Features

- Slim 2" (50.8) sight lines
- Tubular construction with shear block connections
- Split mullion unitized system for horizontal strip window
- Thermally improved framing
- Range of mullion sizes to suit design parameters
- Standard infill options 1/4" (6.4) and 1" (25.4), other infills available
- Integrated entrance framing
- Two color option
- Permanodic™ anodized finishes in seven choices
- Painted finishes in standard and custom choices

Optional Features

- Deep covers available
- Deep and heavy-weight mullions

For specific product applications,
Consult your Kawneer representative.

Architects - Most extrusion and window types illustrated in this catalog are standard products for Kawneer. These concepts have been expanded and modified to afford you design freedom. Some miscellaneous details are non-standard and are intended to demonstrate how the system can be modified to expand design flexibility. Please contact your Kawneer representative for further assistance.

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ELEVATION DETAILS WITH BACKPAN 6
ENTRANCE DETAILS 7
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LAWS AND BUILDING AND SAFETY CODES GOVERNING THE DESIGN AND USE OF GLAZED ENTRANCE, WINDOW, AND CURTAIN WALL PRODUCTS VARY WIDELY. KAWNEER DOES NOT CONTROL THE SELECTION OF PRODUCT CONFIGURATIONS, OPERATING HARDWARE, OR GLAZING MATERIALS, AND ASSUMES NO RESPONSIBILITY THEREFOR.

Metric (SI) conversion figures are included throughout these details for reference. Numbers in parentheses ( ) are millimeters unless otherwise noted.

The following metric (SI) units are found in these details:

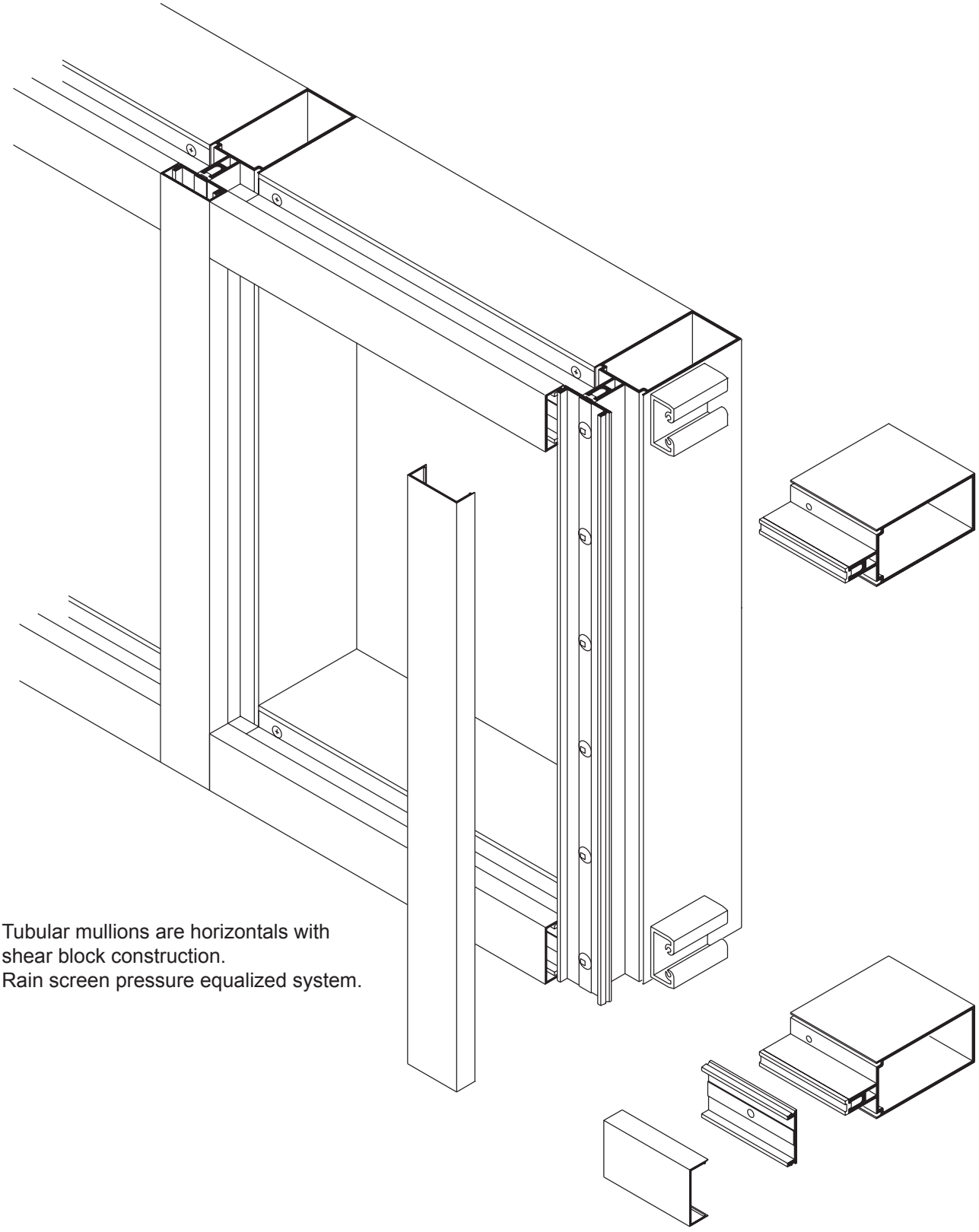
m – meter
cm – centimeter
mm – millimeter
s – second
Pa – pascal
MPa – megapascal

1602 Wall System

PICTORIAL VIEW

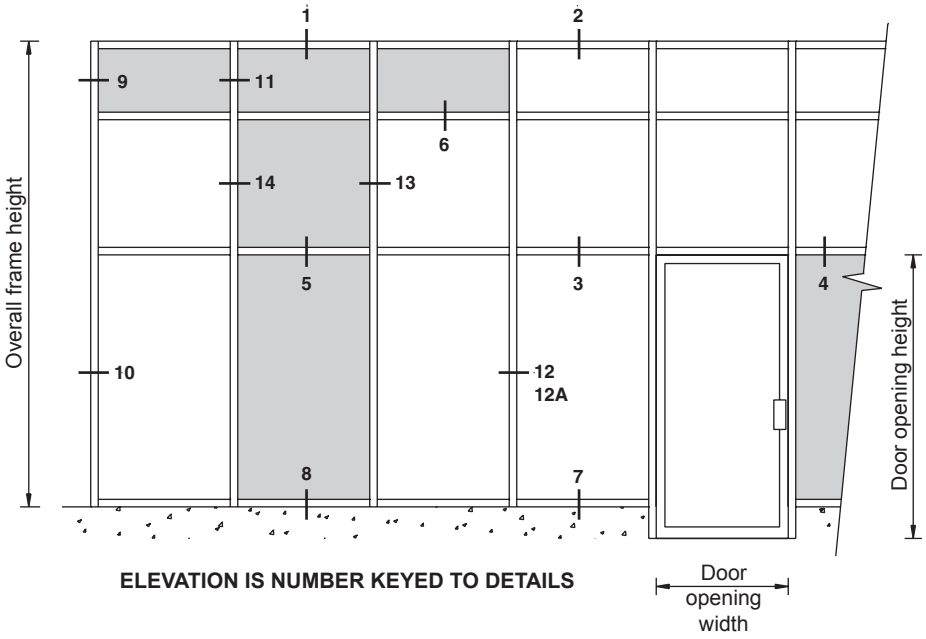
MARCH, 2017

EC 97911-130

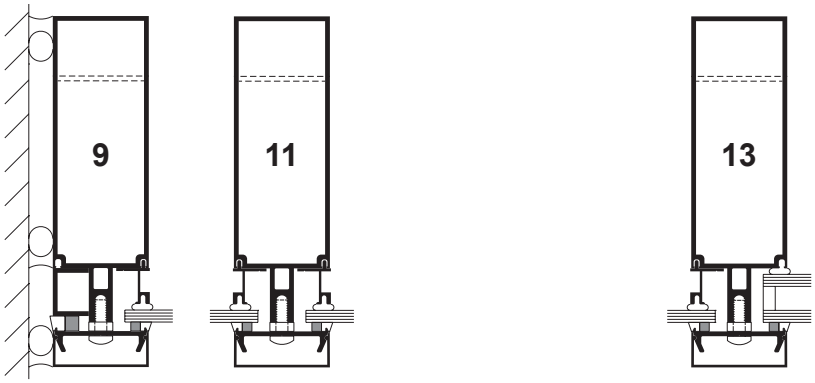


Tubular mullions are horizontals with
shear block construction.
Rain screen pressure equalized system.

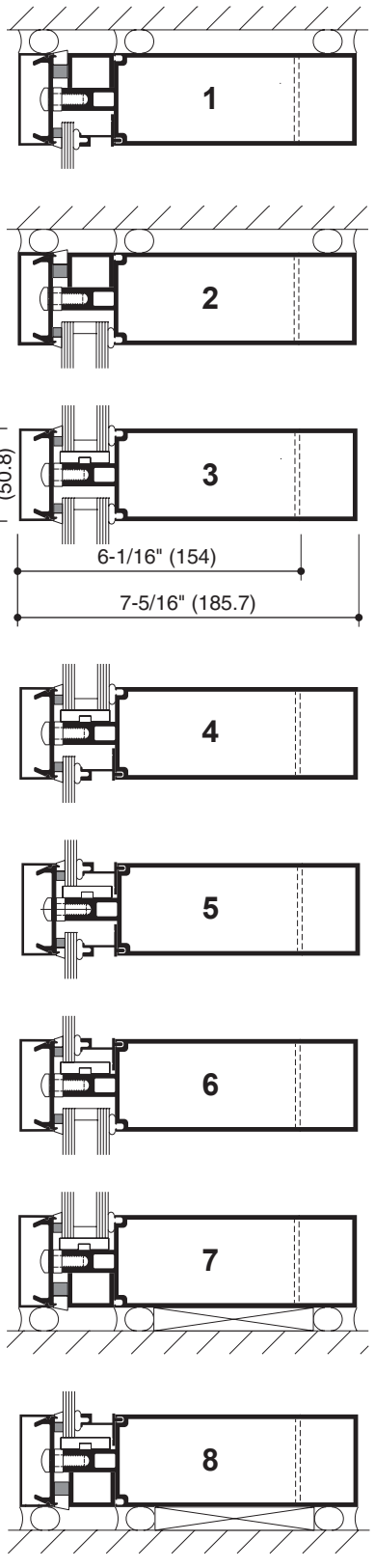
SCALE 3" = 1'-0"



ELEVATION IS NUMBER KEYED TO DETAILS



HEAVY WALL



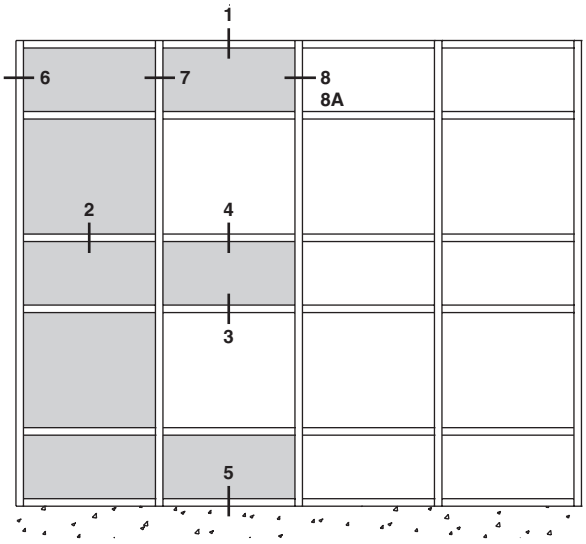
1602 Wall System

MARCH, 2017

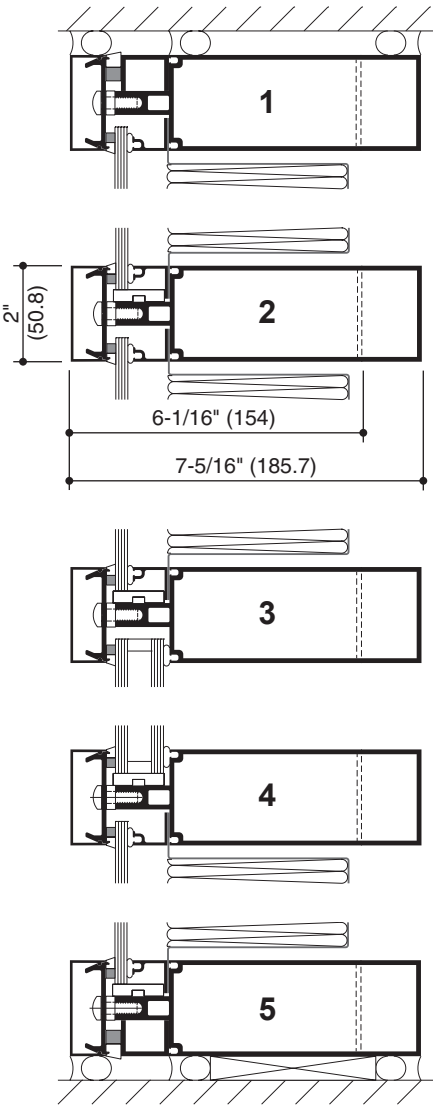
ELEVATION AND DETAILS (WITH BACK PAN)

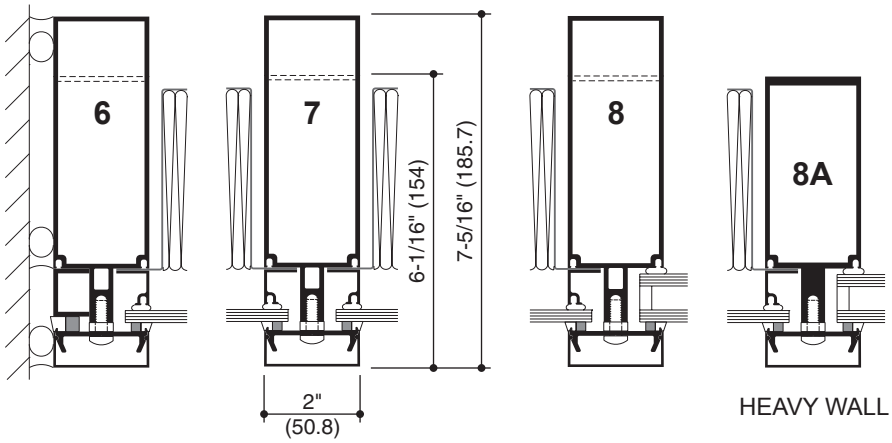
EC 97911-130

SCALE 3" = 1'-0"



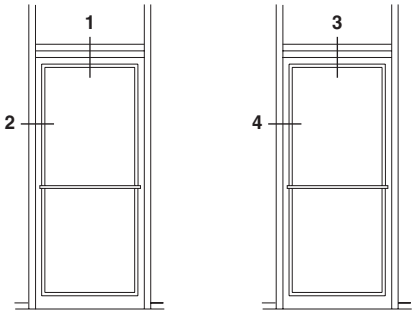
ELEVATION IS NUMBER KEYED TO DETAILS





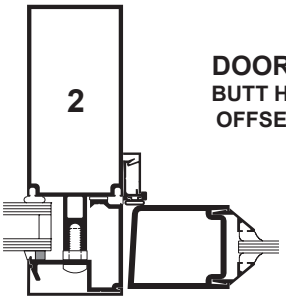
HEAVY WALL

SCALE 3" = 1'-0"

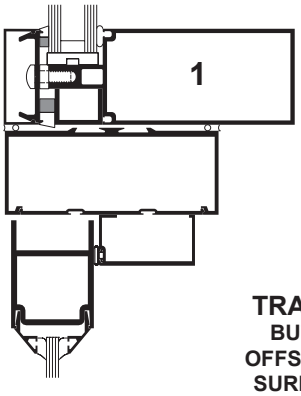


B/H OR O/P C/H

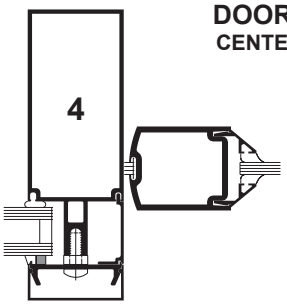
ELEVATION IS NUMBER KEYED TO DETAILS



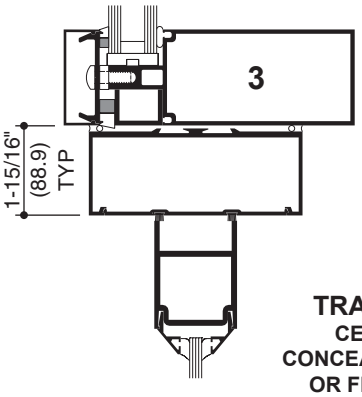
DOOR JAMB
BUTT HUNG OR OFFSET PIVOT



TRANSOM BAR
BUTT HUNG OR OFFSET PIVOT WITH SURFACE CLOSER OR FLOOR CLOSER

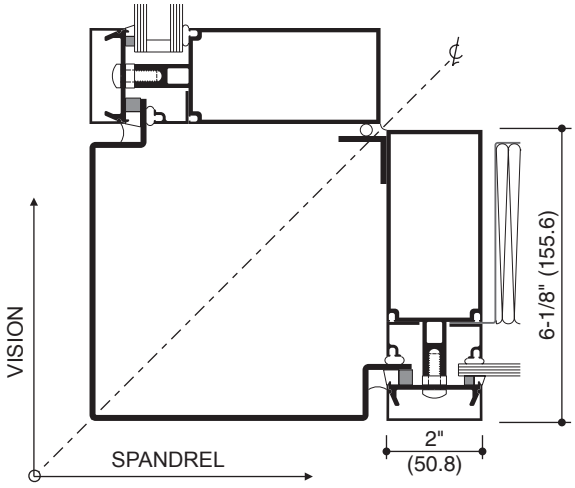


DOOR JAMB
CENTER HUNG

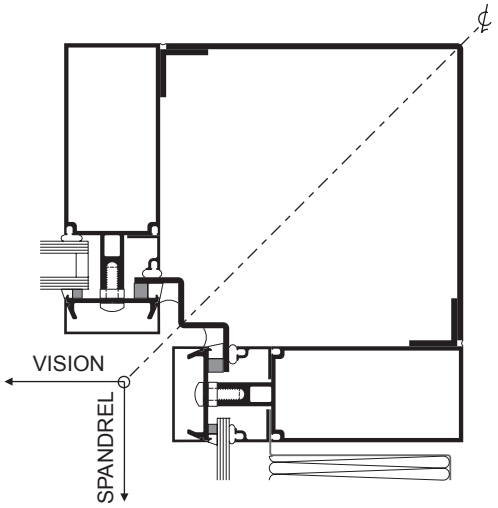


TRANSOM BAR
CENTER HUNG CONCEALED OVERHEAD OR FLOOR CLOSER

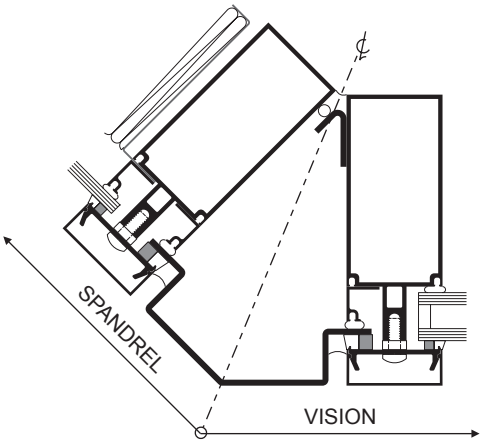
SCALE 3" = 1'-0"



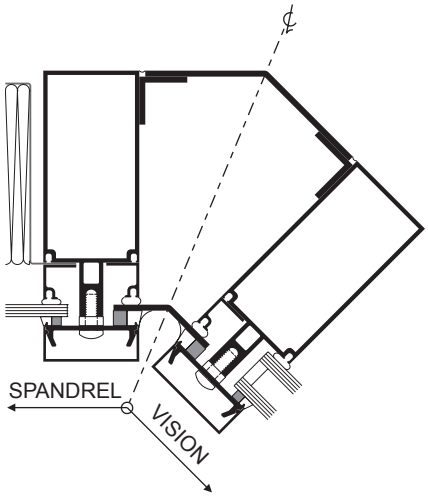
90° OUTSIDE CORNER



90° INSIDE CORNER



135° OUTSIDE CORNER

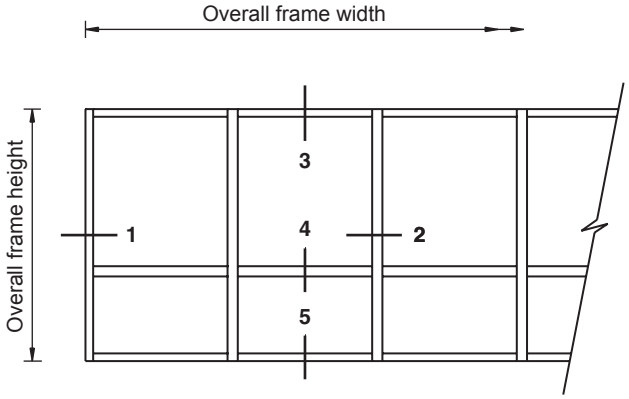


135° INSIDE CORNER

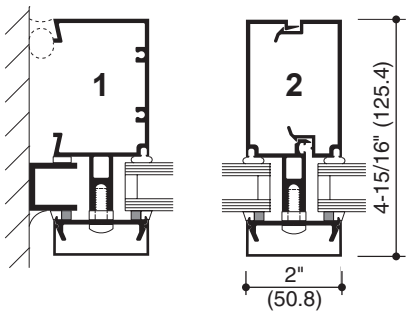
SCALE 3" = 1'-0"

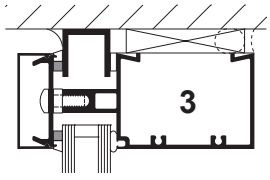
TYPE A

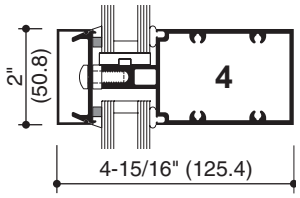
HORIZONTAL STRIP WINDOW

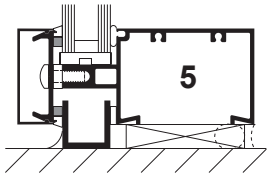


ELEVATION IS NUMBER KEYED TO DETAILS



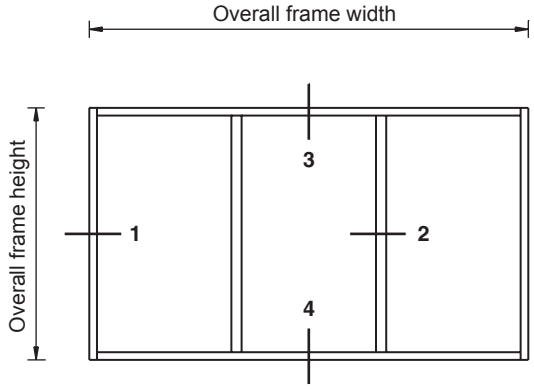




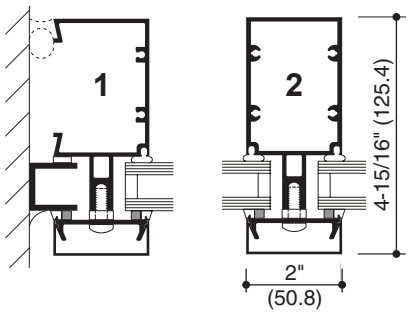


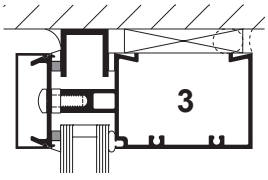
TYPE B

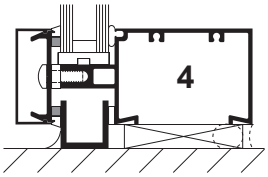
PUNCHED OPENING WINDOW



ELEVATION IS NUMBER KEYED TO DETAILS



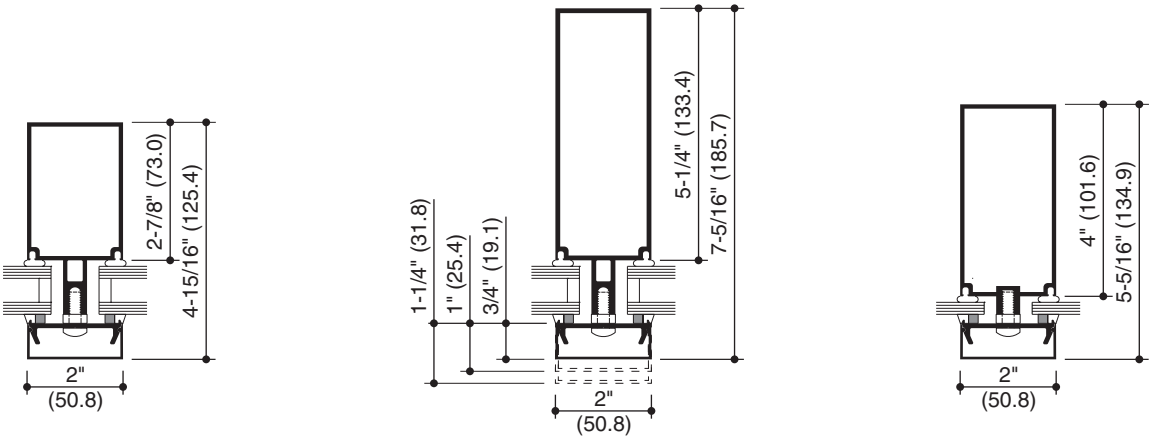




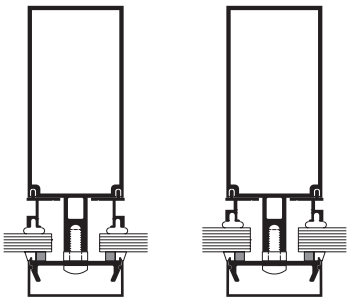
NOTE: 1602 WINDOW CAN ALSO BE FABRICATED AS A STICK SYSTEM.

SCALE 3" = 1'-0"

WALL MULLIONS
(VERTICAL AND HORIZONTAL)



OPTIONAL COVERS



WITHOUT BACKPAN ADAPTORS

WIND LOAD CHARTS

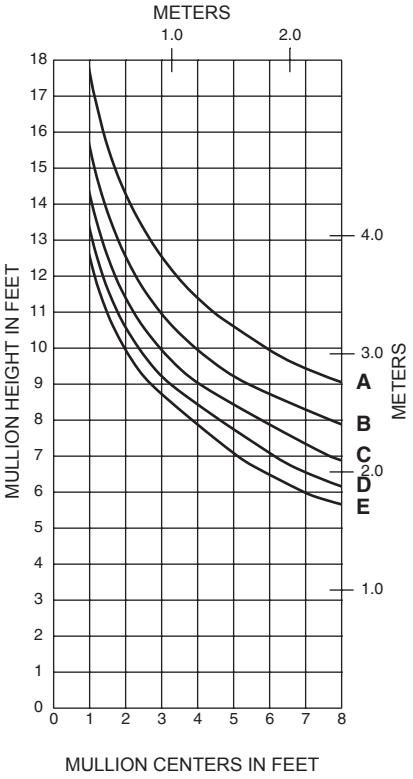
Mullions are designed for deflection limitations in accordance with AAMA TIR-A11 of L/175 up to 13'-6" and L/240 +1/4" above 13'-6". These curves are for mullions WITH HORIZONTALS and are based on engineering calculations for stress and deflection. Allowable wind load stress for ALUMINUM 15,152 psi (104 MPa), STEEL 30,000 psi (207 MPa). Charted curves, in all cases are for the limiting value. Wind load charts contained herein are based upon nominal wind load utilized in allowable stress design. A conversion from Load Resistance Factor Design (LRFD) is provided. To convert ultimate wind loads to nominal loads, multiply ultimate wind loads by a factor of 0.6 per ASCE/SEI 7. A 4/3 increase in allowable stress has not been used to develop these curves. For special situations not covered by these curves, contact your Kawneer representative for additional information.

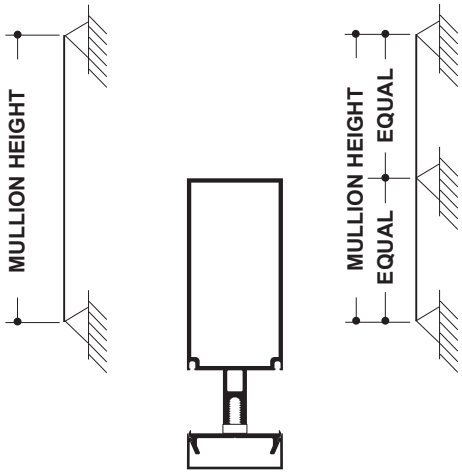
DEADLOAD CHARTS

Horizontal or deadload limitations are based upon 1/8" (3.2), maximum allowable deflection at the center of an intermediate horizontal member. The accompanying charts are calculated for 1" (25.4) thick insulating glass or 1/4" (6.4) thick glass supported on two setting blocks placed at the loading points shown.

	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	50 PSF (2400)	83 PSF (4000)
E =	60 PSF (2880)	100 PSF (4790)

SINGLE SPAN

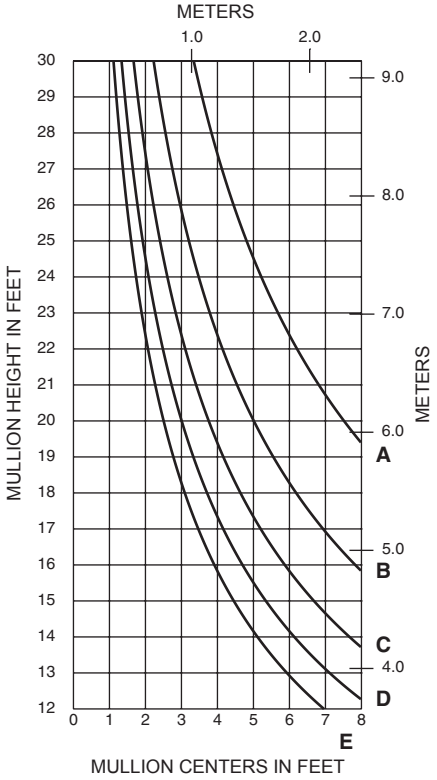




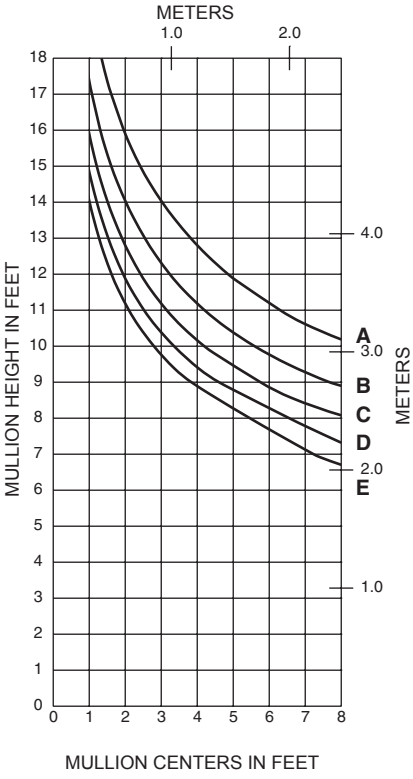
820301

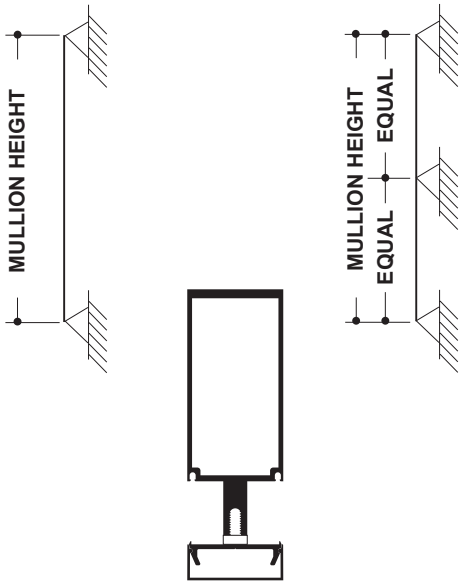
I = 3.883(161.62 x 10^4)
S = 1.488(24.38 x 10^3)

TWIN SPAN



SINGLE SPAN

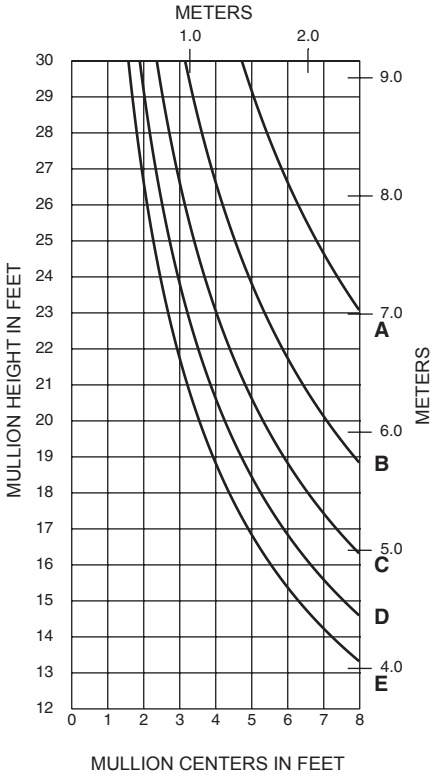




820302

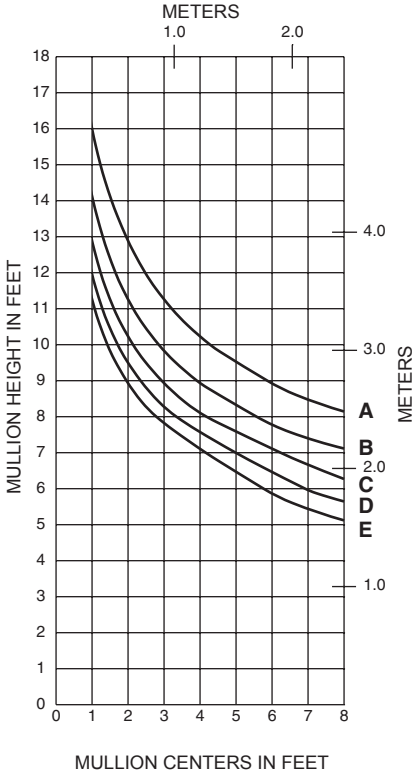
I = 5.507(229.22 x 10^4)
S = 2.105(34.49 x 10^3)

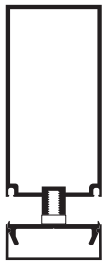
TWIN SPAN



	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	50 PSF (2400)	83 PSF (4000)
E =	60 PSF (2880)	100 PSF (4790)

SINGLE SPAN

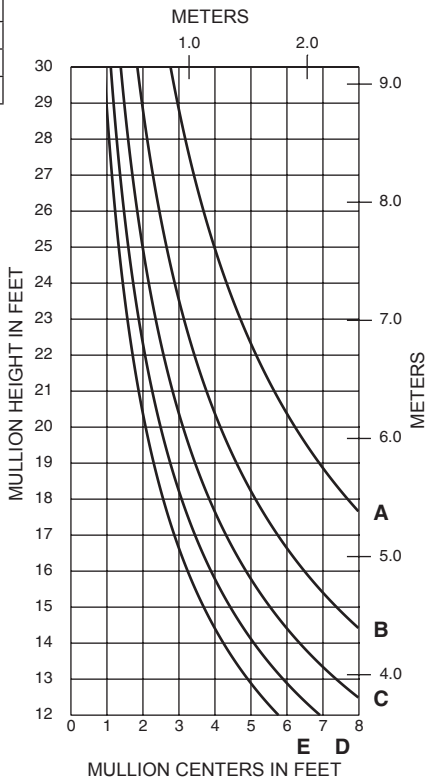




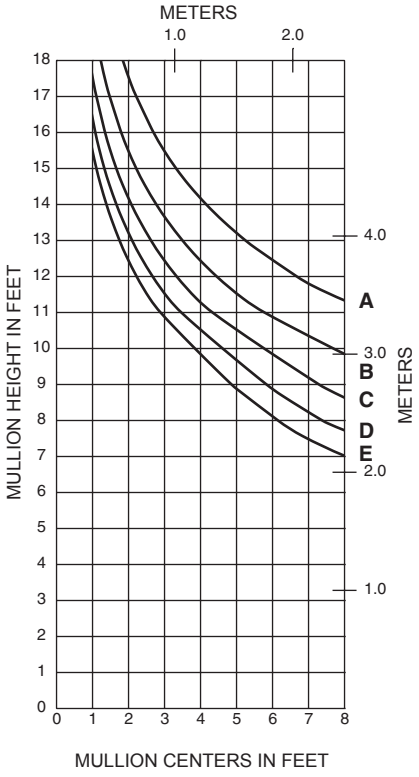
820303

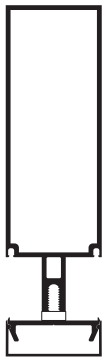
$I = 2.808(116.88 \times 10^4)$
$S = 1.233(20.21 \times 10^3)$

TWIN SPAN



SINGLE SPAN

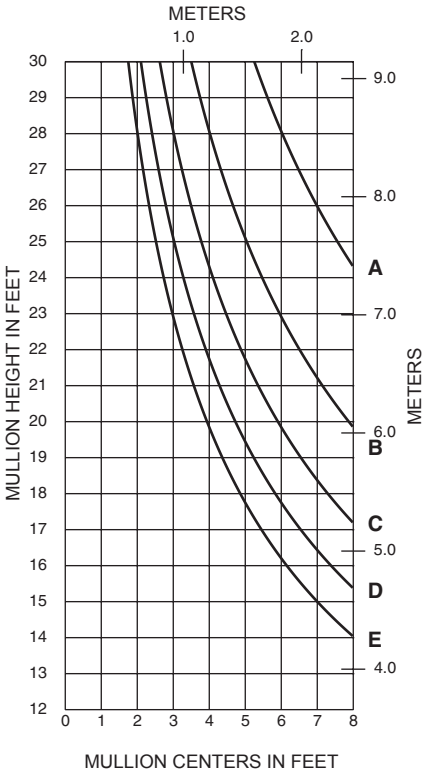




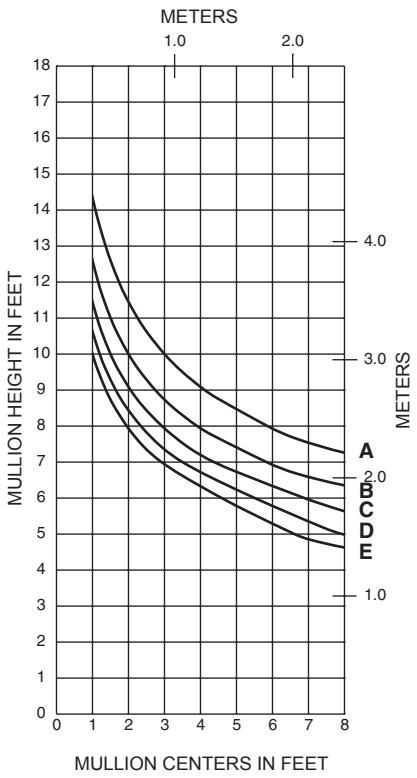
820316

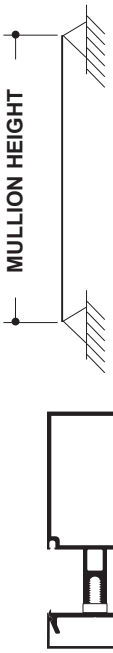
$I = 7.570(315.09 \times 10^4)$
$S = 2.339(38.33 \times 10^3)$

TWIN SPAN



SINGLE SPAN

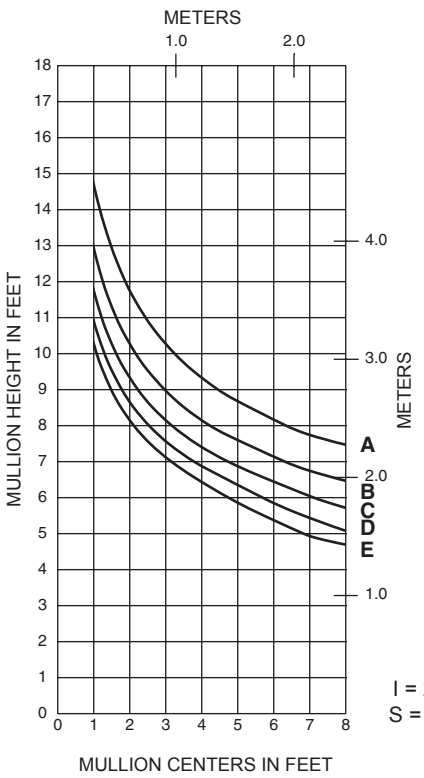


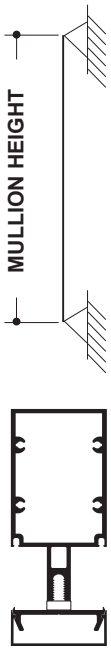


820317

$I = 1.970(82.00 \times 10^4)$
$S = 0.982(16.09 \times 10^3)$

SINGLE SPAN

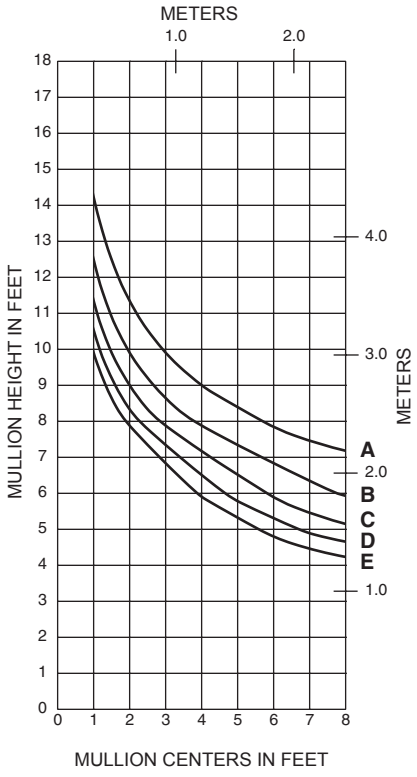


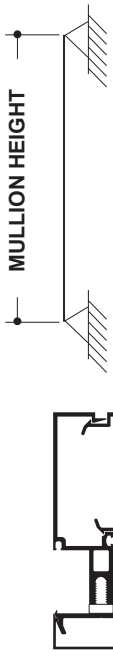


821852

$I = 2.131(88.70 \times 10^4)$
$S = 1.014(16.61 \times 10^3)$

SINGLE SPAN





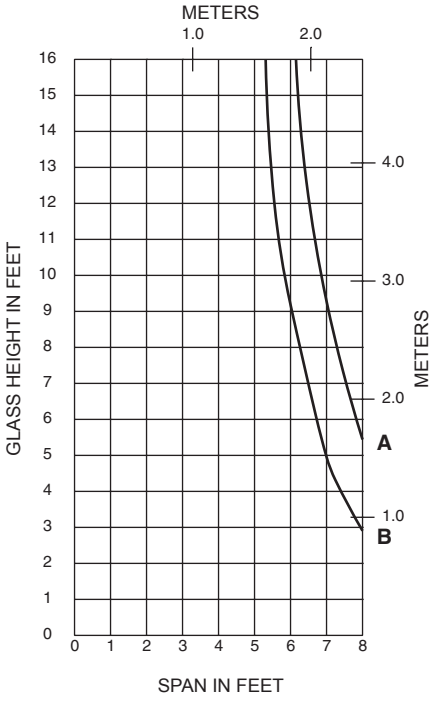
820853 & 821854

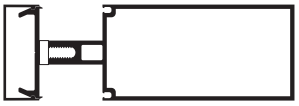
$I = 1.916(79.75 \times 10^4)$
$S = 0.830(13.60 \times 10^3)$

	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	50 PSF (2400)	83 PSF (4000)
E =	60 PSF (2880)	100 PSF (4790)

A - 1/8 POINT LOADING
B - 1/4 POINT LOADING

1/4" INFILL

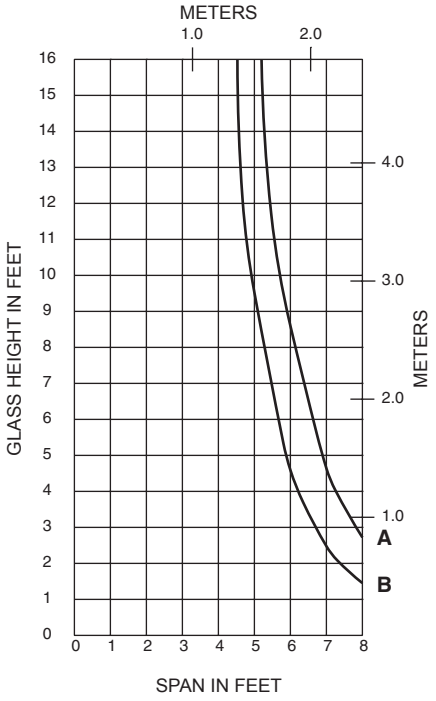




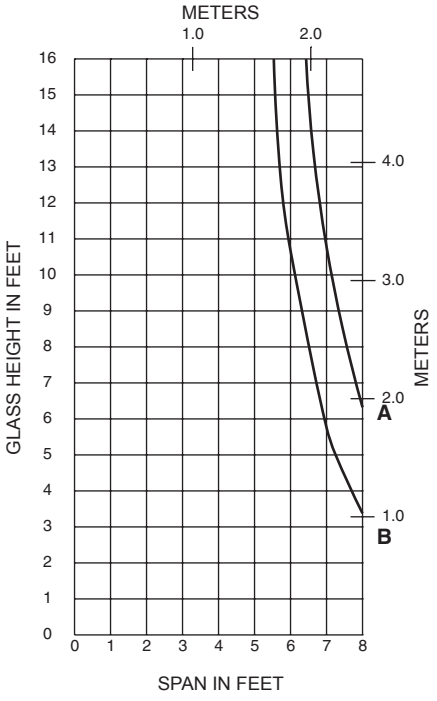
820301

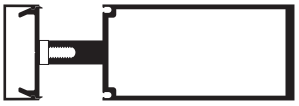
$I = 0.766(31.88 \times 10^4)$
$S = 0.766(12.55 \times 10^3)$

1" INFILL



1/4" INFILL

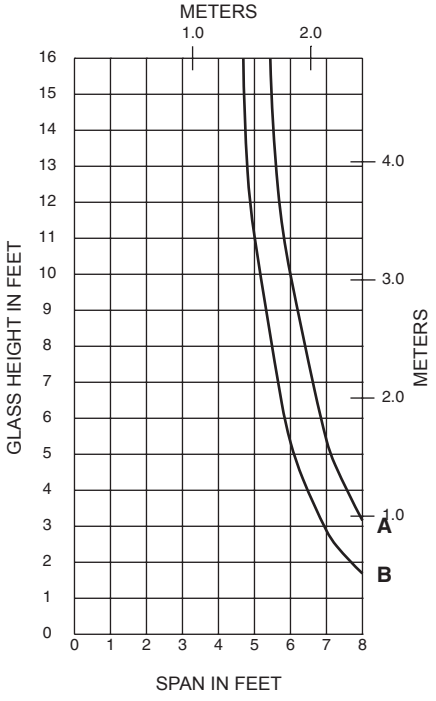




820302

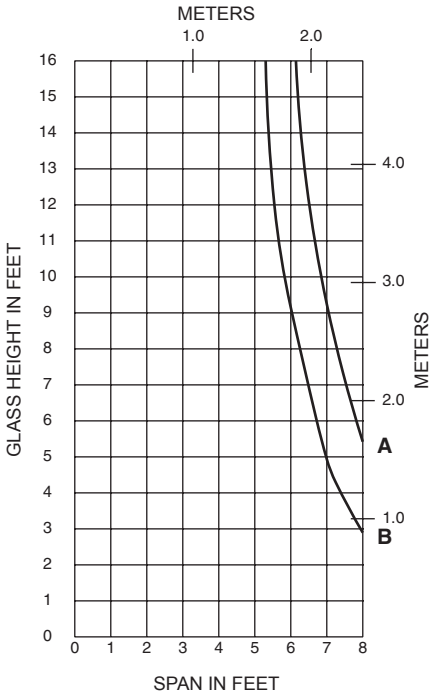
$I = 0.890(37.04 \times 10^4)$
$S = 0.890(14.58 \times 10^3)$

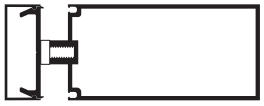
1" INFILL



A - 1/8 POINT LOADING
B - 1/4 POINT LOADING

1/4" INFILL

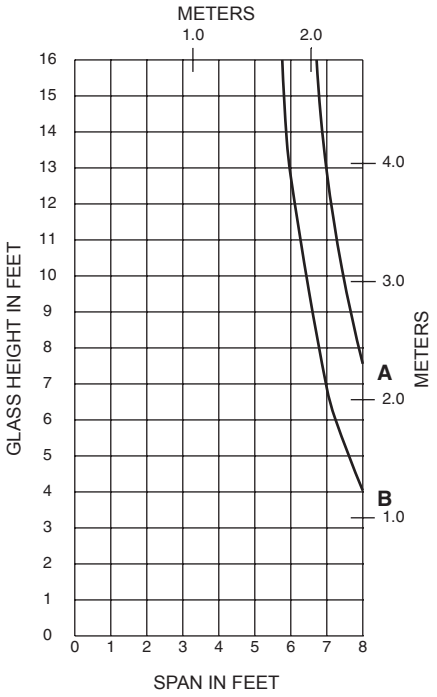




820303

$I = 0.763(31.76 \times 10^4)$
$S = 0.763(12.50 \times 10^3)$

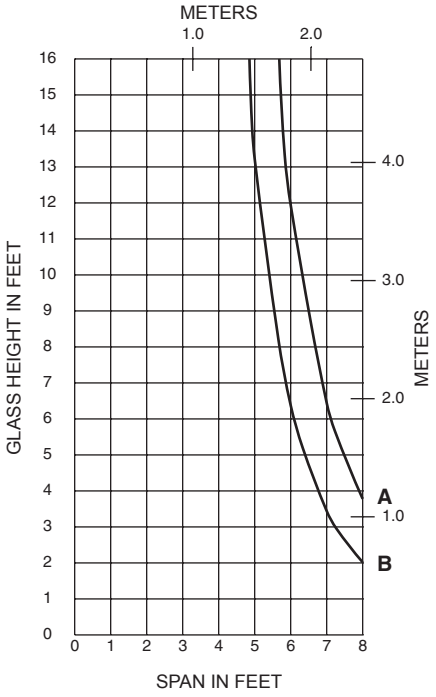
1/4" INFILL



820316

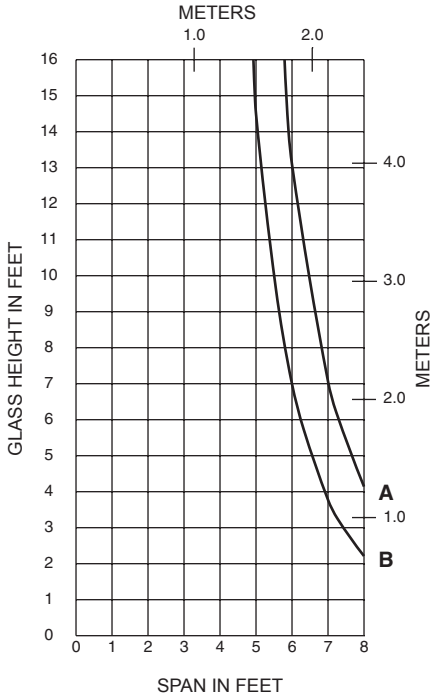
$I = 1.064(44.29 \times 10^4)$
$S = 1.064(17.44 \times 10^3)$

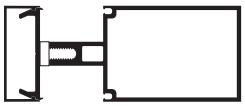
1" INFILL



A - 1/8 POINT LOADING
B - 1/4 POINT LOADING

1/4" INFILL

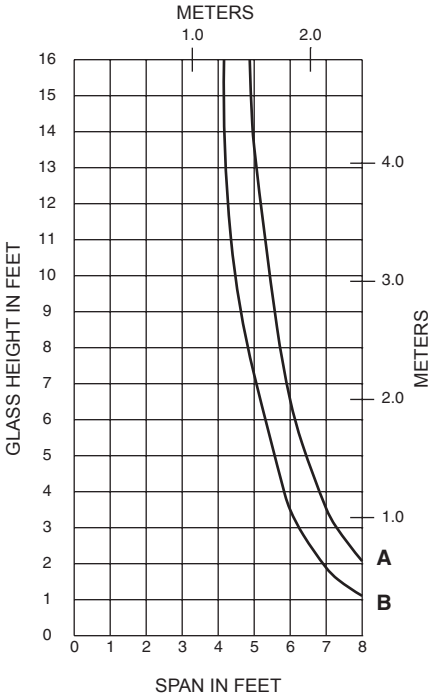




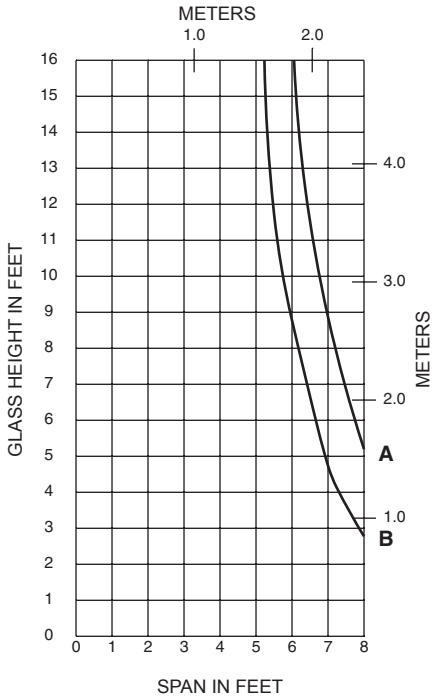
820317

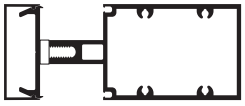
I = 0.583(24.27 x 10^4)
S = 0.583(9.55 x 10^3)

1" INFILL



1/4" INFILL

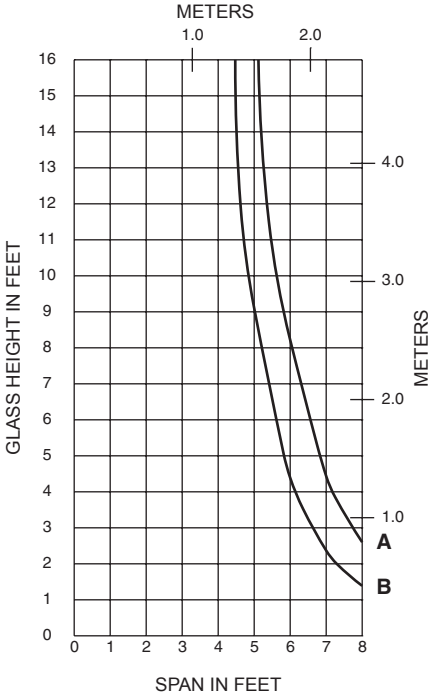




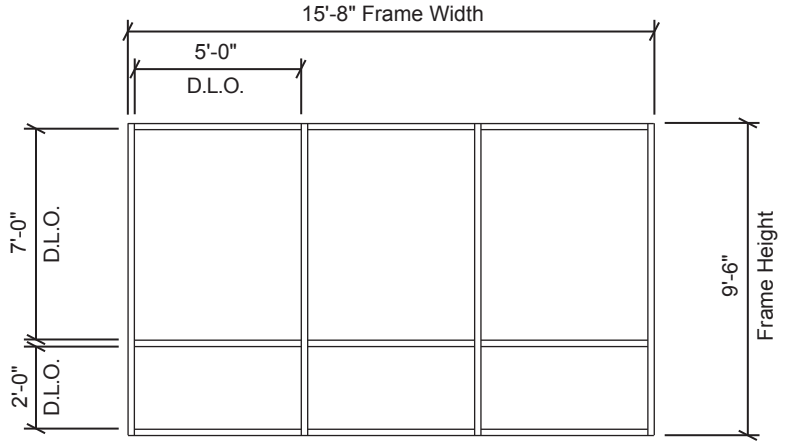
821852

I = 0.732(30.47 x 10^4)
S = 0.732(12.00 x 10^3)

1" INFILL



Generic Project Specific U-factor Example Calculation
(Percent of Glass will vary on specific products depending on sitelines)
(Based on single bay of Curtain Wall/Window Wall)



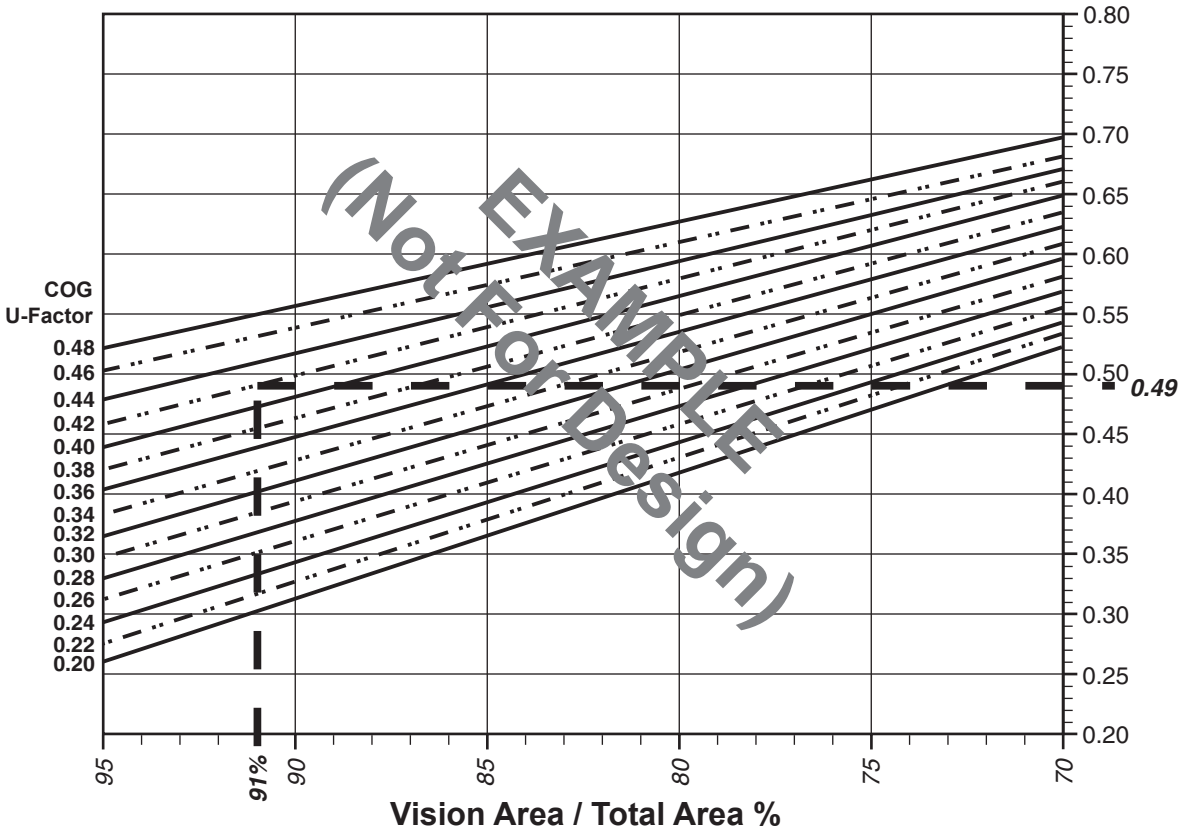
Example Glass U-Factor = 0.42 Btu/hr • ft² • °F

Total Daylight Opening = 3(5' x 7') + 3(5' x 2') = 135 ft²

Total Projected Area = 15'-8" x 9'-6" = 148.83 ft²

Percent of Glass = (Total Daylight Opening ÷ Total Projected Area)100
= (135 ÷ 148.83)100 = 91%

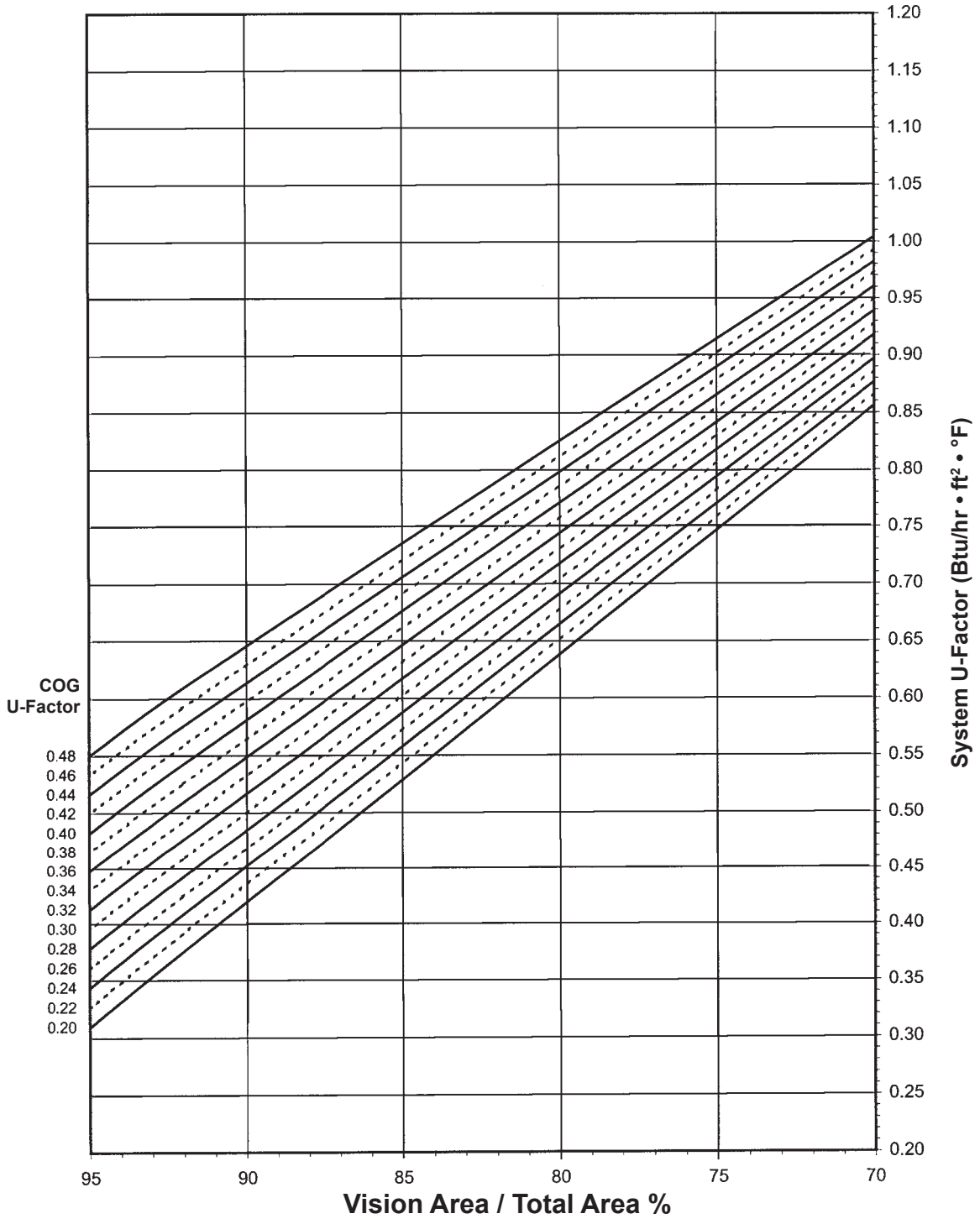
System U-Factor vs Percent of Glass Area



Based on 91% glass and center of glass U-Factor of 0.42
System U-Factor is equal to 0.49 Btu/hr • ft² • °F

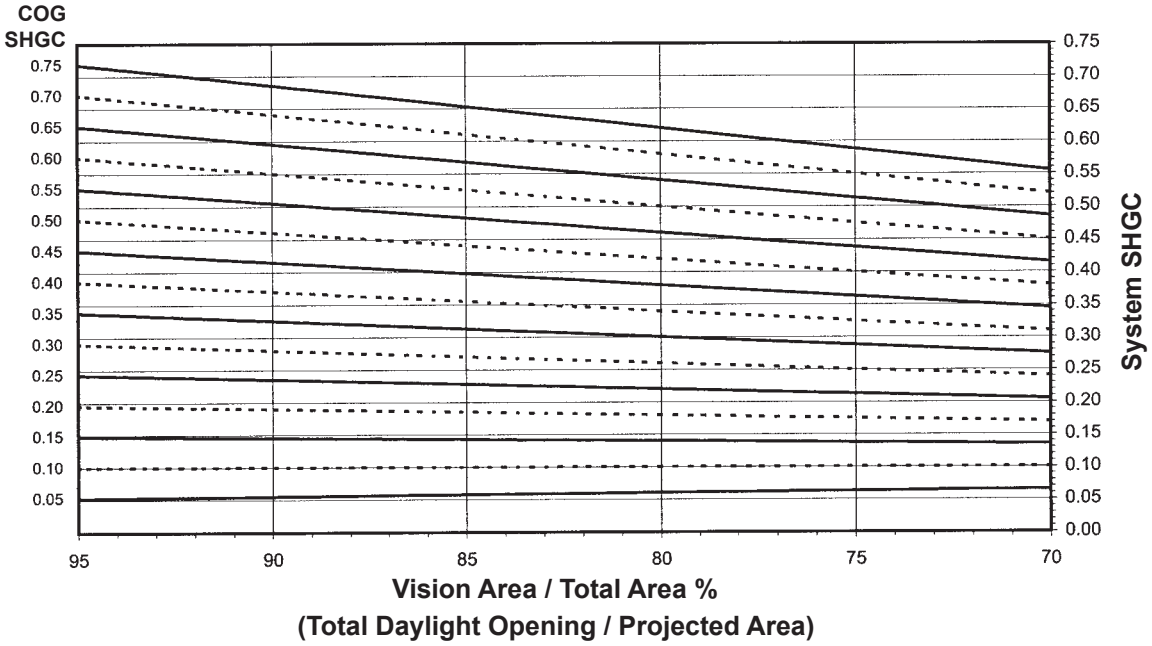
Note:
Values in parentheses are metric.
COG = Center of Glass.
Charts are generated per AMMA 507

System U-Factor vs Percent of Glass Area



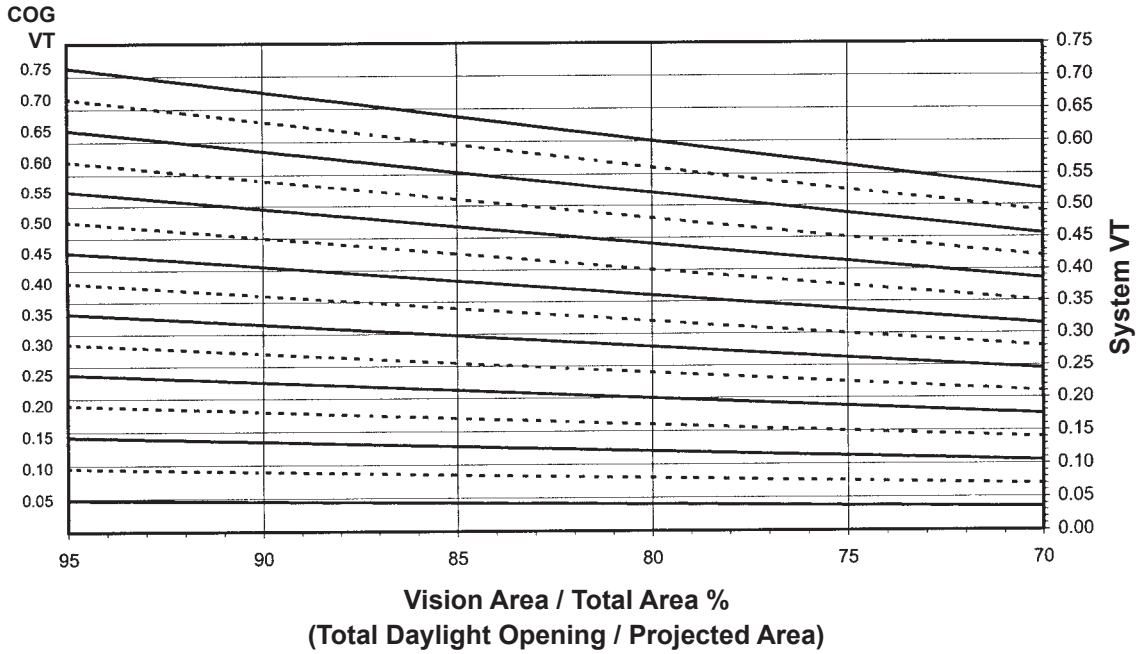
Notes for System U-Factor, SHGC and VT charts:
For glass values that are not listed, linear interpolation is permitted.
Glass properties are based on center of glass values and are obtained from your glass supplier.

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Charts are generated per AAMA 507

Visible Transmittance (VT) vs Percent of Vision Area



Thermal Transmittance [1] (BTU/hr • ft [2] • °F)

Glass U-Factor [3]	Overall U-Factor [4]
0.48	0.61
0.46	0.59
0.44	0.58
0.42	0.56
0.40	0.54
0.38	0.53
0.36	0.51
0.34	0.49
0.32	0.48
0.30	0.46
0.28	0.44
0.26	0.43
0.24	0.41
0.22	0.39
0.20	0.38

1" GLAZING WITH ALUMINUM PRESSURE PLATE

NOTE: For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

SHGC Matrix [2]

Glass SHGC [3]	Overall SHGC [4]
0.75	0.70
0.70	0.65
0.65	0.61
0.60	0.56
0.55	0.51
0.50	0.47
0.45	0.42
0.40	0.38
0.35	0.33
0.30	0.28
0.25	0.24
0.20	0.19
0.15	0.15
0.10	0.10
0.05	0.05

Visible Transmittance [2]

Glass VT [3]	Overall VT [4]
0.75	0.69
0.70	0.64
0.65	0.60
0.60	0.55
0.55	0.51
0.50	0.46
0.45	0.41
0.40	0.37
0.35	0.32
0.30	0.28
0.25	0.23
0.20	0.18
0.15	0.14
0.10	0.09
0.05	0.05