

# SEALCRAFT

Architectural Window Systems

STANDARD PROCEDURE

No. I-300

*Window Installation Instructions*  
*Series 1000 Steel Replica Window*

Examined, Accepted and Approved

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Title: President

## 1.0 INTRODUCTION:

- 1.1 The purpose of this standard procedure is to establish the procedures required for the successful installation of Seal Craft window systems utilizing Seal Craft's Series 1000 Steel Replica Window Systems into prepared openings in brick masonry wall constructions.
- 1.2 The guidelines set forth herein are based on standard industry practices AAMA Publication IPCB-08 which can be located at [www.seal-craft.com](http://www.seal-craft.com) and Seal Craft specific recommendations coupled with our understanding of typical job site conditions and requirements.
- 1.3 This procedure does not purport to address all of the safety problems that may be associated with its use. It is the responsibility of whoever uses this procedure to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

## 2.0 INSTALLER QUALIFICATIONS AND RESPONSIBILITY:

- 2.1 The window installation subcontractor should be an experienced mechanic in the field with at least five continuous years of successful experience installing similar window systems into projects of similar scope, magnitude and design.
- 2.2 The basic function of the window installation subcontractor is to ensure that all windows are installed per the approved manufacturers written instructions and job specific Shop Drawings as approved by the Architect or Owner's Representative.
- 2.3 The window installation subcontractor shall be responsible to ensure that all openings are correctly prepared and ready to accept new window units. Any problems found should be reported to the General Contractor or approving authority promptly and the window installation should not be initiated until all opening deficiencies are corrected. This responsibility extends only to the dimensional accuracy and apparent structural integrity of the masonry openings. Determination as to whether historic masonry walls and window openings are capable of withstanding water intrusion shall be the obligation of the owner's architect and/or waterproofing consultant.
- 2.4 The window installation subcontractor shall then be responsible to ensure that all windows are properly installed, adjusted and ready for use by the Owner, with the exception of final glass washing, which is to be preformed by the pre-occupancy clean-up subcontractor.

### 3.0 RESPONSIBILITIES:

- 3.1 The window installation subcontractor is responsible to gain a full and complete understanding of pertinent information relating to his/her scope of work including but not limited to this document, approved submittals, shop drawings, working construction drawings, project specifications and job site requirements.
- 3.2 The window installation subcontractor is responsible to train his/her workforce in proper material handling, erection and safety procedures, and pursuant with and including OSHA and Prime Contractor safety requirements.
- 3.3 Window installation subcontractor shall ensure that a qualified window installation superintendent is designated and on site during all window installation activities.
- 3.4 To provide all sealants, caulk, fasteners, shims, backer rod, bond breaker and/or machinery as required by this Project and sufficient qualified workmen to perform the installation professionally, safely and on time.
- 3.5 To ensure that all materials are of the type and quality required for this Project and that they are safely stored and protected prior to and during installation.

### 4.0 DUTIES:

- 4.1 The window installation subcontractor shall attend all required job site progress and safety meetings.
- 4.2 Maintain open communication and foster a harmonious relationship with General Contractor and other related trades.
- 4.3 Receive all window material shipments, verifying quality and quantity and that those products are fit for installation, immediately reporting any deficiencies directly to Seal Craft as well clearly listing any such problems on the freight Bill of Laden.
- 4.4 General Contractor is responsible to ensure that rough openings are dimensionally accurate, plumb, square, true and not obstructed, allowing window installer free access to each opening.

### 5.0 ASSEMBLY PROCEDURES:

- 5.1 Series 1000 Steel Replica windows are delivered fully assembled unless agreed upon in advance with the installation subcontractor.
- 5.2 Because of the nature of original steel window constructions; replacement steel

replica window assemblies can be extremely large and heavy. Typical windows can be expected to weigh approximately 6½ pounds per square ft. In order to minimize jobsite handling weight it may be advantageous to ship windows with the operable vent shipped separately or with one or more units of insulated glass shipped separately.

5.3 Installing end dams at each end of subsills is the only other assembly procedure for the steel replica window. Install end dams utilizing three each #8 x 1” assembly screws at each end of the subsill.

5.4 Apply an ample back seal of the specified sealant to subframe corner connections. Special attention should be given to sealant application at the jamb to subsill connections since any failure at this location will result in water intrusion into the building.

## 6.0 INSTALLATION PROCEDURES:

6.1 The following step-by-step instructional procedure is provided for the convenience of the installing subcontractor.

6.2 Inspect all openings scheduled for window installation for accuracy of dimension and squareness. All window system members shall be anchored into openings plumb, square and without rack or warp, using anchors of sufficient diameter and length to meet required design pressure. Utilize shims at fastener locations as may be required and/or as depicted on Shop Drawings.

6.3 Fastener types and frequencies shall be according to the project specific engineer stamped fastener calculations. In the absence of such calculations; subframe to masonry fasteners shall be ¼” masonry screws with a minimum 2 ½” embedment into the masonry and at 16” on center maximum spacing.

6.4 Orient the subsill into the opening as depicted on the approved project drawings, centered left to right and allowing for shim tolerance. Ensure that the sill is oriented with the weep holes draining to the exterior. Shim as required and anchor as detailed in 6.3 above. Seal Craft’s subsill design incorporates an integral trim clip which is located to the interior and behind the water drain tank. Anchoring fasteners should penetrate through this section and not through the water tank. This will minimize the occurrence for leaks at subsill penetrations. Note that historic tax credit authorities require the new window installation to be at the same set back into the masonry as the original windows.

6.5 Ensure that the provided exterior sub-sill weep holes are unobstructed and functioning properly.

6.6 Prior to setting windows, place the provided head expander onto the head of the

window with the trim clip detail toward the interior of the building.

- 6.7 Set windows (from interior or exterior) into the masonry opening: set window's sill into sub-frame sill, rotating (tilting) top of window into the masonry opening. Equalize the left to right tolerance.
  - 6.8 Ensure that the window is standing plumb in the opening and push the head expander up until contact is made with shims or the opening's header. Fasten through the trim clip section of the head expander and into the header substrate as per 6.3 above.
  - 6.9 Install interior trim clips at jambs with sheet metal screws through the trim clip and into the frame as detailed on shop drawings.
  - 6.10 Attach jamb trim clips to masonry opening as per 6.3 above. Use shims as required.
  - 6.11 Cut trim covers to length and snap to trim clip with a mallet.
  - 6.12 Check vent operation and make any adjustments as may be required per 7.0 below.
  - 6.13 Install backer rod as necessary at shim space at perimeter (head, jambs and sill) locations and apply continuous caulk bead at full perimeter. Sealants to be as specified by architect or equal and applied around the full exterior and interior perimeter of newly installed windows. Follow sealant manufacturer's application instructions.
- 7.0 INSTALLATION TIPS:
- 7.1 To field check subsills for water leakage, apply end dams, cover weeps with tape and then fill subsill with water. Let stand for 15 minutes checking for water penetration (RE:AAMA 502.02). This will help to ensure the quality of the installation and to mitigate financial loss since resealing leaking subsills is difficult if not impossible to do without removal of the windows.
  - 7.2 If applying fasteners through subsills;
    - 7.2.1 Pre-drill and clean installation fastener holes.
    - 7.2.2 Pump sealant into the drilled hole ensuring contact with the substrate below and filling the hole and on top of the surface the fastener will penetrate.
    - 7.2.3 Apply the fastener.
    - 7.2.4 Seal over the fastener making sure to encapsulate the fastener head completely.

7.2.5 Tool the sealant into place to fill in any voids and to promote adhesion.

7.3 The integrity of the waterproofing within the subsill is perhaps the single most important element in ensuring that the system will prevent water from intruding into the wall or building. Therefore, the complete and proper sealing of end dams, fastener heads, mullion brackets and all penetrations through the subsill is critical to the success of this type of installation.

## 8.0 ADJUSTMENTS:

8.1 Ensure that all vents travel (open) to their projection without undue pressure, scrape or noise.

8.2 Ensure that cam lock(s) work as intended with appropriate amount of operating force. Confirm that the vent is closing fully by checking meeting weather strip compression and correct as necessary.

8.3 Inspect all exposed finished surfaces for scratches, abrasions and dents and correct. Scratches and abrasions should be wet sanded with 400 grit emery cloth, wiped clean and painted with manufacturer provided touch up paint.

## 9.0 MANUFACTURERS DISCLAIMER:

9.1 Seal Craft is a manufacturer of quality commercial window systems and as such is compensated for the delivery of the same, per approved shop drawings, unto the job site. Seal Craft is not compensated for, and therefore assumes no responsibility for, building design, interface of its products with other building elements or any area of accountability other than the manufacture and delivery of quality window systems as required under each contract.

9.2 The qualifications and procedures as set forth herein are recommendations of Seal Craft as the manufacturer and are intended as a minimum guideline for the successful installation of its products and must be adhered to in order for the Seal Craft warranty to be in effect.

9.3 Upon review of the contract documents, shop drawings and manufacturers installation instructions, final architectural determination should be made as to any further requirements for flashing, sealant or any other detail that may need to be added or addressed to ensure proper interface with the new fenestration and the desired performance of the same.

9.4 Flashing and/or an appropriate method of sealing shall be designed as part of an overall weather resistant barrier system. It is not the responsibility of Seal Craft to design

- or recommend a weather resistant barrier system appropriate for each job.
- 9.5 The qualifications and procedures as set forth herein must be reviewed and approved prior to commencement of installation activities by a duly authorized and accountable owner's representative or agent.
- 9.6 Seal Craft assumes no responsibility for any liability on account of the presence or growth of black mold or any other bacteriological growth in any building or structure in which its window systems are installed.
- 9.7 For building construction which incorporates EIFS; the EIFS Industry Manufacturers Association (EIMA) guidelines must be adhered to in order for Seal Craft's product warranty to be valid.
- 9.8 By stamping and/or signing or by any other means affixing a 'mark' to the submittal booklet that contains these instructions, both architect and contractor demonstrate complete agreement and accept full responsibility for these installation procedures. Further, both architect and contractor agree that the manner in which the windows are installed is beyond the control of the manufacturer and as such, Seal Craft has no responsibility for any liabilities that may arise from the improper installation of its products.
- 9.9 Should field testing be a Project requirement, installing window contractor shall cooperate fully, preparing window unit(s) as requested by the Architect and/or Independent Laboratory personnel, but in no case participate in an unofficial "garden hose tests". Any field testing shall be pursuant with the current AAMA 502 Standard and Seal Craft shall be afforded the opportunity to attend any and all such testing and given a minimum of 15 work days notice in advance of any field testing.