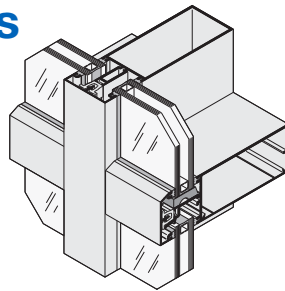


CURTAIN WALLS

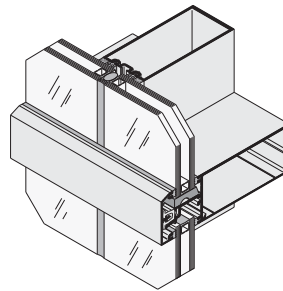
Table of Contents

Thermally Isolated

- Series 4500
- Series 4500SG



SERIES 4500
Captured Vertical
Glazed Curtain Wall



SERIES 4500SG
Structural Silicone Vertical
Glazed Curtain Wall

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TECHNICAL DATA	03-J7
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TYPICAL DETAILS	06-J7 thru 16-J7
WINDLOAD CHARTS.....	17-J7 thru 22-J7
DEADLOAD CHARTS	23-J7
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Project: Kaiser Medical Center, Downey, CA

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 | |

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Specifications

SECTION 08 44 13 ALUMINUM CURTAIN WALL SYSTEMS

Thermally Isolated

- Series 4500
- Series 4500SG

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 4500 Curtain Wall System 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 E 283. Infiltration shall not exceed .06 CFM per square foot (.0003m³/sm²) of fixed area when tested at 6.24 psf (300 Pa).

Water Infiltration: shall be tested in accordance with ASTM E 331. No water penetration at test pressure of 20 psf (958 Pa).

Structural Performance: shall be tested in accordance with ASTM E 330 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 4500 shall be tested 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-T5 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. Glazing gaskets shall be E.P.D.M. elastomeric extrusions.

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
- ____ #33 Black anodic coating

A Fluoropolymer paint coating conforming with the requirements of AAMA 2605. Color shall be *(Specify a U.S. Aluminum standard color).*

FABRICATION

Framing members shall provide for straight-in glazing on all sides with through sight lines and no projecting stops or face joints. Glass and panel framing shall be two part construction

consisting of a back member and face section. The system shall provide for complete thermal isolation. Vertical and horizontal framing members shall have a nominal face dimension of 2-1/4" (57.2). Overall depth shall be *(Specify)*.

All exterior and interior members shall be internally joined with a non-reversible and non-conductive injection molded thermoplastic connector capable of withstanding a direct pull of not less than 350 pounds (159 kg) each. The system shall have an integral extruded internal flashing for the head and all intermediate horizontals to provide continuous flashing of any infiltrated water to the exterior through pressure relieved horizontal weep holes.

Face clips shall be such a design as to provide for the exterior face member to be engaged by pushing it straight into the clip. The face clips shall be designed so they can be easily removed for deglazing.

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.

CURTAIN WALLS

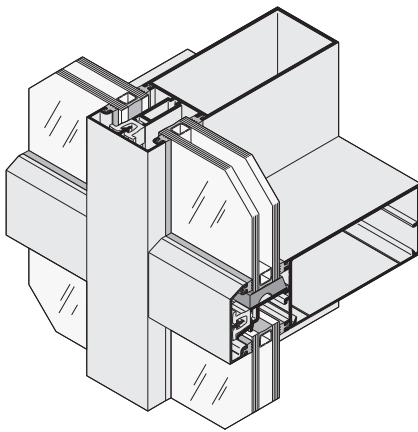
Technical Data

Thermally Isolated

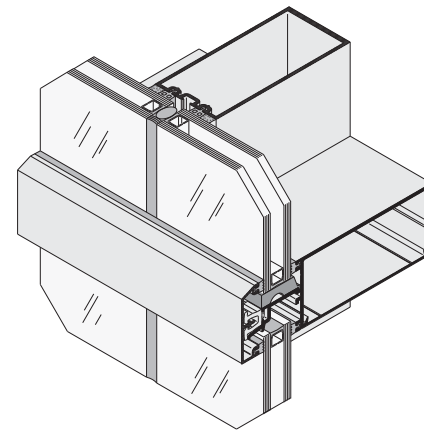
- Series 4500
- Series 4500SG

The Series 4500 and 4500SG Curtain Walls feature pressure relieved horizontals with a unique, integral **UNiflash™** System to literally sweep infiltrated water to the exterior. **UNiflash™** eliminates the secondary operation of installing rigid vinyl internal flashing in horizontals as required by similar systems. Exterior and interior members are internally joined with a non-conductive injection molded thermoplastic connector providing total thermal isolation which allows superior thermal performance. Dual colors can be achieved by specifying different finishes for exterior face members and interior mullions. The system features either stick or panel type erection with no exposed joint fasteners.

Series 4500SG is offered in stick or panel erected systems combining the horizontal members of Series 4500 with structural silicone glazed vertical mullions. The two-sided silicone system creates the appearance of a glass wall with horizontal feature strips.



SERIES 4500
Captured Vertical
Glazed Curtain Wall



SERIES 4500SG
Structural Silicone Vertical
Glazed Curtain Wall

SERIES	FACE WIDTH	BACK MEMBER DEPTH	OVERALL DEPTH	GLAZING INFILL	GLAZING METHOD	APPLICATIONS
4500 4500SG	2-1/4" (57.2)	4" (101.6) 5" (127) 8" (203.2)	6" (152.4) 7" (177.8) 10" (254)	1/4" (6) or 1" (25)	Exterior	Low to Mid-Rise Buildings Where Exterior Glazing is Desired

GLASS SIZES*

Glass Width and Glass Height

= Daylight Opening + 1" (25.4)

Refer to Details for Glass Bites at Structural Silicone Mullions

* This formula does not take into account glass tolerances. Consult glass manufacturer before ordering glass.

USA Patent No. 5,839,236; UK Patent No. 9802018.3; Canada Patent No. 2,228,181

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CURTAIN WALLS

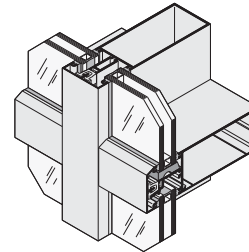
Special Features

Injection Molded End Dams at vertical to horizontal joints ensure any moisture that gets in the system is flushed out. For more information on accessories, see pages 24-J7 through 29-J7.

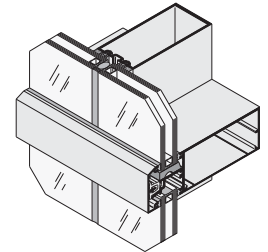
NOTE: To accelerate installation times with pinpoint accuracy of Horizontal Shear Blocks to Curtain Wall Mullions see pages 56-P1 and 57-P1.

Thermally Isolated

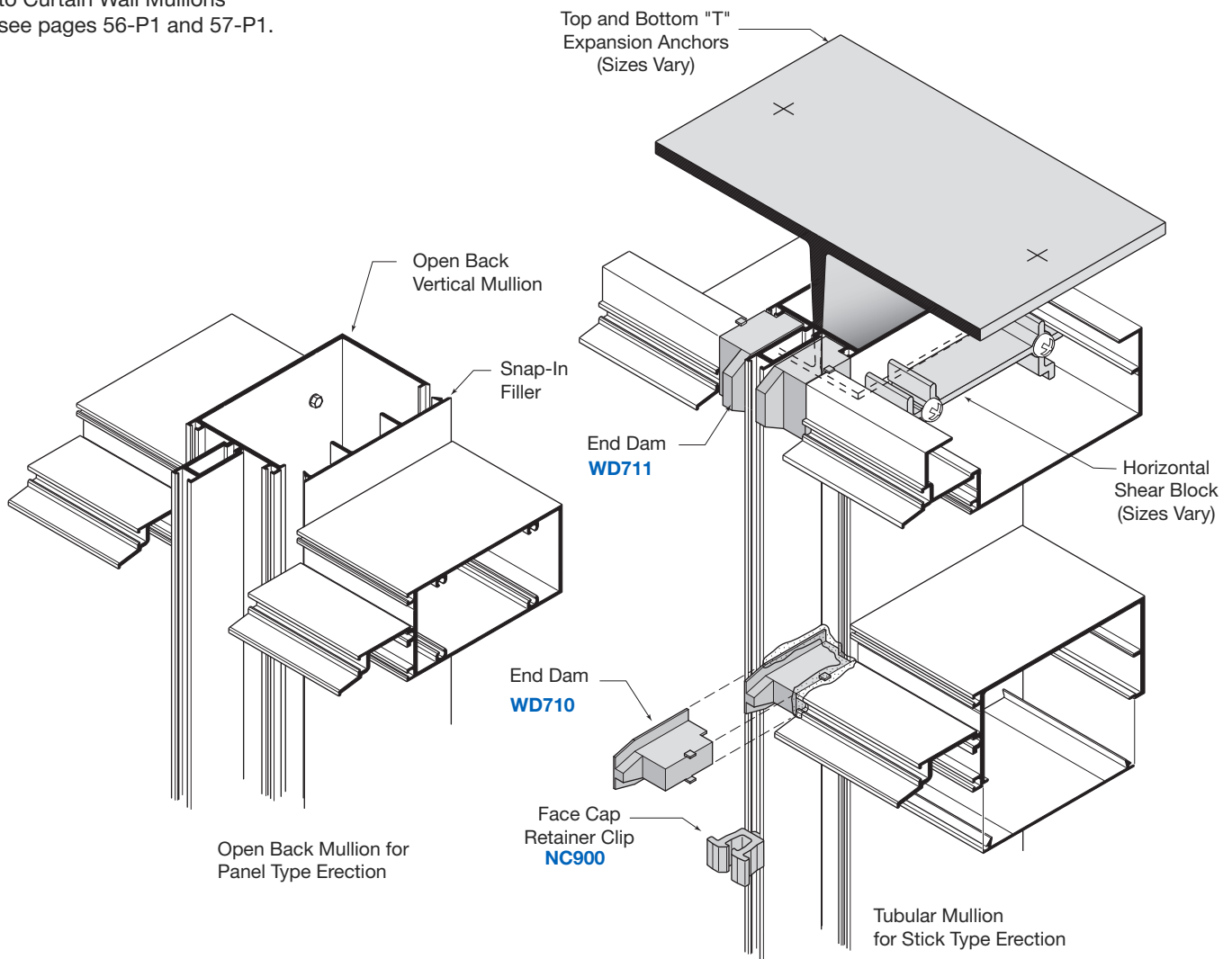
- Series 4500
- Series 4500SG



SERIES 4500
Captured Vertical
Glazed Curtain Wall



SERIES 4500SG
Structural Silicone Vertical
Glazed Curtain Wall

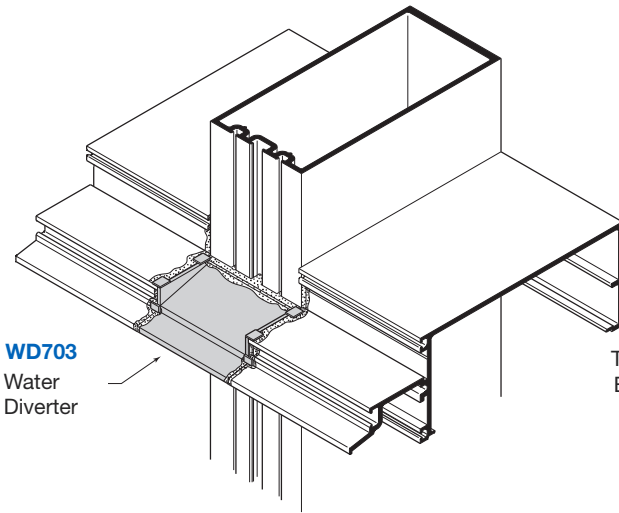


The two-piece vertical adds the versatility of screw race joinery and panel installation for window wall applications. A tubular horizontal attaches to the vertical and filler plate through screw splines. Open back head and sill horizontals allow for easy access for anchorage.

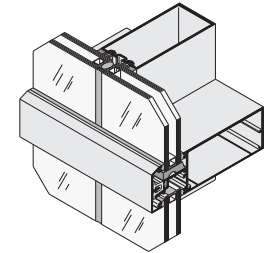
CURTAIN WALLS

Special Features

Thermally Isolated • Series 4500SG



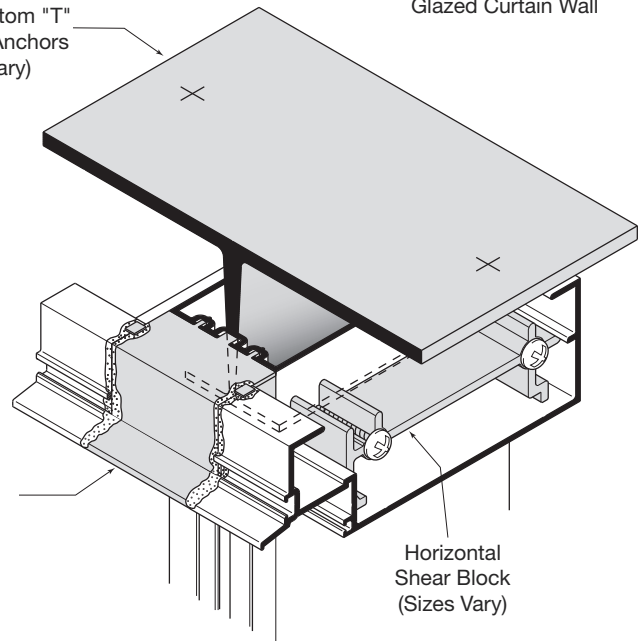
WD703
Water Diverter



SERIES 4500SG
Structural Silicone Vertical Glazed Curtain Wall

Injection Molded Water Diverters continue the patented integral **UNiflash™** design in the silicone glazed system. See page 28-J7 for additional information.

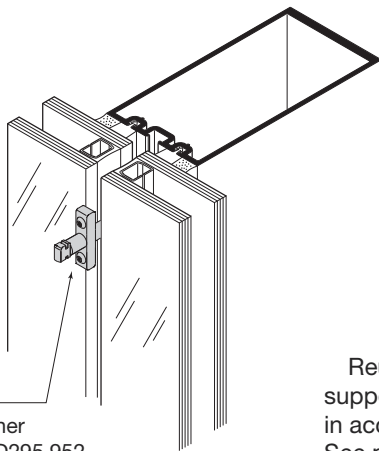
Top and Bottom "T" Expansion Anchors (Sizes Vary)



WD705
Water Diverter (Sill Similar)

Horizontal Shear Block (Sizes Vary)

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



RG700
Twist-In Temporary Glass Retainer
Patent No. D295,952

Reusable Twist-In Temporary Glass Retainers are used to support the glass until the structural silicone has fully cured in accordance with silicone manufacturer's recommendations. See page 28-J7 for additional information.

GLAZING OPTIONS

GLAZING	EXTERIOR GASKETS	INTERIOR GASKETS	POCKET REDUCER	HORIZONTAL FACE CAPS	VERTICAL FACE CAPS	SETTING BLOCK
1/4" (6)	NP726	NP716	TW709	TW917	TW912	SB725
1" (25)	NP726	NP716		TW917	TW912	SB710

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CURTAIN WALLS

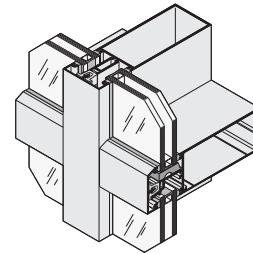
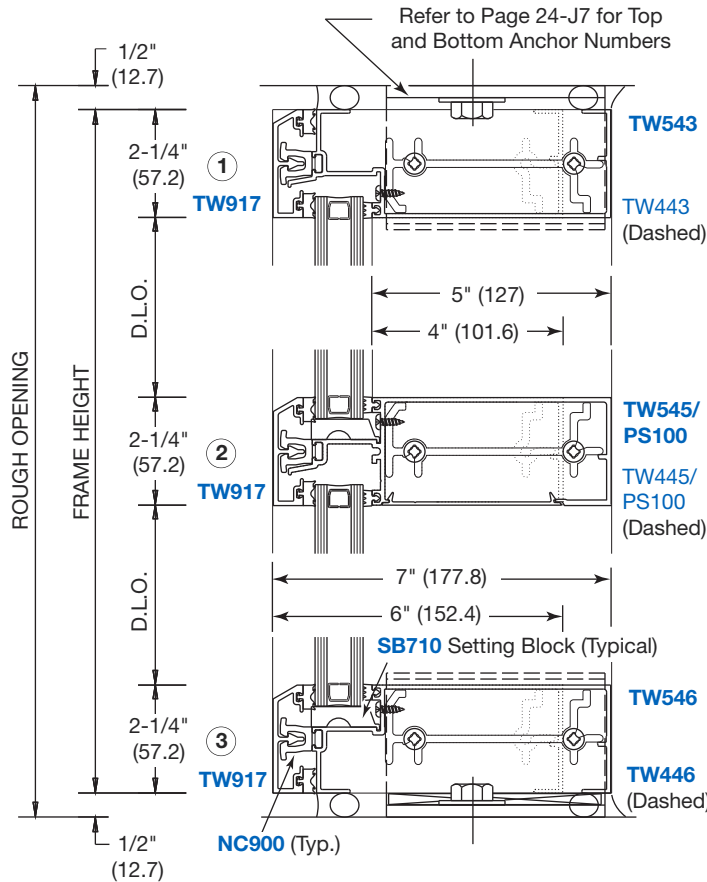
Typical Details

SHEAR BLOCK ASSEMBLY FOR 1" (25) GLAZING

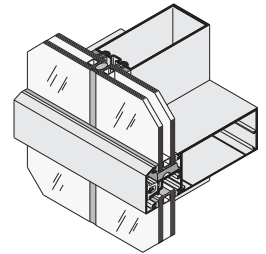
Thermally Isolated

- Series 4500
- Series 4500SG

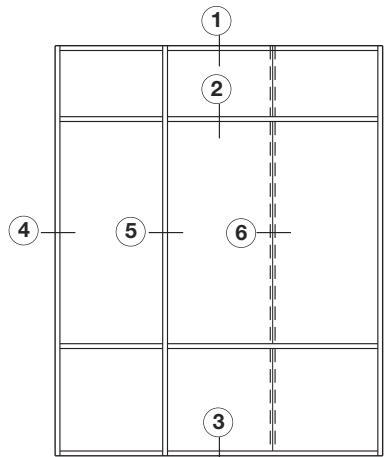
7" (177.8) System in Bold
6" (152.4) System Dashed



SERIES 4500
Captured Vertical
Glazed Curtain Wall



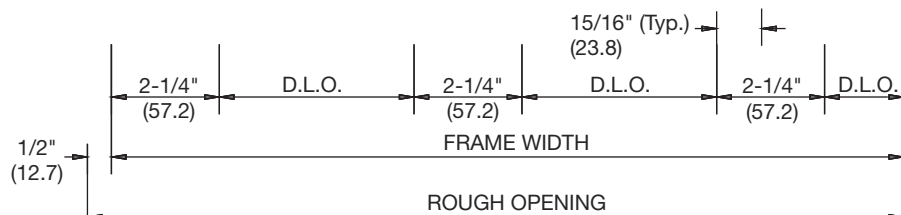
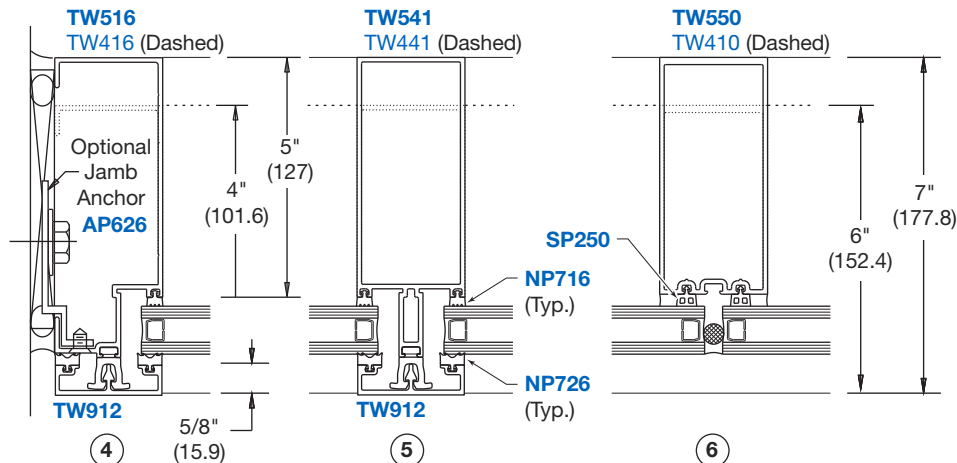
SERIES 4500SG
Structural Silicone Vertical
Glazed Curtain Wall



TYPICAL ELEVATION

AP531
Shear Block
(Typical
@ 5" [127])

AP431 (Dash)
Shear Block
(Typical
@ 4" [101.6])



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CURTAIN WALLS

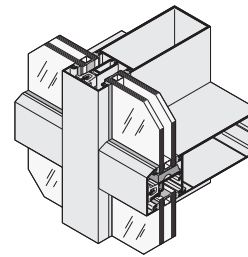
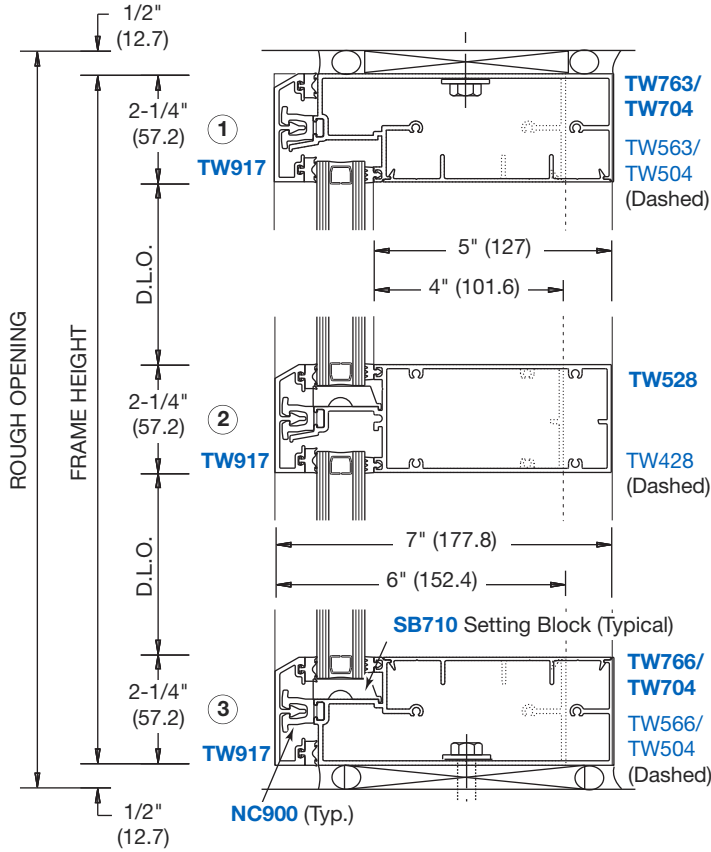
Typical Details

PANEL ASSEMBLY FOR 1" (25) GLAZING

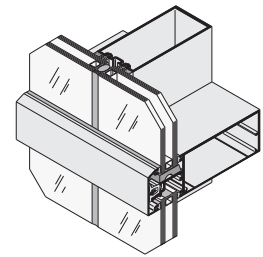
Thermally Isolated

- Series 4500
- Series 4500SG

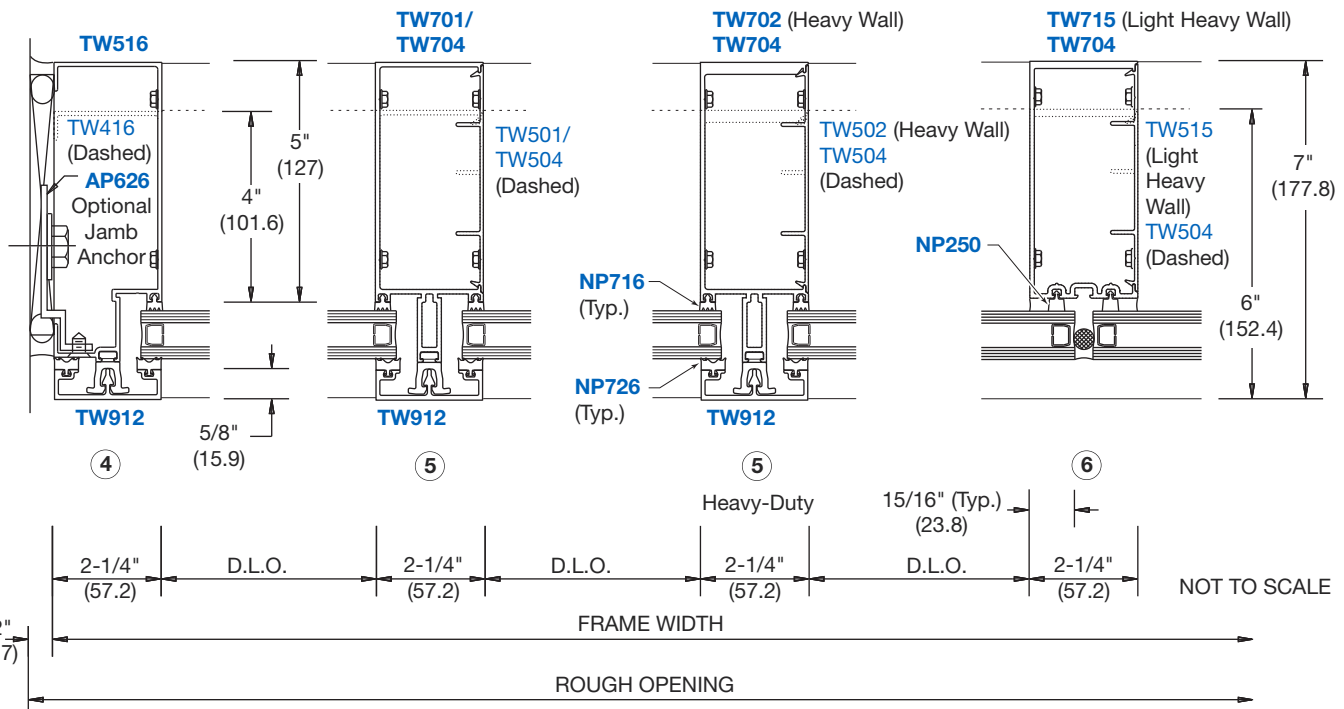
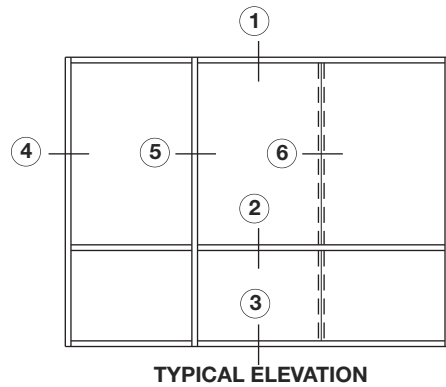
7" (177.8) System in Bold
6" (152.4) System Dashed



SERIES 4500
Captured Vertical
Glazed Curtain Wall



SERIES 4500SG
Structural Silicone Vertical
Glazed Curtain Wall



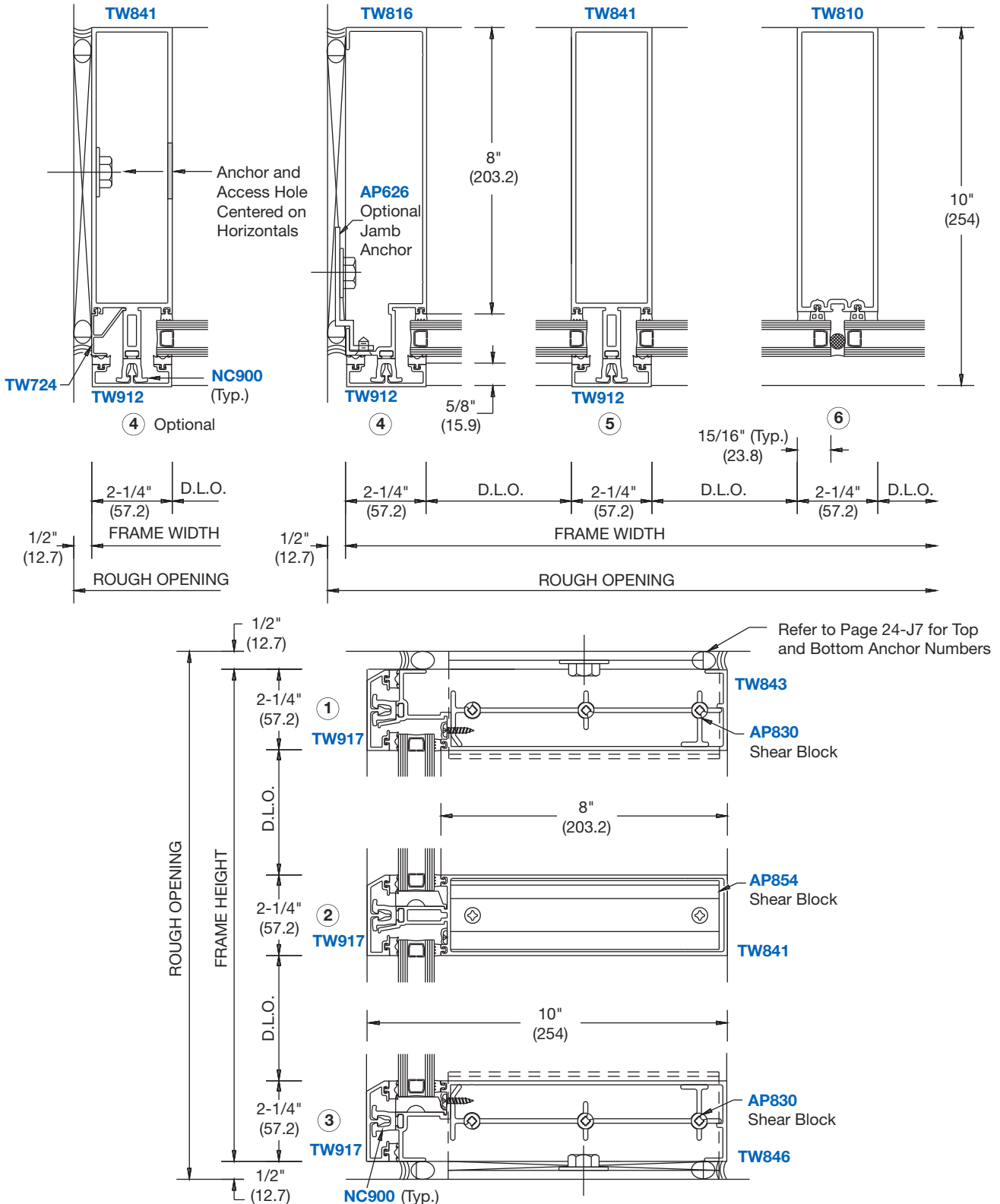
CURTAIN WALLS

Typical Details

Thermally Isolated

HIGH PERFORMANCE "SUPER MULLION" FOR 1" (25) GLAZING

- Series 4500
- Series 4500SG



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CURTAIN WALLS

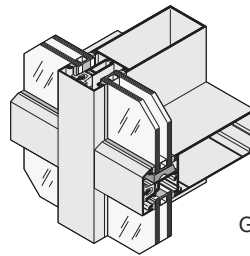
Typical Details

90 DEGREE CORNERS

Thermally Isolated

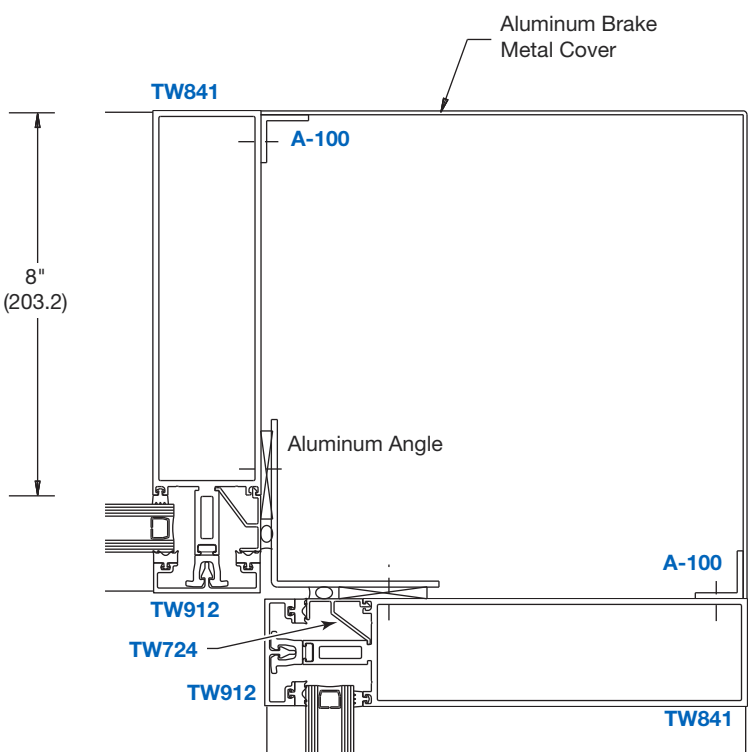
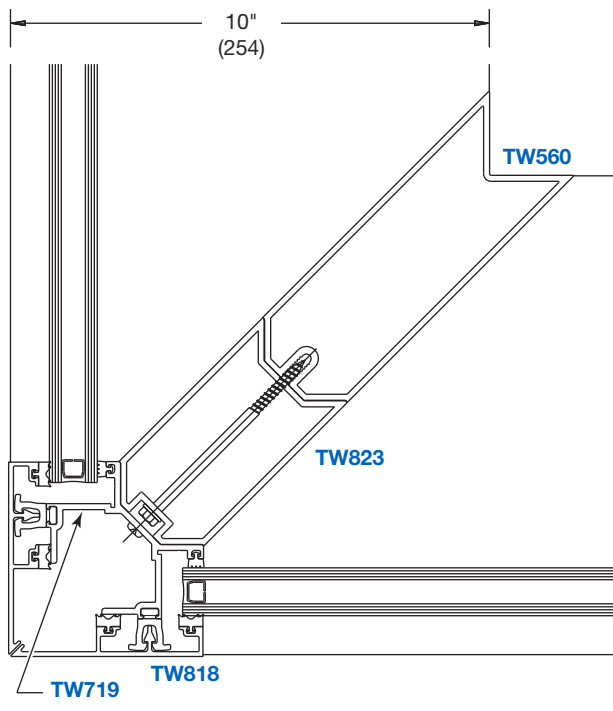
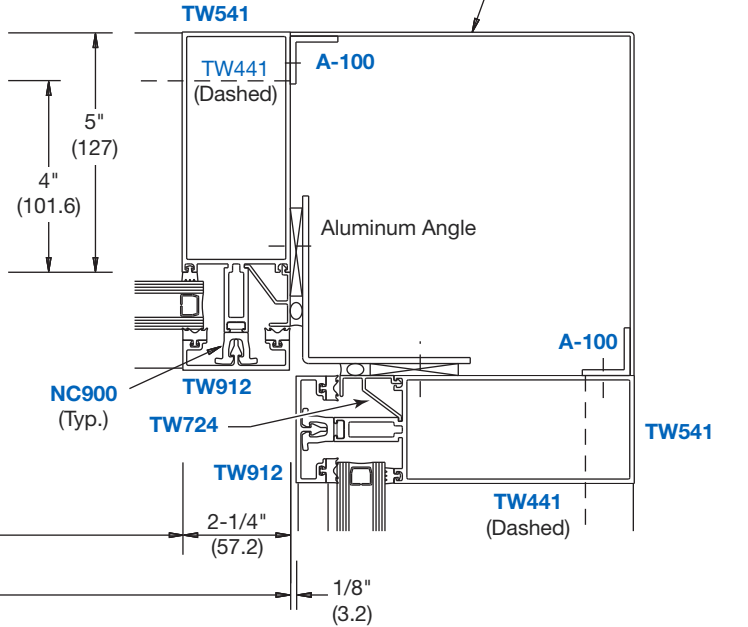
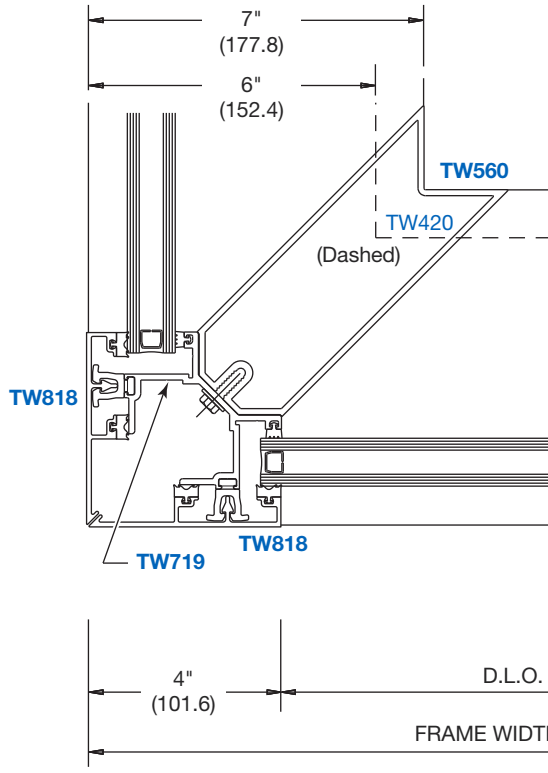
• Series 4500

7" (177.8) and 10" (254)
System in Bold
6" (152.4) System Dashed



SERIES 4500
Captured Vertical
Glazed Curtain Wall

Aluminum Brake
Metal Cover



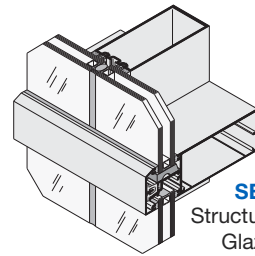
NOT TO SCALE

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CURTAIN WALLS

Typical Details

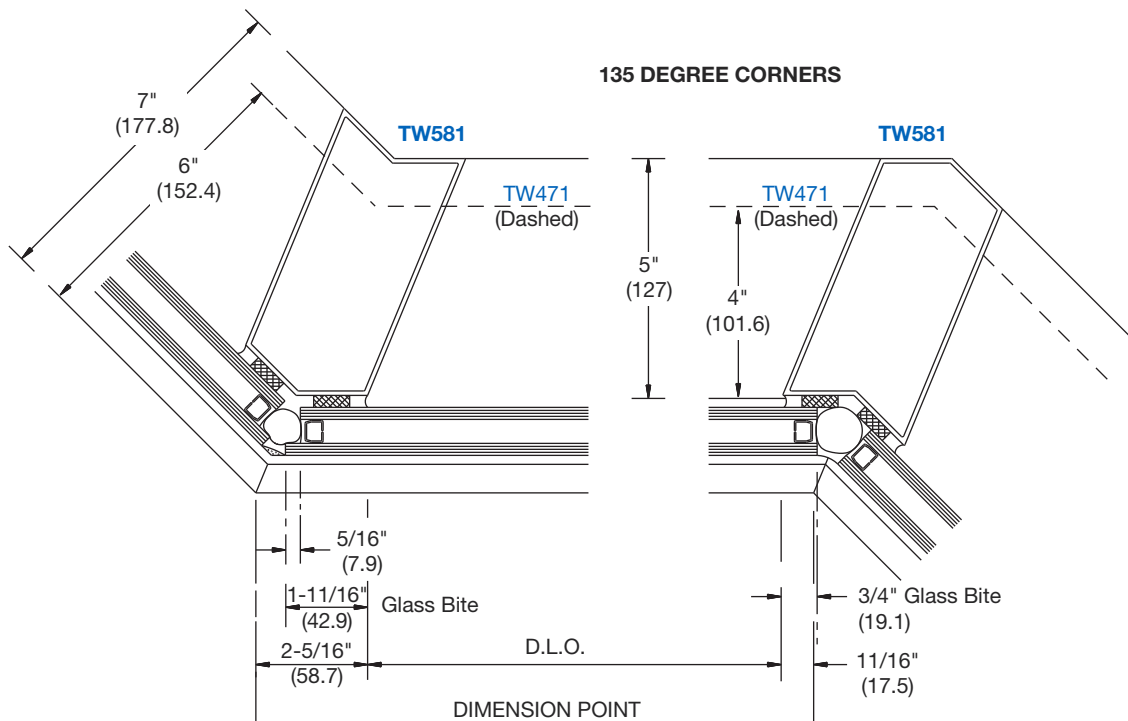
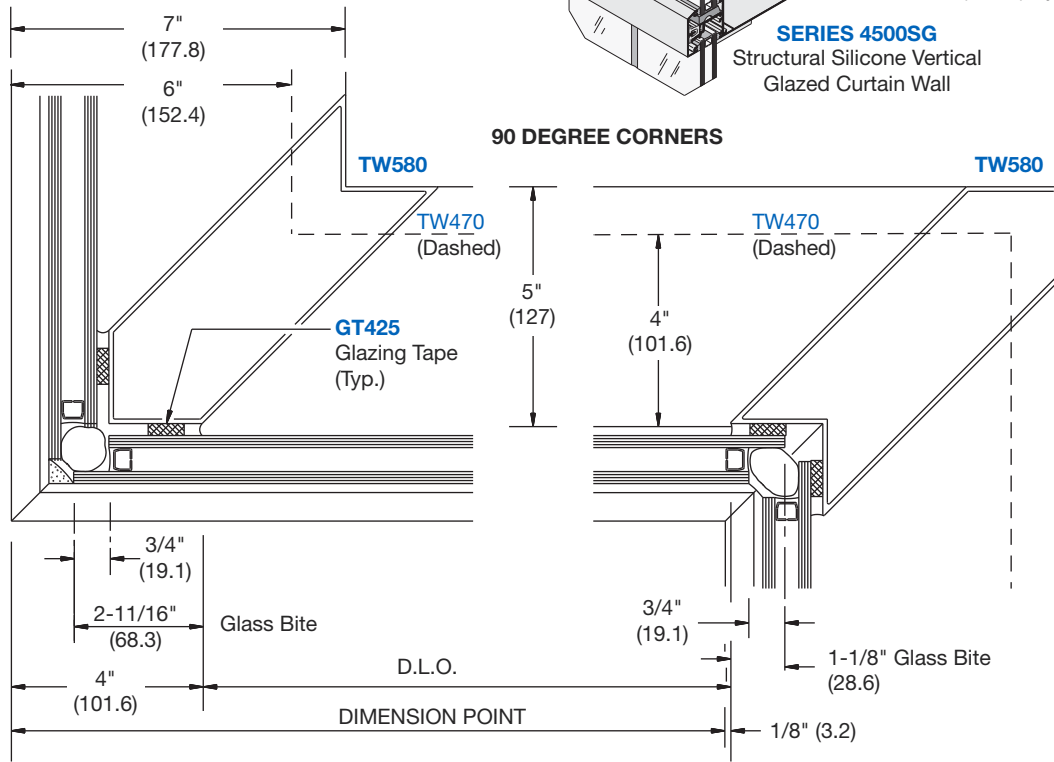
STRUCTURAL SILICONE GLAZED CORNER CONDITIONS FOR 1" (25) GLAZING



Thermally Isolated • Series 4500SG

7" (177.8) System in Bold
6" (152.4) System Dashed

SERIES 4500SG
Structural Silicone Vertical
Glazed Curtain Wall



NOT TO SCALE

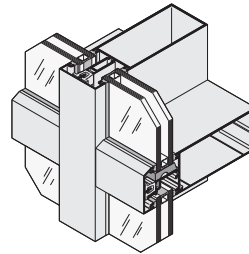
CURTAIN WALLS

Typical Details

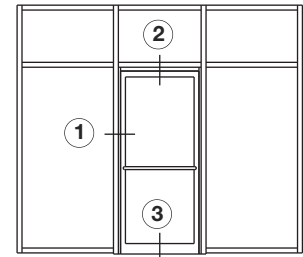
DOUBLE ACTING CENTER HUNG DOORS AND FRAMING - 1" (25) GLAZING

Thermally Isolated • Series 4500

7" (177.8) System in Bold
6" (152.4) System Dashed

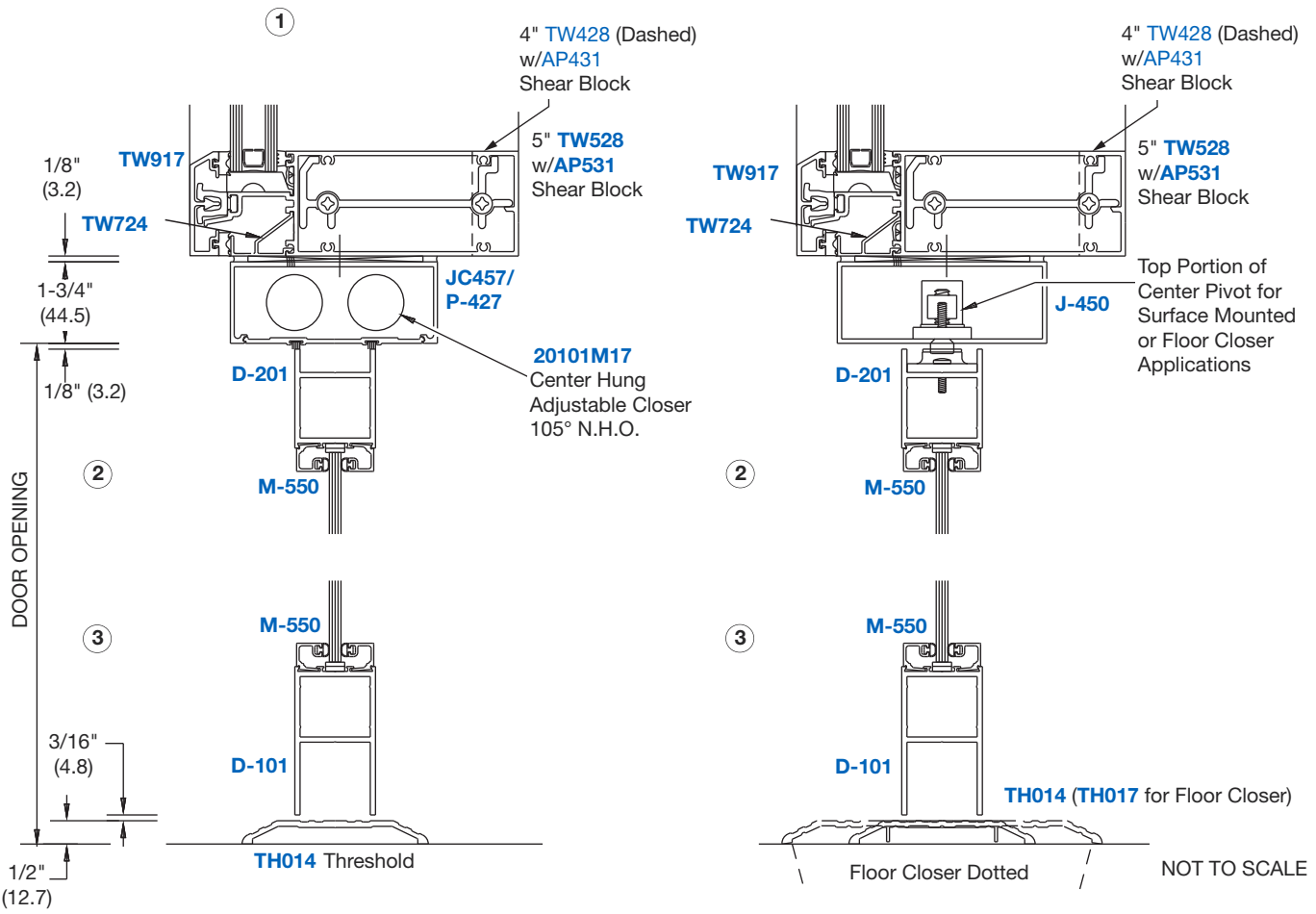
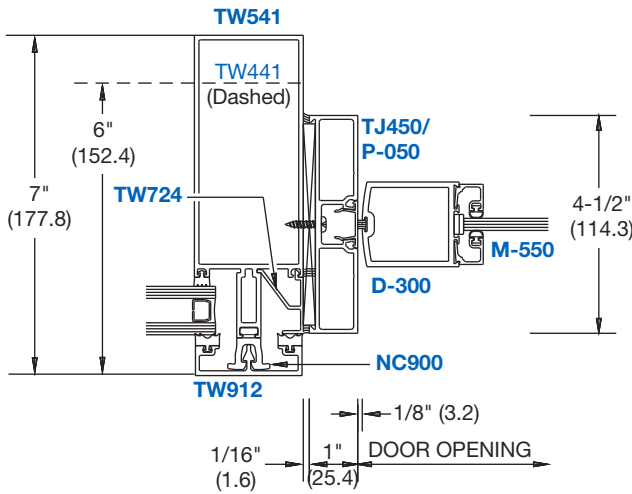


SERIES 4500
Captured Vertical
Glazed Curtain Wall



TYPICAL ELEVATION

NOTE: 5" (127) Back Members Shown;
4" (101.6) and 8" (203.2)
Members Similar



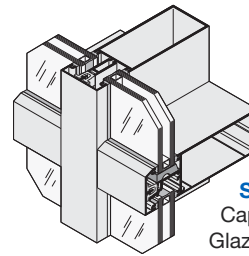
CURTAIN WALLS

Typical Details

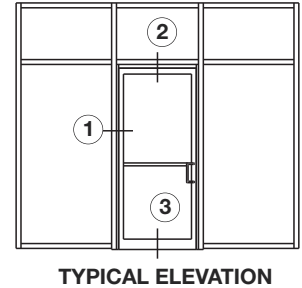
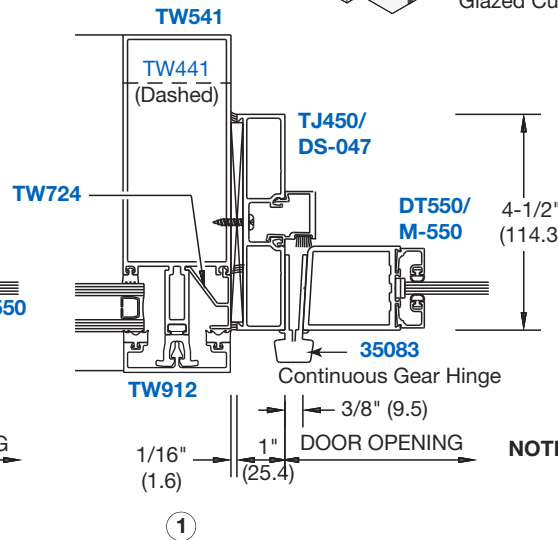
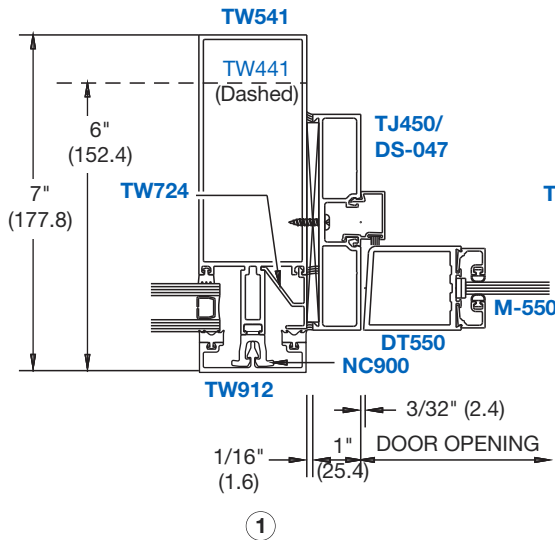
OFFSET PIVOT OR BUTT HUNG DOORS AND FRAMING - 1" (25) GLAZING

Thermally Isolated • Series 4500

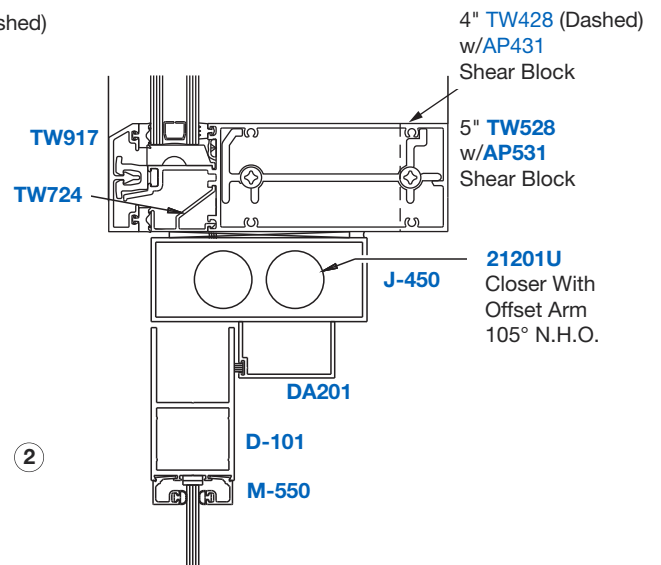
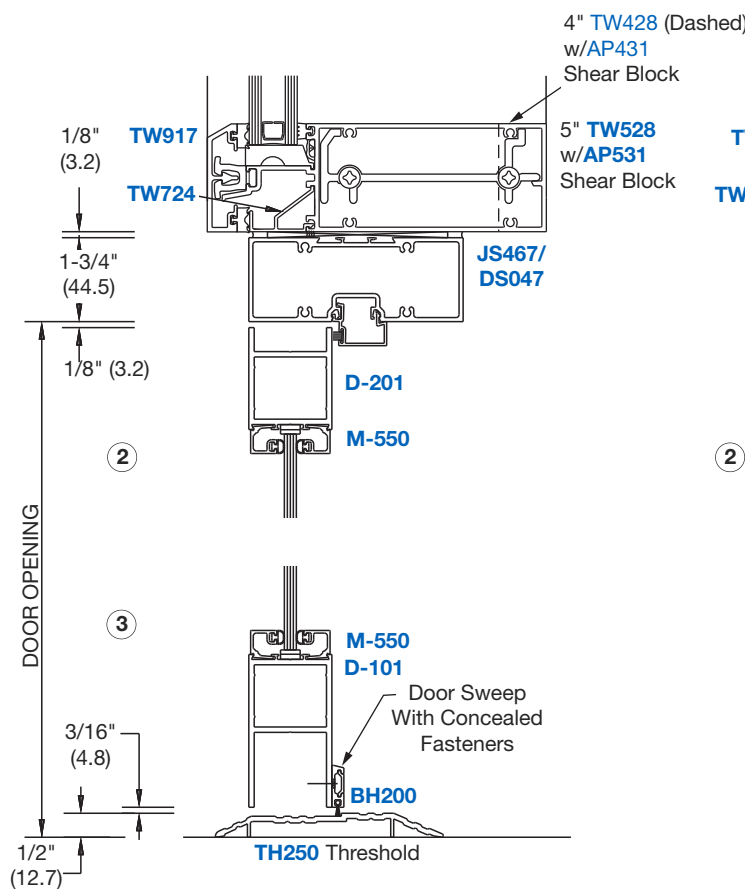
7" (177.8) System in Bold
6" (152.4) System Dashed



SERIES 4500
Captured Vertical
Glazed Curtain Wall



NOTE: 5" (127) Back Members Shown;
4" (101.6) and 8" (203.2)
Members Similar



NOT TO SCALE

CURTAIN WALLS

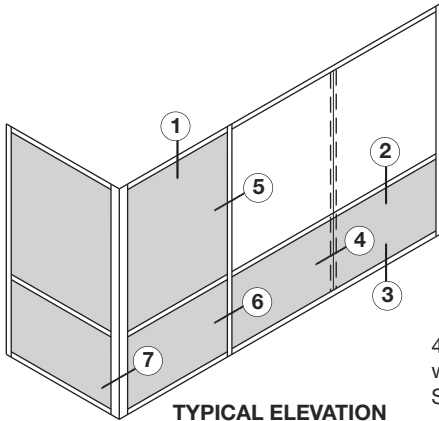
Typical Details

1" (25) TO 1/4" (6) TRANSITION GLAZING

Thermally Isolated

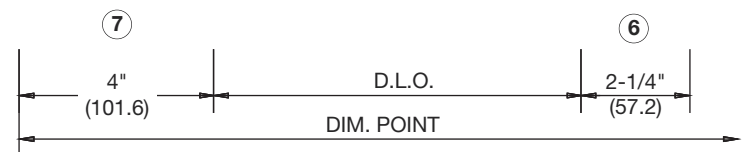
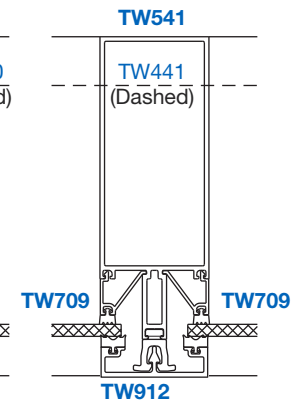
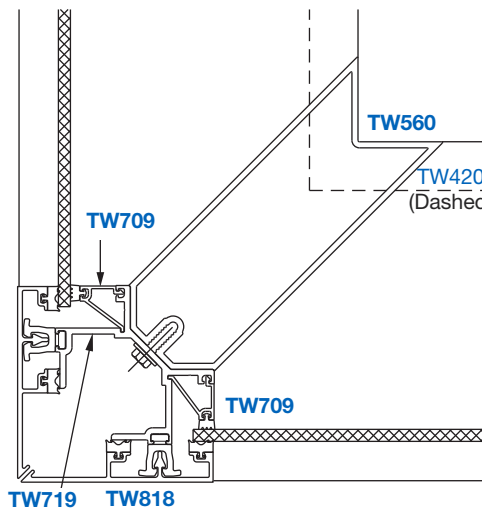
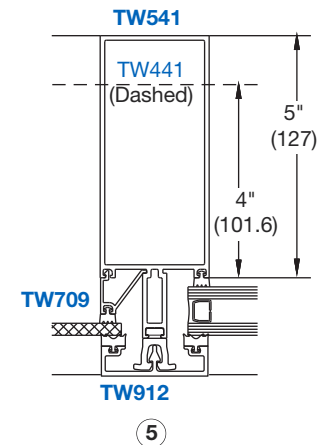
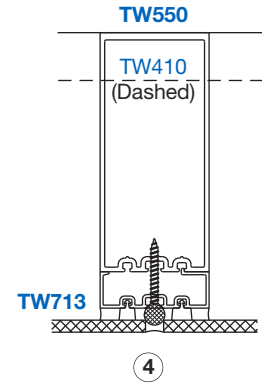
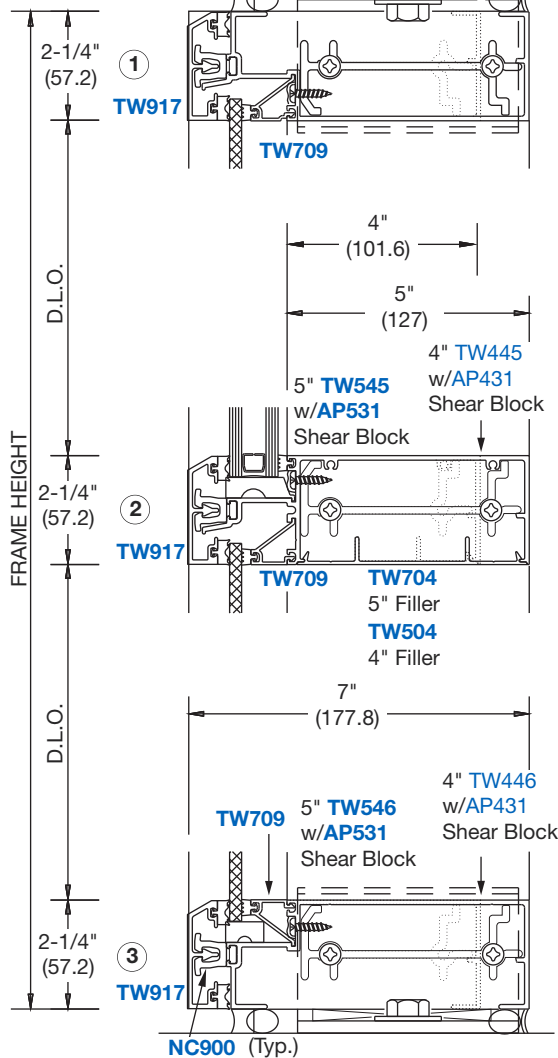
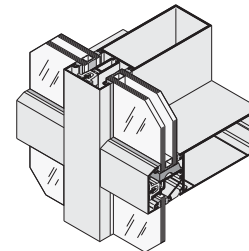
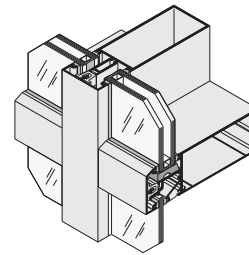
- Series 4500
- Series 4500SG

7" (177.8) System in Bold
6" (152.4) System Dashed



4" TW443 (Dashed)
w/AP431
Shear Block

5" TW543
w/AP531
Shear Block



NOT TO SCALE

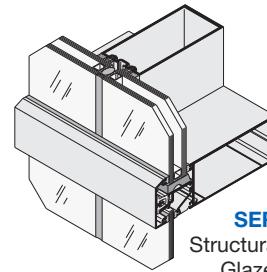
CURTAIN WALLS

Typical Details

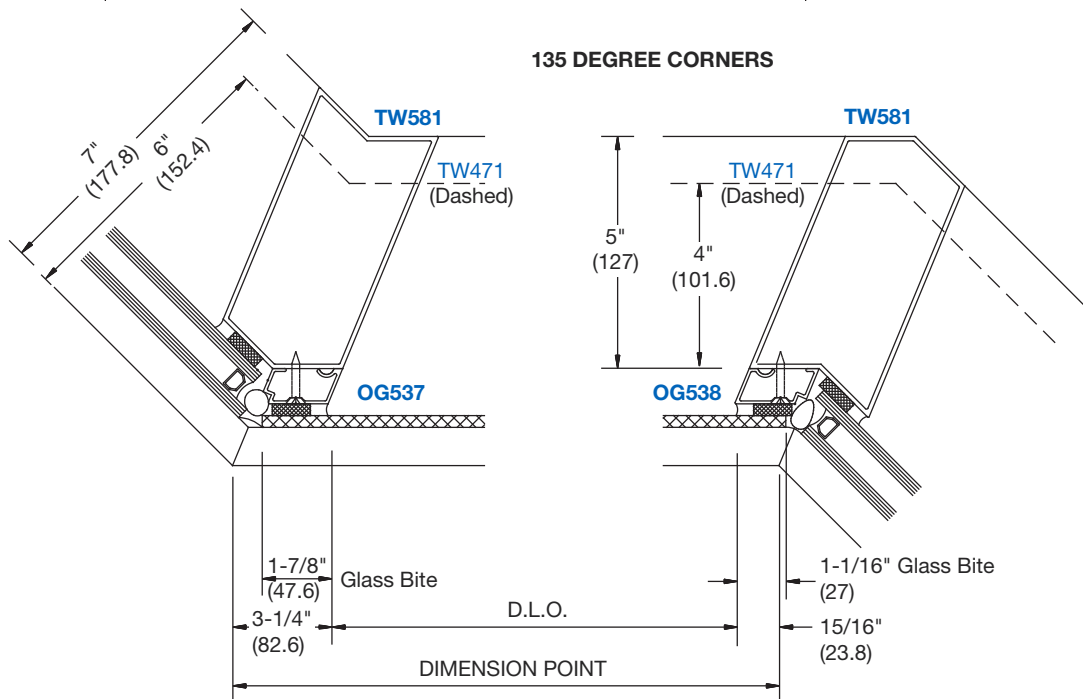
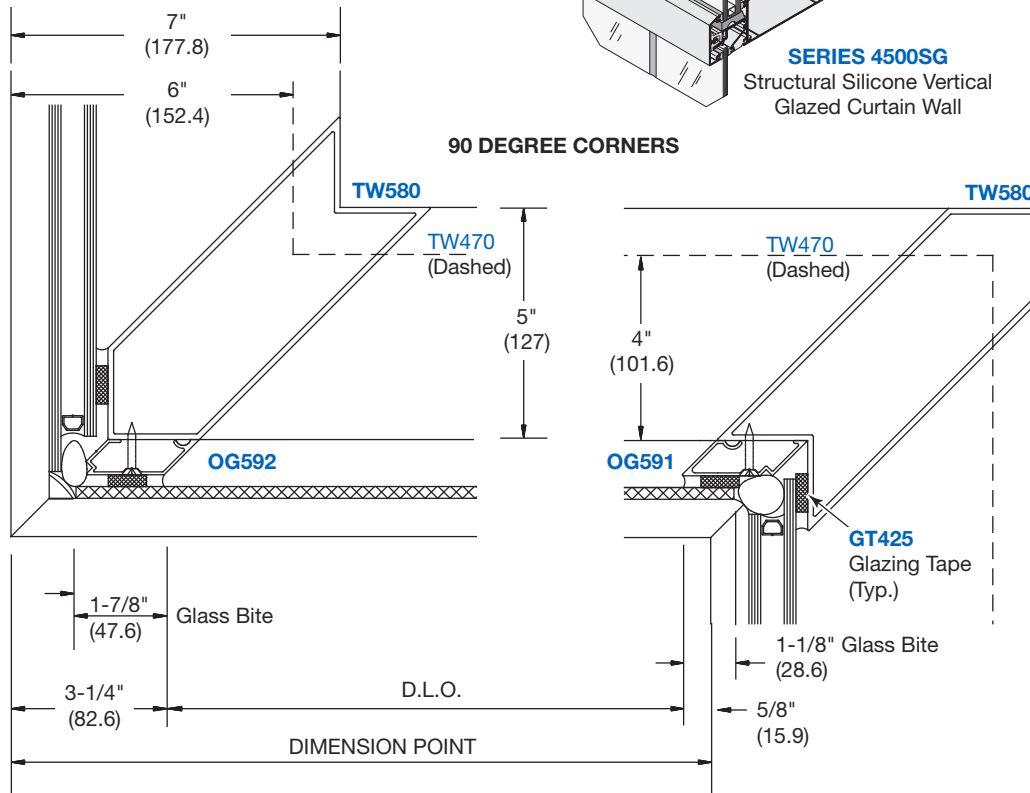
**STRUCTURAL SILICONE GLAZED
CORNER CONDITIONS FOR 1" (25)
TO 1/4" (6) TRANSITION GLAZING**

Thermally Isolated
• **Series 4500SG**

7" (177.8) System in Bold
6" (152.4) System Dashed



SERIES 4500SG
Structural Silicone Vertical
Glazed Curtain Wall



NOT TO SCALE

CURTAIN WALLS

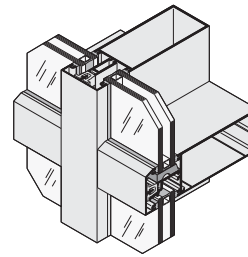
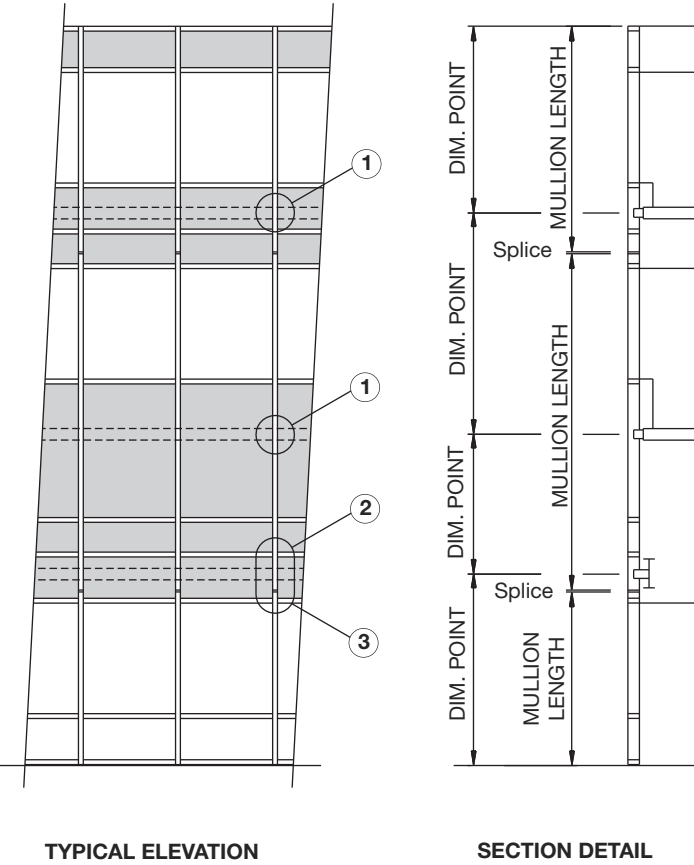
Typical Details

Thermally Isolated

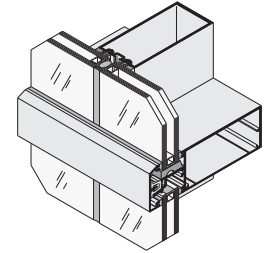
- Series 4500
- Series 4500SG

MID-SPAN ANCHORS AND MULLION SPLICE

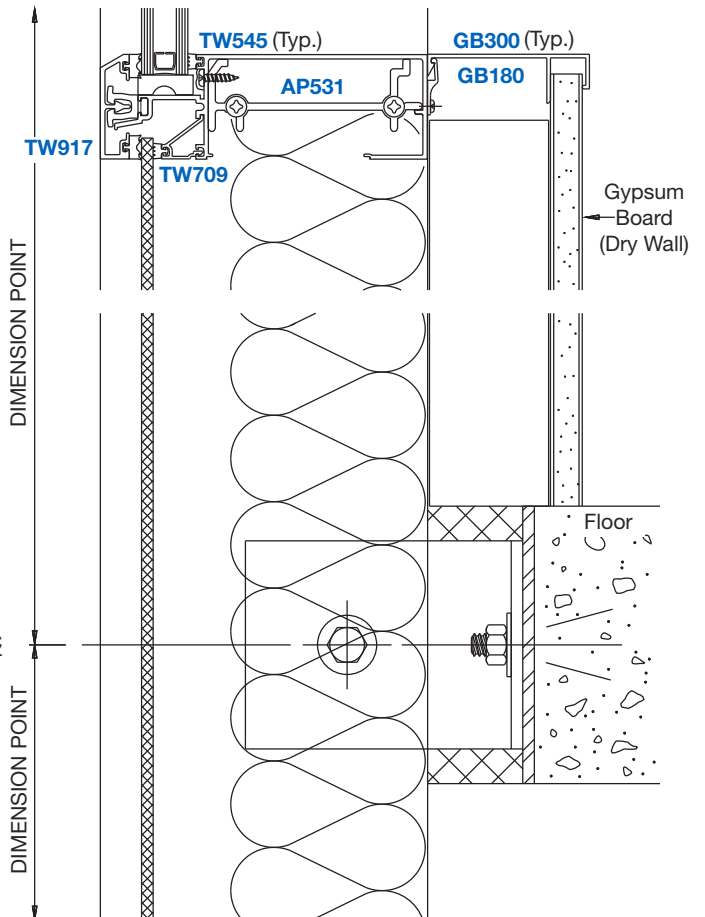
NOTE: Series 4500 Details Shown;
Series 4500SG Similar.



SERIES 4500
Captured Vertical
Glazed Curtain Wall



SERIES 4500SG
Structural Silicone Vertical
Glazed Curtain Wall



①
FIXED ANCHOR
(DEADLOAD ANCHOR)
NOTE: Anchor Type
and Size Varies Per
Job Requirements

NOT TO SCALE

CURTAIN WALLS

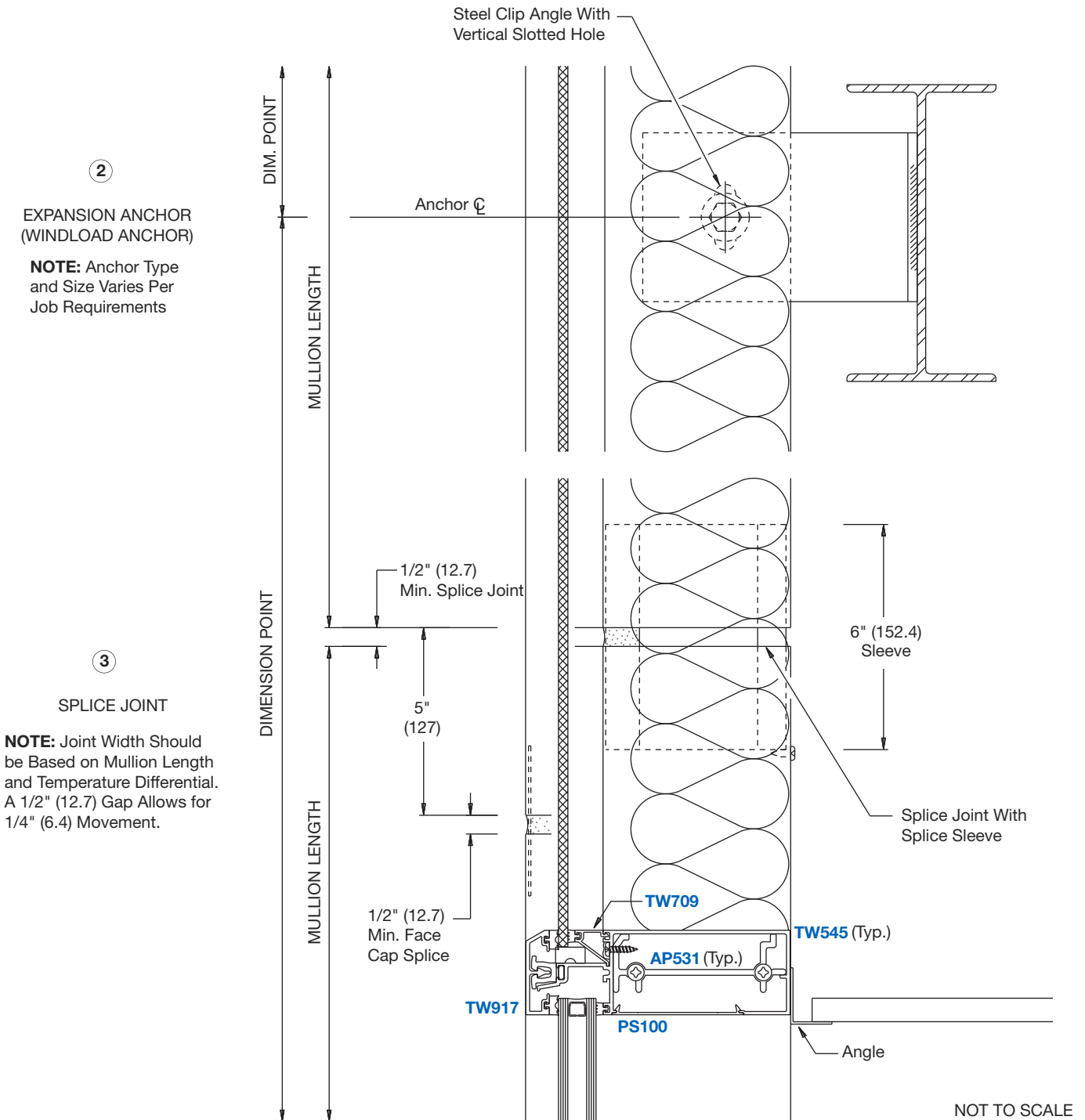
Typical Details

Thermally Isolated

- Series 4500
- Series 4500SG

MID-SPAN ANCHORS AND MULLION SPLICE

NOTE: Series 4500 Details Shown;
 Series 4500SG Similar.



NOT TO SCALE

CURTAIN WALLS

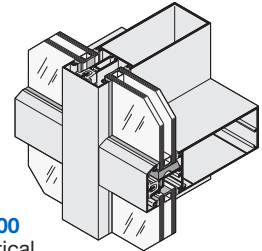
Windload Charts

CAPTURED VERTICAL MULLIONS FOR 1" (25) GLAZING

Deflection criteria to be in accordance with AAMA TIR-A11 - L/175 or L/240 + 1/4" (6.4 mm) for spans greater than 13'-6" (4.1 m) but less than 40'-0" (12.2 m). Codes and specifications may vary. No single lite of glass shall deflect more than 3/4" (19 mm). Glass is not considered as contributing to resistance of deflection. Aluminum alloy 6063-T6 allowable stress for windload is 15,200 psi. (89 MPa), and steel reinforcing allowable stress for windload is 21,600 psi. (183 MPa).

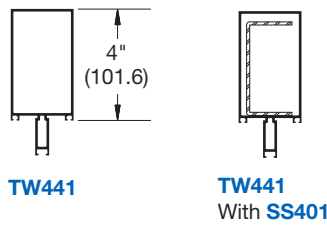
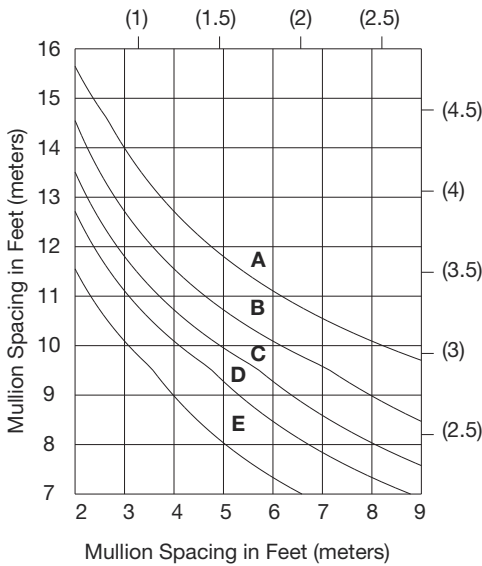
These charts include unbraced length analysis and are based on at least one horizontal being placed at the midpoint of the span. For other applications, please contact U.S. Aluminum Technical Sales at (800) 262-5151, or visit our web site at usalum.com.

Thermally Isolated • Series 4500



SERIES 4500
Captured Vertical
Glazed Curtain Wall

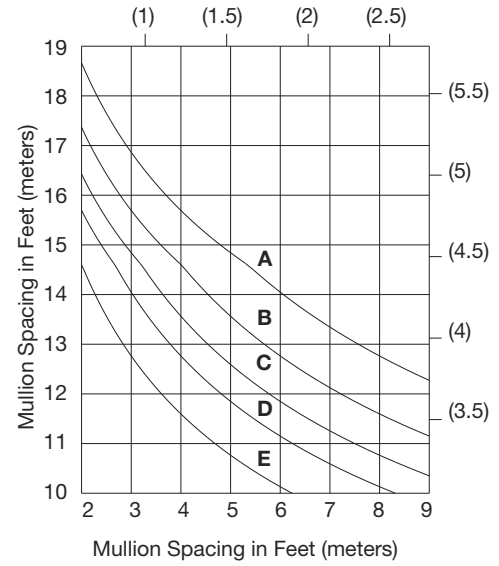
SHEAR BLOCK ASSEMBLY



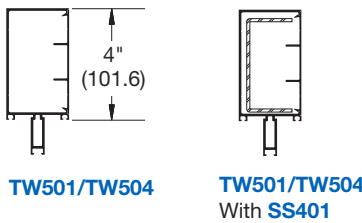
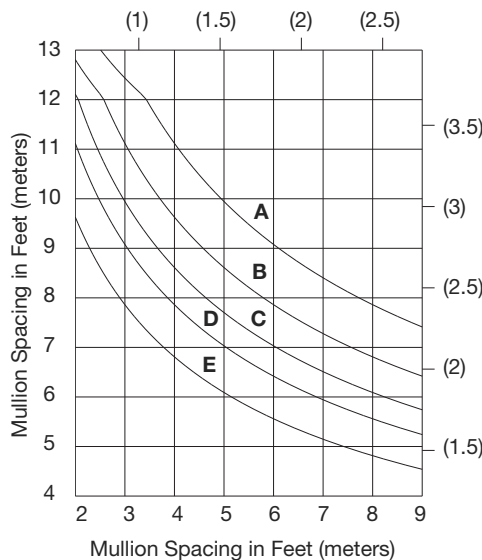
TW441
TW441 With SS401

$I = 4.046 (168.41 \times 10^4)$
 $S = 1.274 (20.88 \times 10^3)$
Steel Stiffener
 $I = 1.428 (59.44 \times 10^4)$
 $S = 0.846 (13.86 \times 10^3)$
 $I_{AL+STL} = 8.187 (340.78 \times 10^4)$

Limitation of vertical mullions for:
CURVES A = 15 PSF (718 Pa)
CURVES B = 20 PSF (957 Pa)
CURVES C = 25 PSF (1197 Pa)
CURVES D = 30 PSF (1436 Pa)
CURVES E = 40 PSF (1915 Pa)

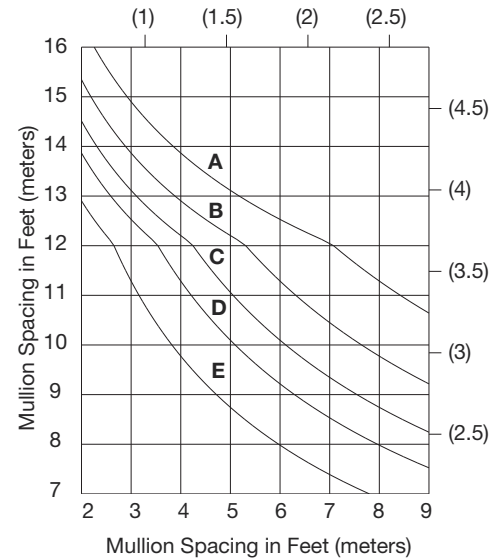


PANEL ASSEMBLY



TW501/TW504
TW501/TW504 With SS401

$I = 3.902 (162.41 \times 10^4)$
 $S = 1.436 (23.53 \times 10^3)$
Steel Stiffener
 $I = 1.428 (59.44 \times 10^4)$
 $S = 0.846 (13.86 \times 10^3)$
 $I_{AL+STL} = 8.043 (334.78 \times 10^4)$



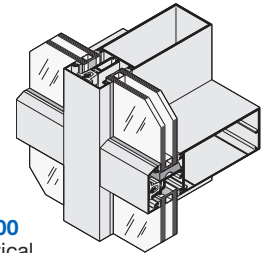
Windload Charts

CAPTURED VERTICAL MULLIONS FOR 1" (25) GLAZING

Deflection criteria to be in accordance with AAMA TIR-A11 - L/175 or L/240 + 1/4" (6.4 mm) for spans greater than 13'-6" (4.1 m) but less than 40'-0" (12.2 m). Codes and specifications may vary. No single lite of glass shall deflect more than 3/4" (19 mm). Glass is not considered as contributing to resistance of deflection. Aluminum alloy 6063-T6 allowable stress for windload is 15,200 psi. (89 MPa), and steel reinforcing allowable stress for windload is 21,600 psi. (183 MPa).

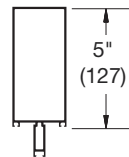
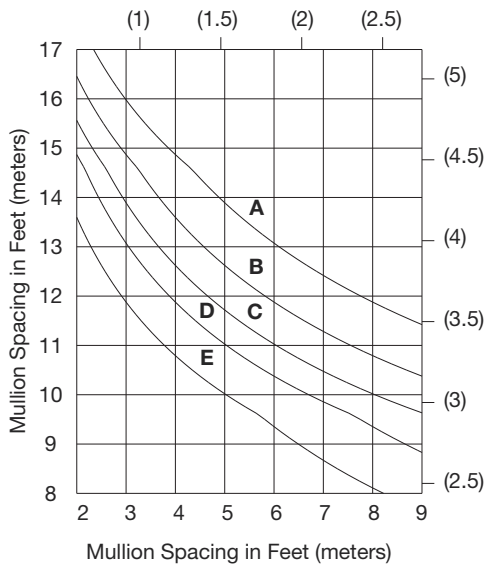
These charts include unbraced length analysis and are based on at least one horizontal being placed at the midpoint of the span. For other applications, please contact U.S. Aluminum Technical Sales at (800) 262-5151, or visit our web site at usalum.com.

Thermally Isolated • Series 4500



SERIES 4500
Captured Vertical
Glazed Curtain Wall

SHEAR BLOCK ASSEMBLY



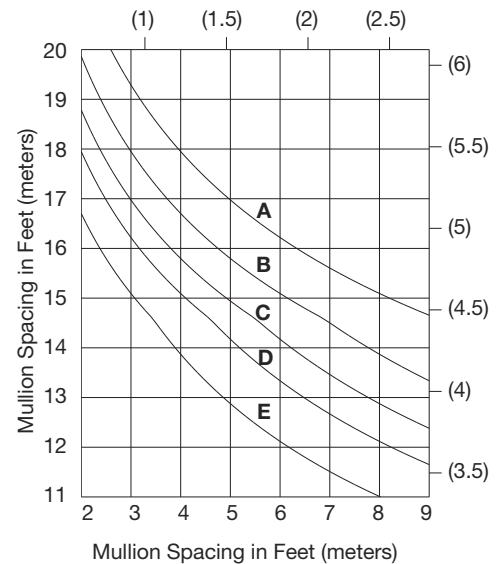
TW541



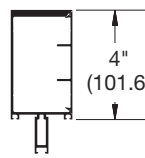
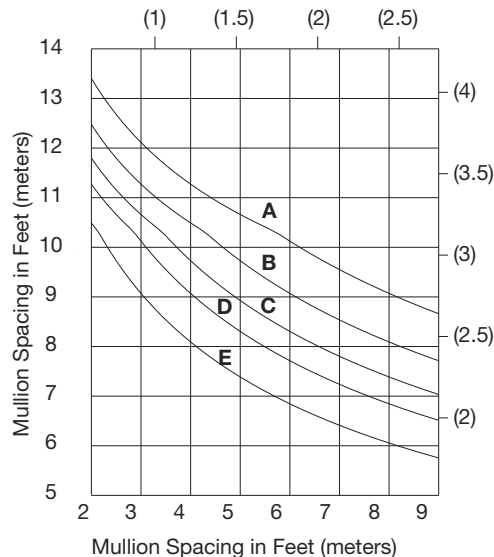
TW541
With **SS501**

$I = 6.599 (274.67 \times 10^4)$
 $S = 2.077 (34.04 \times 10^3)$
Steel Stiffener
 $I = 2.556 (106.39 \times 10^4)$
 $S = 1.186 (19.44 \times 10^3)$
 $I_{AL+STL} = 14.011 (583.18 \times 10^4)$

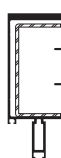
Limitation of vertical mullions for:
CURVES **A** = 15 PSF (718 Pa)
CURVES **B** = 20 PSF (957 Pa)
CURVES **C** = 25 PSF (1197 Pa)
CURVES **D** = 30 PSF (1436 Pa)
CURVES **E** = 40 PSF (1915 Pa)



PANEL ASSEMBLY/HEAVY WALL MULLIONS

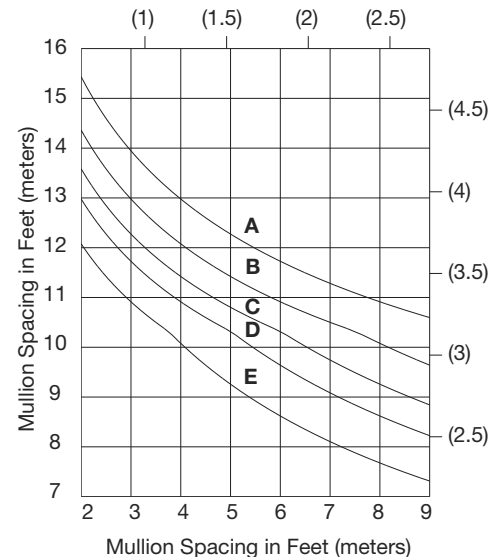


TW502/TW504



TW502/TW504
With **SS401**

$I = 5.476 (227.93 \times 10^4)$
 $S = 1.389 (22.77 \times 10^3)$
Steel Stiffener
 $I = 1.428 (59.44 \times 10^4)$
 $S = 0.846 (13.86 \times 10^3)$
 $I_{AL+STL} = 9.617 (400.30 \times 10^4)$



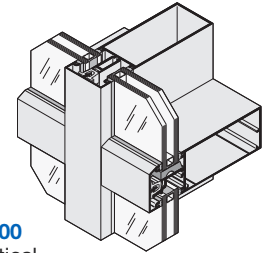
CURTAIN WALLS

Windload Charts

Thermally Isolated • Series 4500

CAPTURED VERTICAL MULLIONS FOR 1" (25) GLAZING

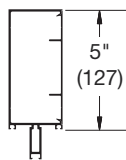
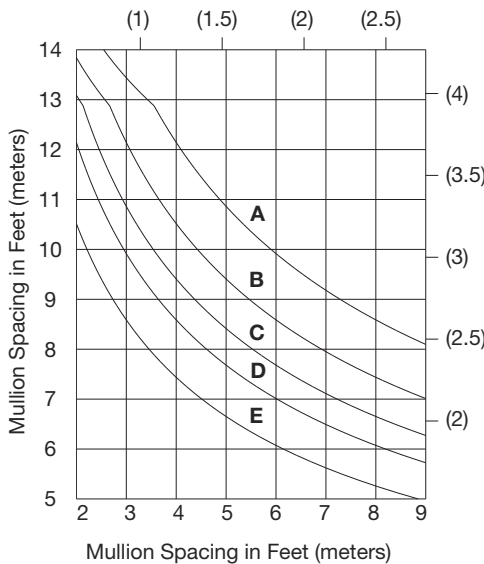
Deflection criteria to be in accordance with AAMA TIR-A11 - L/175 or L/240 + 1/4" (6.4 mm) for spans greater than 13'-6" (4.1 m) but less than 40'-0" (12.2 m). Codes and specifications may vary. No single lite of glass shall deflect more than 3/4" (19 mm). Glass is not considered as contributing to resistance of deflection. Aluminum alloy 6063-T6 allowable stress for windload is 15,200 psi. (89 MPa), and steel reinforcing allowable stress for windload is 21,600 psi. (183 MPa).



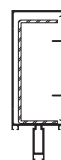
SERIES 4500
Captured Vertical
Glazed Curtain Wall

These charts include unbraced length analysis and are based on at least one horizontal being placed at the midpoint of the span. For other applications, please contact U.S. Aluminum Technical Sales at (800) 262-5151, or visit our web site at usalum.com.

PANEL ASSEMBLY



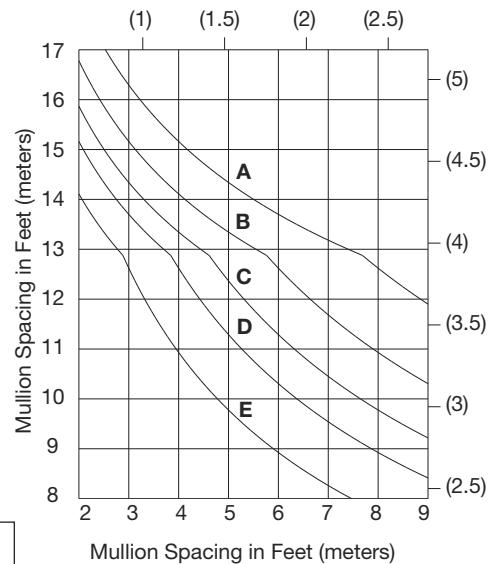
TW701/TW704



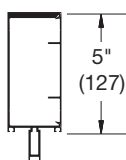
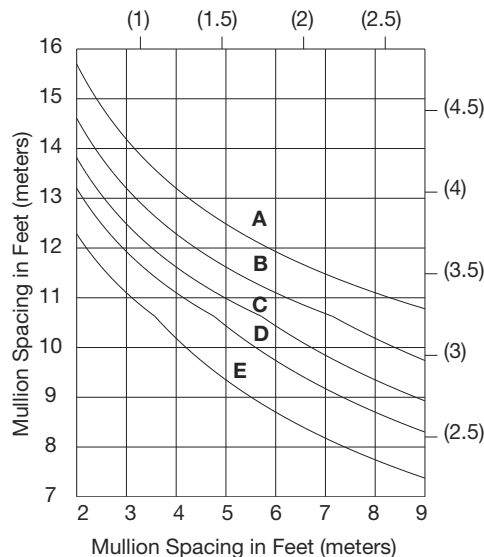
TW701/TW704
With **SS501**

$I = 6.392 (266.06 \times 10^4)$
 $S = 1.936 (31.73 \times 10^3)$
 Steel Stiffener
 $I = 2.556 (106.39 \times 10^4)$
 $S = 1.186 (19.44 \times 10^3)$
 $IAL+STL = 13.804 (574.58 \times 10^4)$

Limitation of vertical mullions for:
 CURVES **A** = 15 PSF (718 Pa)
 CURVES **B** = 20 PSF (957 Pa)
 CURVES **C** = 25 PSF (1197 Pa)
 CURVES **D** = 30 PSF (1436 Pa)
 CURVES **E** = 40 PSF (1915 Pa)



PANEL ASSEMBLY/HEAVY WALL

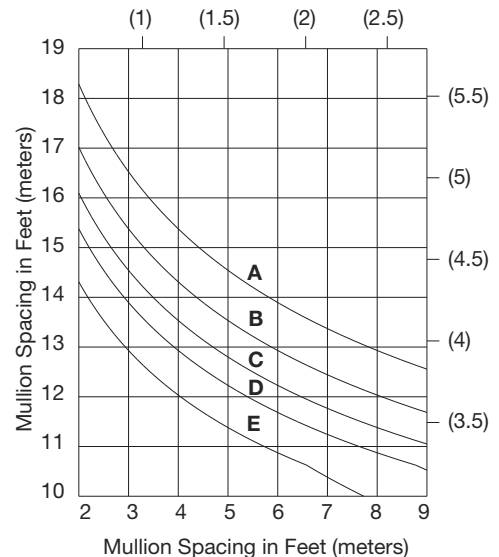


TW702/TW704



TW702/TW704
With **SS501**

$I = 8.804 (366.45 \times 10^4)$
 $S = 2.460 (40.31 \times 10^3)$
 Steel Stiffener
 $I = 2.556 (106.39 \times 10^4)$
 $S = 1.186 (19.44 \times 10^3)$
 $IAL+STL = 16.216 (674.98 \times 10^4)$

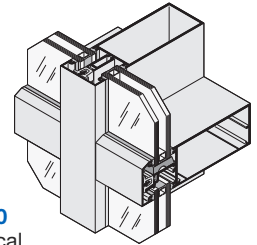


Windload Charts

Thermally Isolated • Series 4500

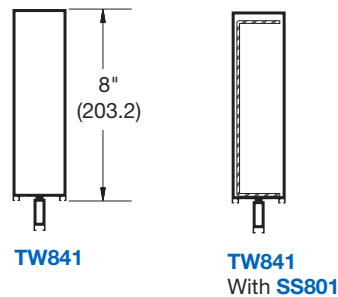
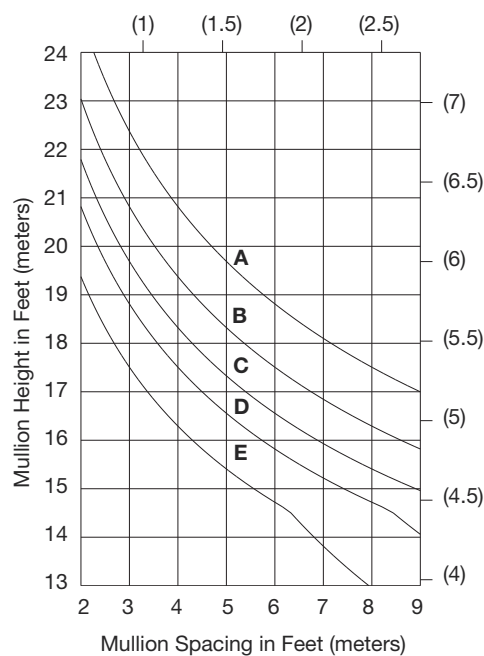
CAPTURED HIGH PERFORMANCE VERTICAL MULLIONS FOR 1" (25) GLAZING

Deflection criteria to be in accordance with AAMA TIR-A11 - L/175 or L/240 + 1/4" (6.4 mm) for spans greater than 13'-6" (4.1 m) but less than 40'-0" (12.2 m). Codes and specifications may vary. No single lite of glass shall deflect more than 3/4" (19 mm). Glass is not considered as contributing to resistance of deflection. Aluminum alloy 6063-T6 allowable stress for windload is 15,200 psi. (89 MPa), and steel reinforcing allowable stress for windload is 21,600 psi. (183 MPa).



SERIES 4500
Captured Vertical
Glazed Curtain Wall

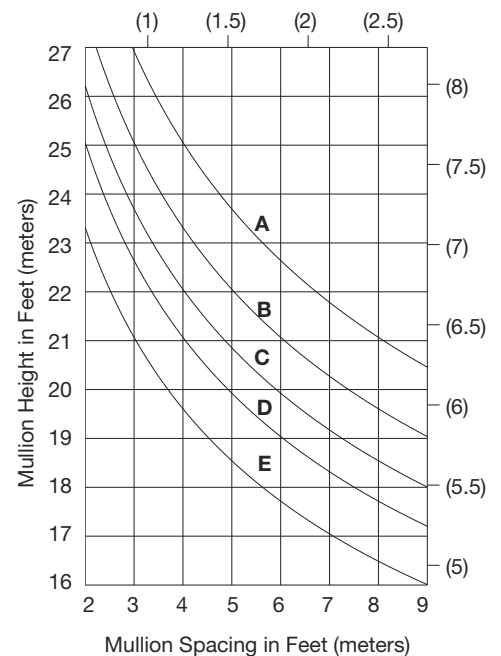
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TW841
TW841 With SS801

$I = 25.360 (1055.56 \times 10^4)$
 $S = 5.481 (89.82 \times 10^3)$
Steel Stiffener
 $I = 9.598 (399.50 \times 10^4)$
 $S = 2.625 (43.02 \times 10^3)$
 $I_{AL+STL} = 53.194 (2214.11 \times 10^4)$

Limitation of vertical mullions for:
CURVES A = 15 PSF (718 Pa)
CURVES B = 20 PSF (957 Pa)
CURVES C = 25 PSF (1197 Pa)
CURVES D = 30 PSF (1436 Pa)
CURVES E = 40 PSF (1915 Pa)



Project: Kaiser Permanente, Downey, CA

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

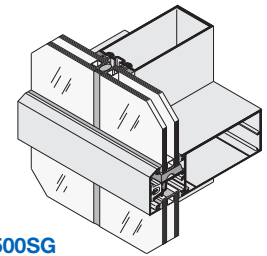
CURTAIN WALLS

Windload Charts

Thermally Isolated • Series 4500SG

STRUCTURAL SILICONE GLAZED VERTICAL MULLIONS FOR 1" (25) GLAZING

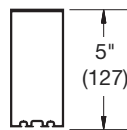
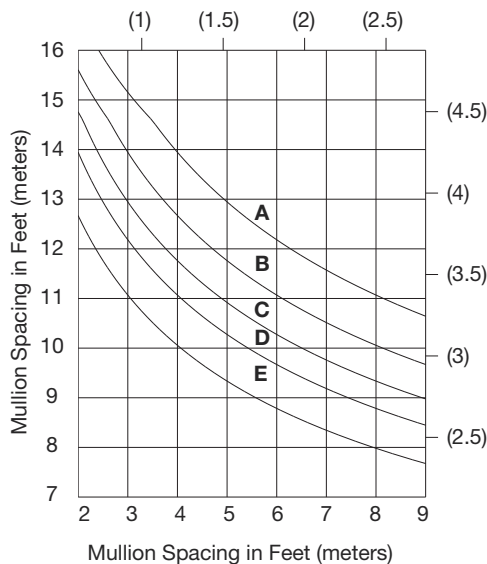
Deflection criteria to be in accordance with AAMA TIR-A11 - L/175 or L/240 + 1/4" (6.4 mm) for spans greater than 13'-6" (4.1 m) but less than 40'-0" (12.2 m). Codes and specifications may vary. No single lite of glass shall deflect more than 3/4" (19 mm). Glass is not considered as contributing to resistance of deflection. Aluminum alloy 6063-T6 allowable stress for windload is 15,200 psi. (89 MPa), and steel reinforcing allowable stress for windload is 21,600 psi. (183 MPa).



SERIES 4500SG
Structural Silicone Vertical
Glazed Curtain Wall

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SHEAR BLOCK ASSEMBLY



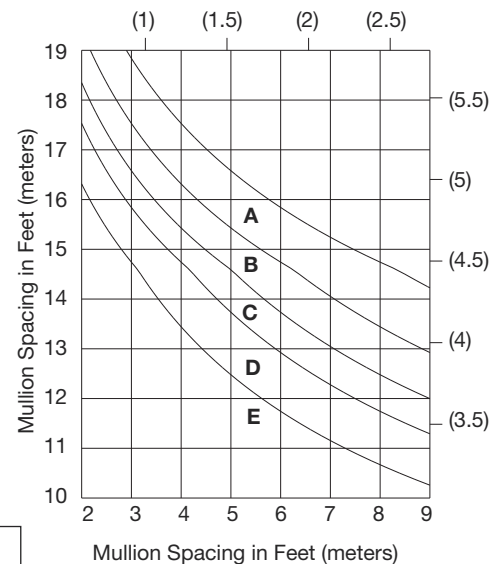
TW550



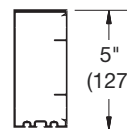
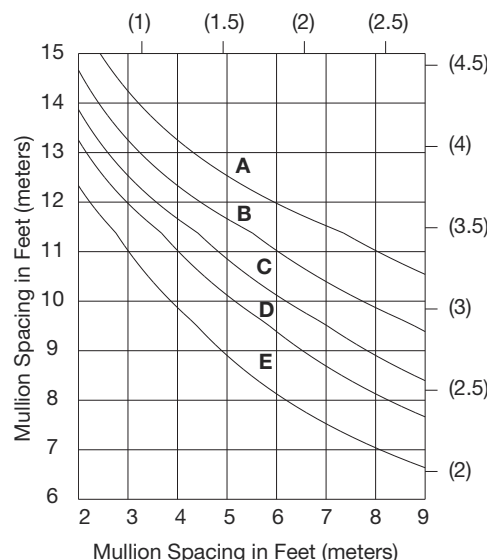
TW550
With **SS501**

$I = 5.339 (222.23 \times 10^4)$
 $S = 2.149 (35.22 \times 10^3)$
Steel Stiffener
 $I = 2.556 (106.39 \times 10^4)$
 $S = 1.186 (19.44 \times 10^3)$
 $I_{AL+STL} = 12.751 (530.75 \times 10^4)$

Limitation of vertical mullions for:
CURVES A = 15 PSF (718 Pa)
CURVES B = 20 PSF (957 Pa)
CURVES C = 25 PSF (1197 Pa)
CURVES D = 30 PSF (1436 Pa)
CURVES E = 40 PSF (1915 Pa)



PANEL ASSEMBLY/HEAVY WALL

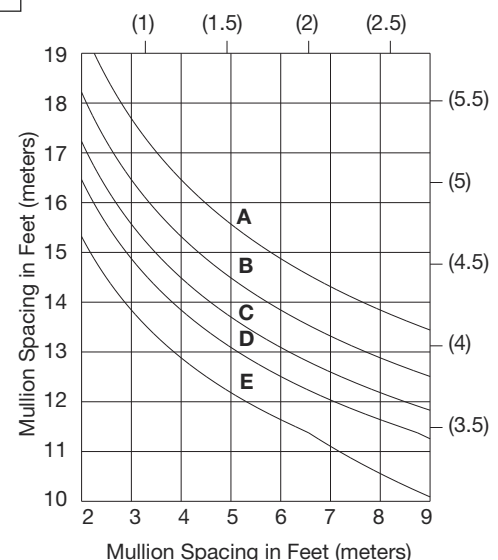


TW715/TW704



TW715/TW704
With **SS501**

$I = 5.372 (233.60 \times 10^4)$
 $S = 2.174 (35.63 \times 10^3)$
Steel Stiffener
 $I = 2.556 (106.39 \times 10^4)$
 $S = 1.186 (19.44 \times 10^3)$
 $I_{AL+STL} = 12.784 (532.13 \times 10^4)$



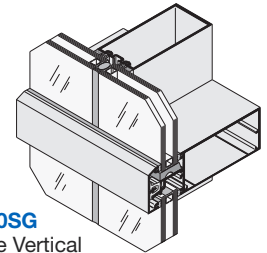
Windload Charts

STRUCTURAL SILICONE GLAZED VERTICAL MULLIONS FOR 1" (25) GLAZING

Deflection criteria to be in accordance with AAMA TIR-A11 - L/175 or L/240 + 1/4" (6.4 mm) for spans greater than 13'-6" (4.1 m) but less than 40'-0" (12.2 m). Codes and specifications may vary. No single lite of glass shall deflect more than 3/4" (19 mm). Glass is not considered as contributing to resistance of deflection. Aluminum alloy 6063-T6 allowable stress for windload is 15,200 psi. (89 MPa), and steel reinforcing allowable stress for windload is 21,600 psi. (183 MPa).

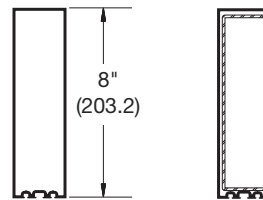
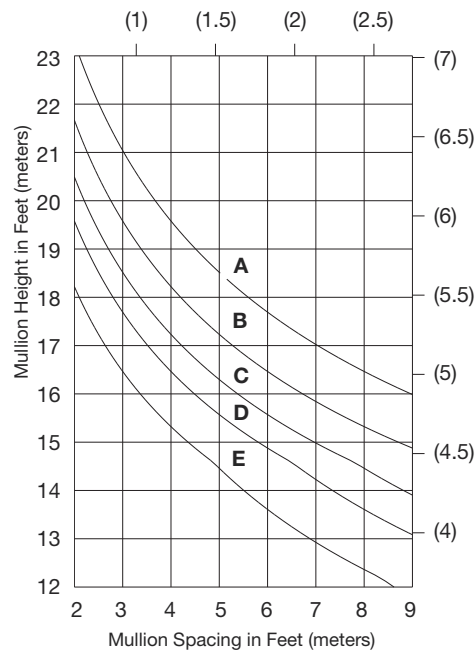
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Thermally Isolated • Series 4500SG



SERIES 4500SG
Structural Silicone Vertical
Glazed Curtain Wall

SHEAR BLOCK ASSEMBLY

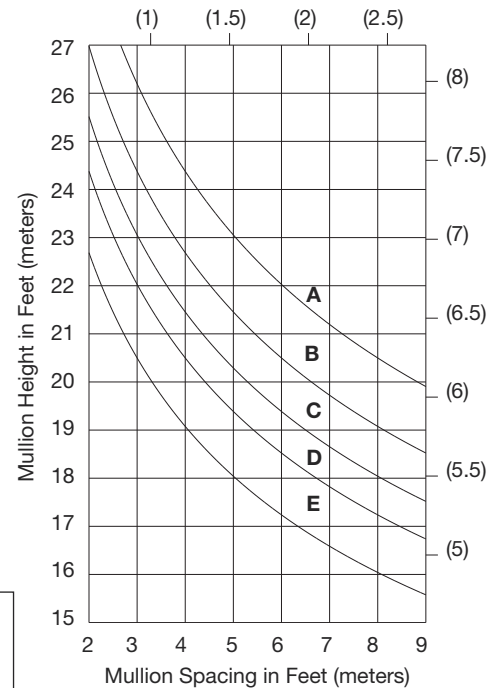


TW810

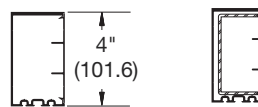
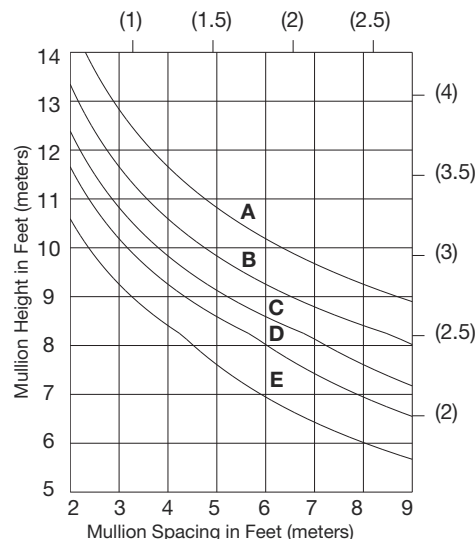
TW810
With **SS801**

$I = 19.839 (825.76 \times 10^4)$
 $S = 5.016 (82.20 \times 10^3)$
 Steel Stiffener
 $I = 9.598 (399.50 \times 10^4)$
 $S = 2.625 (43.02 \times 10^3)$
 $I_{AL+STL} = 47.673 (1984.31 \times 10^4)$

Limitation of vertical mullions for:
 CURVES **A** = 15 PSF (718 Pa)
 CURVES **B** = 20 PSF (957 Pa)
 CURVES **C** = 25 PSF (1197 Pa)
 CURVES **D** = 30 PSF (1436 Pa)
 CURVES **E** = 40 PSF (1915 Pa)



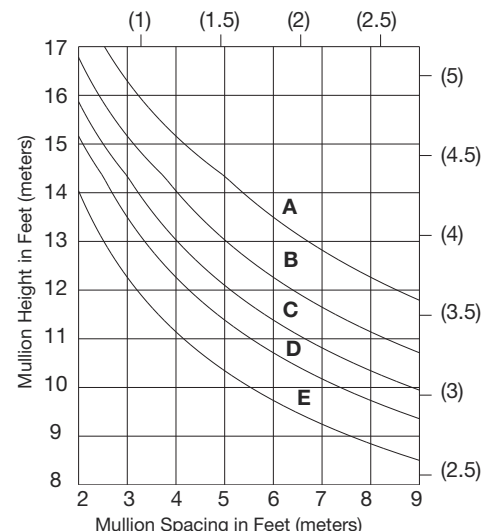
PANEL ASSEMBLY/HEAVY WALL



TW515/TW504

TW515/TW504
With **SS401**

$I = 3.120 (129.86 \times 10^4)$
 $S = 1.587 (26 \times 10^3)$
 Steel Stiffener
 $I = 1.428 (59.44 \times 10^4)$
 $S = 0.846 (13.86 \times 10^3)$
 $I_{AL+STL} = 7.261 (302.23 \times 10^4)$



CURTAIN WALLS

Deadload Charts

Thermally Isolated

- Series 4500
- Series 4500SG

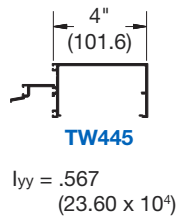
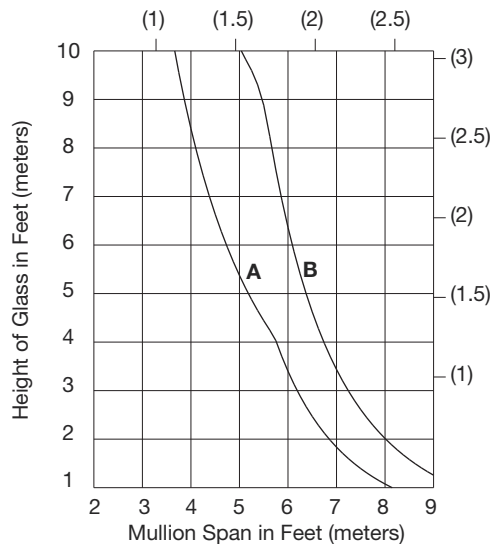
HORIZONTAL MULLIONS FOR 1" (25) GLAZING

Deadload charts are based on 1/8" (3.2) maximum allowable deflection at the center point of the horizontal member and on a glass weight of 6.5 psf (31.74 Kg/m²) for 1" (25) glass.

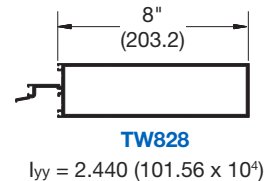
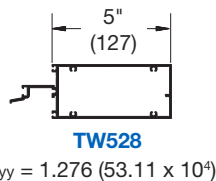
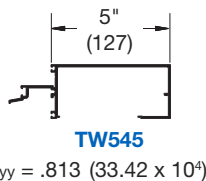
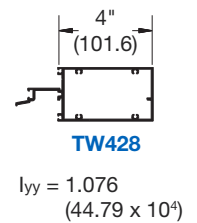
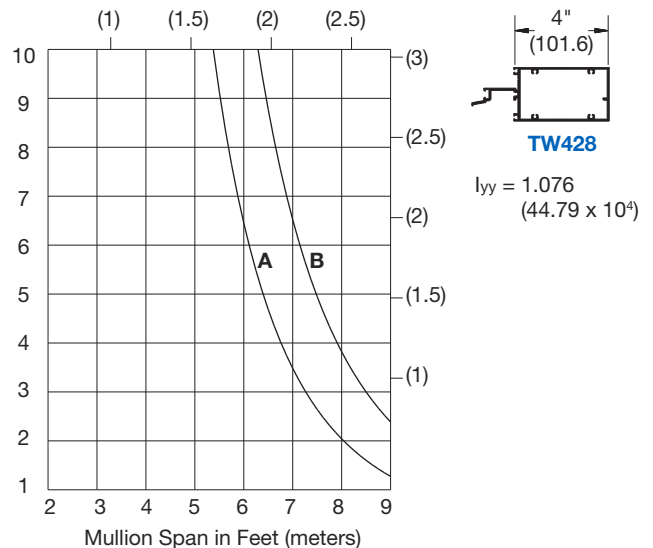
Glass shall rest on two setting blocks located at: CURVES A: 1/4 points

CURVES B: 1/8 points or 8" (203.2) from corners, whichever is larger

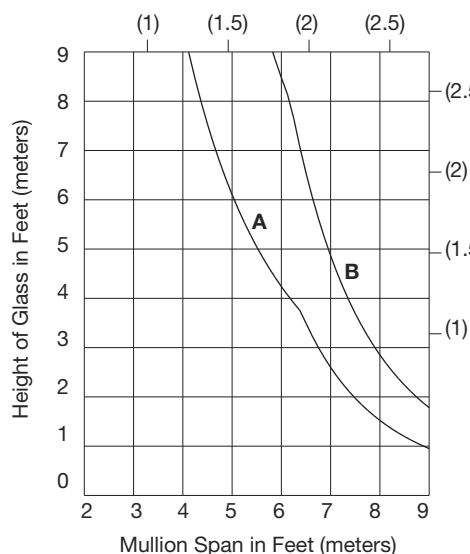
SHEAR BLOCK ASSEMBLY



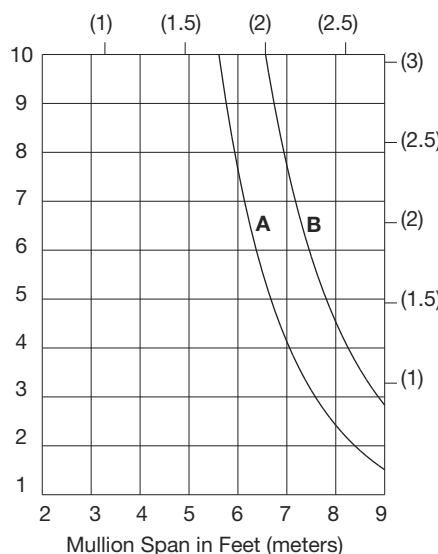
PANEL ASSEMBLY



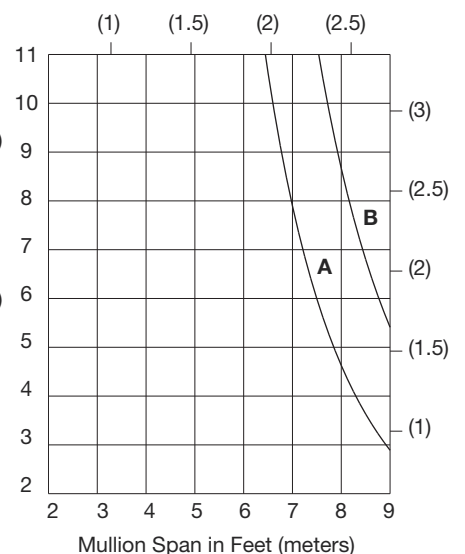
SHEAR BLOCK ASSEMBLY



PANEL ASSEMBLY



SHEAR BLOCK ASSEMBLY



CURTAIN WALLS

Accessories

Thermally Isolated

FOR 1/4" (6) AND 1" (25) GLAZING

- Series 4500
- Series 4500SG

PART NO.	DETAIL	DESCRIPTION	PKG. QTY.	FOR MULLION DEPTHS		
				4" (101.6)	5" (127)	8" (203.2)
AP514		Intermediate Vertical Anchor for TW441	12	●		
AP513		Intermediate Vertical Anchor for TW410	12	●		
AP707		Intermediate Vertical Anchor for TW541	12		●	
AP712		Intermediate Vertical Anchor for TW550	12		●	
AP812		Intermediate Vertical Anchor for TW810	12			●
AP604		Intermediate Vertical Anchor for TW841	12			●
AP516		Wall Jamb Anchor for TW441 and TW416	4	●		
AP511		Wall Jamb Anchor for TW410	4	●		
AP634		Wall Jamb Anchor for TW516 and TW541	4		●	
AP711		Wall Jamb Anchor for TW550	4		●	
AP811		Wall Jamb Anchor for TW810	4			●
AP607		Wall Jamb Anchor for TW841	4			●
AP626		Optional Perimeter Anchor for all Jamb Mullions	12	●	●	●

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


Accessories

Thermally Isolated

FOR 1/4" (6) AND 1" (25) GLAZING

- Series 4500
- Series 4500SG

PART NO.	DETAIL	DESCRIPTION	PKG. QTY.	FOR MULLION DEPTHS		
				4" (101.6)	5" (127)	8" (203.2)
SL511		Mullion Splice Sleeve for TW441	12	●		
SL710		Mullion Splice Sleeve for TW541	12		●	
SL512		Mullion Splice Sleeve for TW410	12	●		
SL711		Mullion Splice Sleeve for TW550	12		●	
SL811		Mullion Splice Sleeve for TW841 and TW810	12			●
SL572		Mullion Splice Sleeve for TW470	12	●		
SL772		Mullion Splice Sleeve for TW580	5		●	
SL823		Mullion Splice Sleeve for TW823	5	●		
SL521		Mullion Splice Sleeve for TW420	5	●		
SL721		Mullion Splice Sleeve for TW560	5		●	
SL573		Mullion Splice Sleeve for TW471	5	●		
SL773		Mullion Splice Sleeve for TW581	5		●	
AP890		Shear Block for 90 Degree Corners (Includes One Left Block, One Right Block, and Screws)	1 Set			●

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CURTAIN WALLS

Accessories

Thermally Isolated

FOR 1/4" (6) AND 1" (25) GLAZING

- Series 4500
- Series 4500SG

PART NO.	DETAIL	DESCRIPTION	PKG. QTY.	FOR MULLION DEPTHS		
				4" (101.6)	5" (127)	8" (203.2)
AP569		Shear Block for Inside 90 Degree Corners (Includes One Left Block, One Right Block, and Screws)	1 Set	●		
AP568		Shear Block for Outside 90 Degree Corners (Includes One Left Block, One Right Block, and Screws)	1 Set	●		
AP528		Shear Block for Inside 135 Degree Corners (Includes One Left Block, One Right Block, and Screws)	1 Set	●		
AP524		Shear Block for Outside 135 Degree Corners (Includes One Left Block, One Right Block, and Screws)	1 Set	●		
AP709		Shear Block for Inside 90 Degree Corners (Includes One Left Block, One Right Block, and Screws)	1 Set		●	
AP708		Shear Block for Outside 90 Degree Corners (Includes One Left Block, One Right Block, and Screws)	1 Set		●	
AP727		Shear Block for Inside 135 Degree Corners (Includes One Left Block, One Right Block, and Screws)	1 Set		●	
AP726		Shear Block for Outside 135 Degree Corners (Includes One Left Block, One Right Block, and Screws)	1 Set		●	
DJ751		Drill Jig for Screw Spline Assembly	1	●	●	●
DJ750		Drill Jig for Shear Block Assembly	1	●	●	●

CURTAIN WALLS

Accessories

Thermally Isolated

FOR 1/4" (6) AND 1" (25) GLAZING

- Series 4500
- Series 4500SG

PART NO.	DETAIL	DESCRIPTION	PKG. QTY.	FOR MULLION DEPTHS		
				4" (101.6)	5" (127)	8" (203.2)
SL506		Vertical Wall Jamb Splice Sleeve for TW416	5	●		
SL706		Vertical Wall Jamb Splice Sleeve for TW516	5		●	
SL834		Vertical Wall Jamb Splice Sleeve for TW816	5			●
SL712		Vertical Face Cap Splice Sleeve for TW912	5	●	●	●
SL717		Horizontal Face Cap Splice Sleeve for TW917	5	●	●	●
SL618		Vertical Corner Face Cap Splice Sleeve for TW818	5	●	●	●
WD719		Water Deflector Outside 90 Degree Corners	10	●	●	●
WD524		Water Deflector 135 Degree Corners	8	●	●	●
AP431		Shear Block for 4" (101.6) Members (Includes Screws)	20	●		
AP531		Shear Block for 5" (127) Members (Includes Screws)	20		●	
AP830		Shear Block for 8" (203.2) Head and Sill (Includes Screws)	20			●
AP854		Shear Block for 8" (203.2) Intermediate Horizontals (Includes Screws)	20			●
MS212		Screw for Attaching TW719 to TW420 or TW560 1/4"-20 x 3/4" (19) HHCS with SRG5	200	●	●	
MS229		Screw for Attaching TW823 to TW560 1/4"-20 x 4-1/2" (114.3) HHCS, Zinc Plated	50			●


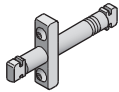


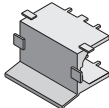
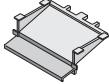
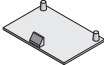
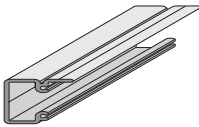



CURTAIN WALLS

Accessories

Thermally Isolated

FOR 1/4" (6) AND 1" (25) GLAZING

- Series 4500
- Series 4500SG

PART NO.	DETAIL	DESCRIPTION	PKG. QTY.	FOR MULLION DEPTHS		
				4" (101.6)	5" (127)	8" (203.2)
NC900		Face Cap Retainer Clip	200	●	●	●
RG700		Temporary Glass Retainer for Butt Glaze Patent No. D295,952	50	●	●	●
WD710		End Dam for Intermediate Horizontals	50	●	●	●
WD711		End Dam for Sill	50	●	●	●
WD704		Water Diverter for Butt Glaze Sill	50	●	●	●
WD705		Water Diverter for Butt Glaze Head	50	●	●	●
WD703		Water Diverter for Butt Glaze Horizontal	50	●	●	●
CP700		Closure Plate for Wall Jamb	30	●	●	●
AP778		Shear Block for Head and Sill at 90 Degree Corners (Includes One Left Block, One Right Block, and Screws)	1 Set			●
ST251		Screw for Screw Spine Assembly #10 x 1" (25) HWH SMS	200	●	●	●
ST269		Screw for Shear Block Assembly #12 x 2" (51) PHL, PH, SMS, Zinc Plated	100	●	●	●
ST217		Screw for Attaching TW719 to TW823 1/4" x 2" (51) HWH, TEK, Zinc Plated	200	●	●	●




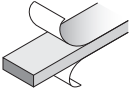
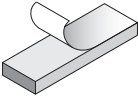
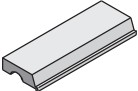
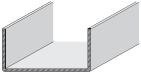

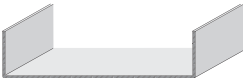
CURTAIN WALLS

Accessories

Thermally Isolated

- Series 4500
- Series 4500SG

FOR 1/4" (6) AND 1" (25) GLAZING

PART NO.	DETAIL	DESCRIPTION	PKG. QTY.	FOR MULLION DEPTHS		
				4" (101.6)	5" (127)	8" (203.2)
NP716		Interior Gasket	500' Roll	●	●	●
NP726		Exterior Gasket	250' Roll	●	●	●
SP450		Spacer Gasket for Butt Glaze	250' Roll	●	●	●
GT425		Spacer Tape for Butt Glaze Corners 1/4" (6) x 3/4" (19)	50' Roll	●	●	●
WB701		Edge Block 1-1/4" (32) x 5/16" (8) x 4" (101.6)	50	●	●	●
SB710		Setting Block 4" (101.6) Long	100	●	●	●
SS401		Steel Stiffener for Use With 4" (101.6) Back Members. ASTM A-559	16' (4.88 m) Stock Length	●		
SS501		Steel Stiffener for Use With 5" (127) Back Members. ASTM A-559	16' (4.88 m) Stock Length		●	
SS801		Steel Stiffener for Use With 8" (203.2) Back Members. ASTM A-559	16' (4.88 m) Stock Length			●