of Insurance directly to PWContracts@bouldercounty.gov or by mail to Boulder County Public Works, ATTN: Utility Permits, P.O. Box 471, Boulder, Colorado 80306.

Deductible: Any and all deductibles contained in any insurance policy are the sole responsibility of Applicant.

Primacy of Coverage: Coverage required of Applicant shall be primary and noncontributory over any insurance or self-insurance program carried by the County.

Subrogation Waiver: All insurance policies secured or maintained by Applicant shall include clauses stating that each carrier shall waive all rights of recovery under subrogation or otherwise against the Board of County Commissioners, the Elected Offices of the County, the County itself, and all County officers, agents, employees, and volunteers.

Coverage Requirements: For the entire duration of the Work, Applicant must procure and maintain, at its own expense and without cost to the County, the following kinds and minimum amounts of insurance:

Commercial General Liability

Coverage should be provided on an Occurrence form, ISO CG0001 or equivalent. The policy shall be endorsed to include Additional Insured Owners, Lessees or Contractors endorsements CG 2038 (or equivalent), Designated Construction Project(s) General Aggregate Endorsement CG2503 (or equivalent) and Additional Insured Completed Operations for Owners, Lessees or Contractors CG 2037 (or equivalent). Minimum limits required of \$1,000,000 Each Occurrence, \$2,000,000 General Aggregate and \$2,000,000 Products/Completed Operations Aggregate.

Automobile Liability

Automobile Liability, Bodily Injury and Property Damage for any owned, hired, and non-owned vehicles used in the performance of this Permit: Minimum limits \$1,000,000 Each Accident.

Workers' Compensation and Employer's Liability

Workers' Compensation must be maintained with statutory limits. Employer's Liability is required for minimum limits of \$100,000 Each Accident/\$500,000 Disease-Policy Limit/\$100,000 Disease-Each Employee.

1.7. Special Mobile Machinery/ Registration Requirements

All equipment used in the ROW must have proper and valid registration from the State of Colorado and Boulder County.

1.8. General Policies

Work must be planned and performed so as not to create safety hazards, cause maintenance problems, lead to unreasonable traffic delays, obstruct drainage, or render any portion of ROW unusable for future improvement. Longitudinal installations shall be placed outside the maintained portions of the roadway when possible. Longitudinal installations shall be discouraged from being placed in the wheel path. Manholes or valves shall not be designed or constructed in the wheel path

of the travel lane or shoulder. Transverse installations shall be directionally boring under the road. Water missile bore techniques will not be allowed without special written approval from the County in advance. When using trenchless excavation methods, Applicant may be required to expose existing Facilities and visually observe/verify with County staff the location, elevation, and safe crossing of underground Facilities. Open excavations will be permitted only in instances where boring is proven infeasible due to site geology or presence of existing utility conflicts.

All utilities shall be installed in accordance with the plans approved by the Utility Owner and the County. If applicable, plans for installations must conform to C.R.S § 9-1.5-103 and include the name, seal, and signature of a Colorado Registered Professional Engineer responsible for their preparation. The alignment of all the utilities within County ROW, including drainage ways, is subject to approval by the County. The issuance of a Utility Permit does not grant any deeded ROW to the Utility Owner. Applicant is responsible for verifying and surveying, consistent with applicable law, the proposed utility corridor as part of plan preparation. Applicant shall take all necessary precautions for protection of existing utilities as required by applicable laws, regulations, standards, codes, ordinances, and requirements, including but not limited to these standards.

1.8.1. Underground Utilities

All road-level access points (manholes, vaults, etc.) to underground utilities, where permitted, shall be of heavy-duty construction, capable of safely supporting legal highway loading, anticipated maintenance equipment, and vehicular traffic, and shall conform to a 1/8" below finish grade of the road. All underground utilities within the ROW shall be suitably marked per industry standards. When requested by County, new or replacement pedestals shall be clearly labeled with the Utility Owner's name.

Where the possibility exists of lowering the surrounding water table by installing a buried utility thereby adversely affecting water wells and vegetation dependent on the water table elevation in the area, suitable engineered methods shall be employed to mitigate such potential impacts.

1.8.2. Aboveground Utilities

All aboveground utilities shall be located and installed so as not to cause unnecessary obstruction to pedestrian, bicycle, vehicular, or other traffic or damage to the utility itself that could be harmful to or create a hazard for the public. The minimum overhead transverse clearance shall conform to National Electrical Safety Code Standards and shall not be less than 18 feet measured from the highest point of the road prism to the bottom of the cable. No pole, structure, or aboveground installation shall be set to conflict with a sidewalk, bikeway, pedestrian facility, or shared use path, nor be set less than 10 feet from the edge of the traveled way on local roads with 20 feet distance required on arterials. A lesser distance will require a design exception from the County Engineer and will be based on the standards adopted by the American Association of State Highway and Transportation Officials (AASHTO) as contained in the most recent version of "A Guide for Accommodating

Utilities within Highway Right-of-Way”. Design exceptions may be considered when necessary. Acquisition of any additional easements is Applicant’s responsibility.

Holes created by vertical bore holes (e.g. potholing) shall be filled with flowable fill and hot patched with an approved surface treatment commensurate with the existing surface and depth; cold mix is not acceptable. The repair shall be flush with the surrounding surface free of indentation or recess. Numerous vertical openings (e.g. potholes) may result in a larger repair and surface treatment to include mill and overlay. Repair of the vertical bore holes shall be the responsibility of Applicant.

1.8.3. Utilities in Floodplain

All utilities within a federal, state, or locally designated floodplain must be located and installed in a manner that will prevent damage such as land erosion, water pollution, and flood diversions.

1.8.4. Non-Public Utilities in Right of Way

In general, only public utility agencies have the right to operate within the ROW; however, on occasion, situations arise where it may be appropriate to place an irrigation conduit or other privately-owned buried conduit in the ROW. These situations will be reviewed by the County on a site-specific basis and, if approved, must adhere to the same requirements for design, construction, and safety as public utilities.

Utility Owners, whether private or public, are required to comply with the excavation requirements contained in C.R.S. § 9-1.5-101 *et seq.* Without limiting the foregoing, any Utility Owner that has the right (e.g. approval from the County) to bury underground Facilities in or near a public road, street, alley, right-of-way, or utility easement is required to join the statewide notification association of owners and operators of underground Facilities created in C.R.S. § 9-1.5-105.

1.9. Road Closure Policies and Requirements

If an unanticipated road closure is needed, Applicant must contact the Boulder County Communications Center non-emergency dispatch line at 303-441-4444 and the Boulder County Public Works Department at 303-441-3900. Unanticipated road closures are not permitted unless justified based on overall benefit and safety to the public and approved in writing in advance by the County Engineer. Boulder County reserves the right to deny the closure of a road for any reason. In the event of an emergency that threatens public health or safety, Applicant should immediately call 911 and thereafter immediately call the Boulder County Public Works Department at 303-441-3900.

Applicant must adhere to the following road closure notification procedure for road closure proposals:

- Applicant must notify the County of a proposed road closure at least 15 business days in advance of said closure.
- Applicant must develop and submit a road closure traffic signage and detour plan for approval by the County.
- If the County approves a road closure proposal, Applicant shall ensure that County has information specifying the closure location, start and end dates, times, and project contact information at least 15 business days prior to the start of the road closure. This information will be incorporated into a press release issued by the County regarding the road closure.

Upon approval of a road closure proposal, the County will:

- Provide signed, written approval to Applicant.
- At least 10 business days prior to the scheduled start of the road closure, the County Traffic Engineer and Public Works communication staff will create and distribute a press release about the road closure to media representatives.
- The County Traffic Engineer will draft and submit to the County Engineer a road closure memorandum explaining why the road closure is warranted, the duration of the closure, and a vicinity map showing the affected roads.
- Transmit the signed road closure approval and Traffic Engineer memorandum to the Colorado State Patrol, Boulder County Sheriff's Office, Boulder County Public Works Road Maintenance Division supervisor ("Road Supervisor"), Boulder County Public Works traffic control section, and Boulder County Public Works communication staff. The Boulder County Sheriff's Office may thereby notify affected emergency response agencies prior to the start of the road closure.

Road closures are permitted only if all of the following conditions are met:

- The road closure is explicitly permitted by the language of the Utility Permit;
- The road closure occurs only during the approved closure time and dates; and,
- The road closure is conducted as approved by the County Engineer.

In the event of road closure, Applicant is responsible for providing a suitable detour that is adequately marked and signed to accommodate day and night traffic. Contact information for Applicant's project traffic control supervisor and Applicant's project supervisor must be provided to the County and such persons must be available at all times during the entire duration of the road closure and must respond to the road closure site within one hour of notification from the County.

If Applicant's failure to fulfill its obligations for road closures or the Construction otherwise necessitates a response from the County, other governmental entity, law enforcement agency, or other emergency service provider, Applicant is solely responsible for all costs incurred by such

entities to respond, including but not limited to costs incurred for deployment and transportation of resources and agents.

1.10. Phasing of Installation and Multiple Permits

Phasing Construction work may be required to produce the least disruption possible for the traveling public. A permit for any subsequent stage will not be issued until the prior stage has been completed and approved or has otherwise sufficiently progressed to the County's satisfaction.

1.11. Safety and Public Convenience

Applicant shall always conduct the Work in a way that ensures the least possible obstruction and hazard to the traveling public and nearby residents. No Work is allowed during inclement weather (including snow, ice, rain or fog) unless and until all hazards on site have been cleared. Applicant shall ensure the safety and convenience of the public and residents along the road and the protection of people and property.

Equipment in the ROW for the Work must be identified with a minimum 2' x 2' logo and phone number for Applicant or its Contractor.

State of Colorado certified flag personnel are required for one-lane and/or potentially hazardous operations. Adequate warning signs, barricades, lighting, flags, flaggers, and other traffic control devices as specified in the latest version of the Federal Highway Administration's "Manual on Uniform Traffic Control Devices for Streets and Highways" and the Colorado Department of Transportation's Safety Standards ("S-Standards") and as otherwise required by the County. Applicant is responsible for submitting and obtaining County approval of its traffic control plan, which Applicant must maintain and follow throughout the Work. Applicant must remove its signage from the ROW at the end of each workday unless such signage is necessary for the ongoing safety of the traveling public.

Plates, steel or other, are only allowed with the prior written approval of Boulder County. Plates must be placed at the existing elevation of the road surface and must be securely anchored. Plates cannot be used during the winter months.

Applicant's operations when performing the Work must conform to applicable laws, regulations, standards, codes, ordinances, and requirements established for employee and workplace safety, including but not limited to those set by the U.S. Occupational Safety and Health Administration (OSHA).

1.12. Maintenance and Repair Responsibility, Warranty Period

Maintenance of the work area during Construction is the responsibility of Applicant. Any damage to a county road caused during Construction is the responsibility of Applicant to cover the costs of repairing such damage. After completion of the Work, Utility Owner is responsible for ongoing maintenance and repair of installed Facilities. If the failure of any Utility Facility causes damage to

a county road following completion of the Work, Utility Owner is responsible for covering the costs of repairing such damage.

1.13. Utility Relocations

As deemed necessary by the County in its sole discretion at any time in the future, upon County request, Utility Owner must relocate its utility facilities in the ROW within 90 days as requested by County.

The following procedure will be used for Utility Facility relocation projects:

- The County will submit roadway project concept plans (plans approximately 30% complete) indicating proposed horizontal and vertical alignment to affected Utility Owners. Utility Owners will have 30 days from the date of receipt of the plans to send any and all comments to the County concerning the utility relocation and any identified coordination issues.
- When plans are developed to the preliminary stage (plans approximately 60% complete) indicating roadway grading, pavement section, drainage improvements, and actual physical locations of utilities in the ROW, the County will submit plans to the affected Utility Owners. Utility Owners will have 30 days from the date of receipt of the plans to send any and all comments to the County concerning the utility relocation and any identified coordination issues. Distributing these “60% plans” is not a requirement and the County may decide to forego this step in its discretion.
- When plans have been developed to the final stage (plans approximately 90% complete), pending final quality control review and subsequent minor corrections, the County will submit plans to the affected Utility Owners. Utility Owners will have 30 days from the date of receipt of the plans to complete and send their final utility relocation plans and relocation schedule to the County. The County may include these materials as reference drawings in its project documents.
- Utility Owners are responsible for completing relocation work within 90 calendar days upon receiving notice from the County that the ROW has all clearances. The County may approve changes to this timeframe upon request in its sole discretion.
- Upon County request, any Utility Owner must promptly remove, at its sole expense, any and all abandoned (retired) Facilities from Boulder County ROW and thereafter restore the ROW to its pre-existing condition in accordance with applicable laws, regulations, standards, codes, ordinances, and requirements.
- The County may allow an abandoned Utility Facility to remain in place in its sole discretion as circumstances warrant. In determining whether to allow abandoned Facilities to remain in place, the County may consider present or potential congestion of utility installation, road construction and maintenance requirements, cost and difficulty of removal, future development, and traffic and safety requirements.

- Any retired Facility shall remain the Utility Owner's sole responsibility, and is subject to all provisions of the codes, standards, terms and conditions of the permit issued including maintenance, removal and relocation requirements.

1.14. Inspections, Final Release Requirements

County inspection is required before Applicant can be released from construction zone maintenance responsibility and before release of any bond. Applicant must contact the County's construction inspector (hereinafter referred to as "Inspector") at least 24 hours in advance of a requested inspection. Applicants may request in-progress inspections of all elements of work to help prevent the need for extensive post-construction testing. The County will notify Applicant of any aspect of the Work or incorporated material that does not conform to County standards. Applicant is then responsible for making immediate corrections to identify deficiencies or suspending the Work. The omission of any County notification of any deficiency in the Work does not alleviate Applicant from its obligation to fully comply with all applicable laws, regulations, standards, codes, ordinances, and requirements in performing the Work.

The County will release a bond or surety following receipt of written approval of satisfactory completion of the Work and road restoration from the Inspector.

2. SPECIFICATIONS

2.1. Quality Control

Without limitation, the Work must conform in all respects to the latest edition of the Boulder County Multimodal Transportation Standards.

Any Work in which untested and unaccepted materials are used without prior written approval by the Inspector shall be removed and replaced at the Applicant's expense.

Tests ordered by the Inspector and procured by Applicant to enforce compliance with specifications shall conform to the most recent standard methods of AASHTO or American Society for Testing and Materials (ASTM) and shall be conducted by an independent testing firm at the sole expense of Applicant. Specific test locations and testing frequency may be specified by the Inspector. Where Applicant or utility owner or operator maintains their own testing equipment and qualified personnel, the requirement for an independent testing firm may be waived by the County. Copies of test data shall be furnished to the Inspector within 1 business day after the Applicant has received such data. Failure to timely submit ordered test results to the Inspector may cause the County to require Applicant to suspend the Work. Applicant is fully responsible for the maintenance and correction of any faulty Construction, including unsuitable road cuts and potholes. Applicant is responsible for ensuring that the roadway and roadside areas where Work has been performed are thoroughly cleared of all debris and extraneous material and restored to its previous or an improved condition. Items that Applicant is responsible for include, but are not limited to, clean-up of pavement and all roadway appurtenances; repairing pavement damage or failures; repairing

broken concrete; repairing damaged signs or fencing; clean-up of debris on adjacent private property; and replacement of road shoulders. All deficiencies must be resolved to the satisfaction of the County.

2.2. Trenching, Backfill and Pavement Restoration

Jetting backfill is not permitted within County ROW. Suitable material excavated from a trench may be used for backfill material subject to approval of the Inspector. At no time will wet, soggy, frozen, contaminated or other unsuitable material be allowed as backfill material. If proper backfill material is not at the excavation site, suitable material (minimum R40) shall be imported and unsuitable material removed from the site. Backfill material shall extend to the sub grade of the road or to the natural ground. Backfill material within the roadbed shall consist of pervious material free of 6-inch or larger rock, shall be placed in maximum 12-inch lifts, and each lift shall be compacted to 95% maximum density with moisture control before the next lift is installed. Backfill material within 12 inches top of sub-grade shall consist of three-quarter inch road base (e.g. Aggregate Base Course (Class 6) compacted to 95% with moisture control below the final surface. In most cases, full depth road base or flowable backfill (e.g. Structure Backfill (Flow-fill) may be specified by the County.

All cuts made in hot mix asphalt pavement (hereinafter referred to as “asphalt”) or concrete surfacing shall be made by mechanical cutting to a neat, true horizontal and vertical line, and shall be cut two-feet wider on each side of the top of the trench excavation. The final pavement cut shall not be made until immediately prior to patching. Repair of concrete surfacing shall consist of placing dowels into the existing concrete surface adjacent to the limits of the excavation and providing proper concrete class and reinforcement within the concrete patch area.

All excavations that are made in paved streets or other transportation facilities within the ROW shall be completely restored after acceptance of the backfill by the Inspector. Temporary asphalt shall be placed immediately in all patch areas on all arterial and collector streets, and within 3 calendar days on all other facilities. In the event weather conditions preclude restoration by permanent asphalt, temporary repairs shall be made by tamping and rolling asphalt into place. Such temporary patches shall be removed and replaced with permanent asphalt within 2 business days or as soon as weather permits, whichever is later.

Permanent asphalt patches shall be no less than 6 inches thick or not less than the thickness of the pavement adjacent to the excavations, whichever is greater, and shall be installed in accordance with Boulder County Multimodal Transportation Standards. Damaged pavement and other facilities within the construction zone shall be repaired by appropriate methods as approved by the County. Any damage, even superficial, to the existing asphalt surface in the vicinity of the Work shall be repaired at the expense of the Applicant, including but not limited to gouges, scrapes, outrigger marks, backhoe bucket marks, potholing etc. by milling 2-inch minimum and repaving as directed by the Inspector.

Sub-grade failures caused by the Applicant's operation of heavy equipment shall be rectified by reconstructing the sub-grade layers and replacing the sub-base, base, and asphalt pavement.

If a utility line is placed longitudinally under or adjacent to the existing asphalt, concrete, or gravel roadway, the roadway shall be patched with asphalt if applicable, and a surface treatment commensurate with the existing road surface treatment (e.g., asphalt, concrete, gravel) shall be placed for the length of the project. The width of the surface treatment will be a minimum of the width of one lane (roadway edge to centerline) of the roadway and may be required to be the width of the entire roadway, based on the determination of the County. The thickness of milling and composition of the surface treatment shall be determined by the County and shall be commensurate (at a minimum of 2 inches) with the existing condition of the roadway surface. A mix design submittal and method for all surface restoration products must be approved by the County prior to placement.

Utility cuts allowed in County roads where the surrounding pavement is less than 3 years old will be required to meet all patching requirements of this section and will also be subject to one of the following requirements depending on size and type of cut:

- Small cuts, less than 100 square feet, will patch and infrared, or patch and fog seal/chip seal the asphalt surface.
- Large excavations, greater than 100 square feet and any longitudinal trenches, require a full-lane (edge to center or edge to edge of road) overlay with a two-inch County-approved asphalt and application method.

All pre-existing pavement markings shall be restored upon completion of the surface treatment.

In the event bituminous base, soil cement, geotextiles, or other base course materials are encountered during excavation, restoration shall be made in-kind or as otherwise specified by the County.

Backfilled trenches or cuts that show signs of depressions or evidence of failure and which have not been repaired by Applicant will be considered a violation of the Permit and the area may be repaired by the County at Applicant's expense.

2.3. Bridge, Culvert and Structure Crossings

The County discourages utilities from being attached to bridges. If the County determines that Utility Facilities may be attached to bridges due to overriding conditions encountered in the field, such Utility Facilities shall be placed so as not to obstruct the waterway of the bridge or interfere with the existing guardrail. Utility Facility locations on the bridge shall be determined by the County Engineer. Applicant shall be responsible for the cost of any structural or hydraulic analyses and modifications necessary to attach a Utility Facility to any bridge or structure.

Utility Facilities shall be placed at least 4 feet below the bottom of the channel at the flow line as close to the right of way limits as conditions permit. Utility Facilities shall be continued at a minimum of 4 feet below the flow line elevation for a minimum distance of at least 30 feet on either side of the channel bank. A lesser distance may be considered based on a scour analysis and design prepared by a professional engineer at the cost of the Applicant.

Utility facilities which cross any irrigation ditch within the ROW will be subject to any applicable fees required by the irrigation ditch company/owner. Evidence of approval by affected irrigation ditch companies/owners shall be submitted to the County prior to issuance of a Utility Permit.