LIVERMORE
CALIFORNIA

Window Replacement Information Sheet

(use this form only when windows are replaced with same size and type and no plans are provided)

WINDOW SIZE		OPENING TYPE		ROOM	U-VALUE OF (N) WINDOW *(.40 maximum)*
Existing Window Size	***New Window Size***	Existing Opening Type	***New Opening Type***	***Location of window change***	*
8'0"x4'0"	**8'0"x4'0"**	**Slide-By**	**Slide-By**	**Family Room**	**.40**

* The smaller the U-Value, the better the energy efficiency. The U-Value for new windows must be .40 or less

JOB ADDRESS: _____

VALUATION: $ _____

The installation of smoke detectors may be required **(requirements attached)**

Comply with City of Livermore Security Ordinance (requirements attached

(Updated 04/20/2010)

City Hall
Permit Center

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Residential Window Installation Information

A building permit is required for the installation of windows. The five (5) main building and energy code items to address for a residential window installation are:

1. Light and ventilation requirements for habitable areas.
2. Sleeping room (bedroom) emergency egress requirements.
3. Windows in locations that are required to be “safety glazing” (tempered or laminate glass).
4. Exterior wall width between windows and doors for lateral load resistance.
5. State of California Title 24 energy compliance requirements for an alteration.

The following information is intended to clarify some of the typical residential window assembly replacement and/or new installation questions (see bullet items below).

- A building permit is required for window assembly replacement (either “retrofit” or nail-on flange style). Replacement of “glass only” does not require a building permit.
- Existing windows that conform to the current light, ventilation, egress, etc. requirements of the 2010 California Residential Code shall not be replaced with windows that do not comply.
- If the existing sill height for emergency egress windows is higher that 44”, it will be allowed to remain. However, if any alterations or repairs are made to the “framed opening” a finished sill height of 44” maximum will be required.
- Safety glazing is required if the window glazing is located within a 24” arc of the vertical edge of a door in the closed position and the glazing bottom edge are less the 60” above the walking surface. Glass areas greater than 9 square feet, less than 18” above the floor, exposed top edge greater than 36” above the floor and within 36” of a walking surface needs to be safety glazing.
- For dwellings of “Conventional Light-Frame Construction”, the locations of existing window or door openings are allowed to remain. However, if existing window or door openings are to be widened or if new window or door openings are proposed in the exterior wall(s) the new opening will have to comply with the 2010 California Residential Code, Section R602.10.1.4.1 for braces wall panels.
- There are two (2) minimum residential Title 24 Energy Code requirements for glazing in windows, skylights, sliding glass doors, etc. The two (2) minimum requirements are a maximum glazing U-Factor of 0.40 and a maximum Solar Heat Gain coefficient (SHGC) of 0.40.

Residential Egress Window Installation Requirements

The 2010 California Building Code requires minimum opening dimensions and areas for bedroom windows (if the bedroom does not have a door to the exterior) for emergency egress.

1. If the bedroom in question does not have a door to the exterior, one window opening in the room shall meet the following minimum building code dimensions and areas when a new window assembly is installed.

   a. Minimum opening width: 20 inches
   b. Minimum opening height: 24 inches
   c. Minimum opening area: 5.7 square feet (Width and/or height must exceed the minimum)
   Exception: 5.0 square feet for "grade-floor openings”
   (See section 202 for a complete definition for grade-floor opening)

   If a “new window opening” is created in a wall of the bedroom and this window is to be used for the required egress, in addition to the minimum dimensions and areas indicated above, a maximum height of 44” to clear opening above the floor level will be required.

2. If the existing window opening(s) does not meet the above minimum dimensions and areas, the new window opening(s) configuration shall be as close as possible to the above dimensions and **shall not reduce the existing opening dimensions and areas.**

Note: Existing window conditions not capable of meeting the above requirements will need to be resolved on an individual basis prior to installation of the new window assembly.

Smoke and Carbon Monoxide Alarms in New <u>and</u> Existing Single and Two Family Dwellings

2010 California Residential Code, Section R314 –R315 and NFPA 72
Effective January 1, 2011

Smoke alarms (smoke detectors) and carbon monoxide alarms save lives. They provide the opportunity for escape by early detection of smoke, fire or carbon monoxide gases.

Smoke and carbon monoxide alarms are required in new and existing dwellings ***<u>anytime</u>*** a permit with a job valuation of more than $1,000.00 is issued for an addition, repair or alteration. This includes but is not limited to furnaces, water heaters, bath remodels, re-pipes, reroofs, etc.

Smoke and carbon monoxide alarm locations:

1. Outside each sleeping area (hallway) in the immediate vicinity of bedrooms.
2. On every story of the dwelling, including basements and habitable attics. Split levels are considered one story.

Additional smoke alarms are required in each sleeping room and any room with a closet.

Power source: Smoke and carbon monoxide alarms are permitted to be solely battery operated in existing areas of buildings undergoing alterations or repairs that do not result in removal of interior walls and ceilings affecting the work area. In new construction and bedroom additions, smoke and carbon monoxide alarms shall receive their primary power from building wiring, shall be interconnected with other required alarms and equipped with battery backup.

Installation guide lines: Smoke and carbon monoxide alarms shall be installed in accordance with the manufacturer's installation instructions. Smoke alarms and combination smoke/carbon monoxide alarms shall be installed as follows:

- **Flat ceilings:** centrally located in sleeping room***.***
- **Peaked ceiling:** within 36'' horizontally of the peak and not closer than 4'' vertically to peak.
- **Sloped ceiling:** within 36'' horizontally of the high side of the ceiling and not closer than 4" to the adjoining wall.
- **Coffered ceiling:** highest flat portion or sloped portion within 12'' from highest point.
- **Wall mounting:** not farther than 12 inches from adjoining ceiling and no closer than 4".
- Alarms shall not be installed within 36'' of a bathroom containing a tub or shower**.**
- Alarms shall not be installed within 36'' of a supply register of a forced air heating/cooling system.
- Alarms shall not be installed within 36'' of a paddle-type ceiling fan blade.