

IMPORTANT! WINDOW MANUFACTURERS INSTALLATION INSTRUCTIONS MUST BE COORDINATED WITH THESE DETAILS. OBTAIN MANUFACTURER INSTRUCTIONS FOR ROUGH OPENING SIZES, FLASHINGS, SEALANTS, MOUNTING & SHIMMING METHODS PRIOR TO ROUGH FRAMING LAYOUT. ALL VARIANCES FROM MANUFACTURER INSTRUCTIONS SHALL BE REVIEWED WITH ARCHITECT & MANUFACTURER.

Notes:

1. **THIS METHOD APPLIES TO WINDOWS WITH MOUNTING FLANGES (I.E. NAIL-ON WINDOWS)**
2. EXTERIOR SHEATHING TO BE (CHECK ONE):
 - 5/8" GLASS FIBER MAT FACED GYPSUM SHEATHING, TYPE X (DENS-GLASS GOLD by GEORGIA-PACIFIC)
 - 5/8" GYPSUM-FIBER SHEATHING, TYPE X (FIBEROCK BRAND SHEATHING with AQUA-TOUGH by USG)
 - EXTERIOR PLYWOOD SHEATHING (THICKNESS, GRADE & EXPOSURE RATING PER STRUCTURAL REQTS)
 - OTHER
3. FRAMERS NOTE: ROUGH OPENING TO BE SIZED PER WINDOW MANUFACTURERS INSTRUCTIONS, WITH ADJUSTMENTS TO ACCOMMODATE FLASHING MATERIALS & SHIMMING METHODS AT WINDOW SILL AND JAMBS (1/4" - 1/2" +/- ADDITIONAL HEIGHT TYPICALLY REQUIRED @ R.O. WIDTH & HEIGHT). SHIMMING TO BE 1/4" HIGH TYP. AT SILL, MORE (HIGHER) SHIMMING REQUIRED AT CRANK-OPERATED CASEMENT WINDOWS.

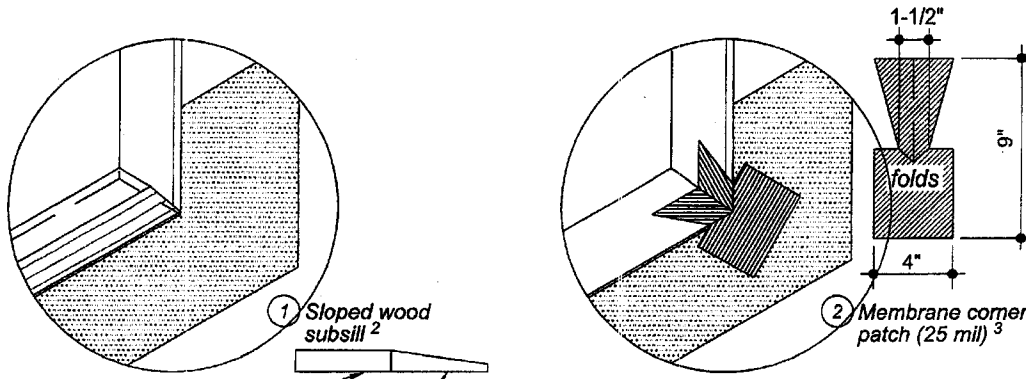


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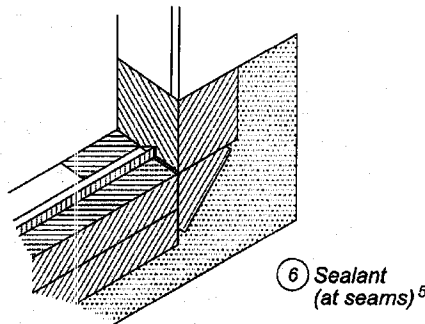
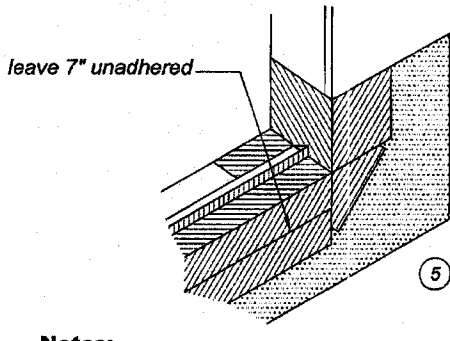
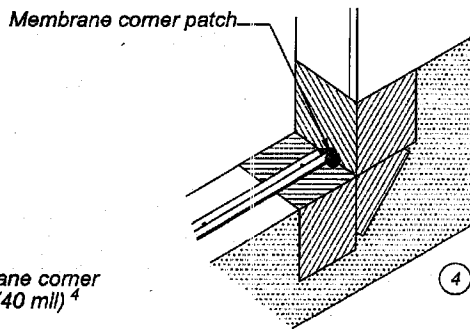
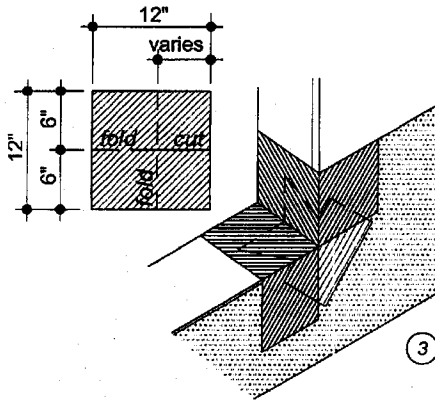
WINDOW FLASHING & INSTALLATION
Typical Rough Opening

WCC Coordination Drawings Scale: Not to scale Date: 10/25/05 08500-00

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1/2" Plywood
Sloped wood sill
Per window depth and
rainscreen strapping thickness



Notes:

1. THIS OPTION APPLIES TYPICALLY TO ALL WINDOWS.
2. WOOD SUBSILL TO BE CUT FROM BEVEL SIDING OR CUSTOM RIPPED 2X MATERIAL. SLOPE 1:8 MIN. TO EXTERIOR.
3. MEMBRANE CORNER PATCHES TO BE CUT FROM SELF-ADHERING MEMBRANE, 25 MIL.
4. MEMBRANE CORNER FLANGE / MEMBRANE WRAP TO BE (CHECK ONE):
 - SELF-ADHERING MEMBRANE, 40 MIL, 12" WIDE (WATERBLOCK 40 by INTERNATIONAL BLDG. COMPONENTS or VYCOR V40 by W.R. GRACE)
5. SEALANT AT SILL PAN FLASHING TO BE DOW CORNING 795 (SILICONE), or SONOLASTIC 150 (SILYL POLYETHER)
6. METAL ANGLE TO BE 20 GA. GALV. STL., 3/4" X 1". PROVIDE 1/8"-1/4" WIDE GAP BETWEEN BACK OF WINDOW FRAME AND METAL ANGLE VERTICAL LEG (TO ALLOW FOR INSTALLATION OF AIR SEAL LATER).

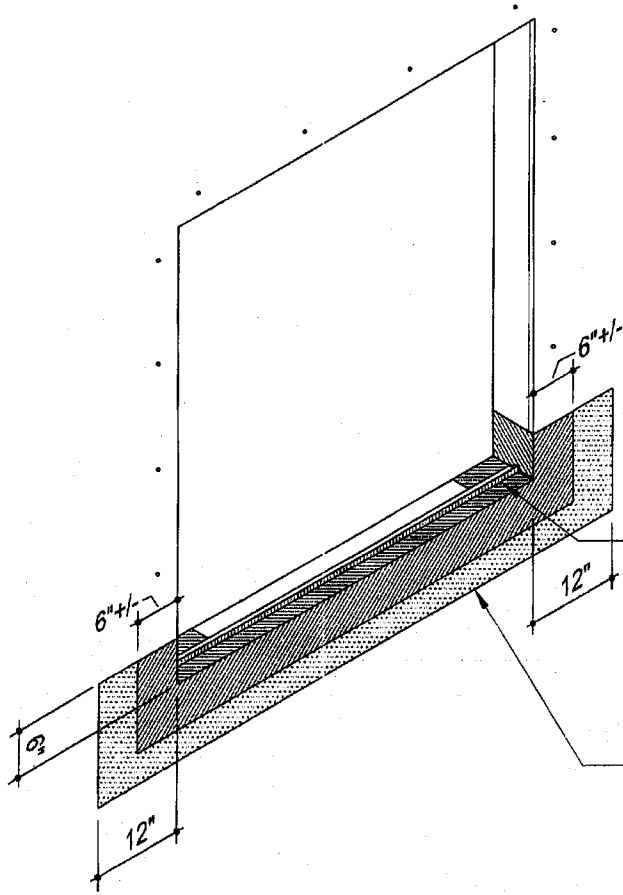


WINDOW FLASHING & INSTALLATION

Step 1: Membrane sill pan (Option 1)

WCC Coordination Drawings Scale: Not to scale Date: 10/25/05 08500-01a

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- 1b) Install sill wrap flashing, covering entire depth of metal angle, lap over sill strip
 NOTE: Sill wrap to be formed as sill pan flashing per project requirements. See Dwg 08500-01a & 08500-01b for membrane pan options.
- 1a) Install 12" wide sill strip, with top edge 6" above edge of rough opening, fold in at rough sill. Leave loose at bottom (staple lower corners only as necessary to avoid wind damage).

Notes:

1. SILL STRIP FLASHING TO BE (CHECK ONE):
 - SPUN-BONDED POLYOLEFIN FILM (TYVEK COMMERCIALWRAP by DUPONT)
 - WOVEN POLYPROPYLENE FILM (WATERBLOCK NAIL ON FLASHING by INTERNATIONAL BLDG. COMPONENTS)
 - REINFORCED ASPHALT SATURATED KRAFT PAPER FLASHING (MOISTOP by FORTIFIBER)
2. SILL WRAP FLASHING TO BE (CHECK ONE):
 - SELF-ADHERING MEMBRANE, 40 MIL, 12" WIDE (WATERBLOCK 40 by INTERNATIONAL BLDG. COMPONENTS or VYCOR V40 by W.R. GRACE)
3. SILL WRAP TO BE FORMED AS SILL PAN FLASHING? NO YES (CHECK ONE):
 - MEMBRANE SILL PAN (SEE DWG. 08500-01a)
 - MEMBRANE SILL PAN (SEE DWG. 08500-01b)
 - METAL SILL PAN (SEE DWG. 08500-01c)

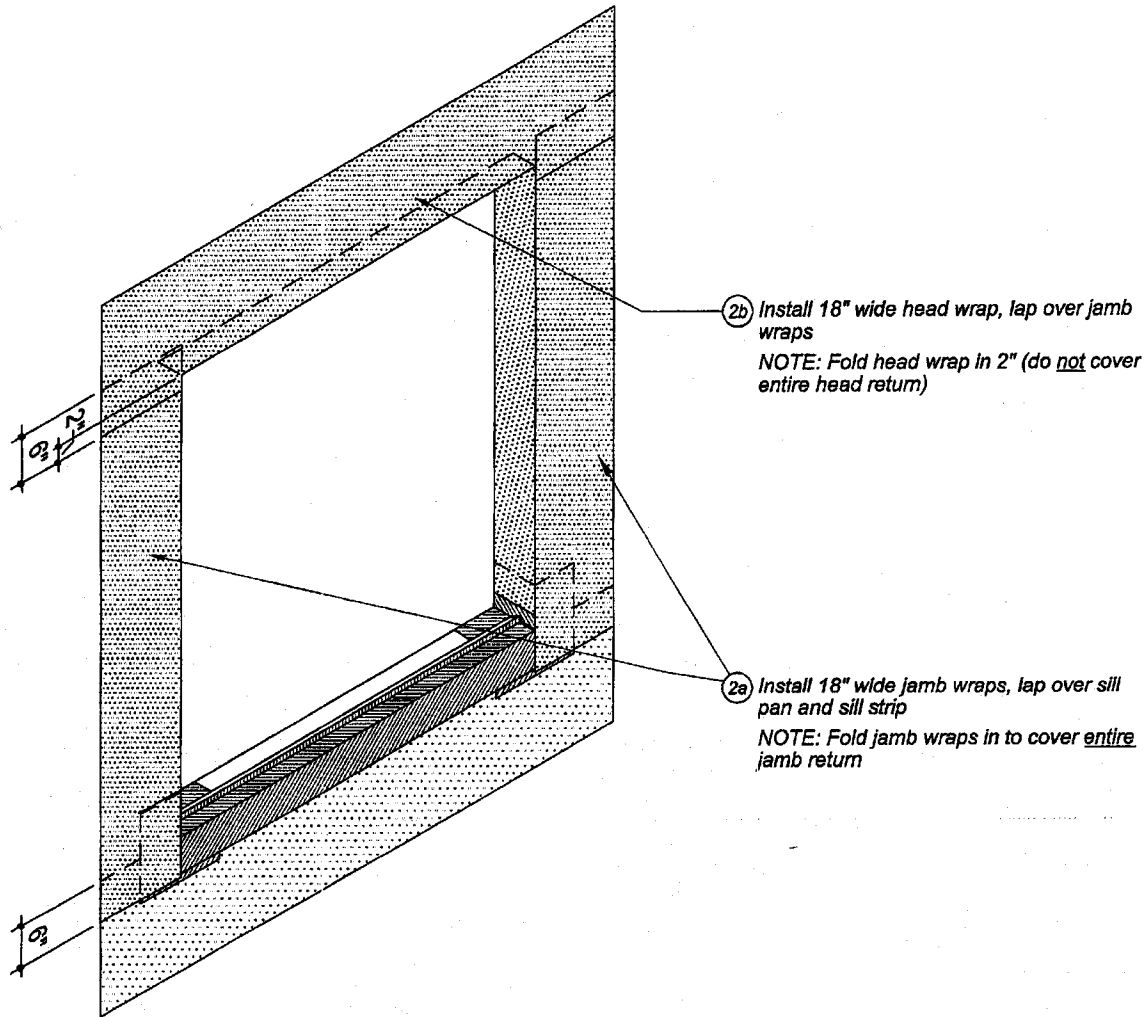


WINDOW FLASHING & INSTALLATION

Step 1: Sill wrap

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Notes:

1. JAMB / HEAD WRAP FLASHING TO BE (CHECK ONE):
 - SPUN-BONDED POLYOLEFIN FILM (TYVEK COMMERCIALWRAP by DUPONT)
 - WOVEN POLYPROPYLENE FILM (WATERBLOCK NAIL ON FLASHING by INTERNATIONAL BLDG. COMPONENTS)
 - OTHER
2. OPTIONAL JAMB / HEAD WRAP FLASHING AT HOT CLIMATE ZONE PROJECTS (I.E. SACRAMENTO): SELF-ADHERING MEMBRANE, 40 MIL, 9" WIDE (VYCOR V40 by W.R. GRACE)

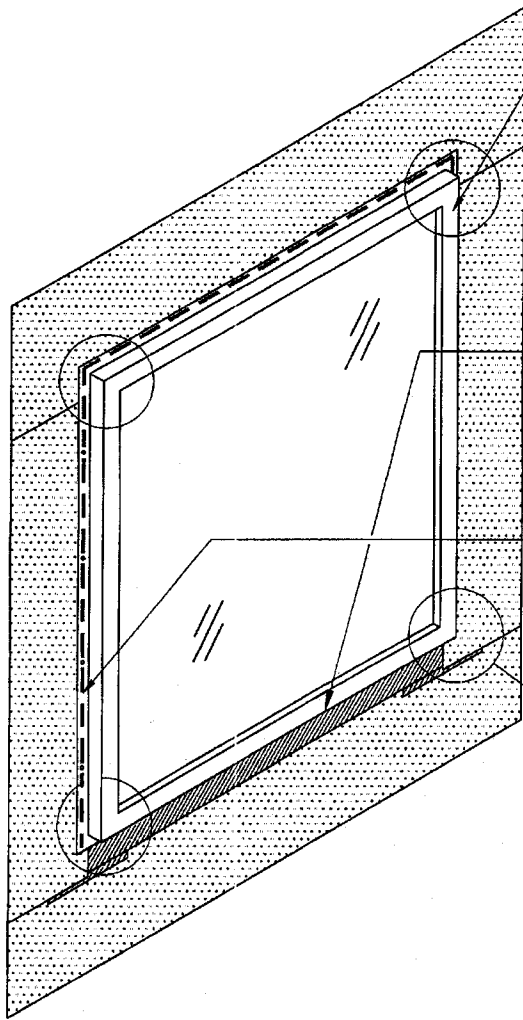


WINDOW FLASHING & INSTALLATION

Step 2: Jamb & head wraps

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- 3d) Install window unit per manufacturer instructions - shim and adjust as req'd to achieve square, plum and level
- Fasten window per manufacturer instructions (do not fasten within 4" of frame corners)
- Set fastener heads flush with flange but not tight (do not bend over)
- 3c) Prior to fastening window, apply shims at sill pan downturn leg (one at each end) to create openings to drain water - use 1/8" thick washers for shims (Option: notch mounting flange to create weeps - obtain manufacturer approval)
- 3b) Prior to setting window, apply continuous liberal bead of sealant (butyl or urethane) to back side of mounting flange at head and jambs only (do not apply at sill)
- 3a) Inspect window frame, mitre joints, & mounting flanges for damage & repair as necessary - seal all corners of aluminum frames to seal frame junctures
- If applied (non-integral) mounting flange, consult manufacturer instructions regarding sealing joint between flange and frame
- Cracks in mounting flange to be repaired with sealant or cement per manufacturer instructions
- NOTE: Where cracks occur in frame, window unit must be rejected

- 3e) Window to be shimmed 1/2" off of substrate at head and jamb. Intermittent shims at sill.

Notes:

1. WINDOW UNIT TO BE:
 -

2. CORROSION-RESISTANT FASTENERS TO BE (CHECK ONE):
 - #8 x 1-1/2" STAINLESS STEEL PAN HEAD SCREWS
 - 8d HOT-DIP GALVANIZED STEEL NAILS
 - OTHER 2" minimum hot-dip galvanized roofing nails

3. OBTAIN MANUFACTURER'S WRITTEN INSTRUCTIONS FOR FASTENING (I.E. FASTENER TYPE, FASTENER SPACING, SPECIAL REQ'TS. AT FRAME CORNERS, SUPPLEMENTAL ANCHORING CLIPS, ETC...)
4. PROVIDE SHIMS AT WINDOWS PER MANUFACTURER REQUIREMENTS. VERIFY PROJECT-SPECIFIC SHIMMING REQUIREMENTS WITH MANUFACTURER PRIOR TO INSTALLATION.
5. BEDDING SEALANT AT WINDOW MOUNTING FLANGES TO BE TREMCO BUTYL, DOW 795 OR SONOLASTIC 150
6. AT WOOD WINDOWS, SEAL UNDERSIDE OF WINDOW FRAME (AT SILL) WITH PAINT PRIOR TO INSTALLATION

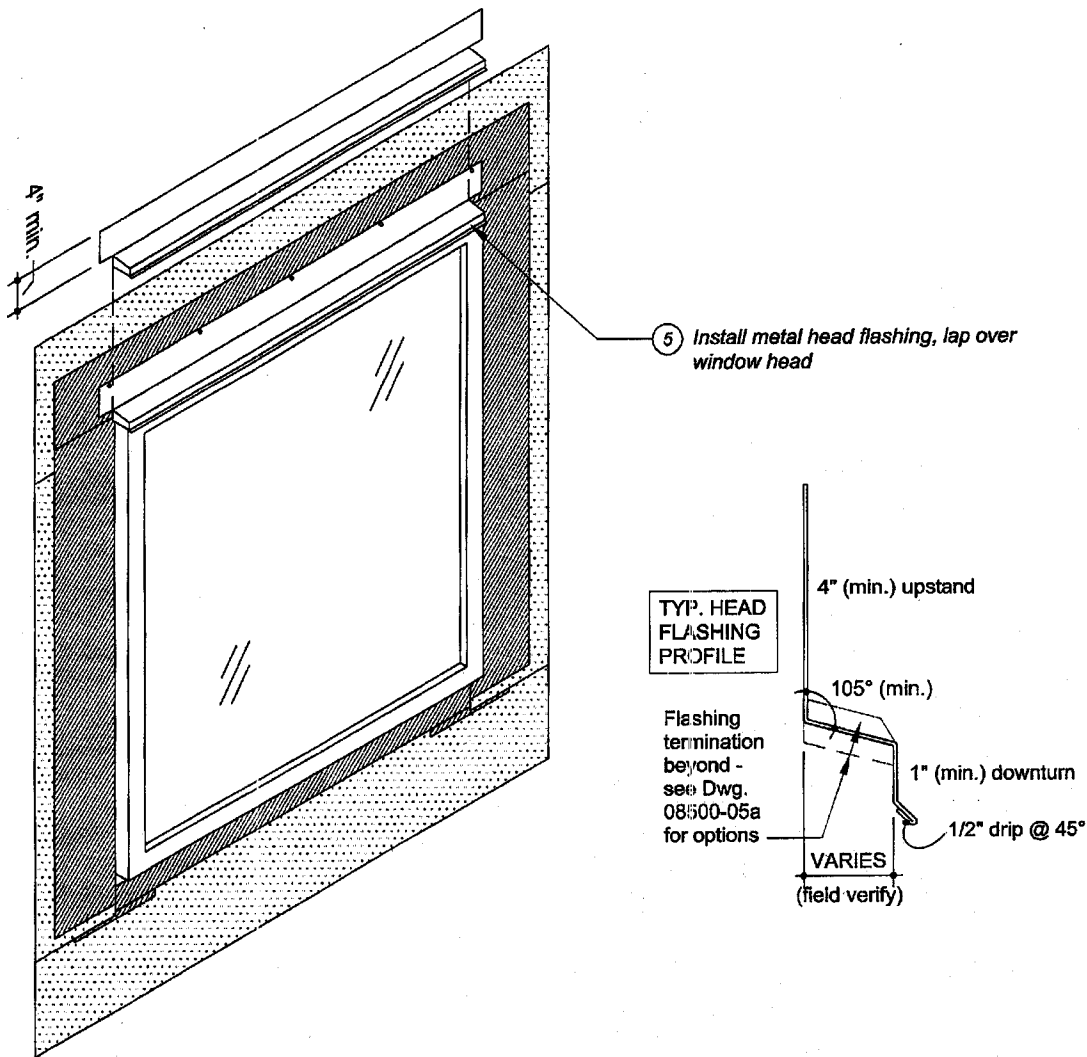


WINDOW FLASHING & INSTALLATION

Step 3: Window installation

WCC Coordination Drawings Scale: Not to scale Date: 10/25/05 08500-03

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Notes:

1. METAL HEAD FLASHING TO BE (CHECK ONE):
 - GALV. STEEL, 24 GA. or 26 GA., PRE-FINISHED or PRE-PRIMED (FOR FIELD PAINTING)
 - ALUMINUM, 0.019" THICK, PRE-FINISHED
 - STAINLESS STEEL, 26 GA. or 28 GA., TYPE 304/2D FINISH (USE 316 FINISH IN COASTAL CONDITIONS)
2. FASTEN GALV. STEEL HEAD FLASHING WITH HOT-DIPPED GALVANIZED ROOFING NAILS @ 12" O.C. (AT STAINLESS STEEL OR ALUMINUM FLASHING, USE SAME METAL AT FASTENERS)
3. HEAD FLASHING TO BE CONTINUOUS (NO JOINTS)
4. HEAD FLASHING TO BE SLOPED TO DRAIN TO EXTERIOR - 15° FROM HORIZONTAL (MIN.)
5. TERMINATE ENDS OF HEAD FLASHING PER DWG. 08500-05a



WINDOW FLASHING & INSTALLATION

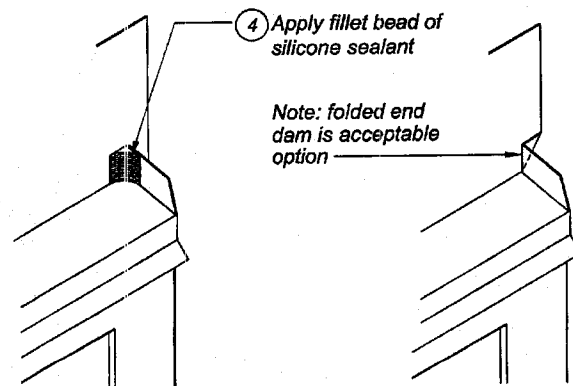
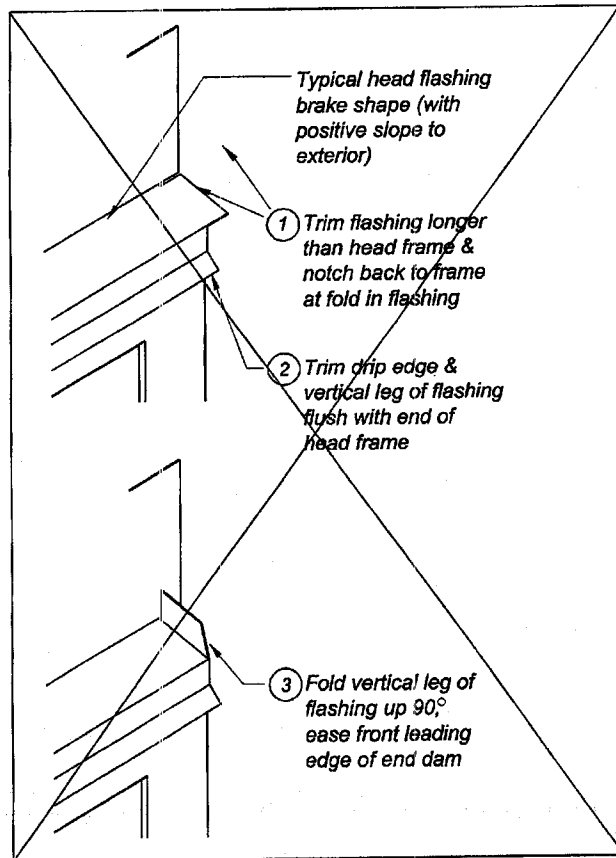
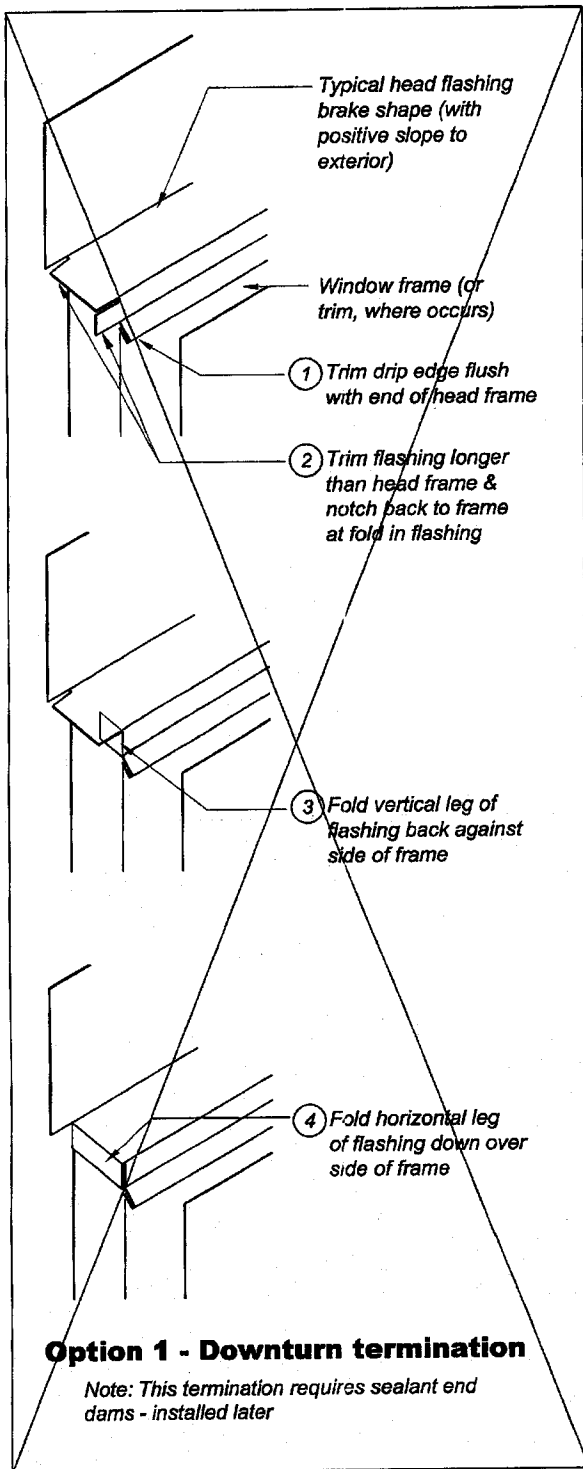
Step 5: Head flashing

WCC Coordination Drawings Scale: Not to scale Date: 10/25/05 08500-05

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Updated: 9/30/04



Option 2 - Upturn termination

Note: This termination requires additional sealant installed below ends of flashing



WINDOW FLASHING & INSTALLATION

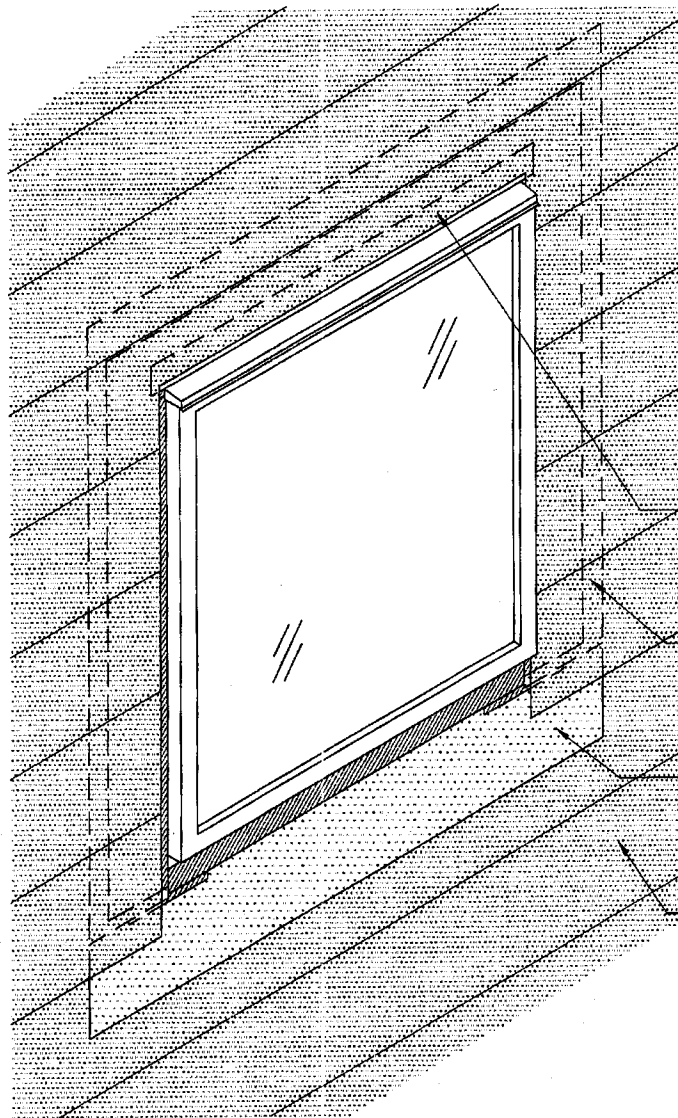
Step 5: Head flashing termination options

WCC Coordination Drawings Scale: Not to scale Date: 10/25/05 08500-05a

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NOTE: Apply Tyvek Tape at all lap joints, edges, and seams where WRB also serves as air barrier

EXCEPTION: Do not apply Tyvek Tape at lap seam to sill strip (below each jamb)

6c Lap WRB over metal head flashing

6b Lap WRB over jamb strip flashing

6a Tuck WRB under sill strip flashing

6 Install weather-resistive barrier (WRB) over exterior sheathing

Notes:

1. WEATHER-RESISTIVE BARRIER (WRB) TO BE (CHECK ONE):
 - ASPHALT-SATURATED ORGANIC FELT per ASTM D226 (TYPE I - #15 or TYPE II - #30)
 - GRADE D BUILDING PAPER (SUPER JUMBO TEX or TWO-PLY SUPER JUMBO TEX by FORTIFIBER)
 - SPUN-BONDED POLYOLEFIN FILM (TYVEK COMMERCIALWRAP or TYVEK STUCCOWRAP by DUPONT)
2. INSTALL WRB PER MANUFACTURERS INSTRUCTIONS. PROVIDE 4" MIN. LAP AT HORIZONTAL SEAMS, 6" MIN. LAP AT VERTICAL SEAMS, UNLESS NOTED OTHERWISE BY MANUFACTURER.
3. TYVEK MUST BE LAPPED 6" MIN. AT HORIZONTAL SEAMS, 12" MIN. AT VERTICAL SEAMS. ALL SEAMS AND EDGES TO BE TAPED WITH TYVEK CONTRACTOR'S TAPE WHERE TYVEK ALSO SERVES AS AIR BARRIER.



WINDOW FLASHING & INSTALLATION

Step 6: Weather-resistive barrier

WCC Coordination Drawings Scale: Not to scale Date: 10/25/05 08500-06

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