08 50 00 | **Windows**

This design guideline is written to the designer of record (DOR). This standard shall apply to all University structures including institutional, residential and Greek structures. This guideline is written to document UA standards of work, assist the designers in ensuring UA standards are incorporated into the contract documents and provide a resource to facilitate the design process. Written variations from this standard may be considered for miscellaneous structures. It is the designer of record's responsibility to coordinate the criteria set forth in design guideline and in conjunction with the manufacturer requirements and use the most stringent standard.

This standard is written in specification language such that parts can be copied and pasted to the project specifications by the designer of record. However, some mandatory language is addressed solely to the designers and is not appropriate for inclusion into a project specification directed toward the contractors

A. General

All windows shall be fixed simulated hung windows with offset upper and lower sashes, unless operable windows are required for egress or requested by UA. Buildings with older mechanical systems and non-sprinkled residential buildings may require operable windows. It is the designer or record's responsibility to advise UA on code implications of using fixed versus operable windows in these structures. Operable windows shall contain sash stops.

Windows shall be extruded aluminum with integral structural, non-shrinking thermal break for maximum efficiency. Thermally improved or skipped bridged thermal breaks are not acceptable. Structural thermal break material shall have a mechanical bite into the aluminum extrusions. Thermal break material anchored with friction only is not allowed. Windows shall have equal-leg frames, have factory applied finishes, and be factory assembled frames and sashes. All windows shall be delivered to the site with sashes preassembled into the window frame to install, as one unit, into the flashed rough opening. Field assembly of the upper and lower sashes into the frame or to each other is not allowed.

B. System Description

Frame Depth: Institutional: Fixed and Operable: 4" minimum nominal frame depth
Residential and Greek: 3" minimum nominal frame depth
Casement: 2" (min.) frame depth

Windows for New Institutional Buildings:

Exterior glazing legs shall be beveled and extruded with the window frame. Interior glazing stops shall be beveled, match and align with the exterior glazing leg.

Windows shall include exterior and interior, matching simulated muntin grids.

Windows for New Residential Buildings:

Exterior glazing legs shall be beveled, aluminum and extruded with the window frame. Windows shall include exterior muntin grids. No interior muntin grids shall be used.

Windows for New Greek Buildings:

Windows for new Greek buildings shall be aluminum or aluminum clad wood windows. The aluminum shall be extruded and have a thickness of 1/16". Nail flanges, through jamb anchors, or strap anchors are allowed.

Operation, glazing leg and muntin grid configuration shall be determined on a case by case basis. In most cases a beveled exterior glazing leg with matching exterior muntin grids will be required. Panning should match that of adjacent structures.

Windows for Existing Buildings:

Windows for existing buildings shall following the same criteria as given above except more variation may be granted to match adjacent structures.

Existing window trim and blocking shall remain as much as reasonable to be used to anchor the new windows. Deteriorated and loose framing shall be removed and replaced or re-secured as required. Existing window frames may remain if the new window will fit around the frames or be anchored to the frames. The designer shall evaluate the quality of the existing trim, blocking, and framing and make recommendations to UA for anchorage to the existing systems, adding additional anchored to the existing systems, or removal and replacement of the existing systems. In most cases, judgment must be exercised on how much modification is required on the existing trim, blocking and framing to adequately anchor the new windows. UA shall be advised of the advantages, disadvantages and cost implication and be actively involved in this decision. The Designer of Record shall dimensionally document the existing conditions on construction drawing details for the sill, jamb and head. Details shall clearly show existing windows and wall systems.

C. Manufacturers

Windows shall meet the performance, aesthetics, function, operation, muntin configuration, glazing cavity and bead configuration, frame depth and profile, sash assembly, and receptor system specified herein. It is the General Contractor's responsibility to provide a window that meets the minimum requirements of this specification and can be produced and field tested according to the requirements of this specification (including delivery schedule). No windows shall be installed prior to approval of all required submittals. No window will be approved for installation unless a sample of the specific model number has been reviewed and approved by UA prior to the project bid.

The following manufacturers and model numbers are approved for use on Institutional and Residential Buildings and shall be listed in project specifications. No others are allowed without written approval of UA. Approval will not be granted without reviewing samples of the product.

Graham	Instit. & Res: S1400FX Offset (fixed) / 2200H (operable)
Winco	Instit & Res: 1450S (fixed)
Traco	Instit. & Res: 9460 (fixed) / 9700 (operable)
Manko	Residential Grade Only: 3325 (fixed) / 5500 (operable)
Wassau	Inst.: 4250i INvent Retro Offset (fixed) / 4250i INvent Retro (operable) Res.: 3250i INvent Retro Offset (fixed) / 3250i INvent Retro (operable)
EFCO	Inst.: Series 6615 (fixed) / HX45 (operable) Res.: Series 6615 (fixed) / 601 (operable)

D. Fabrication

General:

All aluminum extrusions (sash, frame, panning, trim, etc.) are to have a wall thickness as required to satisfy the specified performance criteria. In no case is this to be less than 0.062".

Quality and Fit:

All factory joints shall be tight with no out of plane offsets exceeding five (5) mils. All joints shall be snug and true. No butt or mitered joint shall be open more than ten (10) mils and shall not vary in width more than three (3) mils across the joint. Exposed sealant lines shall be straight and true with variations in sealant width not exceeding 25% of the average width of the exposed sealant. The width of exterior exposed sealant shall be 1/16 inch or less. Joint fit-up tolerance for muntin grids shall be double those values listed above.

Finish on aluminum extrusions:

Unless approved otherwise in writing, the finish color to match the UA Antique White. This color is Azko Nobel: KW3Q36309" or Linetec: 115374 or equal. In some cases, other colors may be required to match adjacent structures. Designer shall prompt UA Architect for direction when other colors are to be used. Coating shall be 70% minimum kynar resin enamel, 1.2 (+/-.2) mil dft meeting the requirements of AAMA 2605. Prefinished interiors for Greek buildings shall meet AAMA 2603.

Hardware:

Operable windows shall contain aluminum automatic (spring loaded) sill latches on lift rail and camp locks on meeting rails.

Weather strip:

Secured in extruded ports; on sash perimeter: ridged PVC weather seal in one side of the vertical stiles, and pile conforming to AAMA 701-92 with polypropylene center fin in remaining locations.

Balances:

All operable sash balances shall be spiral type meeting the minimum class 5 requirements and tested in accordance with AAMA 902.

Hardware for Casements:

Provide with 4-bar support arms, friction adjuster, Allen key lock, and CAM handle.

E. Performance Standard

Window and panning assembly shall conform to AAMA 101, "Standard / Specification for windows, doors, and skylights", performance classification AW for Residential and Institutional structures and LC for Greek structures. A lesser performance class may be used with written approval from The University of Alabama. Laboratory testing shall include:

1. Operable Force
2. Water Leakage (tested at 15% of design pressure or 20% for AW class)
3. Structural Load Resistance
4. Structural Deflection Resistance
5. Auxiliary testing, if applicable
6. Condensation resistance: Minimum of 50 per AAMA 1503
7. Thermal Transmittance: Maximum of 0.55 BTU/(sf*hr*deg F°) per AAMA 1503

For institutional and residential windows, the minimum specified window design pressure shall be the maximum components and cladding design pressure (MCCDP) or 60 psf, whichever is greater. For Greek structures it shall be a minimum of 30 psf.

F. Panning and Subsills

Post set panning shall be used. Panning integral with a receptor may also be used on residential construction. Panning integral with the window or receptor may be used on Greek structures. Written approval is required to use any other type of panning.

Panning is the exterior trim around the perimeter of the windows. Preset panning is installed before the window and includes an integral receiver into which the window is installed. Post set panning is installed after the window is installed and the panning is usually face anchored, with screws, to the window frame. Wrap around panning is field installed onto the window perimeter prior to installing the window.

The panning and receptor (if present) system shall meet the same performance grade and class specified as the glazing assembly.

The manufacturer shall design panning assemblies to channel water penetrating the window and/or panning trim to the drainage plane. Manufacturers shall provide clear written installation instructions to the window installer to ensure compliance with this performance specification.

Double sided butyl tape or silicone sealant shall be installed between the window frame and the post set panning. All screws from the panning and the window frame shall be cap sealed with silicone sealant.

If wrap around panning is used, it shall be installed in a bed of water tight silicone sealant around the window perimeter and the mitered corners shall be cap sealed water tight.

Unless specifically directed to match other profiles, all window panning or trim shall be approximately 3" wide (from the jambs to the windows) and approximately 3" deep (from face of exterior panning to face of window). Panning shapes and details shall be shown on drawings. Manufacturers are not required to match the exact panning shape dimensioned on drawings. Shapes will vary per manufacturer. Thus, similar shapes to those shown on drawings, available from pre-existing dies, will be acceptable. All panning shall be designed around the flashing sill pan.

Exterior panning or trim shall contain an integral return leg projecting at least ¾" into the sealed joint. This leg is required to provide a method to install the backer rod and sealant between the panning/trim and the veneer. Panning with trim flanges may be approved in writing for retrofit applications.

The jamb and head panning profile shall not be used at the sill. The panning and/or sill extension at the sill shall be a standard sill extension or integral to the subsill. It shall be fabricated in straight breaks of metal, shall extend slightly beyond the outer edge of the jamb panning, and shall be sloped away from the window 5 to 15 degrees. Subsills or windows shall be anchored through the back, vertical leg of the subsill. An interior trim angle shall be installed running jamb to jamb inboard. The subsills or windows shall be fastened to the vertical leg of this trim clip. Fasteners anchoring the subsill or window through the horizontal window flashing pan (inside the sill pan), are not allowed.

G. Simulated Muntin Grids

Exact profile shall be specified on drawings. Simulated muntin grids shall not be glazed into the glazing cavity. Exterior simulated muntin grids shall be mechanically attached to the perimeter of the window frame using hidden, stainless steel or aluminum fasteners. Fasteners shall be sealed water tight. Clipped on, removable, and spring loaded clip on muntins are not allowed. Muntins glazed into the glazing pocket are not allowed. Tape or adhesive applied exterior muntin grids is not acceptable.

Interior and exterior muntin grids shall be trapezoidal shaped with beveled edges. Interior and exterior muntin widths shall match and be installed in alignment. Unless architectural details shows otherwise, provide approximately 1 ¼" wide, aluminum, trapezoidal (45 degree slopes) shaped simulated muntin grids for windows 54" and larger wide and 5/8" grids for windows less than 54" wide. Variations (+/- 1/4 inch, and +/- 10 degrees) from these dimensions are acceptable to allow for standard shapes from various manufacturers.

Muntin grid height shall be 5/16 inch (+/- 1/16 inch) thick with a bevel slope of approximately 45 degrees (+/- 10 degrees). Interior muntin grids for fixed windows shall match the exterior muntins. Interior muntin grids for operable windows shall be the same width as exterior grids but be thin enough to allow sash operation, and have beveled edges.

Interior simulated muntin grids shall be adhered to the glass. Mechanically attached interior grids may be approved if they are judged to have adequate rigidity. Exceptions will require approval of submitted window samples.

H. Warranties

Window Manufacturer Warranty to Owner: Warrant for five (5) years against leakage and defects in material and workmanship. This warranty is to include window components and glass. The window finish shall be warranted for fifteen (15) years. Warranty to include all labor and materials required for

replacement or repair. The IGU shall be warranted for twenty (20) years against seal failures, breakage and discoloration.

I. Glazing

Glazing for new structures shall meet energy code requirements and shall conform to the following.

1. One inch insulating glass units shall be used on institutional and residential structures. 5/8" minimum IGU shall be used one Greek structures.
2. All glazing shall be factory installed.
3. On Institutional and residential projects, the exterior glazing shall be wet sealed against the glazing leg using silicone or other UV stable, wet applied products. Glazing gaskets are not permitted on these structures.
4. IGU spacers shall be finished the same color.
5. Exterior glass lite:
    a. Thickness: ¼" unless specifically approved otherwise by UA
    b. Tint: PPG Solargray (or equal) unless tinted or obscured glass is required. No Low E coating is to be installed on outer lite without written approval.
    c. Type: Annealed unless tempered or strengthened is required.
6. Interior glass lite:
    a. Thickness: ¼" unless specifically approved otherwise by UA
    b. Tint: Clear PPG Solarban 70XL (or equal) with Low E coating on Surface 3
    c. Type: Annealed unless tempered or strengthened is required.
7. Air space:
    a. Spacer Bar (when used) in IGU shall align with muntin grids: Exposed finish to be painted the same color as window frames and sized slightly smaller than muntin grids.
    b. Aluminum spacers shall be continuous; no corner keys; desiccant is required.
    c. Do not use Argon filled IGUs.
8. Obscured glass shall be where indicated on drawings and shall be Cardinal Pattern 62 or equal on surface 3.
9. Dual perimeter sealants: Polyisobutylene and silicone.

Exceptions are made for this glazing standard for facilities designed for viewing into the structure. In these cases, designers shall review the glazing with UA. UA will issue a written approval to modify these requirements to allow a greater visible light transmittance.

Glazing for existing structures shall conform to that for new structures except lesser thermal properties may be acceptable to match adjacent structures. For example, a PPG Solarban 60 or equal clear glass may be necessary to match adjacent facilities and may also meet energy code requirements. Designers shall review with UA.

J. Submittals

Samples:

1. 24”x36” Size, fully operable with all parts, accessories and panning.
2. All finish color shall be submitted for approval.

Product Data:

1. Submit data per each unit.
2. Test data: not less than 6 years old
3. All calculations shall be stamped by a licensed professional engineer

Shop Drawings:

Shop drawings shall be configured in such a manner that the submitted window details may be easily compared with details provided on architectural drawings. Shop drawings shall use numbering systems consistent with those provided on architectural plans. The following items shall be clearly detailed on shop drawings:

1. Plan and elevation views
2. Details addressing attachments
3. Anchorage details—including anchor type, size and spacing.
4. Jamb, sill, and head details showing details for the specific project
5. Hardware
6. Flashing details
7. Drainage
8. Weather stripping
9. Thermal breaks
10. Expansion provisions
11. Joinery details

Quality Assurance:

Manufacturer to submit a field installation manual to include

1. Written installation instructions for each type of panning and window assembly
2. QC task checklist showing each step of window installation and a signoff column for each task. This checklist is to be used for all windows installed and the QC manual shall be kept on record by the Contractor to be viewed at any time by Owner or Designer.

K. Existing Window Treatments

All window treatments (blinds, curtains, etc.) are to be catalogued and any damaged or non-functioning units are to be identified PRIOR to beginning work.

Once catalogued, remove and store while window work is being done. At completion of window installation, clean and reinstall window treatments in their original locations.

L. Field Testing

The designer of record (DOR) is to copy/paste the next three paragraphs into the project specifications. DOR is to define the number of tests to be performed and recommend additional testing to UA if appropriate.

All newly installed windows, sealant and flashing shall be tested according to ASTM E1105 (chamber test) at the pressures listed in AAMA 502 ("Voluntary Specification for Field Testing of Windows and Sliding Glass Doors"). ASTM E1105 Procedure A shall be used for AW Class windows. ASTM E1105 Procedure B shall be used on none AW Class windows. The minimum number of tests required will vary based on the project size. The minimum tests required shall be according to the following.

Windows in Project	Min. Tests on Installed Windows
0-50	3
51-200	5
201-500	8
>501	10

Windows, flashings and sealants of the mockup and two in place windows shall be tested, and pass before starting veneer installation on the building. To help clearly identify potential problems, all windows shall be tested without the panning and veneer installed. At least 30% of the window tests shall be conducted on windows installed after the window installation is 50 percent complete.

If possible, testing shall be conducted with the air barrier taped off such that only the flashing, sealants, and windows are tested. For failed tests, the testing agent shall clearly define, if possible, the element through which leakage occurred.

Windows for Greek buildings may be tested according to the procedures of AAMA 501.2 (Nozzle Test) with approval from UA.

M. Design Installation

Windows shall be installed such that the interior face of the fenestration is the dry line of the installation. All water leakage exterior to the interior plane of the windows shall be weeped to the drainage cavity.

Windows shall be installed using post set panning with either a receptor or a continuous interior extruded trim angle. A frame filler shall be used to allow for an exterior sealant bead between the fenestration and the flashed opening when the interior trim angle is used. The sealant between the exterior plane of the window and the flashed opening shall be discontinuous or weeped at the sill to allow weeping of water leakage around the window.

There shall be a continuous water and air tight seal on the interior face of the window. This can be accomplished with a continuous interior sealant bead between the receptor, or the interior trim angle, and

the flashed opening. If blocking is installed straight, the continuous interior trim angle and trim clip can be set hard against the blocking in a bed of wet sealant. Shim packs between the continuous interior trim angle, or the receptor, and the flashed opening shall be held back at least ¼" from the dry line plane of the window to allow for a continuous interior sealant bead between the receptor (or trim angle) and the flashed opening. Either of these methods provides a quality air and water tight barrier between the fenestration and the flashed opening.

The cavity between the outer and inner legs of the window frames shall be insulated. Space should be allowed between the window frame and the flashed opening to provide drainage of any leakage to the sill pan.

N. Installation Construction

Flashing:

Material

Unless approved otherwise in writing, all flashing shall be liquid applied membrane flashing (LAMF). LAMF shall be silicone, STPe, STPu, or urethane based products as long as they meet the following criteria exhibit the following characteristics.

1. Vapor permeable (10 perms minimum per ASTM E96 tested wet).
2. Non-reverting when exposed to saturation conditions.
3. VOC compliant
4. Tack free in 2 hours
5. Self-healing at fasteners (ASTM D1970)
6. One step application that does not involve embedding a separate fabric material
7. Unless the water resistant barrier (WRB or air barrier) is factory installed on the sheathing, the LAMF shall be supplied by the same manufacturer of, and compatible with, the WRB.
8. Air leakage less than 0.03 cfm/sf @ 1.57 psf when tested per ASTM E2357 for air barrier wall assemblies (ASHRAE/ABAA 90.1) and no leakage when tested per ASTM E331 @ 2.86 psf for 15 minutes (ICC).

The following liquid applied membrane flashing materials are approved for use and shall be listed in the project specifications. Other, comparable materials may be used with written approval.

1. Prosoco Flastflash
2. BASF MaxFlash
3. STS Coatings LF-500
4. Sto StoGuard RapidSeal
5. Carlisle Barribond
6. GCP Perm-A-Bond Liquid Flashing
7. Dow 778 Silicone Liquid Flashing

Design

Flashings shall be designed to capture any jamb, head, or seal leakage and divert it to the drainage cavity. Head, jamb, and sill flashing shall be turned into the rough opening and extend beyond the farthest interior vertical plane of the window or interior trim angle. Jamb flashing shall be lapped into the flashing sill pan. When liquid applied flashing is used, the end dams shall be sealed against the jamb flashing. Flashing shall extend a minimum of 4" onto the exterior sheathing outside the rough opening perimeter.

Through wall head flashing shall be installed at the top of all windows and extend beyond the exterior plane of the window with a 45 degree drip edge. Head flashing shall be 40 mil thick peel and stick material. Termination bars with caulk trays shall be installed at the top of the membrane head flashing to prevent sagging if the there is an adhesion failure. Head flashing shall be extended a minimum of 8" beyond the window jambs and terminate with an end dam folded into a brick head joint. With permission of UA, end dams may be omitted if the head flashing is extended more than 8" beyond the jambs.

Sill Pans:

Flashing sill pans are pans installed by the flashing or window installer below the windows and designed to capture any leakage and drain it to the drainage cavity. All windows shall have flashing sill pans installed below window frames or subsills. This requirement is omitted from windows in Greek buildings. Pans shall be designed to capture all leakage and direct leakage into the drainage cavity.

Sill pan material shall be liquid applied membrane flashing (LAMF) installed against or below an interior extruded aluminum trim angle installed the full length of the rough opening sill. Figures 1 through 3 show examples of liquid applied sill pans. Metallic sill pans may be used with written approval from UA. All sill pans shall be installed water tight to a height of at least 1 ½" above the bottom of the flashed opening.

No window connectors shall penetrate the horizontal leg of the sill pan.

Sealants:

There shall be a veneer sealant on the exterior between the window and the veneer. There shall be an exterior sealant between the window and the flashed opening that is omitted at the sill. There shall be an interior dry line sealant between the window and the flashed opening. It is highly recommended that the plane of the dry line sealant remain unchanged as it encircles the window perimeter. If the plane of the dry line sealant changes around the perimeter of the window, the designer shall clearly direct the installers to vary the sealant line and maintain a water tight joint around the windows. The dry line sealant shall be on the interior plane of the window frame. The dry line sealant may be a sealant joint or continuous water tight interior trim clips sealed against the window and against the flashed opening.

Sealant size around the perimeter of window shall be 3/8" (+1/4 to -1/8). Cove beads shall be ¼" unless approved otherwise, but should be avoided if possible except against the interior trim angle.

Where frame fillers are used, they shall be inserted into the frame and be adequately rigid to support backer rod for the required sealant joints. Screws shall not be used to support frame fillers. Where adhesive is used, the adhesive shall be tested against the filler to ensure it will stick and shall be set prior to installing backer rod and sealant between the window and the flashed opening.

The DOR shall include, in the project sealant specification, a statement that the contractors are required to ensure compatibility between window and veneer sealants and window and veneer flashing by conducting mockup testing of the sealants proposed to be used on the project.

Means and Methods:

Designers shall copy/paste from here to the "Mockups" section into the project specifications for institutional and residential buildings.

Windows shall only be installed by glazing contractors approved by the window manufacturer to install the windows. Glazing contractors shall have exhibited a ten (10) year track record of successful window installation projects. Submit letter of manufacturer approval and letter of glazing contractor experience prior to installing windows.

Prior to installing the mockups, a preinstallation meeting is required. The meeting shall be attended by the Owner, Designer, Installer, and Manufacturer. Means and methods shall be reviewed to achieve a water tight installation.

Manufacturer shall be present during installation of the mockups and the first five windows for the project. Provide UA with one week notice for installing the first few windows on the project to allow UA observations during the installation.

Receptors and Interior Extruded Trim Angles

Receptors and interior trim angles shall be installed at least one week before window installation to provide adequate time for visual inspection of the water tight installation. Contractor shall notify Owner when these are ready for inspection. Trim angles may be set directly onto the rough opening provided the framing is installed square and level to within ¼" corner to corner, top to bottom and side to side. Receptors and interior trim angles shall be set on discrete shims otherwise. Shims shall be recessed from the edge of the receptors and angles to allow for a continuous silicone sealant bead around the perimeter of the flashed opening and the receptor / trim angles at the inside face of the windows. Sill trim angles shall be installed jamb to jamb. Gaps between adjacent trim angles shall not exceed 1/8". Figure 4 shows an installation of the continuous interior trim angle. Figures 1, 2 and 3 show the interior trim angle installation at the sill for a receptor system.

Receptors and trim angles shall be set using two templates. One template shall be used to establish the recess from the exterior veneer to the face of the window. The other template shall be used to gauge the shim space (if any) inside the flashed opening. Each different size of window shall require a different template. Using templates will ensure accurate anchorage hardware installation prior to window delivery. The glazing installer may also chose to provide the GC a template to gauge the installation of the wood blocking.

O. Mockups

Window and Flashing manufacturer's representative shall be on site during mockup installation. Mockups are required for every project. Unless permitted otherwise, mockups shall be stand alone. In place mockups may be allowed for smaller projects.

One mockup for each variation of window installation is required. Windows types using similar installations do not require unique mockups.

Prior to installing in place windows, the mockups shall pass water testing.

P. Standard Details and Photographs

The attached details are shown as a communication tool to define terminology and to clarify the installation requirements for panning and sealants. Because of variations in wall systems and existing building elements, it is expected that specific project building details will vary from that shown in the attached details. However, only small variations in the manufactured windows and panning systems will be allowed. In addition, variations in the dimensions shown on flashing installation, sealant locations, and other similar details are not allowed without justification for specific job conditions. Designers shall provide similar details on the construction drawings.

The details are intended as a basis of design and the dimensions should be considered as a guide. Overall panning depth and width can vary up to +/- ¼" in most situations. Larger variations may be allowed on a case by case basis to match existing conditions.

Figure 1: Exterior side of a properly installed interior trim angle with liquid applied membrane flashing pan end and back dams. Fabric shall not be used.

Figure 2: Interior side of a properly installed interior trim angle with liquid membrane flashing pan end dam. Anchor must be cap sealed. Fabric shall not be used.

Figure 3: Interior side of an interior trim angle with receptor installed. Fasteners must be cap sealed. It is the contractor's responsibility to ensure compatibility of sealants to LAMF and fenestration products.

Figure 4: Continuous interior trim angle improperly flashed. No membrane flashing shall be used. LAMF is too thin and not installed to the back of the trim angle. All joints must be sealed water tight. All screws must be cap sealed.

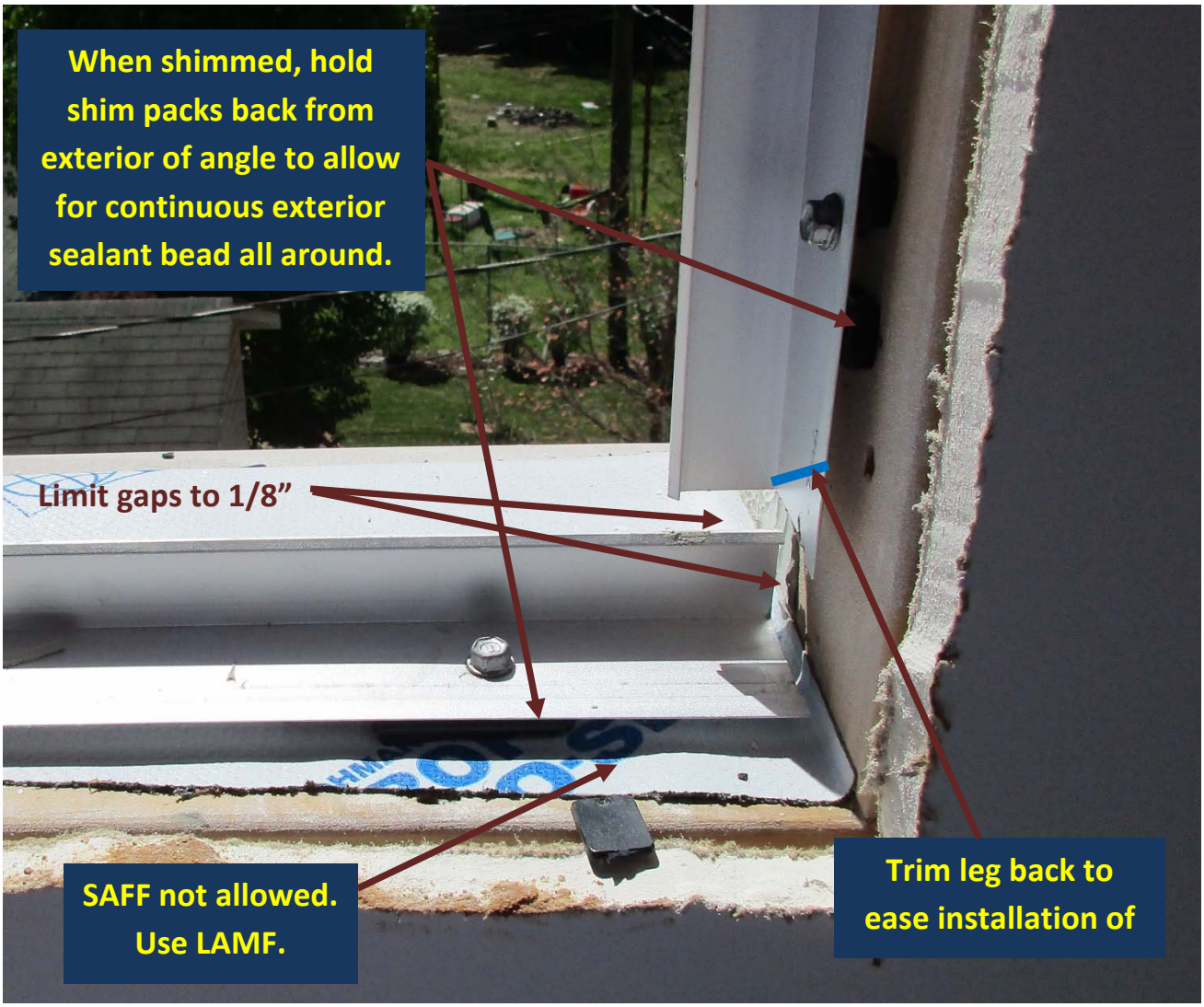

Figure 5: Continuous interior trim angle improperly installed and flashed. No SAFF flashing shall be used. LAMF is not installed to the back of the trim angle. Joints are too large. Screws must be cap sealed. Outside vertical leg of angle to be sealed water tight to substrate. Recess shims to allow for continuous sealant joint on OUTSIDE of aluminum trim angle.

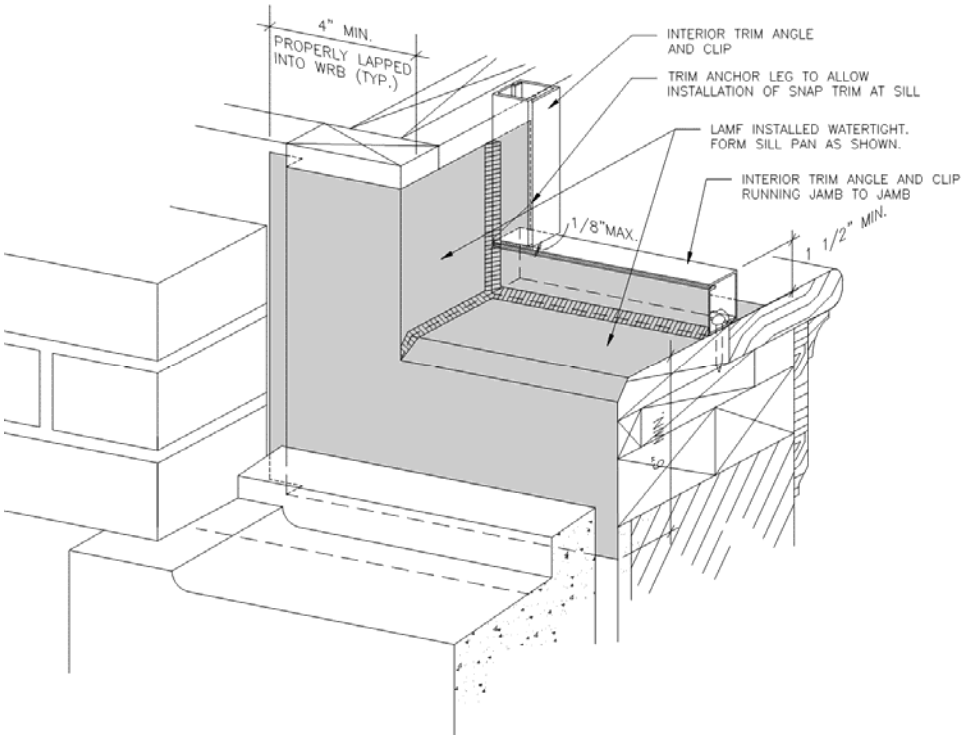

Figure 6: Liquid Applied Membrane Flashing (LAMF) sill pan prior to window installation.

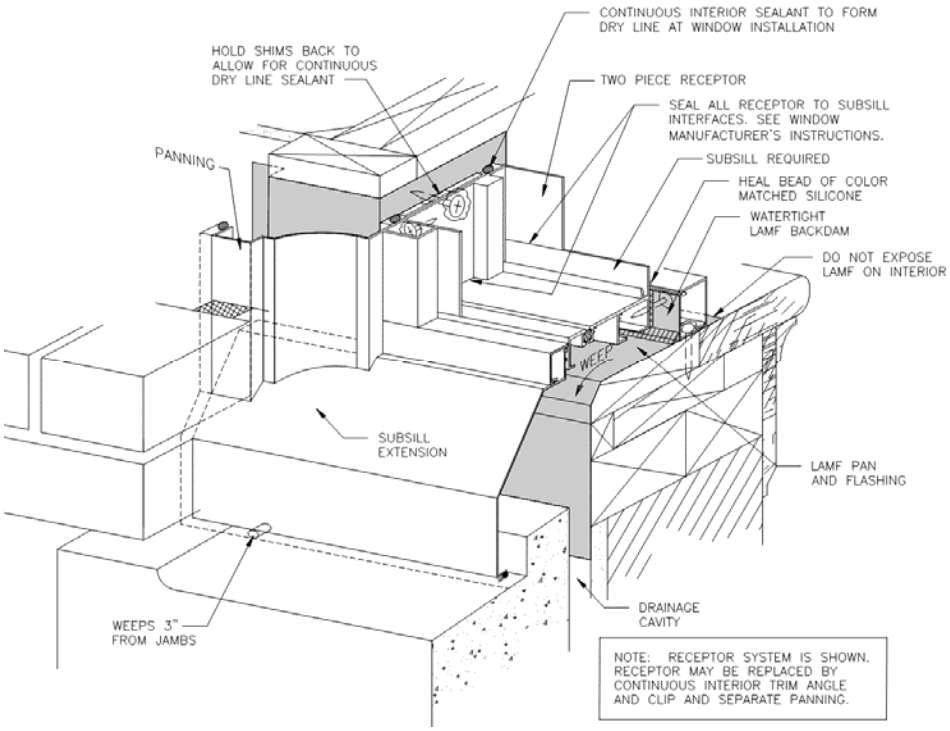

Figure 7: Liquid Applied Membrane Flashing (LAMF) sill pan after subsill and receptor installation.

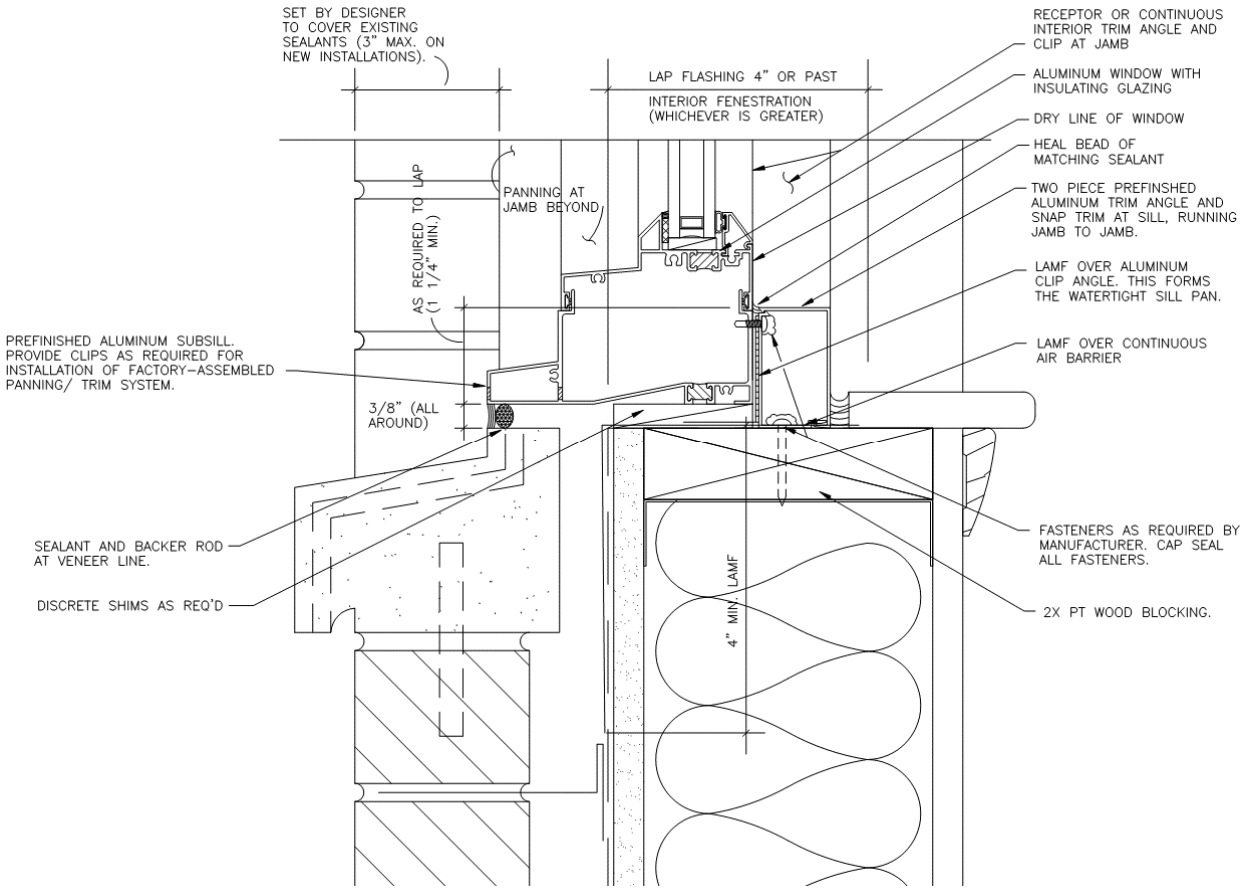

Figure 8: Example of window sill flashing.

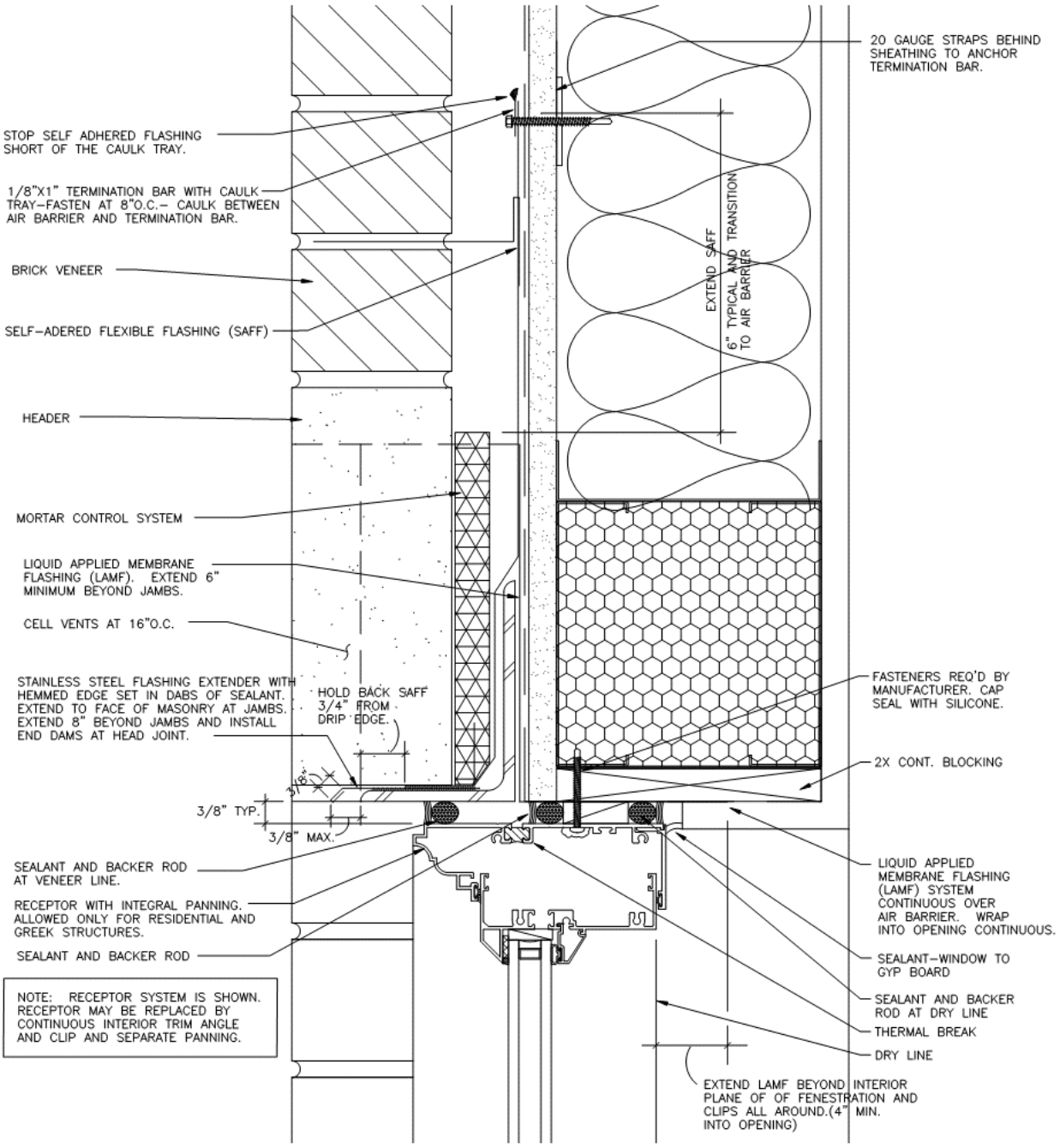

Figure 9: Example of window head flashing.

- End of Guideline -