

DEPARTMENT OF TRANSPORTATION

Transportation Commission

STATE HIGHWAY UTILITY ACCOMMODATION CODE

2 CCR 601-18

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

1.0 GENERAL PROVISIONS

1.1 Statement of Basis

- 1.1.1 The basis of the State Highway Utility Accommodation Code (Code) is the need to serve the public good through the safe, efficient and effective joint utilization of State Highway Right-of-Way (SH ROW) for both transportation and utility purposes.
- 1.1.2 The Code is necessary to establish a uniform and consistent statewide process for accommodating utilities within SH ROW by means of reasonable regulations to ensure that such accommodations do not adversely affect the highway or traffic safety, or otherwise impair the operation, aesthetic quality or maintenance of the transportation facility, or conflict with applicable law.
- 1.1.3 Utility facilities provide an essential service to the general public, but every accommodation must be compatible with and not adversely affect the existing and future needs of the transportation facility.
- 1.1.4 The Code is being implemented in an effort to conserve limited public resources, preserve future options, and minimize conflicts between highway and utility facilities. The reasonable regulations in the Code ensure such accommodations.
- 1.1.5 The effective date of the State Highway Utility Accommodation Code is October 30, 2009.

1.2 Specific Statutory Authority

- 1.2.1 The Code has several sources of specific authority. §43-1-225(1), Colorado Revised Statutes, (CRS) as amended, gives the Transportation Commission (Commission) authority to make reasonable regulations for accommodation of certain utilities in, on, along, over, across, through, or under SH ROW. Also, the Colorado Department of Transportation (Department) has responsibility and authority under § § 43-1-110 and 43-2-102, CRS, for the design, construction, improvement, maintenance and management of the State highway system and SH ROW. § 43-1-106(8)(k), CRS, further authorizes the Commission to make all necessary and reasonable regulations with respect to the responsibilities of the Department for the State highway system. The accommodation of utility facilities within SH ROW is an important part of those responsibilities. Finally, the Commission has authority under the police power to regulate the accommodation of utility facilities within SH ROW to the extent that regulation is necessary to protect the public safety and welfare, and the Code is necessary for that reason as noted above.
- 1.2.2 The Commission's specific authority is consistent with the concurrent authority granted by the State Legislature to utilities and to local agencies regarding utility facilities in public highway right-of-way. While utilities have certain statutory authority to place their facilities within SH ROW, § § 32-1-1006(1)(c), 32-4-406(1), 32-4-510(1), 38-5-101, and 38-5.5-103(1), CRS, that authority is subject to reasonable regulation by the Department to ensure that the facilities do not

unreasonably impair transportation purposes. While local agencies have certain authority to allow utilities in streets that are also SH ROW pursuant to §§ 43-2-135(1), 31-15-702(1), and 38-5-108, CRS and also Article XXV of the Colorado Constitution, that authority must be construed harmoniously with the primary authority of the Commission and the Department to regulate the accommodation of utility facilities in the SH ROW, as provided in the Code, in order to ensure statewide uniformity.

1.3 Purpose

- 1.3.1 The main purpose of the Code is to implement, by permit, Commission and Department authority to regulate utility accommodations in SH ROW. The Code establishes a utility permit system which includes uniform Department procedures and requirements necessary to allow utility accommodations while accomplishing the purpose described herein. The utility permit system will guide the Department, utility owners and local agencies in the planning and administration of utility accommodations within SH ROW.
- 1.3.2 Another purpose of the Code is to comply with certain federal provisions in order to enable the Department to receive federal funds. The Department must exercise uniform and adequate regulation over utility accommodations on all State highways. Therefore, the Code shall apply to all State highways and SH ROW.
- 1.3.3 A further purpose of the Code is to formalize and supersede the policies contained in the Department's "Utility Manual," which, as a regulatory document, had the following limitations: it was not applied consistently statewide, it was difficult to enforce, it did not provide an effective process for resolving disputes, and it lacked public and utility owner input. The Code is more complete and is intended to address these limitations. It is intended to increase uniformity, provide clarity and credibility, and enforceability to the Department's procedures, criteria, engineering and technical requirements for utility accommodations within SH ROW.

1.4 Definitions and References

1.4.1 Abbreviations: As used in the Code these abbreviations shall have the following meaning:

- 1.4.1.1 AASHTO: American Association of State Highway and Transportation Officials
- 1.4.1.2 CCR: Code of Colorado Regulations
- 1.4.1.3 CDOT: Colorado Department of Transportation (Department)
- 1.4.1.4 CFR: Code of Federal Regulations
- 1.4.1.5 CRS: Colorado Revised Statutes
- 1.4.1.6 FHWA: Federal Highway Administration
- 1.4.1.7 MPH: Miles per Hour
- 1.4.1.8 MUTCD: The FHWA "Manual of Uniform Traffic Control Devices" and the Colorado supplement thereto as adopted by the Commission pursuant to § 42-4-104, CRS
- 1.4.1.9 OSHA: Occupational Safety and Health Administration
- 1.4.1.10 PUC: Colorado Public Utilities Commission

- 1.4.1.11 ROW or SH ROW: Highway Right Of Way or State Highway ROW under CDOT jurisdiction
- 1.4.1.12 RTD: CDOT Regional Transportation Director [see 1.4.2.86]
- 1.4.1.13 SECTION: A cross-referenced Section of the Code
- 1.4.1.14 §: A cross-referenced Section of CFR or CRS
- 1.4.1.15 UNCC: Utility Notification Center of Colorado
- 1.4.1.16 USC: United States Code

1.4.2 Definitions: These definitions are provided and adopted to explain certain technical words and phrases found in the Code. All words not specifically defined herein shall have their commonly accepted meanings.

- 1.4.2.1 AASHTO GUIDE: “A Guide for Accommodating Utilities Within Highway Right-of-Way.”
- 1.4.2.2 AASHTO POLICY: “A Policy on the Accommodation of Utilities Within Freeway Right-of-Way.”
- 1.4.2.3 ABANDONMENT: The cessation of ownership, use, and operation of a utility facility.
- 1.4.2.4 ACCOMMODATE: The act of enabling an accommodation.
- 1.4.2.5 ACCOMMODATION: The location, installation, construction, operation, maintenance, repair, renewal, relocation or presence of utility facilities.
- 1.4.2.6 ADJUSTMENT: A modification of an existing utility facility.
- 1.4.2.7 AESTHETIC QUALITY: Those desirable characteristics in the appearance of the highway and its environment, such as harmony between or blending of natural or manufactured objects in the environment, continuity of visual form without distracting interruptions, and simplicity of designs which are desirably functional in shape but without clutter.
- 1.4.2.8 APPLICANT: The person or entity that prepares a utility permit application on behalf of the utility owner. Permits are only issued in the name of the utility owner.
- 1.4.2.9 BACKFILL: Replacement of suitable material compacted as specified around and over a pipe, conduit, casing or gallery.
- 1.4.2.10 BEDDING: Organization of soil or other suitable material to support a pipe, conduit, casing or gallery.
- 1.4.2.11 BOARD: Three or more persons appointed by the Chief Engineer to act as a body to preside over hearings.
- 1.4.2.12 BORE or BORING: The excavation of an underground circular cavity for the insertion of a pipe or other type of conduit.
- 1.4.2.13 BRIDGE: A structure, including supports, erected over a depression or obstruction, such as water, a highway, or railroad, and having a track or passageway for carrying traffic or other moving loads and having a length measured along the center of roadway of more

than twenty (20) feet between undercopings of abutments or extreme ends of openings for multiple boxes.

- 1.4.2.14 CAP: Rigid structural element surmounting a pipe, conduit, casing, or gallery.
- 1.4.2.15 CARRIER: Pipe directly enclosing a transmitted fluid in a liquid or gaseous state.
- 1.4.2.16 CASING: A larger pipe enclosing a carrier. The cell of a box girder does not qualify as a casing. Tunnels or galleries may function as casing pipes.
- 1.4.2.17 CATHODIC PROTECTION: A method of controlling corrosion through the use of an induced electrical current and sacrificial anodes.
- 1.4.2.18 CHIEF ENGINEER: The Chief Engineer of the Colorado Department of Transportation, acting either directly or through duly authorized representatives.
- 1.4.2.19 CLEAR ZONE: That portion of the roadside, within the highway right-of-way as established by the highway agency, free of nontraverseable hazards and fixed objects.
- 1.4.2.20 COATING: Material applied to or wrapped around a pipe.
- 1.4.2.21 CODE: The State Highway Utility Accommodation Code.
- 1.4.2.22 COMMISSION: The Colorado Transportation Commission.
- 1.4.2.23 CONDUCTOR: Wire carrying electric current.
- 1.4.2.24 CONDUIT or DUCT: An enclosed tubular runway for protecting wires or cables.
- 1.4.2.25 COVER or COVER DEPTH or DEPTH OF COVER: The depth of top of pipe, conduit, casing or gallery below grade of roadway or ditch.
- 1.4.2.26 CRADLE: Rigid structural element below and supporting a pipe.
- 1.4.2.27 CROSSING: The utility crossing of the SH ROW plus isolated segments of utility lines which may parallel the highway for not more than five hundred (500) feet.
- 1.4.2.28 DAY: Means a calendar day, unless specifically stated otherwise in the applicable text of the Code.
- 1.4.2.29 DEPARTMENT: The Colorado Department of Transportation.
- 1.4.2.30 DESIGN-BUILD CONTRACT: The procurement of both the design and construction of a transportation project in a single contract with a single design-build firm or a combination of such firms capable of providing the necessary design and construction services.
- 1.4.2.31 DESIGNATED REPRESENTATIVE: A duly authorized, appointed representative of the Department, local agency, utility owner or permittee.
- 1.4.2.32 DIVIDED HIGHWAY: A highway with separated roadways, usually for traffic moving in opposite directions, such separation being indicated by depressed dividing strips, raised curbs, traffic islands, or other physical barriers so constructed as to impede vehicular traffic or otherwise indicated by standard pavement markings or other official traffic control devices as prescribed by the Department.

- 1.4.2.33 DRAIN: Appurtenance designed to discharge liquid contaminants.
- 1.4.2.34 EASEMENT: A possessory interest held by a person or entity in the land of another whereby the first person is accorded partial use of such land for a specific purpose.
- 1.4.2.35 EMERGENCY: Where circumstances imperatively require immediate action to comply with a State or federal law or federal regulation or for the preservation of the public health, safety or welfare.
- 1.4.2.36 ENCASEMENT: A structural element surrounding a pipe, which may include boxing or jacketing in trenched installations, or grouting in untrenched installations.
- 1.4.2.37 EXPRESSWAY: A divided arterial highway for through traffic with full or partial control of access and generally with grade separations at major intersections.
- 1.4.2.38 FEDERAL AID HIGHWAY: A highway or portion thereof which is or has been developed, constructed or improved as part of a federal aid highway project as defined herein.
- 1.4.2.39 FEDERAL AID HIGHWAY PROJECTS: Active or completed highway projects administered by or through a State highway agency which involve or have involved the use of federal aid highway funds for the development, ROW acquisition, construction, or improvement of highway or related facilities, including highway beautification projects.
- 1.4.2.40 FLEXIBLE PIPE: A pipe which can be deformed without undue stress.
- 1.4.2.41 FLOWABLE BACKFILL: A low-cement-content aggregate mixture developed as an alternative to conventional trench backfilling methods, to facilitate the backfilling operation and expedite the restoration of a pavement surface.
- 1.4.2.42 FORCE MAJEURE: is a "superior force," such as natural and unavoidable catastrophies that interrupt the expected course of events and restrict participants from fulfilling obligations. It is a common clause in contracts to free both parties from liability or obligation when an extraordinary event or circumstance beyond the control of the parties, such as a war, strike, riot, crime, or an event described by the term "act of God" (e.g., flooding, earthquake, volcano), prevents one or both parties from fulfilling their obligations under the contract. It does not excuse negligence or other malfeasance of a party, as where non-performance is caused by the usual and natural consequences of external forces, or where the intervening circumstances are specifically contemplated.
- 1.4.2.43 FREEWAY: A divided arterial highway for through traffic with full control of access and generally with grade separations at major intersections.
- 1.4.2.44 FRONTAGE ROAD: A local street or road auxiliary to and located on the side of an arterial highway for service to abutting property and adjacent areas for control of access.
- 1.4.2.45 FULL CONTROL OF ACCESS: The access control which provides for a preference to through traffic by providing access connections only with selected public roads and by prohibiting at-grade crossings and direct private driveway connections.
- 1.4.2.46 GALLERY: An underpass for two or more utility lines.
- 1.4.2.47 GRADE SEPARATION: A crossing of two roadways, or a roadway and railroad, at different levels.

- 1.4.2.48 GROUT: A cement mortar or a slurry of fine sand or clay.
- 1.4.2.49 HEAVY WALL THICKNESS PIPE: Pipe meeting the industry standard for this specific designation.
- 1.4.2.50 HIGHWAY: The entire width between boundary lines of every way publicly maintained when any part thereof is open to use of the public for purposes of vehicular travel or the entire width of every way declared to be a public highway by any law of this State.
- 1.4.2.51 HIGHWAY AGENCY: That department, agency, commission, board, or official of any state or political subdivision thereof, charged by its law with the responsibility for highway administration.
- 1.4.2.52 HIGHWAY PURPOSE: Pertaining to the planning, design, construction, operation, maintenance, or improvement of any portion of the highway facility or function thereof, or to any lawful duty or act of a highway agency.
- 1.4.2.53 HIGHWAY PROPERTY: SH ROW and all improvements constructed thereon for highway purposes, including but not limited to such elements as: roadway template, pavement, subgrade, roadside areas, curbing, traffic barriers, highway structures, landscaping, irrigation and drainage systems, lighting, traffic signal systems, delineation, pavement markings and survey monumentation.
- 1.4.2.54 HIGHWAY STRUCTURE: Any structure constructed for the purpose of carrying vehicular, rail, or pedestrian traffic over a depression, stream, obstacle, roadway, walkway, or railroad.
- 1.4.2.55 HOLIDAY: Holidays recognized by the State of Colorado are: New Year's Day, Dr. Martin Luther King Jr. Birthday (observed), President's Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, Christmas Day. When a holiday falls on Sunday, the following Monday shall be considered a holiday, and when a holiday falls on a Saturday, the preceding Friday shall be considered a holiday. Cesar Chavez Day (March 31) may be considered a holiday, and, will be noted on the completed permit if applicable. Additional legal holidays, when designated by the Governor or the President of the United States, may also be recognized by the State. When a local agency has issuing authority for a permit, such other day(s) as the local agency may designate shall also be considered holiday(s) for the purpose of the permit.
- 1.4.2.56 INSPECTOR: A designated representative of the Department who is assigned to make detailed inspections of utility permit activities in order to verify compliance with the Code and with the terms and conditions of an approved permit.
- 1.4.2.57 INSTALLATION: A utility facility or portion thereof, which is placed within SH ROW, or the act of making same.
- 1.4.2.58 INTERCHANGE: A facility that grade separates intersecting roadways and provides directional ramps for access movements between the roadways. The structure and the ramps are part of the interchange.
- 1.4.2.59 INTERSTATE: A highway that is included as part of the national system of interstate and defense highways.
- 1.4.2.60 ISSUING AUTHORITY: The authority vested in the appropriate government agency to issue a permit in accordance with the Code to accommodate a utility in SH ROW.

- 1.4.2.61 JACKET or BOX: Encasement by concrete poured around a pipe.
- 1.4.2.62 JACKING: Pushing a pipe horizontally under a roadway by mechanical means, with or without boring.
- 1.4.2.63 JETTING: Pushing a pipe through a roadway embankment using water under pressure to create a cavity ahead of the pipe.
- 1.4.2.64 JOINT USE: The use of pole line, trenches, duct systems, or other facilities by two or more utilities in order to conserve SH ROW.
- 1.4.2.65 LEAK-PROOF CONSTRUCTION: Methods to ensure against leakage in pipelines, including welded or mechanical leak-proof joints, and/or quality assurance measures such as radiographic or hydrostatic testing and certification of welds and joints.
- 1.4.2.66 LOCAL AGENCY: The city, city and county, or incorporated town within whose jurisdiction the utility will be accommodated in the ROW of a street that is also a State highway. The term shall also include the government of any Indian lands.
- 1.4.2.67 LOCAL STREET: A municipal street as provided in §§ 43-2-123 to 43-2-125, CRS.
- 1.4.2.68 LONGITUDINAL: Parallel or nearly parallel to the approximate alignment of the highway for more than five hundred (500) feet.
- 1.4.2.69 MAINTENANCE: The servicing and repair of an existing facility as necessary to keep the facility in safe and acceptable operating condition.
- 1.4.2.70 MAJOR CHANGE: An alteration in the scope, location, nature, or cost of the work and includes but is not limited to:
- 1.4.2.70.1 changing a facility from aerial to underground; or
 - 1.4.2.70.2 changing the location of a highway crossing; or
 - 1.4.2.70.3 a shift from one side of the highway to another; or
 - 1.4.2.70.4 any increase in plant capacity; and
 - 1.4.2.70.5 changing from boring to open cut installation.
- 1.4.2.71 MANHOLE: An opening in an underground system which workmen, or others may enter for the purpose of making installations, repairs, connections or tests.
- 1.4.2.72 MARKER: A pole or other object placed over or near a buried facility to denote the facility's alignment.
- 1.4.2.73 MEDIAN: That portion of the highway separating the opposing traffic flows.
- 1.4.2.74 METHOD OF HANDLING TRAFFIC (MHT): A discrete element of a traffic control plan that describes the traffic control measures that may or will be taken in a particular phase of a permit operation or in a particular situation that may be encountered.
- 1.4.2.75 NIGHT: The period between one hour before sunset and one hour after sunrise.

- 1.4.2.76 **PARTIAL CONTROL OF ACCESS:** The authority to control access is exercised to give preference to through traffic to a degree that, in addition to access connections with selected public roads, there may be some crossings at-grade and some private driveway connections.
- 1.4.2.77 **PAVEMENT CUT:** The removal of an area of pavement for the purpose of placing or maintaining a utility facility.
- 1.4.2.78 **PAVEMENT STRUCTURE:** The combination of subbase, base course, and surface course placed on a subgrade to support and distribute the traffic load to the roadbed.
- 1.4.2.79 **PERMIT:** The written document by which the Department regulates and/or gives approval of the use and occupancy of the SH ROW by utility facilities or private lines, and which sets forth the approved terms and conditions under which a utility or utility facility may be accommodated within SH ROW. A permit is a license that does not convey any compensable property interest to the permittee. Permits shall be issued only to the actual facility owner.
- 1.4.2.80 **PERMITTEE:** The entity that owns and operates the utility facility, and that is responsible for fulfilling all the terms and conditions of the permit; or, as accepted by the Department, the utility owner's designated representative, duly authorized by the owner, to carry out any or all permitted activities.
- 1.4.2.81 **PIPE:** A tubular product made as a production item and for sale as such. Cylinders formed from plate in the course of fabrication of auxiliary equipment are not pipe as defined herein.
- 1.4.2.82 **PLOWING:** Direct burial of utility lines by means of a "plow" type mechanism which breaks the ground, places the utility line and closes the break in the ground in a single operation.
- 1.4.2.83 **PRESSURE:** Relative internal pressure in pounds per square inch (PSI) gauge.
- 1.4.2.84 **PRIVATE LINE:** Privately owned facilities, which convey or transmit commodities outlined in the definition herein for "utility facility," but devoted exclusively for private use.
- 1.4.2.85 **REGION:** A geographical subdivision of the State of Colorado established by the Department for administrative purposes.
- 1.4.2.86 **REGIONAL TRANSPORTATION DIRECTOR (RTD):** An authorized representative of the Chief Engineer who is in responsible charge of engineering, design, construction, operations, maintenance, and safety activities within a Department region, or the designated representative of said director.
- 1.4.2.87 **RELOCATION:** The adjustment of utility facilities required by the highway project or other highway purpose. It includes removing and reinstalling the facility, including necessary temporary facilities, acquiring necessary right of way on the new location, moving, rearranging or changing the type of existing facilities and taking any necessary safety and protective measures. It shall also mean constructing a replacement facility that is both functionally equivalent to the existing facility and necessary for the continuous operation of the utility service, the project economy, or sequence of highway construction.
- 1.4.2.88 **REST AREA:** A roadside area with parking facilities separated from the roadway provided for motorists to stop and rest for short periods. It may include drinking water, toilets, tables and benches, telephones, information and other facilities for travelers.

- 1.4.2.89 RETIREMENT: The cessation of use and operation of a utility facility that remains under the utility's ownership.
- 1.4.2.90 RIGHT-OF-WAY (ROW): Real property, or interests therein, acquired, dedicated or reserved for the construction, operation, and maintenance of the State highway system.
- 1.4.2.91 ROADSIDE: A general term denoting the area adjoining the outer edge of the roadway. Extensive areas between the roadways of a divided highway may also be considered roadside.
- 1.4.2.92 ROADWAY: That portion of a highway improved, designed or ordinarily used for vehicular travel exclusive of the berm or shoulder. In the event a highway includes two or more separate roadways, "roadway" refers to any such roadway separately but not to all such roadways collectively.
- 1.4.2.93 ROADWAY TEMPLATE: The area of the constructed or proposed road embankment from road centerline across the traveled lane(s) and shoulder, then down to a drainage ditch, then up to an intercept with natural ground in a cut section, or from the shoulder down to an intercept with natural ground in a fill section.
- 1.4.2.94 RURAL AREA: Any segment of the State highway system not considered to be in an urban area.
- 1.4.2.95 SCENIC OVERLOOK: A roadside area provided for motorists to stop their vehicles beyond the shoulder, primarily for viewing the scenery in safety.
- 1.4.2.96 SHOULDER: A portion of the roadway template immediately adjacent to the traveled lane.
- 1.4.2.97 SPECIAL PROVISIONS: Terms and conditions of a permit, imposed by the Department, which are consistent with but not otherwise set forth in the Code and which address unique or variable circumstances peculiar to a given installation.
- 1.4.2.98 STANDARD PROVISIONS: Standardized terms and conditions of a permit that reflect specific Code requirements and which apply in most situations.
- 1.4.2.99 STATE: The State of Colorado, or the Department as a duly constituted agency thereof, or the Commission as the context may require.
- 1.4.2.100 STATE HIGHWAY (SH): A highway on the State highway system.
- 1.4.2.101 STATE HIGHWAY SYSTEM: All highways under Department jurisdiction and control and declared as such by the Commission pursuant to § 43-2-101, CRS.
- 1.4.2.102 STATE UTILITY ENGINEER: The duly authorized representative, acting on behalf of the Chief Engineer of the Colorado Department of Transportation, to implement the Code.
- 1.4.2.103 STRUCTURE ATTACHMENT: A utility attached to or installed within a highway structure.
- 1.4.2.104 TRAFFIC CONTROL PLAN (TCP): The planned utilization of MHT and of traffic control devices, as necessary, to ensure the safe and expeditious movement of traffic around and through the utility work site and the safety of the utility work force.

- 1.4.2.105 **TRAFFIC CONTROL SUPERVISOR (TCS):** The on-site person in direct responsible charge for implementing the TCP and shall be certified as a worksite traffic supervisor by either the American Traffic Safety Services Association or the Colorado Contractors Association, and shall have a current CDOT flagger certification card.
- 1.4.2.106 **TRAVELED WAY:** The portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes.
- 1.4.2.107 **TRENCHED:** Installed in a narrow open excavation.
- 1.4.2.108 **TRENCHLESS:** Installed using a method where no trench is excavated, such as microtunneling, jacking or horizontal directional drilling.
- 1.4.2.109 **UNDERGROUNDING:** The act of burying a line, cable, or conduit, and in context may refer in particular to the act of replacing an existing aerial facility with a buried facility.
- 1.4.2.110 **UNTRENCHED:** Installed without breaking ground or pavement surface, such as by jacking or boring.
- 1.4.2.111 **URBAN AREA:** An area where residences or businesses are clustered, not necessarily within municipal boundaries, where frequent approaches, utility lines, and drainage facilities are likely to be encountered, and where potential exists for future widening of the road to accommodate anticipated traffic growth.
- 1.4.2.112 **UTILITY or UTILITY FACILITY:** Any privately, publicly or cooperatively owned line, facility, or system for producing, transmitting, or distributing communications, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, storm water not connected with highway drainage, or any other similar commodity, including any fire or police signal system or street lighting system, which directly or indirectly serves the public. The term utility shall also mean the utility company inclusive of any substantially owned or controlled subsidiary. For the purposes of the Code, the term includes those utility-type facilities which are owned or leased by a government agency for its own use, or otherwise dedicated solely to governmental use. The term utility includes those facilities used solely by the utility which are part of its operating plant. As the context provides, the term utility may also relate to an action or requirement of a "permittee."
- 1.4.2.113 **VARIANCE:** A deviation from a specific requirement of the Code, requested by a utility owner or permittee, that if approved, is deemed consistent with the purpose and intent of the Code, and is reasonably necessary for the convenience, safety, and welfare of the public.
- 1.4.2.114 **VEHICLE:** Any device which is capable of moving itself or of being moved from place to place upon wheels or endless tracks. Vehicle includes any bicycle, but such term does not include any wheelchair or any such other device as specifically exempted in § 42-1-102(112), CRS.
- 1.4.2.115 **VENT:** Apparatus to discharge all gaseous contaminants from a casing.
- 1.4.2.116 **WATER ASSISTED or WET BORING:** To bore using water under pressure at the cutting auger to soften the earth and to sluice out the excavated material.
- 1.4.2.117 **WORKING DAY:** Any day that the permittee can perform a normal day of work, exclusive of delays which result from inclement weather, labor disputes, material

shortages and other factors beyond the permittee's control. It does not include any weekends or legal holidays.

1.5 Applicability and General Provisions

- 1.5.1 The Code shall apply only to utility accommodations on SH ROW and shall apply to all such accommodations.
- 1.5.2 The Chief Engineer, through the RTD or designee(s), shall implement the Code for the Department.
- 1.5.3 Applications for utility permits and utility relocation permits, shall be on Department-prescribed forms, unless issuing authority for permits has been delegated to a local agency.
- 1.5.4 The utility shall comply with all applicable requirements of the Code, and if a permit is issued, with all terms and conditions of that permit.
- 1.5.5 A utility shall not perform any utility accommodation work without first obtaining a permit issued by the Department or delegated issuing authority.
- 1.5.6 The Department will issue a permit only if the utility accommodation complies with the Code, and is not otherwise detrimental to the highway facility or to the health, welfare and safety of the public.
- 1.5.7 The Department may include permit terms and conditions deemed reasonably necessary to give effect to the purpose, scope or requirements of the Code.
- 1.5.8 Where language of the Code requires particular action to be taken or omitted, but does not specifically identify the responsible party, such requirements shall apply to and be the sole responsibility of the utility owner, as the context provides.
- 1.5.9 Where the language of the Code does not impose a particular obligation, but expressly indicates that a requirement or condition "will be specified," or "otherwise approved," or "may be required," or "may be necessary," or that the "Department may require a utility to take further action," the Code anticipates that such requirement or condition or action, if any, will be described by the Department in the permit. Such a requirement, condition or action will be applicable to the utility owner only if specifically described in the issued permit.
- 1.5.10 The Code does not invalidate utility permits or agreements issued or entered into prior to the effective date of the Code. However, to the extent the Code requires a utility to take reasonably necessary action in order to protect the public health, welfare and safety, or to prevent unreasonable interference with a State highway, existing utilities shall be subject to such requirements. The utility must take such actions upon written notice.

1.6 Material Incorporated by Reference

The following regulations and standards are incorporated by reference; such incorporation does not include later amendments or editions of any incorporated material. As part of the Code and by this reference, such material is incorporated but only to the extent such material is consistent with the express provisions of the Code:

1.6.1 Federal Regulations and Standards

- 1.6.1.1 [Title 23 - Highways] 23 CFR 1.23, "Rights of Way," April 1, 2008
- 1.6.1.2 23 CFR Part 645A, "Utility Relocations, Adjustments, and Reimbursement," April 1, 2008

- 1.6.1.3 23 CFR Part 645 B, "Accommodation of Utilities," April 1, 2008
- 1.6.1.4 [Title 49 - Transportation] 49 CFR Part 192, "Transportation of Natural and Other Gas by Pipeline; Minimum Safety Standards," Hazardous Materials Regulation Board, October 1, 2007
- 1.6.1.5 49 CFR Part 195, "Transportation of Liquids by Pipeline; Minimum Safety Standards," Hazardous Materials Regulation Board, October 1, 2007

1.6.2 National and Industry Standards

- 1.6.2.1 "A Guide For Accommodating Utilities Within Highway Right-of-Way," AASHTO, October 2005 edition
- 1.6.2.2 "A Policy on the Accommodation of Utilities Within Freeway Right-of-Way," AASHTO, October 2005 edition
- 1.6.2.3 "Roadside Design Guide with Updated Chapter 6" , AASHTO, 3rd edition 2006 with Appendix A and March 2006 Errata
- 1.6.2.4 "Recommended Practice for Liquid Petroleum Pipelines Crossing Railroads and Highways," American Petroleum Institute, Division of Transportation, API Recommended Practice 1102, December 2007 edition with November 2008 errata

1.6.3 The Code of Federal Regulations (CFR) and standards are available online at

http://www.access.gpo.gov/nara/cfr/waisidx_08/23cfrv1_08.html and at http://www.access.gpo.gov/nara/cfr/waisidx_07/49cfrv3_07.html. Copies of the national and industry standards are maintained by the CDOT State Utilities Engineer and are available for public inspection during regular business hours at the Colorado Department of Transportation, Utilities Unit, 4201 East Arkansas Avenue, Denver, Colorado 80222. Incorporated materials are also maintained at the State Publications Depository and Distribution Center, 201 East Colfax Avenue, Denver, CO 80203, and may be examined at any other state publications library via inter-library loan.

2.0 ADMINISTRATIVE PROCEDURES

2.1 General

2.1.1 Authority to Issue Permits in the SH ROW

- 2.1.1.1 The Department has the authority and primary responsibility to issue permits for utility accommodations on all SH ROW, including State highways that may also be local streets within the local agency jurisdiction.
- 2.1.1.2 If an application requests utility accommodation on a State highway that is also a local street within the local agency jurisdiction, the Department shall, if requested by the local agency, consult with the local agency before the Department acts on the application and/or the terms and conditions of the permit.
- 2.1.1.3 The Department may, upon written request by a local agency and prior approval thereof by the Department, delegate the authority described in the above Section 2.1.1.2 to a local agency for State highways within its jurisdiction, subject to the following conditions:
 - 2.1.1.3.1 The local agency's written request must be executed by the person authorized to obligate the local agency on utility matters.

- 2.1.1.3.2 Under any delegation, the Department shall remain the sole issuing authority for utility permits on all State highways designated as freeways or expressways.
- 2.1.1.3.3 Any permit issued by the local agency shall include all terms and conditions necessary to ensure compliance with the Code.
- 2.1.1.3.4 Upon written request from the local agency, the Department will assist with permit applications received by the local agency, including but not limited to reviewing an application, recommending permit action, and/or preparing a permit for local agency issuance.
- 2.1.1.3.5 If requested by the Department, the local agency shall promptly furnish the Department with copies of all permits issued, and of applications denied together with reasons for denial.
- 2.1.1.3.6 The local agency shall be responsible to ensure minimum Code compliance with all terms and conditions of any permit issued, and to hear and decide any appeals of its permitting decisions.
- 2.1.1.3.7 The permit shall expressly provide that the Department may, at any time, inspect the site of work authorized by the permit.
- 2.1.1.3.8 Any locally adopted utility accommodation standards that are imposed through a permit shall meet the minimum applicable requirements of the Code.
- 2.1.1.3.9 The permit shall expressly provide that the Department shall retain authority to take immediate remedial action concerning permitted work to attain compliance with the Code or with permit conditions, or as otherwise required for the public health, welfare and/or safety.
- 2.1.1.3.10 The local agency may relinquish the delegated authority upon written notice to the Department, and the Department may withdraw its delegation of authority upon written notice to the local agency.
- 2.1.1.3.11 The Department reserves the right to issue utility relocation permits.

2.1.2 Responsibility for Utility Accommodation Costs

- 2.1.2.1 The utility owner shall be responsible for all costs of the accommodation of its facilities within the SH ROW, or their relocation from the SH ROW and the Department shall have no responsibility for any costs of any utility accommodation, except as expressly provided otherwise in this Section or in a permit or written agreement.
- 2.1.2.2 If a utility fails to fulfill any requirement of the Code or of the permit, the Department, after written notice to the utility and an opportunity to remedy, may elect in its discretion to perform the work by any other suitable means. In that event, the utility shall be liable to the Department for all costs reasonably and actually incurred by the Department for that performance. The utility shall pay that amount plus interest at the statutory rate to the Department not later than 30 days after receipt of the Department's bill. Any such amounts not paid may be used to offset future fiscal Department obligations to the utility.
- 2.1.2.3 The utility company shall pay for damages caused by the company's delay in the performance of utility relocation work or interference with the performance of transportation project work done by others. Such damages may include, but are not limited to, payments made by the Department to any third party based on a claim that performance of the transportation project work was delayed

or interfered with as a direct result of the utility company's failure to timely perform the utility relocation work. This is subject to the following additional provisions:

- 2.1.2.3.1 Damages resulting from delays in the performance of the utility company's relocation work or interference with the transportation project work caused by Force Majeure or events beyond the utility company's ability to reasonably foresee or control shall not be charged to the utility company.
- 2.1.2.3.2 If damages are charged against the utility, the Department may withhold issuance of a permit until such damage charges are paid, or deduct damage charges from any outstanding accounts for relocation reimbursement agreements with that utility company.
- 2.1.2.3.3 For utility relocations arranged through Design-Build Contracts, damage charges and the potential withholding of permits are subject to Part 14 of Title 43 CRS.
- 2.1.2.4 The Department will reimburse a utility for the costs of relocating its facility only where any of the following conditions exist:
 - 2.1.2.4.1 the Utility has the right of occupancy in its existing location because it holds the fee, an easement, or other real property interest, the damaging or taking of which is compensable in eminent domain; or
 - 2.1.2.4.2 the facilities are owned by a governmental subdivision of the State of Colorado or an abutting landowner, as provided in § 43-1-225, CRS; or
 - 2.1.2.4.3 the provisions of § 43-1-1411, CRS apply with respect to certain relocation costs associated with a Design-Build Contract; or
 - 2.1.2.4.4 the facilities exist to serve a highway purpose.
- 2.1.2.5 Except as otherwise provided in § 43-1-1411(5), CRS, when in the acquisition of new SH ROW, the Department overtakes a utility's real property interest, the Department may:
 - 2.1.2.5.1 acquire a replacement property interest for the utility or reimburse the utility for the reasonable cost of acquiring its own replacement interest, the reasonableness of which will be determined by the Department after consultation with the utility; or
 - 2.1.2.5.2 where it is not necessary, by virtue of the nature of the transportation project to relocate utility facilities, the Department may enter into a common use agreement or other type of agreement with the utility that allows a property interest to exist within SH ROW; or
 - 2.1.2.5.3 if the utility must relocate within the SH ROW and if a replacement interest is not acquired, the utility may be justly compensated to the extent allowable in accordance with Colorado eminent domain law and precedent for the value of its real property interest; or
 - 2.1.2.5.4 if the relocation of a utility's facility is necessitated by a transportation project and the utility elects to relocate its facilities within the SH ROW, the Department may enter into a common use agreement or a utility permit with the utility that allows reimbursement for future relocations of the utility's facilities provided that the utility vacates all property interest that exists within the SH ROW.

2.2 Utility Permits and Utility Relocation Permits to the State Highway

2.2.1 Requirement to Obtain a Permit

- 2.2.1.1 Utility owners must obtain a permit from the Department prior to performing any utility accommodation work, including the initial installation, relocation, maintenance activities not covered under existing permit, or facilities removal.
- 2.2.1.2 The utility must obtain a new or revised permit for any work which is not expressly described in the language of the scope of work of an existing permit. The Department may issue an annual maintenance permit, depending upon the utility type, for planned or emergency maintenance activities, traffic and roadway characteristics.

2.2.2 Application for a Utility Permit

- 2.2.2.1 An applicant must submit an application for a permit to the appropriate Region Utility Permit Office where the accommodation is requested. CDOT region offices are located in Aurora, Denver, Durango, Grand Junction, Greeley, and Pueblo. For permitting purposes the Durango region is further subdivided into Durango and Alamosa offices. Contact names, addresses, phone/fax numbers and e-mail addresses are available online.
- 2.2.2.2 The application must be in writing on the Department's prescribed form, which is available from the Department's regional offices or online. The application must include a complete description of the purpose, nature and specific location of planned work, and the anticipated start and completion dates for that work. The application must include a scope of the proposed activities to be covered by a permit, including type and size of utility facility, proposed utility plans, traffic control plans, and methods used to perform the work. The application must describe that information in sufficient detail to enable the Department to determine exactly what work is proposed.
- 2.2.2.3 If the applicant is other than the utility owner, the application must include written evidence granting the applicant's authority to act as an agent for the utility owner. Such evidence will be on official utility owner letterhead, signed by the utility owner granting such authority. Such written evidence shall acknowledge that the utility owner understands that the permit will only be issued to the owner.
- 2.2.2.4 The applicant shall submit reasonably necessary additional items of information, if any, as requested by the Department in conjunction with a permit application, including but not limited to: highway and utility plan and profile information, utility facility design, existing and/or proposed locations of other facilities within the affected area, evidence of adequate, current liability insurance coverage of the proposed work, and any available Global Positioning System (GPS) coordinates for all proposed work.

2.2.3 Action on the Application; Issuance of Permit

- 2.2.3.1 The Department may refuse to accept or consider any incomplete application that lacks necessary information or detail. Such permit is not denied.
- 2.2.3.2 When a completed application is received, the Department shall promptly evaluate and act on the application in accordance with the Code. For any applications involving extraordinary circumstances, the Department shall negotiate additional reasonable time, as necessary, to completely review and act on an application.
- 2.2.3.3 If the Department denies the permit requested by the application per Section 2.2.6.1, a copy of the permit application marked "Denied," together with a written explanation of the grounds for the denial shall immediately be provided. Retracted applications are not permit denials.
- 2.2.3.4 If the Department preliminarily approves the permit requested by the application, it will prepare and transmit to the applicant for signature a written permit containing standard provisions and

applicable special provisions and other terms and conditions. The permit will be prepared using the Department's prescribed form. The permittee must sign and return the permit to the Department in a timely manner.

- 2.2.3.5 The Department may issue a "conditional" permit that is subject to further resolution of such matters as work schedule, construction methods or other permit requirements, before the affected work may proceed.
- 2.2.3.6 The effective date of the permit shall be the date the Department signs the permit. A permit shall not be effective or valid until it is signed by the permittee and the Department, with the date of issuance properly affixed thereto.
- 2.2.3.7 If the permittee does not sign the permit, or does not agree to all the terms and conditions of the permit, or does not return the signed permit within that 60 day period, then the Department shall have no obligation to sign the permit or to take further action on the permit.
- 2.2.3.8 The Department will submit the Utility Relocation Permit to the Utility Owner for signature when a utility relocation is required for a transportation project.

2.2.4 Utility Permits Requiring Third Party Approval

- 2.2.4.1 The applicant must obtain the approval of a third party, and agree to terms and all conditions imposed by that third party, before the Department will issue a permit in certain circumstances, which may include but not be limited to:
 - 2.2.4.1.1 applications wherein the proposed accommodation is on federal lands and the SH ROW grant is for highway purposes only. In such cases, the applicant must first obtain permission from, and comply with the requirements of, the federal agency having jurisdiction over the underlying land; or
 - 2.2.4.1.2 proposed utility accommodation wherein others hold an overlapping easement or other real property interest in a portion of SH ROW. In such cases, the application must include written evidence that the overlapping easement or other real property interest owner concurs with the application; or
 - 2.2.4.1.3 required FHWA concurrence when the proposed accommodation is on the ROW of a federal aid highway and either:
 - 2.2.4.1.3.1 does not conform with applicable federal regulations; or
 - 2.2.3.1.3.2 does not comply with the Code; or
 - 2.2.4.1.3.3 involves longitudinal use of the SH ROW by a private line as described in Section 3.2.2.5; or
 - 2.2.4.1.4 the proposed accommodation involves the joint use of another utility owner facility or facilities, or involves the co-location of two or more utility facilities in a common trench or conduit.
- 2.2.4.2 Any necessary FHWA approval under Section 2.2.4.1 above will be requested by the Department during the permit application review process. The applicant shall be solely responsible to request and obtain all other approvals required under Section 2.2.4.1 above.
- 2.2.4.3 The applicant must identify and address the need for any such third party approval in the application. The Department will advise the applicant of such needs that it is aware of, and will

make the permit expressly subject to prior written approval of such third parties, or may require reasonable evidence of such approvals.

2.2.4.4 If a permit is issued, it will contain, or incorporate by reference, all terms and conditions required by such third parties.

2.2.4.5 Environmental clearances must be obtained as described in Section 3.1.7.

2.2.5 Variance Procedures

2.2.5.1 The applicant must submit a written request, as part of the permit application, if seeking a variance from any requirement of the Code. The request shall describe the proposed variance, and the specific reasons for the variance.

2.2.5.2 In determining whether to grant a variance the Department will consider all relevant factors, including whether:

2.2.5.2.1 a variance is reasonably necessary for the convenience, safety and/or welfare of the public; or

2.2.5.2.2 there is exceptional or undue financial burden or other hardship on the applicant, or a physical impracticability; or

2.2.5.2.3 a variance will not impair the highway, highway operations, maintenance, safety or otherwise conflict with the purposes of the Code; or

2.2.5.2.4 a variance would not be detrimental to the public health, welfare and/or safety.

2.2.6 Denial, Suspension, Modification or Revocation of Permit

2.2.6.1 The Department may deny a permit if the requested utility accommodation does not comply with the Code or applicable law, or otherwise endangers the public health, safety and/or welfare.

2.2.6.2 The Department may suspend, limit, modify, revoke or refuse to renew or revise a previously issued permit if:

2.2.6.2.1 the application contains any material misrepresentations, false information, or its approval was otherwise obtained fraudulently and/or in bad faith; or

2.2.6.2.2 the permitted work is performed in violation of the terms and/or conditions of the permit, the requirements of the Code or any other applicable law; or

2.2.6.2.3 the permittee fails to satisfactorily perform, in a timely manner, any obligation imposed by the permit or the Code; or

2.2.6.2.4 such action is necessary to protect the highway facility, or otherwise protect the public health, safety and/or welfare.

2.2.7 Appeals

2.2.7.1 A utility owner may request the Issuing Authority to reconsider, on an informal basis, any objections to or requested revisions of Section 2.2.6 permit actions without prejudicing the right of the utility owner to the formal review procedures contained in §§ 24-4-104 and 24-4-105, CRS. If so requested, the Department may informally reconsider its action and may revise the permit

accordingly, issue a new permit or require an applicant to submit a new application for consideration.

2.2.7.2 A utility owner may also formally appeal Section 2.2.6 permit actions. Such appeal and request for hearing shall comply with the following provisions:

2.2.7.2.1 Should the utility owner object to the denial of a permit application by the Department or to any of the Department terms or conditions of a permit, the utility owner has a right to appeal that Department decision. To appeal a decision, a request for an administrative hearing shall be submitted to the Chief Engineer within 60 days of transmittal of notice of denial or transmittal of the permit for signature. A request for a hearing shall be submitted to the Chief Engineer, Colorado Department of Transportation, 4201 E. Arkansas Avenue, Denver, CO 80222-3400. The request shall include the reasons for the appeal and may include changes, revisions, or conditions that would be acceptable to the utility owner.

2.2.7.2.2 An appeal of a Department decision under the Code regarding a utility permit shall be conducted in accordance with § 24-4-105, CRS. Upon proper request by the utility owner, a hearing shall be commenced within ninety (90) days of the receipt of the appeal, unless otherwise agreed upon. The Chief Engineer shall appoint a Board consisting of three or more persons to preside over the hearing, at least one of which will have experience with utility issues within the SH ROW. Board members may serve on a Board more than once. The Chief Engineer shall select, from among the Board members, a chairperson who shall direct the proceedings, and shall assign a Department employee as a non-voting Board secretary, who will accomplish the Board's administrative duties.

2.2.7.2.3 The Board shall have authority and the hearing shall be conducted pursuant to § 24-4-105, CRS. Each side shall have 30 minutes in which to present their case, beginning with the utility owner, and the utility owner shall have 15 minutes in which to rebut the Department's presentation. The Board may opt to hear opening and closing statements, and may ask questions of either party. If requested, the Board may, but is not required to, extend the allotted times. Each party may have an attorney present their case, solely at their own expense. Any attorney who is a witness may not act as counsel for the party calling the attorney as a witness.

2.2.7.2.4 The Board shall electronically record the proceedings or hold the hearing before a certified court reporter.

2.2.7.2.5 The utility shall have the burden of proof, by a preponderance of the evidence, relating to the Department's decision regarding the utility permit.

2.2.7.2.6 Within 10 days of the hearing, the Board shall make a recommendation to the Chief Engineer regarding the validity of the Department's action on the utility permit. The recommendation shall be in writing and contain a Statement of Findings and Conclusions upon all the material issues of fact, law or discretion presented by the record and shall enter an appropriate order sanctioning or denying relief. The recommendation shall not be binding on the Chief Engineer.

2.2.7.2.7 The Chief Engineer shall take the recommendation of the Board under advisement and shall make a final decision on the utility permit within 30 days of receipt of the recommendation. The decision of the Chief Engineer shall be in writing and sent to all of the parties. The decision of the Chief Engineer shall be the final agency action of the Department pursuant to §§ 24-4-105 and 24-4-106, CRS.

2.3 Installation, Operation and Maintenance

2.3.1 Construction and Inspection

- 2.3.1.1 The permittee shall keep a copy of the completed utility permit, including accepted plans, accepted TCP, insurance and other required attachments at the accommodation work site at all times. All such documents and all the utility accommodation work shall be subject to Department review at all reasonable times.
- 2.3.1.2 Permittee shall not proceed with any work covered by a conditional permit pursuant to Section 2.2.3.5 without express written Department permission.
- 2.3.1.3 An approved permit will specify the completion date for all the accommodation work, which work shall include final cleanup. The permittee shall not perform any work after that date without the prior written Department approval. A permit shall expire automatically if the construction work approved therein has not commenced within the timeframe established in the permit or approved time extensions(s).
- 2.3.1.4 The permittee shall provide notice to the Department at the following times:
 - 2.3.1.4.1 at least two working days prior to commencing work, or resuming operations which have been suspended for five or more consecutive working days; and
 - 2.3.1.4.2 promptly upon completion of the work; or
 - 2.3.1.4.3 when otherwise specified in the permit or as ordered by the Department.
- 2.3.1.5 The Department may designate an inspector during permit operations, to assist with coordinating the work and inspect the work during progress and upon completion.
- 2.3.1.6 The Department shall determine the extent of necessary inspection services.
- 2.3.1.7 Remediation of any unacceptable work under the approved permit shall be as ordered by the Department and completed in a timely manner prior to any further work, as determined by the Department.
- 2.3.1.8 The permittee shall attend a final site inspection, as directed by the Department.
- 2.3.1.9 The permittee shall comply with all requirements related to the performance of planned or ongoing highway construction work in the same area of the SH ROW, in order to coordinate the performance of any such work and minimize public inconvenience and cost.
- 2.3.1.10 When utility operations encounter areas of previously unknown historical or ecological significance, the permittee shall immediately avoid any further disturbance thereof, and shall promptly notify and follow any subsequent Department and/or other applicable Federal, State or local agency rules and regulations.
- 2.3.1.11 If utility operations cause or observe hazardous materials spills or illicit discharges, the permittee shall immediately notify the Department and any other interested Federal, State and local agencies. If the utility construction causes an illicit discharge that may potentially enter into the Department's Municipal Separate Storm Sewer System (MS4), operations must cease until the discharge has been properly contained and the appropriate corrective measures have been implemented. An illicit discharge is any discharge to a municipal separate storm sewer that is not composed entirely of CDPS-permitted stormwater and allowable non-stormwater discharges.
- 2.3.1.12 If utility operations are not being carried out in compliance with the terms and conditions of the permit, the Department may order the utility to perform whatever corrective measures are

necessary to attain compliance. If there is an imminent danger to the public's health, safety or welfare, the Department may order the utility to cease all operations, and if necessary, to remove all equipment and facilities from the SH ROW.

2.3.1.13 If no permit has been issued for utility work in the SH ROW, the Department shall order the utility to immediately cease all operations until such time as a permit is obtained. If deemed by the Department to be necessary for the public's health, safety or welfare, the Department may order the utility to remove all equipment and/or facilities from the SH ROW. The permit issued for the work may include whatever terms and conditions necessary to correct any improperly performed work and attain Code compliance.

2.3.2 Plan Revisions or Altered Work

2.3.2.1 The permittee shall not revise the plans or methods of performing the work covered in the permit without prior written Department permission.

2.3.2.2 The permittee shall promptly notify the Department of any desired changes, or if site conditions are encountered which may require changes.

2.3.2.3 The Department may accept and/or order minor changes in the plans and/or methods that are within the scope of the existing permit.

2.3.2.4 The permittee must apply for, and receive a new or revised permit before performing any major change(s) in the work.

2.3.3 Operation and Maintenance

2.3.3.1 The permittee shall operate and maintain all utility facilities in SH ROW in accordance with the permit, either the initial permit or any subsequent individual or annual maintenance permit, and in a manner that does not impair traffic safety or unreasonably interfere with the operation and maintenance of the State highway or SH ROW.

2.3.3.2 A permit will describe the scope of work and conditions thereto, and of maintenance activities that may be performed without prior notice to and/or Department approval. The permittee shall provide written notice to, and if necessary obtain a new permit from, the Department before performing any maintenance not expressly covered in the permit.

2.3.3.3 The Department shall be given proper advance notice, as specified in the permit, whenever maintenance work will affect the movement and/or safety of traffic.

2.3.3.4 To determine if the permittee must obtain a new permit for maintenance activities, the Department shall consider all relevant factors, including: extent and duration of the work, traffic control requirements and required construction or excavation within SH ROW.

2.3.3.5 Notwithstanding Section 2.3.2, and unless any area within expressway or freeway ROW is being accessed per Section 3.2.2.9, the permittee need not provide written notice before performing maintenance work which is confined to areas beyond the traveled way and contiguous shoulders, which does not require new excavation or construction, and which does not require the active control or rerouting of traffic, and temporary lane closures where utility facilities must be serviced from within the traveled way, provided that the traffic control plan in the original permit addresses such closures. Forty-eight (48) hours notice is required for all non-emergency work requiring temporary lane closure(s).

2.3.3.6 Emergency repairs not affecting the movement or safety of traffic may be performed without prior notice to the Department. The permittee shall notify the Department soon after the repairs are

completed, and shall comply with the terms of the initial permit for the facility, as well as any subsequent permit issued to cover site restoration activities. If emergency repairs will affect the movement or safety of traffic, the permittee shall, before commencing such repairs, notify the Department and the appropriate law enforcement agency to coordinate traffic safety measures. The permittee shall notify the Department soon after the repairs are completed, and shall comply with the terms of the initial permit for the facility, as well as any subsequent permit issued to cover site restoration activities.

2.3.3.7 If the utility facility unreasonably interferes with or impairs any necessary highway function, the permittee shall, upon reasonable notice from the Department, shut off utility lines, remove combustible or hazardous materials from SH ROW, provide necessary temporary safeguards and take other appropriate actions as directed by the Department.

2.3.3.8 The permittee shall provide written notice to the Department and obtain written permission prior to any change in the carrying capacity of the utility's facility before implementing such change.

2.3.3.9 The permittee shall contact the Department immediately if, during any operation and maintenance procedure, an illicit discharge or improper connection is observed.

2.3.4 Safety Corrective Measures

2.3.4.1 The permittee shall promptly perform any corrective safety measures that the Department, after consultation with the utility owner and others, deems necessary to protect the public health, safety or welfare and has notified the permittee in writing thereof.

2.3.4.2 The permittee's performance of the safety corrective measures shall conform with the Code.

2.3.4.3 When the public health, safety or welfare require that any corrective measures be performed immediately, and if the permittee is unable or unwilling to take such action, the Department may perform those corrective measures, pending a determination of responsibility and an allocation of cost for that performance.

2.3.5 Utility Relocations Initiated by the Department

2.3.5.1 The utility shall relocate its existing facilities when the Department provides reasonable notice to the utility in writing that the relocation is necessary due to a transportation project or other transportation purpose. The notice shall include all available and relevant information including the Department's planned timeframe within which the utility relocation work must be completed. If the relocation of the company's facilities is necessitated by a transportation project, the Department shall provide written notice to the utility.

2.3.5.2 When the utility owner is required to relocate existing utility facilities, the utility owner may assist the Department to develop schedules and alternatives concerning the new location of the facilities. The Department will consider the impact of new transportation projects on existing utilities during project development.

2.3.5.3 The utility shall relocate its facilities in compliance with all terms of the permit. The permit shall be prepared using the Department's prescribed form.

2.3.5.4 The utility shall perform the relocation at or within a time convenient to, and in proper coordination with, the project or transportation-related activity, to minimize public inconvenience and cost, as directed by the Department.

- 2.3.5.5 Every permit shall be contingent upon and subject to the right of the Department to require the utility, upon reasonable written notice, to relocate facilities as necessary for any transportation purpose.
- 2.3.5.6 Relocations associated with Design-Build Contracts shall conform to the provisions of Part 14 of Article 1, Title 43 CRS.
- 2.3.5.7 Utility relocation cost responsibilities are described in Section 2.1.2.

2.3.6 Illegal or Nonconforming Installations or Activities

- 2.3.6.1 The utility owner shall, after receiving written notice from the Department: promptly remove any utility facility which was constructed, installed, revised or relocated without a utility permit or in violation of the terms of a permit after the effective date of the Code, immediately cease all unauthorized utility activities, promptly perform remedial actions to attain compliance with the terms and conditions of a permit that was issued after the effective date of the Code, and immediately suspend the permitted operation/maintenance of the facility when it is determined that the permittee has committed a deliberate and willful violation of the Code or permit and the public safety, health or welfare require emergency action.
- 2.3.6.2 Remedial actions, concerning utility accommodations that existed prior to the effective date of the Code, are subject to the provisions of Section 1.3.10.

2.3.7 Abandonment, Retirement, Change in Ownership

- 2.3.7.1 The utility shall notify the Department in writing of the planned inactivation of a facility or any portion thereof, including plans for removing the facility or a request to retire or abandon the facility in-place.
- 2.3.7.2 The Department may allow a retired facility to remain in place. The retired facility shall remain the utility's sole responsibility, and is subject to all provisions of the Code and all terms and conditions of the permit issued for that facility, including maintenance and relocation requirements. The Department shall notify the utility in writing when the facilities may be retired in place, along with any applicable special conditions.
- 2.3.7.3 The utility shall promptly remove all abandoned facilities from the SH ROW and promptly restore the SH ROW to pre-existing or other conditions prescribed by the Department unless the Department in writing expressly allows the facility to remain in place. Written notice from the Department, allowing an abandoned facility to remain in place, may include special conditions.
- 2.3.7.4 In determining whether to allow abandoned or retired facilities to remain in place, the Department may consider such factors as: present or potential congestion of utility installations, highway construction and/or maintenance requirements, cost and/or difficulty of removal, presence of hazardous materials such as asbestos, the potential for the facilities removal by the Department at some future date, and traffic and/or safety requirements.
- 2.3.7.5 The Department will notify the utility in writing of the determination if and/or when the facilities must be removed.
- 2.3.7.6 If utility facilities are retired or abandoned in place, the Department may require the utility to: cap, plug or fill lines, furnish suitable location records for any such buried facilities, maintain records of such facilities and respond to locate notices and requests from the UNCC or others. In providing such services, the utility shall indicate to the requesting entity whether or not the subject facilities are retired or abandoned, perform any other actions as deemed necessary by the Department to protect the transportation facility or the traveling public.

2.3.7.7 When transferring ownership of utility facilities, both the original permittee and the new owner shall notify the Department in writing prior to the change, and such notice shall indicate the planned date of change. The notice from the new owner shall include a written statement accepting all terms and conditions of the existing permit, effective upon the planned date of ownership change.

2.3.7.8 Utility facilities containing asbestos shall not be abandoned in-place without the express written permission of the Department with the utility owner retaining full legal responsibility for the facilities. Such facilities are normally removed from the SH ROW when removed from service.

3.0 ACCOMMODATION STANDARDS

3.1 General

3.1.1 Use of Highways for Non-Highway Purposes - Utilities may only be accommodated within SH ROW when such accommodations do not adversely affect highway or traffic safety, or otherwise impair the highway or its aesthetic quality, and do not conflict with the provisions of Federal, State, or local laws or regulations.

3.1.2 Utilities Which Serve a Highway Purpose

3.1.2.1 The applicability of the Code's location standards will be addressed in the service agreement.

3.1.2.2 The Department reserves the right to amend or waive Code requirements.

3.1.3 Joint Use Utility Facilities

3.1.3.1 Utilities shall implement joint use design alternatives where the Department determines it is necessary or prudent for the safe and efficient use of the SH ROW, especially in developing areas subject to a proliferation of individual utility installations. When so directed by the Department, the permittee is responsible for proper coordination with other affected utilities. Joint use facilities shall comply with all applicable industry guidelines and standards.

3.1.4 Utility Permit Standard and Special Provisions - Effect

3.1.4.1 Utility owner shall comply with all permit terms and conditions, including but not limited to, permit standard provisions, and any designated as special provisions.

3.1.5 Liability Insurance and Indemnification

3.1.5.1 The utility owner shall ensure that all permitted operations, whether performed by the utility owner or by subcontractors, are adequately and continuously covered by liability insurance. The types and minimum amounts of insurance acceptable to the Department will be specified in the permit application, and in the permit terms and conditions.

3.1.5.2 Policies shall name the Department, and the State of Colorado as an additional insured party, and provide for advance notification to both in the event of cancellation of coverage. This requirement is not applicable to other government entities.

3.1.5.3 Before commencing any work on any SH ROW, the utility owner shall furnish or cause to be furnished certificates of insurance in a form satisfactory to the Department certifying that the policies are in full force and effect. Insurance documentation shall be available on site at all times during the work.

- 3.1.5.4 Utilities that frequently operate within highway ROW may, with the Department's concurrence, annually or semi-annually file appropriate insurance documentation which demonstrates adequate and continual coverage of all permit operations.
- 3.1.5.5 To the extent authorized by the law, the utility shall hold harmless the Department, its employees and agents, against any action for personal injury or property damage caused by or growing out of any act or omission regarding the use or occupancy of SH ROW by the utility owner or by the utility's facilities.

3.1.6 Right of Way Considerations

- 3.1.6.1 In the location and design of its facilities, utility owners shall consider the need to conserve space for the future accommodation of other utility facilities, anticipate future expansion requirements and, when feasible, install additional carrying capacity to meet such needs. Utility owners shall enter into joint use arrangements with other utilities whenever feasible, and shall design facilities so as to minimize interference with the operation or maintenance of other pre-existing utility facilities.
- 3.1.6.2 The Department may deny a proposed utility use or occupancy of the SH ROW, based on highway user needs, safety or other criteria as set forth in 23 CFR 645 B.
- 3.1.6.3 When the highway is adjacent to agricultural lands, the Department may deny a proposed utility use or occupancy of the SH ROW, but only when such denial is consistent with the provisions of 23 CFR 645.211(c).

3.1.7 Environmental Compliance

- 3.1.7.1 Where significant adverse social, economic or environmental impacts may result from the accommodation work, the utility owner shall comply with applicable Federal, State and local laws, regulations and codes.
- 3.1.7.2 The utility owner shall comply with the "Colorado Air Quality Control Act," Title 25, Article 7, CRS, and regulations promulgated thereunder.
- 3.1.7.3 Utility operations shall comply with the maximum permissible noise levels and related requirements, prescribed in § 25-12-103, CRS.
- 3.1.7.4 The utility owner shall minimize the generation of hazardous wastes as defined in § 25-15-101(9), CRS resulting from permitted operations, shall promptly remove any such wastes from SH ROW, and shall arrange for the proper treatment, storage, reuse, and/or disposal of such wastes in accordance with the provisions of Title 25, Article 15, CRS, and regulations promulgated thereunder.
- 3.1.7.5 As directed, the utility shall perform an appropriate environmental site assessment to determine whether a proposed buried installation would facilitate the underground migration of hazardous wastes from a known site and, if so, shall employ construction methods, as directed or accepted by the Department, to prevent such migration.
- 3.1.7.6 The utility shall comply with the "Colorado Water Quality Control Act," Title 25, Article 8, CRS, the "Protection of Fishing Streams," Title 33, Article 5, CRS, the "Clean Water Act," with promulgated regulations and certifications issued. Temporary erosion and sediment control shall be provided in accordance with Sections 3.4.7 and 3.4.8.

- 3.1.7.7 The utility shall comply with all requirements of an applicable permit and all special conditions thereto, issued by the US Army Corps of Engineers, when placing dredged or fill materials in waters of the US for utility line crossings, intake or outfall structures.
- 3.1.7.8 When directed by the Department, the utility shall perform advance natural resources investigations in the vicinity of all proposed buried or above-ground installation, as necessary, to comply with the Endangered Species Act of 1973, as amended, the Migratory Bird Treaty Act, and the Bald and Golden Eagle Protection Act. The Endangered Species Act requires a permit to harass, harm, or take any species listed by the U.S. Fish & Wildlife Service as threatened or endangered. The Migratory Bird Treaty Act and Bald and/or Golden Eagle Protection Act prohibit harm, harassment, or taking of bald and golden eagles and other migratory birds and their nests. Additionally, the utility shall coordinate with the Department and the Colorado Division of Wildlife a minimum of 90 days in advance of construction within or adjacent to active stream channels in order to ensure compliance with § 33-5-101, CRS.
- 3.1.7.9 The utility shall avoid construction or other activity in wetlands unless there is no practicable alternative to such construction or activity and provided that all practicable measures are taken to minimize harm to wetlands which may result from such use. The utility shall perform any permitted work in wetlands in accordance with the Code, Federal, State or local rules and regulations, and as directed by the Department.
- 3.1.7.10 When directed by the Department, the utility shall perform advance cultural resources investigations, as necessary for the Department to comply with the “Colorado Historical, Prehistorical, and Archaeological Resources Act,” Title 24, Article 80, CRS, the “Colorado Register of Historical Places Act,” Title 24, Article 80.1, CRS, and all applicable Federal, State and local agency rules and regulations.
- 3.1.7.11 Any cultural resources investigation required by Section 3.1.7.10 above shall be performed by a Colorado permitted archaeologist. Such investigations, and proposed mitigation if any, shall be subject to review and concurrence by the Colorado State Historic Preservation Officer. Any permit issued shall include all mitigation measures prescribed as a result of such investigations.
- 3.1.7.12 When directed by the Department, the utility shall perform advance paleontological resources investigations in the vicinity of a proposed buried installation, as necessary for the Department to comply with the Colorado Historical, Prehistorical, and Archaeological Resources Act, Title 24, Article 80, CRS. Any paleontological resources investigation required shall be performed by a paleontologist permitted by the Colorado Office of Archaeology and Historic Preservation. Such investigations, and proposed mitigation if any, shall be subject to review and concurrence by the Department. Any permits, shall include all mitigations prescribed as a result of such investigations.
- 3.1.7.13 For the purposes of this paragraph, the following definitions apply:
- 3.1.7.13.1 ALLOWABLE NON-STORMWATER DISCHARGES: Unless otherwise identified by the Department or the Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division (WQCD) as significant sources of pollutants to the waters of the State, the following non-stormwater discharges to stormwater systems are allowed: landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration to separate storm sewers, uncontaminated pumped ground water (This refers to minor discharges such a private homeowner’s basement sump pump. It does not include any discharges associated with construction activity such as dewatering or infiltration. These activities require separate Colorado Discharge Permit System (CDPS permits), discharges from potable water sources, foundation

drains, air conditioning condensation, irrigation water, springs (this is not intended to refer to water rights or waters regulated by the State Engineer), water from crawl space pumps, footing drains, lawn watering, individual residential car washing, individual residential swimming pool and hot tub discharges, individual residential street washing, water-line flushing, flows from riparian habitats and wetlands, flow from emergency fire fighting activities, and water incidental to street sweeping (including associated side walk and medians) and that is not associated with construction. Discharges from these sources may still require a separate CDPS permit coverage to be obtained by the discharger.

3.1.7.13.2 CDOT WATER QUALITY PROGRAM MANAGER: The CDOT Water Quality Program Manager is responsible for managing the Illicit Discharge Program for the Department. This person would have the primary role of submitting illicit discharges to the CDPHE. The CDOT Water Quality Program Manager can be contacted regarding additional surface water quality concerns.

3.1.7.13.3 CDPHE-EMP: The Colorado Department of Public Health and Environment (CDPHE) Emergency Management Program (EMP) is a 24-hour spill reporting hotline for the State of Colorado. All spills shall be reported to the Department. Spills on highways, into waterways, or that may otherwise present an immediate danger to the public shall also be reported by calling 911 and shall be reported to the CDPHE-EMP. The EMP can notify downstream entities in case of a spill or a discharge into a waterway.

3.1.7.13.4 CDPHE–WQCD: The CDPHE Water Quality Control Division has the capabilities to take enforcement actions against illicit discharges.

3.1.7.13.5 ILLICIT DISCHARGE: Any discharge to a municipal separate storm sewer that is not composed entirely of stormwater, except the following: discharges specifically authorized by a CDPS permit and allowable non-stormwater discharges.

3.1.7.13.6 MS4: Municipal separate storm sewer system.

3.1.7.13.7 STATE WATERS: Any and all surface and subsurface waters which are contained in or flow through the State, including, streams, rivers, lakes, drainage ditches, storm drains, ground water, and wetlands, but not including waters in sewage systems, waters in treatment works or disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed.

3.1.7.14 The utility shall comply with all applicable CDPHE water quality rules and regulations. The utility shall contact the CDPHE to obtain a CDPS permit, if required, for any type of discharge, including but not limited to the following: construction site stormwater runoff, stormwater from industrial sites, municipal stormwater, drainage from utility line casings, construction dewatering, hydrostatic testing water, equipment wash water or rinse operations water, effluent from industrial treatment plants, and effluent from municipal wastewater treatment facilities.

3.1.7.15 Unallowable non-storm water discharges that enter into the storm sewer system must be reported to the Department and to the CDPHE immediately upon discovery and repaired as soon as possible. Any spills which do not enter the storm sewer system shall be, at a minimum, referred to the Department.

- 3.1.7.16 The utility shall notify the CDPHE and the Department of breaks or damage to any pipes owned by either the utility or by other entities, arising from the utility's permitted operations, which may lead to contaminated materials entering the Department MS4 and eventually discharging into State Waters. The utility shall be responsible for the prompt reconstruction and repair of damaged pipe, environmental cleanup, restoration and damages as required by the Department and CDPHE-WQCD.
- 3.1.7.17 The utility shall perform concrete washout in accordance with approved Department guidelines.
- 3.1.7.18 Unallowable non-stormwater discharges include, but are not limited to, substances such as paint, automotive fluids, solvents, oils or soaps.
- 3.1.7.19 The utility owner will comply with regulations established by the CDPHE, and/or policies established by the Department, pertaining to the handling and disposal of asbestos and asbestos-containing-materials, including applicable air quality permitting requirements.
- 3.1.7.20 If the utility owner is aware of the presence of mine tailings within the project site of a proposed facility installation, they shall so indicate on their permit application. If unexpected mine tailings are encountered during work, the utility shall immediately contact the Department. The utility owner shall comply with any special provisions pertaining to the handling, disposal, containment or monitoring of mine tailings as specified in their permit, or as directed by CDPHE or the Department.
- 3.1.7.21 It is the responsibility of utility owners to contact appropriate environmental regulatory agencies and obtain all environmental clearances and/or permits required for their activities. All required clearances or permits must be obtained prior to commencing work within the SH ROW. To the extent that the Department is made aware of any specific required environmental clearance or permit during the utility permit application review process, by either the permittee or the implementing environmental regulatory agency, the Department will include a special permit provision requiring that those specific clearances/permits be obtained prior to commencing work.

3.1.8 Aesthetic Considerations

- 3.1.8.1 Utility facility designs shall consider measures to preserve or enhance landscaping, vegetation, scenic and/or other aesthetic features of the highway and contiguous surroundings.
- 3.1.8.2 A utility installation shall not unreasonably detract from the scenic or aesthetic qualities inherent to the highway, and shall not block scenic views in any manner.
- 3.1.8.3 The utility shall utilize architectural considerations and colors that fit into the topography and blend with nature, as directed or approved by the Department.
- 3.1.8.4 New utility installations in scenic areas are subject to the criteria of Section 3.2.3 of the Code.

3.2 Restricted Uses

3.2.1 New Above Ground Installations

- 3.2.1.1 New above ground utility installations on SH ROW shall be located as far as possible from the traveled way, preferably along the ROW line.

- 3.2.1.2 New above ground installations shall not be permitted within the clear zone, as determined in accordance with Section 3.3.3, unless the Department determines that undergrounding is unfeasible or unreasonably costly, and that no feasible alternatives exist. If permitted, the utility shall employ appropriate countermeasures to reduce hazards, as determined in accordance with Section 3.3.3.4.
- 3.2.1.3 Ground-mounted radio or telecommunication facilities including relay and repeater stations which must be housed in a building structure shall not be permitted on SH ROW unless the Department determines that feasible alternative locations are unavailable.

3.2.2 Accommodations on Expressway, Freeway and Interstate ROW

- 3.2.2.1 Utility accommodations within expressway, freeway and Interstate ROW shall be subject to additional requirements not generally applicable on other highways.
- 3.2.2.2 Utilities may be accommodated within frontage road areas of such ROW without complying with the requirements of this Section, if the frontage road areas can be accessed, for constructing and servicing the utility, from beyond the fully access controlled portion of that ROW. "Frontage road areas" will be delineated by a fence, access, or barrier line established between the frontage road and the expressway, freeway or Interstate mainline or ramps.
- 3.2.2.3 Except as provided in Section 3.2.2.6 below, utility accommodations within freeway ROW shall comply with the AASHTO Policy.
- 3.2.2.4 Utilities crossing freeway ROW, and all installations within or traversing interchange areas, shall conform with the provisions of the AASHTO Policy, and with the following requirements:
 - 3.2.2.4.1 Untrenched construction methods for buried line crossings shall be utilized for the full width between access lines, except that the Department may permit trenches within medians or beyond the outer roadway shoulders if it finds that other installation methods are impractical, and if adequate safeguards for workers and highway users are provided.
 - 3.2.2.4.2 Pavement cuts shall not be permitted except at freeway ramp terminals which connect with other public roads.
- 3.2.2.5 Except as provided in Section 3.2.2.6 below, new utilities shall not be permitted to be installed longitudinally within the access control lines of expressway, freeway or Interstate ROW, unless special extenuating circumstances exist, as determined by the Department, and only under all of the following conditions:
 - 3.2.2.5.1 The utility can be installed underground with minimal effort and disturbance, and will not require frequent maintenance.
 - 3.2.2.5.2 The utility shall be installed along the outer edge of the ROW in a utility strip established by the Department.
 - 3.2.2.5.3 Longitudinal utility installations shall not be permitted within the freeway median or through roadway areas.
- 3.2.2.6 Notwithstanding other provisions of this Section, and subject to the provisions of §§ 43-1-1201, CRS et seq, the "Public Private Initiatives Program," the Department's accommodation plan and the express approval of the Commission, the Department may solicit and /or enter into agreement(s) with telecommunication provider(s) for the longitudinal installation of wireline and/or wireless telecommunication facilities within expressway, freeway or Interstate ROW.

3.2.2.7 Service connections to adjacent properties shall not be permitted from longitudinal utility installations located within the access control lines of an expressway, freeway. Service connections across the full width between access control lines may be permitted in areas where utility services are not available within reasonable distance along the side of the freeway where the service is needed.

3.2.2.8 Access for constructing and servicing utilities shall conform with permit conditions and the following Code requirements:

3.2.2.8.1 If access to or from the through roadways or connecting ramps is permitted, the permit must include provisions for vehicles to safely enter or leave the traveled way without impairing the flow of traffic. At interchange areas, such access shall be only from along lower-speed ramp sections.

3.2.2.8.2 Temporary lane closures may be permitted only when no other feasible alternative exists, and only as allowed by Region lane closure policy.

3.2.2.8.3 A locked gate along the freeway fence may be permitted to meet periodic service access needs if the Department determines that other access alternatives are impractical and that the gate does not interfere with freeway operations. If permitted, such gate shall be secure from unauthorized use and shall under no circumstance be utilized for direct access to or from the freeway mainline or ramps. If a gate is to be located along the freeway ROW line, the utility must also obtain and comply with the terms of a temporary access crossing license issued by the Department pursuant to § 43-2-147, CRS.

3.2.2.9 Notwithstanding the provisions of Section 2.3.3, the utility shall not access any area within freeway ROW without prior notification and written approval of the Department.

3.2.3 New Installations Within or Adjacent to Scenic Areas

3.2.3.1 A new utility installation on a highway, or on land acquired or improved with highway funds, which is located within or adjacent to areas of scenic enhancement or natural beauty, may be permitted. Such installation shall not require extensive removal or alteration of trees or other natural features visible to the highway user or impair the visual quality of lands being traversed. For a proposed new aerial installation, the Department must find that other locations are not available or are unusually difficult and costly, are less desirable from the standpoint of aesthetic quality, that undergrounding is not feasible or is unreasonably costly, and that the proposed installations will be made at a location and employ suitable designs and materials which give the greatest weight to the aesthetic qualities of the area to be covered.

3.2.3.2 Areas of scenic enhancement or natural beauty may include but are not limited to scenic strips, overlooks, rest areas, landscaped areas, public park and recreation lands, wildlife and waterfowl refuges, and historic sites.

3.2.4 Private Lines

3.2.4.1 Private line crossings of SH ROW may be permitted, subject to the same location and design requirements of the Code applicable to utility line crossings.

3.2.4.2 Longitudinal installations of private lines shall be subject to a determination by the Department and the FHWA that the proposed accommodation is in the public interest and will not impair the highway or interfere with the free and safe flow of traffic thereon.

3.3 Location and Design Requirements

3.3.1 General Location Requirements

- 3.3.1.1 The utility shall locate all facilities in accordance with the horizontal and vertical clearance requirements set forth in the Code.
- 3.3.1.2 The utility shall locate longitudinal installations on a reasonably uniform alignment as near as practical to the SH ROW line. Except as otherwise provided in Section 3.3.1.4 below, the utility shall not locate longitudinal installations within median areas, traveled ways, shoulders, or under curbs or sidewalks.
- 3.3.1.3 Except as provided in Section 3.3.1.4 below, the utility shall locate a buried longitudinal installation not less than 15 feet beyond the edge of pavement or back of curb to avoid potential conflict with highway signs, guardrail, or other appurtenances. If there is no feasible alternative to longitudinal placement outside of this 15 foot zone, the Department may, as a condition of approval, specify from among the following safeguards: increased cover depth to 60 inches in lieu of additional mechanical protection, require a concrete cap, Class B or better, with a minimum 4 inches thickness, the full width of the installation trench, require concrete encasement, Class B or better, minimum 2 inches on all sides, or require encasement in 0.25 inch wall thickness steel conduit, or other acceptable material.
- 3.3.1.4 The Department may allow longitudinal placement of buried utility lines beneath present and planned median areas, traveled ways, shoulders, or under curbs or sidewalks, when the State highway is also part of a local street system, subject to municipal regulations, and/or when the State highway is within an urban area as defined by the Code.
- 3.3.1.5 Where utility facilities are permitted to cross the highway, the utility shall install the facilities on a line perpendicular to the highway alignment.
- 3.3.1.6 The utility owner shall not install underground facilities in the following locations: in deep cuts, near footings of bridges and retaining walls, across intersections at grade or ramp terminals, at cross drains where flow of water, drift or stream bed may be obstructed, or within basins drained by a pump in wet or rocky terrain and difficult to attain minimum cover.

3.3.2 General Design Requirements

- 3.3.2.1 The utility owner shall be responsible for the design of all utility facilities to be installed within SH ROW, subject to the provisions of the Code.
- 3.3.2.2 The utility shall design its facilities to avoid unreasonable conflict with planned or programmed changes to existing highway facilities, as directed by the Department, so as to avoid such conflict.
- 3.3.2.3 The utility facility shall be of durable materials in conformity with accepted practice or industry standards, designed for long service life and relatively free from routine servicing or maintenance.
- 3.3.2.4 The utility shall design all utility installations to, at a minimum, meet the following requirements as applicable: electric power or communication facilities shall conform with all applicable Federal, State, and local jurisdiction codes, pipelines shall conform with the applicable provisions of industry standards and Federal and State rules and regulations, liquid petroleum pipelines shall conform with the recommended practice of the American Petroleum Institute for pipelines crossing under highways and railroads, pipelines carrying natural or other gas shall conform to the rules and regulations of the US Department of Transportation, Title 49, CFR, Part 192, and any pipeline carrying hazardous liquids shall conform to the rules and regulations of the US Department of Transportation governing the transportation of such materials, Title 49, CFR, Part 195.

3.3.2.5 The utility owner shall design and construct all buried facilities, including pipelines, conduits and casings to withstand the full range of expected internal and external pressures and loads, including internal pressures ranging from maximum expected pressure to zero pressure, and external loads from the highway and superimposed vehicle loads. Pipelines shall also be designed and constructed to resist internal and external corrosion.

3.3.2.6 All new utility facilities shall be free of asbestos and asbestos containing materials.

3.3.2.7 The utility shall design and construct all utility facilities in conformance with the applicable provisions of all Federal, State and local jurisdiction codes.

3.3.3 Clear Zone Requirements

3.3.3.1 The utility shall maintain a clear zone in accordance with this Section.

3.3.3.2 The utility shall not keep, store, stockpile or allow to remain, either in the traveled way or in the clear zone of SH ROW, any utility accommodation work equipment, material or excavation or any other nontraversable hazard or fixed object.

3.3.3.3 The clear zone shall be as follows:

3.3.3.3.1 In urban areas with barrier or vertical curbs and design speeds of 40 MPH or less, a clear zone of fifteen (15) feet shall be provided wherever feasible. Where fifteen (15) feet cannot be provided, the clear zone shall extend beyond any adjacent sidewalks. In variance situations, the clear zone shall be not less than 2 feet beyond the front face of the curb.

3.3.3.3.2 In all areas without curbs, or with mountable curbs, and with design speeds of 40 MPH or less, a minimum clear zone of fifteen (15) feet shall be provided.

3.3.3.3.3 In all areas with design speeds of 45 MPH or greater, the AASHTO "Roadside Design Guide" shall be used to determine clear zone width.

3.3.3.4 If the Department determines, in accordance with Section 3.2.1.2, that a new above ground installation may be permitted within the clear zone, the utility shall provide countermeasures as directed by the Department in the permit. Countermeasures shall include, without limitation: locations which minimize exposure to out-of-control vehicles, use of breakaway features, use of impact attenuation devices, and use of delineation and/or shielding.

3.3.3.5 The location and design of traffic barriers and countermeasures shall comply with the AASHTO "Roadside Design Guide."

3.3.3.6 All excavations shall be closed at the end of daily operations, and no unattended open excavation will be allowed within the clear zone after dark.

3.3.4 Utility Plans

3.3.4.1 Along with a completed utility permit application and other associated documents, the utility shall submit detailed plans or detailed work sketch showing the location, character, dimensions and details of proposed construction.

3.3.4.2 Any permit shall be subject to utility owner's compliance with the plans accepted by the Department.

3.3.4.3 The Department may issue a conditional permit if certain details of the plans must be completed after permit work starts, but the utility shall not start any work related to such details until accepted by the Department.

3.3.4.4 After a permit is issued, all plan revisions shall conform with Section 2.3.2.

3.3.4.5 The Department may require the utility to submit “as-constructed” plans within ninety (90) days of completion of the work that are certified by a Professional Engineer licensed by the State of Colorado or Professional Land Surveyor licensed by the State of Colorado, and showing actual final location, alignment, profile, details or dimensions. If so directed by the Department, such plans shall be of an electronic format compatible with Department software.

3.3.5 Aerial and Ground-Mounted Electric and Communications Facilities

3.3.5.1 The utility shall locate, where feasible, poles, guys, anchors, and related ground-mounted appurtenances near the ROW line and beyond embankment slopes. The utility shall not locate guy wires and stub poles between a pole and the traveled way where either guy wires or stub poles encroach upon the clear zone.

3.3.5.2 Aerial longitudinal installations in SH ROW shall be limited to single pole construction. The Department shall not permit duplication of pole line construction on the same side of the highway. The utility must arrange for the joint use of single pole construction at for aerial longitudinal locations where two or more utilities must utilize aerial facilities on the same side of the highway.

3.3.5.3 The Department shall review and accept utility plans with respect to location, the manner in which the utility facility is to be installed, measures taken to preserve safe and free flow of traffic, structural integrity of the roadway, highway structure or appurtenance, aesthetic quality of the highway, ease of maintenance, future roadway expansion, and integrity of the utility facility.

3.3.5.4 The vertical clearance for overhead power and communication lines above the highway, structure or ROW surface, and the lateral and vertical clearance from bridges shall conform with the clearances as shown below in Table 1.

3.3.5.5 The utility shall install overhead wires, conductors, and cables above the ROW surface in compliance with industry standards and Federal, State and local jurisdiction codes in effect at the time of design or installation.

3.3.5.6 The minimum overhead clearance shall apply to conductors at maximum final sag conditions with specified thickness of ice at 32 ° F (no wind displacement), at 120 ° F (no wind displacement), or maximum conductor temperature for which the line was designed to operate, whichever produces the largest final sag. Additionally, the minimum overhead clearance must be maintained at the point where the conductor is nearest the roadway or ground surface, taking both sag of the line and variations in ground surface elevation into account. The minimum vertical clearances between the conductor and the structure, bridge, roadway or ground surface within the ROW shall be as listed in Table 1.

TABLE 1

Minimum Vertical Clearance Within Right-of-Way

Type of Conductor, Cable & Voltage	Over Roadway Template	Outside Roadway Template
Insulated communication conductors & cables; messengers; grounded or effectively insulated guys; effectively grounded neutral conductors; 230C1 supply cables.	24 ft.	20 ft.
Noninsulated communication conductors; supply cables 0-750 Volts (multiplex wire)	24 ft.	20.5 ft.
Open Supply Conductors 0 - 750 Volts	24 ft.	21 ft.
Open Supply Conductors >750 Volts to 22 kVolts	25 ft.	23 ft.
Voltages exceeding 22 kVolts to 50 kVolts	25 ft.*	23 ft.*
Voltages exceeding 50 kVolts	25.5 ft.**	23 ft.**

* plus 0.4 inch per 1,000 Volts in excess of 22 kVolts

** plus [0.4 inch per 1,000 Volts in excess of 22 kVolts] X [1.0 + (.03 per 1,000 feet above 3,300 feet above sea level)] or alternate method for voltages exceeding 98 kVolts

Voltages are phase to ground for effectively grounded circuits and those other circuits where all ground faults are cleared by promptly de-energizing the faulted section, both initially and following subsequent breaker operations.

3.3.5.7 The utility may locate ground-mounted components of aerial facilities crossing the highway in highway median areas beyond the clear zone for both directions of travel with Department approval.

3.3.6 Underground Electric and Communications Facilities

3.3.6.1 The utility shall place buried facilities at a cover depth of not less than 48 inches.

3.3.6.2 Where the Department reasonably anticipates the utility will need to expand its future line capacity along the same alignment as the permitted facilities, the utility shall place spare conduit or duct, when directed in the permit, to accommodate such future needs and to avoid possible future disturbance to the highway or to traffic.

3.3.6.3 The utility shall locate pedestals, or other ground mounted appurtenances to a buried facility as near as practicable to the ROW line.

3.3.6.4 If the Department approves a variance for less than the minimum cover depth specified in Section 3.3.6.1 above, the utility shall encase buried fiber optic communications lines either in a steel pipe of minimum 6 inches inside diameter and 0.25 inch wall thickness, or in concrete, Class B or better, of minimum 2 inches thick on all sides of the lines.

3.3.7 Water, Sanitary Sewer, Natural Gas, and Hydrocarbon Pipeline Facilities

3.3.7.1 The utility shall install pipeline facilities at not less than the following minimum depths of cover:

- 3.3.7.1.1 water and sanitary sewer pipelines—4 feet 6 inches or the local frost penetration depth, whichever is greater, or as directed by the Department in the permit; and
- 3.3.7.1.2 natural gas transmission lines, mains, and service lines, and liquid hydrocarbon pipelines—48 inches, or as directed by the Department in the permit.
- 3.3.7.2 The utility shall reroute, or protect the pipeline, as determined by the Department in accordance with Section 3.3.11, where less than the minimum cover described above is available for any reason, including conflict with other utilities, water table, or local codes.
- 3.3.7.3 Joints in all pipelines operating under pressure shall be of mechanical or welded, or other leak-proof type of construction. The utility shall not use mortar, grout, or other Portland cement materials as pipeline joint sealants.
- 3.3.7.4 The utility shall construct sanitary sewers of materials and install them in a manner that will minimize the potential for any leakage. Such sewer lines shall be located below and at a minimum of ten (10) feet horizontal separation between pipes from all water lines and storm sewer lines. Where sanitary sewers are located such that any leakage that might occur could reach surface waters, the utility shall establish a schedule for routine inspection of the sewer line. Any observed leaks from sanitary sewers within the SH ROW shall be reported to the CDPHE-EMP, the Department immediately upon discovery and repaired as soon as possible.
- 3.3.7.5 Sanitary sewers larger than 24 inches, lift stations, and other certain wastewater treatment facilities are subject to the design criteria, design review and approval of the CDPHE-WQCD. Other Federal, State and local jurisdiction codes may also apply.
- 3.3.7.6 Potable water treatment facilities and certain related distribution system facilities are subject to the design criteria, design review and approval of the WQCD. Other Federal, State and local jurisdiction codes may also apply.
- 3.3.7.7 Thrust blocks shall be required on all vertical and horizontal bends in pressure pipes.

3.3.8 Irrigation and Drainage Pipes, Ditches, Canals and Stormwater Drainage Facilities

- 3.3.8.1 Irrigation and drainage pipelines shall meet the applicable requirements of Section 3.3.7. The utility shall locate open ditches and canals in conformance with the requirements of Sections 3.2.1 and 3.3.3 for above ground utility accommodations.
- 3.3.8.2 Irrigation facilities shall be constructed as directed by the Department.
- 3.3.8.3 Drainage pipelines carrying any type of wastewater effluent must be approved and receive a CDPS permit from the CDPHE-WQCD.
- 3.3.8.4 Stormwater Drainage Facilities: The Code's definition of "utility" includes "storm water not connected with highway drainage." Stormwater facilities constructed within the SH ROW which carry stormwater originating outside of the SH ROW and pass through the SH ROW without any connection to highway drainage are subject to the provisions of the Code, including all permitting requirements.
- 3.3.8.5 When a Department utility permit must be obtained to install or perform maintenance on storm drainage facilities, the design and construction of such facilities shall conform to Department standards and specifications. All plans must be accepted by the Department. Detailed design or construction requirements may be specified in the utility permit.

3.3.8.6 Stormwater originating outside of the SH ROW which flows into the SH ROW and mixes with highway drainage is not a utility under the Code.

3.3.8.7 Connections of other stormwater drainage systems to the Department highway drainage system shall be approved by the Department. No utility permit is required for the construction or maintenance of such facilities.

3.3.9 Highway Lighting Facilities

3.3.9.1 Highway lighting facilities shall be designed in accordance with current standards, as directed by the Department.

3.3.9.2 When operation and/or maintenance responsibilities for proposed SH ROW lighting will rest with a utility or local agency pursuant to law or agreement, the lighting facility shall be compatible with that entity's system and inventories.

3.3.9.3 Highway lighting systems circuits and wiring shall comply with all local jurisdiction codes, as applicable.

3.3.10 Highway Structure Attachments

3.3.10.1 Utility facilities shall not be attached to highway structures, including but not limited to bridges, culverts, lighting supports, traffic signal poles, sign supports, or sign bridges without Department approval, and other locations are unavailable, or are unreasonably difficult or costly, the structure is of a design, age, and physical condition that is adequate to support the additional load, and the attachment will not adversely affect the safety, ease of maintenance and appearance of the structure.

3.3.10.2 The utility shall design the proposed structure attachment individually for a specific highway structure. Department permission shall be required for all attachments to all bridges and structures in the SH ROW.

3.3.10.3 The utility shall locate the entire utility installation on a highway bridge or structure so as to not reduce the vertical or horizontal clearance otherwise available between the bridge or structure and any stream, pavement or rails. On water crossings by means of a bridge attachment, the utility line shall be no lower than the bottom of a stringer, and shall be located on the downstream side.

3.3.10.4 The utility shall insulate, ground, and carry communication and electric power line attachments in protective conduit or pipe from below the point of ground exit to below the point of ground re-entry. Carrier pipe and casing pipe shall be insulated from electric power lines.

3.3.10.5 Structure attachments shall conform with applicable protection requirements of Section 3.3.11.

3.3.11 Encasement and Related Protection of Utility Lines

3.3.11.1 The utility shall protect buried utility lines and structure attachments, as follows:

3.3.11.1.1 Buried facilities which are subject to damage from construction or maintenance operations, as determined by the Department, may require additional protective measures, such as: a concrete cap, Class B or better, minimum 4 inches thickness, the full width of the installation trench, concrete encasement, Class B or better, minimum 2 inches on all sides, and/or encasement in 0.25 inch wall thickness steel conduit, or other acceptable material, and/or a tunnel or gallery.

- 3.3.11.1.2 Where metal pipelines are installed in a corrosive environment and encasement is not employed, the utility shall demonstrate that the welded steel carrier pipe will provide sufficient strength to withstand the internal design pressure and the dead and live loads of the pavement structure and traffic. Additional protective measures shall include: heavier wall thickness, higher factor of safety in design, or both, adequate coating and wrapping in accordance with industry standards, cathodic protection, and the use of Barlow's formula regarding maximum allowable operating pressure and wall thickness as specified in 49 CFR § 192.105. Corrosion protection shall be required for all steel carrier pipes. Cathodic protection shall be mandatory for natural gas and hazardous material pipelines in accordance with 49 CFR, Parts 192 and 195.
- 3.3.11.1.3 At locations subject to settlement or displacement, including but not limited to: areas of unstable ground, near highway structure footings, where the method of installation or use of flexible pipe may result in subsidence or reduced pavement support, a cradle or wall, casing pipe, concrete encasement, extra strength or heavy wall thickness pipe, or leak-proof construction shall be required.
- 3.3.11.1.4 Where water, high-pressure gas, or hazardous material pipelines are either in or suspended from a highway structure, a casing pipe shall be required.
- 3.3.11.2 The utility shall utilize casing pipe: when necessary to facilitate bored or jacked installations, or to protect coated carrier pipes from damage during insertion, or as a means of conveying leaking fluids or gases to points safely beyond the traveled way, or when necessary to provide for the future adjustment, removal or replacement of the carrier line.
- 3.3.11.3 Where a casing is required and the use of a metal casing could defeat the cathodic protection circuit applied to a carrier pipe, the utility shall take the protective measures determined by the Department to be appropriate in the circumstances, including: use of non-metallic casings, or use of carrier/ casing insulation systems, or cathodically protecting casing and carrier pipes as a unit.
- 3.3.11.4 The utility shall use tunnels or galleries when determined by the Department to be appropriate in the circumstances, including: where several utility lines must share a crossing location, or as a provision for future increase in line size or additional lines; or as a means of inspecting carrier lines in the crossing.
- 3.3.11.5 On highway crossing installations, the utility shall extend any required protection at a minimum: beyond slope and ditch lines on uncurbed sections, or beyond the outer curbs on curbed sections or the full width between access control lines on expressways, freeways and Interstates. For installations other than crossings, the utility shall extend the protection as specified by the Department.

3.3.12 Vents, Drains, Manholes, Valves and Appurtenances

- 3.3.12.1 The utility shall locate vents at the high end of casings that are less than one hundred and fifty (150) feet long. The utility shall locate vents at both ends of casings that are longer than one hundred and fifty (150) feet. The utility shall locate vent standpipes at a fence line or ROW line.
- 3.3.12.2 The utility shall provide drains for casings, tunnels, or galleries which enclose carriers of liquid, liquefied gas, or heavy gas. Drains for allowable non-stormwater discharges may outfall into roadside ditches or natural watercourses at locations approved by the Department, and as allowed by the CDPHE-WQCD. At outfalls for unallowable non-stormwater drains, the utility shall take all additional measures that are determined by the Department and the CDPHE-WQCD to be suitable to protect against possible soil and/or water contamination, such as construction of dikes or liner installation. Outfalls shall not be used as a wasteway for purging the carrier.

- 3.3.12.3 The utility shall not locate manholes in the present or planned traveled way or shoulder areas, except:
- 3.3.12.3.1 in municipal streets, provided that manholes shall not be located at street intersections nor in the wheel paths of traffic lanes; and
 - 3.3.12.3.2 where manholes are essential parts of existing lines.
- 3.3.12.4 The utility shall install shutoff valves on pressurized or hazardous materials pipelines at the following locations:
- 3.3.12.4.1 near the ends of highway structures to which such lines are attached, unless the pipeline is equipped with nearby shutoff valves or operates under effective control by automatic devices; and
 - 3.3.12.4.2 near unusual hazards, such as unstable ground, structure footings, or locations subject to disturbance by construction and/or maintenance operations, unless the affected line segment can be isolated by other sectionalizing devices within a reasonable distance.
- 3.3.12.5 The utility shall install permitted structural elements, such as manholes, vaults or anchor blocks, so that the high point of the element is at or below the grade of the traveled way or shoulder surface. Manhole covers located in the traveled way or shoulder shall be not less than one-quarter inch, or more than one-half inch, below the finished pavement grade.
- 3.3.12.6 Meters shall not be placed on SH ROW except within local jurisdiction where codes require such use.

3.4 Construction Requirements

3.4.1 Access for Constructing or Servicing Utility Facilities

- 3.4.1.1 The utility shall access the work site only at locations and by means acceptable to the Department.
- 3.4.1.2 The utility shall not work at night or on Saturdays, Sundays, or holidays, except as approved by the Department. The Department may specify and/or restrict the utility's access to construct or service utility facilities during peak traffic flow or due to adverse weather, insufficient visibility, or other conditions not conducive to safe and efficient traffic operations.
- 3.4.1.3 To gain access to the SH ROW from abutting properties at other than established, approved locations, the utility must obtain and comply with the terms of an access permit issued pursuant to § 43-2-147, CRS.

3.4.2 Traffic Control and Work Zone Safety Requirements

- 3.4.2.1 The utility shall develop and submit a TCP to the Department for any work that will affect traffic movement or safety. The utility shall implement the TCP and utilize traffic control devices to ensure the safe and expeditious movement of traffic around and through the work zone and the safety of the utility work force.
- 3.4.2.2 The utility shall develop the TCP, and MHT in conformance with Department standards. The TCP shall include provisions for the passage of emergency vehicles through the work zone, and shall conform to all Federal, State and local agency rules and regulations. The TCP and MHT shall contain sufficient detail to demonstrate conformity with all applicable requirements.

- 3.4.2.3 The utility shall have a competent person at the work site at all times in direct responsible charge of temporary traffic control. In situations where the TCP goes beyond any typical application shown in the MUTCD, or particularly dangerous roadway or traffic conditions exist, the Department may require the utility to have a TCS on-site during work.
- 3.4.2.4 The utility shall not start the permitted work before the Department accepts the TCP.
- 3.4.2.5 The Department may review and order changes to the TCP and MHT during performance of the work, as required.
- 3.4.2.6 The utility shall comply with the TCP at all times during performance of the work.
- 3.4.2.7 The utility shall maintain the TCP at the work site at all times during performance of the work, and make available to the Department upon request.
- 3.4.2.8 The TCP shall ensure that closure of intersecting streets, road approaches and other access points is minimized. On heavily traveled highways, the Department shall not permit utility operations that interfere with traffic during periods of peak traffic flow.
- 3.4.2.9 When utility operations coincide with highway construction or maintenance operations or other permitted activities, the utility shall develop and implement the TCP in cooperation and coordination with the highway agency and/or its contractors, and as otherwise directed by the Department in the permit.
- 3.4.2.10 All flaggers shall have a current CDOT flagger certification card, and shall be capable of effectively communicating with the traveling public and others at the work site.
- 3.4.2.11 All workers within the SH ROW shall comply with applicable OSHA regulations.
- 3.4.2.12 Personal protective equipment (e.g. head protection, footwear, high visibility apparel, safety glasses, hearing protection, respirators, gloves, etc.) shall be worn as appropriate for the work being performed, and as specified in all applicable Federal, State and local rules and regulations.

3.4.3 Utility Owner Notification

- 3.4.3.1 The utility will comply with the applicable requirements of Article 1.5 of Title 9 CRS, including any requirement to participate in the State's Notification Association pursuant to § 9-1.5-105, CRS. All owners of underground utilities within the SH ROW, with the exception of the Department itself, must become members of the UNCC.
- 3.4.3.2 Pursuant to § 9-1.5-103, CRS, and except as provided for emergency or other special circumstances in that statute, the permittee shall not make or begin excavation without first notifying the UNCC and, if necessary, the tier two members having underground facilities in the area of such excavation. The Department shall be notified of planned excavation as specified in the permit. If known by the utility permittee to exist, underground utility owners who have not yet become members of the UNCC shall be contacted directly. Notice of commencement, extent, and duration of the excavation work shall be given at least two business days prior thereto, not including the day of actual notice.

3.4.4 Pavement Cuts and Repairs

- 3.4.4.1 The utility shall install buried facilities crossing the highway only by trenchless methods, except as provided by this Section.

- 3.4.4.2 The utility may install buried facilities by open cut of the pavement structure only if it demonstrates to the Department that: trenchless methods are not feasible due to soil conditions, or space limitations or other considerations preclude untrenched construction, and/or removal and replacement of the pavement structure will be concurrent with or closely precede a project to construct or reconstruct the affected roadway.
- 3.4.4.3 When the Department permits pavement cuts, the utility shall comply with the following conditions: no more than half the width of the roadbed may be opened at any time, the utility must replace any removed pavement to a design equal to or greater than the surrounding, undisturbed pavement structure, and the utility must saw or wheel-cut to a neat line, or as otherwise specified in the permit, any pavement removed. On trenched installations unless otherwise specified by the Department, additional cutback of base and surfacing to approximately 2 feet beyond normal trench limits shall be required, the utility shall replace excavated portions of the base and subgrade with flowable backfill, or as otherwise directed by the Department, the utility shall trim all overbreaks or incidental damage of existing pavement back to a neat line before patching, the utility shall repair all surface gouges or other minor damage in a manner acceptable to the Department, and the utility shall restore all pre-existing pavement markings in and adjacent to resurfaced areas.

3.4.5 Trenched Construction and Backfill

- 3.4.5.1 The utility shall construct vertical-sided trenches, of uniform width, and no wider than the line diameter plus three feet, unless the utility demonstrates to the Department's satisfaction that such construction is impracticable.
- 3.4.5.2 Shoring or bulkheading shall conform with all applicable Federal, State and local jurisdiction construction and safety standards.
- 3.4.5.3 The utility shall provide drainage from excavation areas.
- 3.4.5.4 The utility shall not perform construction or compaction by means of jetting, puddling, or water flooding within SH ROW; however, a limited amount of puddling may be allowed up to the springline of the pipe when free-flowing granular backfill materials are used, when necessary to obtain proper compaction of pipeline bedding.
- 3.4.5.5 Unless otherwise directed or approved by the Department, the utility shall replace excavated material with flowable backfill as specified by the Department within toes of slopes or place backfill in 6 inch layers, each consolidated by mechanical tamping and controlled addition of moisture to a density equal to or greater than that of the surrounding undisturbed soil outside toes of slopes.

3.4.6 Trenchless Installations

- 3.4.6.1 Portal limits of untrenched crossings shall be established safely beyond the highway surface and clear zone, and in no case shall the lateral distance from the surfaced area of the highway to the boring or jacking pit be less than the vertical difference in elevation between such surface and the bottom of the pit.
- 3.4.6.2 Shoring or bulkheading shall conform with applicable Federal, State and local jurisdiction construction and safety standards.
- 3.4.6.3 The utility shall not use water jetting or tunneling, but water-assisted or wet boring may be permitted if determined by the Department to not result in excessive erosion or unacceptable moisture conditions in the roadway subgrade.

3.4.6.4 The boring hole shall be oversized to the minimum amount required to allow pull-through of the conduit being installed, based upon equipment and product manufacturer's specifications. If the oversize excavation is not already filled by the drilling slurry after product pull through, the void shall be grouted to the satisfaction of the Department. Grout or other approved backfill material shall be used for pipe of 12 inches or more in diameter, and for overbreaks, unused holes or abandoned pipe. The composition of the grout shall be a cement mortar, a slurry of fine sand or fine granular materials, subject to Department approval.

3.4.6.5 The utility shall follow manufacturer's guidelines and industry standards for equipment set-up and operation. The utility shall assess soil conditions to determine the most appropriate installation technique. Underground borepaths or tunnels shall be tracked and recorded by the utility. Failed bores shall be appropriately abandoned by the utility.

3.4.6.6 Drilling fluids shall be prepared and used according to fluid and drilling equipment manufacturer guidelines. The utility shall use fluid containment pits at both bore entry and exit points, and shall use appropriate operational controls in order to avoid heaving or loss of drilling fluids from the bore.

3.4.6.6.1 Antifreeze additives shall be non-toxic and biodegradable products.

3.4.6.6.2 Depending upon chemical composition or the specific method of disposal, improperly disposed drilling fluids may be classified as solid wastes or illicit discharges per Section 3.1.7, and in general, shall be pumped or vacuumed from the construction area, removed from the SH ROW and disposed of at permitted facilities that specifically accept such wastes.

3.4.6.6.3 Disposal of drilling fluids into storm drains, storm sewers, roadside ditches or any other type of man-made or natural waterway is expressly prohibited.

3.4.6.6.4 Small quantities of drilling fluid solids (less than 1 cubic yard of solids) may be left on-site after either being separated from fluids or after infiltration of the water, provided:

3.4.6.6.4.1 the drilling fluid consists of only water and bentonite clay; or

3.4.6.6.4.2 if required for proper drilling properties, small quantities of polymer additives that are approved for use in drinking water well drilling; and

3.4.6.6.4.3 the solids are fully contained in a pit, and are not likely to pose a nuisance to future work in the area; and

3.4.6.6.4.4 the solids are covered and the area restored as required by permit requirements.

3.4.7 Utility Installations Near Drainage Ways and Watercourses

3.4.7.1 The utility shall not install any facility along or across the ROW of an irrigation ditch or canal company without first obtaining the written approval of such company.

3.4.7.2 The utility shall install facilities that cross a stream or other drainage only at a point beneath the bed of that watercourse and only at a depth that adequately allows for scour or ditch maintenance requirements. The utility shall also take the added measures to protect such lines that the Department deems necessary in areas subject to erosion or other disturbance.

3.4.7.3 In establishing the depth of cover below an unpaved channel, the Department will consider potential scour, ditch maintenance operations and/or future needs to increase the channel

capacity. The utility line shall be installed a minimum of three feet below the lowest expected level of scour or degradation.

- 3.4.7.4 Utility construction operations within or near live streams, ditches, wetlands or other bodies of water shall include adequate provision to protect or maintain surface and/or ground water quality, and may require appropriate clearances as described in Section 3.1.7.
- 3.4.7.5 The utility shall not install utility lines within culverts where the primary purpose of that culvert is to carry drainage. For culverts or culvert-like structures where the primary purpose of the culvert is something other than drainage, such as providing passage for stock, wildlife, pedestrians or vehicles, utility installations shall be addressed through Section 3.3.10.
- 3.4.7.6 In order to avoid any interference with the operations or maintenance of either utility lines or of drainage structures, the utility shall not install utility lines inside any such drainage structure or inside the trench that surrounds any drainage structure, and shall maintain a horizontal and vertical clearance from any such drainage structure or surrounding trench if further directed to do so by the Department in the utility permit.

3.4.8 Protection, Construction and Restoration of Highway Property

- 3.4.8.1 The utility shall avoid disturbing or damaging all highway property, and shall be responsible for the prompt reconstruction, alteration, repair or maintenance of highway property, to repair any damage caused by the utility work, and to restore the SH ROW to pre-existing or better conditions as may be specified in the permit.
- 3.4.8.2 Cleated or tracked equipment shall not work on or move over paved surfaces without mats or pads on tracks.
- 3.4.8.3 The utility shall not spray, cut or trim trees, or other landscaping elements, or remove any landscaping material, unless such work is specifically described in the permit application and approved in the permit.
- 3.4.8.4 The utility shall employ erosion and sediment control measures, to protect storm water quality, in conformance with current Federal, State and local jurisdiction codes and Department standards. At a minimum, the utility shall employ the following measures, as applicable:
 - 3.4.8.4.1 minimize the length of open trench; and
 - 3.4.8.4.2 minimize the area of disturbance to ground cover and vegetation; and
 - 3.4.8.4.3 manage necessary stockpiles in accordance with the permit requirements.
- 3.4.8.5 The utility may be required to obtain a storm water permit from the CDPHE per Section 3.1.7.
- 3.4.8.6 The utility shall perform any required construction or restoration of highway property in conformance with the Code, permit requirements, and with current Department standard specifications and standard plans adopted by the Commission pursuant to § 43-2-107(1), CRS, as directed by the Department. Material removed from any portion of the roadway template must be replaced in like kind with better or equal compaction. Segregation of material is not permitted.
- 3.4.8.7 All utility construction or restoration work shall be subject to Department approval, and the utility shall promptly replace all unsatisfactory work as determined by the Department.

- 3.4.8.8 The utility shall maintain any such finished work for a period of twenty four (24) months following completion and acceptance, and must post a bond to assure the adequacy of construction or maintenance.
- 3.4.8.9 The utility shall remove all debris, refuse, waste, salvage, and surplus materials resulting from utility accommodation work from SH ROW in a safe and expedient manner, daily during installation and upon completion of such work.
- 3.4.8.10 The utility shall restore ditch flow lines and shall reseed or re-sod, as conditions dictate, all areas which are denuded of vegetation during utility operations. The seed species, origin and application rates required for each location shall be as approved by the Department. Seed mixtures and mulch must be certified free of noxious weed seeds. The utility shall clean equipment before transporting it into or out of the State in order to prevent the migration of noxious weeds.

3.4.9 Markers, Location Aids and Location Assistance

- 3.4.9.1 The utility shall take all practical measures to ensure that buried utility facilities are surface-detectable by standard methods. Where the utility facilities, by the nature of their material properties, burial depth or other factors, may by themselves not be surface-detectable, the utility shall incorporate detection wire or other detection aids in the installation of those facilities. In instances where detection aids are not feasible or would be ineffective and surface-detectability cannot be ensured, surface markers shall be installed as directed by the Department, and as-constructed plans, prepared in accordance with Section 3.3.4 and showing the accurate horizontal and vertical location of the buried facilities, shall be provided to the Department.
- 3.4.9.2 All plowed or trenched installations must include appropriate color-coded warning tape placed not less than 12 inches vertically above the top of the line. The warning tape shall be surface-detectable if needed to facilitate detection of the line.
- 3.4.9.3 The utility shall place readily identifiable markers at the ROW line where it is crossed by pipelines carrying transmittants which are flammable, corrosive, expansive, energized, or unstable, except where a vent will serve as a marker.
- 3.4.9.4 The utility shall place markers for longitudinal underground facilities vertically above the facilities or at a known horizontal offset, unless otherwise approved in writing by the Department. Each marker shall provide a foresight and backsight to succeeding and preceding markers. Markers shall be installed at suitable intervals along tangent sections, at angle points or points of curvature, and at reasonable intervals along curves.
- 3.4.9.5 The utility shall maintain any markers required by the Code for the life of the installation.
- 3.4.9.6 When the utility files "as-constructed" plans with the Department in accordance with Section 3.3.4.5, the utility and the Department may enter into an agreement whereby the Department can rely on those plans for the exact location of the utility for any future excavations, and need not give notice to the utility under Article 1.5 of Title 9, CRS.
- 3.4.9.7 In addition to complying with Section 3.4.3 of the Code and the provisions of Article 1.5 of Title 9 CRS in response to the Department's notification of planned excavations, utility owners shall surface-mark their buried utility facilities that are located within the SH ROW in order to facilitate Department engineering and design activities, upon reasonable request from the Department, and at no cost to the Department. The permittee shall respond to such request within a reasonable timeframe acceptable to the Department, but no longer than 14 days from the date of request, and the accuracy of the surface marking shall be within 18 inch of either side of the actual location of the buried facility.

Editor's Notes**History**

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