# YCW 750 OG Curtain Wall System

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Installation Notes

1. Do not drop, roll or drag boxes of aluminum framing. Move and stack boxes with proper support to prevent distortion. If fork lifts are used be especially careful about striking the boxes when lifting or moving.

2. Store in a dry, out of the way area. If rain exposure, condensation or any water contact is likely, then all packaging material should be removed. Wet packaging materials will discolor and may stain aluminum finishes and paints.

3. All materials should be checked for quality and quantity upon receipt, YKK must be notified immediately of any discrepancies in shipment. Check to make sure that you have the required shims, sealants, supplies and tools necessary for the installation.

4. Carefully check the openings and surrounding conditions that will receive your material. Remember, if the construction is not per the construction documents, it is your responsibility to notify the general contractor in writing. Any discrepancies must be brought to the general contractor's attention before you proceed with the installation.

5. Gather your shop drawings, materials, packing list, and this installation manual. Carefully review parts location, the sequence it goes therein, when you glaze it and how you seal it. Installation instructions are of a general nature and may not cover every condition you will encounter. The shop drawings and/or installation manuals were prepared specifically for the product.

6. Any material substitutions must be of equal or greater quality.

7. Make certain that material samples have been sent for compatibility testing for all manufacturer's sealants involved. Make certain sealants have been installed in strict accordance with the manufacturer's recommendations and specifications.

8. Remember to isolate, in an approved manner, all aluminum from uncured masonry or other incompatible materials.

9. System-to-structure fasteners are not supplied by YKK. Fasteners called out on shop drawings are to indicate minimum sizes for design loading.

10. If any questions arise concerning YKK products or their installation, contact YKK AP for clarification before proceeding.

11. YKK storefront and/or curtain wall framing is typically completed before drywall, flooring and other products which may still be in process. Take the extra time to wrap and protect the work that you have proudly produced, because no one else will.

12. Cutting tolerances are plus zero, minus one thirty second unless otherwise noted.

13. Check our website, www.ykkap.com, for the latest installation manual update prior to commencing work.
<table>
<thead>
<tr>
<th>FRAMING MEMBERS</th>
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<th>E9-1246</th>
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<td>E9-1216 with PVC Isolator Punched 9” O.C.</td>
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<td>For 1/4&quot; Glazing</td>
<td>AS-3572</td>
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<td>2-1/2&quot; x 5-1/4&quot;</td>
<td>For Deep Covers E9-3574 with PVC Isolator Punched 9” O.C.</td>
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<td>For 1&quot; Glazing</td>
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<td>For 1&quot; Glazing</td>
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<td>Open Back</td>
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<td>Open Back</td>
<td>E9-1207</td>
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* Splay mullions and other face covers are available, contact YKK AP.
# YCW 750 OG Curtain Wall System

## Framing Members

<table>
<thead>
<tr>
<th>Component</th>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>Bull Nose Face Cover 2-1/2” x 2”</td>
<td>E9-1293</td>
<td>90° Outside Corner Face Cover For 1” Glazing</td>
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<tr>
<td>Glazing Adaptor For 1/2” Glazing</td>
<td>E9-1220</td>
<td>90° Outside Corner Face Cover For 1/4” Glazing</td>
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<tr>
<td>Glazing Adaptor For 1/2” Glazing</td>
<td>E9-1232</td>
<td>Interior Cover Base Use with E9-1281</td>
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<tr>
<td>Flush Pocket Filler For 1” Glazing</td>
<td>E9-1253</td>
<td>Interior Cover For 90° Outside Corner Use with E9-1280</td>
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<tr>
<td>Perimeter Anchor For 1/4” Glazing</td>
<td>E9-1248</td>
<td>Single Acting Transom Bar Elastomer Weathering E2-0051 Included</td>
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<tr>
<td>Perimeter Anchor For 1” Glazing</td>
<td>E9-1223</td>
<td>Standard Door Jamb For 1/4” Glazing Use with AS-0417</td>
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<tr>
<td>Perimeter Channel For 1” Glazing</td>
<td>E9-1231</td>
<td>Standard Door Jamb For 1” Glazing Use with AS-0417</td>
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<tr>
<td>90° Outside Corner Adaptor For 1/4” Glazing</td>
<td>E9-1236</td>
<td>Heavy Duty Door Jamb Use with AS-0441</td>
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<tr>
<td>90° Outside Corner Adaptor For 1” Glazing</td>
<td>E9-1226</td>
<td>Heavy Duty Door Stop Elastomer Weathering E2-0051 Included Use with E9-3531</td>
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<td>90° Outside Corner Pressure Plate with PVC Isolator, punched 9” O.C., For 1/4” Glazing</td>
<td>AS-1237</td>
<td>Snap-In Door Stop Elastomer Weathering E2-0051 Included Use with E9-1224</td>
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<td>90° Outside Corner Pressure Plate with PVC Isolator, punched 9” O.C., For 1” Glazing</td>
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<td>Standard Shear Block for 90° Outside Corner</td>
<td>E1-3503</td>
<td><img src="image1.png" alt="Image" /></td>
<td>For E9-1235, E9-1250, &amp; E9-3537, 3.125” Long</td>
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<tr>
<td>Standard Shear Block</td>
<td>E1-3504</td>
<td><img src="image2.png" alt="Image" /></td>
<td>For E9-1215, E9-1225, E9-1246, 4.375” Long</td>
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<td>Standard Shear Block for 90° Outside Corner</td>
<td>E1-3506</td>
<td><img src="image3.png" alt="Image" /></td>
<td>For E9-1242, 6.000” Long</td>
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<tr>
<td>“J” Anchor</td>
<td>E1-3501</td>
<td><img src="image4.png" alt="Image" /></td>
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<td>E1-3502</td>
<td><img src="image5.png" alt="Image" /></td>
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<td>“J” Anchor</td>
<td>E1-3505</td>
<td><img src="image6.png" alt="Image" /></td>
<td>For E9-1242, 6.000” Long</td>
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<td>Shear Block (For E-Slot)</td>
<td>E1-1206</td>
<td><img src="image7.png" alt="Image" /></td>
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<td>Shear Block (For E-Slot)</td>
<td>E1-1200</td>
<td><img src="image8.png" alt="Image" /></td>
<td>For E9-1215, E9-1225, E9-1246, 4.375” Long</td>
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<td>Shear Block (For E-Slot)</td>
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<td><img src="image9.png" alt="Image" /></td>
<td>For E9-1242, 6.000” Long</td>
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<td>Shear Clip</td>
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<td><img src="image10.png" alt="Image" /></td>
<td>For E9-1255 &amp; E9-1258 3.986” Long</td>
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<td>Shear Clip</td>
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<td><img src="image11.png" alt="Image" /></td>
<td>For E9-1257 &amp; E9-1259 2.736” Long</td>
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<td>Mullion Splice Sleeve</td>
<td>E1-1212</td>
<td><img src="image12.png" alt="Image" /></td>
<td>For E9-1235, E9-1250 &amp; E9-3537</td>
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## ACCESSORIES

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<td>E1-1201</td>
<td>Mullion End Cap for 90° Outside Corner</td>
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<td>E1-1201</td>
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<td>Mullion Splice Sleeve For E9-1242</td>
<td>E1-1299</td>
<td>Mullion End Cap for 90° Outside Corner</td>
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<td>Mullion “T” Anchor For E9-1235, E9-1250, &amp; E9-3537, 3.462” Long</td>
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<td>Face Cover Splice Sleeve For E9-1206</td>
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<td>Wind Load Anchor Steel with Zinc Oxide Paint Refer to Shop Drawings for Anchor Dimensions</td>
<td>E1-1204* Project Specific</td>
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<td>Dead Load Anchor Steel with Zinc Oxide Paint Refer to Shop Drawings for Anchor Dimensions</td>
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<td>Mullion “F” Anchor For E9-1235, E9-1250 &amp; E9-3537, 3.462” Long</td>
<td>E1-1232</td>
<td>Reinforcing Steel 2” x 4” x 1/4” For 5-1/4” Back Verticals Steel with Zinc Oxide Paint</td>
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<td>Setting Block For 1/4” Glazing EPDM with Pressure Sensitive Adhesive</td>
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<td>Side Block For 1/4” Glazing EPDM with Pressure Sensitive Adhesive</td>
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<td>Setting Block For 1” Glazing EPDM with Pressure Sensitive Adhesive</td>
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<td>E2-0125</td>
<td>#12 x 1-1/4” FHSMS Type AB, Concealed Fastens. For Attachment of Horizontal to Shear Block</td>
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<td>#14 x 5/8” FHSMS Type AB For Attachment of Mullion End Cap E1-1286</td>
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<td>1/4” – 20 x 1” HWHMS For Attachment of Pressure Plate to Mullion &amp; “J” Anchor at Jamb</td>
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<td>Isolator Tape</td>
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<td>Anchor Slip Pad</td>
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<td>1/4” Flat Washer For Attachment of “J” Anchor at Intermediate Vertical &amp; Jamb</td>
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<td>FC-0808</td>
<td>Type AB, Undercut For Attachment of Face Cover Splice Sleeve</td>
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**ACCESSORIES**

**End Dam Plug**
- Use with E9-1223 & E9-1231

**Standard Joint Plug**
- For 1/4” Glazing EPDM Sponge

**Standard Joint Plug**
- For 1” Glazing EPDM Sponge

**Joint Plug**
- For slide in mullion at end bays, 1/4” glazing
- Use with E2-0123

**Joint Plug**
- For slide in mullion at end bays, 1” glazing
- Use with E2-0123

**E-Slot Plug**
- For slide in mullion at end bays

**Isolator Tape**
- 1/8” x 7/16”
- Use with Perimeter Pressure Plate

**Anchor Slip Pad**
- For Dead Load & Wind Load Anchors

**Interior/Exterior Glazing Gasket**
- For Attachment of Glazing Adaptors

**#8 x 3/8” PHSMS**
- Type AB, Undercut For Attachment of Face Cover Splice Sleeve
FRAME FABRICATION

FRAME TYPES / ANCHORING METHODS

The following is a guideline for common types of frames. Refer to shop drawings for exact layout of frames.

Smaller units may be assembled on the ground and tipped in place. Larger units require being stick assembled in place.

Note: If YKK does not prepare the shop drawings for the project, a qualified engineer must approve all anchors, their arrangement, and mullion selection.

All anchors must be attached to structurally sound material that will accommodate the anchor reactions.

* Vertical end attachment will be continuous perimeter anchor, “J” anchor, or mullion end anchor.

Fabrication of YCW 750 OG varies depending on the type of vertical end attachment required for a given project:

Perimeter Anchors are for low load anchoring conditions (maximum 500lb. end load reaction):
   E9-1248, E9-1223, & E9-1231

“J” Anchors are for medium to high load conditions: E1-3501, E1-3502, & E1-3505.

Mullion End Anchors “F” & “T” are for high load conditions: E1-1207, E1-1208, E1-1209, E1-1231, E1-1232, E1-1233, E1-1238, & E1-1240
FRAME FABRICATION

FRAME TYPES / ANCHORING METHODS

Using Perimeter Anchors:

- Vertical mullions must be notched as shown in Detail 1 on Page-8.

Using Mullion End Anchors:

YCW 750 OG has three possible end anchoring conditions: “J”, “T”, and “F”.

- "J" anchors are used with jambs and intermediate verticals at the sill only.
- "T" anchors are used with intermediate verticals at the head and sill.
- "F" anchors are used with jamb mullions at the head and sill.
- Anchor usage depends on end reaction, stress, and attachment.

Mullions should be pre-assembled with shear blocks/clips, end anchors, and steel or aluminum reinforcing if necessary.

Framing Members for Stick Build:

- Head and sill members must be notched as shown Detail 9 on Page-14 to clear the mullion end anchors.
- Closed horizontal members are used at all intermediate locations except at end bays.
- Open back intermediate horizontals are used at end bays to clear the shear clips.

Note: When using stick build construction, check overall frame width every fifth mullion as the wall is installed to prevent the buildup of cumulative tolerance errors.
YKW 750 OG Curtain Wall System

FRAME FABRICATION

FABRICATE VERTICAL MULLIONS

**Step 1**
-Cut all vertical and jamb mullions to dimensions as shown on shop drawings.
Allow for 1/2" caulk joint around the frame & 1/2" joint at vertical splices.

**Step 2**
-If you are using continuous perimeter anchors, E9-1223 or E9-1248, the top and bottom of vertical and jamb mullions must be notched as shown in **Detail 1**.

**Note:** Do not notch verticals when using mullion end anchors: “J”, “T”, or “F”.

**Detail 1**
-Notch Top and Bottom of Vertical & Jamb Mullions
-7/8"
-TOP END
-7/8"
FRAME FABRICATION

STEP 3
FABRICATE VERTICAL MULLIONS

-Mullion hole locations for shear blocks, shear clips, and “J” anchors are shown below.
-Drill 0.213” dia. (#3 drill bit) holes for shear block/clip attachment at the locations indicated.
Drill 0.281” dia. (#9/32 drill bit) holes for “J” anchor attachment at the sill.
See Detail 2.

Note: Hole locations for shear clips, E1-1213 & E1-1214, are not the same as for shear blocks and “J” anchors.

<table>
<thead>
<tr>
<th>Dim “A”</th>
<th>Dim “B”</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-3/4”</td>
<td>4-3/8”</td>
</tr>
<tr>
<td>5-1/4”</td>
<td>2-3/4”</td>
</tr>
<tr>
<td>3-3/4”</td>
<td>1-1/2”</td>
</tr>
</tbody>
</table>

Detail 2
STEP 4
USING ALTERNATE REINFORCING

If your engineering calculations require the vertical mullions to be reinforced with either steel or aluminum, secure the reinforcing to the vertical using the appropriate fasteners.

- Start 3" from both ends of the mullion and install a fastener on both sides of the mullion tongue.
- Stagger the fasteners on either side of the tongue going up the vertical.
- Seal all screw heads with sealant.

Note: Exact size of reinforcing, size and location of fasteners to be determined by a qualified engineer.

Optional reinforcing is also attached on the sides of the mullion with the attachment of shear blocks.

- Drill 0.281" dia. (9/32 bit) clear holes in the mullion only.
- Match drill 0.213 dia. (#3 bit) tap holes in the reinforcing only.
- Attach the shear blocks with HF-2516 fasteners.

See Detail 3.
FRAME FABRICATION

STEP 5
ATTACH SHEAR BLOCKS/CLIPS FOR HORIZONTALS

Shear blocks are used to attach one piece horizontal members to the jamb and vertical mullions:
- E1-3503 for 3-3/4” back members.
- E1-3504 for 5-1/4” back members.
- E1-3506 for 6-3/4” back members.
Shear clips are used to attach two piece intermediate horizontal members to the jamb and vertical mullions:
- E1-1213 for 5-1/4” back members.
- E1-1214 for 3-3/4” back members.

Attach the shear blocks/clips to jambs and verticals with two HF-2510 fasteners per block. See Detail 4.

Note: See Step 4 on the previous page when using alternate reinforcing.
STEP 6
ATTACH “J” ANCHORS

In addition to anchoring the curtain wall frame to the structure, “J” anchors are used to attach sill members to jamb and vertical mullions:
- E1-3501 for 3-3/4” back members.
- E1-3502 for 5-1/4” back members.
- E1-3505 for 6-3/4” back members.

Note: “J” anchors are used at the sill only.

Attach “J” anchors at jambs:
- Align the “J” anchor with the mullion and insert the HM-2516 bolts through the inside of the mullion and out the “J” anchor.
- Install 1/4” flat and lock washers between the anchor and HM-2500 hex nuts.

Attach “J” anchors at intermediate verticals:
- Align the “J” anchors and insert the HM-2556 bolts through both anchors and the mullion.
- Install 1/4” flat and lock washers between the anchor and HM-2500 hex nuts.

See Detail 5.
FRAME FABRICATION

STEP 7
FABRICATE HORIZONTAL MEMBERS

-Cut all horizontal members to the daylight opening as shown in shop drawings.
-Horizontal members must be fabricated as shown below to attach to shear blocks or clips.

Horizontals with Exposed Fasteners:

-Layout hole locations on the top of the horizontal at both ends as shown below.
-Drill 0.236” diameter (#B bit) holes and countersink for #12 flat head fasteners.
See Detail 6.

Horizontals with Concealed Fasteners:

-Layout hole locations on the face of the horizontal at both ends as shown below.
-Drill 0.236” diameter (#B bit) holes and countersink for #12 flat head fasteners.
See Detail 7.
FRAME FABRICATION

STEP 7 (Continued)
FABRICATE HORIZONTAL MEMBERS

Two Piece Horizontals:

- Layout hole locations on the bottom of the horizontal along the “V”-grooves at both ends.
- Drill 0.213” diameter (#3 bit) holes at each location.
Be careful not to penetrate the outer wall of the mullion.
See Detail 8.

If Mullion End Anchors Are Used
Head and Sill Members Require Additional Fabrication:

- Head and sill members must be notched out at each end to clear mullion end anchors and anchor bolts.
- See Detail 9 below for notch dimensions.

<table>
<thead>
<tr>
<th>Dim “A”</th>
<th>Dim “B”</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-3/4”</td>
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</tr>
<tr>
<td>3-3/4”</td>
<td>3-1/4”</td>
</tr>
</tbody>
</table>
FRAME FABRICATION

STEP 7 (Continued)
FABRICATE HORIZONTAL MEMBERS

One Piece Horizontals at End Bays (E-SLOT):

When using one piece horizontals at end bays, horizontals must slide in from the interior. In order to clear the shear blocks on the verticals:
- Notch the face and tongue of the horizontal at both ends as shown below.
  See Detail 10.

![Detail 10 Diagram]

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**Effective Date:** July 15, 2004
FRAME FABRICATION

STEP 8
FABRICATE PRESSURE PLATES

Horizontal Pressure Plates:

- Cut horizontal pressure plates to the daylight opening between verticals minus (−) 1/8".
- Pressure plate stock lengths have 0.281" dia. holes factory punched every 9".
  After cutting, drill additional holes if required to ensure that end holes are within 1-1/2" of each end.
- Drill two 0.313" (5/16") diameter weep holes 3" from each end and one at the centerline of the pressure plate.
  See Detail 11.

Vertical Pressure Plates:

- Cut vertical and jamb pressure plates to the same length as the vertical mullions unless verticals are spliced.
- If vertical mullions are spliced, cut pressure plates to accommodate for 1/2" expansion joint as shown in Step 10 on Pages 18 & 19.
- Drill additional attachment holes if required to ensure that end holes are within 1-1/2" of each end.

**Detail 11**
STEP 9
FABRICATE FACE COVERS

Horizontal Face Covers:

-Cut horizontal face covers to the daylight opening between verticals minus(−) 1/16".
-Drill two 0.313" diameter weep holes at 1/3 points of cover as shown below.
See Detail 12.

Vertical Face Covers:

-Cut vertical face covers to the same length as the vertical mullions unless the verticals are spliced.
-If vertical mullions are spliced, cut vertical covers to accommodate for the 1/2" expansion joint as shown in Step 10 on Pages 18 & 19.
STEP 10
TYPICAL VERTICAL SPLICE

Stagger Mullion, Pressure Plate, and Cover Splice Joints as Shown Below.

Detail 13
FRAME INSTALLATION

STEP 10 (Continued)
TYPICAL VERTICAL SPLICE

-Clean all surfaces as recommended by sealant manufacturer.
-Apply bond breaker tape to the face of the splice sleeve at its midpoint (3” from top or bottom).
-Lower the splice sleeve into top of lower mullion 2-3/4” and attach with two FC-1212 fasteners on both sides of the mullion. Screws should be installed 3/4” from the front and back of mullion and 1” down from the top.
-When using 1” glazing mullions, stuff a small piece of backer rod 1/2” down the cavity behind mullion tongue and pump in sealant to fill the cavity.
-Apply sealant to the face of splice sleeve on the upper half and carefully slide the upper mullion down onto the splice sleeve. Place a 1/2” temporary shim between the mullions to locate them.
-Secure the upper mullion to the mid anchors and remove the temporary shims.
-Apply and tool sealant to the face and sides of the splice sleeve to create a water tight joint.

-Leave a 1/2” expansion joint between vertical pressure plate splices and fill the joint with sealant.
-Locate pressure plate fasteners 1-1/2” from each end of pressure plate splice as shown.
-Apply bond breaker tape to the face of the cover splice sleeve and attach it to the lower face cover with a FC-0808 fastener on each side.
-Prior to snapping on the upper portion of the face cover, apply sealant to the face of the splice.
-Leave a 1/2” expansion joint between face cover splices.

See Details 13 & 14.

Note: Face covers, pressure plates, and mullions are staggered at splice locations.
STEP 11
INSTALL CONTINUOUS PERIMETER ANCHOR

-Cut perimeter anchors to size:
   Head and sill anchors stop 1/8" short of the structure.
   Vertical jamb anchors butt in between head and sill anchors.

-Prepare structure for anchor attachment.
-Install perimeter anchors with appropriate perimeter fasteners. Refer to shop drawings or engineering calculations for type and spacing of fasteners. Shim as required to install anchors level.
-When splicing head and sill pieces together, leave 3/8" joint for expansion and install end plug, E2-0505, that has been buttered with sealant on the front, back, and bottom at the joint.
-Run continuous sealant along the perimeter between the anchors and the substrate.
-Seal corners of butted perimeter anchors watertight with sealant.
-Butter E2-0505 end plug with butyl on all sides that touch the anchors. Then push end plug into place and tool excess sealant that comes through the cracks.
-Field drill 0.313" diameter weep holes in perimeter anchor (exterior face only) at sill 3" from center line of vertical on each side.
See Detail 15.
FRAME INSTALLATION

STEP 12
JAMB/VERTICAL INSTALLATION
WITH PERIMETER ANCHORS

- The notched ends of vertical mullions for 1” glazing leaves the interior of the mullion exposed and must be plugged prior to installation.
  - Install a small piece of backer rod into the notched out space directly behind the tongue at the top and bottom of the vertical mullions.
  - Push the backer rod into the opening at the face of the mullion.
  - Apply and tool sealant to seal off the opening made by the notch.

- Install interior gasket, E2-0100, to jamb mullion (jamb side only) the full length of the mullion.
- Position jamb into opening as shown in Detail 16.
- Seal the gap between the perimeter anchor and vertical glazing pocket(s) with sealant (one side for jambs - both sides for intermediate verticals).
- Install temporary retainer clip, E1-1294, at the top and bottom of the mullion.
- Repeat this step for all jamb and vertical mullions.
See Detail 16.
YCW 750 OG Curtain Wall System

FRAME INSTALLATION

STEP 13
JAMB/VERTICAL INSTALLATION
WITH MULLION END ANCHORS

- Clean all contact surfaces as recommended by sealant manufacturer.
- Apply sealant into the screw raceway and along the front edge of the mullion at each end.
- Prior to erecting verticals, install mullion end caps, E1-1286, at the top and bottom of the mullions with FC-1410 fasteners.
- Seal all screw heads with sealant.

See Detail 17.

- Insert mullion “T” and “F” anchors into the top and bottom of the mullions before erecting them into the opening.
- Erect and locate the jamb and vertical mullions and temporarily attach them to the structure. All mullions must be installed plumb and true.
- Field drill holes in “T”, “F”, and “J” anchors for the appropriate anchor fasteners according to shop drawings or engineering calculations. Consult YKK if load requirements are in question.

See Detail 18.
STEP 14
INSTALL WIND LOAD / DEAD LOAD ANCHORS

-Install steel wind load and dead load anchor clips. Anchor clips are normally template or line set before mullions are hung. Outstanding leg of clip must be set at 90° to offset line. The back of the vertical mullion should set 1” from the anchoring substrate. See Detail 19.

Detail 19

-Install, plumb, and align vertical mullions. Drill and install appropriate diameter anchor bolts. If shop drawings are not prepared by YKK AP, all anchors and bolts must be checked by a qualified engineer.

-Nylon slip pads, E3-0103, must be installed between mullion and anchor. See Detail 20.

Detail 20
FRAME INSTALLATION

TYPICAL WIND LOAD ANCHOR

Note: Drill holes in mullion centered along the slots to permit the frame to contract and expand.

Detail 21

TYPICAL DEAD LOAD ANCHOR

Note: Fasteners are shown for reference only; horizontals are typically attached before anchor fasteners are installed.
FRAME INSTALLATION

STEP 15
ATTACH HORIZONTAL MEMBERS

-Just prior to attaching the horizontal members to the vertical, apply sealant to the front of the shear block as shown below.

**Note:** Before applying any sealant, clean aluminum surfaces using cleaner and method approved by sealant manufacturer.

For Concealed Fasteners:

- Slide the horizontal members towards the vertical and attach them to the shear blocks at each end with two FC-1220 fasteners.
- Tool and wipe away any excess sealant at the vertical to horizontal joints.
See **Detail 22**.

For Exposed Fasteners:

- Slide the horizontal members towards the vertical and transfer the hole locations on top of the horizontal to the shear block.
- Remove the horizontal and drill a 0.189” dia. (#12 bit) hole at each hole location.
- Slide the horizontal back against the vertical and attach it to the shear block with two FC-1212 fasteners at each end.
- Tool and wipe away any excess sealant at the vertical to horizontal joints.
See **Detail 23**.
FRAME INSTALLATION

STEP 15 (Continued)
ATTACH HORIZONTAL MEMBERS

For Two Piece Horizontals:

- Lower the horizontal down onto the shear clip. Make sure the horizontal and vertical glazing pockets are flush.
- Attach the horizontal to the shear clip from the underside of the horizontal using two HF-2510 fasteners at each end.
- Snap on the horizontal cover.

See Detail 24.

At Head and Sills:

- Mullion end anchors must be installed before head and sill members are attached.
  - Provide anchor fasteners as per job requirements. See approved shop drawings or engineering calculations for appropriate anchor fasteners.
  - Install the anchor fasteners as recommended by fastener manufacturer.
- Attach head and sill members according to the procedures previously outlined with the notched out portion facing the anchors.

See Detail 25.

Caution: There must always be a shim under the mullion to transfer glazing dead loads to the foundation.
FRAME INSTALLATION

STEP 15 (Continued)
ATTACH HORIZONTAL MEMBERS

For One Piece Horizontals at End Bays:

- Slide the horizontal into place from the interior; the shear blocks should easily pass through the E-Slots at the ends of the horizontal. Make sure that the glazing pockets are flush.
- Attach the horizontal to the shear block at each end with FC-1212 fasteners as previously instructed for exposed fastener attachment. See Detail 26.

- Apply sealant to all contact sides of the E-Slot plug, E2-0123.
- Insert the E-Slot plugs into place and press them firmly against the shear blocks.
- Cover the entire slot with sealant and tool the sealant to ensure a watertight seal. See Detail 27.
FRAME INSTALLATION

STEP 16
APPLY PERIMETER SEALANT

- Clean the area around the perimeter of the frame with cleaner and method approved by sealant manufacturer.
- Push in backer rod between the perimeter of the frame and the substrate about 1/4".
- Apply a quality sealant to the perimeter of the frame.
- Tool the sealant making sure that sealant does not get into the gasket reglets.
See Detail 28.

Detail 28
FRAME INSTALLATION

STEP 17
INSTALL JOINT PLUGS

The tongue of each horizontal must be sealed to the tongue of the vertical mullions. The space between the two tongues is closed by using joint plugs, E2-0102 for 1” glazing or E2-0125 for 1/4” glazing.

- Clean the area around the tongue intersection with an approved cleaner.
- Apply and tool sealant to the intersection of the horizontal and vertical.
- Apply sealant to the three contact sides of the joint plug and at the intersection of the vertical and horizontal glazing pocket.
- Install joint plug as shown with the long leg of plug against the vertical tongue.
- Press joint plugs firmly against face of mullion.
- Tool the sealant to ensure a watertight seal.
- Seal all exposed screw heads on the face of the mullion.

See Detail 29.
STEP 18
INSTALL GLAZING ADAPTORS
(When Required)

Note: 1/4” glazing adaptor, E9-1220 shown
1/2” glazing adaptor, E9-1232 similar.

- Cut glazing adaptors to size:
  Vertical Cut Length = Daylight Opening plus(+) 7/8”.
  Horizontal Cut Length = Daylight Opening minus(–) 1/32”.

- Predrill each adaptor with 0.189” dia. (#12) holes 2” from each end.
- Dry fit adaptors and match drill 0.141” diameter (#28) holes on mullion to receive PC-0806 screws.
- Clean the area around the mullion glazing reglet and the glazing adaptor with a cleaner approved by the sealant manufacturer.
- Apply sealant into the glazing reglet of the mullion and the ends of the horizontal adaptors.
- Install the adaptors with PC-0806 screws 2” from each end and at the center of the adaptor. Install the vertical adaptors first and make sure they are centered along the daylight opening.
- Tool sealant at all adaptor intersections and seal all screw heads.
See Detail 30.

Detail 30

Note: 1/4” glazing adaptor, E9-1220 shown
1/2” glazing adaptor, E9-1232 similar.
STEP 19
INSTALL INTERIOR GLAZING GASKETS

-Cut interior glazing gaskets to size:
   Vertical Gasket = Daylight Opening + 1-1/4”.
   Horizontal Gasket = Daylight Opening + 1/8” per each foot of opening width.

-Install vertical gaskets first, centered along the daylight opening.
-Install horizontal glazing spacers next.
   -Insert the glazing spacer into the reglet at each end first.
   -Snap the rest of the glazing spacer into the reglet starting at the center and work towards each end.

-Pull the last 3” of each gasket away from the reglet.
-With gasket end held out of the way, run a 2-3” bead of sealant into the reglet at the ends.
-Apply sealant at the ends of the horizontal gaskets.
-Reinsert the ends of the gaskets pressing them firmly against the face of the mullions.
-Apply and tool sealant at the intersection of the vertical and horizontal gaskets.
See Detail 31.
GLAZING

STEP 20
INSTALL SETTING & SIDE BLOCKS

- Install setting blocks, E2-0104 for 1" glazing or E2-0112 for 1/4" glazing, at 1/4 points of D.L.O. or minimum of 6" from edge of glass, whichever is greater.
- Consult YKK AP for setting block requirements on units that exceed 60" x 90" or 40 sq. ft.
- Install side blocks, E2-0105 for 1" glazing or E2-0113 for 1/4" glazing, centered along the daylight opening on both sides of glazing material.

See Detail 32.
GLAZING

STEP 21
INSTALL EXTERIOR GLAZING GASKETS

- Cut exterior vertical glazing gaskets to the same length as the vertical pressure plates.
- Cut exterior horizontal glazing gaskets to daylight opening plus 1/8” per foot of opening width.
- Install vertical glazing gaskets onto the vertical pressure plates.
- Install horizontal gaskets by pushing each end into the reglet of the pressure plate. Next press center of gasket into reglet; then push gasket into reglet working from center towards the ends.

Caution: Do not stretch the gaskets.

STEP 22
INSTALL GLASS

Glass and Spandrel Size = Daylight Opening + 1” horizontally and vertically.

- As each lite is installed, attach a temporary retaining clip, E1-1294, in the middle of each horizontal and 4” from glass edge at each end using HM-2516 fasteners.
- Reuse the temporary retaining clips.
- Apply sealant to the face of the joint plugs just prior to installing vertical pressure plates. Do not allow sealant to skim over prior to installing pressure plates.

Note: Sealant must form a complete seal between the exterior gasket, pressure plate, thermal isolator, and the joint plug.

See Detail 33.
GLAZING

STEP 23
PRESSURE PLATE LAYOUT AND ASSEMBLY

-Pressure plate stock lengths are factory punched with 0.281” diameter holes at 9” o.c. maximum. After cutting, additional holes may be required to have bolts within 1-1/2” of each end.
-Install isolator tape, E2-0239, onto the back leg of the perimeter pressure plates.
-Install vertical pressure plates using HM-2516 bolts. Initially torque bolts to 30 inch pounds with a speed wrench or torque limiting screw gun. Work from the bottom up.
-Center and install horizontal pressure plates in opening, leaving a 1/16” gap at the ends.
-Starting at the center of each pressure plate, tighten each retainer bolt to 50 inch pounds.
-Apply and tool sealant to completely seal gaps at the pressure plate ends.
-Torque all vertical pressure plate bolts to 50 inch pounds.

See Detail 34.

**Note:** Pressure plate AS-1216 must be used instead of AS-3569 on the perimeter when using perimeter anchors. Mullion end cap, E1-1286, must be installed when using mullion end anchors: “F”, “T”, or “J”.

*Pressure plate layout shown for 1” glazing, 1/4” glazing similar but use perimeter pressure plate, AS-3572.*
GLAZING

STEP 24
INSTALL EXTERIOR FACE COVERS

-Snap on exterior covers using a mallet and a clean scrap piece of lumber. Start at one end and work block and mallet down the vertical and across the horizontal. See Detail 35.