

**Carlsbad Fire Department  
Fire Prevention Bureau**

# **Alternate Materials & Methods Requests Guideline**



Approved and Authorized By:

Randall Metz, Fire Marshal

Issued: January 1, 2016

# Guideline for Alternate Materials & Methods Requests

## PURPOSE

This guideline is intended to provide direction for submitting requests for use of Alternative Materials and Methods (AM&M) in accordance with the 2019 California Fire Code (CFC), Chapter 1, Section 104.9.

## SCOPE

Requests for AM&M shall be evaluated by the Fire Department (MVFD) Fire Prevention Bureau staff to ensure the proposed design, use, or operation satisfactorily complies with the intent of the CFC. Additionally, the alternatives that are being proposed will be evaluated to determine they are at least equivalent to that prescribed in the CFC in quality, strength, effectiveness, fire resistance, durability, or safety.

## SUMBITTAL REQUIREMENTS

### 1. General Requirements

The applicant shall provide the following information, in writing, with those plans necessary to evaluate the project:

- A. Identify relevant project information:
  1. The project name, address, contact person and phone number
  2. The owner's name, address, and phone number
  3. Other specific information identifying the project may be required (e.g., development permit type, tract and lot number, etc.)
- B. Identify the code section or reference the specific requirement for which the modification is requested (e.g., CFC 503.2.1, Carlsbad Fire Department Guideline — Residential Care Facilities, etc.).
- C. Detail the alternative fire protection measures as part of the AM&M proposal and how they establish equivalency to those prescribed in the code. The report shall address the concerns of the CFD and the issues as identified above. Refer to the sample AM&M proposal letter provided at the end of this document for guidance.

### 2. Engineering Evaluation

If the Fire Code Official, or established designee, deems an engineering evaluation necessary, it shall be performed and reported by a firm or individual that has been approved by the CFD Fire Prevention Bureau. The applicant is responsible for all costs associated with the preparation of the AM&M.

### 3. Submittal Process

- A. Submit three (3) copies of both the AM&M request letter and other supporting information directly to the CFD Fire Prevention Bureau.
- B. AM&M requests will be evaluated by CFD plan review staff. All such requests are evaluated on a case by case basis. Approval of the request is based upon several factors, including, but not limited to, the level of equivalency achieved (as described under "Scope" in this guideline), the effect of the AM&M on fire and emergency response, and site conditions. All evaluations will be performed in the context of the specific project being reviewed.
- C. If the AM&M proposal provides an equivalent level of protection considering all related conditions pertaining to the project, the CFD will issue a response letter granting approval. Such approval may be conditional upon implementation of additional requirements listed in the AM&M response letter that were not part of the original AM&M proposal. Approval is granted only for the specific project under review and the conditions for approval shall not be construed as applicable to any other project.
- D. In the event that the AM&M proposal does not provide an equivalent level of protection, the request will be denied and a response letter will be issued to this effect. Should the applicant submit a different AM&M request for this project or choose to revise and resubmit the previously denied request, additional AM&M fees may apply. To facilitate the evaluation process, include any previously denied AM&M proposals when submitting a revised AM&M request.
- E. Upon completion of the evaluation, the AM&M response letter and a copy of the applicant's AM&M proposal will be available to be picked up at the CFD Fire Prevention Bureau. Should evaluation of the AM&M proposal require time and resources beyond the standard allotted for this activity, additional time and materials fees may be applied. These additional fees must be paid when the applicant picks up the AM&M response letter.
- F. The approved AM&M request and response letters must be copied on the plans prior to plan approval. Retain a copy of the AM&M proposal and response at the project site at all times. This documentation may be required for review by CFD inspection staff.

SAMPLE AM&M PROPOSAL LETTER

March 10, 2015

(Insert the CFD reviewer's name and title)  
Carlsbad Fire Department  
Fire Prevention Bureau  
1635 Faraday Ave.  
Carlsbad, CA 92008

**SUBJECT: AM&M Proposal for the Stein Residence (Project Name)  
CFD Plan Check Number FP11-1234**

Dear (insert reviewer's name):

In accordance with Section 104.9 of the 2010 California Fire Code, we are requesting an alternate method of fire protection for the proposed project detailed below. This is in response to items 3, 4, and 6 on the February 14, 2011 correction letter for the residential site plan submitted under Plan Check Number FP11-1234.

**PROJECT INFORMATION**

Project:	Custer Residence 1234 Serpentine Road Carlsbad, CA 92008 Tract 16345, Lot 11	Owner:	Gregory N. Custer 5413 Cochin Ave. Arcadia, CA 91006 805-555-2468
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**REQUEST:**

Construct a 20 foot wide driveway from Serpentine Road not to exceed 15% grade to the residence and provide a flat 20 foot by 60 foot turnout on the driveway.

**CODE SECTION REFERENCE AND THE INTENT:**

Carlsbad Fire Department and the Carlsbad Municipal Code amendments to the California Fire Code require a maximum of 12% grade for all fire department access roads to all structures to facilitate evacuation of residents while providing access for responding fire apparatus.

**PROPOSAL**

The proposed residence is located in the Sierra Hills area. The building pad is located on the top of a graded hilltop approximately 115 feet above street access at Serpentine Road. The maximum driveway grade is 14.7% and the driveway length is approximately 200 feet. This property is located within a Hazardous Fire Area (FHSZ). The size of the residence and garage is approximately 10,500 square feet and will be equipped with an automatic fire sprinkler system in accordance with NFPA 13D, 2010 edition.

The existing topography of the project site precludes compliance with the CFD's requirements for a maximum roadway grade of 12% and a minimum driveway width of 20 feet for homes located in a FHSZ. Use of the driveway grade limit would require the proposed hilltop building pad to be lowered approximately 85 feet.

I would like to propose the following alternative methods and materials:

1. Construct a 20 foot wide driveway from Serpentine Road to the residence and provide a flat 20 foot by 60 foot turnout on the driveway. Both will be paved with an all-weather surface and be capable of supporting 80,000 pounds.
2. Propose a fuel modification "A" zone to 50 feet from all structures and an irrigated "B" zone with a width 100 feet. The "C" and "D" zones would be maintained at 50 feet each. This will provide a total of 250 feet of fuel modification.
3. Eliminate the omission of sprinklers allowed in NFPA 13D. Provide a fully sprinklered attic within the entire structure. Provide an approved water flow monitoring system for the sprinklers serving the structures.

### **JUSTIFICATION**

The turnout on the road will allow fire trucks to pass each other safely and facilitate evacuation of the residents by providing a clear path to and from Serpentine Road. It will also provide a location to stage emergency response vehicles in the event of a fire. Extension of the fuel modification areas past the minimum widths would impede the advance of a wildland fire and further enhance protection of the structure beyond those design elements already required by FHSZ regulations. The monitoring system, not normally required for a sprinkler system of the size needed to protect these structures, will improve the response time of emergency personnel and help offset the delay caused by the steep grade of the driveway. The elimination of the sprinkler omissions will provide protection in areas of the home that would otherwise be unprotected.

### **ADDITIONAL COMMENTS**

We appreciate your consideration of this proposal. Should you find that the proposed items provide an equivalent level of protection to that prescribed in the CFC, we will submit revised site and fuel modification plans. If you have any questions regarding this AM&M proposal or the Stein project in general, please do not hesitate to contact me at 951-555-4567.

Sincerely,

Myron D. Yanish, P.E.