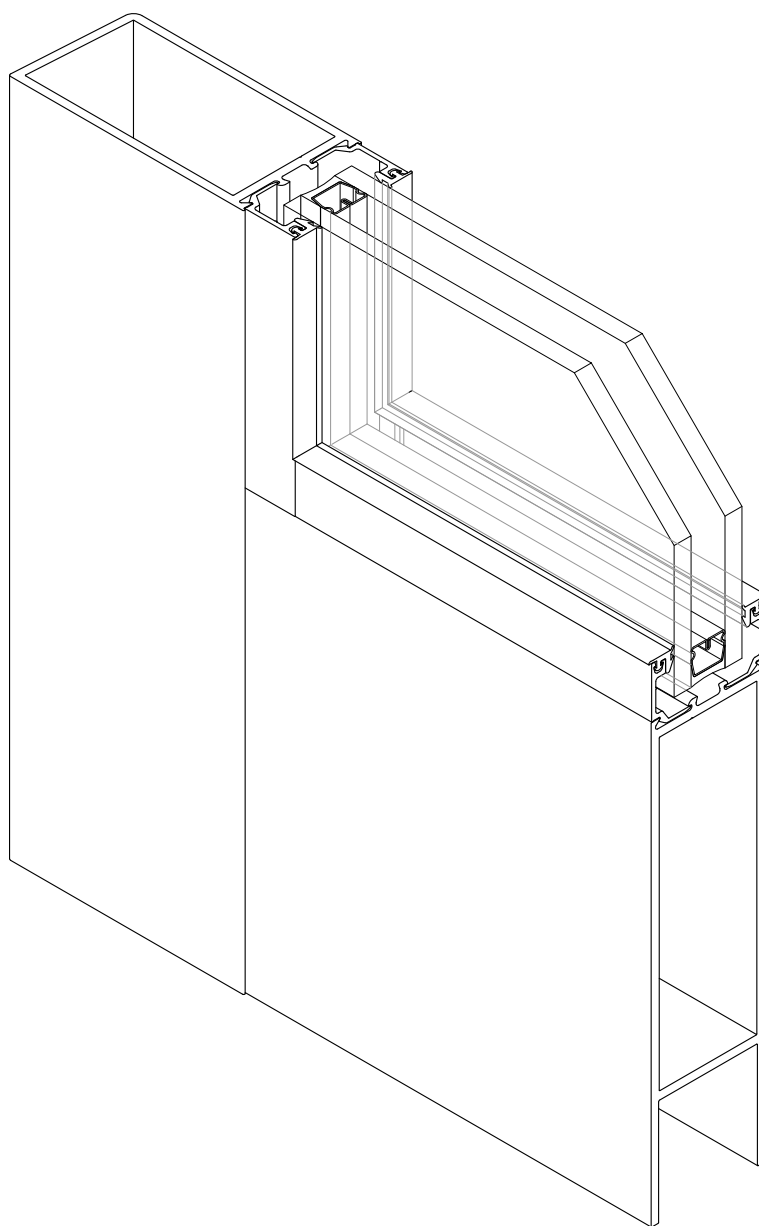
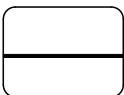


# STANDARD ENTRANCES TECHNICAL MANUAL





FEATURES

FEATURES

- Narrow stile doors have a 2 1/2" top rail, 3 7/16" bottom rail, and 2 1/16" vertical stiles
- Medium stile doors have a 3 7/16" top rail, 6 7/16" bottom rail, and 3 7/16" vertical stiles
- Wide stile doors have a 4 13/16" top rail, 6 7/16" bottom rail, and 4 13/16" vertical stiles
- Optional 8" and 9 1/2" bottom rails
- Doors are 1 3/4" deep
- Available in both single and double acting
- Infill options from 1/8" up to 1"
- Available with butt hinges, continuous geared hinges, offset pivots, or center pivots
- Variety of hardware configurations including MS locks, dead locks, latch locks, and panic hardware
- Adjustable weatherstrip astragal at meeting stiles
- Meets ADA requirements
- Numerous custom hardware choices
- Wide variety of bottom rail, mid rail, and muntin options
- 3 standard finishes stock (Clear Anodize #42, Dark Bronze Anodize #62, Black #63)
- Standard and custom paint finishes available

APPLICATIONS

- Narrow stile - office buildings, retail stores, residential buildings
- Medium stile - schools, institutions, other moderate to high traffic applications
- Wide stile - libraries, banks, and municipal buildings

**SYSTEM PERFORMANCE**

Description	Test Method	Allowed	Achieved	Test Report
Air (Single)	ASTM E 383	0.5 cfm/sq ft @ 1.57 psf	0.12 cfm/sq ft	30-41
Air (Pair)	ASTM E 283	1.0 cfm/sq ft @ 1.57 psf	0.69 cfm/sq ft	30-16
Water	ASTM E 331	None @ 0 psf	0 psf	30-41

FOR SPECIFIC PRODUCT APPLICATIONS PLEASE CONTACT YOUR PITTCO REPRESENTATIVE



INDEX

PRODUCT DESCRIPTION . . . . . PAGES 4 TO 9  
PICTORIAL VIEWS . . . . . PAGE 10  
GENERAL INFORMATION . . . . . PAGE 11  
1/4 SIZE DETAILS . . . . . PAGES D1 TO D5  
THERMAL CHARTS . . . . . PAGES T1 TO T4

- BASIC USES / RELATED USES

Exterior entrance doors, glazed  
 Interior doors in public facilities, glazed  
 Doors may be fitted to most rigid and stable frame assemblies

- PRODUCT ATTRIBUTES AND CHARACTERISTICS

Rigid door with narrow, medium and wide stiles and rails are standard  
 Doors are internally reinforced with tensioned steel rods and interlocking rigid corners  
 Doors will resist reasonable abuse and attempts at forced entry  
 Doors are available as single leaf or double leaf types  
 Doors are weatherstripped for a weather barrier and a measure of acoustic control  
 Doors will accommodate single pane or double pane insulating glass unit  
 Glass may be transparent, opaque, or decorative types  
 Air infiltration (with optional bottom weatherstrip):

Dimensions	Pressure Differential	Air Infiltration
36 x 84 inches Single Door	1.57 / 6.24 psf (25 / 50 mph)	0.14 / 0.20 cfm/ft crack, or 0.12 / 0.20 cfm/sqft
72 x 84 inches Pair of Doors	1.57 / 6.24psf, (25 / 50mph)	0.88 / 2.06 cfm/ft crack, or 0.69 / 1.63 cfm/sqft

Doors will accommodate a variety of functional and decorative hardware

- SELECTION CRITERIA

Quality, economy, and high performance are provided at a reasonable cost  
 A wide variety of hardware options available

- APPLICABLE STANDARDS, RELATED REFERENCES

AA (Aluminum Association) - Designation System for Aluminum Finishes  
 AAMA - Metal Curtain Wall, Window, Storefront and Entrance - Guide Specifications Manual  
 AAMA 611-98 - Voluntary Specification for Anodized Architectural Aluminum  
 AAMA 2604-05 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels  
 AAMA 2605-05 - 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

**PRODUCT DESCRIPTION**

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**

Varies with frame assembly and environment

● **PACKAGING, HANDLING, AND PROTECTION INSTRUCTIONS**

Packaged in specially designed heavy cartons

● **SPECIAL WARRANTY**

One (1) year

● **LIMITATIONS**

Resistance to abuse and forced entry may be restricted to glass and glazing types selected

● **SAFETY PRECAUTIONS**

Normal precautions required

● **AVAILABILITY**

Doors are available in all regions of USA - refer to Internet web site for locations and addresses of distributors

● **COST**

Cost varies with elevation, configuration and finish desired

### PRODUCT PROPERTIES

- MATERIAL AND DESIGN

Aluminum: 6063-T6 alloy and temper, to ASTM B221

Fasteners: Stainless steel, or zinc plated carbon steel

Glazing gaskets: Bulb-type, Ethylene Propylene Diene Monomer (EPDM) rubber

Glass stops: Snap-in type with glazing gaskets

Weatherstripping: Pile, installed in stile of center pivoted doors and frame of hinged and offset pivoted doors

Hardware:

- Deadbolt Lock

- Closers:

  - Surface Closers - Use with butt hinge and continuous geared hinge

  - Overhead Concealed Closers - Use with center pivot doors

- Handles: Use type #12, Push/Pull with butt hinges  
or offset pivot doors. Use type #11 push bar  
on both sides with center pivot doors

Glazing Frames:

- Integral weatherstripped door stops

- Recessed glass pockets to accommodate flush glazed side lites

Panic Devices:

- Single Door: Rim Mounted type, Pittco Standard

- Double Door: Concealed Vertical Rod type, Pittco Standard on each door leaf

Hinges:

- Butt Hinge or Continuous Gear type

Pivots:

- Offset Pivot or Center Pivot

- SHAPE AND DIMENSIONS

Standard door opening sizes:

- Single:

  - 36 x 84 inch

  - 42 x 84 inch

- Pair:

  - 72 x 84 inch



**PRODUCT DESCRIPTION**

Swing Configurations (as viewed from exterior):

- Left Hand (LH): Swings indoors, hinged on left
- Left Hand Reverse (LHR): Swings outdoors, hinged on left
- Right Hand (RH): Swings indoors, hinged on right
- Right Hand Reverse (RHR): Swings outdoors, hinged on right

Standard glazing frames:

- Pittco EMS 114: 1-3/4 x 4-1/2 inch
- Pittco TMS 114: 2 x 4-1/2 inch

Glazing Thickness Accepted: 1/4 inch and 1 inch

Door Thickness: 1 3/4 inch

Door stile and rail face dimensions\*:

Door Stile Type:	Vertical Stile inch	Top Rail inch	Bottom Rail inch	Optional Bottom Rail inch
Narrow	2-1/16	2-1/2	3-7/16	8 or 9 1/2
Medium	3-7/16	3-7/16	6-7/16	8 or 9 1/2
Wide	4-13/16	4-13/16	6-7/16	8 or 9 1/2

\*Add 1/2" for 1/4" glass stops or 3/4" for 1" glass stops

● **SHOP FABRICATION AND ASSEMBLY**

Factory assembled doors with heavy steel tension rod, holding the nested corners together

Push bars and pull handles are fastened to door with fasteners passing through the stile, and connecting the two hardware items

Glass is installed with aluminum snap-in glass stops, cushioned by a glazing gasket

Panic doors: Butt Hinge or Offset Pivot type, with factory installed hardware

- Pull handle: Type #12 on exterior
- Closer: Standard type.
- Exit Devices:

Single doors: Rim mounted

Pairs of doors: Concealed Vertical Rod type

Custom mid-panel panic doors: Butt Hinge or Offset Pivot type, with factory installed hardware

- Pull handle: Type #12 on exterior
- Closer: Standard type
- Exit Devices: Concealed Vertical Rod with release mechanism contained in a 7 inch (175 mm) overall mid-rail section

- **COLORS AND TEXTURES**

- Architectural anodic coating, in accordance with AAMA 611;

- o Aluminum Association Designation.

- AA-M10C22A41 - Class I - (Pittco #42 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)

- Architectural organic coating, in accordance with AAMA 2604 (50% Kynar 500<sup>®</sup>);

- 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<sup>®</sup>);

- 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 DESCRIPTION

PRODUCT PLACEMENT

- **PREPARATION WORK**  
Ensure openings are of proper size, and are plumb, square, level and in the proper location and alignment
  
- **INSTALLATION**  
Install doors in accordance with Pittco's Fabrication, Sealant and Erection Brochure and AAMA - Metal Curtain Wall, Window, Storefront and Entrance - Guide Specifications Manual  
Attach to door frame to permit sufficient adjustment to accommodate construction tolerances and other irregularities  
Align installed assembly plumb and level, free of warp or twist. Maintain dimensional tolerances, aligning with adjacent work  
Set thresholds in bed of butyl mastic and secure to substrate  
Install hardware using physical hardware and templates provided
  
- **START-UP AND OPERATION**  
Check operating hardware for proper function and adjustment
  
- **OWNER'S MAINTENANCE INSTRUCTIONS**  
Follow maintenance instructions of operating hardware

Corporate Identification

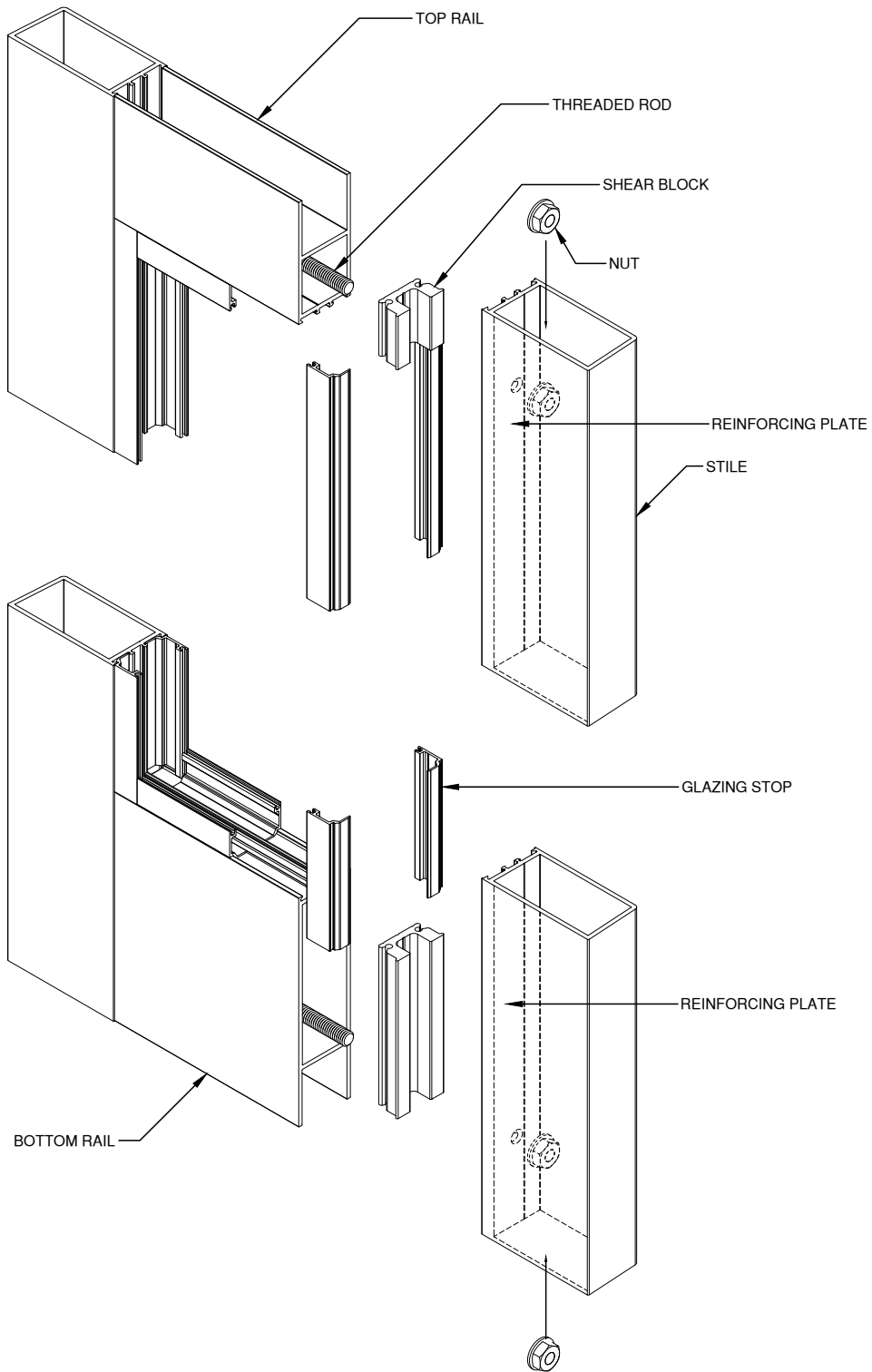
Pittco Architectural Metals, Inc  
1530 Landmeier Road  
Elk Grove Village, Illinois 60007  
Tel: (847) 593-3131  
Fax: (847) 593-9946  
Toll-Free: (800) 992-7488  
Internet: <http://www.pittcometals.com>  
E-mail: [info@pittcometals.com](mailto:info@pittcometals.com)

Technical Services Available

Toll-Free: (800) 992-7488

Classification and Filing

MasterFormat  
Subset of Section 08120 - Aluminum Doors and Frames  
UniFormat  
Section B2030 (exterior doors) or C1020 (interior doors)



GENERAL INFORMATION

STANDARD SIZES:

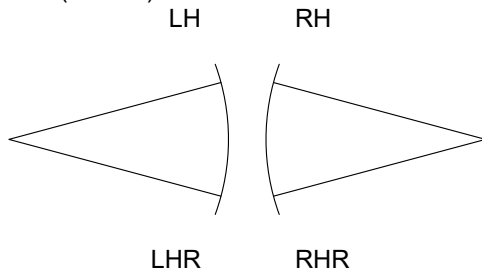
Door Opening	
Single	Pair
3'0" x 7'0"	6'0" x 7'0"
3'6" x 7'0"	

STANDARD FRAMES

- EMS 114 - 1 3/4" x 4 1/2" Flush Glaze Door Frame
- TMS 114 - 2" x 4 1/2" Flush Glaze Door Frame
- TMS 114T - 2" x 4 1/2" Flush Glaze Door Frame

DOOR SWING DIAGRAM

SWING IN (Interior)



SWING OUT (Exterior)

SWING DESIGNATION

- RH - Right Hand
  - LH - Left Hand
  - RHR - Right Hand Reverse
  - LHR - Left Hand Reverse
- Double acting doors are designated either RH or LH.

STANDARD HARDWARE:

Butt Hung Models

- 1 Pair Full Mortise 4 1/2" x 4" (N.R.P.) B.B. Butts with Backup Plate, factory installed on door.
- 1 MS Lock with Cylinders, factory installed on door.
- 1 Set of Type 12 Pull Handle/Push Bar, packaged with door.
- 1 Pair Flush Bolts, factory installed. (Pairs ONLY)

Offset Pivot Models

- 1 Offset Pivot Set, factory installed on door. Frame portion included in door package.
- 1 MS Lock with Cylinders, factory installed on door.
- 1 Set of Type 12 Pull Handle/Push Bar, packaged with door.
- 1 Pair Flush Bolts, factory installed. (Pairs ONLY)

Butt Hung/Offset Pivot Panic Models

- (Available in 3'0" Singles and 6'0" Pairs)
- 1 Offset Pivot or Butt Hinge Set, factory installed on door. Frame portion included in door package.
- 1 Rim Panic on Singles
- 1 Concealed Vertical Rod Panic on Pairs
- 1 Cylinder, factory installed.
- 1 Type 12 Pull Handle.

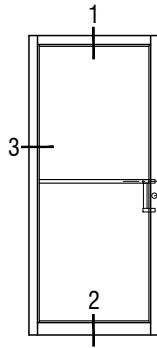
Center Pivot Models

- 1 MS Lock with Cylinders, factory installed on door.
  - Type 11 Push Bars, Both Sides.
  - 1 Pair Flush Bolts, factory installed. (Pairs ONLY)
- Standard doors are factory fabricated to receive Top Arms and Bottom Pivots which are furnished as part of the Closer Package, not the Door Package.

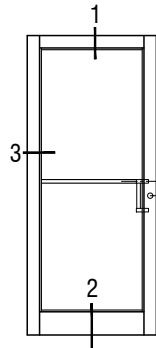


DOOR DETAILS

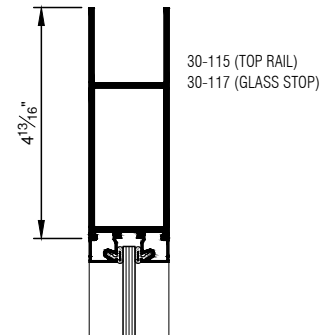
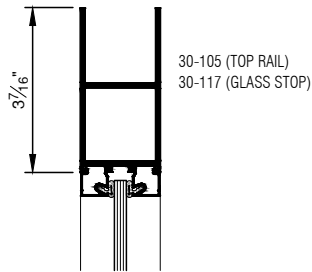
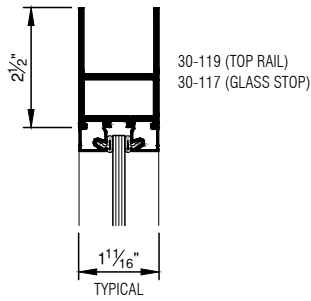
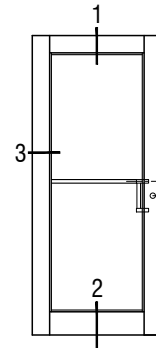
NARROW STILE



MEDIUM STILE



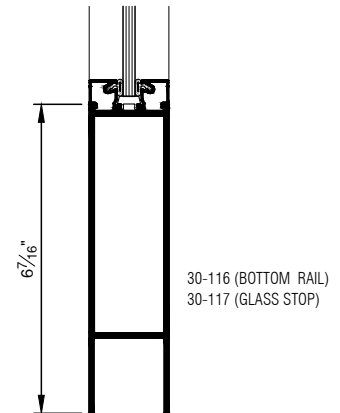
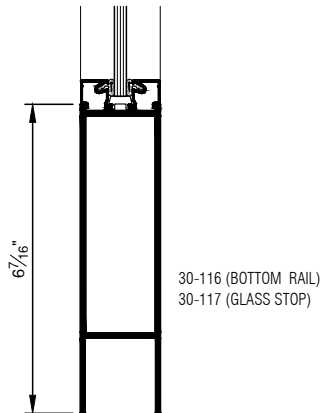
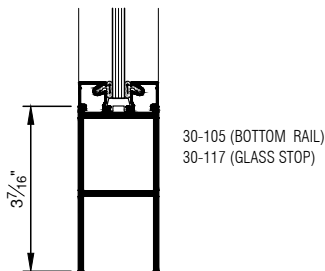
WIDE STILE



SECTION 1

SECTION 1

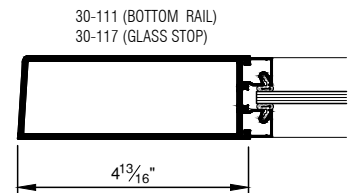
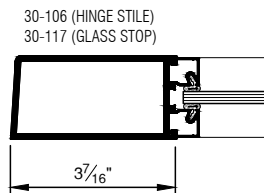
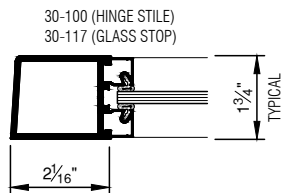
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SECTION 2

SECTION 2

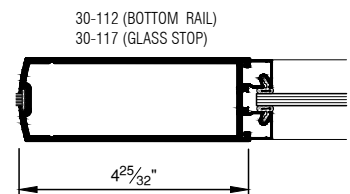
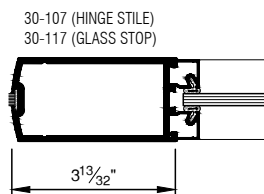
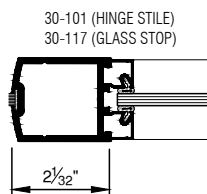
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SECTION 3  
SINGLE ACTING

SECTION 3  
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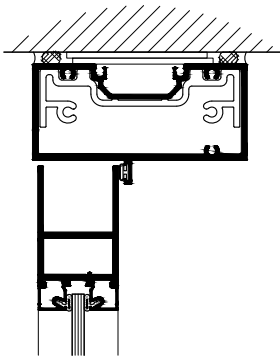
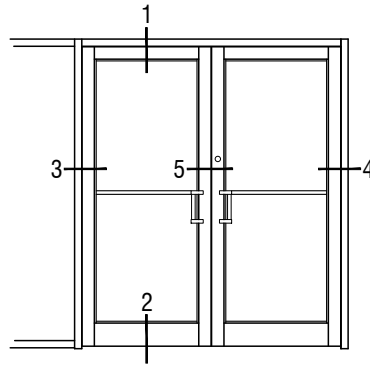
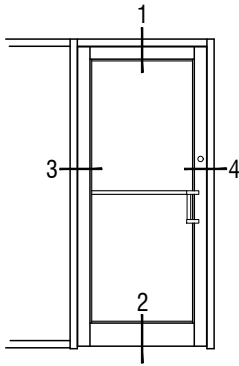
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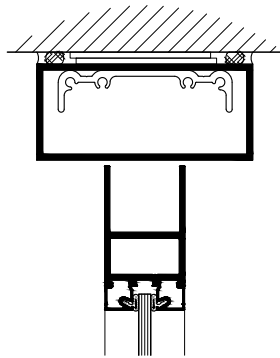
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SECTION 3  
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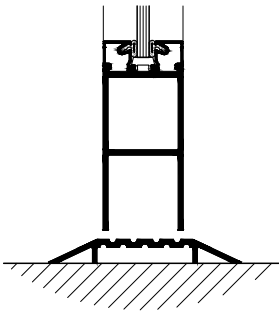
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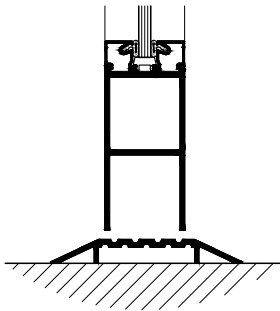
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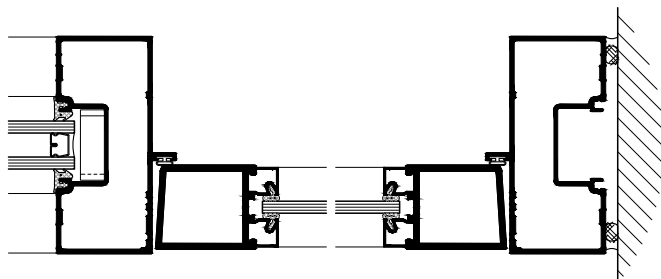
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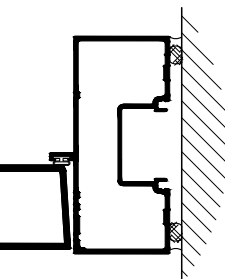
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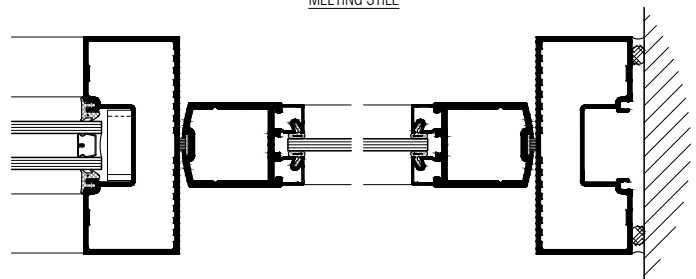
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MEETING STILE



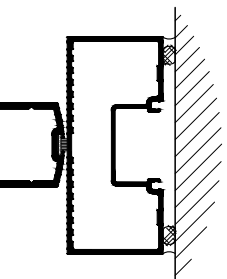
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SECTION 4  
SINGLE ACTING



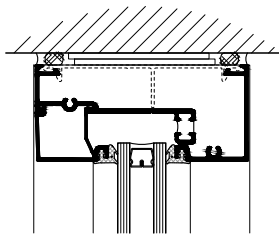
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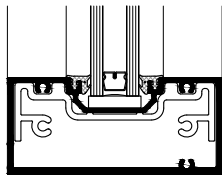
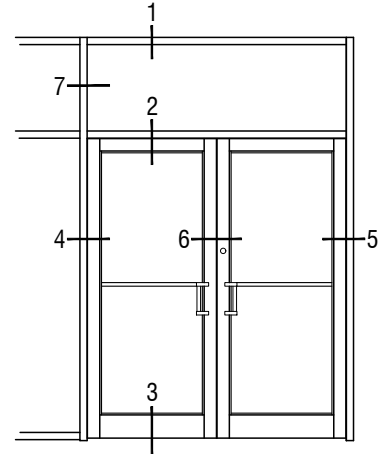
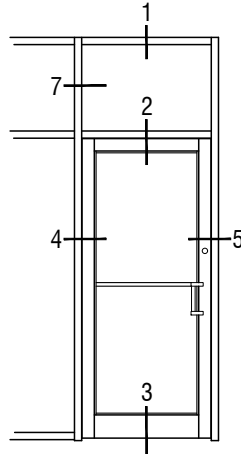
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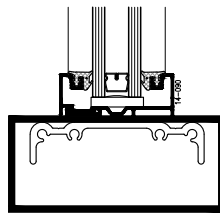
DOOR DETAILS



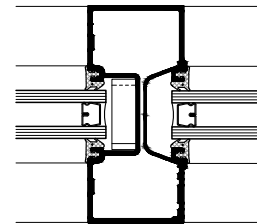
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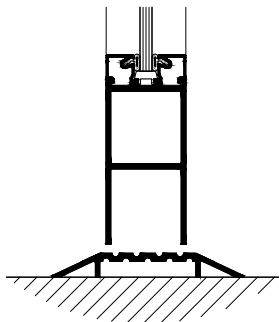
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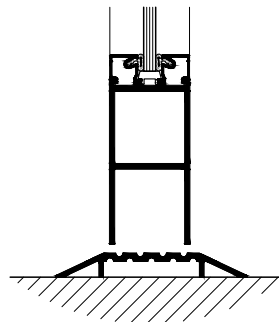
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SECTION 7



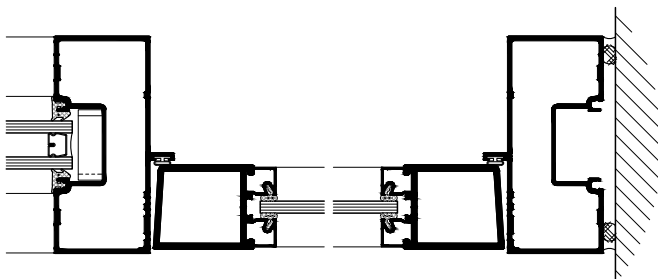
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SECTION 3  
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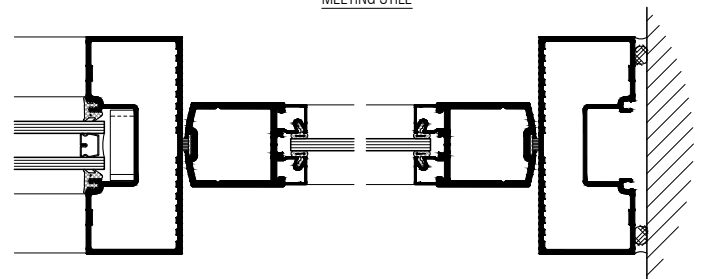


SECTION 6  
MEETING STILE



SECTION 4  
SINGLE ACTING

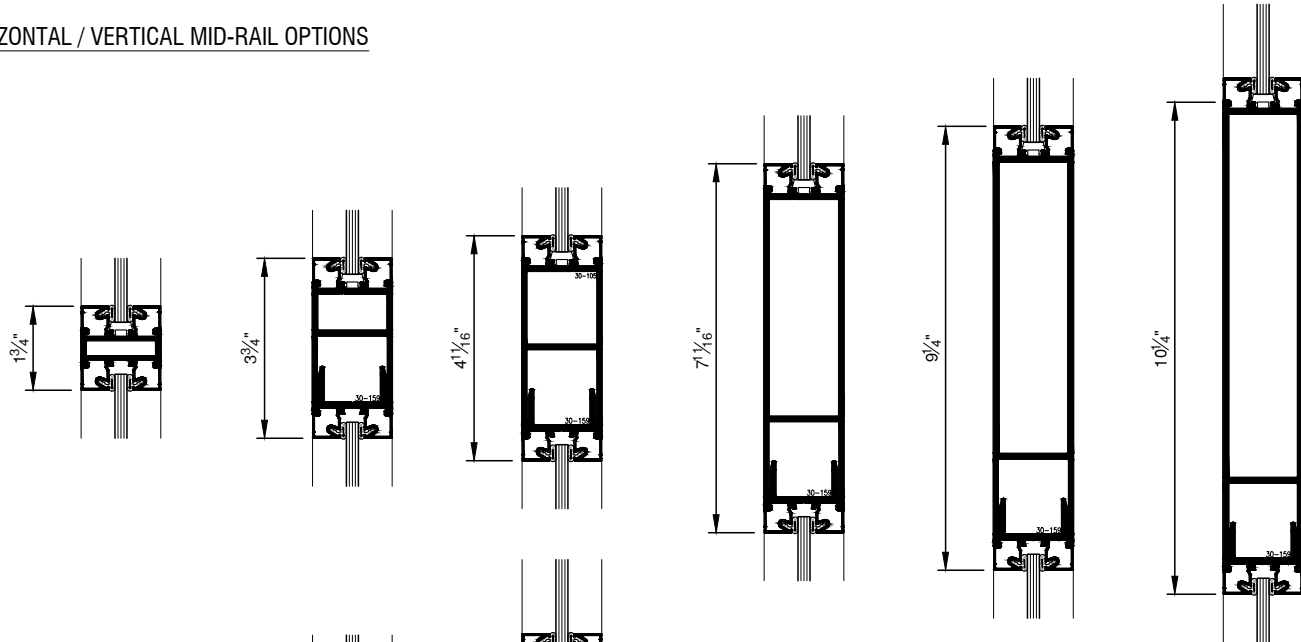
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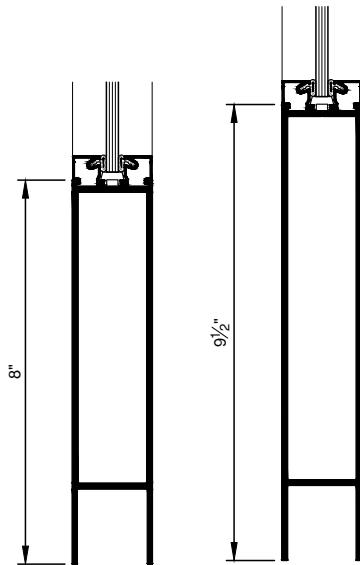
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SECTION 5  
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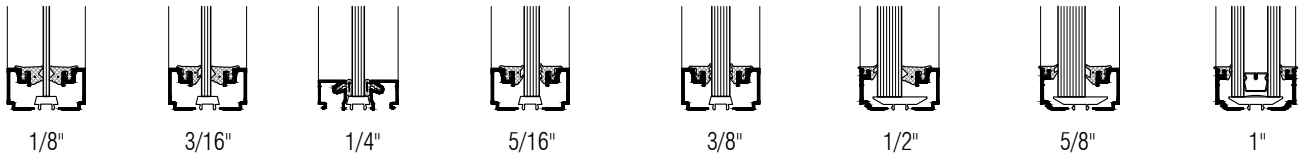
### HORIZONTAL / VERTICAL MID-RAIL OPTIONS



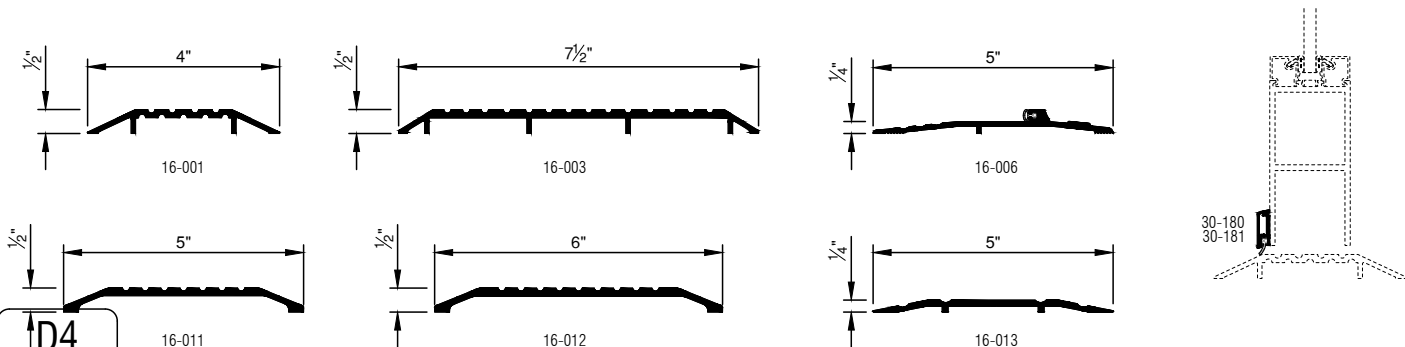
### BOTTOM RAIL OPTIONS



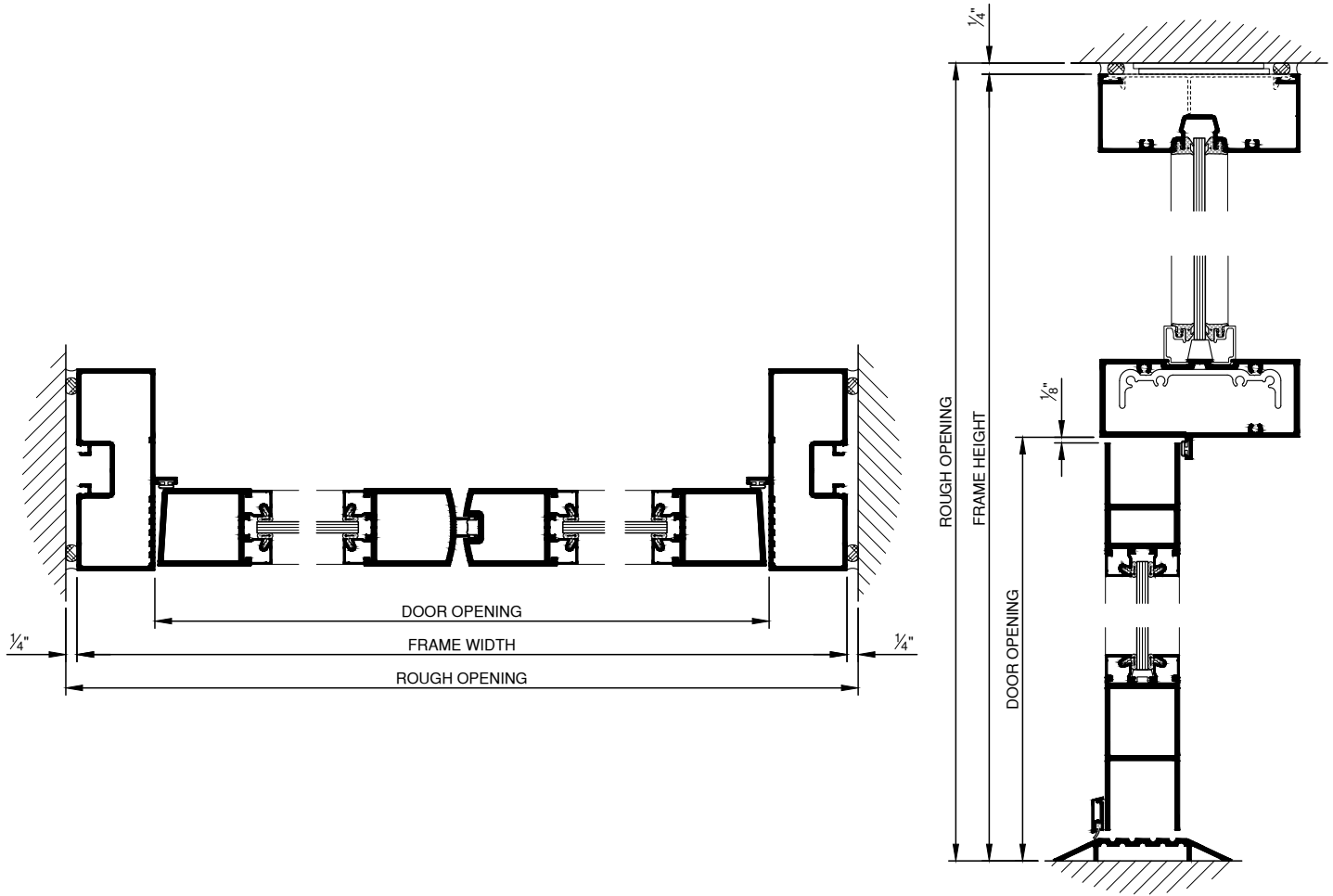
### INFILL OPTIONS



### THRESHOLDS AND WEATHERSWEEP



DETAILS



STOCK SIZES (EMS 114 FRAMES)

WITHOUT TRANSOM

Door Opening Dimension

3'-0" x 7'-0"  
3'-6" x 7'-0"  
6'-0" x 7'-0"

Overall Frame Dimension

3'-3 1/2" x 7'-1 3/4"  
3'-9 1/2" x 7'-1 3/4"  
6'-3 1/2" x 7'-1 3/4"

Suggested

Rough Opening Dimension

3'-4" x 7'-2"  
3'-10" x 7'-2"  
6'-4" x 7'-2"

WITH TRANSOM

Door Opening Dimension

3'-0" x 7'-0"  
3'-6" x 7'-0"  
6'-0" x 7'-0"

Overall Frame Dimension

3'-3 1/2" x 10'-3 1/2"  
3'-9 1/2" x 10'-3 1/2"  
6'-3 1/2" x 10'-3 1/2"

Suggested

Rough Opening Dimension

3'-4" x 10'-4"  
3'-10" x 10'-4"  
6'-4" x 10'-4"

STOCK SIZES (TMS 114 CENTER SET FRAMES)

WITHOUT TRANSOM

Door Opening Dimension

3'-0" x 7'-0"  
3'-6" x 7'-0"  
6'-0" x 7'-0"

Overall Frame Dimension

3'-4" x 7'-2"  
3'-10" x 7'-2"  
6'-4" x 7'-2"

Suggested

Rough Opening Dimension

3'-4 1/2" x 7'-2 1/4"  
3'-10 1/2" x 7'-2 1/4"  
6'-4 1/2" x 7'-2 1/4"

WITH TRANSOM

Door Opening Dimension

3'-0" x 7'-0"  
3'-6" x 7'-0"  
6'-0" x 7'-0"

Overall Frame Dimension

3'-4" x 10'-3 1/2"  
3'-10" x 10'-3 1/2"  
6'-4" x 10'-3 1/2"

Suggested

Rough Opening Dimension

3'-4 1/2" x 10'-4"  
3'-10 1/2" x 10'-4"  
6'-4 1/2" x 10'-4"

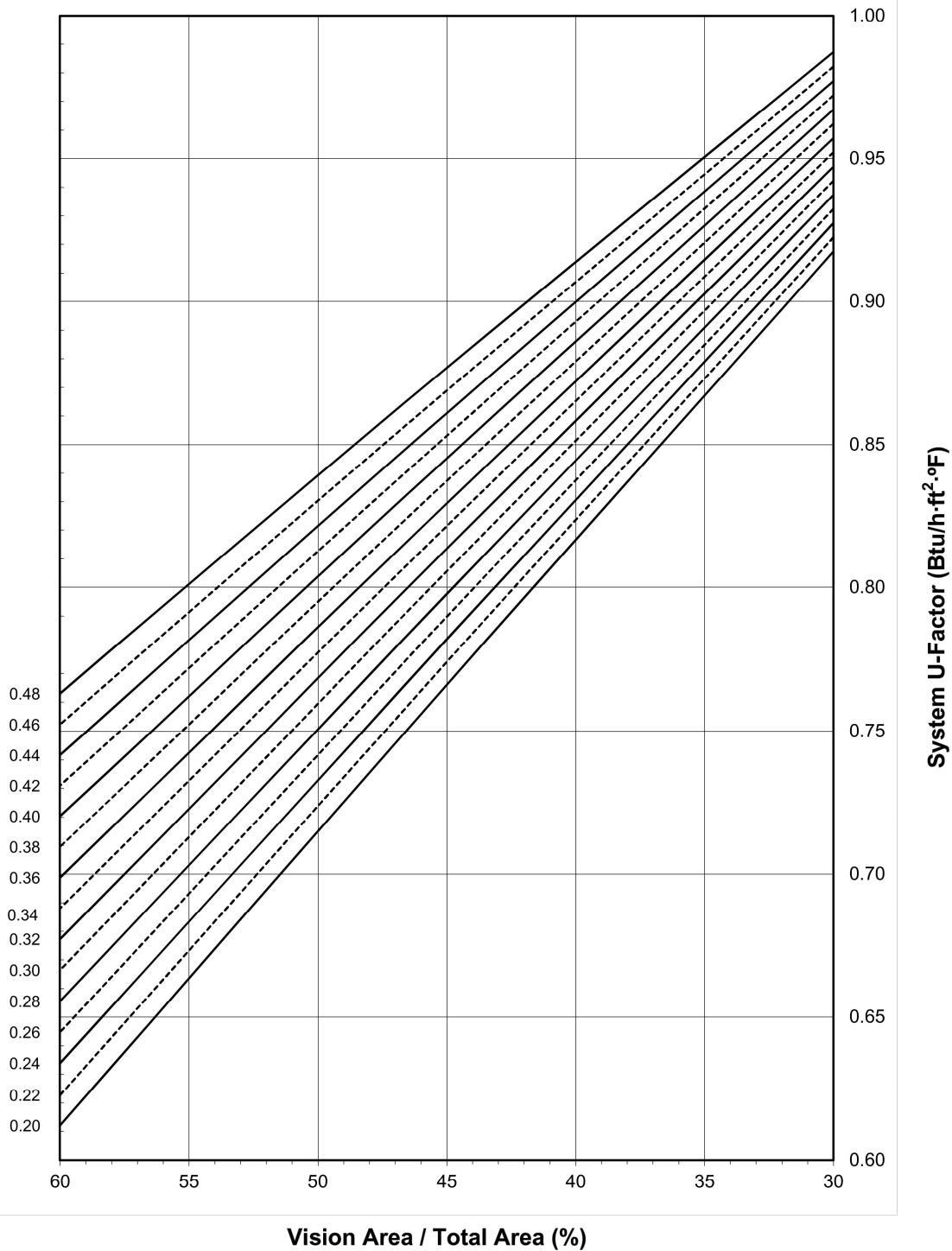


**Pittco Architectural Metals, Inc.**

**Standard Entrance Door - Side Hinge - Swinging Door - Single**

Up Front Glaze, Wide Stile, ADA Sill, 9-1/2" Bottom Rail, Stop 19-001, & Single Doors as the Representative

**System U-Factor vs. Percentage of Vision Area**



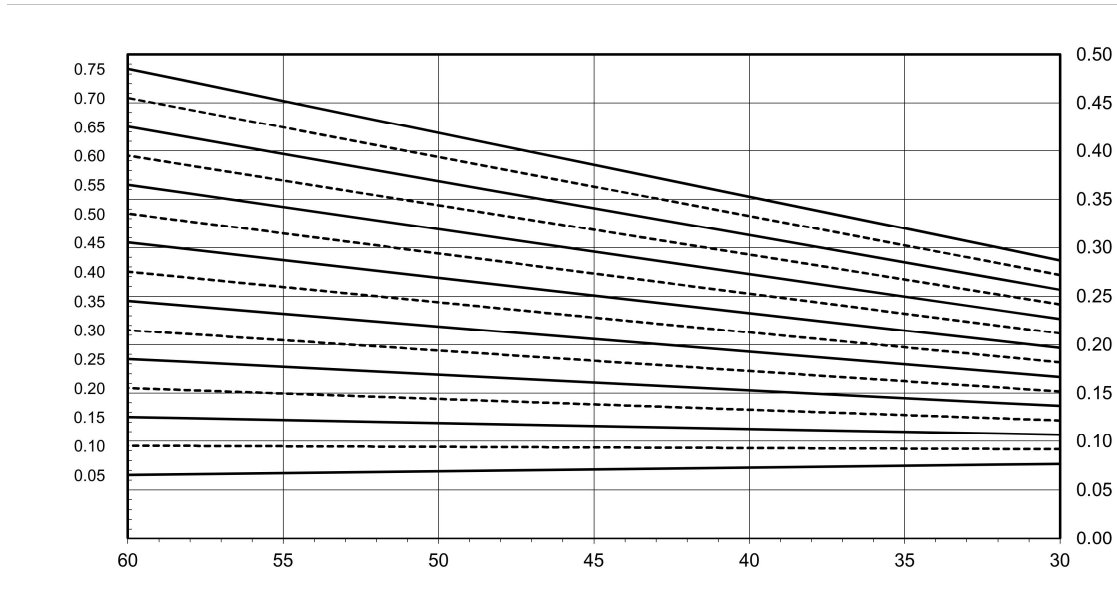
Note: 1 inch Overall - Dual Glazed Glass (0.48-0.20 COG) with Aluminum Spacer

**Pittco Architectural Metals, Inc.**

**Standard Entrance Door - Side Hinge - Swinging Door - Single**

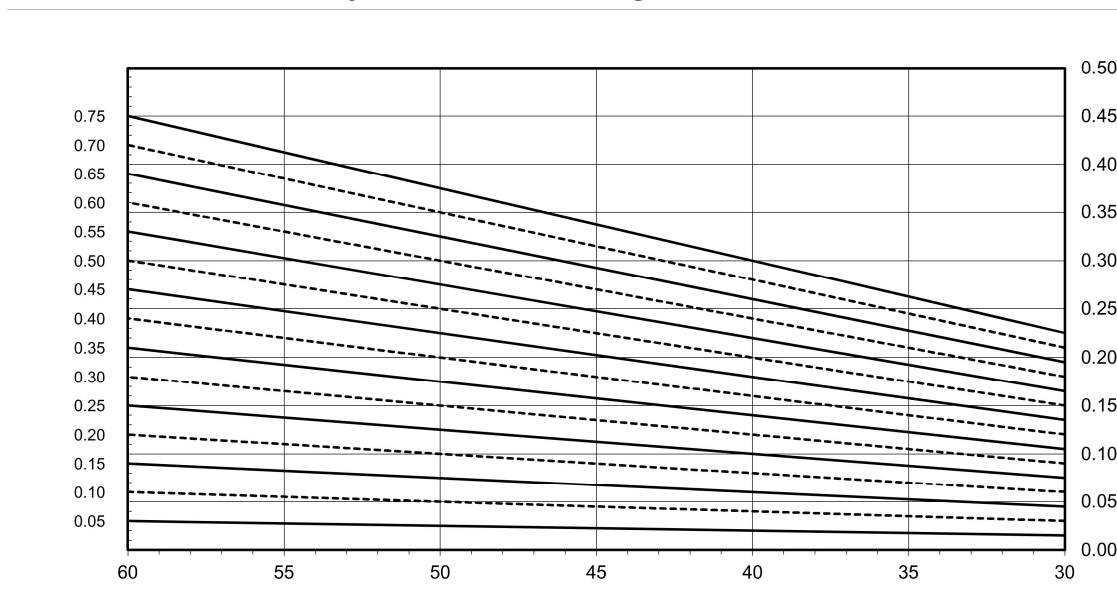
Up Front Glaze, Wide Stile, ADA Sill, 9-1/2" Bottom Rail, Stop 19-001, & Single Doors as the Representative

**System SHGC vs. Percentage of Vision Area**



Vision Area / Total Area (%)

**System VT vs. Percentage of Vision Area**



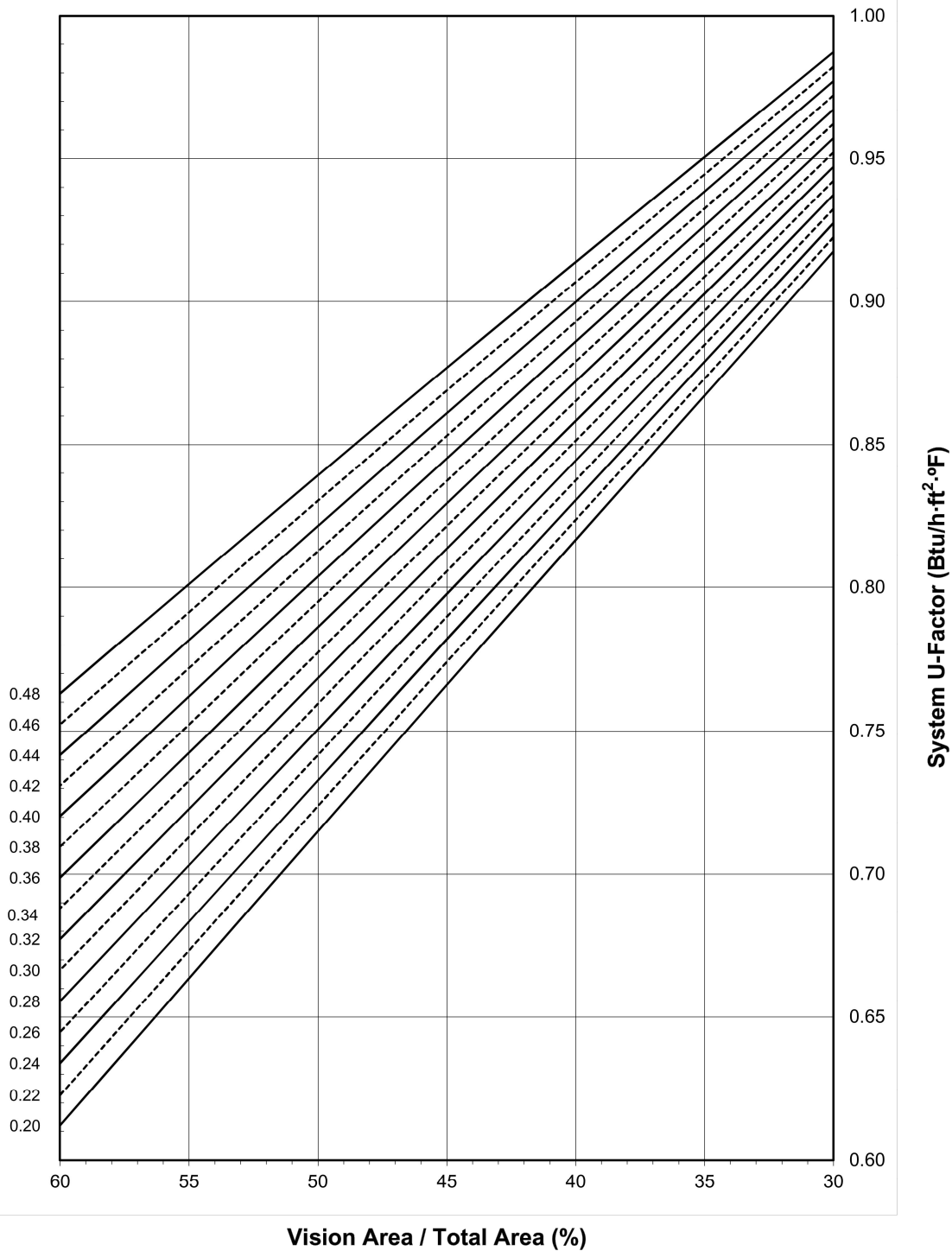
Vision Area / Total Area (%)

**Pittco Architectural Metals, Inc.**

**Standard Entrance Door - Side Hinge - Swinging Door - Single**

Up Front Glaze, Wide Stile, ADA Sill, 9-1/2" Bottom Rail, Stop 19-001, & Single Doors as the Representative

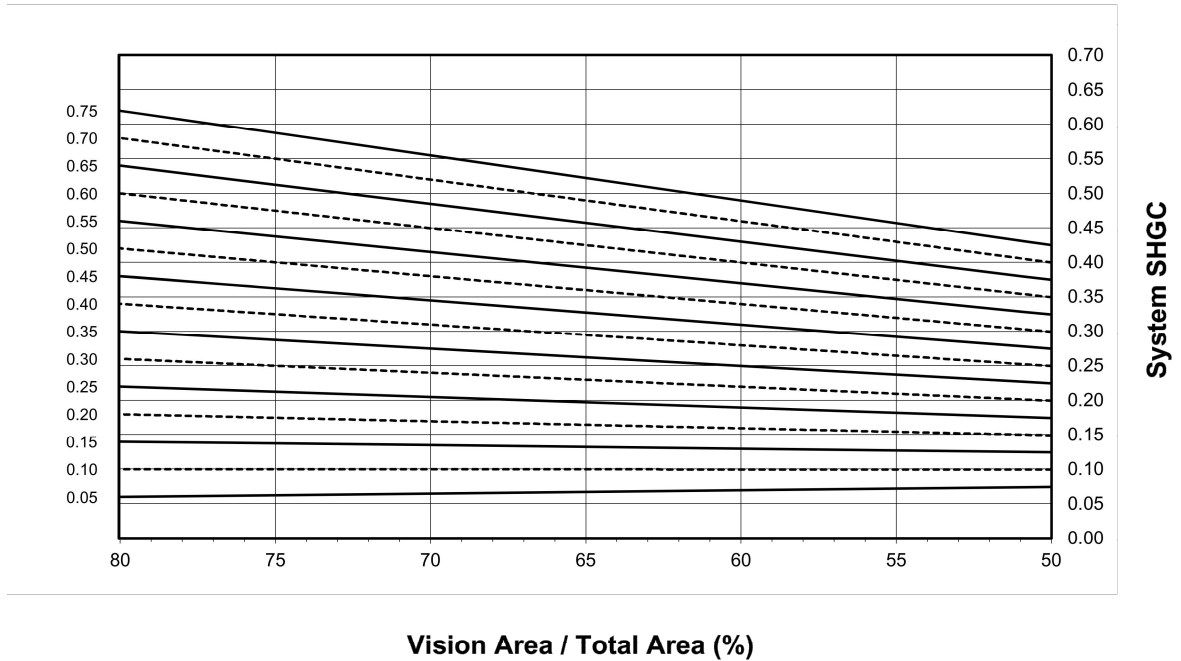
**System U-Factor vs. Percentage of Vision Area**



Note: 1 inch Overall - Dual Glazed Glass (0.48-0.20 COG) with Aluminum Spacer

**Pittco Architectural Metals, Inc.**  
**Standard & Monumental Entrance Door Transom - Door Transom**  
 Up Front Glazed as Representative

**System SHGC vs. Percentage of Vision Area**



**System VT vs. Percentage of Vision Area**

