



WINDOW REPLACEMENT + EGRESS SIZING Guide

REVISED 12/12/14

GENERAL REQUIREMENTS

The purpose of this guide is to clarify the minimum building code requirements when repairing or replacing windows in a residential building.

The information provided in this document is general and intended as a guide only. Each project is unique and additional requirements may be enforced as deemed appropriate.

Failure to complete items below prior to inspection may result in a re-inspection fee.

DEFINITIONS

AWNING WINDOW = A window unit in which the bottom of the sash swings outward for ventilation.

CASEMENT WINDOW = A window unit in which the single sash cranks outward, to the right or left.

DOUBLE OR DUAL GLAZING = Use of two panes of glass in a window to increase energy efficiency and provide other performance benefits.

DOUBLE-HUNG WINDOW = A window unit that has two operable sashes which move vertically in the frame.

EMERGENCY ESCAPE AND RESCUE WINDOW = Also called an Egress Window.

FIXED WINDOW = Non-venting or non-operable window. Also known as picture window.

FLASHING = A thin strip of metal or synthetic material that diverts water away from a window or skylight.

GLAZING = Glass in a window or door; the act or process of fitting with glass.

JAMB = The main vertical members forming the sides of a window or door frame.

LIGHT OR LITE = Glazing framed by muntins and/or sash in a window or door.

PANE = A framed sheet of glass within a window.

REPLACEMENT WINDOW = A window assembly that fits in an existing rough opening after the existing window assembly has been removed.

RETROFIT WINDOW = A window unit that fits inside an existing window frame after the existing sash have been removed.

ROUGH FRAME OPENING = The framed opening in a wall into which a window assembly is to be installed. The rough frame consists of the header, king stud, cripple stud, sill and associated supports.

R-VALUE = Resistance to thermal transfer or heat flow. Higher R-value numbers indicate greater insulating value.

SASH = A single assembly of stiles and rails made into a frame for holding glass.

SILL = The main horizontal member forming the bottom of the frame of a window or door.

SINGLE GLAZING = Use of single panes of glass in a window. Not as energy-efficient as double glazing.

SINGLE-HUNG WINDOW = A double-hung type of window in which the top sash is fixed or inoperable.

SLIDING WINDOW = A sliding window which has wider panel members around the glass.

TEMPERED GLASS = Glass manufactured to withstand greater than normal forces on its surface. When it breaks, it shatters into small pieces to reduce hazard. Standard on all doors and large fixed windows.

U-VALUE = Rate of heat flow-value through the complete heat barrier, from room air to outside air; the lower the U-value, the better the insulating value.

VENT UNIT = A window or door unit that opens or operates.

WINDOW ASSEMBLY = A combination of the sash, frame, and all other parts that make up a window unit. The assembly generally includes a nailing fin for securing the window assembly in the rough opening.

WINDOW FRAME = The enclosure in which window sash or panels are mounted.

WINDOW TYPE = Fixed, Double Hung, Single Hung, Casement, Awning, Slider.

PERMIT REQUIREMENTS

1. A Building Permit is required when any of the following is undertaken:
 - a. A retrofit window is installed.
 - b. A replacement window is installed.
 - c. The size or shape of the window's rough frame opening is altered.
 - d. The existing flashing is altered, as when removing the nailing fin of an existing window,
 - e. The exterior finish is altered, as when stucco is removed in order to remove an existing window, or
2. If the window replacement is part of a project that already has a Building Permit, no additional permit is required.
3. If replacing a broken window pane (glass only), a permit is not required.

BUILDING CODE REQUIREMENTS

GENERAL

1. If a bedroom window is to be changed in size, type and / or location, then the replacement window shall comply with the emergency escape and rescue window dimensions. See Figure 1 below.
2. If the bedroom window framing is altered, all aspects of the replacement window shall comply with the current Building Code requirements.
3. If the existing bedroom window is not in compliance, and the framing is not going to be altered, the new window must comply with current requirements for new construction (including energy, light, ventilation and egress) within the existing opening. It is possible, therefore, that the style of window may need to be changed, (for example, a non-complying single hung style would need to be changed to a complying casement style).
4. If a bedroom window is to be replaced, it may be replaced with a window of the same size, and type that was required by the Building Code when the existing window was installed. The replacement window shall not increase the level of non-compliance.

1. Bathrooms, water closet compartments and laundry rooms shall have windows or skylights with an aggregate minimum of 3 square feet, half of which (1 ½ square feet minimum) are operable.
2. Openable windows 72” inches or more above exterior grade must be at least 24” above the finished interior floor OR no opening to window that would allow 4” sphere OR install window guards
3. When the valuation of window replacement project exceeds \$1,000.00 and a permit is required, smoke and carbon monoxide alarms shall be installed.

SAFETY GLAZING

1. Whether a permit is required or not, new glazing in existing openings shall be safety glass if window glass is located:
 - a. within 24” of either edge of a door and less than 60” above the walking surface
 - b. less than 60” above drain inlet in a bathtub or shower enclosure.
 - c. less than 18” above walking surface and has more than 9 square feet of glass.
2. Requirements for energy, light, ventilation and egress shall be accommodated within the scope of work.

LIGHT AND VENTILATION REQUIREMENTS

1. All habitable rooms must have exterior windows, glass doors and/or skylights which area totals a minimum of 8% of the floor area for light.
2. All habitable rooms must have exterior operable windows, glass doors and/or operable skylights which area totals a minimum of 4% of the floor area for ventilation of the room served 1.

EMERGENCY ESCAPE AND RESCUE WINDOW REQUIREMENTS

1. Each sleeping room below the fourth story shall have at least one operable window or exterior door for emergency escape and rescue that opens directly to a public street, alley, yard or exit court.
2. Emergency escape and rescue windows located on the ground floor shall have a clear opening area of at least 5.0 square feet, with a minimum clear height of 24” and a minimum clear width of 20”.
3. Emergency escape and rescue windows located above the ground floor shall have a clear opening area of at least 5.7 square feet, with a minimum clear height of 24” and a minimum clear width of 20”.
4. In order to meet the required 5.0 or 5.7 square feet clear window area, either the width or height, or both, must exceed the minimum dimension. See Figure 1 below.

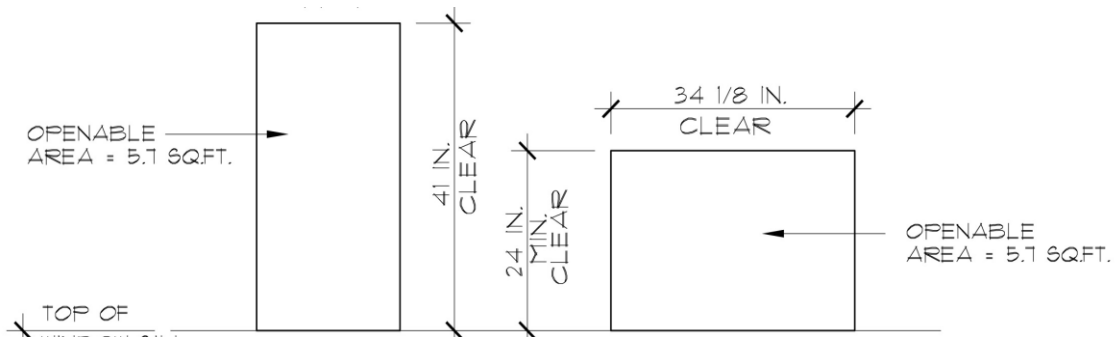


Figure 1

5. Finish window sill heights shall not exceed 44" above the floor.
6. Emergency escape and rescue windows with the finished sill height below the adjacent ground elevation shall have a window well that meets the following:
 - a. The window well shall have a minimum clear opening area of 9 square feet.
 - b. The minimum dimension in any direction measured horizontally is 36".
 - c. If window well has a vertical depth more than 44", it shall be equipped with a permanently affixed ladder or stairway.
7. Bars, grills, grates or similar devices installed on escape or rescue windows, doors or window wells, shall be equipped with approved released mechanisms.
8. When an emergency escape and rescue window is replaced in an existing frame, the new window shall meet all the minimum clear opening dimensions noted above.

ENERGY CODE REQUIREMENTS

1. Prescriptive approach: Replacement and retrofit windows shall have a maximum U-factor of 0.32. There is no minimum solar heat gain coefficient (SHGC) required in San Mateo.
2. Performance approach: Provide windows with the stipulated U-factor and SHGC.

SEQUENCE OF INSPECTIONS

3. First inspection: Paper and flashing, and if applicable lath and framing.
4. Final inspection: Smoke alarms, egress, tempered windows, U value, (keep stickers attached to windows until final inspection), all work to be completed.

PLAN SUBMITTAL REQUIREMENTS.

Plans are not required for retrofit and replacement windows, unless rough frame openings are to be altered.