



# Town of Charlotte

ESTABLISHED 1762

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**To:** Charlotte Selectboard

**From:** Town Planner

**CC:** Planning Commission, Zoning Board of Adjustment

**Date:** September 19, 2019

**Re:** **Town of Charlotte Recommended Standards for Developments and Homes, 2019**

The following DRAFT standards serve as guidelines the development of private roads and driveways; and emergency water supply and connections for land use development under the Charlotte Land Use Regulations. Generally reviewed as part of Subdivision and Site Plan review within the purview of the Planning Commission, and potentially for Conditional Use review with the Zoning Board of Adjustment and compliance for a Certificate of Occupancy with the Zoning Administrator, these standards are employed to ensure safe and adequate access to properties by the emergency response vehicles of the Charlotte Volunteer Fire & Rescue Services (CVFRS).

During 2018, the Planning and Zoning Office, the Planning Commission, and the Selectboard had been in communication with CVFRS to update the *“Town of Charlotte Recommended Standards for Developments and Homes”*, which was originally approved by the officers and members of CVFRS on July 2, 1997, and adopted by the Charlotte Planning Commission on September 2, 1997.

Among the issues raised during the [Planning Commission meeting held on August 27, 2018](#), included:

1. Many pre-existing homes do not meet the 1997 standard. Often roads that pre-date the standard are barely as wide as a fire truck. This can slow down the response time to an incident, according to the Charlotte Fire Chief.
2. Newly constructed homes are continually increasing in size, which necessitates a dimensional upgrade to the 1997 standard.
3. Non-conforming infrastructure is the cause of greater mutual-aid required from other communities.

Some citizens have complained about the financial burden that the new standards bring to bear upon the property-owner. An issue that the public are advised to consider is that if CVFRS cannot guarantee that they may access a property, then property insurance rates substantially increase or they may become uninsurable.

## **Town of Charlotte: Recommended Standards for Developments and Homes, 2019**

The following outlines the specific details and information recommended for the update of the 1997 standards.

The 1997 standards were developed per the requirements of the CVFRS Truck, a 1979 Mack MC 1250/500 (refurb 92' exE1) with an approximate 144" wheelbase. The wheelbase for modern apparatus measures about 195". Subbase specifications (e.g. depth of the gravel, crusher run, geotextile fabric, et al.) should be reviewed by a civil engineer.

For driveways longer than 500' in length to accommodate fire trucks and ambulances, an 80' minimum diameter for a circular vehicle turnaround is difficult to implement on some properties.

Apparatus (vehicles) need to access an area within 100' of the house.

Vehicle "bumpouts" will need to increase in size so that the apparatus (vehicles) may pass one another to and from the house, allow for multiple tanker trucks to shuttle water to a house, and have room to turnaround.

### **ROADS:**

DEVELOPMENT ROADS TO BE TOWN HIGHWAYS AND MAJOR ACCESS ROADS:

Must conform to all Town Highway standards as outlined in Vermont Agency of Transportation standard A-76.

### **ACCESS ROADS:**

- **1997 Standard: Serving 6 or more house sites or driveways:**
  - Minimum 18' wide with 2' shoulders,
  - 18" of gravel with a 4" crusher run stone wearing surface,
  - Weight bearing of a 29,000 lb. (14.5 ton fire truck on entire width),
  - Maximum grade of 8.0%,
  - Non-through roads terminate in cul-de-sac of minimum 40' radius or 80' diameter turning circle (with option of "hammerhead", or "Y" turnarounds),
  - Removal of tree limbs to a height of 12' above the finished grade of the road,
  - Where Access Road intersects with another road there shall be a turnaround big enough to accommodate three fire vehicles at one time (~ 1,600 sq.ft.),
  - Access Roads longer than 800' will have vehicle tum-outs (12' wide x 35' long) near the half way point or every 800'.
- **2018 Changes Recommended by CVFRS: Serving 6 or more house sites or driveways:**
  - Weight bearing of a 50,000 lb. (25-ton truck with a loaded tank),
  - Non-through roads terminate in cul-de-sac of minimum 42.5' radius or 85' diameter turning circle (with option of "hammerhead" of 40' wide x 40' long, or "Y" turnarounds),
  - Access Roads longer than 800' will have vehicle tum-outs (15' wide x 50' long) near the half way point or every 800'.



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- **Portola Valley, California (Recommended by Ken Niemczyk, City Planner, Retired):**
  - Fire apparatus roads shall be provided for every facility, building or portion of a building constructed when the building is located more than 150 feet from fire apparatus access.
  - Fire apparatus roads shall have an unobstructed width of not less than 20 feet and an unobstructed vertical clearance of not less than 13' 6".
  - Cul-de-sacs need be minimum 40' radius.
  - Fire apparatus turnarounds must be no more than 150 feet from the building.
- **2015 International Fire Code & Aerial Fire Apparatus Requirements (see page 4).**
  - Access Roads longer than 150' should have width of 20', ~26' measured clearance around fire hydrant, and either:
    - 120' long "hammerhead" tapering to minimum 20' width at each end using 28' Radius curve, or
    - 96' diameter cul-de-sac or circular turnaround, or
    - 60' wide "Y" turnaround, or
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  - Access Roads longer than 500' should have width of 26'.
- **Morristown, Vermont Road Policy:**
  - Private roads built to less than town road standards that provide access to three or more properties shall have a minimum width of 16 feet,
  - Centerline grade of new town roads shall not exceed 10%,

## DRIVEWAYS:

- **1997 Standard: Serving 1-5 house sites or driveways:**
  - Minimum 14' wide, but shoulders not required,
  - 18" of gravel with a 4" crusher run stone wearing surface. However, driveways less than 800' will have a minimum of 12" of gravel.
  - Weight bearing of a 29,000 lb. (14.5 ton fire truck on entire width),
  - Maximum grade of 8.0%,
  - Removal of tree limbs to a height of 12' above the finished grade of the road,
  - All driveway entrance intersections must be at least 18' wide for the first 20' of driveway, tapering to 14' to allow for emergency vehicles to turnaround.
  - Driveways 500' or longer shall have a turnaround at the house site large enough to accommodate 3 emergency vehicles (~ 1,600 sq.ft.),
  - All Driveways longer than 800' will have vehicle tum-outs (12' wide x 35' long) near the halfway point or every 800'.
- **2018 Changes Recommended by CVFRS: Serving 1-5 house sites or driveways:**

## Town of Charlotte: *Recommended Standards for Developments and Homes, 2019*

- Weight bearing of a 50,000 lb. (25-ton truck with a loaded tank),
- Driveways 500' or longer shall have a turnaround at the house site large enough to accommodate 3 emergency vehicles (~ 1,600 sq.ft.). A "hammerhead" option would measure 40' wide x 40' long.
- All Driveways longer than 800' will have vehicle tum-outs (15' wide x 50' long) near the halfway point or every 800'.
- **Portola Valley, California (Recommended by Ken Niemczyk, City Planner, Retired):**
  - Maximum grade of 15.0%. Driveways greater than 15% grade need be rough brushed concrete or an alternate material approved by the Fire Department. No driveway shall exceed a 20% grade.
  - Minimum 12' wide measured curb to curb for all single-family dwellings. Driveways with curbs or retaining walls parallel to each other, (or those with slopes greater than 15% with a retaining wall) need be increased to 14 feet wide.
  - Minimum 18' wide measured inside curb to inside curb for common driveways (for 2 family residences).
  - Any driveway more than 350' in length shall have a turnout provided near the center of the driveway. Driveways with extended length shall have turnouts provided evenly as possible.
  - Driveways that extend more than 150' in length shall be provided with a turnaround for fire apparatus.
  - 12' Single Family and 18' Shared driveways shall have either: 1. a turnaround with a 40' radius, or 2. a "hammerhead" with turnouts the same width of the driveway (e.g. 12' or 18') and a 30' minimum set back from the top (or "eye") of the "hammer" (40' Radius curve).
  - Turnouts are minimum 20' width x 30' length, plus additional 25' taper on each end of the turnout (i.e. total length with tapering = 80').
- **Morristown, Vermont Driveway Policy:**
  - The access width of driveways & parking areas that enter upon a town road shall have a minimum 14 feet in width and a maximum width of 20 feet for residential uses or a maximum width of 40 feet of width for commercial uses.

[View guidance from CVFRS \(at this link\):](#)



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## **New Driveway & Road Standards—(draft) May 2015 : Proposed by former Town Planner McCrumb**

### Minimum width:

- Driveways serving 1 dwelling unit, less than 100' in length: 14' wide.
- Driveways serving 1 dwelling unit, 100' in length or longer: same as for 2-3 dwelling units.
- Driveways serving 2-3 dwelling units: 18' wide within 20 feet of curb-cut; 14 feet thereafter; no shoulder is required.
- Private roads serving 4-9 dwelling units: 18' wide; no shoulder is required.
- Private roads serving 10 or more dwelling units: 18' wide with 2' shoulders on both sides.

### Minimum Surface:

- Driveways serving 1 dwelling unit less than 100' in length: average of 12' of gravel.
- All other driveways and private roads: average of 18" which includes a 4" wear surface unless fabric is used, in which case an average of 16" of gravel which includes 4" of wear surface.