

DESIGN STANDARDS

1. MATERIAL & FINISH STANDARDS

- FRAMES: CLEAR, KILN-DRIED VERTICAL GRAIN FIR (VG FIR).
- FINISH: PAINTED OR STAINED PER ARCHITECTURAL SPECIFICATIONS.
- SHEEN: LOW-LUSTER FINISH ONLY (MATTE OR SATIN).

2. GLAZING OPTIONS

- STANDARD GLAZING IS 1/8" SINGLE-PANE. OPTIONAL 1/2" IGU AVAILABLE UPON REQUEST WITH ADJUSTED STOPS AND DEPTH
- SELECTION CRITERIA:
 - PRIORITIZE VISUAL CLARITY AND HISTORIC COMPATIBILITY.

3. MUNTIN ALIGNMENT

- ALL MUNTINS MUST VISUALLY ALIGN WITH THOSE ON EXISTING WINDOWS.
- SIMULATED DIVIDED LITES (SDLs) SHOULD BE ADHERED DIRECTLY TO GLAZING.
- FIELD-VERIFIED SIGHTLINE ALIGNMENT REQUIRED PRIOR TO FABRICATION.

4. REVERSIBILITY

- ALL STORM WINDOW ASSEMBLIES MUST BE FULLY REVERSIBLE AND REMOVABLE.
- NO ADHESIVES OR PERMANENT CAULKING MAY BE USED ON HISTORIC MATERIAL.

5. APPROVED REMOVABLE ATTACHMENT METHODS:

- TURN BUTTONS (TOOL-FREE, STAINLESS STEEL)
- LIFT-OFF HINGES
- MECHANICAL FASTENERS WITH REMOVABLE BACKING

****NOTE**** STORM WINDOWS SHALL BE FULLY REVERSIBLE AND REMOVABLE WITHOUT DAMAGING RIGINAL COMPONENTS.

5. HARDWARE & FASTENING STANDARDS

- TURN BUTTONS: STAINLESS STEEL, TOOL-FREE OPERATION
- SCREWS: STAINLESS STEEL #8 PAN-HEAD @ 12" O.C.
- LIFT-OFF HINGES: REQUIRED FOR ALL SIDE-HINGED STORM WINDOWS.
- SEALANTS: NON-HARDENING, REVERSIBLE, PAINTABLE WOOD-COMPATIBLE SEALANT.

6. PRESERVATION COMPLIANCE

- ALL ASSEMBLIES MUST COMPLY WITH THE **SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION.
- EMPHASIS ON:
 - VISUAL COMPATIBILITY WITH HISTORIC WINDOWS
 - REVERSIBILITY OF INTERVENTIONS
 - PROTECTION*OF ORIGINAL FABRIC (NO ALTERATIONS TO HISTORIC SASH OR CASING)

7. GENERAL CONSTRUCTION DETAILS

- FRAME PROFILES & JOINERY
 - STILES & RAILS: 3/4" X 2-1/4" VERTICAL GRAIN FIR (VG FIR)
 - BOTTOM RAIL: SLOPED TO MATCH EXISTING SILL PROFILE
 - JOINERY OPTIONS:
 - MORTISE AND TENON, GLUED AND PINNED
 - POCKET SCREW WITH WATERPROOF WOOD EPOXY (FOR CONCEALED JOINERY)

****NOTE**** TYPICAL STORM WINDOW JOINERY – OPTIONS BASED ON LOCATION AND CONCEALMENT.

- GLAZING OPTIONS
 - ACCEPTABLE TYPES:
 - 1/2" INSULATED GLASS UNIT (IGU)
 - LAMINATED SAFETY GLASS (SINGLE-PANE)
 - SINGLE-PANE TEMPERED OR ANNEALED GLASS
 - STOPS: 3/8" X 1/2" WOOD GLAZING STOPS, REMOVABLE FROM INTERIOR

8. MATERIALS & FINISHES

- WOOD SPEC
 - CLEAR, KILN-DRIED VERTICAL GRAIN FIR (VG FIR)
 - NO FINGER-JOINTED MATERIAL
 - ALL EXPOSED EDGES EASED, NO SHARP CORNERS
- FINISH
 - PAINT OR STAIN TO MATCH ARCHITECTURAL COLOR SCHEDULE
 - LOW-LUSTER ONLY (SATIN OR MATTE SHEEN)
- SEALANTS
 - ONLY NON-HARDENING, PAINTABLE, REVERSIBLE SEALANTS
 - EXAMPLES: BUTYL-BASED OR DAP 33 FOR GLAZING; ELASTOMERIC SEALANTS FOR JOINTS

9. HARDWARE OVERVIEW

GROUPED BY FUNCTION:

- HINGES (SIDE-HINGED TYPES ONLY)
 - LIFT-OFF HINGES ONLY (NOT BUTT HINGES)
 - STAINLESS STEEL OR BRASS
 - TWO PER SASH, SIZED TO SASH WEIGHT
- LOCKS
 - CAM LOCKS (TRUTH 700 SERIES OR EQUAL) – INTERIOR ONLY
 - FOR OPERABLE SASH (NOT FIXED UNITS)
- ADJUSTERS
 - SASH ADJUSTERS FOR TOP-HUNG UNITS (KILIAN HARDWARE)
 - MOUNT TO JAMB WITH STAINLESS SCREWS
- TURN BUTTONS
 - STAINLESS STEEL, TOOL-FREE OPERATION
 - USE ONLY ON FIXED OR REMOVABLE-PANEL UNITS
 - 1-1/4" TO 1-3/4" SIZE RANGE
- HANGERS
 - TOP-MOUNTED STORM HANGERS FOR LIFT-OFF TOP-HUNG UNITS
 - REGULAR OR HEAVY-DUTY, DEPENDING ON SASH WEIGHT

10. WEATHER SEALING COMPONENTS

- KERF SEALS
 - 1/4" DIAMETER BULB-TYPE WEATHERSTRIPPING
 - INSERTED INTO KERFED GROOVES IN TOP AND BOTTOM RAILS
- BULB GASKETS
 - FOR TIGHT COMPRESSION AT CONTACT SURFACES (E.G., BETWEEN MEETING RAILS)
- BACKER ROD
 - FOR OPTIONAL RETROFIT SEALING BEHIND SASH IF WALL CONDITION PERMITS
 - NOT TO BE USED AGAINST HISTORIC FABRIC

11. INSTALLATION GUIDELINES

- FASTENERS
 - STAINLESS STEEL #8 PAN-HEAD SCREWS @ 12" O.C.
 - PILOT HOLES REQUIRED TO PREVENT WOOD SPLITTING
 - DO NOT OVER-TIGHTEN — COMPRESSION, NOT DEFORMATION
- MOUNTING STRATEGIES (ALL REVERSIBLE)
 - TURN BUTTONS ON INTERIOR FACE FOR FIXED PANELS
 - LIFT-OFF HINGES FOR SIDE-HINGED AND REMOVABLE PANELS
 - STORM HANGERS FOR TOP-HUNG LIFT-OFF DESIGNS
 - AVOID ADHESIVES, NAILS, OR ANY MECHANICAL FASTENER THAT PENETRATES HISTORIC SASH OR CASING
- PRESERVATION NOTES
 - NO ADHESIVES OR CAULKS APPLIED TO HISTORIC FABRIC
 - FIELD VERIFICATION REQUIRED FOR ALL DIMENSIONS
 - ALL ATTACHMENTS MUST BE REMOVABLE WITHOUT DAMAGE

12. DRAINAGE & VENTILATION

- WEEP HOLES
 - 1/8" DIAMETER, 12" O.C. MIN.
 - LOCATED AT THE LOWER BACK EDGE OF THE BOTTOM RAIL
 - DRILL SLIGHTLY DOWNWARD AND OUTWARD.
 - ENSURE WATER CAN DRAIN THROUGH A REVEAL OR ROUTED CHANNEL BEHIND THE STORM FRAME.
- CONDENSATION CONTROL (FIXED UNITS)
 - RECOMMEND 1/8" VENT NOTCH OR CONCEALED BREATHER SLOT IN UPPER SASH CORNER
 - ALLOW LIMITED AIR EXCHANGE TO PREVENT FOGGING IN WINTER
- SLOPED RAILS & DRIP EDGES
 - ALL BOTTOM RAILS SLOPED TO MATCH HISTORIC SILL PITCH
 - INTEGRATE 3/4" DRIP CAP AT HEAD, WITH OPTIONAL COPPER OR ALUMINUM FLASHING

No.	Description	Date																	

DESIGN
STANDARDS

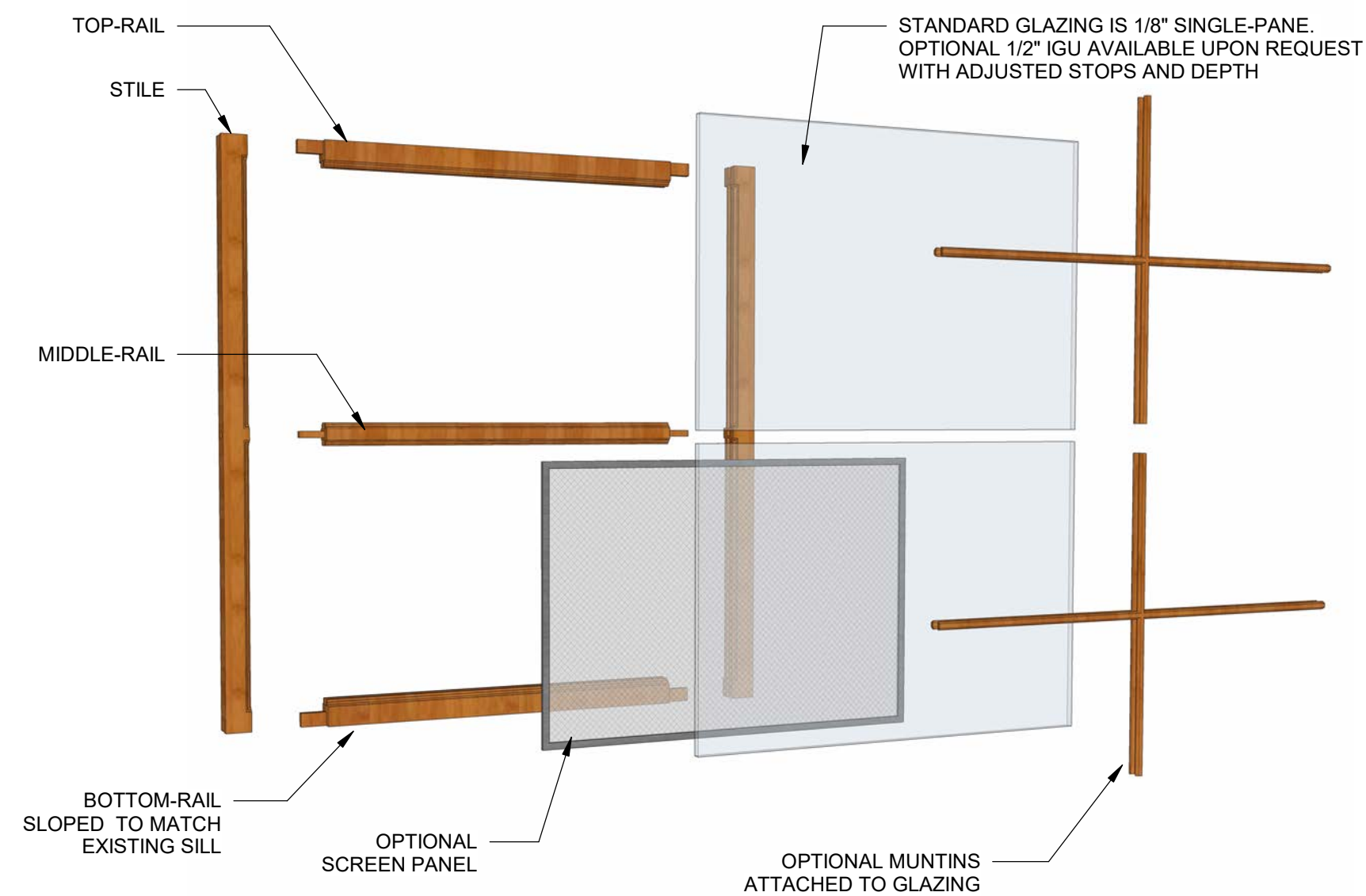
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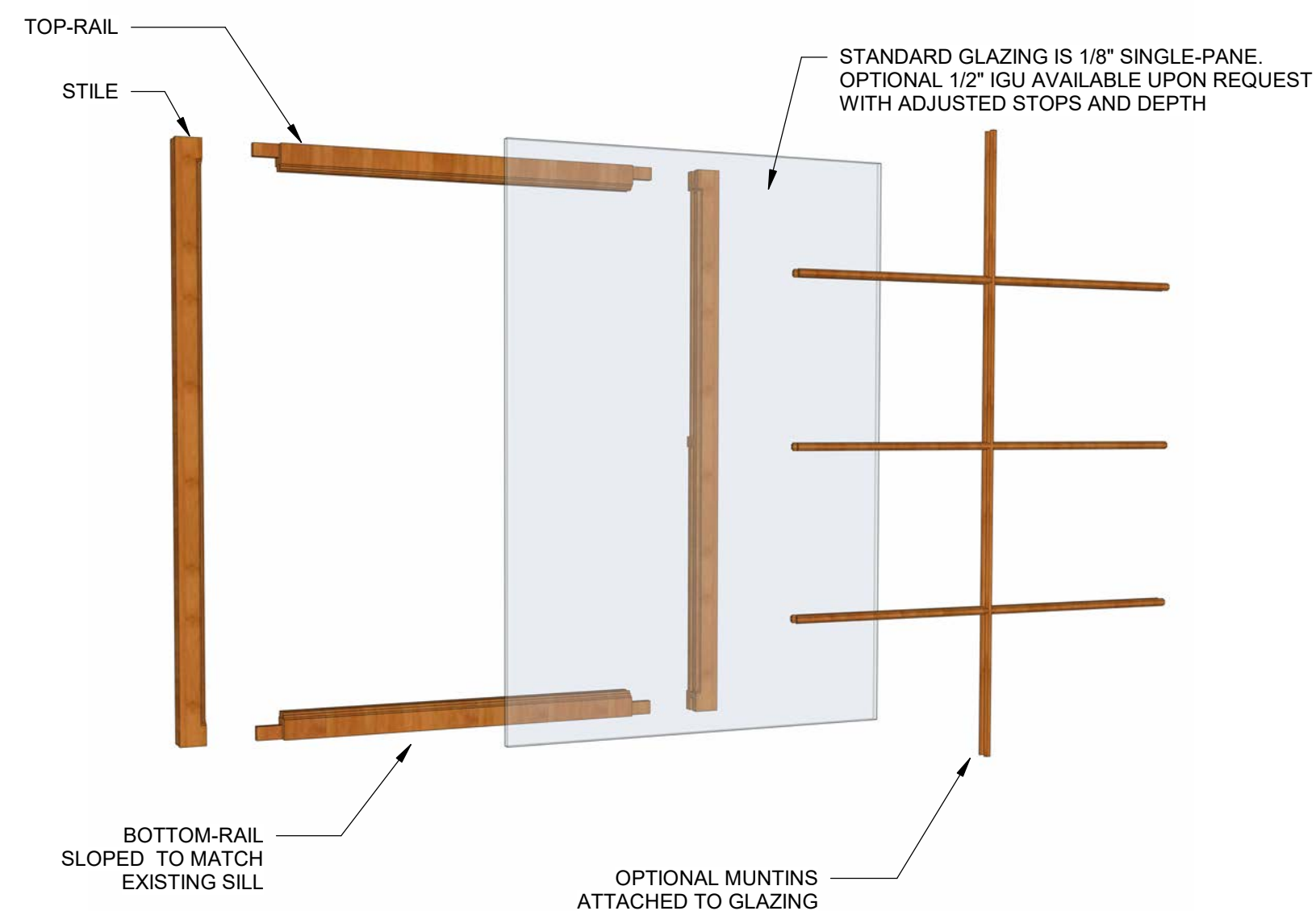
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1" = 1'-0"



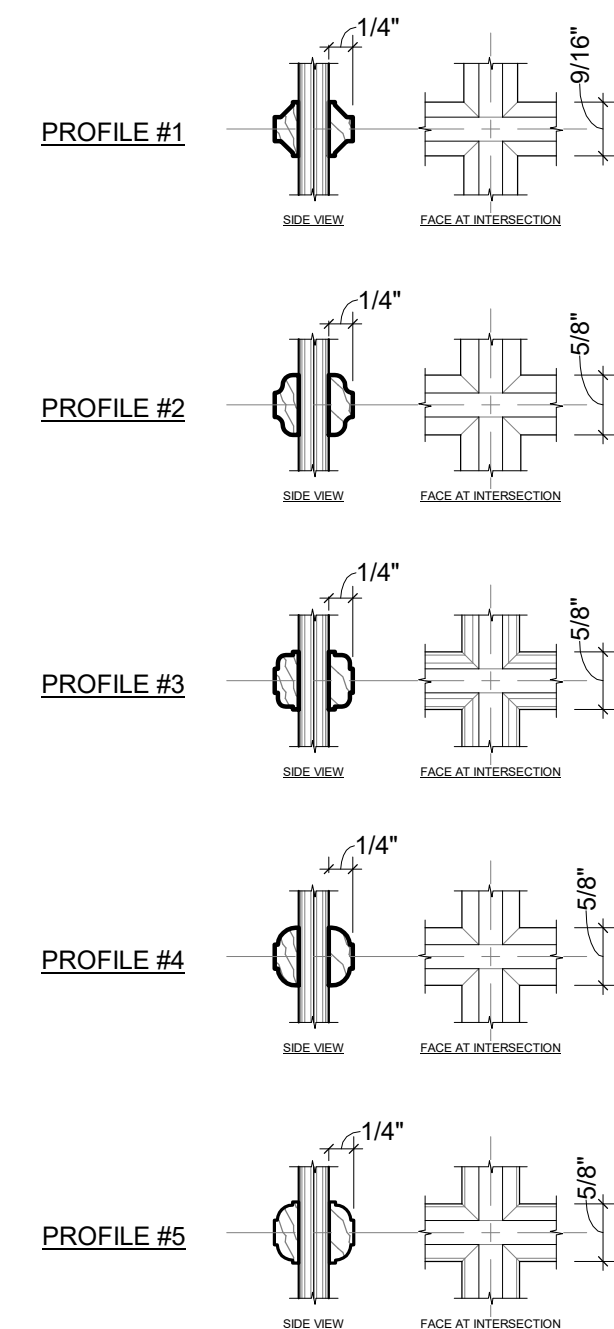
4 STORM WINDOW W/ MIDDLE RAIL COMPONENTS
1" = 1'-0"



1 STORM WINDOW
1" = 1'-0"



2 STORM WINDOW COMPONENTS
1" = 1'-0"



5 MUNTIN PROFILES
6" = 1'-0"

STORM WINDOWS

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STORM WINDOW OPTIONS

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STORM WINDOWS

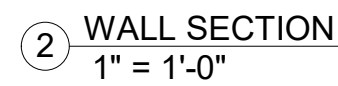
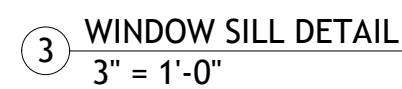
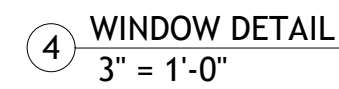
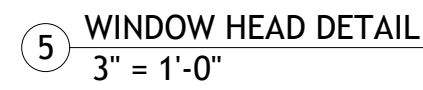
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TOP-HUNG STORM WINDOW

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TOP-HUNG WINDOW DETAILS

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STORM WINDOWS

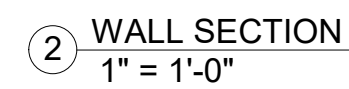
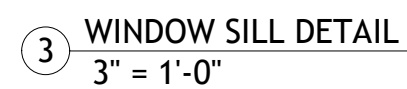
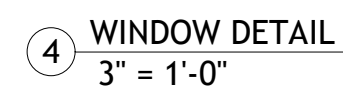
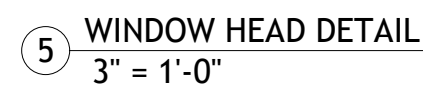
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SINGLE-HUNG STORM WINDOW

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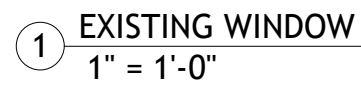
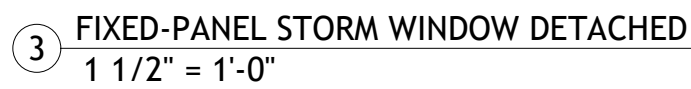
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SINGLE-HUNG WINDOW DETAILS

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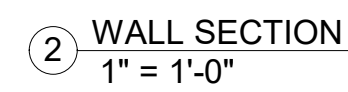
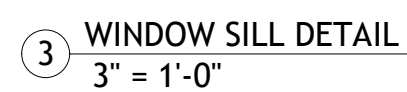
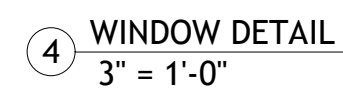
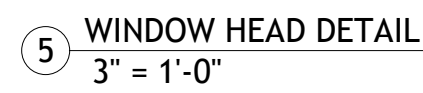
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FIXED-PANEL STORM WINDOW

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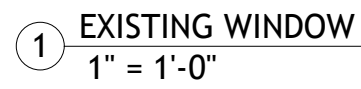
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FIXED-PANEL WINDOW DETAILS

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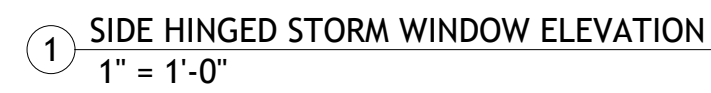
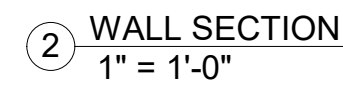
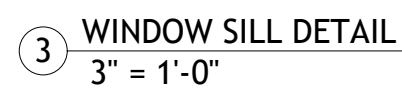
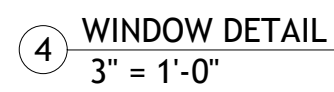
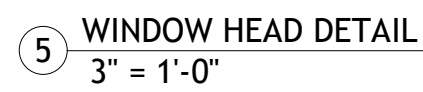
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SIDE-HINGED WINDOW DETAILS

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STORM WINDOWS

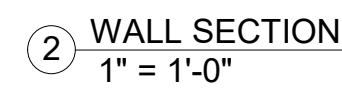
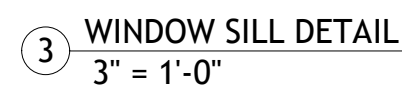
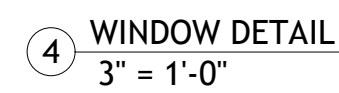
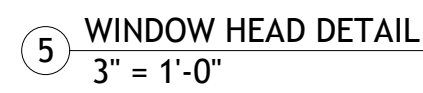
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AWNING-PANEL STORM WINDOW

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AWNING-PANEL STORM DETAILS

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