



DASMA
Door & Access Systems
Manufacturers Association
International

COMMERCIAL & RESIDENTIAL GARAGE DOOR DIVISION

TECHNICAL DATA SHEET

#186

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Vehicular Access Doors and the Wildland-Urban Interface

Introduction

A wildland-urban interface is defined as that geographical area where structures and other human development meets or intermingles with wildland or vegetative fuels. A wildland is defined as an area in which development is essentially nonexistent, except for roads, railroads, power lines and similar facilities. While virtually all U.S. fire rates are on the decline, the number of wildfires is steadily rising, with multiple factors at play. Today, there are 1 billion acres of government (federal, state and local) and privately owned wildlands, and another 220 million acres (twice the area of CA) that collectively have been designated by each State as being at high-risk of wildland urban interface (WUI) fire.

These 220 million acres of WUI are overlaid with more than 70,000 communities, 46 million single-family homes, several hundred thousand businesses, and an estimated population of more than 120 million people. As individuals and businesses continue to build near wildlands, the number of WUI communities is steadily accelerating. Since 1990, the U.S. has experienced an unprecedented conversion-growth rate of 3 acres per minute, 4,000 acres per day and close to 2 million acres per year of conversion from wildlands to WUI. Recent research indicates that in the western U.S., about 14% (on average) of the available WUI lands have been developed and 86% remain available for development. Nationally, estimated projections show that about 30% of WUI acreage has been developed with 70% available for future development.

Because of the concern about the risk to life and structures from intrusion of fire from wildlands, and structure fires adjacent to wildlands spreading to such areas, specific building codes have been developed. This Technical Data Sheet highlights language from such codes as applicable to vehicular access doors.

Applicable Model Code

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This Technical Data Sheet was prepared by the members of DASMA's Commercial & Residential Garage Door Division Technical Committee. DASMA is a trade association comprising manufacturers of rolling doors, fire doors, grilles, counter shutters, sheet doors, and related products; upward-acting residential and commercial garage doors; operating devices for garage doors and gates, sensing devices, and electronic remote controls for garage doors and gate operators; as well as companies that manufacture or supply either raw materials or significant components used in the manufacture and installation of the Active Members' products.

The International Code Council (ICC) has published the International Wildland-Urban Interface Code (IWUIC.) "Vehicle access doors" are exempt from the exterior door requirements for both Class 1 (extreme

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fire hazard) and Class 2 (high fire hazard) ignition resistant construction, because of the intended use of the doors. Class 3 (moderate fire hazard) ignition resistant construction does not address exterior doors. Classes are regardless of structure type.

Model Codes versus Adopted Codes

A code is not enforceable unless it has been adopted by a state or local municipality. An adopted code may or may not use a model building code, in this case the IWUIC, as a base document. Municipalities may also adopt revisions to a model code, using such code as a base document.

California Building Code Requirements

Wildland-urban interface code requirements in California do not use the IWUIC as base requirements. Specifically, California code requirements for exterior doors do not contain an exemption for "vehicle access doors". In the 2016 edition of Part 2, Volume 1 of the Code, all exterior doors are required to meet one of the following requirements.

1. The performance requirements of standard SFM 12-7A-1. The standard, specific to California, is a test method for exterior wall siding and sheathing. Test procedures are similar to the "corner burn test" in ANSI/DASMA 107; however, the test procedure is more severe than the DASMA standard and the acceptance criteria differs.
2. Approved noncombustible construction. The code official must approve the garage door construction as noncombustible. Cal Fire staff has clarified that metal of any thickness covering insulation in a door section meets the intent of this alternative.
3. Ignition-resistant material. The wood must be documented as fire retardant.
4. Solid core wood complying with the one of the following requirements:
 - a) Stiles and rails shall not be less than $1\frac{3}{8}$ inches thick.
 - b) Raised panels shall not be less than $1\frac{1}{4}$ inches thick, except for the exterior perimeter of the raised panel that may taper to a tongue not less than $\frac{3}{8}$ inch thick.

These are prescriptive requirements for wood, but do not address insulated doors with wood facings.

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5. A fire resistance rating of not less than 20 minutes. Garage doors are not fire resistance rated products, but rolling steel doors can be fire resistance rated.

Further, glazing in doors is required to comply with one of the following:

1. Be constructed of multi-pane glazing with a minimum of one tempered pane meeting the requirements of Section 2406 Safety Glazing. Since the requirements are most likely similar to those in the International Building Code because Federal regulations govern safety glazing, see DASMA TDS-158 for more information.
2. Be constructed of glass block units. Because the thickness may not be compatible with typical garage door thickness ranges, employing glass block may not be a practical means of complying.
3. Have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 257. The referenced standard prescribes fire and hose stream test procedures that apply to fire window assemblies, intended for use in window openings to retard the spread of fire through openings in fire-resistive walls.
4. Be tested to meet the performance requirements of SFM 12-7A-2. The referenced standard is a test involving direct flame exposure to an exterior window.

Sources: www.osfm.ca.st.us for SFM 12-7A-2
www.iccsafe.org for obtaining the IWUIC
www.nfpa.org for obtaining NFPA 257
codes.iccsafe.org for the latest edition of the California Building Code

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