

GRAND FIRE PROTECTION DISTRICT NO. 1

Proposed Development and Review Standards (Revision 04/06/2009)

In order to provide adequate fire protection for new subdivisions and developments the Fire Department requires submittal of plans and plats for review. All plats, construction plans and / or site plans must be prepared by a professional licensed engineer and be submitted in full scale drawings of no less than 1 inch equals 20 feet. The following submittal requirements are mandatory.

New Subdivision – Full scale drawings with dimensions showing street and road layouts and lots. In addition an overall utility plan sheet and water main plan sheet including details should be included. Water main sizes and fire hydrant locations will be checked. A letter from a licensed engineer must be included to verify fire flow requirements.

Condominium / Town home or Commercial Development – complete set of civil engineering construction plans at full scale prepared by a licensed engineer.

Access

All buildings must be accessible to fire department apparatus. Access must meet Grand County road and driveway regulations or Town of Granby road and driveway regulations as applicable and NFPA Standard 299, Protection of Life and Property from Wildfire.

Roadways and Accesses

Roadways should be a minimum of 24 feet in width with a hard all-weather surface sufficient to support 64,000 lbs. fire apparatus. Shoulders should be a minimum width of 4 feet on each side. Vertical clearance should be a minimum of 18 feet. Maximum grade should not exceed 7% (See Grand County Road Specifications Section 3.5 for any exceptions). Minimum curve radius should be 100 feet measured at centerline, or follow the AASHTO Manual figure II-3 for straight frame BUS. At 750 foot intervals, emergency turnarounds for fire apparatus are needed. (These can be oversized driveways, intersections or specifically constructed areas). Turnarounds that are cul-de-sac design should be a minimum of 120 feet outside diameter. Intersections or hammerheads should be a minimum of 40 feet in length measured from the center point with an inside radius not to exceed 20 feet.

More information can be found in the International Fire Code 2006 Appendix D Pg. 397

Driveways and Accesses

Driveways and accesses should be a minimum width of 20 feet with 12 foot drive lanes and two 4 foot shoulders. If the access or drive is more than 150 feet from a roadway there should be a turnaround constructed to standards adequate to accommodate fire apparatus. Three homes or residential units need a road and not a driveway. Grades must meet applicable standards for fire apparatus.

Gates

Gates are to be avoided, but if necessary shall be considered on a case by case basis. If allowed the design would need to be approved prior to construction and consist of a counterweighted barrier that swings completely free of the access when released. Any manual locking mechanism must provide for two locks, one for the fire department and one for the owner. Owner / developer must provide a Knox padlock. Any automatic locking system must provide for an onsite fire department activation secured by a Knox style rapid entry system product. The Knox authorization order form is available and should be requested from the Fire District. The preferred method for Fire Department access to any locked gates would be through a radio system activation control.

Water Supply

Municipal

Water supplies needed for firefighting would range between 3,500 gallons per minute fire flow for 3 hours (minimum 630,000 gallons of fire protection storage), to a minimum of 1,500 gallons per minute fire flow (minimum 180,000 gallons of fire protection storage) depending on the occupancy, size and construction of buildings within the proposed development. Water main sizes should be determined as needed to meet the required fire flows. Required fire flows maybe reduced if buildings are protected by sprinkler systems. Documentation would be needed that adequate fire flows will be available from the water system at a residual pressure of no less than 20 psi. By installing fire sprinkler systems in all structures any large life or property losses would be minimized and would make the best use of the available water supplies. Fire hydrants are to be located at least every 450 feet or as agreed to by the Fire District. Fire hydrants need to be mountain type with a 6 inch barrel manufactured by Mueller or Waterous (Mueller is preferred). One 4 ½ inch NST fire department connection and two 2 ½ inch NST outlets per hydrant are required. Fire hydrants are to be installed with the traffic flange at the same elevation as the edge of the pavement (road surface) or the back of a walkway. The approach to the fire hydrant should be a level-walking surface free of obstructions at least five feet wide including the backside. Testing of the fire hydrants will be required. The International Fire Code tables B105.1 and C105.1 provide further guidance on flows and fire hydrant distribution.

Dry Hydrant Systems

See Cisterns and Underground Tanks

Utility Services

Utilities

Careful consideration should be given to the location of all utilities to avoid interference with fire department operations. All meters, transformers, and gas piping all need to be carefully located to avoid damage from ice, snow and vehicles. Shutoffs need to be readily available. Overhead electric lines are discouraged.