NOTE:

THE ASSEMBLY DETAILS FOUND IN THIS PACKAGE ARE GENERIC AND ARE FOR REPRESENTATION ONLY WITH THE INTENT OF GIVING THE ASSEMBLY TEAM A VISUAL REPRESENTATION AS TO HOW THE ASSEMBLIES TYPICALLY ASSEMBLE. THE SHOP SUBMISSION DRAWINGS AND DETAILS ARE THE GOVERNING DOCUMENTS AND AS SUCH THIS PACKAGE IS TO BE USED ONLY AS A RESOURCE.

FOLLOW STRUCTURAL GLAZING TAPE AND SEALANT MANUFACTURER’S RECOMMENDATIONS FOR USE AND APPLICATION OF THE STRUCTURAL GLAZING TAPE AND WEATHER SEAL.

NOTE: CUSTOMER / PROJECT QUALITY ASSURANCE PROCEDURES ARE SEPARATE DOCUMENTS AND ARE TO BE FOLLOWED IN CONJUNCTION WITH THIS MANUAL.
# RELIANCE UNIT WALL - ASSEMBLY AND SEALING INSTRUCTIONS

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RELANCE UNIT WALL - ASSEMBLY AND SEALING INSTRUCTIONS

GENERAL INFORMATION

PRODUCT USE

Reliance Unit Wall Curtain Wall system is intended for assembly and installation by glazing professionals with appropriate experience. Subcontractors must be qualified to provide field instruction and project management.

Oldcastle BuildingEnvelope® does not control the application of its product configurations, sealant or glazing material and assumes no responsibility for the application. It is the responsibility of the owner, architect and installer to make these selections in strict compliance with applicable laws and building codes.

It is critical to involve 3M™ at the earliest stage of the project as possible. Building loads and glass sizes may be restricted based on structural capabilities of the tape used on project. Supplier must review shop drawings and make recommendations prior to ordering materials.

When using 3M™ VHB™ SGT you must involve 3M's™ technical services to obtain approval, and have SOP written for project specific materials, order materials and schedule training prior to assembling any window frames. (3M VHB must be purchased directly from distributor and is NOT provided by or sold through O.B.E.)

The air and water performance of the unitized curtain wall is directly related to the completeness and integrity of the assembly/glazing and installation process. Care must be taken when applying the seal at the horizontal to vertical connections as well as at the glazing tape installed on the interior side of the glass.

1. Surface to be sealed should be cleaned with isopropyl alcohol or solvent and dried as recommended by tape/sealant manufacturer to remove dirt and cutting oils. No gap should be visible in the sealant. Exposed surfaces should be cleaned of excess sealant after installing the horizontal. Inspect joint for complete sealant contact, especially where the horizontal meets the face of the vertical member.

2. The glazing tape should be installed so as to avoid stretching, buckles or tears. Cut the tape at corners (As shown on sheet 34). The glazing tape should be installed in one continuous piece per side, with seams/joints only at corners.

Variations on details shown may occur, but are not the responsibility of Oldcastle BuildingEnvelope.

PROTECTION AND STORAGE

Handle all material carefully. Do not drop from the truck. Stack with adequate separation so the material will not rub together. Store material off the ground, protecting against the elements and other construction hazards by using a well ventilated covering. Remove material from package if wet or located in a damp area. For further guidelines consult AAMA publication "Care And Handling of Architectural Aluminum From Shop To Site".

01
CHECK MATERIAL

Check glass dimensions for overall size as well as thickness. Oldcastle BuildingEnvelope® cannot be held responsible for gaskets that are not water tight due to extreme glass tolerances. The unitized curtain wall system is designed to accommodate glass or panels measuring 1” in thickness (± 1/32”).

Check all material upon arrival at job site for quality and to determine any shipping damage. Using the contract documents, completely check the surrounding conditions that will receive your materials. Notify the general contractor by letter of any discrepancies before proceeding with the work. Failure to do so constitutes acceptance of work by other trades.

Check shop drawings, installation instructions, architectural drawings and shipping lists to become familiar with the project. The shop drawings take precedence and include specific details for the project. The assembly and installation instructions are of a general nature and cover the most common conditions.

Due to varying job conditions all sealant must be approved by the sealant manufacturer to ensure it will perform per conditions shown on the instructions and shop drawings. The sealant must be compatible with all surfaces in which adhesion is required, including other sealant surfaces. Use primers where directed by sealant manufacturer. Properly store sealant at the recommended temperatures and check sealant for expiration and shelf life before using.

FIELD CONDITIONS

All material to be installed must be plumb, level and true. Aluminum to be placed in direct contact with masonry or incompatible material should be isolated with a heavy coat of zinc rich, bituminous paint or non-metallic material unless otherwise specified. After sealant is set and a representative amount of the wall has been glazed (250 sq. ft. or more), perform a water hose test in accordance with AAMA 501.2 "Field Check of Metal Storefront, Curtain Wall and Slope Glazing Systems for Water Leakage". On large projects the hose test must be repeated during the glazing operation. Review anchors or embeds in structure as early as possible to confirm that "as built" building structure can accommodate anticipated anchor tolerances.

CLEANING MATERIALS

Cement, plaster terrazzo, alkaline and acid based materials used to clean masonry are very harmful to finishes. Any residue should be removed with water and mild soap immediately or permanent staining will occur. A spot test is recommended before any cleaning agent is used. Refer to the architectural finish guide in the detail catalog.

EXPANSION JOINTS

Expansion joints and perimeter joints shown in these instructions and in the shop drawings are shown at nominal size. Actual dimensions may vary due to perimeter conditions and/or differences in metal temperature between the time of fabrication and the time of assembly/installation. For example, a 12’ unrestrained length of aluminum can expand or contract 3/32” over a temperature change of 50° F. Any movement potential should be accounted for at the time of the assembly and installation.
RELIANCE UNIT WALL - ASSEMBLY AND SEALING INSTRUCTIONS

MEASURING & CUTTING MATERIAL

Unless otherwise noted, the details shown in these instructions reflect 1" glazing, and are representative of typical non corner conditions.

1.1 Measure ROUGH OPENING to determine FRAME WIDTH and FRAME HEIGHT dimensions. Allow 3/4" minimum clearance at jamb vertical & 1 1/4" at head frame installation.

1.2 Cut material to size.

Frame Members

Verticals
Vertical Pressure Plates
Vertical Face Covers
Vertical Pocket Filler (Non Capt.)
Vertical Pocket Filler Trim (Non Capt.)

Horizontals
Horizontal Interior Trim
Horizontal Stack

Horizontal Pocket Filler

Horizontal Pressure Plates
Horizontal Face Covers
Horizontal Pocket Filler (Non Capt.)
Horizontal Pocket Filler (Non Capt.)
Starter Sill

Reference Project Shop Drawings.
See Page 4 for Cut Lengths
See Page 4 for Cut Lengths
Mull Height
Mull Height
D.L.O.
D.L.O. minus 1/16"
D.L.O. plus 3 5/8" (jamb unit)
D.L.O. plus 2 1/4" (typ. unit)
D.L.O. plus 3 5/8" (jamb unit)
D.L.O. plus 2" (typ. unit)
D.L.O. minus 1/4"
D.L.O. minus 1/8"
D.L.O. plus 3 1/4" (jamb unit)
D.L.O. plus 1 1/2" (typ. unit)
Frame size w/ 1/4" splice joints as required

CUT TO LENGTH MATERIAL

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RELIANCE UNIT WALL - ASSEMBLY AND SEALING INSTRUCTIONS

Pressure Plate = Mull Length minus 5/16"
Face Cap = Mull Length minus 3/16"

Live Load
Starter Sill to Stack

Pressure Plate = Mull Length plus 1/32"
Face Cap = Mull Length plus 5/32"

Dead Load
Starter Sill to Stack

Pressure Plate = Mull Length plus 11/16"
Face Cap = Mull Length plus 13/16"

Stack to Stack

Pressure Plate = Mull Length plus 5/8"
Face Cap = Mull Length plus 3/8"

Stack to Head

Pressure Plate = Mull Length plus 1 1/4"
Face Cap = Mull Length plus 1 3/8"

Dead Load
Starter Sill to Head

Pressure Plate = Mull Length plus 1/4"
Face Cap = Mull Length

Live Load
Starter Sill to Head

PRESSURE PLATE / FACE CAP CUT LENGTHS
**Additional fasteners may be required to meet project specific structural requirements.**
**Additional fasteners may be required to meet project specific structural requirements.
**See Note

MULL

90° CORNER

NOTCH @ ENDS

7 1/4" HORIZONTAL REFERENCE INFORMATION

**Additional fasteners may be required to meet project specific structural requirements.

MULL

90° CORNER

NOTCH @ ENDS

8" HORIZONTAL REFERENCE INFORMATION
RELIANCE UNIT WALL - ASSEMBLY AND SEALING INSTRUCTIONS

NEAR SIDE PREPS

FAR SIDE PREPS

7" VERTICAL REFERENCE INFORMATION (CAPTURED JAMB)
ANCHOR HOLE LOCATION

Prep when stack horizontal NOT USED.

Prep @ dead load condition.

FOLLOW INSIDE OF VERTICAL LEG

1/8" FILLET
NEAR SIDE PREPS

FAR SIDE PREPS

7" VERTICAL REFERENCE INFORMATION (NON CAPTURED JAMB)
RELIANCE UNIT WALL - ASSEMBLY AND SEALING INSTRUCTIONS

7" VERTICAL REFERENCE INFORMATION (NON CAPTURED INTERMEDIATE MULLS)

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7" VERTICAL REFERENCE INFORMATION (NON CAPTURED INTERMEDIATE MULLS)

PREP WHEN STACK HORIZONTAL
NOT USED.

PREP @ DEAD LOAD CONDITION.

FOLLOW INSIDE OF VERTICAL LEG

1/8" FILLET
8" VERTICAL REFERENCE INFORMATION (CAPTURED INTERMEDIATE MULL)
ANCHOR HOLE LOCATION

Prep when stack horizontal NOT USED.

Prep @ dead load condition.

8" VERTICAL REFERENCE INFORMATION (CAPTURED O.S. 90° MULL)
RELIANCE UNIT WALL - ASSEMBLY AND SEALING INSTRUCTIONS

NEAR SIDE PREPS

FAR SIDE PREPS

8" VERTICAL REFERENCE INFORMATION (NON CAPTURED JAMB)
NOTE: Vent holes are designed for use with metal back pans which are hermetically sealed to glazing cavity openings on the back face. If the cavity is left open, or if FSK tape is used to seal the insulation to the framing, consideration must be given to the effect of vent holes at elevated structural loads during testing.

NOTE: Complete seal, water tight, all metal to metal joints within the spandrel cavity.
1. LAYOUT PARTS

Typically units are to be assembled with Female Mullion Half on the left of the unit and with the Male Mullion Half on the right of the unit (viewed from exterior of the unit). Please refer to shop drawings for proper mullion half required at left and right jamb units.

Check that all preps have been applied and located in the proper position per approved shop drawings.

2. APPLY SILICONE SEALANT

Clean and butter top of the vertical mullions and both ends of horizontals with silicone sealant per approved shop drawings.

NOTE: ALL ASSEMBLY WORK MUST BE COMPLETED IMMEDIATELY AFTER SEALANT APPLICATION. BEFORE SEALANT SKINS.

Butter both ends of the head horizontal from the front leg continuously around the perimeter including screw chase.

Butter both ends of the intermediate transom from the lower screw chase inboards to the upper screw chase.

(NOTE: Spandrel & shadow box cavity areas are to be sealed full depth of horizontal.)

Butter both ends of the transom at the front wall up to the first screw chase.

(NOTE: Spandrel & shadow box cavity areas are to be sealed full depth of horizontal.)
RUW-MA04 is attached using FS-74 1/2"-13 X 2"
(2) FSW-73 FLAT WASHER
FSW-71 LOCK WASHER
FSN-69 NUT
(1) PER LIFTING LUG

RUW-MA01 is attached using FS-289 .375 X 1 1/4"
(2) FSW-80 FLAT WASHERS
FSW-83 LOCK WASHER
FSN-81 NUT
(2) PER ANCHOR

Prep and butter tops of verticals with sealant prior to attachment of RU-640 Horizontal. (Tool sealant after RU-640 is installed)
ASSEMBLING FRAME

Position horizontal members aligning with splines with screw holes and assemble with FS-8 #14 x 1” long hex washer head Type B pt assembly screws.

When applying opposite side of mullion half, do not tighten screws until all orbitals have been applied to keep from wiping off the sealant with mullion during installation.

A RING OF SEALANT SHOULD APPEAR AROUND EVERY SCREW HEAD LOCATED IN WET AREAS. (SEE FIGURE BELOW)

THOROUGHLY SEAL OVER SCREW HEADS WHICH ARE LOCATED OUTSIDE OF THE AIR SEAL CHAMBER.
APPLY 3M™ STRUCTURAL GLAZING TAPE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS

3M™ STRUCTURAL GLAZING TAPE

3M™ STRUCTURAL GLAZING TAPE

TAPE LOCATION / APPLICATION
NOTE: Just prior to setting glass, remove remainder of VHB™ protective film & apply pressure per 3M™ recommendation to fully adhere glass.

NOTE: Side block for transit only. Use modified HP-17 (1/4" x 1/4") - Not intended for long term storage.
**RELIANCE UNIT WALL - ASSEMBLY AND SEALING INSTRUCTIONS**

**VERTICAL FACE CAP & PRESSURE PLATE LOCATING DIMENSIONS**

**TYP. INTERMEDIATE STACK**

**TYP. SILL STARTER**

**CRITICAL**: Vertical pressure plate attached with FS-322 torqued to 70 in lb, 9" o.c. & 2" from each end.

**NOTE**: Different fastener used to secure horizontal pressure plate.

**GP-50028 SWEEP GASKET (2)**
CRITICAL: Horizontal pressure plate attached with FS-325 torqued to 70 in lb, 9" o.c. & 2" from each end.

NOTE: Different fastener used to secure vertical pressure plate.

(FS-317 Pin) (1) required at vertical cap only. Location of pin to be concealed behind horizontal cap.) See Figure **

HORIZONTAL FACE CAP INSTALLATION
### 7" SYSTEM

<table>
<thead>
<tr>
<th>RU-662</th>
<th>Male Corner Mullion 90° Outside Captured</th>
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<tbody>
<tr>
<td>RU-663</td>
<td>Female Corner Mullion 90° Outside Captured</td>
</tr>
<tr>
<td>RU-632</td>
<td>Male Mullion Captured</td>
</tr>
<tr>
<td>RU-634</td>
<td>Female Mullion Captured</td>
</tr>
<tr>
<td>RU-667</td>
<td>Jamb Captured</td>
</tr>
<tr>
<td>RU-658</td>
<td>Jamb Non Captured</td>
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<tr>
<td>RU-651</td>
<td>Male Mullion Non Captured</td>
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<tr>
<td>RU-652</td>
<td>Female Mullion Non Captured</td>
</tr>
<tr>
<td>RU-653</td>
<td>Head Horizontal Non Captured</td>
</tr>
<tr>
<td>RU-637</td>
<td>Filler Trim for Head Horizontal</td>
</tr>
<tr>
<td>RU-650</td>
<td>Dead Load Sill Starter</td>
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<tr>
<td>RU-649</td>
<td>Stack Horizontal @ Stack Condition</td>
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<td>RU-644</td>
<td>Head Horizontal @ Stack Condition</td>
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<tr>
<td>RU-639</td>
<td>Sill 1&quot; Infill, Captured</td>
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<td>Standard Horizontal Captured</td>
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<td>RU-636</td>
<td>Head Horizontal Captured</td>
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<tr>
<td>RU-673</td>
<td>Sill Non Captured</td>
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<tr>
<td>RU-654</td>
<td>Standard Horizontal Non Captured</td>
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<td>RU-670</td>
<td>Dead Load Sill, Captured</td>
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<tr>
<td>RU-671</td>
<td>Dead Load Sill, Non Captured</td>
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### 8" SYSTEM

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<th>RU-762</th>
<th>Male Corner Mullion 90° Outside Captured</th>
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<tr>
<td>RU-763</td>
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<td>RU-732</td>
<td>Male Mullion Captured</td>
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<td>RU-734</td>
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<tr>
<td>RU-767</td>
<td>Jamb Captured</td>
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<tr>
<td>RU-773</td>
<td>Sill Non Captured</td>
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<tr>
<td>RU-754</td>
<td>Standard Horizontal Non Captured</td>
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<tr>
<td>RU-770</td>
<td>Dead Load Sill, Captured</td>
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<td>RU-771</td>
<td>Dead Load Sill, Non Captured</td>
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### COMMON EXTRUSIONS

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<tr>
<th>RU-642</th>
<th>Pressure Plate for 3 1/2&quot; Face Cap @ Stack, Captured</th>
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<tr>
<td>WW-1505</td>
<td>3 1/2&quot; Face Cap @ Stack Condition, Captured</td>
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<td>WW-162</td>
<td>Pressure Plate for 2 1/2&quot; Face Cap (Typ.), Captured</td>
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<tr>
<td>WW-110</td>
<td>2 1/2&quot; Face Cap @ Typical Condition, Captured</td>
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<tr>
<td>RU-641</td>
<td>Pocket Filler, Captured</td>
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### ACCESSORIES

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<th>Part No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>FS-289</td>
<td>Hex Head Bolt 3/8&quot; X 1 1/4&quot;</td>
</tr>
<tr>
<td>FSW-80</td>
<td>Flat Washer For 3/8&quot; Bolt</td>
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<tr>
<td>FSN-81</td>
<td>Nut For 3/8&quot; Bolt</td>
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<tr>
<td>FS-74</td>
<td>Hex Head Bolt 1/2&quot;-13 X 2&quot;</td>
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<tr>
<td>FSW-73</td>
<td>Flat Washer For 1/2&quot; Bolt</td>
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<td>FSW-71</td>
<td>Lock Washer For 1/2&quot; Bolt</td>
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<tr>
<td>FSN-69</td>
<td>Nut For 1/2&quot;-13 Bolt</td>
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<tr>
<td>FS-8</td>
<td>Typical Assembly Fastener</td>
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<td>FS-322</td>
<td>Vertical Pressure Plate, Pocket Filler / Chicken Head Fastener</td>
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<td>FS-325</td>
<td>Horizontal Pressure Plate Fastener</td>
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<td>FS-347</td>
<td>Adjustment Bolt 3/8&quot;-16x5&quot; Square Head Cup Point Bolt</td>
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<tr>
<td>FS-346</td>
<td>Taplock Threaded Insert 3/8&quot;-16x11/16&quot;</td>
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<tr>
<td>FS-317</td>
<td>Attachment Pin</td>
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<td>UW-465</td>
<td>Silicone Splice 4&quot;</td>
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<td>UW-466</td>
<td>Silicone Splice 2&quot;</td>
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<td>GP-492</td>
<td>Formed Silicone Boot for Sealing of 90° O.S. Corner</td>
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<td>GP-483</td>
<td>Santoprene Weather Gasket</td>
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<tr>
<td>GP-142</td>
<td>EPDM Isolator</td>
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<td>GP-50008</td>
<td>EPDM / Silicone Gasket</td>
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<td>GP-50028</td>
<td>EPDM / Silicone Weatherseal Gasket</td>
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<tr>
<td>GP-185</td>
<td>Air Seal Gasket @ Stack</td>
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<td>GP-186</td>
<td>Air Seal Gasket @ Sill</td>
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<tr>
<td>GP-484</td>
<td>1&quot; X 1/4&quot; Setting Block</td>
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<td>GP-485</td>
<td>5/16&quot; X 1/2&quot; Spacer Block</td>
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<td>HP-17</td>
<td>Edge Block Modified as Needed</td>
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<td>3M™ VHB™ SGT</td>
<td>3M Structural Glazing Tape (NOT Provided by C.B.E.)</td>
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<td>UCW-8759</td>
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<td>UCW-387</td>
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<td>UCW-6006</td>
<td>Lifting Lug Typical</td>
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<td>UCW-6012</td>
<td>Lifting Lug 90° O.S. Corner</td>
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<td>Dead Load Block</td>
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<td>8&quot; Mullion Anchor 90° O.S. Corner</td>
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<td>RU-201</td>
<td>7&quot; Sill Shear Angle</td>
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<tr>
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