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| Description: Color Seal | **CITY OF HAWTHORNE**  BUILDING AND SAFETY  4455 WEST 126TH STREET, HAWTHORNE, CA 90250  TELEPHONE: (310)349-2990  Door and Window Replacements for One- and Two-Family Residences and Townhouses | INFORMATION BULLETIN CSI\_MF 08-10-00.81 & 08-50-00.81 |

**GENERAL REQUIREMENTS**

This information bulletin was created to help the homeowner secure a building permit for door and window replacements.

Where only door and/or window replacements are proposed, the installation of doors and windows within one- and two-family residences and townhouses shall be shown in compliance with the provisions of the *California Residential Code* [CRC] and the *California Energy Code*.

Doors and windows shall provide—

* Resistance to the environment and security
* Egress and separation between garage and dwelling where applicable
* Adequate space for emergency escape and rescue where required by the code
* Adequate light and natural ventilation to habitable spaces as necessary by the code

Windows and other glazing shall be shown as Category II safety (tempered) glazing tested in accordance with CPSC 16 CFR 1201 when required by Section R308.4 of the *California Residential Code.*

Exterior windows and other glazing shall be shown in compliance with the maximum U-factor and maximum SHGC of the *California Energy Code* [CEnC] and exterior (opaque) doors shall be shown in compliance with the maximum U‑factor of the *California Energy Code*, as well as the applicable the maximum area limitations of the energy code.

Where new window areas are proposed, provide a *Certificate of Compliance, CF-1R* energy form to justify the window additions.

**PERMIT REQUIREMENTS**

Door and window replacements require a building permit prior to the start of the work—please apply for and obtain a building permit prior to ordering windows and/or doors, as well as starting any work related to installing the windows and/or doors.

When applying for the permit, on an 8-1/2 inch by 11 inch sheet of paper or larger, provide a plot plan that identifies the approximate true north direction, the location(s) and name(s) of the adjacent streets, and the placement of the relative to the property lines. Also, provide a fully labeled and proportioned Floor Plan that identifies the locations, sizes and types of existing as well as proposed new windows and doors within the building with labels that identifies the use of the rooms and/or spaces. Types of windows include, but may not be limited to—sliding, hung, fixed, casement, awning, etc. Do not use room labels such as ‘Bonus Room’ that does not identify a use of the room.

In addition, within the drawing identify the maximum U-factor and the maximum solar heat gain coefficient (SHGC) of all proposed new windows, as well the maximum U-factor of the proposed new doors. Unless otherwise supported by a *Certificate of Compliance, CF-1R* energy report, windows are to have a maximum U-factor of 0.30 and a maximum SHGC of 0.23. For opaque doors (doors with less than 25 percent glazed area), the maximum U-factor shall be 0.20.

Within the permit application where applicable, clearly identify ‘like-for-like’ window and door replacements (i.e.—windows and/or doors of the same size and type within the same location as the existing). Also for windows and/or doors, please clearly identify if the windows and/or doors are to be the ‘retrofit’ type or ‘nail-on’. The difference is that ‘retro-fit’ windows and doors fit into the framework of the existing window or door without breaking the stucco around the opening and the ‘nail-on’ type requires the breaking of the stucco around the opening.

A plans examiner/plan check engineer shall review the plan prior to the issuance of the permit at the building counter.

**TEST STANDARDS FOR RESISTANCE TO ENVIRONMENT AND SECURITY**

To ensure that the windows and sliding doors comply with the code provisions for resistance to the environment and security, please make sure that the windows and sliding doors that you choose to use comply with the test standards of AAMA/WDMA/CSA 101/I.S.2/A440. Exterior side-hinged doors shall be shown in compliance with AAMA/WDMA/CSA 101/I.S.2/A440, or AMD 100, or shall be shown to comply with ASTM E330.

**EGRESS**

Provide at least one exterior side-hinged egress door that is accessible from all portions of the dwelling without requiring travel through the garage that provides a minimum clear width of 32 inches (nominal 36-inch wide door)[[1]](#footnote-1) and a clear height of 78 inches (6’-6”). The egress door shall be readily openable from inside the dwelling without special effort or knowledge, or without the use of a key, and shall provide open directly to a yard or court that opens to public way, or shall open directly into a public way as required by CRC R311.1 and R311.2; or CBC 1010.1 and 1010.2.

**DOORS SEPARATING ATTACHED GARAGES AND DWELLINGS**

Doors separating attached garages and dwellings—

### Shall not open into a room used for sleeping purposes [CRC R302.5].

### Shall be self-closing and self-latching [CRC R302.5]

### Unless the building is otherwise protected by an automatic fire-sprinkler system, the door shall be a 20‑minute fire-resistance rated door, a minimum 1-3/8 inch solid wood or solid steel door, or a minimum 1‑3/8 inch honey-comb steel door [CRC R302.5]

### The opening around the door shall be fitted with a gasket or weather stripping to restrict the transfer of contaminants between the garage and the residence [ASHRAE 62.2, 6.5 as referenced from the air quality provisions of CEnC 150.0(o)].

**EMERGENCY ESCAPE AND RESCUE**

Except as provided for within CRC R310.1, bedrooms, basements and habitable attics shall be shown with not less than one opening to the outside that meets the requirements of CRC R310 for emergency escape and rescue. Emergency escape and rescue openings shall open into a yard or court that opens to the public way without reentry into the building, or that opens directly into a public way.

Except as provided for within CRC R310.5 for replacement windows and as provided for within CRC R310.7.1 for changes of occupancies, emergency escape and rescue openings shall provide a minimum clear width of 20 inches and a minimum clear height of 24 inches. Emergency escape and rescue openings shall also provide a minimum clear opening of 5 SF at the grade level and 5.7 SF at all other levels. Also,, the bottom of the clear openings shall not exceed 44 inches AFF [CRC R310.2].

Doors providing emergency escape and rescue shall be side hinged or sliding [CRC R310.3].

Where applicable window wells shall be shown in compliance with the provisions of CRC R310.4.

Replacement of existing windows shall be exempt from the emergency escape and recue provisions of CRC R310, provided:

### The existing window is not a part of a change of occupancy.

### The replacement window is of the same operating style of the original window or a style that will provide an open area larger or equal to the existing window.

### The replacement window is the largest manufacturer’s standard size window that will fit into the existing opening.

**NATURAL LIGHT AND VENTILATION**

Except where artificial light is provided that is capable of providing an average illumination of 6 foot-candles (65 lux) over the area of the room at of height of 30 inches AFF, habitable rooms shall be shown with an aggregate glazed area that is at least 8 percent of the floor area that allows natural light to illuminate the area. In addition, unless whole-house ventilation is provided, the aggregate of openings to the outside provided by windows, doors and/or louvers or other approved elements shall be at least 8 percent of the floor area.

**SAFETY GLAZING**

[CRC R308.3]

Replacement doors and windows shall be shown of Category II safety glazing tested in accordance with CPSC 16 CFR 1201 as follows:

### Within Doors.

### Exceptions: For decorative glazing and glazing that would restrict the passage of a 3-inch sphere.

### Glazing on either side of a door, within the same plane of the door, and within 24 inches of the door opening and/or where the glazing is within a wall less than 180 degrees from the plane of a door in a closed position and within 24 inches of the hinge-side of in swinging door.

### Exceptions: For decorative glazing, where the glazing is protected by a wall or other barrier, where the door is for a closet less than 3 feet deep, or where the glazing is adjacent to the fixed pane of a patio door.

### Individual glass panes larger than 9 SF, where the bottom edge of the pane is less than 18 inches AFF and the top edge is more than 36 inches AFF and where the walking surface is within 36 inches horizontally and in a straight line of the glazing.

### Glazing is within 60 inches (horizontally and perpendicular) to the water’s edge of a tub, shower, pool or similar feature and within 60 inches of the standing surface.

### Except where protected by a code conforming handrail 34 to 38 inches above the walking surface, glazing within 36 inches horizontally of stairs or ramps and less than 36 inches vertically of the walking surface. Walking surface of stairways shall be considered as the plane tangent to the stair nosing.

### Except where protected by a guard complying with CRC R312 and the glazing is more than 18 inches from the guard, glazing in a horizontal arc 180 degrees from the bottom read nosing and less than 36 inches above the landing.

**ENERGY COMPLIANCE**

### As mentioned above, the fenestrations (glazed elements, that include doors where glazing is equal to or greater than 25 percent of the door area) shall be shown with an area weighted U-factor (maximum 0.30) and SHGC (0.23) that does not exceed the limitations of Table 150.1-A within *California Energy Code* [CEnC 150.2(b)3A].

### Opaque Doors (with glazing less than 25 percent of the door surface) shall be shown to comply with the maximum U-factor of CEnC Table 150.1-A (i.e.—0.20).

### The SCGH shall be shown met by one of the five conditions identified within CEnC 150.2(b)4.

### If a shading device is required, a completed Solar Heat Gain Coefficient (SHGC) Worksheet (CF1R-ENV-03-E) that is signed by both the document author and the responsible person eligible under Division 3 of the California Business and Professions code to justify the shading device(s).

### Where more than 75 SDF of new fenestrations are being added, or if the weighted average for the fenestrations needs to be calculated, a *Certificate of Compliance, CF-1R* energy form shall be provided.

**APPENDIX**

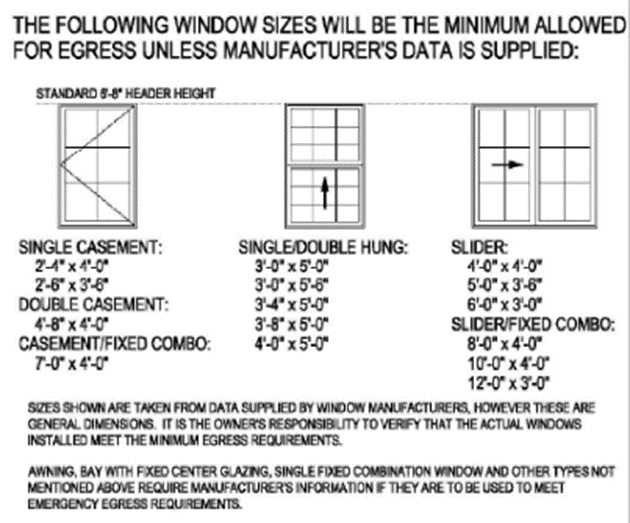
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* All replacement windows and doors are to be ‘nail-on’ type doors and windows. No new openings are proposed. Inspections shall be required to verify framing (if altered), the flashing around opening, as well as the installation of the exterior wall covering.
* All windows and glazed patio doors shall have a maximum U-factor of 0.30 and a maximum SHGC of 0.23.

Safety glazing shall be Category II safety glazing tested in accordance with CPSC 16, CFR 1201.

**STANDARD WINDOW SIZES FOR EMERGENCY ESCAPE AND RESCUE**



1. Where the door opening has two door leafs, one leaf shall be shown to provide the minimum 32-inch clear width and shall be shown readily openable. [↑](#footnote-ref-1)