

PREFACE

The Chowchilla Fire Department protection standards are enforced under the Uniform Fire Code and the National Fire Protection Association Standards.

Compiled by the Chowchilla Fire Department.

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A. INTRODUCTION TO ACCESS

The purpose of fire protection access is to allow emergency vehicles to approach a building as close as practical in order to employ the hose, ladders, and other equipment necessary for fire control and rescue operations.

Fire Department emergency vehicles are likely to be the longest, widest, tallest, and heaviest that will be driven on the residential streets, private driveways, and alleys in the City. As an example, an aerial ladder truck is 36 feet long, 9 feet wide, 12 feet in height, with a gross weight of 16 tons and a turning radius of 40 feet. The ability to manipulate and deploy Fire Department emergency apparatus is greatly affected by the adequacy and reliability of the access designed into the residential developments within the City of Chowchilla.

Access as defined in these standards would refer to private streets and driveways or otherwise not defined.

Any development over 300 feet in depth or width shall have two (2) means of egress and ingress.

Any unusual design that does not meet the above conditions may be required to have a second means of access.

"All surface access roads shall be installed and made serviceable prior to and during the time of construction".¹

1 Uniform Fire Code 10.301 (d)

B. TYPES OF ACCESS

1. Common Vehicular Access

Common access describes the private streets, drives, and alleys that connect with a public street and are required for emergency access as well as for access by the public.

2. Emergency Access

Where adequate and reliable vehicular access to buildings is not provided by adequate public streets or private drives, emergency access shall be provided for the exclusive use of Fire Department vehicles.

3. Walking Access

Walking access describes unobstructed walkways required to provide continuous access connecting vehicular access to portions of buildings.

C. STANDARDS FOR ACCESS

1. Common

a. Single and Two-Family Residence

The public streets and private driveways serving single and two-family dwelling developments are usually adequate for Fire Department access use. The minimum street width (public and private) is thirty feet curb to center.

b. Apartment Complexes, Condominiums, Unit Planned Development, Commercial/Industrial Developments

Structures will be identified by a sign (Standard Drawing #B7) placed at the normal entrance to the apartment complex, condominiums, and planned unit development. ²

Any portion of the perimeter of a building shall be accessible from within 150 feet of a public street, private driveway, or other forms of approval access.

c. Private Driveway

Driveways over 200 feet in length with two-way traffic must be maintained at a minimum width of thirty feet with "NO PARKING" signs posted. Where parallel parking is allowed on one side, an additional eight feet in the minimum driveway width is required, giving a total of 38 feet in width. For all other parking situations and for driveways less than 200 feet in length, the Fire Department will implement and appropriate City-Adopted Parking Standards. In addition to general requirements and policies, the Fire Department may require an increase or decrease in the driveway width, depending on particular situations.

d. Turnarounds

Turnarounds may be required at the end of single-entry private road designs or over 150 feet in length and shall be required if the length exceeds 300 feet. Intermediate turnarounds may be required at approximately 300 foot intervals for single-entry road/driveway designs exceeding 350 feet in length and for dual-entry designs exceeding 700 feet in length. Maximum length of single-entry road/driveway designs shall be 450 feet. Cul-de-Sac turnarounds on public streets shall have a minimum 40 foot centerline to curb radius. All turnarounds must be kept clear of all obstructions (i.e., no parking, no garbage bins, etc.).

Standard Drawing #ST-9

e. Vertical Access

Where buildings or portions of buildings are more than 35 feet in height, measured from natural grade driveways shall be located adjacent to at least one side of such building. Driveways shall be in alignment to accommodate the use of Fire Department aerial apparatus. Access shall be provided adjacent to at

least two sides of such buildings that exceed 150 feet in length or width. All required common vehicular access shall maintain a minimum 13 feet 6 inches of vertical clearance over the entire width of the access

f. Angle of Grade

Access surfaces shall not exceed a 20% grade or contain any irregularity creating an angle of approach or departure in excess of 20% (11.3⁰)

2. Emergency

Emergency access is for the exclusive use of Fire Department apparatus and is required where common access is either inadequate or unreliable.

Emergency access shall be a minimum of twenty feet in unobstructed width.

Additional unobstructed widths may be required at curves and turns to accommodate the turning requirements of Fire Department vehicles.

Emergency access adjacent to required fire hydrants shall be a minimum of 26 feet in width for a linear distance of 25 feet on both sides of the hydrant.

Turnaround requirements for emergency access would be the same as for private driveways. Gates, posts, or other barriers approved by the Fire Department are required to be installed at every entrance to emergency accesses.

The entrances to all emergency access shall be posted with permanent signs with the following wording: "FIRE ACCESS" in six-inch letters, "VEHICLES REMOVED AT OWNER'S EXPENSE" in two-inch letters (the sign must show a telephone number the owner can call to recover the vehicle).

Assurance of the integrity and reliability of emergency accesses may require the dedication of a fire protection access easement to the City or County.

"All surface access roads shall be installed and made serviceable prior to and during the time of construction" ³ , unless waived in writing.

3. Walking

Improved walking access may be required to connect vehicular access routes with the required pedestrian entrances and exits in the buildings. Required walking access shall be designed to prevent sharp turns or obstacles that would hinder the carrying of ground ladders and other hand-held equipment.

D. SECURED COMPLEX BYPASS SWITCH

A problem may exist in secured apartments, condominiums, and residential developments in regard to access by Police and Fire vehicles due to locked gates and barriers. It would be almost impossible for emergency services to maintain separate keys or pass cards for each development. To eliminate this problem, the City of Chowchilla may provide a method to bypass these locking systems.

Residents of these complexes cannot expect a normal level of service if this system is not used.

The bypass consists of an electric switch cylinder that overrides the existing system. This system is operated by a key that is carried only by police and fire vehicles.

BYPASS SWITCH REQUIREMENTS:

- * The bypass cylinder will be "Best Lock Company, Model No. iW6B2,

Electric Switch Cylinder".

- * The cylinder should be mounted in plain view at any convenient place on or near the gate or barrier.
- * A sign shall be placed adjacent to each cylinder. It will be a minimum of three inches high with letters at least two inches high. The words "Fire - Police" will be in red on a white background.
- * During construction of a new development, a "construction" core will be used in the cylinder for convenience of the contractor. After completion of the development, the owner or his agent shall notify the Chowchilla Fire Department, or Buildings & Planning Department (665-4816) and a permanent core will be installed into the cylinder by an official.
- * After a permanent core is installed, only Police and Fire personnel will have pass keys.
- * The cylinder is to be purchased by the owner or contractor.
- * The cylinder may be purchased wherever the owner or contractor desires as long as it is of the model designated
- * When the cylinder is ordered, be sure to specify that it is for "City of Chowchilla condominium access". The permanent core will then be sent to the Fire Department for installation after construction is completed.

II. FIRE HYDRANT SPACING AND FIRE FLOW REQUIREMENTS:

The Fire Department requires that in residential areas, fire hydrants shall be no further than 300 feet apart, and travel distance to a fire hydrant over a paved access shall not exceed 150 feet.

In single-family residential subdivisions, the Fire Department requires that fire hydrants be installed in accordance with Chowchilla City specifications on no less than a minimum six inch (6") water main capable of flowing 1000 gallons per minute as calculated by the using methods in FIRE FLOW TESTS, published by the Insurance Services Office. This system may be incorporated with the domestic water supply.

In multi-family residential subdivisions, the Fire Department requires that fire hydrants be installed in accordance with Chowchilla City specifications on no less than a minimum six inch (6") water main capable of flowing 1000 gallons per minute as calculated by the using methods in FIRE FLOW TESTS, published by the Insurance Services Office. This system may be incorporated with the domestic water supply.

The Fire Department requires that in commercial areas, fire hydrants shall be no further than 300 feet apart, and the travel distance to a fire hydrant over a paved access shall not exceed 150 feet. Exceptions may be granted by the City Planning Commission or City Council where circumstances may permit deferred construction agreements.

In commercial areas, the Fire Department requires that fire hydrants be installed in accordance with Chowchilla City specifications on no less than a minimum eight inch (8") water main capable of flowing 1500 gallons per minute as calculated by using methods in FIRE FLOW TESTS, published by the Insurance Services Office. This system may be incorporated with the domestic water system.

In industrial areas, the Fire Department requires that fire hydrants be installed in accordance with Chowchilla City specifications on no less than a minimum eight

inch (8") water main capable of flowing 2000 gallons per minute as calculated by using methods in FIRE FLOW TESTS, published by the Insurance Services Office.

This system may be incorporated with the domestic water system.

When fire hydrants are to be installed by the developer, such fire hydrants shall be tested, painted, numbered, and approved by the Fire Department. Fire hydrants shall be installed and made serviceable prior to and during the time of construction, except when written authority by the City is granted.

A reduction in the required fire flow be allowed for fire-resistive construction and the provision of automatic fire sprinkler systems. Consideration on such reductions shall be predicated on the standards as set forth in the UNIFORM BUILDING CODE (Chapter 38; Standard 38-1) and the National Fire Protection Association (NFPA) Pamphlet No. 13, STANDARDS FOR AUTOMATIC SPRINKLER SYSTEMS.

All required fire flows are to be available within the water system at 20 pounds per square inch residual pressure. Dead end water mains shall not be allowed unless looping of main line is impossible. Any dead-end line must be approved by the City Planning Commission.

Fire hydrant color code as stated by the National Standard.

- Blue - 1500 Gallons per minute
- Green - 1000 Gallons per minute
- Orange - 500 to 1000 Gallons per minute
- Red - 500 or less - Gallons per minute