

Coal Creek Canyon

Fire Protection District

P.O. Box 7187 Crescent Branch ▪ Golden, Colorado 80403

303-642-3121 ▪ Fax 303-642-1652

www.coalcreekcanyonfd.org ▪ CCCFPD@aol.com

CCCFPD RESIDENTIAL BUILDING REQUIREMENTS

Dear Property Owner / Contractor:

The Coal Creek Canyon Fire Protection District (CCCFPD) requires the following Residential Building Requirements when building a new one- and two-family structure or additions over 400 square feet.

Architects licensed in the state of Colorado are required by statute to design residential structures to all applicable codes including local fire codes. Owners and builders are responsible for contacting the local fire department to ensure that new construction meets current fire codes.

Per Jefferson County, the local Fire District has individual authority to enforce fire code standards beyond the county's requirements. Cooperation and coordination with the CCCFPD early in the planning and building process may prevent costly alterations to your project and ensure compliance with all applicable health and safety standards.

Please contact Duane Harkwell, CCCFPD Fire Marshal, with any questions regarding the following building requirements. Mr. Harkwell can be reached at 303-642-7507 or CCCFPD@aol.com.

A final inspection is required by CCCFPD prior to issuance of the Certificate of Occupancy.

DRIVEWAY REQUIREMENTS

For all driveways:

- (1) Provide turns of no less than 30-foot radius measured to the centerline of the drive/roadway.
- (2) For driveways over 50 feet in length, grades should not be in excess of 10%, and 12% where the dip of the natural terrain bears between south 60 degrees east and south 45 degrees west. Maximum grade of 8% for curves with radius of less than or equal to 50 feet at centerline.
- (3) Provide 10-foot all weather, travel surface driveway width with 2-foot shoulders (for a total of 14 feet), with 14-foot drive/roadway width on minimum radius turns of 90 degrees or more.
- (4) Need road base capable of carrying 40,000 GVW (gross vehicle weight).
- (5) Provide 13-1/2-foot vertical clearance to overhanging wires and limbs.
- (6) Clearly post address where drive meets roadway.
- (7) Provide horizontal clearance / thinning, of a minimum of driveway width, of trees / scrubs on each side of the driveway for emergency vehicles.

Additional requirements for driveways in excess of 150 feet in length:

- (1) Provide 34 foot "T" or pullouts at each 150 foot in length of driveway. Refer to *Jefferson County Planning and Zoning Driveway and Private Road Standards*.

WILDFIRE MITIGATION REQUIREMENTS

"Defensible Safety Zone" (Wildfire Mitigation) for all homes, new or existing:

- (1) Defensible Safety Zone is defined as a minimum of 30 feet (where ground is level) around house. For each 10% slope uphill, add 5 feet to the zone on sides and area uphill from house. For each 10% slope downhill, add 9 feet to the zone.
- (2) With combustible siding, remove all shrubs and trees within 4 feet of building.
- (3) With noncombustible siding, widely spaced low growing shrubs are acceptable within 4 feet of building, but not beneath windows.
- (4) Make outer edges of tree crowns 10 feet apart in the defensible safety zone.
- (5) Separate shrubs by inserting 10 feet of irrigated grass or noncombustible material.
- (6) Remove dead limbs and other ground litter within the defensible space.
- (7) Prune branches on trees, within defensible space to a height of 10 feet above ground.
- (8) Remove shrubs and small trees from beneath large trees ("ladder" fuels).
- (9) Trim branches that extend over eaves of roof.
- (10) Remove branches from within 15 feet of chimney.
- (11) Dispose of all debris left from pruning and thinning.
- (12) Remove combustibles stored under open porches and areas under overhanging roofs and decks.

Area beyond defensible safety zone:

- (1) Reduce density of surrounding forest (outer edge of above-described defensible space, out to 100 feet or edge of lot), so that no tree crowns touch each other.
- (2) Remove dead limbs and ground litter.

WATER SUPPLY REQUIREMENTS

In conjunction with adopting the 2003 International Fire Code and the 2003 International Urban-Wildland Interface Code effective January 1, 2005, the CCCFPD Board of Directors requests that all new one- and two-family structures or additions over 400 square feet follow these specific requirements for water availability.

The 2003 International Urban Wildland Interface Code, Section 404.5, Adequate Water Supply, states that adequate water supply shall be determined for purposes of initial attack and flame front control as follows for one- and two-family dwellings:

The required water supply for one- and two-family dwellings having a fire area that does not exceed 3,600 square feet (334m²) shall be 1,000 gallons per minute (63.1 L/s) for a minimum duration of 30 minutes [equals 30,000 gallons]. The required water supply for one- and two-family dwellings having a fire area in excess of 3,600 square feet (334m²) shall be 1,500 gallons per minute (95 L/s) for a minimum duration of 30 minute [equals 45,000 gallons]. If an approved automatic sprinkler system is installed, the water supply maybe reduced by 50% [22,500 gallons].

The CCCFPD amended IUWI Code 404.5 as follows:

- (1) CCCFPD requires that a 5,000-gallon water cistern (buried tank) be installed on your premises in accordance with District specifications. This cistern is to be used **only** by fire department personnel as a supplementary water supply in the event of a structural or wildland fire on or near your property.

OR

- (2) As an alternative, CCCFPD accepts that a contribution to “community cisterns” be made in lieu of installing your own on-site tank. The number of square feet shown on your building permit determines the contribution amount. The square footage is based on the enclosed area of your project, including covered decks and porches, basements, and detached outbuildings such as garages, barns, etc. Cistern contributions are currently set at **\$1 per square foot (total square footage)**, not to exceed **\$4,000**, and are **payable within 30 days of the issuance of your building permit**.

CCCFPD has installed three 30,000-gallon “community cisterns” to date at three of our fire stations, with plans to install more throughout the district as funds become available. These projects usually cost \$60,000 - \$75,000.

It is our preference that these large, centrally located water tanks continue to be installed rather than smaller individual tanks at residences. Community tanks are filled and maintained by the District, whereas individual cisterns are the responsibility of the homeowner.

- **Individual / On-Site Cistern Standards**

Cisterns and Dry Hydrants should comply with the latest edition of the *National Fire Protection Association Standard #1231, WATER SUPPLIES FOR SUBURBAN AND RURAL FIREFIGHTING* with appendices, for design, installation, and maintenance, with the following additions / exceptions:

- (1) The minimum cistern size should be 5,000 gallons.
- (2) The maximum depth of the cistern for draft purposes should be 12 feet.
- (3) The cistern must be located no closer than 50 feet to the proposed structure and should be no more than 150 feet from any side of the structure.
- (4) Each cistern should have a dry hydrant installed for water supply purposes.
- (5) The dry hydrant should be located a minimum of 50 feet from the structure it is to protect.
- (6) The dry hydrant supply piping should be a minimum of 6-inch sch80 steel with a 6-inch *National Standard Hose* male thread and 6-inch x 2-1/2-inch adapter with a standard cap with ears, for protection and ease of removal. This termination should be horizontal to the ground at a height of 2 feet 6 inches, centerline of the opening and shall be located no more than five feet from the edge of the drive/roadway.
- (7) The dry hydrant supply piping exposed above the ground should be a minimum of schedule 40 steel or schedule 80 PVC.
- (8) The dry hydrant supply piping exposed above the ground should be painted BRIGHT YELLOW.
- (9) The dry hydrant supply piping with a Fire Department Connection should be conspicuously labeled "**FIRE PROTECTION WATER.**"

See attached *CCCFPD Fire Cistern Installation* drawing for further details.

New on-site cisterns must be inspected by the CCCFPD to ensure that they meet the above requirements. Call 303-642-3121 to schedule an appointment for this inspection. Please call at least one week in advance of your desired inspection date. Late requests for inspections will be handled as availability and time permits.

- **Community Cistern Contributions**

The contribution check* or money order should be made payable to:

Coal Creek Canyon Fire Protection District (or CCCFPD)
Attention: Cistern Fund
Post Office Box 7187 Crescent Branch
Golden, CO 80403

CCCFPD will notify the appropriate County agency of the contribution as necessary.

* Cashier's or certified check.

RESIDENTIAL FIRE SPRINKLER SYSTEM REQUIREMENTS

One- and two-family dwellings over 3,600 square feet must have an approved fire sprinkler system.

Residential Fire Protection Sprinkler Systems should comply with the latest edition of the *National Fire Protection Association Standard #13D, INSTALLATION OF SPRINKLER SYSTEMS IN ONE- AND TWO-FAMILY DWELLINGS AND MANUFACTURED HOMES* with appendices, for design, installation, and maintenance, with the following additions / exceptions:

- (1) Fire Department Connections, if provided, should terminate in a 2-1/2-inch female *National Standard Hose* thread. A standard cap should be provided for protection.
- (2) Fire Department Connections, if provided, should be accessible and conspicuously labeled.

A certified sprinkler system contractor must approve all sprinkler systems.

▪ **Residential Fire Sprinkler System Submittal Procedures**

- (1) District Administrative Assistant receives listing of permits posted for construction projects.
- (2) Administrative Assistant transmits to county, contractor, and property owner: CCCFPD cover letter, District Residential Building Requirements and, if required, CCCFPD Plan Review Application & Supplication Permit for all CCCFPD projects.
- (3) If project is greater than 3600 feet per our requirements, an interior fire sprinkler system in accordance with NFPA 13D is required. Copy of CCCFPD Fire Cistern Installation drawing shall be sent to property owner.
- (4) Prior to installation, three sets of stamped shop drawings for review are required by an NICET/PE for fire sprinkler system. The Design Engineer shall submit the shop drawings to the CCCFPD Fire Marshal. In addition, a copy of the Review Application & Suppression Permit and a \$200.00 review fee is required prior to review of the drawings.
- (5) If required, Fire Marshal may make preliminary review of design drawings.
- (6) Fire Marshal will submit all three sets of the shop drawings to the Certified Fire Suppression Inspector for plan review. Sets will be marked-up and stamped as required. Two marked-up sets along with a cover letter will be returned to the Design Engineer. One marked-up set will be retained for CCCFPD's files. 14 days are required for the CCCFPD review.

- (7) The Certified Fire Suppression Inspector shall make rough-in review and inspection with cover letter to follow. If required, contractor shall make all corrections noted. A 72-hour notice is required. A 12-hour notice for a cancellation is required.
- (8) After fire sprinkler completion, the Certified Fire Suppression Inspector shall make final inspection/review and test procedures of the complete system. Final review letter will then be sent. A 72-hour notice for final review is required. A 12-hour notice for cancellation is required.
- (9) The Fire Suppression Contractor shall supply the Fire Suppression Inspector with a completed NFPA 24 (standard for the installation on private fire system mains and their appurtenances) form upon request.
- (10) CCCFPD permit numbers will be as follows: Example: 09-001.