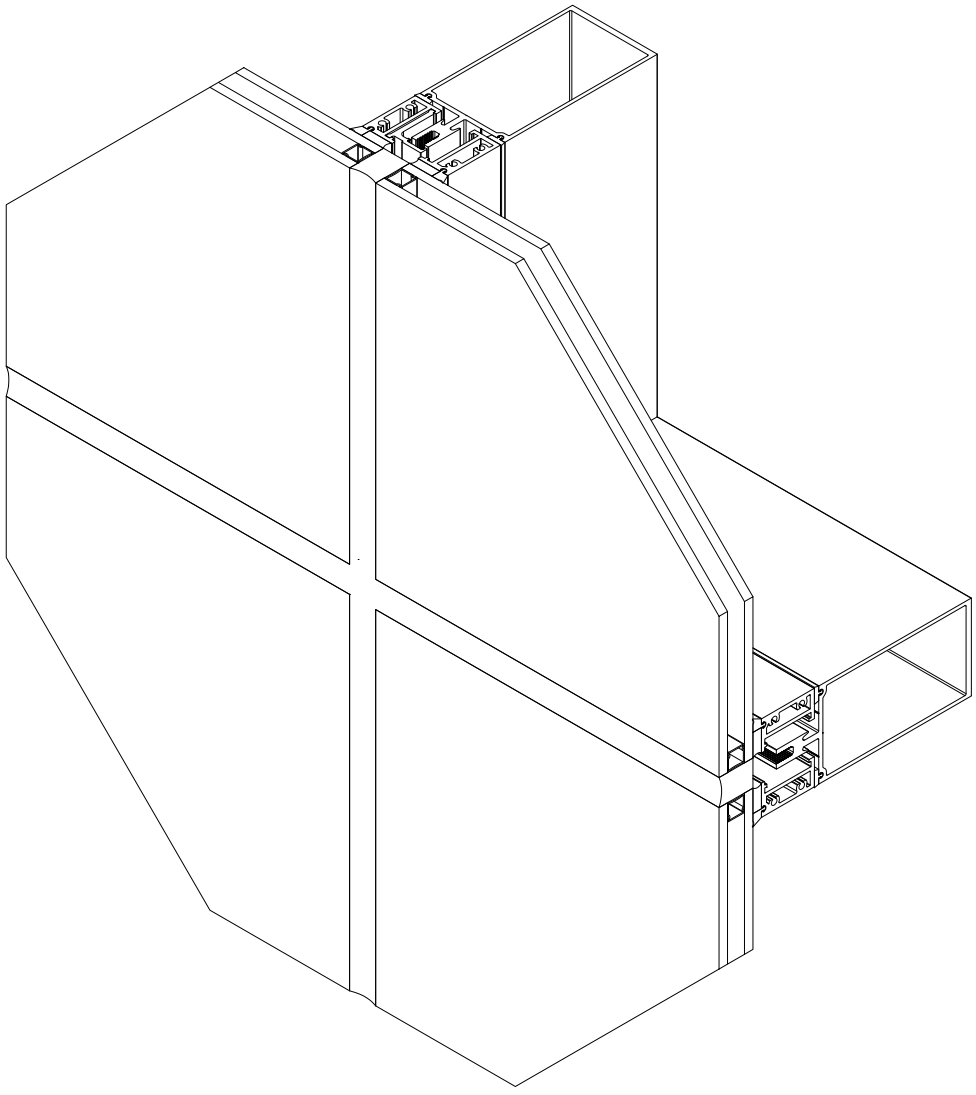
CARRIER FRAME
TECHNICAL MANUAL



FEATURES

- Pre-glazed SSG Carrier frames to be installed on 70 Wall curtain wall
- Carrier has a 2 1/2" sight line to align with 70 Wall
- Optional exterior faces either vertically, horizontally, or both.
- Available for installation on 3 1/2", 4 1/2", 5 1/2", and 8 1/2" 70 Wall back member depths
- Infill is 1"
- Carrier frame is screw spline fabrication
- Concealed fastener joinery gives a smooth appearance
- Entrance sub-framing system available
- Available in anodized, standard and custom painted finishes
- Exterior can be different color than interior with optional applied faces
- Numerous exterior face contours available

APPLICATIONS

- Mid-rise curtainwalls
- High span atriums
- Large glazing lites

SYSTEM PERFORMANCE (Fully Captured)

Description	Test Method	Allowed	Achieved	Test Report
Structural	ASTM E 330	≤ L/175	≤ L/175 @ 50 psf	71-01b
Air	ASTM E 283	0.06 cfm / ft² @ 1.57 psf	0.005 cfm / ft² @ 1.57 psf	71-01b
Air	ASTM E 283	0.06 cfm / ft² @ 6.24 psf	0.01 cfm / ft² @ 6.24 psf	71-01b
Water (Static)	ASTM E 331	None	None @ 15 psf	71-01b
Water (Dynamic)	AAMA 501.1	None	None @ 15 psf	71-01b
Seismic Racking	AAMA 501.4	No Damage	± 1 1/2"	71-01b
CRF ●	AAMA 1503	N/A	77	71-02
U Value ●	AAMA 1503	N/A	0.29	71-02
U Value*	NFRC 100	N/A	0.54	71-05
SHGC*	NFRC 200	N/A	0.64	71-05
VT*	NFRC 200	N/A	0.71	71-05
CR*	NFRC 500	N/A	48	71-05
U Value+	NFRC 100	N/A	0.38	71-05
SHGC+	NFRC 200	N/A	0.36	71-05
VT+	NFRC 200	N/A	0.63	71-05
CR+	NFRC 500	N/A	54	71-05

+ 1" IGU (1/4 Solarban 60 1/4-1/2-1/4 Clear) Glass, Aluminum Spacer.
* 1" IGU (1/4-1/2-1/4) Clear Annealed Glass, Air Filled, Aluminum Spacer.
● 1" IGU - 1/4" Solarban 60 / 1/2" Argon Filled Space w/ high performance spacer / 1/4" Pilkington EA low E Glass

INDEX

- BASIC USES / RELATED USES
  Carrier Framing is designed to be pre-glazed assemblies and field applied to 70 Wall back member framing
  Carrier Framing and back member mullions are of tubular aluminum butt glazed exteriors or with optional exterior faces
  Corners are configured for 90 degree outside and inside
  Glazing is 1" insulating glass unit or panels
  Glass may be transparent, opaque, or decorative types
  Framing is intended for multi-story applications

- PRODUCT ATTRIBUTES AND CHARACTERISTICS
  Carrier frame members are thermally isolated from exterior
  SSG Framing and optional pressure plates for face caps are designed for 1" glass and panels
  Wind pressure resistance and pressure equalization are standard within the frame assembly
  Weep containment and condensate water collection and drainage to the exterior at concealed weeps are standard
  Door sub-frame adaptor is available
  Energy savings are available with thermally broken mullion and SSG glazing

- SELECTION CRITERIA
  Quality, economy, and high performance are provided at a reasonable cost
  Framing is designed for Interior or exterior environments
  Carrier is structurally glazed in a controlled environment

- APPLICABLE STANDARDS, RELATED REFERENCES
  AA (Aluminum Association) - Designation System for Aluminum Finishes
  AAMA SFM-1-14 - Aluminum Storefront and Entrance Manual
  AAMA CWM-19 - Curtain Wall Manual
  AAMA 501.1-17 - Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors using Dynamic Pressure
  AAMA 611-14 - Voluntary Specification for Anodized Architectural Aluminum
  AAMA 1503-09 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors, and Glazed Wall Sections
  AAMA 2604-17a - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels
  AAMA 2605-17a - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels
  ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
  ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate
  ASTM B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate [Metric]

ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wires, Profiles, and Tube
ASTM B221M - Standard Aluminum-Alloy Extruded Bars, Rods, Wires, Profiles, and Tube [Metric]
ASTM E283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen
ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference

- QUALITY, TESTS, CERTIFICATIONS, AND APPROVALS
  Air Infiltration: Maximum leakage of 0.01 cfm/sq ft when measured in accordance with ASTM E283 at a test pressure of 6.24 psf
  Static Water Leakage: No uncontrolled leakage, when measured in accordance with ASTM E331 at a test pressure difference of 15 psf
  Dynamic Water Leakage: No uncontrolled leakage, when measured in accordance with AAMA 501.1 at a test pressure difference of 15 psf
  Structural Performance: Maximum deflection less than L/175 of the span length up to 3/4" for spans less than 13'-6", otherwise L/240 + $\frac{1}{4}$". No damage to the assembly, when measured in accordance with ASTM E330 at a test pressure of 50 psf
  Seismic Racking: 1 1/2" per (AAMA 501.4)
  Condensation Resistance Factor (CRF): 77 when measured in accordance with AAMA 1503 with 1" insulated glass unit (1/4" Solarban 60, 1/2" argon space with high performance spacer, 1/4" Pilkington EA low E glass)
  Insulation U-Factor: 0.29 BTU/hr/sq ft/degrees F when measured in accordance with AAMA 1503 with 1" insulated glass unit (1/4" Solarban 60, 1/2" argon space with high performance spacer, 1/4" Pilkington EA low E glass)

- PACKAGING, HANDLING, AND PROTECTION INSTRUCTIONS
  Packaged in specially designed heavy cartons or pre-fabricated and shipped assembled

- SPECIAL WARRANTY
  One (1) year

- LIMITATIONS
  Exterior pre-glazed only
  Shear block back member construction

- SAFETY PRECAUTIONS
  Normal precautions required

- AVAILABILITY
  Framing is available in all regions of USA - refer to Internet web site for locations and addresses of distributors

- COST
  Varies with elevation, configuration and finish desired

PRODUCT PROPERTIES

- MATERIAL, COMPOSITION AND DESIGN
  Aluminum: 6063-T6 alloy and temper, to ASTM B221 or ASTM B221M
  Fasteners: Stainless steel, or zinc plated carbon steel
  Perimeter Anchors: Aluminum, or steel that will be isolated from aluminum components
  Glazing Gaskets: Sponge EPDM at interior, and silicone with silicone compatible spacer at butt-glaze, and (EPDM) rubber at exterior with optional faces
  Glass Stops: None unless with optional faces exterior pressure plate
  Thermal Barrier: Rigid PVC isolator

- SHAPE, MASS, AND DIMENSIONS
  Frame Width: 2-1/2 inch
  SSG Frame Depths: 6-7/16 inch, 7-7/16 inch, 8-7/16 inch, and 11-7/16 inch with 3 1/2", 4 1/2", 5 1/2", and 8 1/2" back members respectively
  Glass Edge Bite: For SSG 1 3/4 inch + day light opening, with optional face or at splice 1 1/2" inch + day light opening
  Glazing Thickness Accepted: 1"
  Glazing Thickness Accepted with butt glaze: 1"

- SHOP FABRICATION AND ASSEMBLY
  Provide for flush glazing on all sides with no projecting stops
  Configurations:
  - Solid tubular back member mullions, assembled to specially designed shear block clips

  Accessories:
  - "Tee" Anchors
  - Corner Mullions
  - Solid tubular carrier frame members

- COLORS AND TEXTURES
  - Architectural anodic coating, in accordance with AAMA 611-14;
    - Aluminum Association Designation.
      - AA-M10C22A31 - Class II - (Pittco #42 Clear)
      - AA-M10C22A41 - Class I - (Pittco #43 Clear)
      - AA-M10C22A44 - Class I - (Pittco #59 Champagne)
      - AA-M10C22A44 - Class I - (Pittco #60 Light Bronze)
      - AA-M10C22A44 - Class I - (Pittco #61 Medium Bronze)
      - AA-M10C22A44 - Class I - (Pittco #62 Dark Bronze)
      - AA-M10C22A44 - Class I - (Pittco #63 Black)

PRODUCT DESCRIPTION

- Architectural organic coating, in accordance with AAMA 2604 (50% Kynar 500®);
  - o Finish of Exposed Aluminum shall be compliant with the performance standards set forth in AAMA Specification 2604, High Performance Organic Coatings on Aluminum
  - o Type: Factory Applied, High Performance, 50% Polyvinylidene Fluoride (PVDF) Coating formulated by a licensed paint manufacturer, and applied by Paint Manufacturer's Warranty-Approved Applicator
  - o Pretreatment: Applicator to pre-treat the aluminum with solutions to remove organic and inorganic surface soils, remove residual oxides, followed by a Chrome Phosphate or Chromate Coating to ensure adhesion to the aluminum
  - o Specify color code, e.g. UC 40577(Duranar Black)

- Architectural organic coating, in accordance with AAMA 2605 (70% Kynar 500®);
  - o Finish of Exposed Aluminum shall be compliant with the performance standards set forth in AAMA Specification 2605, Superior Performing Organic Coatings on Aluminum
  - o Type: Factory Applied, High Performance, 70% Polyvinylidene Fluoride (PVDF) Coating formulated by a licensed paint manufacturer, and applied by Paint Manufacturer's Warranty-Approved Applicator
  - o Pretreatment: Applicator to pre-treat the aluminum with solutions to remove organic and inorganic surface soils, remove residual oxides, followed by a Chrome Phosphate or Chromate Coating to ensure adhesion to the aluminum
  - o Specify color code, e.g. UC 40577(Duranar Black)

PRODUCT PLACEMENT

- PREPARATION WORK
  Ensure openings are of proper size, and are plumb, square, level and in the proper location and alignment

- INSTALLATION
  Align installed assembly plumb and level, free of warp or twist
  Maintain dimensional tolerances, aligning with adjacent work
  Seal joints between framing and building structure watertight
  Follow guidelines in Pittco Fabrication, Sealant and Erection Brochure

- START-UP AND OPERATION
  Not Applicable

- OWNER'S MAINTENANCE INSTRUCTIONS
  Wash surfaces with warm water and mild soap; wipe clean, at least once a year

Corporate Identification

Pittco Architectural Metals, Inc
1530 Landmeier Road
Elk Grove Village, Illinois 60007
Tel: (847) 593-3131
Fax: (847) 593-9946
Toll-Free: (800) 992-7488
Internet: http://www.pittcometals.com
E-mail: info@pittcometals.com

Technical Services Available

Toll-Free: (800) 992-7488

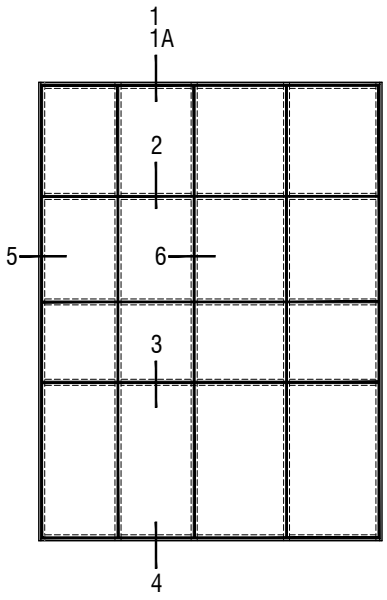
Classification and Filing

MasterFormat

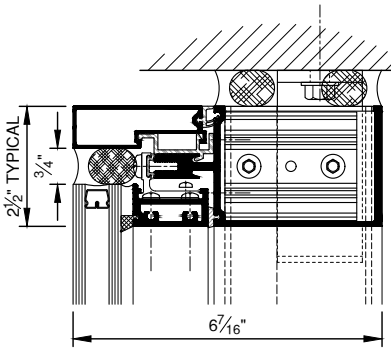
Subset of Section 08 44 23- Structural Sealant Glazed Curtain wall

TYPICAL FRAMING DETAILS

3 1/2" Back Member



1
HEAD
('T' ANCHOR)



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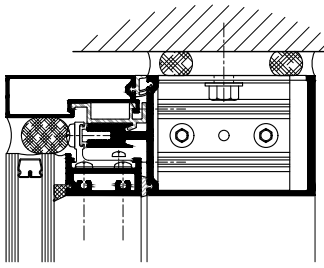
71-101 (PERIMETER FILLER)
70-683 (SHEAR BLOCK)
70-623 (ANCHOR SLEEVE)
70-653 ('T' ANCHOR)
71-901 (CARRIER CLIP)

1A
HEAD
(CLIP ANCHOR)



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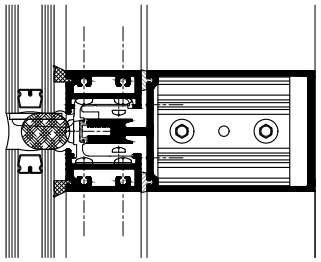

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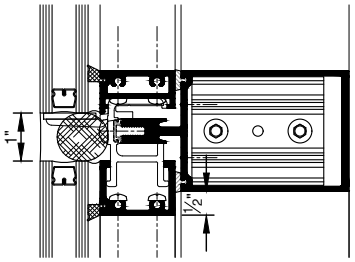
3
SPLICE
HORIZONTAL



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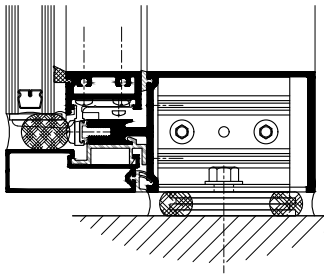
71-907 (CARRIER SETTING CHAIR)

4
SILL
(CLIP ANCHOR)



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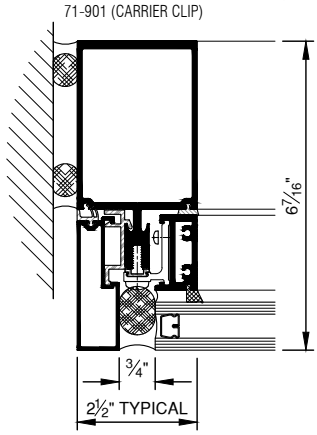
70-663 (ANCHOR)
71-901 (CARRIER CLIP)
71-907 (CARRIER SETTING CHAIR)

70-135 (VERTICAL)
71-001 (CARRIER FRAME)
71-101 (CARRIER PERIMETER FILLER)
71-901 (CARRIER CLIP)



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JAMB

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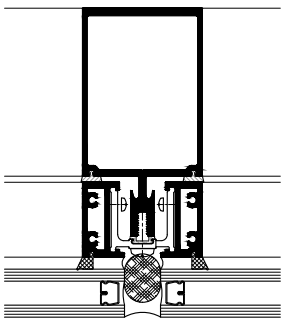

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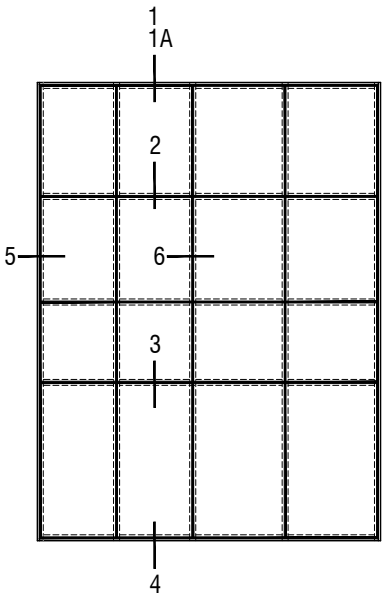

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HEAD
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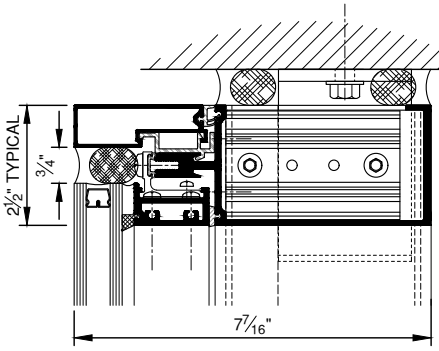

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71-901 (CARRIER CLIP)

1A
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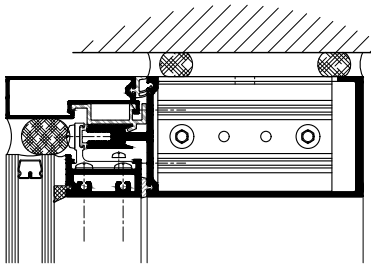
(CLIP ANCHOR)



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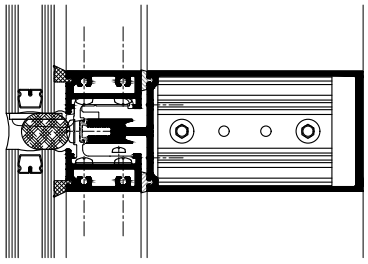

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71-905 (CARRIER CLIP)
71-907 (CARRIER SETTING CHAIR)

70-145 (VERTICAL)
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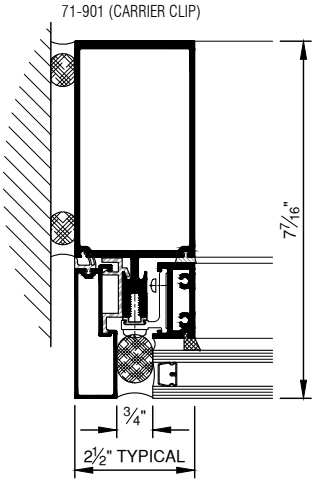
71-901 (CARRIER CLIP)



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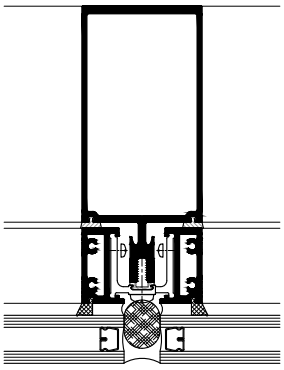

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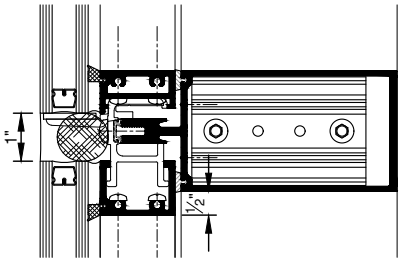
VERTICAL

3
SPLICE
HORIZONTAL



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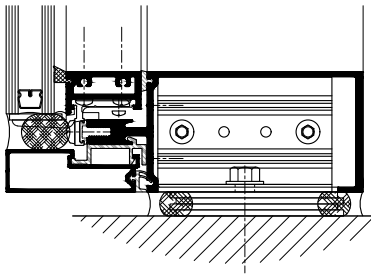
4
SILL
(CLIP ANCHOR)



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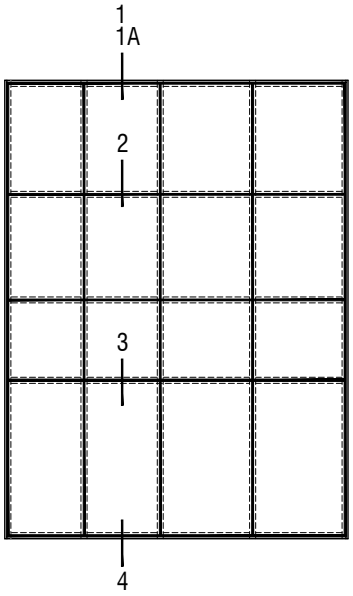
70-664 (ANCHOR)
71-901 (CARRIER CLIP)
71-907 (CARRIER SETTING CHAIR)

TYPICAL FRAMING DETAILS

5 1/2" Back Member



1
HEAD
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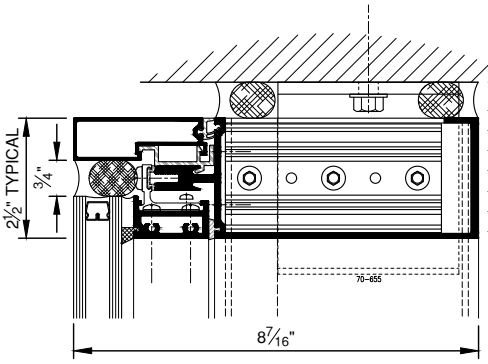

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71-101 (PERIMETER FILLER)
70-685 (SHEAR BLOCK)
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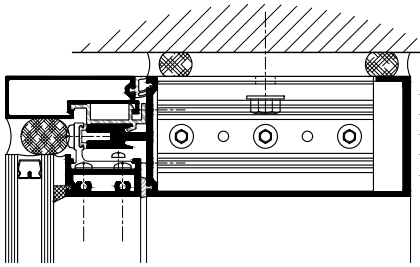
70-655 ('T' ANCHOR)
71-901 (CARRIER CLIP)

1A
HEAD
(CLIP ANCHOR)



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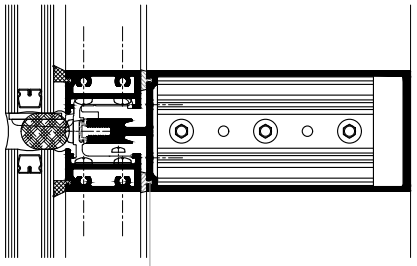
2
HORIZONTAL



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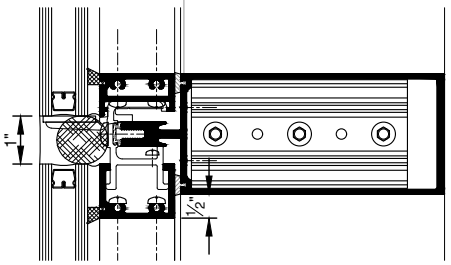
3
SPLICE
HORIZONTAL



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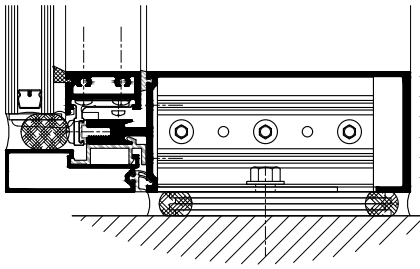
4
SILL
(CLIP ANCHOR)



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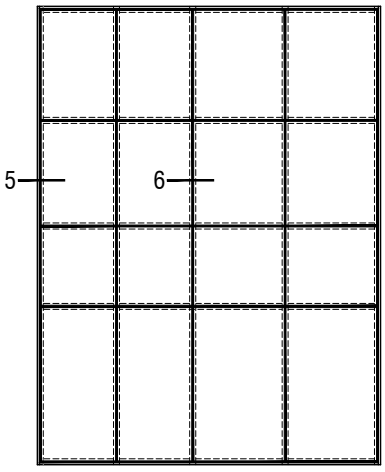
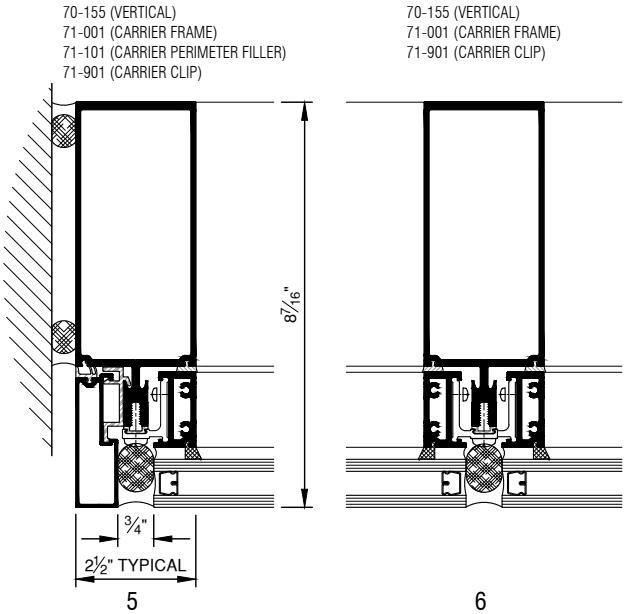


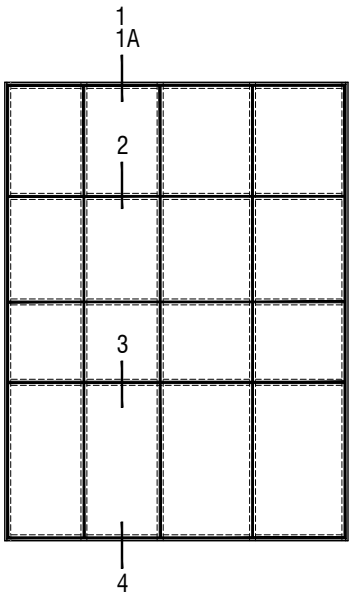


5
JAMB

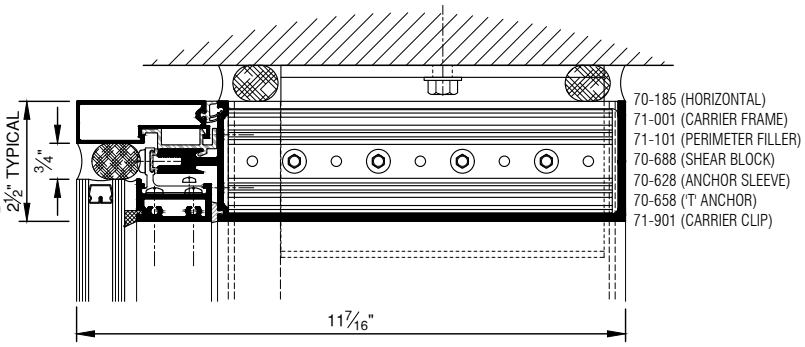
6
VERTICAL

TYPICAL FRAMING DETAILS

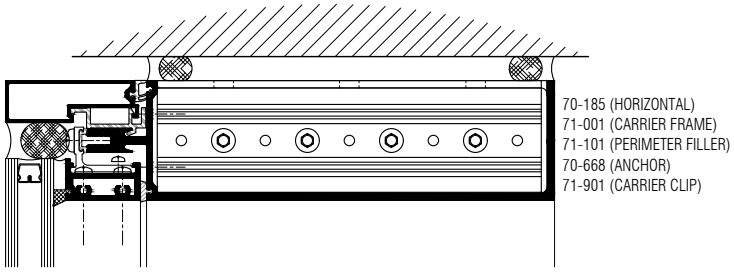
8 1/2" Back Member



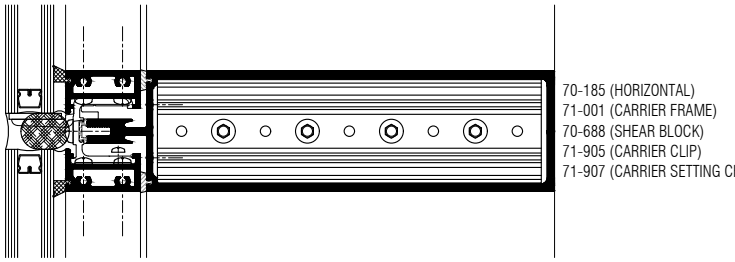
1
HEAD
('T' ANCHOR)



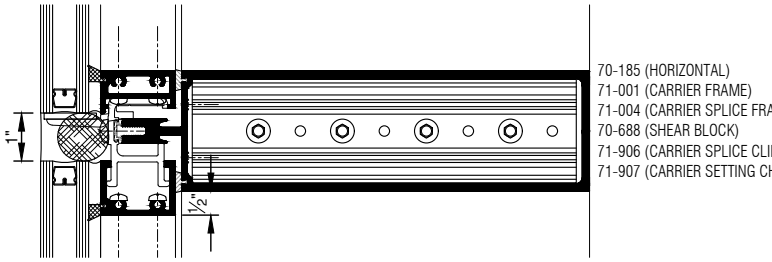
1A
HEAD
(CLIP ANCHOR)



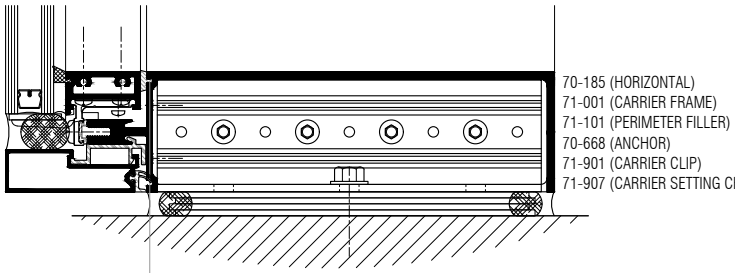
2
HORIZONTAL

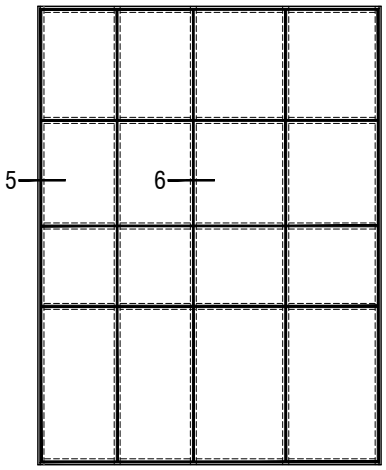


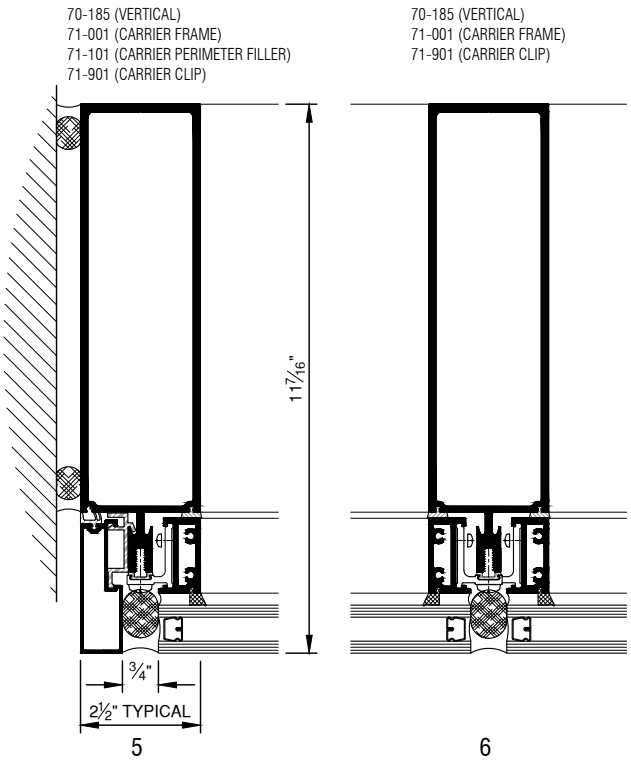
3
SPLICE
HORIZONTAL



4
SILL
(CLIP ANCHOR)



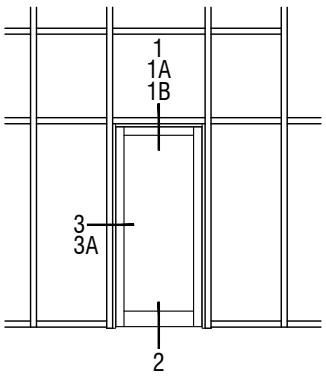


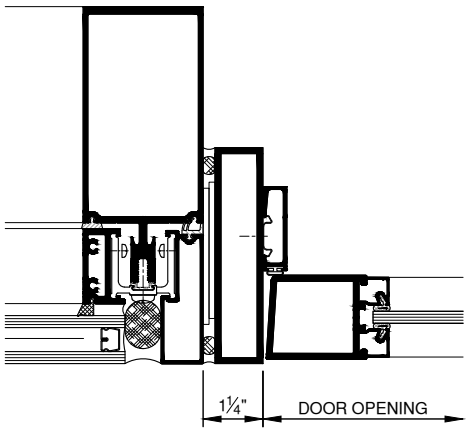


5
JAMB

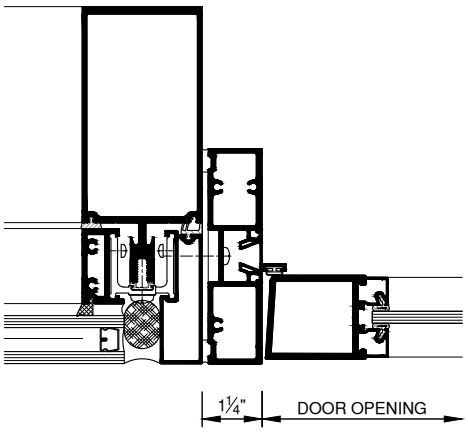
6
VERTICAL

ENTRANCE DETAILS

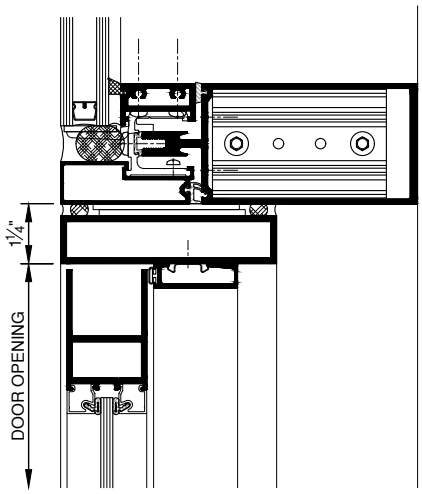




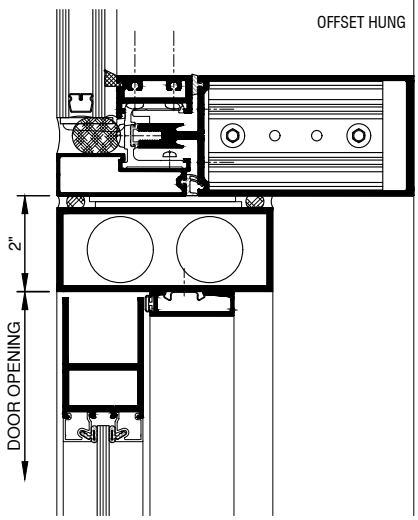
3
DOOR JAMB
OFFSET HUNG



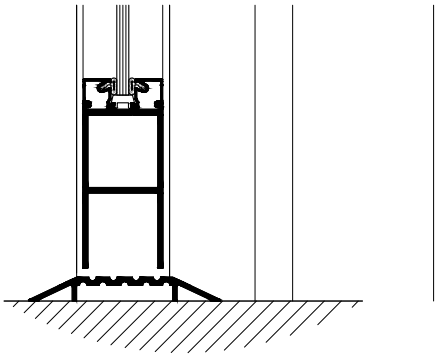
3A
DOOR JAMB
OFFSET HUNG



1
TRANSOM BAR
BUTT HUNG OR
OFFSET PIVOT w/
SURFACE CLOSER

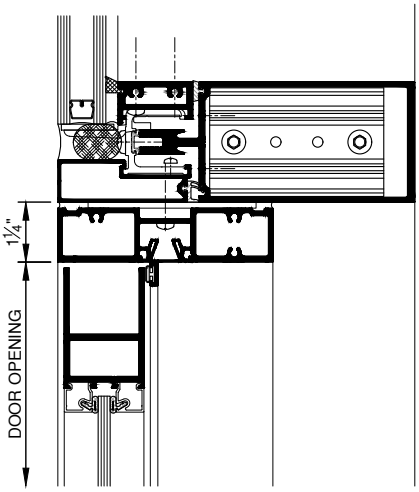


1A
TRANSOM BAR
BUTT HUNG OR
OFFSET PIVOT w/
CONCEALED CLOSER

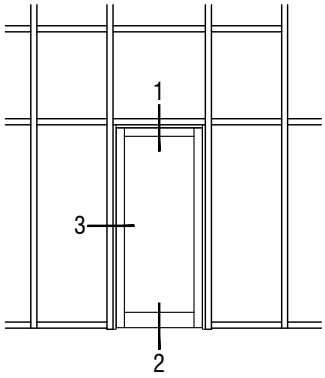


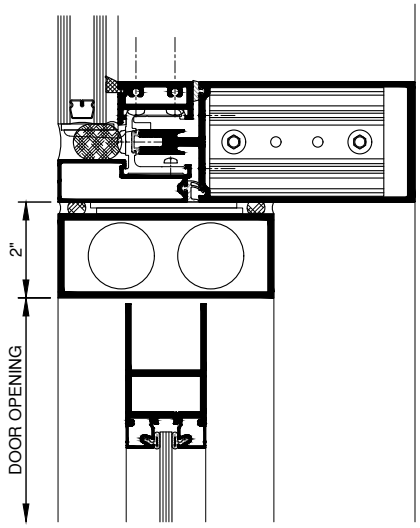
2
BOTTOM RAIL

DETAILS SIMILAR FOR ALL
BACK MEMBER DEPTHS

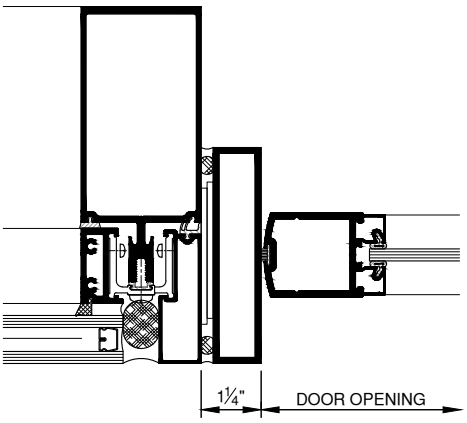


1B
TRANSOM BAR
BUTT HUNG OR
OFFSET PIVOT w/
SURFACE CLOSER

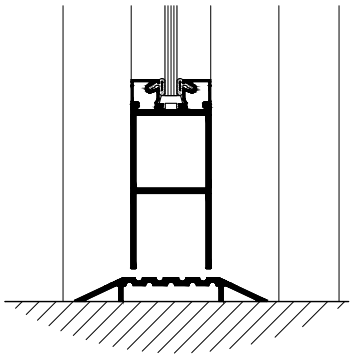




1
TRANSOM BAR

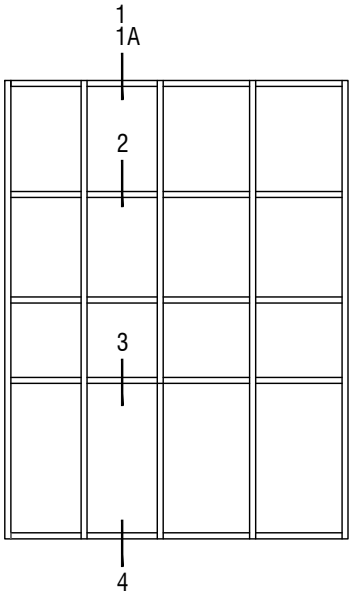


3
DOOR JAMB

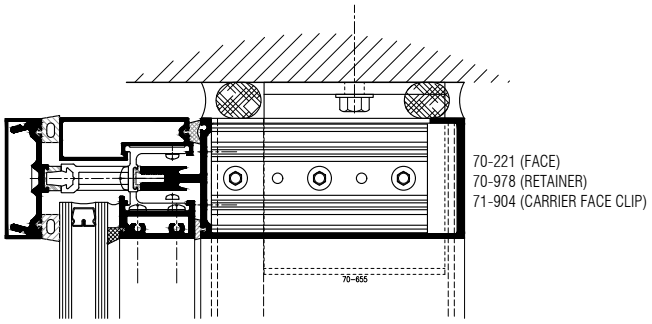


2
BOTTOM RAIL

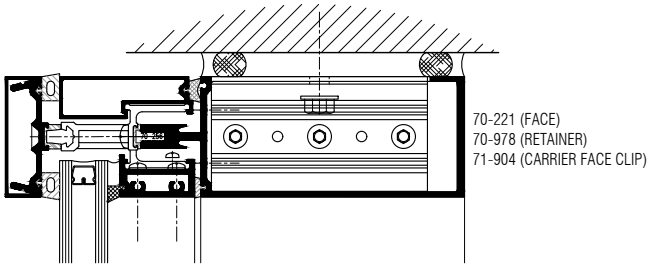
DETAILS SIMILAR FOR ALL
BACK MEMBER DEPTHS



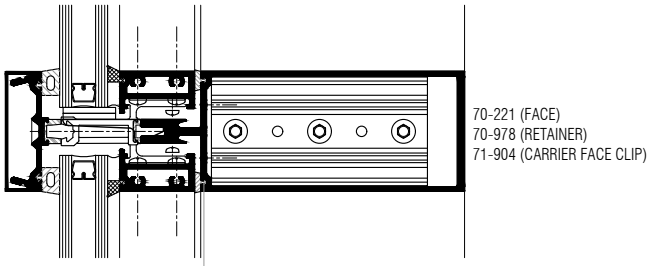
1
HEAD WITH FACE
('T' ANCHOR)



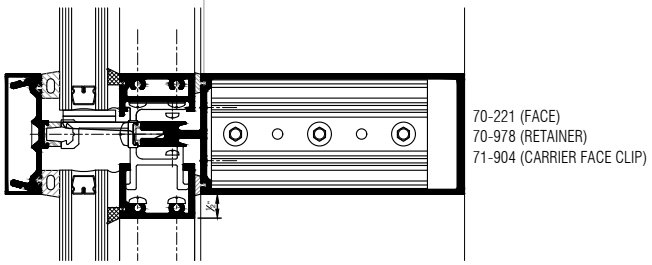
1A
HEAD WITH FACE
(CLIP ANCHOR)



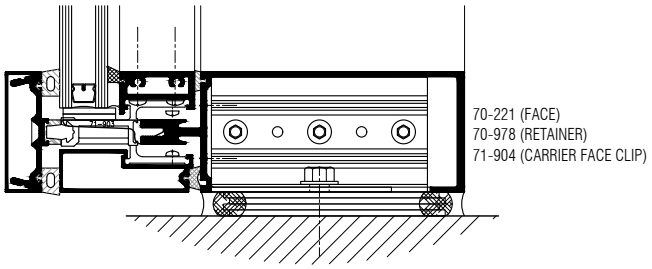
2
HORIZONTAL
WITH FACE

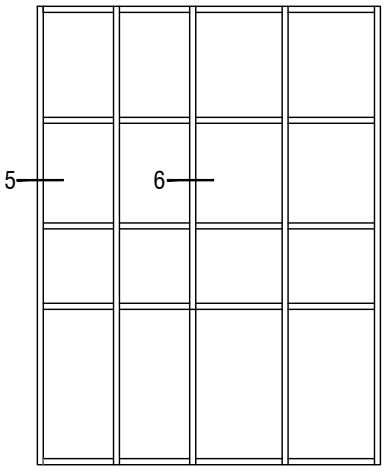


3
SPLICE
HORIZONTAL
WITH FACE

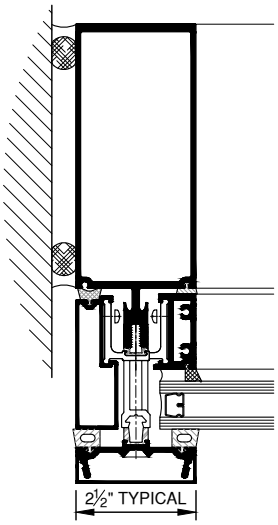


4
SILL WITH FACE
(CLIP ANCHOR)



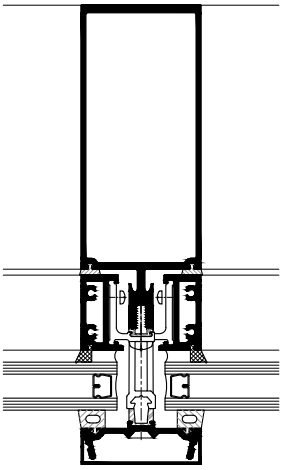


70-221 (FACE)
70-978 (RETAINER)
71-904 (CARRIER FACE CLIP)

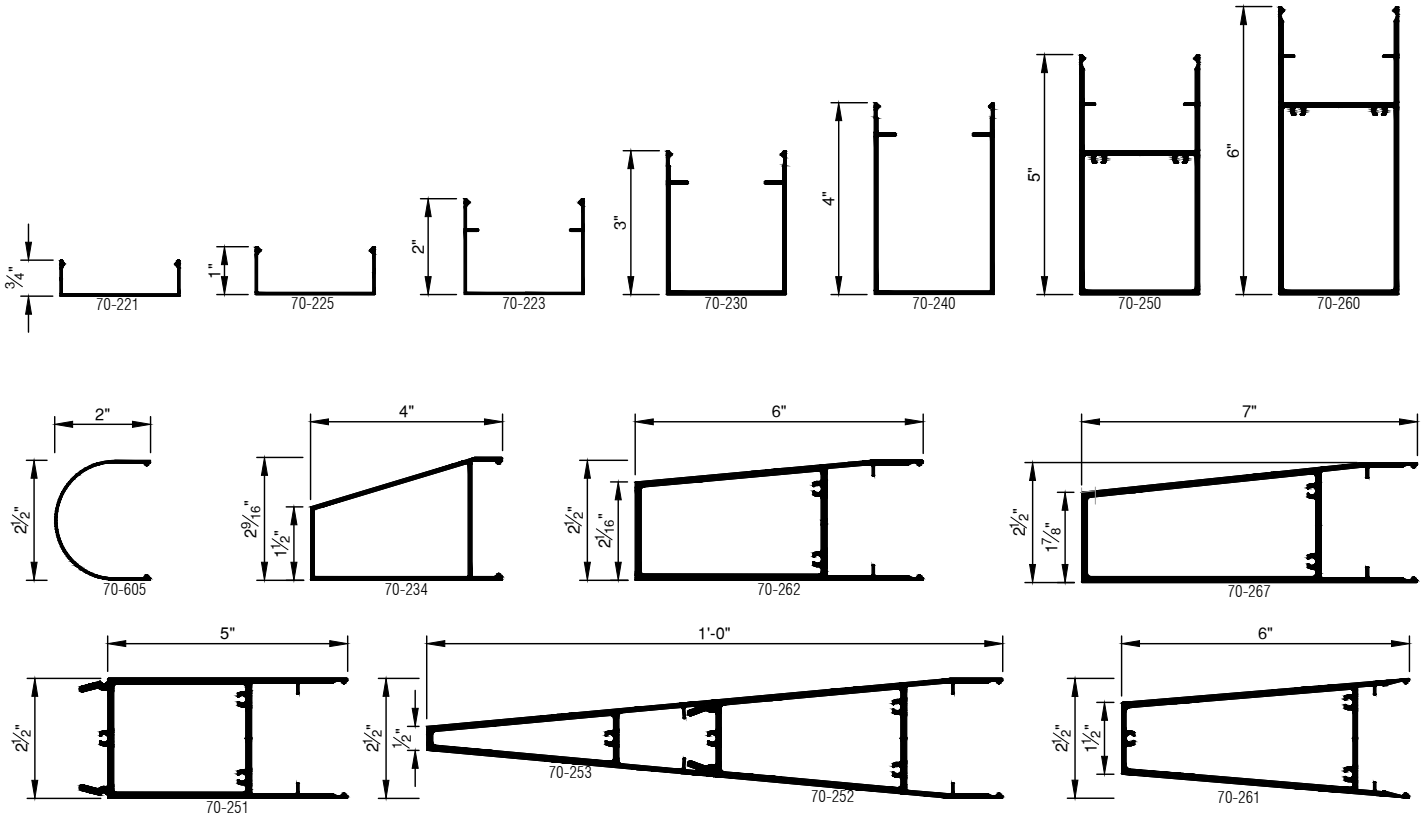


5
JAMB WITH FACE

70-221 (FACE)
70-978 (RETAINER)
71-904 (CARRIER FACE CLIP)

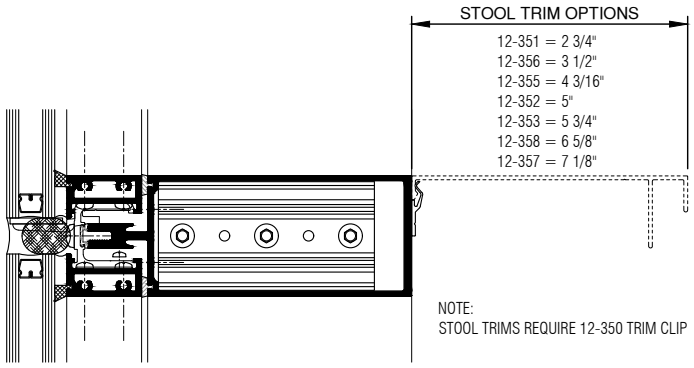


6
VERTICAL WITH FACE

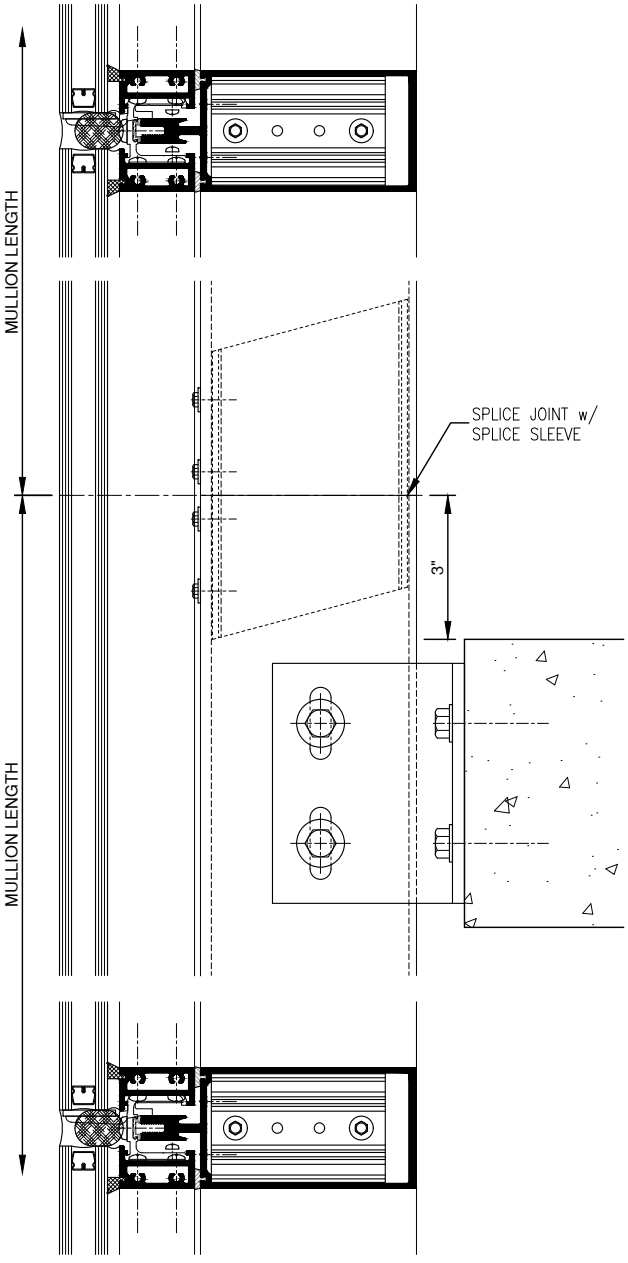


EXTERIOR COVER OPTIONS

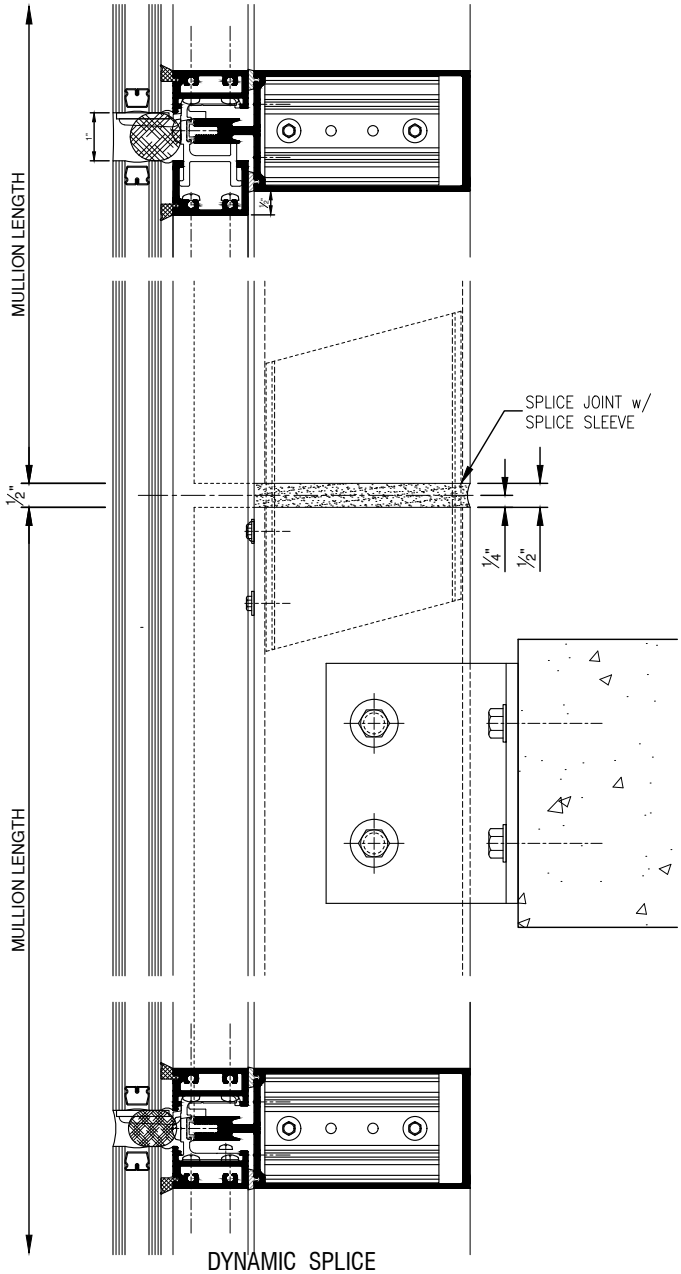
** ALL COVERS DEEPER THEN 3" MUST BE MECHANICALLY FASTENED **



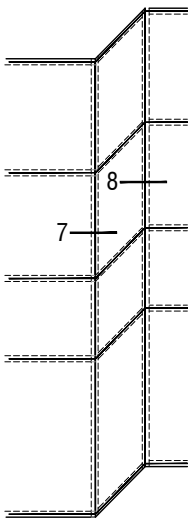
INTERIOR STOOL TRIM

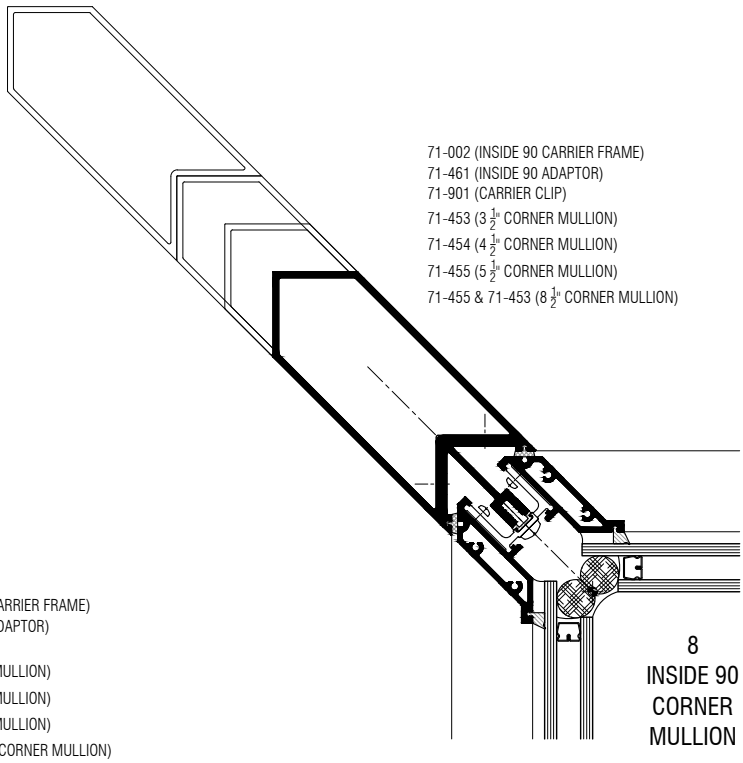


STATIC SPLICE

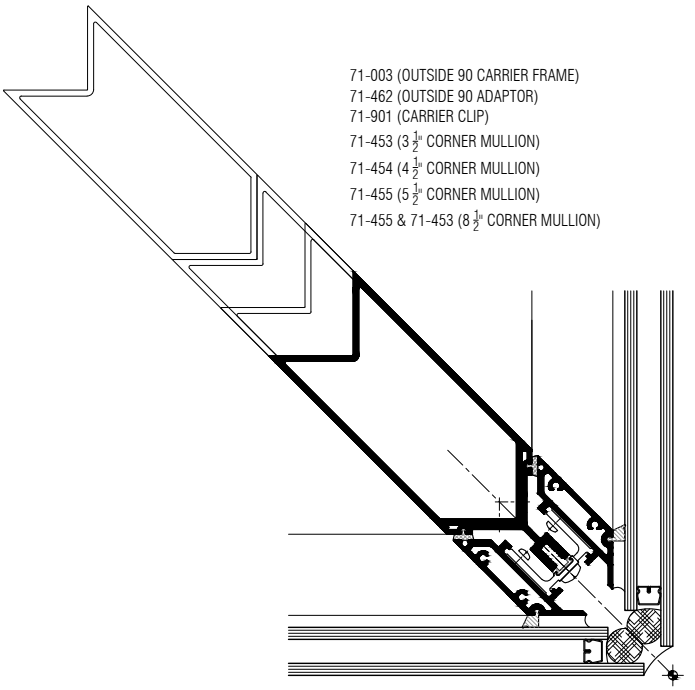


DYNAMIC SPLICE
(± ¼" MOVEMENT)





8
INSIDE 90
CORNER
MULLION

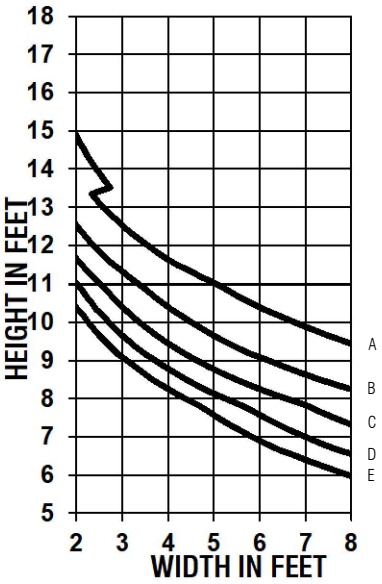


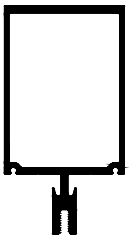
7
OUTSIDE 90
CORNER
MULLION

SYSTEM ANALYSIS CRITERIA:

ALUMINUM: 6063-T6
DEFLECTION LIMITS: L/175 FOR SPANS LESS THAN 13'-6" OR 3/4"
L/240 + 1/4" FOR SPANS GREATER THAN 13'-6"
CODES AND SPECIFICATIONS VARY, NO SINGLE LITE OF GLASS SHALL DEFLECT MORE THAN 3/4"
LATERAL BRACING OR HORIZONTAL MULLION SPACING: 80" O.C. (MAXIMUM)
SECTION EVALUATED PER 2005 ALUMINUM DESIGN MANUAL
SIMPLE SPAN CONDITION
REINFORCEMENT IS ADDITIVE TO ALUMINUM MULLIONS (NOT COMPOSITE SECTIONS)

WITH HORIZONTALS

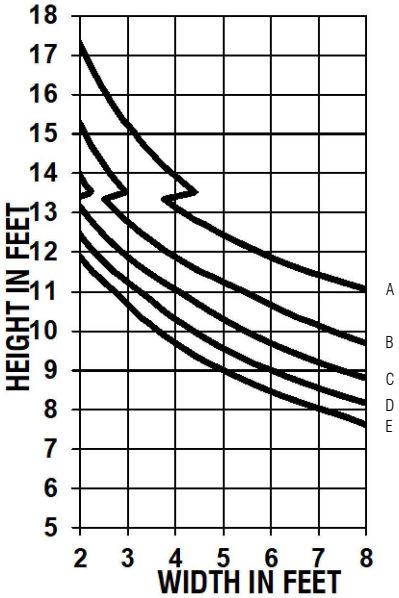


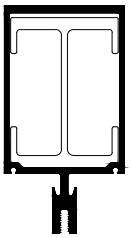


70-135

A = 20 PSF (960Pa)
B = 30 PSF (1440 Pa)
C = 40 PSF (1920 Pa)
D = 50 PSF (2400 Pa)
E = 60 PSF (2880 Pa)

WITH HORIZONTALS





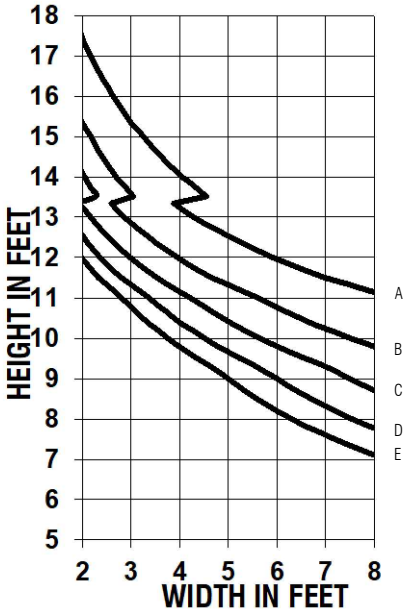
70-135
70-703

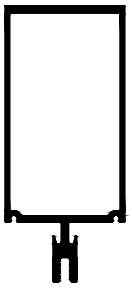
WINDLOAD CHARTS

SYSTEM ANALYSIS CRITERIA:

ALUMINUM: 6063-T6
DEFLECTION LIMITS: L/175 FOR SPANS LESS THAN 13'-6" OR 3/4"
L/240 + 1/4" FOR SPANS GREATER THAN 13'-6"
CODES AND SPECIFICATIONS VARY, NO SINGLE LITE OF GLASS SHALL DEFLECT MORE THAN 3/4"
LATERAL BRACING OR HORIZONTAL MULLION SPACING: 80" O.C. (MAXIMUM)
SECTION EVALUATED PER 2005 ALUMINUM DESIGN MANUAL
SIMPLE SPAN CONDITION
REINFORCEMENT IS ADDITIVE TO ALUMINUM MULLIONS (NOT COMPOSITE SECTIONS)

WITH HORIZONTALS

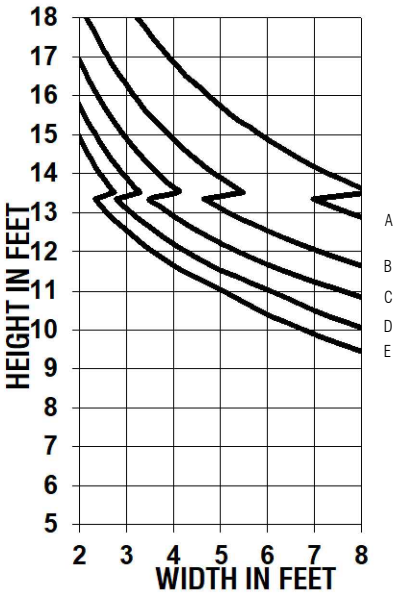


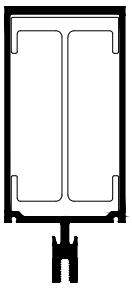


70-145

A = 20 PSF (960Pa)
B = 30 PSF (1440 Pa)
C = 40 PSF (1920 Pa)
D = 50 PSF (2400 Pa)
E = 60 PSF (2880 Pa)

WITH HORIZONTALS



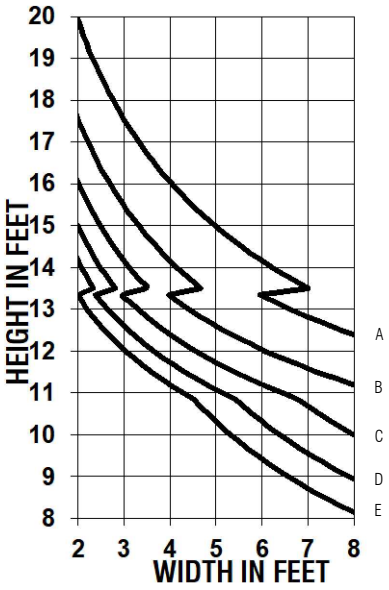


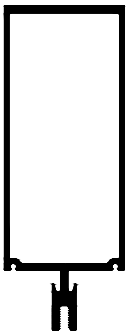
70-145
70-704

SYSTEM ANALYSIS CRITERIA:

ALUMINUM: 6063-T6
DEFLECTION LIMITS: L/175 FOR SPANS LESS THAN 13'-6" OR 3/4"
L/240 + 1/4" FOR SPANS GREATER THAN 13'-6"
CODES AND SPECIFICATIONS VARY, NO SINGLE LITE OF GLASS SHALL DEFLECT MORE THAN 3/4"
LATERAL BRACING OR HORIZONTAL MULLION SPACING: 80" O.C. (MAXIMUM)
SECTION EVALUATED PER 2005 ALUMINUM DESIGN MANUAL
SIMPLE SPAN CONDITION
REINFORCEMENT IS ADDITIVE TO ALUMINUM MULLIONS (NOT COMPOSITE SECTIONS)

WITH HORIZONTALS

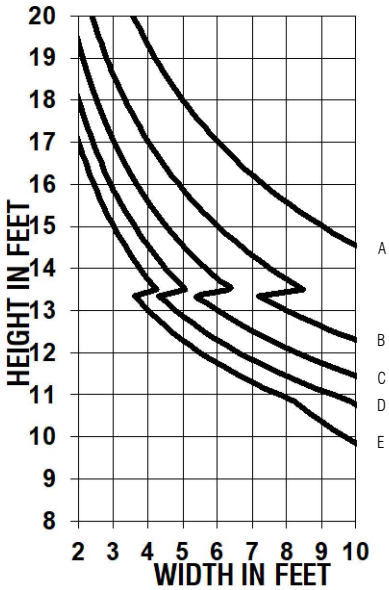


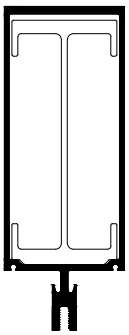


70-155

A = 20 PSF (960Pa)
B = 30 PSF (1440 Pa)
C = 40 PSF (1920 Pa)
D = 50 PSF (2400 Pa)
E = 60 PSF (2880 Pa)

WITH HORIZONTALS



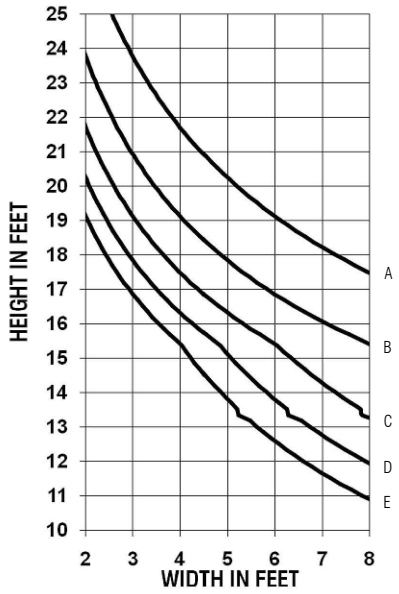


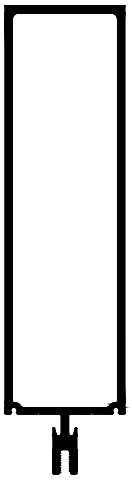
70-155
70-705

SYSTEM ANALYSIS CRITERIA:

ALUMINUM: 6063-T6
DEFLECTION LIMITS: L/175 FOR SPANS LESS THAN 13'-6" OR 3/4"
L/240 + 1/4" FOR SPANS GREATER THAN 13'-6"
CODES AND SPECIFICATIONS VARY, NO SINGLE LITE OF GLASS SHALL DEFLECT MORE THAN 3/4"
LATERAL BRACING OR HORIZONTAL MULLION SPACING: 80" O.C. (MAXIMUM)
SECTION EVALUATED PER 2005 ALUMINUM DESIGN MANUAL
SIMPLE SPAN CONDITION
REINFORCEMENT IS ADDITIVE TO ALUMINUM MULLIONS (NOT COMPOSITE SECTIONS)

WITH HORIZONTALS

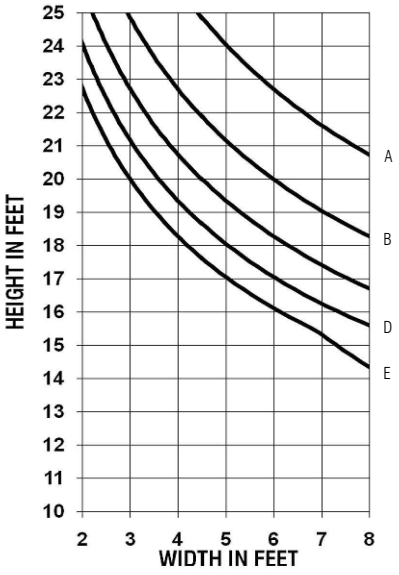


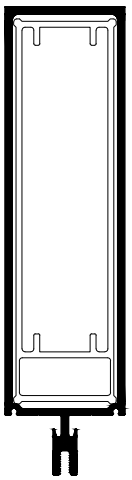


70-185

A = 20 PSF (960Pa)
B = 30 PSF (1440 Pa)
C = 40 PSF (1920 Pa)
D = 50 PSF (2400 Pa)
E = 60 PSF (2880 Pa)

WITH HORIZONTALS

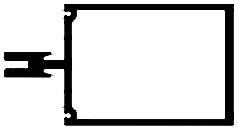




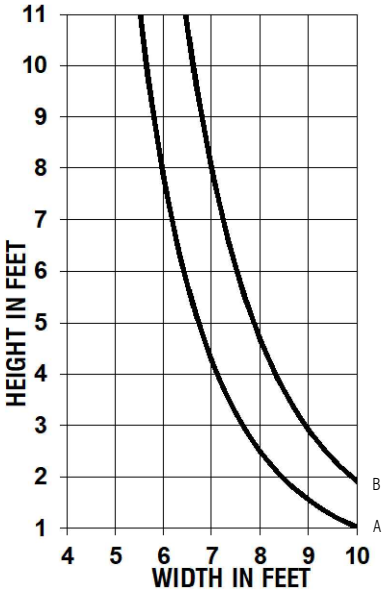
70-185
70-628

SYSTEM ANALYSIS CRITERIA:

ALUMINUM: 6063-T6
DEADLOAD LIMITATIONS ARE BASED UPON 1/8" MAXIMUM ALLOWABLE DEFLECTION
SECTION EVALUATED PER 2005 ALUMINUM DESIGN MANUAL
SIMPLE SPAN CONDITION WITH 1" IGU(1/4, 1/2,1/4)
HEIGHT IN FEET ON CHART IS GLASS HEIGHT ABOVE HORIZONTAL

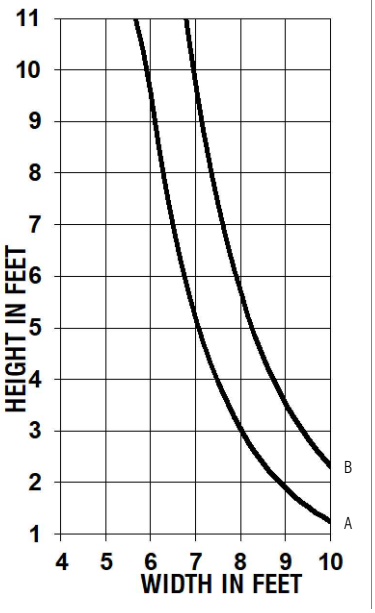


70-135



A = SETTING BLOCKS AT 1/4 POINTS
B = SETTING BLOCKS AT 1/8 POINTS

70-145

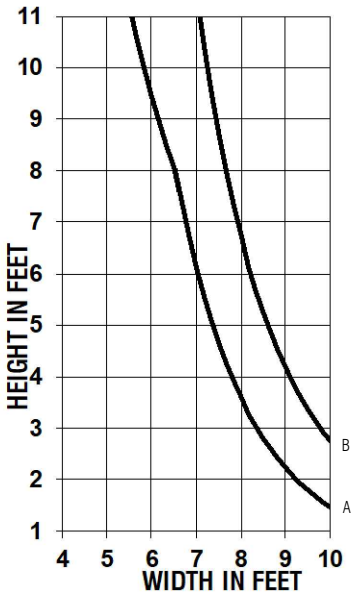


DEADLOAD CHARTS

SYSTEM ANALYSIS CRITERIA:

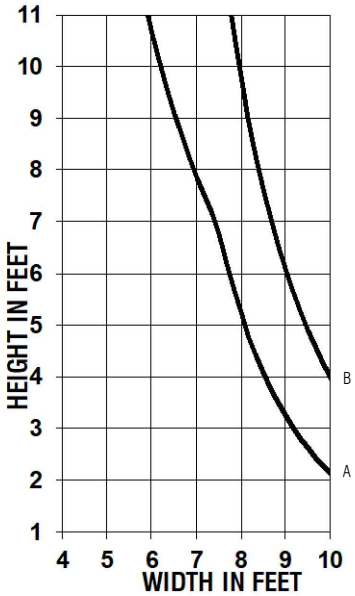
ALUMINUM: 6063-T6
DEADLOAD LIMITATIONS ARE BASED UPON 1/8" MAXIMUM ALLOWABLE DEFLECTION
SECTION EVALUATED PER 2005 ALUMINUM DESIGN MANUAL
SIMPLE SPAN CONDITION WITH 1" IGU (1/4, 1/2, 1/4)
HEIGHT IN FEET ON CHART IS GLASS HEIGHT ABOVE HORIZONTAL

70-155



A = SETTING BLOCKS AT 1/4 POINTS
B = SETTING BLOCKS AT 1/8 POINTS

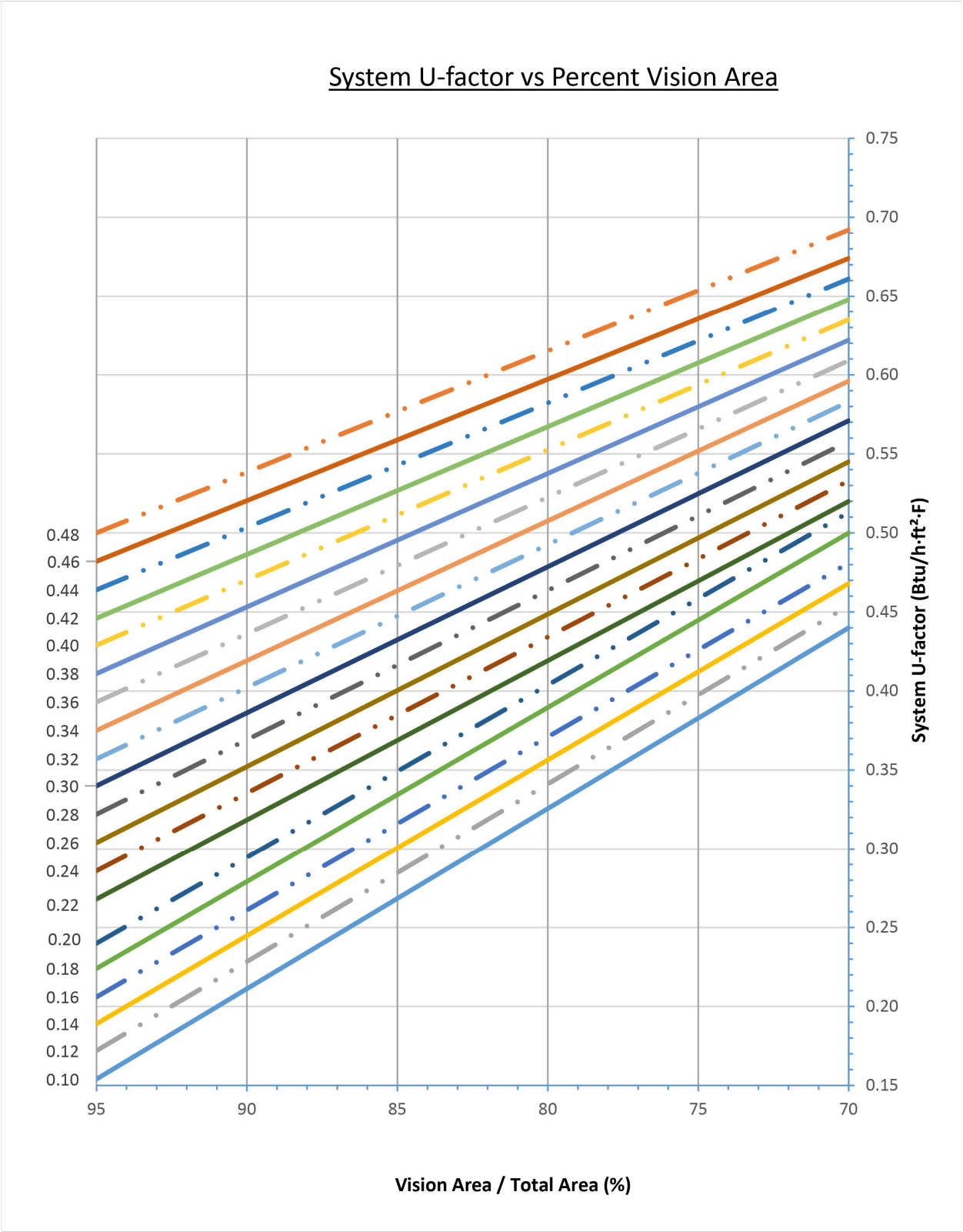
70-185



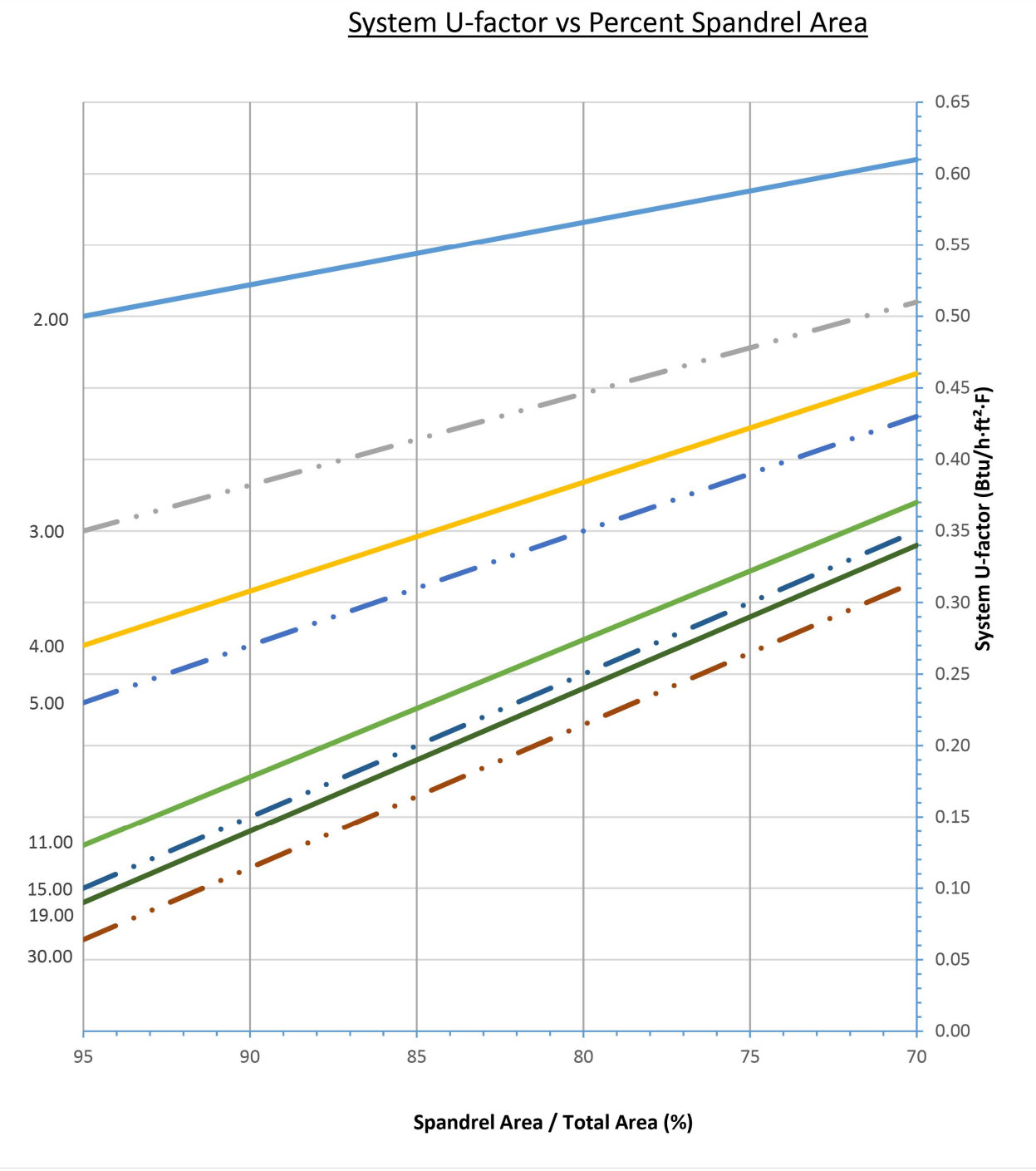
STRUCTURAL PROPERTIES				
Part Number	Ix	Sx	Iy	Sy
70-135	4.420	1.745	1.314	1.052
70-145	7.388	2.463	1.603	1.282
70-155	11.320	3.260	1.891	1.513
70-185	35.287	6.950	3.907	3.126
70-623	1.803	1.162	1.099	0.977
70-624	3.787	1.795	1.355	1.205
70-625	6.734	2.535	1.612	1.433
70-628	20.862	5.070	2.038	1.906
70-703	2.736	1.722	0.732	0.654
70-704	5.905	2.797	0.798	0.713
70-705	9.284	3.585	0.750	0.686

IF INERTIA (I) OR SECTION MODULUS (S) DO NOT MEET REQUIREMENTS CONSULT PITTCO ENGINEERING FOR ADDITIONAL REINFORCEMENT OPTIONS

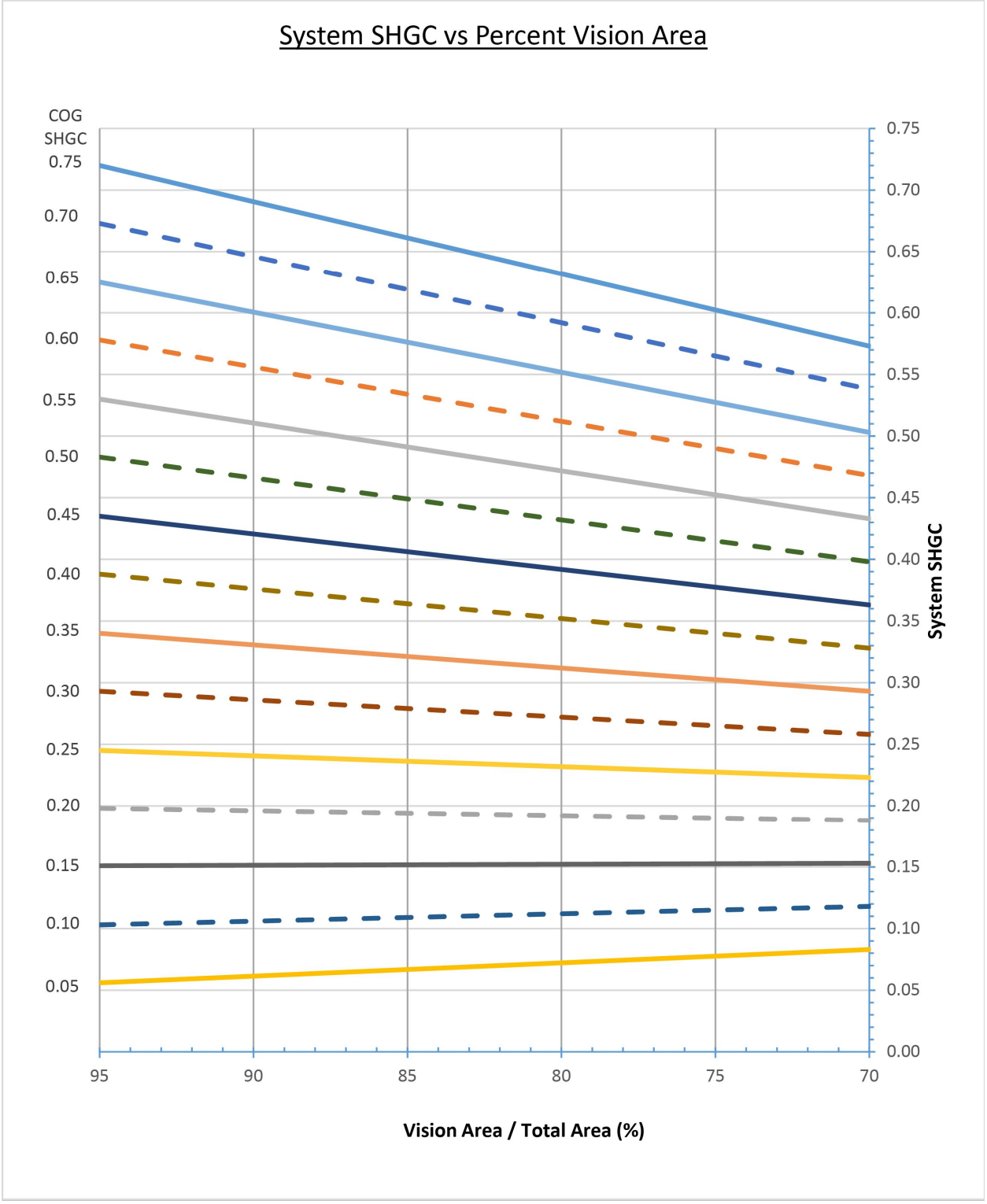
U-factor Vision Area



U-factor Spandrel Area



SHGC (Solar Heat Gain Coefficient) -Vision Area



Graph VT (Visible Transmittance) -Vision Area