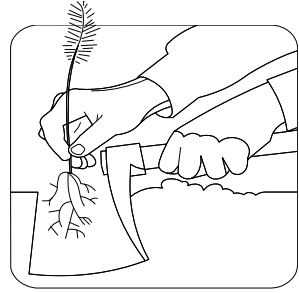


CLEAR CREEK COUNTY SITE DEVELOPMENT DEPARTMENT REQUIREMENTS FOR A SINGLE FAMILY RESIDENCE



The Site Development Department is responsible for many of the permits for the initial phases of a property's development. The Driveway Permit, Defensible Space Plan, Flood Hazard and Wetlands determination and erosion mitigation are all handled by this Department. After you have completed your **Zoning Disclosure Form**, you will typically start the permitting process here.

Before starting any of these permit processes, you should be fairly certain of the locations of all the proposed improvements: the building site; driveway; well; and leach field. Due to the potential change of grade, building height, retaining walls or locations of structures, a rough-in driveway inspection is required before a building permit will be issued. The Environmental Health Department should be contacted for any restrictions on the proposed location of the well and leach field. Another initial consideration is the possibility that your site is located in a floodplain or designated wetlands area. If your property is along a water course, you may wish to contact this Department early in your development planning for information and restrictions. The Site Development Department Inspector will otherwise make that determination at the point of the driveway permit application, and will contact you if there is a flood hazard or wetlands impact.

This packet will guide you through all of these processes as you work toward your goal of building your mountain residence. Please note that the requirements in this packet are for the Site Development Department only. Additional submittal requirements will be required for other applicable County permits and reviews are explained in detail in other packets.

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Site Development Department Directory:

Jan Patterson, Assistant - (303)679-2428

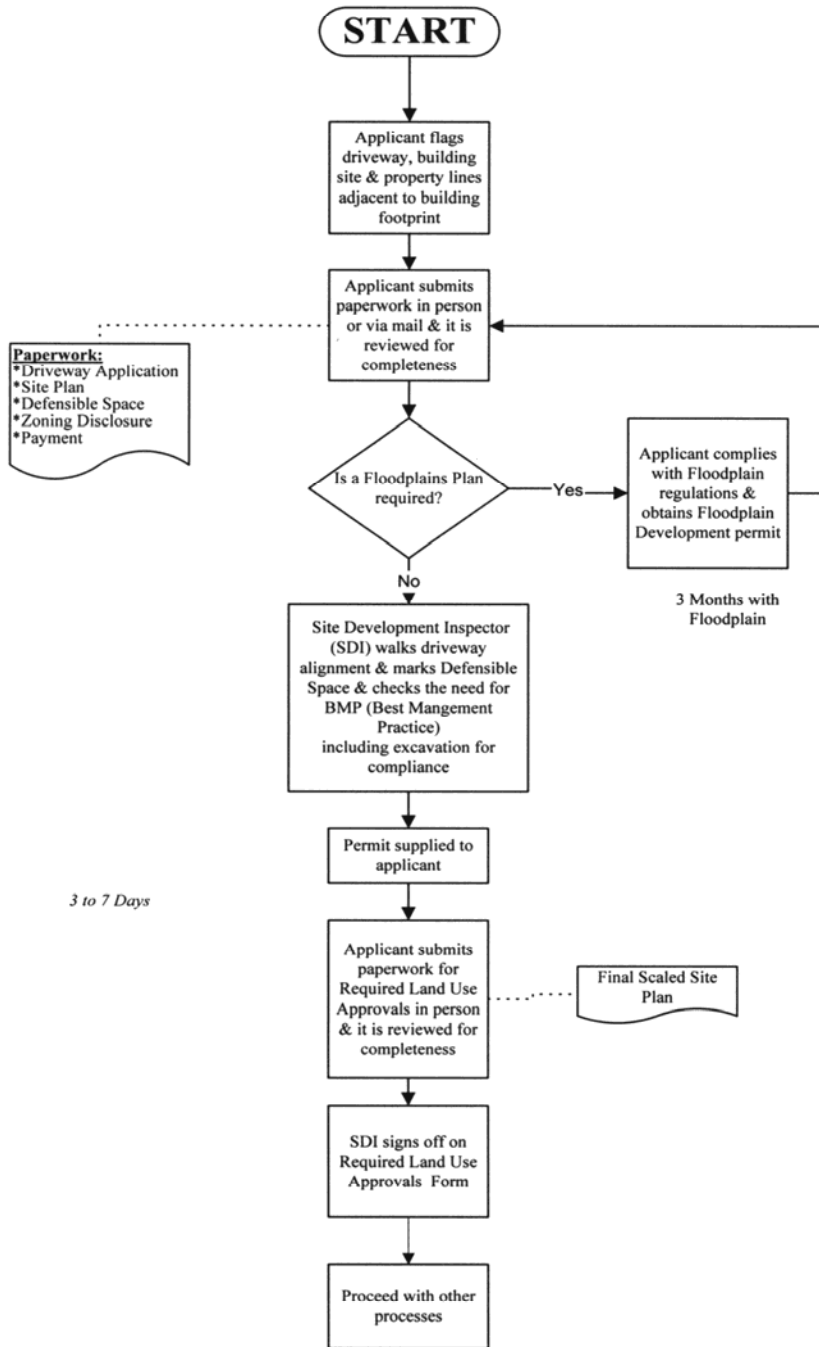
Tim Vogel, Site Development Inspector - (303)679-2421

Fax - (303)569-1103

Email address - sitedev@co.clear-creek.co.us

Website - <http://www.co.clear-creek.co.us/Depts/sitedev.htm>

Flow Chart



Site Development Department Applications Submittal Check List

Required Submittal Documents and Site Development Approvals:

Driveway Permit Submittals:

- Completed **Driveway and Building Site Excavation Permit Application**
- Copy of completed **Zoning Disclosure Form**
- Copy of recorded easements for the proposed driveway, if required
- Copy of State Highway Access Permit, if required
- Accurately scaled Site Plan; please refer to the "Driveway and Excavation Application Requirements" on page 6 for a list and explanation of the required detail. The North arrow and scale of the site plan must be shown
- Payment of the fee

Defensible Space Permit Submittals:

- Completed **Defensible Space Application Form**
- Payment of the fee

Retaining Wall Permit Submittals, when applicable:

- Completed **Retaining Wall Permit Application Form**
- Two sets of detailed plans for retaining wall or other stabilization design prepared and stamped by a Registered Colorado Licensed Engineer
- Payment of the fee

Best Management Practices Permit Submittals, when applicable:

- Completed **Best Management Practices Application Form** (the Form will be provided when a large scale earth disturbance - 2,500 cubic yards and/or 20,000 square feet or more has been determined and a **Best Management Practices** Permit will be required)
- Payment of the fee

Floodplain & Wetlands Submittals, when applicable:

- Completed **Floodplain Development Application Form** (the Form will be provided when Flood Hazard has been determined and a **Floodplain Development Permit** will be required)
- Stream Channel Cross-Sectional Survey
- Payment of fee
- Copy of Letter from Army Corps of Engineers when Wetlands Impact has been identified

Driveway Design Standards

The Clear Creek Board of County Commissioners has adopted design standards for the construction of driveways. These design standards were developed with the intent to provide reasonable ingress and egress for emergency vehicles. It is the responsibility of this Department to make sure all driveways are constructed in accordance with the adopted design standards while also taking into consideration any constraints imposed by the nature of the parcel and the mitigate for erosion both during and after excavation.

The complete **Clear Creek County Driveway Design Standards** is available at the Land Use Public Counter and must be requested by all excavation contractors and all property owners who are planning on doing their own excavation. The basic requirements are as follows:

- All driveways shall have a minimum driveway surface width of 12 feet if the driveway is less than 200 feet long or 14 feet if the driveway is equal to or greater than 200 feet long. This width does not include additional width required for proper drainage.
- All horizontal curves shall have a minimum curve radii of 30 feet measured from the centerline of the driveway to the center point of the curve.
- All driveways shall end in an approved turn-around area with a minimum 13.75 foot radius.
- Sight distances at the intersection of the driveway with a public road shall be at least seven times the posted speed limit of the public road for speeds of 40 M.P.H. or less and grades of 6% or less. All other sight distances shall be at least eleven times the posted speed limit.
- Driveways shall intersect a public road at right angles to each other. With supporting justification, a relaxation of up to 15 degrees can be requested from the county. Driveways shall meet the county road at a positive 4% grade for the length of the Right of Way but not less than 10 feet. Radii or flares of 20 feet are required.
- The maximum allowable grade on straight sections of driveway is 10%. An exception of 12% can be requested under certain circumstances. Grades from 10% to 12%, when allowed, shall not continue for lengths greater than 150 feet. A maximum grade of 8% for curves with radius of less than or equal to 50 feet at centerline shall be maintained. Grades through a switchback shall not exceed 4%.
- Cut slopes and fill slopes should be constructed no steeper than a 1 $\frac{1}{2}$: 1 slope (1 $\frac{1}{2}$ feet horizontal to 1 foot vertical). Cut slopes steeper than 1 $\frac{1}{2}$: 1 shall be designed by a Colorado licensed engineer, prior to approval from the County. In areas of solid rock, slopes shall not be cut steeper than $\frac{1}{2}$: 1. Open rock cuts greater than ten (10) feet in height and steeper than $\frac{1}{2}$: 1 slope, or greater than twenty (20) feet in height and steeper than 1:1 slope shall be designed by a Colorado licensed engineer.
- All driveway access from existing private or public roads, which interfere with a natural or constructed drainage course, shall provide a drainage culvert. The culvert shall be a

minimum of 18 inch diameter or of a diameter which will carry the flow of a 10 year storm event, as determined by the Site Development Inspector. The culvert shall be positioned offset to the drainage ditch centerline and away from the traveled portion of the access road. Cross road drainage must be provided at a minimum of every 800 feet or where an identifiable drainage course is defined, with culvert(s) a minimum of 18 inch diameter or of a diameter which will carry the flow of a 10 year storm event, as determined by the Site Development Inspector.

- The faces of cut and fill slopes shall be prepared and maintained to control against erosion. This control shall consist of effective planting as a permanent control measure. Permanent soil stabilization measures shall be installed within thirty days after final grade is reached. Planting shall occur within the next window of opportunity, should construction be completed during the winter months. Where necessary, check dams, cribbing, riprap or other devices or methods shall be employed to control erosion and provide safety. Existing trees, shrubs and grasses should be preserved where possible to prevent erosion. All topsoil shall be salvaged and redistributed. Any applicant creating an earth disturbance greater than 2,500 cubic yards and/or 20,000 square feet shall be required to apply for a **Best Management Practices Permit**.
- During construction emergency access must be maintained at all times.
- Failure to comply with any portion of these Driveway and Private Road Design Standards and Permit Procedures shall be sufficient grounds for denial, suspension, or revocation of any necessary permit. Financial penalties may also be imposed.
- All bridges shall be designed by a Colorado licensed engineer to meet the Colorado Department of Transportation requirements and specifications. Bridges shall meet elevation requirements of the Clear Creek County Floodplain Regulations (2007), if located in a designated Flood Hazard Zone A, as determined by the Flood Insurance Rating Map. All driveways and roads, which cross water courses designated as "Waters of the State" by the Army Corps of Engineers, must meet the requirements set forth by the Army Corps of Engineers for permitting before the county permits can be issued.
- A minimum 400 square foot parking area is required in lieu of meeting driveway design standards.

Where necessary, deviations from these standards may be requested. Deviations will not exceed 18%. If determined appropriate, or if the public roadway that accesses your property is not a county maintained road, the increased hazard will be required to be mitigated by conforming to the "**Wildfire Hazard Mitigation Point System**." This determination will be made at the time you are issued your driveway permit. For further information regarding the "**Wildfire Mitigation Point System**," please refer to the **Building Department Requirement Packet**.

Driveway and Site Excavation Application Requirements

All driveways, road cuts or building site excavations in Clear Creek County MUST have a driveway and excavation permit before any excavation has begun, whether the construction site is on a county maintained or non-maintained road. Please contact the Road and Bridge Department for any road cut permits needed for utility installation.

The Following Detail Must be Depicted on Both Your Application and Scaled Site Plan:

1. The linear distance of the property along the access road must be measured and labeled on the site plan. When the property is not crossed by or adjacent to the access road, the location of access road in relation to the property must be accurately shown on the site plan.
2. The actual width of the access road as traveled must be measured in the field and shown, as well as the width of the right of way, if the two widths are different.
3. In cases where easements are needed to access the property, the location must be shown on the site plan and a copy of the recorded easement must be submitted. Where other access permits, such as a State Highway Access Permit, are required, a copy of that permit must be provided with your driveway application.
4. The distance from the driveway to the nearest road intersection must be measured in the field and shown.
5. The surface width of the proposed driveway must be shown.
6. The total length of the proposed driveway must be shown.
7. The horizontal angle of the approach where the driveway intersects the access road must be shown. This angle will be expressed in degrees, i.e. 90 degrees, 80 degrees, 75 degrees, etc.
8. The maximum grade of the proposed driveway and the length of any part(s) of the driveway which will exceed 10% grade must be shown. The grade is calculated by dividing the rise by the run, (i.e., 1 foot rise in 100 feet of run or driveway length would be a 1% grade).
9. The inside turning radius of each switchback of the proposed driveway must be shown. The radius is measured from the center point of the curve to the centerline of the proposed driveway.
10. The location(s) of both temporary and permanent erosion mitigation measures planned for the control of off-site erosion and sedimentation and the proposed revegetation schedule must be shown.

After the application, scaled site plan and permit fee have been submitted, the Site Development Inspector will make an appointment to meet the applicant at the site for the driveway inspection. It is advisable to combine the driveway inspection with the defensible space inspection. The property must be clearly marked with a sign that is visible from the roadway, which identifies the property. The proposed driveway centerline, excavation site and/or building footprint and adjacent property lines shall be staked out in advance of the initial inspection.

Defensible Space Information and Requirements

A component of the **Wildfire Hazard Mitigation Plan**, which was implemented in 1996, is the development of a defensible space for all new construction and for additions of greater than 400 square feet to existing structures. It was established to reduce the hazards of the spread of fire for the protection of the life and property. When the completed application and permit fee have been submitted, the Site Development Inspector will meet with the applicant at the site, ideally at the same time that the initial driveway inspection is performed, to evaluate the property and the proposed improvements, establish the fire safety zones and to mark the trees and lower branches, which will be required to be removed.

Establishing the Fire Safety Zones

To develop the most effective Defensible Space Plan possible, the property is evaluated and divided into 3 Zones. The following are explanations and illustrations of the Zones and their role in your Defensible Space Plan:

Zone 1 is the defensible space area immediately adjacent to the structure and the driveway. This area is where the greatest modification of thinning and cleanup will occur. It consists of an area of 15 feet around the structure in which all flammable vegetation is removed. This 15 feet is measured from the outside edge of the home's eaves and any attached structures, such as decks.

This area should be decorated with decorative rock or other non-flammable ground cover. If a non-combustible siding is used, then a widely spaced planting of low shrubs is acceptable. Make sure not to plant the shrubs under windows of eaves and foundation vents. Firewood and other combustible materials must not be stored in this area. For maximum safety, the area under decks should have a gravel ground cover and not be used for storage.

Zone 2 is an area of fuel reduction. It is a transitional area between Zones 1 and 3. The size of Zone 2 depends on the slope of the ground where the structure is built. Typically, the Defensible Space should extend at least 75 to 125 feet from the structure. Thin trees and large shrubs so there is at least 10 feet between crowns. Crown separation is measured from the furthest branch of one tree to the nearest branch on the next tree (Figure 3). On steep slopes, allow more space between tree crowns. Remove all ladder fuels from under these remaining trees. Carefully prune trees to a height of 10 feet. Limit the number of dead trees (snags) retained in this zone. Wildlife needs only one or two snags per acre. Be sure any snags left for wildlife cannot fall onto the house or block access to roads or driveways.

Locate propane tanks at least 30 feet from any structures, preferably on the same elevation as the house. Clear and keep away flammable vegetation within 10 feet of these tanks. Do not screen propane tanks with shrubs or vegetation.

Dispose of slash (limbs, branches and other woody debris) removed from your trees and shrubs through chipping or by piling and burning. Contact the Clear Creek County Sheriff's Office for information about burning slash piles. Only if neither of these alternatives is possible, lop and scatter slash by cutting it into very small pieces and distributing it over the ground. Avoid heavy accumulations of slash. Make it lay close to the ground to speed decomposition. If desired, no more than two or three small, widely spaced brush piles may be left for wildlife purposes. Locate these uphill towards the outer portions of your defensible space.

Zone 3 is the area of existing forest from the edge of Zone 2 out to the property boundaries. Traditional forest management in this area will target dead, diseased and damaged trees allowing continued health of the surrounding forest and the property's aesthetics.

Illustration of the three Fire Safety Zones surrounding a building site

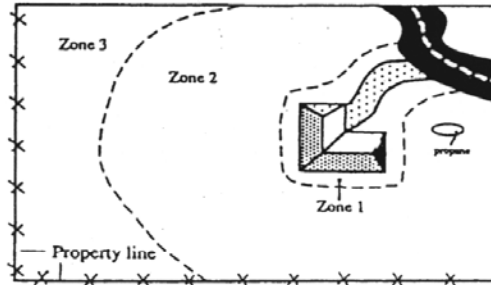


Figure 1: Forested property showing the three fire-defensible zones around a home or other structure.

Illustration of Crown Spacing

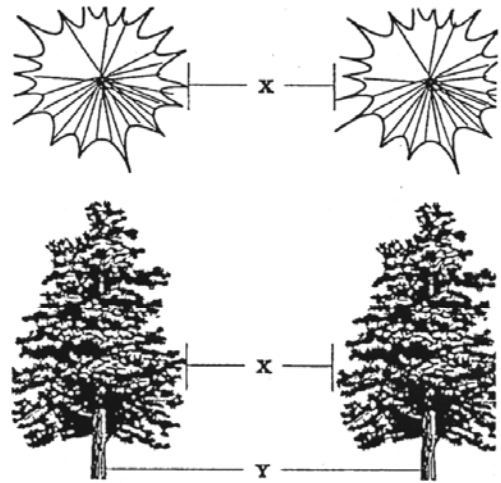


Figure 3: X = crown spacing; Y = stem spacing. Do not measure between stems for crown — measure between the edges of tree crowns.

Commonly Asked Questions About Defensible Space -

“What is a defensible space and why do I need this?” According to the National Wildfire Coordinating Group, it is defined as “a fuel break adjacent to improvements, in which you can safely defend the improvements.” In order for a structure to survive a wildfire, radiated heat and fire intensity must be kept to a minimum. This is accomplished by a combination of clearing and thinning for trees and other vegetation around the proposed or existing structures and along the driveway. Our defensible space requirements are designed to minimize the impact to the property while still providing safety for the structures, the inhabitants, and the firefighters.

“How are the trees selected?” The trees are selected by considering the crown spacing, the types of trees and topographical characteristics of the property. As a fire grows in intensity, it can move into the crowns of trees and by a heat transfer mechanism known as convection, it will rapidly move up slope and down wind. The crown spacing must then be wider when closer to the home, and can be narrower as the distance from the home increases. Smaller trees and diseased trees will be selected first. The homeowners' selection of “special” trees, for screening and aesthetics, will be considered and worked around whenever possible.

“Do I have to clear cut everything from around my home?” This is a common misconception of the defensible space program. The area immediately adjacent to the home is 15 feet wide. If the home is sided with flammable material, it is advised not to plant any trees, shrubs or flammable ground cover in this area. If non-combustible siding is used, widely spaced shrubs are acceptable but should not be planted under windows or next to vents. From this zone, extending out away from the home, crown spacing decreases gradually and additional lower branches are allowed to remain.

“What else can I do to help protect my home?” In addition to the Defensible Space Plan requirements, there are numerous suggestions in the Colorado State Cooperative Extension Publications. Some of the more important but often overlooked items are:

- Posting signs for quick address identification, designed emergency vehicle parking areas, and bridge load limits.
- Routine maintenance of the Defensible Space.
- Clearing debris from roof and gutters.
- Removal of branches overhanging the chimney.
- Outdoor water supply is available complete with hose and nozzle.
- Fire extinguishers are checked and in working condition.
- Storing tools, such as rakes, hoes, axes, and shovels in an easily accessible area for use in case of a fire.
- Practicing family fire drills and evacuation plan. Escape areas should be open with good visibility all around. Meadows, rock outcrops and wide roads are good examples.
- Proper screening of attic, room and eave openings, and properly skirting, screening or enclosing the sides of stilt type foundations.
- If time allows as the wildfire approaches, covering windows with shutters or heavy draping and moving furniture to the center of rooms.

Best management Practices Information and Requirements

In order to prevent any earth disturbing activity from adversely affecting water quality, erosion control and revegetation are handled through the Best Management Practices (BMP) Permits. In most instances, the BMP Permit for a single family residence will be handled as a part of the Driveway Permit for that property. The following guidelines will be used to control erosion for most residential development.

- Both temporary and permanent measures will be utilized to prevent soil erosion and to protect water quality.
- Silt fence or brush barriers are to be used to control erosion as a temporary method while construction is taking place. These sediment barriers are to be in place on any new disturbed earth by the end of that working day.
- When possible, top soils shall be set aside during excavation and reused during revegetation. Top soil must be stock-piled away from roads or waterways and should be revegetated while being stock-piled.
- Preserve existing trees, shrubs and grasses where possible to prevent erosion. A site plan should indicate a green belt that will remain around a property's perimeter. In large areas of disturbance, replacing trees and bushes may be required.
- Seeding side slopes shall be completed at the end of construction for irrigated sites. Non-irrigated sites shall be seeded through October and November or April and May.
- In dry areas, mulching may be used to protect germinated seeds. On steeper slopes staked netting or matting may be necessary.
- For sites completed during winter months, or when a final inspection is expected before actual revegetative growth occurs, a financial guarantee will be required.

When the proposed earth disturbance is 2,500 cubic yards and/or 20,000 square feet or greater, a separate BMP Permit will be required, and the **BMP Application Form** and detailed requirements will be provided by the Site Development Inspector.

Slope Stabilization Information and Requirements

One of the aspects of erosion control is the stabilization of all cut and fill slopes. As discussed in the Driveway Design Standards, all cut and fill slopes and banks are required to be constructed to maintain a slope not steeper than 1½:1 (Horizontal : Vertical). In areas of solid rock, steeper slopes of ½:1 are allowed. Slopes and rock cuts steeper than this, or greater than 4 feet in height, will require a Retaining Wall Permit, and the retaining wall(s) or other methods of stabilization shall be designed by a Colorado Licensed Professional Engineer. Excessive bank cuts, as determined by the Site Development Inspector, may need to be retained by structural retaining walls to prevent the slopes, during periods of heavy moisture, from sloughing onto the roadways or otherwise causing heavy siltation in waterways. The **Retaining Wall Permit Application Form** and additional information will be provided, when required, by the Site Development Inspector.

Floodplain and Wetlands Information

If your property is adjacent to one of the county's main watercourses, your property may have a designated Flood Hazard Zone, and you will have to conform to the Clear Creek County Floodplain Regulations. These regulations are designed to protect properties along these watercourses from damage due to unexpected rises in the base flood elevations as a result of development activities. The Site Development Inspector can be contacted to make a Flood Hazard determination early on in your development planning, or the determination will be made at the time your driveway permit is processed and issued.

It is in your best interest to investigate the Flood Hazard potential of your property as early as possible, as the process of obtaining a Floodplain Development Permit can add substantially to the amount of time required for the issuance of your permits.

When a bridge is required, the structure must meet elevation requirements of the Clear Creek County Floodplain Regulations (2007) if located in a Zone A, as determined by the Site Development Inspector, using the Flood Insurance Rating Maps. A Building Permit will also be required for the proposed bridge, and the Building Department information packet will explain the requirements.

In many areas of our County, there are designated Wetlands which must be protected from damage. Although Clear Creek County does not have authority to regulate jurisdictional wetlands, it is in our best interest to ensure that property owners are aware of the permitting procedures necessary for wetland development, as required by the U.S. Army Corps of Engineers. The determination of Wetlands Impact will be made during the processing of your Driveway Permit, and you will be notified with further information and will need to contact the Army Corps of Engineers. Copies of all correspondence with the Army Corps of Engineers must be provided to this Department.

Stages of Required Inspections for Driveway and Excavation

1. Initial Inspection prior to any work for site evaluation and compliance with driveway design standards. Trees may be marked for the defensible space permit.
2. Rough-in Inspection at time of footer and foundation unless prior approval and sign off.
3. Final inspection after final grade. Defensible space and re-vegetation must be complete.

Procedures to Request a Site Development Inspection

In order to manage all the inspection requests for all open permits, we must ask that you follow the established procedures whenever possible. We will make every effort to perform the requested inspection within 48 hours of receiving your request. It is preferable to combine the final driveway inspection and the final defensible space inspection. The Site Development Department will contact you to arrange that meeting. There may be circumstances where the inspection may be delayed, and you will be notified when that is the case.

Please call the Site Development Inspector directly at 303-679-2421 to request an inspection. The following information will be required when requesting an inspection:

- ➔ Name and Phone Number of Contractor Requesting Inspection
- ➔ Permit Number and Legal Description of the Property
- ➔ Type of Inspection Being Requested (any further information, i.e., special instructions, lock box or gate combination, requested date for the inspection, if other than the next inspection day, or other special message can be left on the inspection line by just continuing to speak).

Be Prepared With The Required Information Before You Call

If a temporary address is needed for utility hookup please check this box.

Temporary Address Requested

CLEAR CREEK COUNTY SITE DEVELOPMENT DEPARTMENT
PO Box 2000/1111 Rose Street
Georgetown, CO 80444
Phone (303) 679-2421/Fax (303) 569-1103
Sitedev@co.clear-creek.co.us

DRIVEWAY AND BUILDING SITE EXCAVATION PERMIT APPLICATION

Application fee is \$350.00. If construction has been started without the permit approval, the fee is \$700.

APPLICATION FOR: Driveway _____ Building Site Excavation _____
OWNER(S) _____ PHONE _____ WORK/CELL PHONE _____
MAILING ADDRESS _____
APPLICANT _____ PHONE _____ WORK/CELL PHONE _____
MAILING ADDRESS _____
LEGAL DESCRIPTION _____
PARCEL NUMBER _____
ACCESS ROAD NAME OR COUNTY ROAD NUMBER _____

ALL APPLICATIONS AND SCALED SITE PLANS MUST INCLUDE ALL NECESSARY DETAIL AND DEPICT THE FOLLOWING:

1. Frontage of lot along access road - _____ Ft
2. Width of access road as traveled - _____ Ft; Width of Right of Way, if different - _____ Ft
3. Required easements - Yes (attach copies) No
State Highway or other access permit required - Yes (attach copies) No
4. Distance from driveway to nearest road intersection - _____ Ft
5. Width of proposed driveway - _____ Ft
If more than one driveway is requested, width of secondary driveway - _____ Ft
6. Total length of proposed driveway - _____ Ft
If more than one driveway is requested, length of secondary driveway - _____ Ft
7. Horizontal angle of driveway approach to access road- _____ °(degrees)
8. Maximum grade of the proposed driveway - _____ %
Length of section(s) exceeding 10% grade - _____ Ft
9. Inside turning radii of each turn - 1st turn - _____ Ft, 2nd turn _____ Ft, 3rd turn _____ Ft
10. Areas and types of proposed mitigation to control off-site erosion and proposed revegetation schedule (attach description)

- I certify that the information I have provided is true and correct to the best of my knowledge.
- I have read, understand, and will comply with the above information and attached documentation.
- Any and all changes to the proposed driveway or building site require notification of the Site Development Department
- I will allow the Site Development Department staff to go onto my property in order to process this request.

OWNER/APPLICANT

DATE

FEE PAID _____ DATE PAID _____ RECEIPT # _____ RECEIVED BY _____

CLEAR CREEK COUNTY SITE DEVELOPMENT DEPARTMENT

PO Box 2000/1111 Rose Street

Georgetown, CO 80444

Phone (303) 679-2421/Fax (303) 569-1103

Sitedev@co.clear-creek.co.us

**DEFENSIBLE SPACE TREE THINNING INSPECTION PERMIT APPLICATION
(Non-Voluntary)**

Application fee is \$150.00

OWNER(S) _____ PHONE _____ WORK/CELL PHONE _____

MAILING ADDRESS _____

APPLICANT _____ PHONE _____ WORK/CELL PHONE _____

MAILING ADDRESS _____

PROPERTY WHERE DEFENSIBLE SPACE TREE THINNING IS BEING REQUESTED:

LEGAL DESCRIPTION _____

PARCEL # _____

PROPERTY ADDRESS _____

- I certify that the information I have provided is true and correct to the best of my knowledge.
- I have read, understand, and will comply with the above information and attached documentation.
- Any and all changes to the proposed tree thinning require notification of the Site Development Department.
- I will allow the Site Development Department staff to go onto my property in order to process this request.

OWNER/APPLICANT

DATE

FEE PAID _____ DATE PAID _____ RECEIPT # _____ RECEIVED BY _____