Due to the diversity in state/provincial, local, and federal laws and codes that govern the design and application of architectural products, it is the responsibility of the individual architect, owner, and installer to ensure that products selected for use on projects comply with all applicable building codes and laws. U.S. Aluminum exercises no control over the use or application of its products, glazing materials, and operating hardware, and assumes no responsibility thereof.

The rapidly changing technology within the architectural aluminum products industry demands that U.S. Aluminum reserve the right to revise, discontinue or change any product line, specification or electronic media without prior written notice.

NOTE: Dimensions in parentheses ( ) are millimeters unless otherwise noted.
Other metric units shown in this publication are:
- m - meter
- Kg - kilogram
- Pa - pascal
- KPa - kilopascal
- MPa - megapascal

Project: Robert M. Isaac Municipal Court, Colorado Springs, CO

Online usalum.com  By Phone (800) 262-5151 Ext. 5305
Online crlaurence.com  By Phone (800) 421-6144 Ext. 5305
SPECIFICATIONS

SECTION 08 44 13 ALUMINUM CURTAIN WALL SYSTEMS

I. GENERAL DESCRIPTION

Work Included: Furnish all necessary materials, labor, and equipment for the complete installation of aluminum framing as shown on the drawings and specified herein. (Specifier Note: It is suggested that related items such as aluminum entrance doors, glass, and sealants be included whenever possible.)

Work Not Included: Structural support of the framing system, interior closures, and trim. (Specifier list other exclusions). Related Work Specified Elsewhere: (Specifier list).

QUALITY ASSURANCE

Drawings and specifications are based on the Series 3252 Curtain Wall Systems as manufactured by U.S. Aluminum. Whenever substitute products are to be considered, supporting technical literature, samples, drawings, and performance data must be submitted 10 days prior to bid in order to make a valid comparison of the products involved.

Test reports certified by an independent test laboratory must be made available upon request.

PERFORMANCE REQUIREMENTS

Air Infiltration: shall be tested in accordance with ASTM E283. Infiltration shall not exceed .06 CFM per square foot (.0003m3/sm2) fixed area when tested at 1.65 psf (718 Pa).

Water Infiltration: shall be tested in accordance with ASTM E331. No water penetration at test pressure of 15 psf (718 Pa).

Structural Performance: shall be tested in accordance with ASTM E283 and based on:
- Maximum deflection of L/175 of the span
- Allowable stress with a safety factor of 1.65

The system shall perform to this criteria under a windload of (Specify) psf.

System shall exceed maximum seismic lateral displacement requirements specified in section 1628.8.2 of the Uniform Building Code, 1994 edition.

Upon successful completion of the Phase I seismic testing, the curtain wall shall once again be subjected to and must successfully pass the air and water infiltration tests specified above before proceeding to Phase II testing.

Thermal Performance: Series 3252 shall be tested in accordance with NFRC. NFRC’s Condensation Resistance rating is NOT equivalent to a Condensation Resistance Factor (CRF) determined in accordance with AAMA 1503, and NFRC-100

Testing Procedures: ASTM 283, E 331, and E 330 - Laboratory performance testing. AAMA 503-08 - Newly installed curtain walls. AAMA 511-08 - Installed curtain walls after six months.

II. PRODUCTS MATERIALS

Extrusions shall be 6063-T6 alloy and temper (ASTM B221 alloy T5 temper). Fasteners, where exposed, shall be aluminum, stainless steel or zinc plated steel in accordance with ASTM A 164. Perimeter anchors shall be aluminum or steel, providing the steel is properly isolated from the aluminum. For vertical silicone glazing, system shall provide conventional glass support at horizontal and perimeter members and structural silicone support at intermediate verticals. Horizontal members and jamb configurations shall allow for pockets to receive E.P.D.M. elastomeric extruded glazing gaskets. Vertical glass spacers shall be extruded silicone compatible E.P.D.M. (Silicone compatible rubber) All materials that come in contact with the silicone should be tested for compatibility. Samples of aluminum vertical mullions should be submitted to the silicone manufacturer for adhesion evaluation.

FINISH

All exposed framing surfaces shall be free of scratches and other serious blemishes. Aluminum extrusions shall be given a caustic etch followed by an anodic oxide treatment to obtain...

(Specify one of the following):
- #11 Clear anodic coating
- #22 Dark Bronze anodic coating

High Performance Thermally Broken
- Series 3252
- Series 3252SG

_____#33 Black anodic coating

Fluoropolymer paint coating conforming with the requirements of AAMA 2605.

Color shall be (Specify a U.S. Aluminum standard color).

FABRICATION

All mullions and horizontals shall have flexible polyurethane thermal break material located on exterior side of glass plane. Exterior glazing seal gasket shall be secured by extruded aluminum pressure plates fastened to main grid members. Provisions shall be made at all sealed horizontals to weep moisture accumulation to the exterior. A cover shall be snapped over pressure plate to show only a sharp, uninterrupted exterior profile. Framing members shall provide for straight in glazing on all sides, with through sight lines and no projecting stops or face joints. Vertical and horizontal framing members shall have a nominal width of 2-1/2” (63.5). Overall depth of system shall be (Specify). System shall provide for two piece horizontal framing so that all fasteners at intersection of horizontal and vertical members will be concealed. There shall be no exposed fasteners at perimeter sections.

III. EXECUTION INSTALLATION

All glass framing shall be set in correct locations as shown in the details and shall be level, square, plumb, and in alignment with other work in accordance with the manufacturer’s installation instructions and approved shop drawings. All joints between framing and the building structure shall be sealed in order to secure a watertight installation.

PROTECTION AND CLEANING

After installation the General Contractor shall adequately protect exposed portions of aluminum surfaces from damage by grinding and polishing compounds, plaster, lime, acid, cement or other contaminants. The General Contractor shall be responsible for final cleaning. Per AAMA 609 and 610.
Series 3252 Curtain Wall System brings ultra high thermal performance to your curtain wall options. Series 3252 is for 1” (25) insulating double pane glazing, and Series 3252SG combines the horizontals mullions of the 3252 with structural silicone glazed vertical mullions.

<table>
<thead>
<tr>
<th>SERIES 3252</th>
<th>WIDTH</th>
<th>DEPTH*</th>
<th>GLAZING INFILL</th>
<th>APPLICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>3252</td>
<td>2-1/2” (63.5)</td>
<td>7” (177.8)</td>
<td>1” (25) and/or 1/4” (6)</td>
<td>Low-Rise to Mid-Rise Buildings Where Exterior Glazing is Required</td>
</tr>
<tr>
<td>3252SG</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Other depths available upon request

** These formulae do not take into account glass tolerances. Consult glass manufacturer before ordering glass.
Special Features

- Extruded Aluminum Mullion Anchors
- Extruded Shear Blocks are Furnished to Ensure Extra Strong Horizontal to Vertical Joinery
- Injection Molded End Dams and Closure Plates Used for Controlling Water Infiltration

Complementing the efficiency of insulating glass, Series 3252 Curtain Wall Systems are thermally broken by a continuous Thermal Spacer interlocked with pressure plates and adds our Fill and Debridge Technology. The 3252 uses one Fill and Debridge pocket along with the Thermal Spacer, providing two Thermal Break Points. Dual colors can be achieved by specifying different finishes for the exterior face covers and interior mullions. Two piece horizontals and extruded Shear Blocks allow for a concealed horizontal to vertical joinery without exposed screws. These joint intersections also have concealed injection molded End Dams for controlling any infiltrated water.

NOTE: To accelerate installation times with pinpoint accuracy of Horizontal Shear Blocks to Curtain Wall Mullions see pages 56-P1 and 57-P1.
CURTAIN WALLS

Typical Details

VERTICAL, HORIZONTAL MULLIONS AND INSIDE, OUTSIDE CORNERS FOR 1" (25) GLAZING

NOTE: Part numbers shown are available in 24' (7.3 m) stock lengths. Visit usalum.com for more information.

Top and Bottom Anchors
AP960 @ Outside 90 Degree
AP975 @ Inside 90 Degree
5' (127) Back Member

High Performance Thermally Broken
- Series 3252
- Series 3252SG

Captured Vertical Glazed Curtain Wall
Structural Silicone Vertical Glazed Curtain Wall

Notes: The figures are not to scale.
Typical Details

OPEN BACK AND TUBULAR HORIZONTAL MULLIONS FOR 1" (25) GLAZING

NOTE: Part numbers shown are available in 24' (7.3 m) stock lengths. Visit usalum.com for more information.

TYPICAL ELEVATION

Tubular Horizontals
Top and Bottom Anchors
AP965 @ Captured Vertical
AP995 @ Butt Glaze Vertical
AP975 @ Jambs (Captured)

Open Back Horizontals
Top and Bottom Anchors
AP965 @ Captured Vertical
AP995 @ Butt Glaze Vertical
AP975 @ Jambs (Captured)

HIGH PERFORMANCE THERMALLY BROKEN
• Series 3252
• Series 3252SG

SERIES 3252
Captured Vertical Glazed Curtain Wall

SERIES 3252SG
Structural Silicone Vertical Glazed Curtain Wall

NOTE: Tubular Horizontals Must be Used When Span Exceeds 6'-0" (1.83 m) or if Deadload Exceeds 250 lbs. (113.4 Kg).

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CURTAIN WALLS

Typical Details

1" (25) TO 1/4" (6) TRANSITION GLAZING
5" (127) Back Member Shown; Other Sizes Available Upon Request.

NOTE: Part numbers shown are available in 24' (7.3 m) stock lengths.
Visit usalum.com for more information.

High Performance Thermally Broken
• Series 3252
• Series 3252SG

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THERMAL ENTRANCE WITH FLUSH DOOR ADAPTOR

Series 3252 Curtain Wall Shown With Series 400-T Medium Stile Thermal Entrance Door.


NOTE: 5" Open Back and Tubular Horizontals Shown. Other Depth Open Back Horizontals and Tubular Horizontals are Similar.

NOT TO SCALE
Typical Details

THERMAL ENTRANCE WITH SUB-FRAME

NOTE: 5" Open Back and Tubular Horizontals Shown. Other Depth Open Back Horizontals and Tubular Horizontals are Similar.
Windload Charts

CAPTURED VERTICAL MULLIONS
FOR 1" (25) GLAZING

<table>
<thead>
<tr>
<th>Mullion Height in Feet (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
</tr>
<tr>
<td>(1.5)</td>
</tr>
<tr>
<td>(2)</td>
</tr>
<tr>
<td>(2.5)</td>
</tr>
<tr>
<td>(3)</td>
</tr>
<tr>
<td>(3.5)</td>
</tr>
<tr>
<td>(4)</td>
</tr>
<tr>
<td>(4.5)</td>
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</tbody>
</table>

Mullion Spacing in Feet (meters)

<table>
<thead>
<tr>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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</thead>
<tbody>
<tr>
<td>PT905</td>
<td>Ixx = 6.261</td>
<td>Sxx = 1.978</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

CURVE A = 15 PSF (718 Pa)
CURVE B = 20 PSF (957 Pa)
CURVE C = 25 PSF (1197 Pa)
CURVE D = 30 PSF (1436 Pa)
CURVE E = 40 PSF(1915 Pa)

SERIES 3252
Captured Glazed Curtain Wall

SERIES 3252SG
Structural Silicone Vertical Glazed Curtain Wall

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Deadload Charts
OPEN BACK HORIZONTAL MULLIONS
FOR 1" (25) GLAZING

Calculated using glass weights of:
Glass Weight @ 6.5 lbs/sf

TUBULAR HORIZONTAL MULLIONS
FOR 1" (25) GLAZING

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Online crlaurence.com  By Phone (800) 421-6144 Ext. 5305
## Curtains Walls

### Accessories

#### FOR 5" (127) MULLION DEPTHS

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DETAIL</th>
<th>DESCRIPTION</th>
<th>PKG. QTY.</th>
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<tbody>
<tr>
<td>AP955</td>
<td><img src="image1" alt="AP955" /></td>
<td>Intermediate Shear Block. (Includes screws)</td>
<td>20</td>
</tr>
<tr>
<td>AP926</td>
<td><img src="image2" alt="AP926" /></td>
<td>Shear Block for Inside and Outside Corners. (Includes screws)</td>
<td>20</td>
</tr>
<tr>
<td>AP975</td>
<td><img src="image3" alt="AP975" /></td>
<td>Wall Jamb Anchor at Head and Sill for PT905</td>
<td>6</td>
</tr>
<tr>
<td>AP965</td>
<td><img src="image4" alt="AP965" /></td>
<td>Intermediate Vertical Anchor at Head and Sill for PT905</td>
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</tr>
<tr>
<td>AP995</td>
<td><img src="image5" alt="AP995" /></td>
<td>Intermediate Vertical Anchor at Head and Sill for CW935</td>
<td>12</td>
</tr>
<tr>
<td>AP960</td>
<td><img src="image6" alt="AP960" /></td>
<td>Outside 90 Degree Corner Anchor at Head and Sill for CW960</td>
<td>10</td>
</tr>
<tr>
<td>SL935</td>
<td><img src="image7" alt="SL935" /></td>
<td>Mullion Splice Sleeve for CW935</td>
<td>12</td>
</tr>
<tr>
<td>SL945</td>
<td><img src="image8" alt="SL945" /></td>
<td>Mullion Splice Sleeve for PT905</td>
<td>12</td>
</tr>
<tr>
<td>SL960</td>
<td><img src="image9" alt="SL960" /></td>
<td>Outside 90 Degree Corner Mullion Splice Sleeve for CW960</td>
<td>5</td>
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<tr>
<td>CP900</td>
<td><img src="image10" alt="CP900" /></td>
<td>Closure Plate for Captured Mullions</td>
<td>50</td>
</tr>
<tr>
<td>CP951</td>
<td><img src="image11" alt="CP951" /></td>
<td>Closure Plate for Butt Glaze Mullions</td>
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</tr>
<tr>
<td>CP953</td>
<td><img src="image12" alt="CP953" /></td>
<td>Closure Plate For Outside Corner</td>
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<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DETAIL</th>
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<tr>
<td>HD975</td>
<td><img src="image13" alt="HD975" /></td>
<td>End Dam for Captured Mullions</td>
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<tr>
<td>WD900</td>
<td><img src="image14" alt="WD900" /></td>
<td>End Dam for Butt Glaze Mullions</td>
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<tr>
<td>WD961</td>
<td><img src="image15" alt="WD961" /></td>
<td>Water Dam For Outside Corner</td>
<td>10</td>
</tr>
<tr>
<td>CW368</td>
<td><img src="image16" alt="CW368" /></td>
<td>Temporary Glass Retainer for Captured Mullions</td>
<td>50</td>
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<tr>
<td>RG935</td>
<td><img src="image17" alt="RG935" /></td>
<td>Temporary Glass Retainer for Butt Glaze. Patent No. D295,952</td>
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<tr>
<td>SB925</td>
<td><img src="image18" alt="SB925" /></td>
<td>Setting Block for 1/4&quot; (6) Glass; 4&quot; (101.6) Long</td>
<td>100</td>
</tr>
<tr>
<td>AW900</td>
<td><img src="image19" alt="AW900" /></td>
<td>Edge Block for 1/4&quot; (6) Glass; 2-1/2&quot; (63.5) Long</td>
<td>50</td>
</tr>
<tr>
<td>SB910</td>
<td><img src="image20" alt="SB910" /></td>
<td>Setting Block for 1&quot; (25) Glass; 4&quot; (101.6) Long</td>
<td>100</td>
</tr>
<tr>
<td>AW901</td>
<td><img src="image21" alt="AW901" /></td>
<td>Edge Block for 1&quot; (25) Glass; 2-1/2&quot; (63.5) Long</td>
<td>100</td>
</tr>
<tr>
<td>NP430</td>
<td><img src="image22" alt="NP430" /></td>
<td>Exterior Gasket</td>
<td>250' Roll</td>
</tr>
<tr>
<td>NP420</td>
<td><img src="image23" alt="NP420" /></td>
<td>Interior Gasket</td>
<td>250' Roll</td>
</tr>
<tr>
<td>SP450</td>
<td><img src="image24" alt="SP450" /></td>
<td>Spacer Gasket for Butt Glaze</td>
<td>250' Roll</td>
</tr>
<tr>
<td>MS222</td>
<td><img src="image25" alt="MS222" /></td>
<td>Screw for Pressure Bar 1/4&quot;-20 x 1&quot; (25) HWHCS with SRG5</td>
<td>200</td>
</tr>
</tbody>
</table>

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