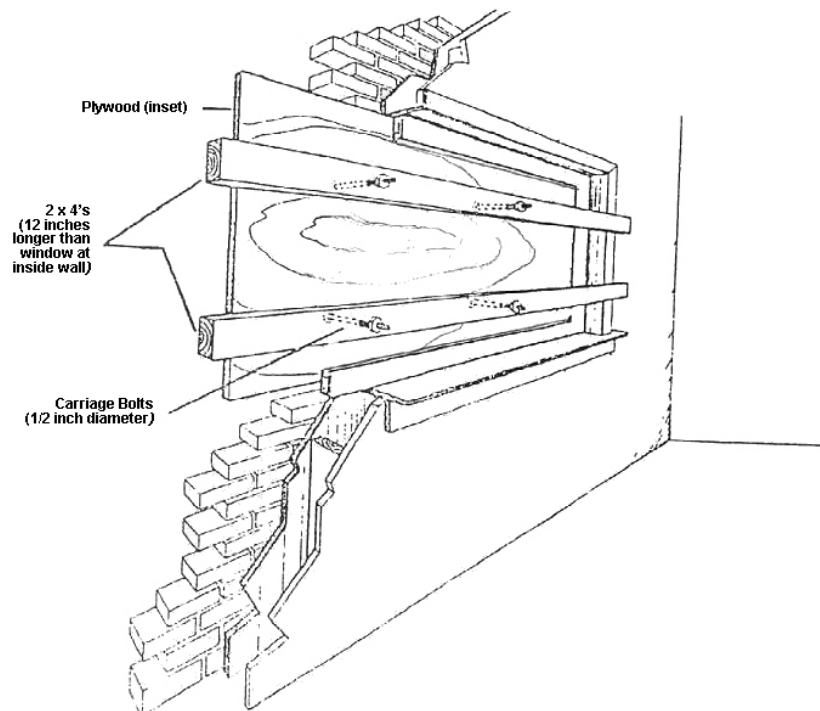




**Carriage Bolt (Preferred) Method:**

- **Plywood** should be  $\frac{3}{4}$ " if building is to be boarded for 6 months (180 days). For all other applications, use minimum  $\frac{1}{2}$ " plywood. Plywood should be painted with a good quality exterior paint that matches the exterior.
- **Double-Hung wood sash windows** should be opened from both the top and bottom so that the carriage bolts may pass through the open portion of the window without damage to the glass.
- **Wood casement windows** (windows that swing out from the side of the frames) should be removed at the hinges from the frame and stored inside the building near the window opening. The carriage bolts may then pass through the window opening without damage to the window.
- **Steel casement windows** (windows that swing out from the side of the frames) will require removing panes of glass or breaking selected panes of glass if pane removal is not feasible. This will allow the carriage bolts to pass through the window openings if this method is used to secure the window. No more panes than necessary should be broken and should be approved by Historic Preservation Office (HPO) in advance.
- **Sliding windows** should be opened as far as possible to permit the carriage bolts to pass through the window opening. The sliding sash may often be lifted out of the track and stored inside the building.
- **Fixed glass windows** require removing the glazing from the frame or reverting to the Boarding with Screws method below. Breaking glass is only allowed with approval from HPO. In some cases, the glazing is set within a fixed sash attached to the frame and the sash may be removed, without breaking the glass, for storage inside the building. This approach is particularly desirable for stained/leaded glass windows.
- **Canopy or hopper windows** (windows that are hinged from the top or bottom) should be removed at the hinges from the frame and stored inside the building. The carriage bolts may then pass through the window opening without damage to the window.
- **Doors:** All entry doors should be removed and stored inside the building. One entry doorway should have a temporary plywood door with an accessible entrance with lock and key. It may be necessary to install a temporary 2"x4" frame to attach to the plywood door. All other doors should be removed at the hinges and the openings boarded the same as the window openings.

**Diagram of Carriage Bolt Boarding Method:**



**Boarding with Screws:**

- Insert ½" or ¾" as appropriate (see above) plywood into the exterior of the window opening for a close fit and secure with a minimum 1 ½" drywall, deck or sheet metal screws.
- Cut plywood so it completely inserts into the window opening (including any radius arch at the top of the window opening) and set the screws every 8" to 10".
- Screws are to be set into the wooden window frame or wood lintel and/or only, **not** into brick masonry, concrete or adobe. Screwing into mortar joints would be acceptable if there is no wooden material available.

**Doorways/Other Openings:**

- Doorway openings should be boarded to the same requirements as window openings. All entry doors may need to be removed and stored inside the building since plywood boarding may not clear door hardware. One entry doorway should have a temporary plywood door with an accessible entrance with lock and key. It may be necessary to install a temporary 2"x4" frame to attach the plywood door. All other doors should be removed at the hinges and the openings boarded the same as the window openings.
- Other openings that permit entrance into or under the building must also be boarded. This may include, but is not limited to crawl space access, large vents, basement and cellars doors and windows.

**No trespassing signs should also be posted and an authority to arrest form should be on file with the City of Phoenix Police Department.**

**General Considerations:**

- Please make an appointment for a site visit with the HPO staff member and the board up company - to do a walk through and go over methods, to discuss ventilation, to discuss door/entry methods prior to beginning board-up work.
- All first and second story windows must be boarded. Windows above two stories should ALSO be boarded if these openings/windows are not weather tight.
- If boards cannot be inserted into the window openings because of security bars, carefully remove the bars and board the openings as indicated above. Then security bars should be stored inside the building.
- **Use caution when installing plywood into the window openings.** It should fill the entire opening, and should be secured snugly (but not overly tight) against the building, but the bolts should not be overly tight because this can actually damage building exteriors/frame building.
- Loose debris should be removed from inside and around building prior to boarding. Please ensure no animals are living in or near the building before beginning work. If evidence of animals are present, they need to be removed, and all entry/exit points for animals should be boarded and/or closed off.
- Evaluate whether any patching of the roof is needed at same time so that building is entirely weather tight and vandal-free.
- **Consider ventilation:** make sure attic vents are open and all interior doors are open. Metal louvers inserted into plywood panels should be considered and discussed with HPO, since they may be needed to provide cross-ventilation.

**Final Thoughts:**

- The city of Phoenix Neighborhood Preservation Ordinance prohibits boarded window or door openings on an unoccupied structure for more than one hundred eighty days (180) in any two-year period.
- **Eliminate graffiti.** The city of Phoenix Graffiti Busters Program provides paint and graffiti removal supplies to assist neighborhood groups with keeping Phoenix graffiti free. Call the Graffiti Removal Hotline at 602-495-7014.
- **Maintain fences.** Check periodically to ensure fences are structurally sound, free of deterioration and that they are constructed of uniform materials. Well-maintained fences look nice and provide security.
- **Maintain vegetation.** Keeping properties free of tall weeds/grass and dead/dried vegetation enhances the appearance of a neighborhood. It also prevents fire hazards.
- Contact the Neighborhood Services Department's website for additional tips and information at 602-262-7844 or visit their Web site: <https://www.phoenix.gov/nsd>.