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Window Installation Guideline Instructions / Checklist

1. Delivery

Windows are typically delivered to jobsites by Cascadia. Upon delivery of the windows, review of the windows should be performed while unloading the windows from the transport vehicle.

Ensure that the windows have not been damaged during the delivery process. Check for the following signs of damage. Customer is required to sign off to acknowledge receipt in good condition. Cascadia, at its discretion, will return, replace, or repair items noted as damaged.

- Broken or scratched glass
- Bent, broken or cracked flanges or frames
- Scratched frames

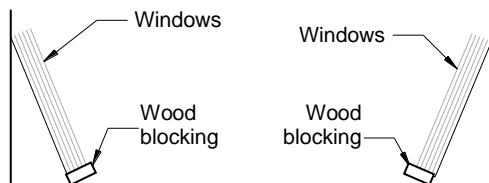
2. Handling & Storage

2a Means of Transporting - Determine method and means of transporting windows to the rough openings or storage area. The following provisions should be made:

- Transport mechanism capable of transporting windows to rough openings or storage locations without dropping or dragging the windows
- Accessible route to rough openings or storage locations without having to rotate windows from their upright position, unless setting blocks have been provided at one of the jambs and is shown on the window

2b Protecting Windows - Determine means of protecting windows from damage during storage period at rough openings or storage areas. Protection must be provided from the following:

- Rainwater and ground moisture
- Wind, tie frames to adequate support
- Concrete dust and other pollutants
- Damage by other trades
- Blocking must be provided to prevent damage to flanges if applicable
- Excessive heat
- Frame deflection caused by unsupported glass weight (see sketches below for proper storage methods)





3. Installation Detail Compliance

3a Shop Drawings (if applicable)

The most current set of approved shop drawings or approved window schedule should be reviewed when transporting windows and doors to the rough openings to ensure that the correct windows are installed in the correct openings. Labels are placed on each window or door for reference.

Ensure conformance with the approved shop drawings. In particular, the following items should be verified. If they do not conform, Cascadia should be advised immediately:

- Hardware type and colour
 - Frame Series
 - Operable vent style and operation
 - Sizes
 - Frame colour
 - Glass and panels (material type, thickness, low emissivity coatings, tempered, etc.)
 - Accessories (installation clips, angles, insulation, sealants, fasteners, etc.)
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3b Architectural Details & Cascadia Conceptual Installation Details

If project specific Shop Drawings are not included in the supply contract, an Architect and/or Building Envelope Consultant needs to be retained to design the installation details. Architectural details are to meet the general intent of Cascadia conceptual installation details, which are available online at www.cascadiawindows.com.

4. Rough Opening Review

Substrate and/or wall assemblies surrounding rough openings vary from project to project. The preparation work is often undertaken by trades other than the window installer. Review of the rough opening prior to installing the window to determine suitability is therefore required.


Ensure rough opening is suitable for specified window installation details. If deficiencies are observed with the rough openings, advise the General Contractor or Construction Manager immediately. The following items should be reviewed prior to the installation of the window opening components:

- Required clearance between window size and rough opening size
 - Level sill and plumb jamb
 - Moisture content of substrate
 - Contaminants on substrate
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5. Window Opening Preparation

Window installation includes work before and after the installation of the window unit itself. Proper sub sill drainage and detailing is critical to the overall performance of the window assembly.

Ensure all window opening component products are listed in the Project Specifications or have been accepted as an approved alternate by the governing consultant. The following is a list of possible window opening components required:

- Sealant for interior perimeters of window openings
 - Sealant for interior finish joints
 - Sealant for perimeter and lap joint vapour barrier seals (interior vapour barrier systems)
 - Sealant for perimeter of exterior openings
 - Sealant for self-adhesive membrane joints
 - Sealant or tape for air-barrier continuity between sheathing paper layers (exterior air-barrier systems)
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- Sealant primers
 - Backer-rod and/or bondbreaker
 - Sheathing paper
 - Tape
 - Membrane
 - Membrane primers
 - Metal flashing & trim
 - Fasteners
 - Retainer clip
 - Installation angles
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6. Installation of Window Assembly

Installation of the window unit into the prepared rough opening includes several items that are not typically described in detail in the applicable construction documents, and may not be included in the shop drawings or manufacturer's instructions.

6a Installation details - Ensure that window installation materials are installed in accordance with applicable construction details, shop drawing details (if applicable) and Window Installation Guideline instructions/ checklist. Identify any conflicts between these documents. The following is a list of key interface conditions that should be reviewed:

- Material compatibility
 - Shingling of layers
 - Continuity of sealants
 - Preparation of surfaces
 - Lap lengths
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6b Continuity of critical barrier systems - Ensure that material interfaces within installed window assembly are capable of successfully achieving continuity of the critical barriers listed below. Mock-ups should be undertaken of typical conditions to confirm details and continuity; mock-ups should be reviewed by consultant and approved. If lack of continuity appears to be an issue with any of these barrier systems, advise the applicable consultant immediately:

- Water Shedding Surface
 - Weather Resistive Barrier
 - Air Barrier
 - Vapour Barrier
 - Thermal Barrier
 - Fire Separation (when specified)
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6c Placement of shims - Ensure shims are placed intermittently beneath the window frames at all points where the glass loads are being directed. Additional shims should be placed to provide a level surface for frame. Shims should be placed as follows:

- Below all setting blocks supporting lower lites
- Below mullions
- Below coupling bars (if applicable)





- Intermittently between large setting block spans (typically 8" o/c)
- Per project shop drawings (when applicable), some frame types require more frequent shim spacing

****Note that shims for all swing doors and sliding doors need to extend all the way out to the exterior edge of the threshold and slider track.**

6d Proper alignment of frame - Ensure window is installed plumb, level and square. Windows installed out of level may promote ponding of moisture at the glazing pocket corners and may impede the smooth operation of the operable vents. The following should be reviewed to ensure proper alignment of frame:

- Uniform margin between operable vent and frame when slightly open
- Uniform reveal at sash to frame when operable vent is shut
- Diagonal measurements from one corner of frame to other corner of frame
- Operation of vent not restricted by flashing
- Alignment of frame consistent with those in adjacent openings

6e Fastening details - Ensure window is fastened to structure in accordance with the most current approved set of shop drawings, or by the design professional responsible for the installation detailing (whichever is applicable for the project). The following fastening details should be confirmed:

- Type of fasteners
 - Level of corrosion resistance
 - Composition of fasteners
 - Length of fasteners
 - Shank diameter of fasteners
 - Thread spacing of fasteners
 - Head diameter
 - Spacing of fastener anchor points
 - Composition of structural angles and clips
 - Gauge of structural angles and clips
 - Minimum edge distances for anchor points on substrate
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