

Town of Castle Rock, Douglas County, Colorado
Project: Fiber Optic Construction

1. Project Overview

This permit application covers the installation of new underground Fiber-to-the-Home (FTTH) infrastructure within the Town of Castle Rock. The project area lies within the Southeast Quarter of Section 1, the Southwest Quarter of Section 6, and the North Line of Section 7, Township 8 South, Range 66–67 West. The purpose of this project is to expand broadband network capacity and support residential service by constructing a dedicated fiber-optic distribution system.

The project scope includes the installation of new conduit, vaults, handholes, and associated fiber pathways in accordance with Town standards and utility guidelines.

2. Project Scope and Work Description

Approximately 38,800 linear feet of new underground fiber-optic infrastructure will be installed as part of this project. Work includes:

- Placement of HDPE fiber conduit via approved construction methods, primarily directional boring, with open-cut construction used only where permitted.
- Installation of handholes, vaults, pull points, and access structures as shown on the approved construction plans.
- Placement of fiber-optic cable upon completion of conduit installation and verification.
- Installation of tracer wire and marking devices to ensure long-term locatability of facilities.
- Restoration of all disturbed surfaces to the Town of Castle Rock standards.

All construction will occur within public right-of-way or approved easements. No private property access is included unless separately documented by the contractor and project owner.

3. Existing Utilities and Coordination

Existing utilities have been identified using available records from the Town and individual service providers listed on the plan sheet. These include water, sanitary sewer, electric, gas, and communication utilities.

Prior to excavation:

- Contractor must contact Colorado 811 to request utility locates.
- All utilities must be pothole-verified at conflict points.
- Horizontal and vertical clearances must comply with provider standards.

Any field discrepancies must be reported immediately to the engineer before proceeding.

4. Survey Control and Basis of Bearing

The project uses survey control based on the Town of Castle Rock monumentation system, tied to the Colorado State Plane Coordinate System, Central Zone (NAD83). Bearings and references on the plans are derived from these monuments. Vertical control is tied to Town-approved benchmarks shown on the construction plans.

Contractors must field-verify control prior to construction.

5. Construction Standards and Requirements

All work will be performed in compliance with:

- Town of Castle Rock Dry Utility / Fiber Optic Construction Standards
- Town right-of-way regulations and permit conditions
- MUTCD-compliant traffic control requirements
- OSHA excavation and safety standards
- Colorado 811 excavation laws

Backfill, compaction, and surfacing will be restored to equal or better condition than pre-construction.

Traffic control plans will be submitted as required and maintained throughout construction.

6. Materials and Installation Procedures

Materials will follow the Proposed Material List included in the construction plans. This includes conduit, fiber cable, vaults, handholes, pull tape, tracer wire, and other components required for a functional FTTH system.

Construction steps include:

1. Locating and potholing existing utilities
2. Conduit installation via directional bore or open-cut where permitted
3. Handhole and vault installation
4. Placement and labeling of fiber cable
5. Final testing, including continuity and light-level verification
6. Restoration of disturbed surfaces

7. Final Documentation and Acceptance

Following construction, the contractor will provide:

- Complete as-built drawings, showing all horizontal and vertical installation data
- Fiber testing documentation (including OTDR and loss measurements)
- Restoration verification
- Compliance statements confirming work was completed per approved plans

Final acceptance will be issued by the Town after review of all documentation and successful inspection of the work.