

t r a d i t i o n a l | c o n t e m p o r a r y | c u s t o m

Architectural Guide

KARONA

by JELD-WEN

distinctive design
distinctive quality
distinctive service

karonadoor.com



KARONA

by JELD-WEN

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Thank you for your interest in Karona, Inc. We are pleased to send you this current product information catalog.

Included in this catalog are standard product designs. A large number of doors are offered in our catalog, but these designs are not the only products Karona can manufacture. The majority of our architectural projects are custom in nature, which provides you confidence that Karona can manufacture the unique design that sets your project apart.

Karona manufactures with a variety of wood species including: Red Oak, Poplar, White Maple, White Birch, Natural Birch, Cherry, Mahogany, Pine, Hickory, Walnut, Alder, Knotty Alder, MDF and many more.

Through product innovation and manufacturing flexibility, Karona offers additional value added products and services:

- ✓ Products manufactured to A.W.S. and W.D.M.A. custom grade specifications
- ✓ Green Products: Certified Wood, No-added Urea, Recycled
- ✓ 20, 45, 60, and 90 minute fire rated doors
- ✓ Jams non-rated and rated
- ✓ Pre-machining for hardware
- ✓ UV Water based Factory Finishing
- ✓ Custom color matching
- ✓ CAD drawings for architectural approval
- ✓ Web based product information and design tools
- ✓ Web based On-Line Quote tool
- ✓ Web site address . www.karonadoor.com

Karona manufactures its products using Old World craftsmanship, while using today's most sophisticated technology.

Please reference Karona's website at www.karonadoor.com for the latest product information and updates.

Thank you again for your interest and we look forward to a long, successful relationship.

The Karona Team.

Differential Advantage

- Made in the USA!
- Limited lifetime warranty on all interior doors.
- The industry's finest furniture-level quality backed by today's most sophisticated machinery.
- Web based Quote Tool with the ability to quote specials.
- In-house veneer processing and selection to ensure Uniformity of raw material.
- Industry leading lead times, including quick ship program.
- Price competitiveness due to extensive use of engineered components.
- Industries widest range of standard door designs and inventoried veneers.
- 20, 45, 60 and 90 minute fire doors available in most door styles and veneers. Glass options available in all ratings.
- FSC and No Added Urea Formaldehyde products, Leed project contributor
- Specials/Custom capabilities in terms of door design and wood species.
- Water based, UV cured pre-finish system
- Commercial hardware machining capabilities.
- Four-color sales literature that accurately represents KARONA quality.
- Responsive, extensively-knowledgeable in-house sales support coordinators.
- WDMA and AWS custom grade product specifications compliance.
- Web Site . www.Karonadoor.com

1 3/8"

**INTERIOR
DOORS**



1-3/8" & 1-3/4"

**INTERIOR
FRENCH
DOORS**



Our Door Panels provide structural stability with tighter tolerances and superior strength, while eliminating shrinkage.

An interior French door consists of stiles, top and bottom rail and divided glass panels or lites; used as singles and pairs.

Door Stiles, Rails, and Mullions

- FACE VENEER ARE %A+GRADE
- VENEERS ARE GLUED WITH TYPE 2 ADHESIVE
- SOLID EDGE BANDS ARE ELECTRONICALLY GLUED TO THE INNER CORE

Details

- STILES AND RAILS USE STABLE CORE MATERIAL
- STILES/RAILS ARE GLUED AND DOWELED USING VERTICAL-GROOVED HARDWOOD DOWELS
- A PROTECTIVE FILM IS APPLIED MOST GLASS PRIOR TO ASSEMBLY. THIS FILM ELIMINATES THE NEED TO MASK THE GLASS PRIOR TO FINISHING AND PROTECTS THE PANE FROM SCRATCHING DURING THE INSTALLATION PROCESS
- MUNTIN BARS ARE SOLID WITH 1/2+FACE
- CERTAIN DOORS ARE CLAMP GLAZED, WHICH ELIMINATES GLAZING COMPOUND, SQUEEZE OUT AND STAPLE HOLES

Door Panels

- STABLE CORE, TYPICALLY MDF OR PARTICLE BOARD
- FACE VENEER ARE %A+GRADE
- RAISED PANELS ARE BLADDER PRESSED
- FLAT PANELS ARE 3/8+THICK LAMINATED PARTICLE BOARD
- RAISED PANELS ARE 7/8+MDF

1-3/4"

**INTERIOR
DOORS**



1-3/4"

**EXTERIOR
DOORS**



Consists of stiles, rails and one or more panels, the stiles and rails forming the frame around the panel; "stile and rail" door.

Consists of stiles, rails and one or more panels, the stiles and rails forming the frame around the panel; "stile and rail" door.

Details

- STILES AND RAILS USE STABLE CORE
- STILES/RAILS ARE GLUED AND DOWELED
- PANELS ARE 1 1/4+THICK STABLE CORE
- FIRE DOORS 20 MIN, NEUTRAL OR POSITIVE PRESSURE
- A HIGH RATED 45, 60, & 90 MINUTE FIRE DOOR IS AVAILABLE IN MOST DESIGNS

Details

- STILES/RAILS FEATURE EXTERIOR GRADE CORE
- STILES/RAILS ARE GLUED AND DOWELED.
- PANELS ARE 1 1/4+THICK WITH A EXTERIOR CORE

VENEER SPECIES



Clear Alder



Knotty Alder



White Ash



Natural Birch



White Birch



Cherry



Hickory



Mahogany



Maple



Knotty Pine



White Pine



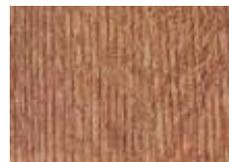
Paint Grade Poplar



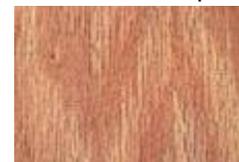
Stain Grade Poplar



White Poplar



Quartered Red Oak



Red Oak



Rift Cut Red Oak



Walnut



Quartered White Oak

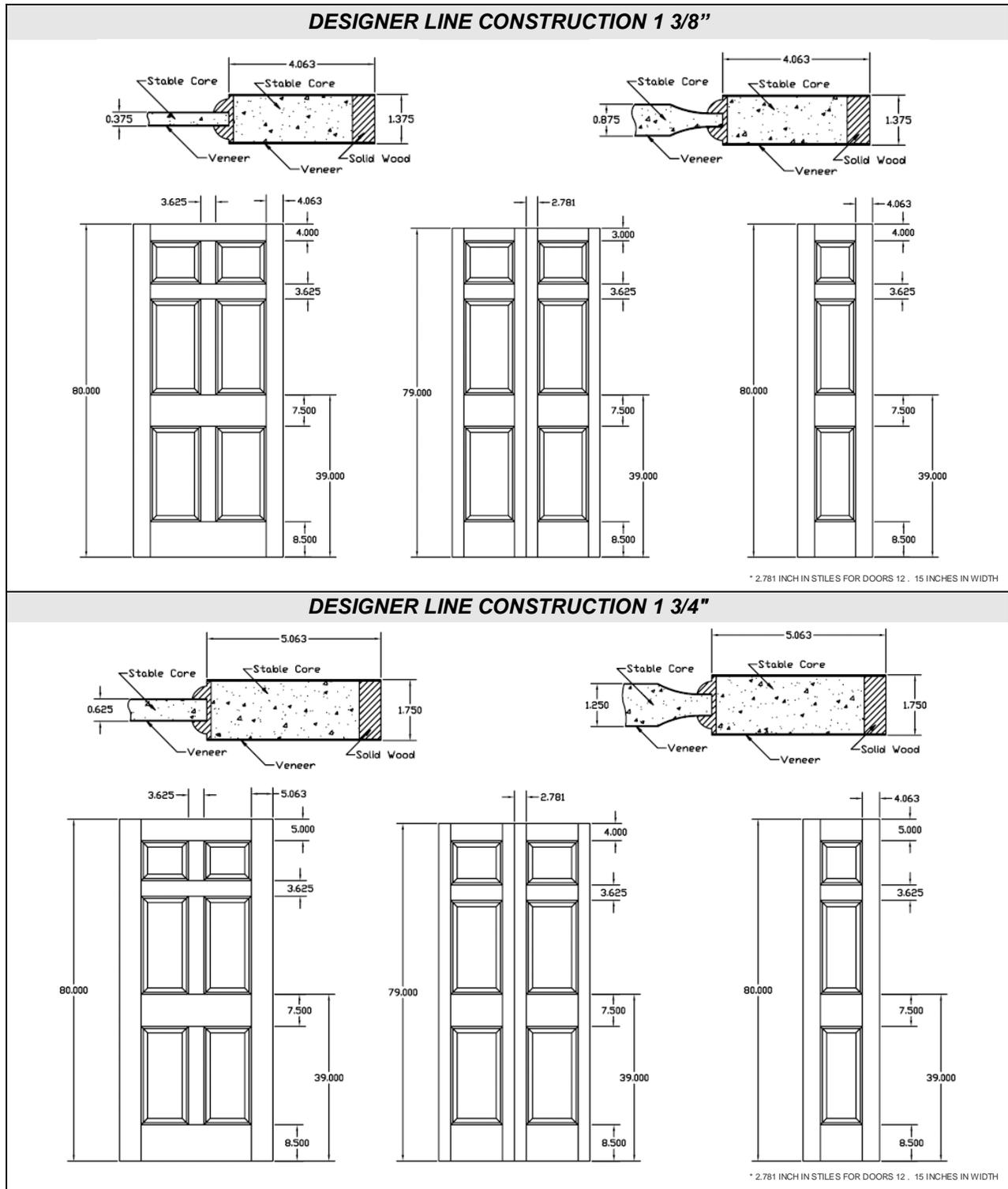


White Oak

Standard options not shown: VG Fir, Qtr. Cherry, MDF

OTHER SPECIES AVAILABLE UPON REQUEST, CALL FOR QUOTE

DOOR STANDARD DIMENSIONS



Factory Finishing

Karona's Factory Finishing utilizes the advanced technology of 100% water borne stains and lacquers. Ultraviolet (UV) technologies are employed in both the coating and process to ensure a durable yet environmentally conscience finish.

The finishing systems at Karona Door are similar to those used to finish the luxurious wood trim in European furniture and high-end vehicles. This automation provides accurate control of the multiple steps related to the finishing of an architectural door.

Benefits of Karona's Advance UV Factory Finishing:

- ✓ Clarity of Finish
- ✓ Cost effective
- ✓ Consistency of final finish quality
- ✓ Consistent top-coat material thickness
- ✓ Flat line processing, eliminates chance of top coat runs
- ✓ Reduced project time, regardless of project size
- ✓ Aligns with many project objectives as it relates to environmental stewardship
- ✓ Reduction of jobsite use of harmful finishing materials
- ✓ No Added Urea Formaldehyde

Per AWI Quality Standards – Section 1500

Referring to AWI Factory Finishing Specialty Finish (UV Cured, (water-based), and Urethane)

- ✓ AWI Custom Grade
- ✓ AWI Excellent Rating: #5 UV Urethane
- ✓ Water Reducible, Urethane based, Acrylic lacquer

Per WDMA I.S. 6A – 08 Standards

- ✓ WDMA Custom Grade
- ✓ WDMA TR-6 Rating
- ✓ Water Reducible, Urethane based, Acrylic lacquer
- ✓ Meets Extra Heavy Duty Standards

Material Technical Data

- ✓ Sheen 35 dry, (+ - 5), 40 Sheen wet
- ✓ Effect . Open Pore
- ✓ Some cross grain scratches may remain evident
- ✓ Does not contain Urea-Formaldehyde

Staining Process

1. Preparatory Sanding
2. Application of Spray and Wipe stain
3. Stain Wipe
4. Heated Forced Air/Infra-red Dry

Clear UV Finish Process

1. De-ionized cleansing curtain removes dust particles
2. Automated application of Ultra Violet sealer material . on all 6 sides
3. Curing of Sealer Coat
 - a. Ambient Flash off
 - b. High Velocity Water Evaporation
 - c. Ultra Violet Cured
4. Automated Sealer Sand
5. Removal of dust particles though Deionized Air Curtain
6. Automated application of UV Top Coat material to all 6 sides
7. Curing of Top Coat
 - a. Ambient Flash off
 - b. High Velocity Water Evaporation
 - c. Ultra Violet Cured

COMPONENT STANDARDS & SPECIFICATIONS

PART TYPE	MIN/MAX	WIDTH	HEIGHT
STILES	Min	2	5
	Max	18	120
RAILS	Min	4	3
	Max	96	96
DOOR	Max	60	120
	Min	8	5

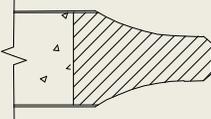
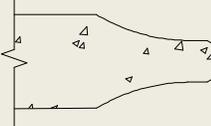
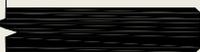
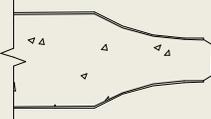
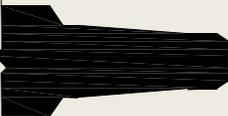
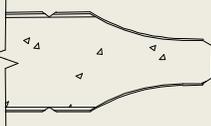
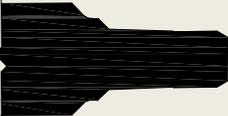
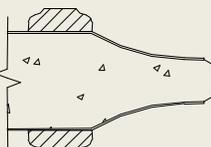
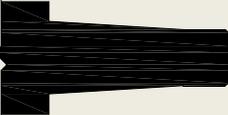
PART TYPE	MIN/MAX	WIDTH	HEIGHT
RAISED PANELS	Min	4	4
	Max	60	96
FLAT PANELS	Min	3	3
	Max	60	96
ARC/RADIUS PANELS (INCLUDES LAFAYETTE)	Min	5	5
	Max	60	96
MITERED RIM-BAND	Min	6	6
	Max	67	96

PART TYPE	MIN/MAX	WIDTH	HEIGHT
MUNTIN BARS	Min	3/8	4
	Max	3	96
SLAT LOUVERS	Min	3	1-1/8
	Max	48^	4
CHEVRON LOUVERS	Min	3	Fixed
	Max	96	Fixed

- THESE SPECIFICATIONS ARE KARONA STANDARDS-CONSULT YOUR SALES REPRESENTATIVE WHEN DEVIATING FROM THESE GUIDELINES.
- WARRANTY MAY BE LIMITED BASED ON DOOR OR PART SIZE.
- ^ SLAT LOUVERS 36" AND OVER RECEIVE AN ANTI-SAG BAR.

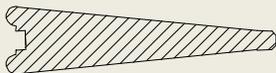


PANEL OPTIONS

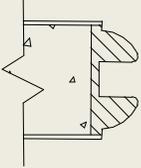
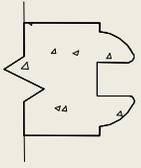
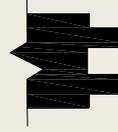
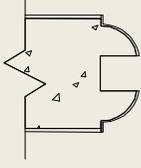
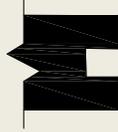
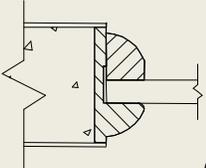
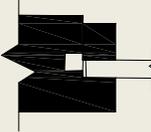
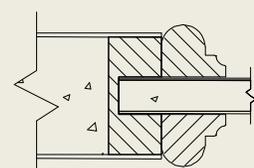
<u>Profile</u>	<u>Construction</u>
 <p>Std Raised (P5)</p>	 <p>Mitered Rim-Band</p>
 <p>Std Raised (flat back) (P5)</p>	 <p>MDF</p>
 <p>Std Flat (P6)</p>	 <p>Veneered</p>
 <p>Std Step</p>	
 <p>Custom Raised (CS15882)</p>	
 <p>Custom Raised (CS18636) (P1)</p>	<p><u>Features</u></p>  <p>V-Groove</p>
 <p>Custom Raised (CS19010) (P2)</p>	 <p>Molding</p>
 <p>Custom Raised (CS18637) (P3)</p>	
 <p>Custom Raised (CS18638) (P4)</p>	

Other custom profiles are available . tooling charges may apply.

LOUVER OPTIONS

<u>Profiles</u>	<u>Construction</u>
 <p>Standard 1-1/8+</p>	 <p>Solid Wood</p>
 <p>Plantation 2+</p>	 <p>MDF</p>
 <p>Plantation 3+</p>	
 <p>Plantation Stagger</p>	
 <p>Chevron Standard</p>	
 <p>Plantation Chevron</p>	
 <p>False</p>	
<p>Other custom profiles are available . tooling charges may apply.</p>	

STICKING OPTIONS

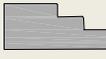
<u>Profile</u>		<u>Construction</u>
	Ovolo	
	Ogee	
	Classic	
	Qtr Classic	
	Mission	
	Cove & Bead	
	Square	
	Sq Glass	
	Slant	
	Liana [^]	
	Superior [^]	
	Huron [^]	
	K-Glaze [^]	

[^] Available in 1-3/8" thickness only.

^{^^} Available in 1-3/8" thickness, ovolo & square sticking only.

Other custom profiles are available . tooling charges may apply.

MOLDING OPTIONS

<u>Profiles</u>		<u>Construction</u>
 CS8026	 CS17004	 Solid Wood
 CS15269 (M1)	 Quirk (M5)	
 CS17445 (M2)	 CS12932	 MDF
 CS17328	 CS14374	
 CS17056	 CS16612	
 CS17055	 CS16189	
 CS15310	 CS13768	
 CS14900	 CS13894	
 CS16439	 CS13935	
 CS13090 (M4)	 CS15055	
 CS16507	 CS14373	
 CS16506	 CS14116	
 CS15619	 CS17058	
 CS15719	 CS15777	
 CS16922	 CS15493	
 CS15547	 CS15550	
Other custom profiles are available . tooling charges may apply.		

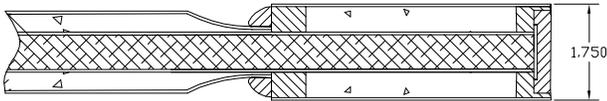
FIRE DOOR OPTIONS & RESTRICTIONS

All dimensions are in inches unless otherwise indicated.		20 Minute Neutral		20 Minute Positive		45/60 Minute Positive		90 Minute Positive	
		Min	Max	Min	Max	Min	Max	Min	Max
Door Single (Cat A&B)	Width	na	48	na	48	na	48	na	48
	Height	na	108	na	96	na	96	na	96
	Thickness	1.75	na	1.75	na	1.75	na	1.75	na
Door Pair (Cat A&B)	Width	na	96	na	84	na	84	na	84
	Height	na	108	na	96	na	96	na	96
	Thickness	1.75	na	1.75	na	1.75	na	1.75	na
Stiles & Rails	Stiles	4	na	4	na	4	na	5	na
	Top Rail	4	na	4	na	4	na	5	na
	Bottom Rail	6.625	na	6	na	6	na	6	na
	Center Rail & Mullions	2	na	2	na	na	na	na	na
	Sticking Options	Ogee, Ovolo, Mission, Square, Classic, Special		Ogee, Ovolo, Mission, Square, Classic, Special		Ogee, Ovolo, Mission, Square, Classic, Special		Ogee [^] , Ovolo, Mission, Square, Classic [^] , Special	
Face Molding	Available		Available		Available		Available		
Panels	Raised Panel Width	6	40	6	40	na	na	na	na
	Raised Panel Height	6	85	6	85	na	na	na	na
	Flat Panel Width	6	40	6	40	na	na	na	na
	Flat Panel Height	6	85	6	85	na	na	na	na
	Panel Options	Raised, Flat, Step, Rim-Band, Arch, Radius, Lafayette		Raised, Flat, Step, Rim-Band, Arch, Radius, Lafayette		Raised, Flat, Step, Rim-band, Arch, Radius, Lafayette		Raised, Flat, Step, Rim-band, Arch, Radius, Lafayette	
V-Groove Options	Raised, Step & Flat		Raised, Step & Flat		Raised, Step & Flat		Raised & Step		
Glass	Glass Width	4	26	4	26	3	na	3	na
	Glass Height	4	40	4	40	3	na	3	na
	Glass Area (Sq. Inch)	na	1040	na	1040	na	1216	na	1216
	Light to Lock Restriction	5	na	1	na	1.625	na	na	na
	Glass Options	Open for glass, Must be 1/4" rated glass, Fire clips mandatory		3/16 Ceramic or Pyroswiss 1/4"		3/16 Ceramic Radius, Arch, & Circle Glass Available		3/16 Ceramic w/ Listed Vision Kit	
Machining	Positive latching hardware with a listed closer or spring hinge ^(a) must be used. Concealed closers available on 20-90 minute doors.								
	Concealed verticle rods (CVR) available with up to 60 min								
	90 minute double egress pair available up to 2.25' x 8' x 10'								
	AA or RR tops available with up to 60 min								
	Wire raceways allowable in most doors								
	Listed viewers can be used up to 1" in diameter								
	Surface & Mortise auto bottoms (1 x 1-3/4)								
Fire Treated EB-Pair Req'd?	Yes	No	No	No	No	No	No	No	No
Some combinations of options limit features and require an alternate construction that may include additional charges.									
^ Ogee & Classic not available in 1.75" 90 min pair.									
^(a) Not available in CC construction.									
na - not applicable									

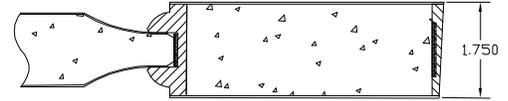
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FIRE DOOR CROSS-SECTION EXAMPLES

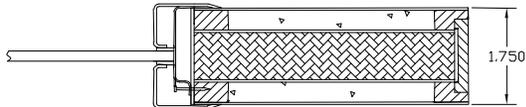
Continuous Core
45/60/90 Minute



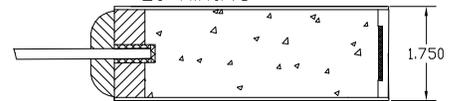
Positive Pressure
20 Minute



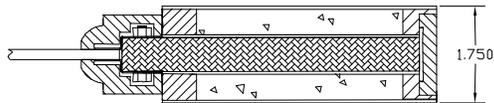
Continuous Core
90 Minute Glass



Positive Pressure Glass
20 Minute



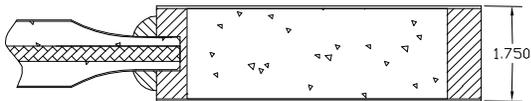
Continuous Core
45/60 Minute Glass



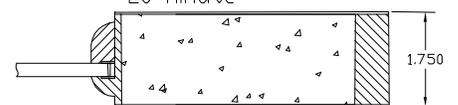
Neutral Pressure
20 Minute



Positive/Neutral Pressure
20 Minute (Alt)



Neutral Pressure Glass
20 Minute



STC TESTING DATA

Test Date	STC Rating (Operable)	STC Rating (Sealed)	Door Model	Door Seals	Test Lab	Construction Method
1/24/96	NA	32	K4030	Dense Mastic	Riverbank	Std construction - painted
7/24/07	39	NA	K4010	Krieger (422N) Pemko (S88),	Intertek	CC 90 minute fire door construction 1.75" thick - laquered
7/24/07	36	NA	K4010	Krieger (422N) Pemko (S88),	Intertek	Tectonite 90 minute fire door construction 2.25" thick - laquered
2/7/11	31	33	K5610	Pemko (Q102D & 234A)	Stork	Std construction with silicone caulk around panels - painted
2/7/11	32	34	K3820	Pemko (Q102D3684 & 234APK36)	Stork	Std construction with 1/8" tempered, 1/4" air, 1/4" laminated glass, silicone caulk around panels - painted
10/15/11	26	33	K5610	Pemko (234A & 2005GV + Zero sound trap)	Stork	Standard construction with stave core and weather seals around panels (EPDM bulb) - painted
11/17/11	33	33	K5610	Pemko (234A & Q102D + Zero sound trap)	Stork	Continuous core construction with 5/8" MDF CC core - painted (non-rated door)
11/17/11	34	NA	K5610	Pemko (234A & 102D + Zero Sound Trap)	Stork	Extera panel core with weather striping around panels (EPDM bulb) - painted

Sound transmission class data was collected using specific seals, hardware, and construction. To obtain similar results, the seals, hardware and construction must be as close to the tested door as possible.

GLASS OPTIONS

Glass Name	Thickness (inches)	Limitations
Arctic	5/32	
Autumn	5/32	
Bamboo	3/16	
Beveled	1/4	
Bronze Tint	1/8	
Bubbles	1/4	
Cross Reeded (small)	5/32	
Deltra Frost	5/32	
Flemish	5/32	
Glue Chip	1/8	
Obscured (Pinhead) Beveled	3/16	
Rain	3/16	
Reeded	1/4	
Seedy Baroque	1/8	
Thin Reeded (Narrow)	5/32	
Velour	1/4	
V-Groove	1/4	
Water Laminated	1/4	
White Laminated	1/4	

* See web-site for example images www.karonadoor.com

January 2013

LEED CREDIT & LEED CRITERIA		STILE & RAIL CONSTRUCTION								
KARONA DOOR NOMENCLATURE		Interior 1.375	Interior 1.75	Interior 2.25	Exterior 1.75	Negative Pressure 20 Min.	Positive Pressure 20 Min.	Positive Pressure 45 Min.	Positive Pressure 60 Min.	Positive Pressure 90 Min.
MR 4.1	RECYCLED CONTENT: 10% , (SUM OF POST-CONSUMER + 1/2 PRE-CONSUMER)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MR 4.2	RECYCLED CONTENT: 20% , (SUM OF POST-CONSUMER + 1/2 PRE-CONSUMER)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MR 5.1	REGIONAL MATERIALS: 10% (EXTRACTED AND MANUFACTURED REGIONALLY)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MR 5.2	REGIONAL MATERIALS: 20% (EXTRACTED AND MANUFACTURED REGIONALLY)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MR 6	RAPIDLY RENEWABLE MATERIAL USE RAPIDLY RENEWABLE BUILDING MATERIALS AND PRODUCTS FOR 2.5% OF THE TOTAL VALUE OF ALL BUILDING MATERIALS AND PRODUCTS USED IN THE PROJECT.	Yes Call Factory for Details	Yes Call Factory for Details	Yes Call Factory for Details	Yes Call Factory for Details	Yes Call Factory for Details	Yes Call Factory for Details	Yes Call Factory for Details	Yes Call Factory for Details	Yes Call Factory for Details
MR 7	Certified Wood USE A MINIMUM OF 70% OF WOOD-BASED MATERIALS AND PRODUCTS, WHICH ARE CERTIFIED IN ACCORDANCE WITH THE FOREST STEWARDSHIP COUNCIL (FSC) PRINCIPLES AND CRITERIA, FOR WOOD BUILDING COMPONENTS. ** Extra six-week lead time - Interior 2.25	Yes** See Door List of Models	Yes See Door List of Models	Yes** See Door List of Models	Yes See Door List of Models	Yes See Door List of Models				

INDOOR ENVIRONMENTAL QUALITY										
EQ 4.4	Low Emitting Materials: COMPOSITE WOOD	Yes								

**Extra lead time - Interior 1.375 & 2.25 Call Karona for details

MATERIALS & RESOURCES		INTENT
4.1	Recycled Content: 10% , (SUM OF POST-CONSUMER + 1/2 PRE-CONSUMER)	Increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of new virgin materials.
4.2	Recycled Content: 20% , (SUM OF POST-CONSUMER + 1/2 PRE-CONSUMER)	Increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of new virgin materials.
5.1	Regional Materials: 10% (EXTRACTED, PROCESSED AND MANUFACTURED REGIONALLY)	Increase demand for building materials and products that are extracted and manufactured within the region, (500 miles of project site) thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.
5.2	Regional Materials: 20% (EXTRACTED, PROCESSED AND MANUFACTURED REGIONALLY)	Increase demand for building materials and products that are extracted and manufactured within the region, (500 miles of project site) thereby supporting the use of indigenous and reducing the environmental impacts resulting from transportation.
6	Rapidly Renewable Material	Reduce the use and depletion of finite raw materials and long-cycle renewable materials by replacing them with rapidly renewable materials.
7	Certified Wood	Encourage environmentally responsible forest management.

INDOOR ENVIRONMENTAL QUALITY		INTENT
4.4	Low Emitting Materials: COMPOSITE WOOD	Reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well being of installers and occupants

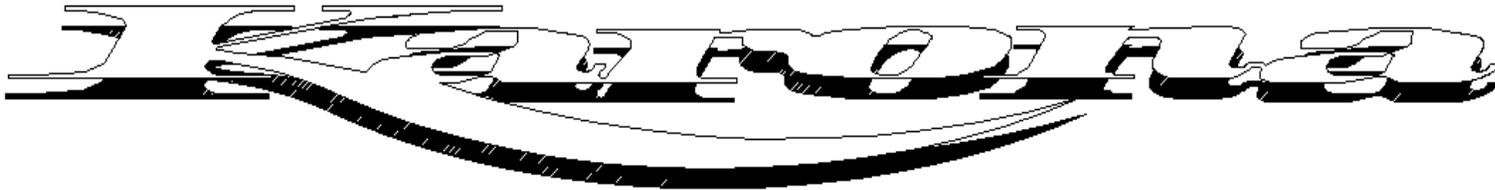
KARONA

by JELD-WEN

4100 Karona Court, Caledonia, MI 49316

www.karonadoor.com

616.554.3551 • 1.800.829.9233 • Fax: 616.554.3908 • Sales Fax: 616.554.3902



Doors of Distinction

DOOR TOP OPTIONS

PAGES 1-2

RAISED PANEL DOORS

PAGES 3-12

LOUVER DOORS

PAGE 13-14

FRENCH DOORS

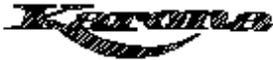
PAGES 15-19

SECTION DETAILS

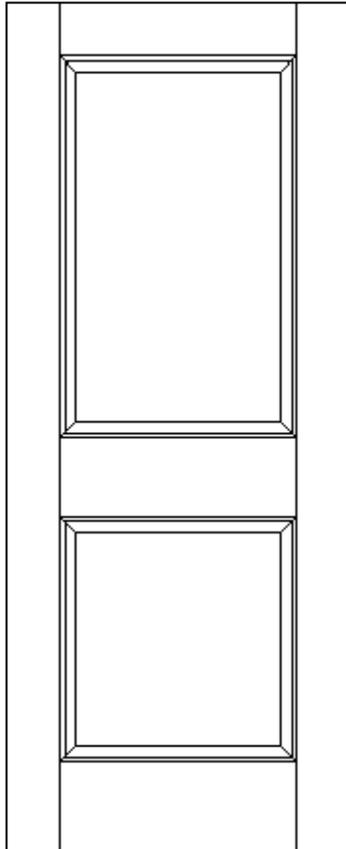
PAGES 20-45

JAMBS

PAGE 44

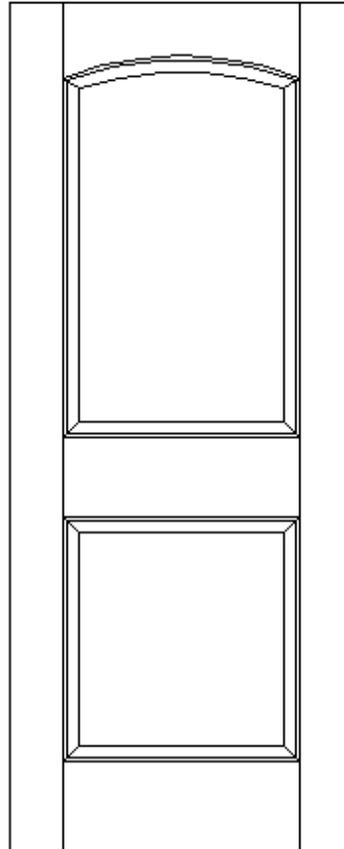


Doors of Distinction



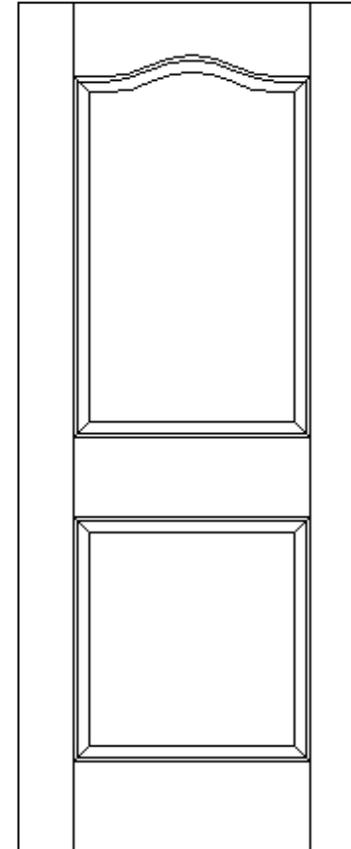
K

SQUARE TOP, SQUARE PANEL



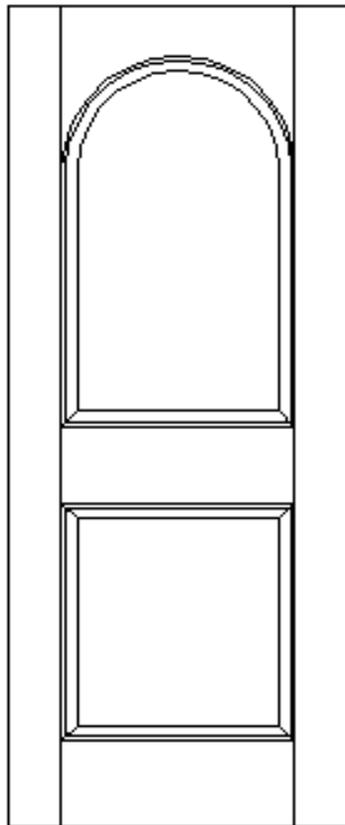
A

SQUARE TOP, ARCH PANEL



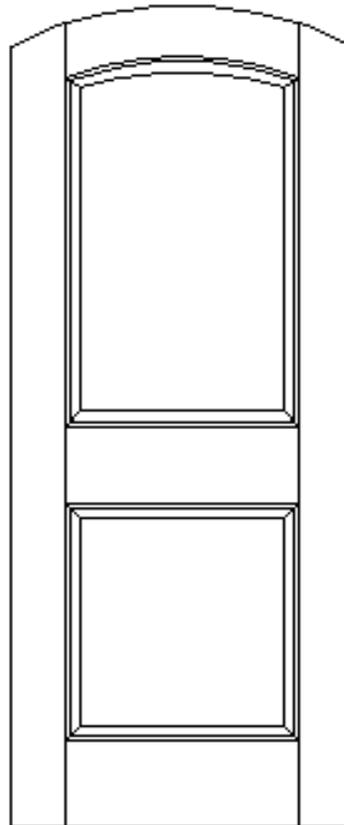
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SQUARE TOP, LAFAYETTE PANEL



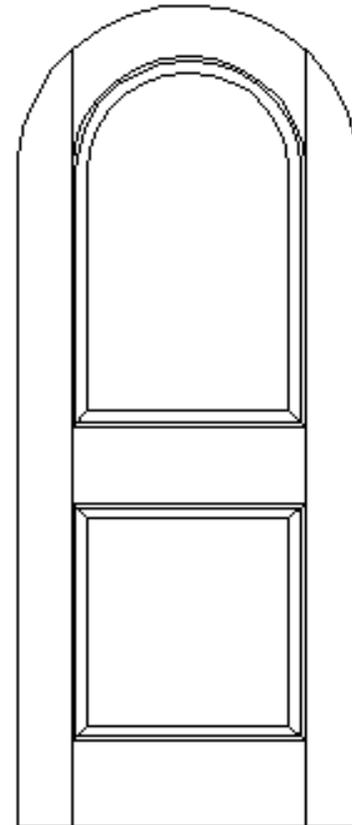
R

SQUARE TOP, RADIUS PANEL



AA

ARCH TOP, ARCH PANEL

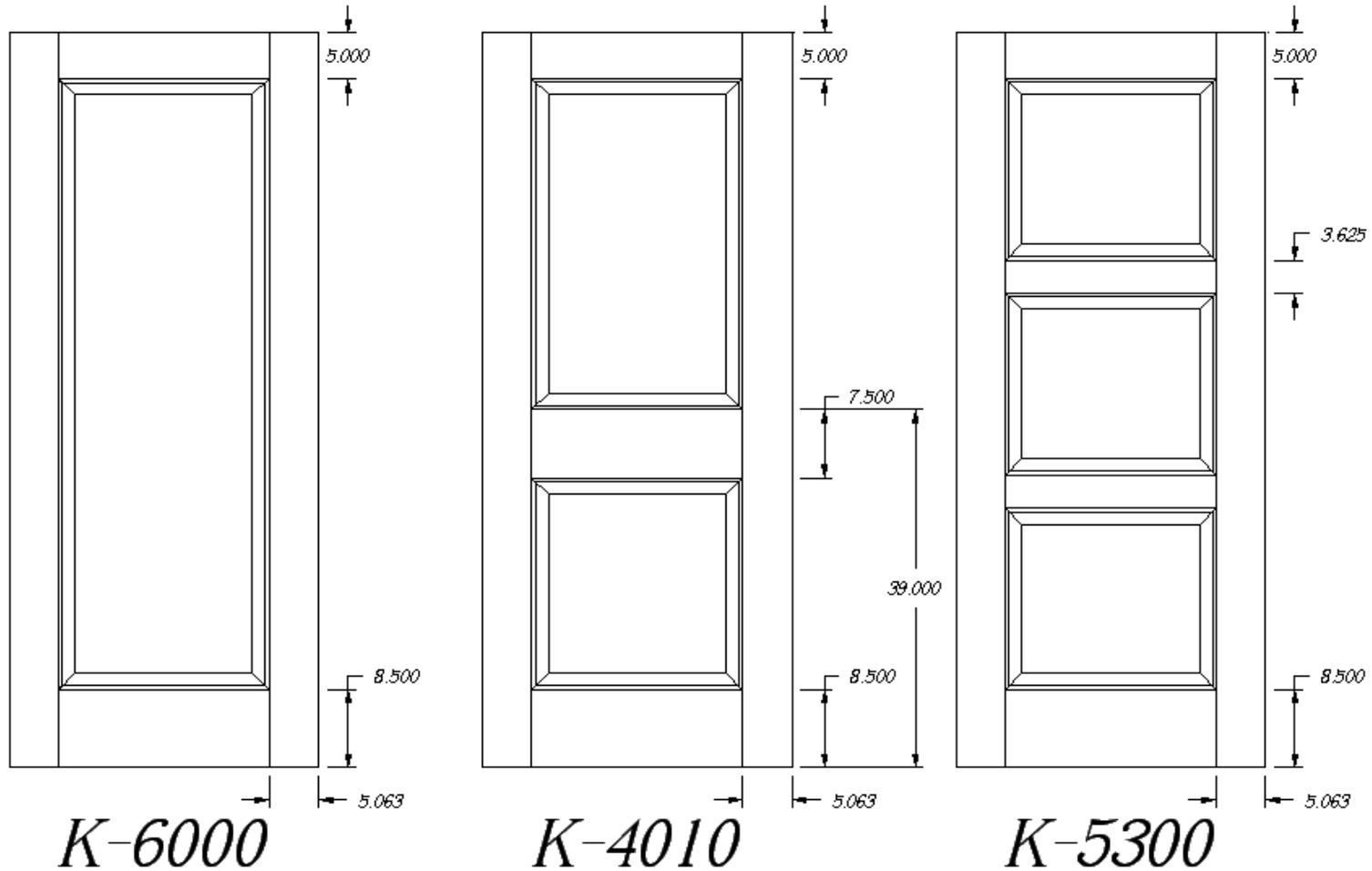


RR

RADIUS TOP, RADIUS PANEL

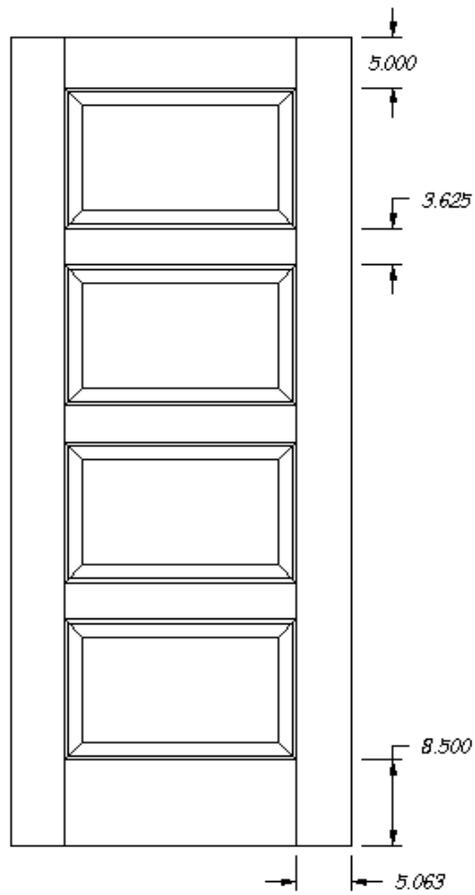


ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.

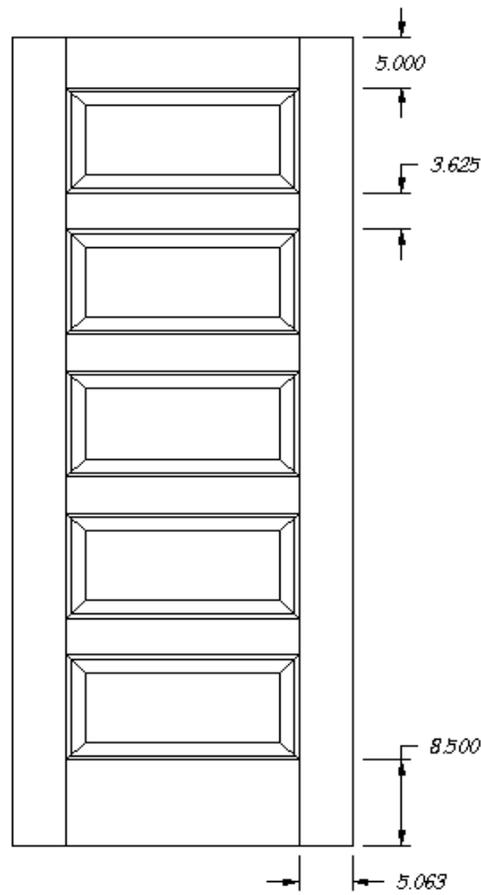




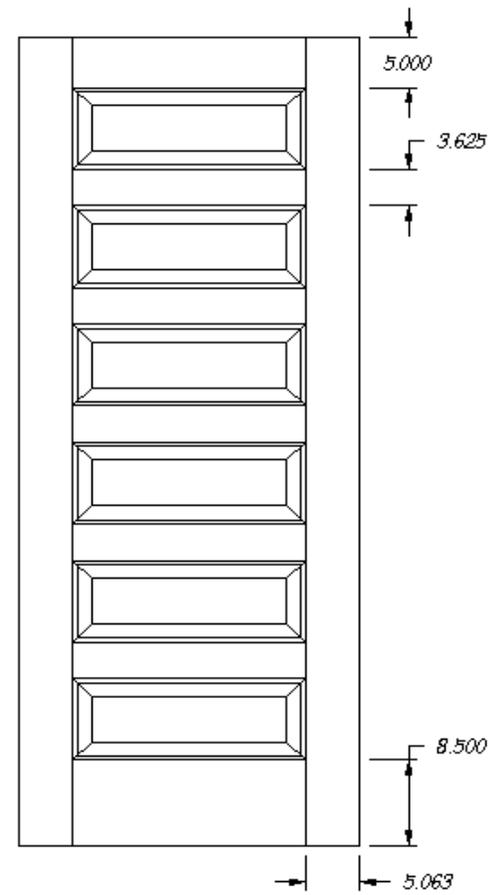
ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.



K-3040



K-3050

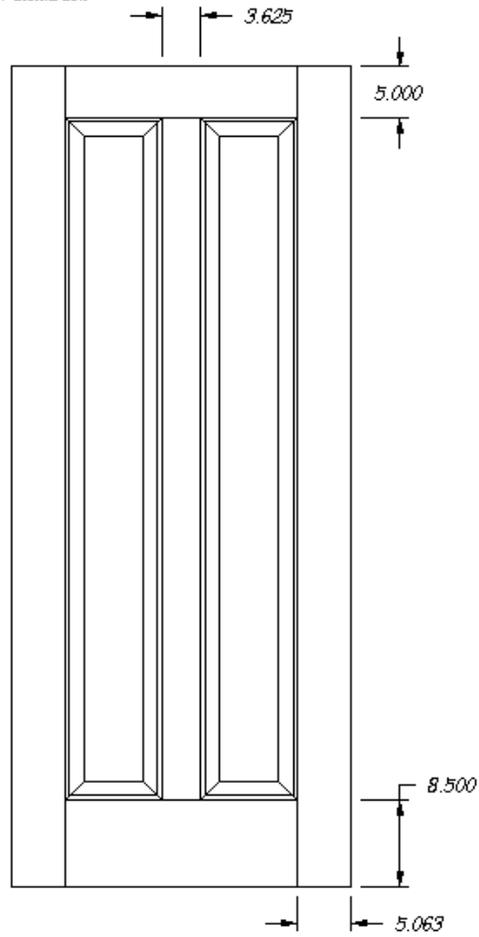


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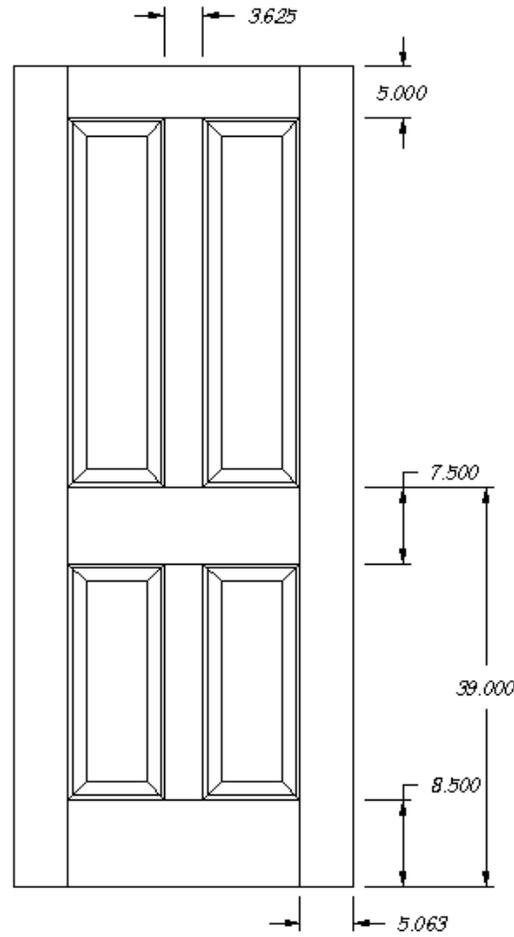


ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.

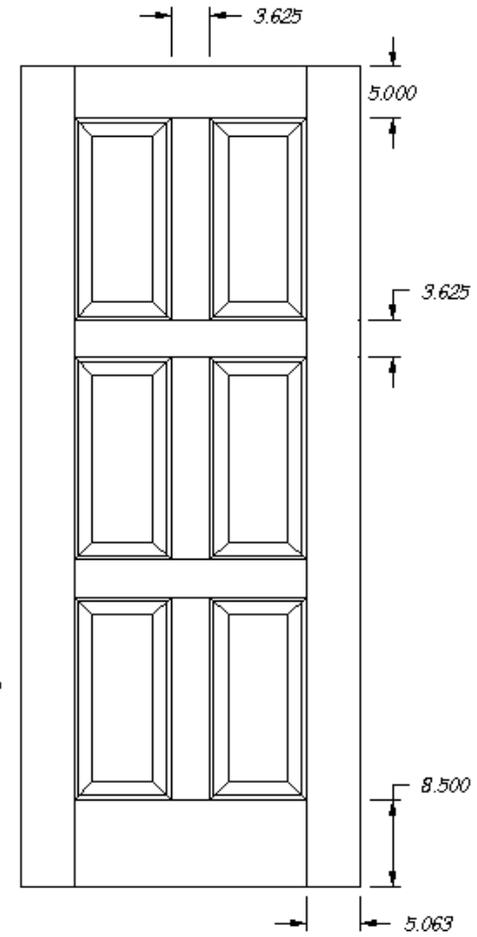
Doors of Distinction



K-5020



K-5400

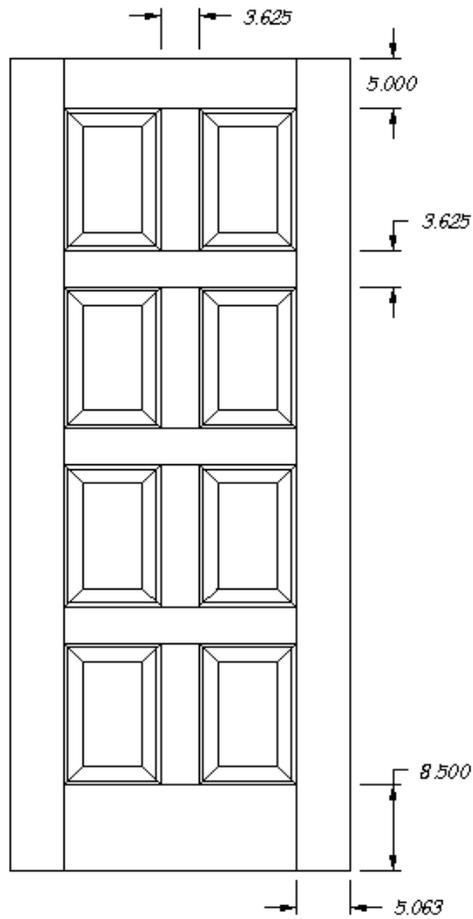


K-5660

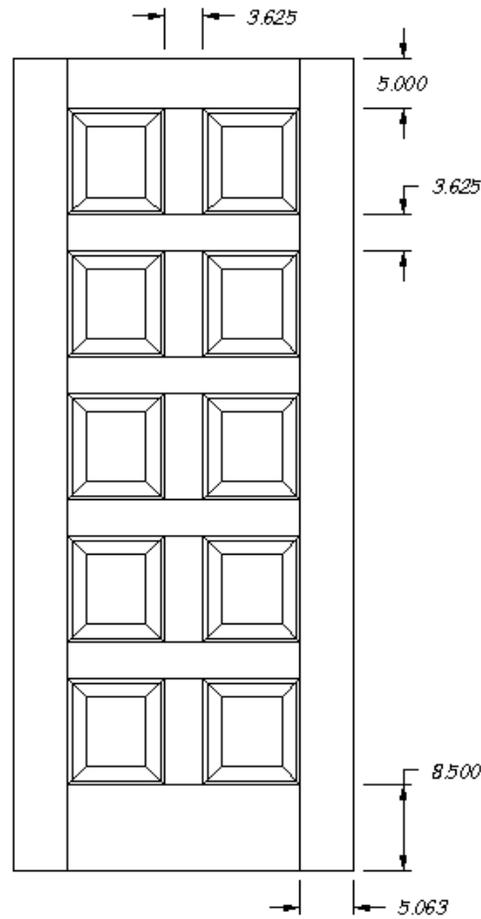


Doors of Distinction

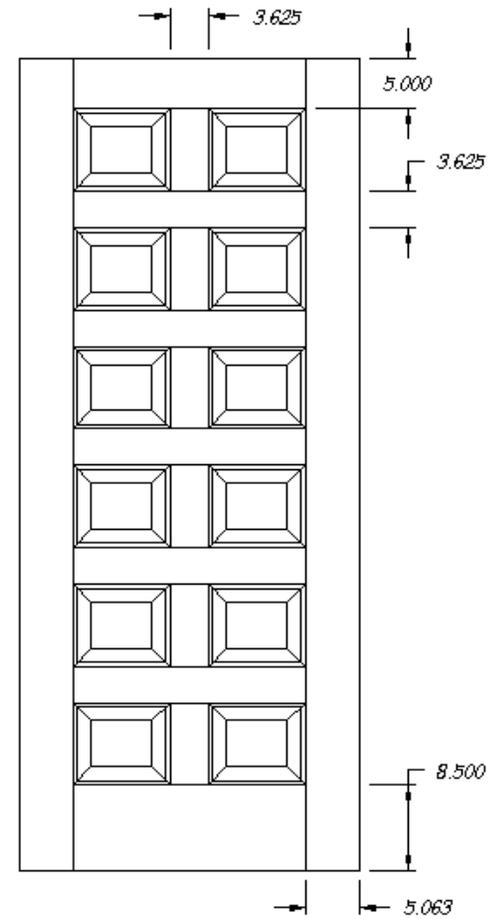
ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.



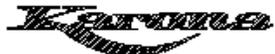
K-5810



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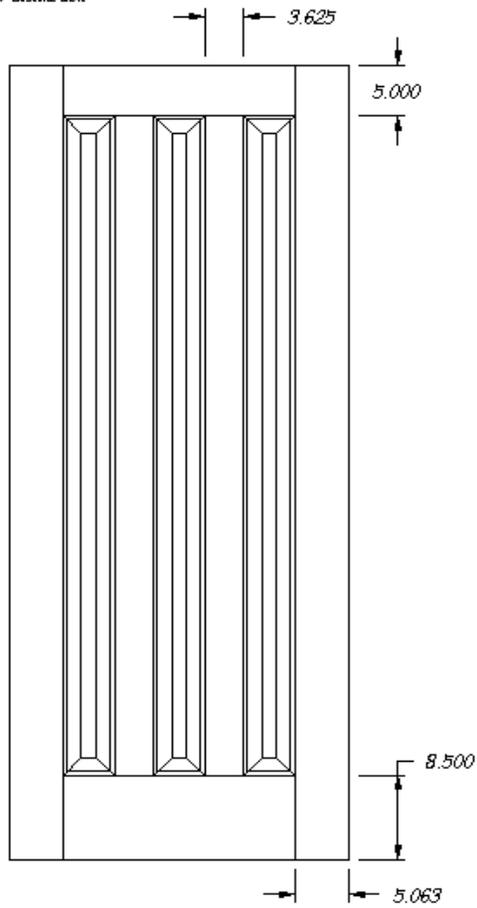


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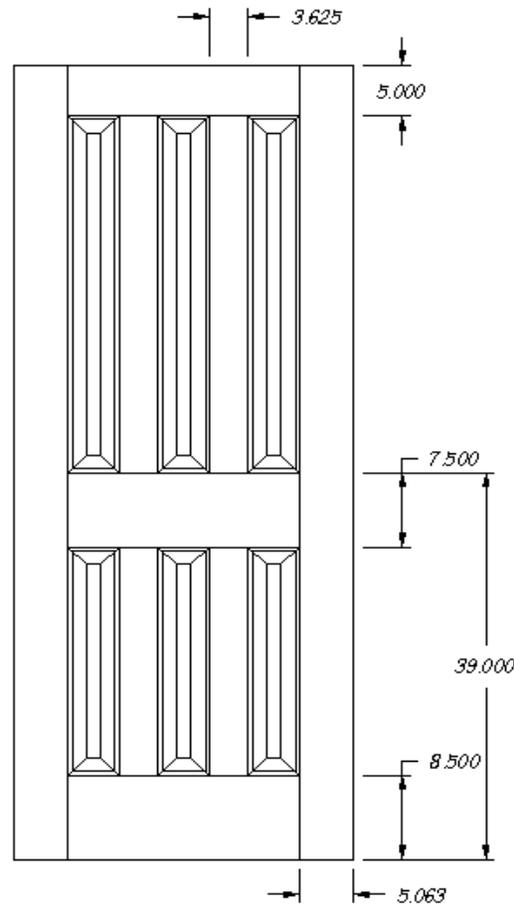


ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.

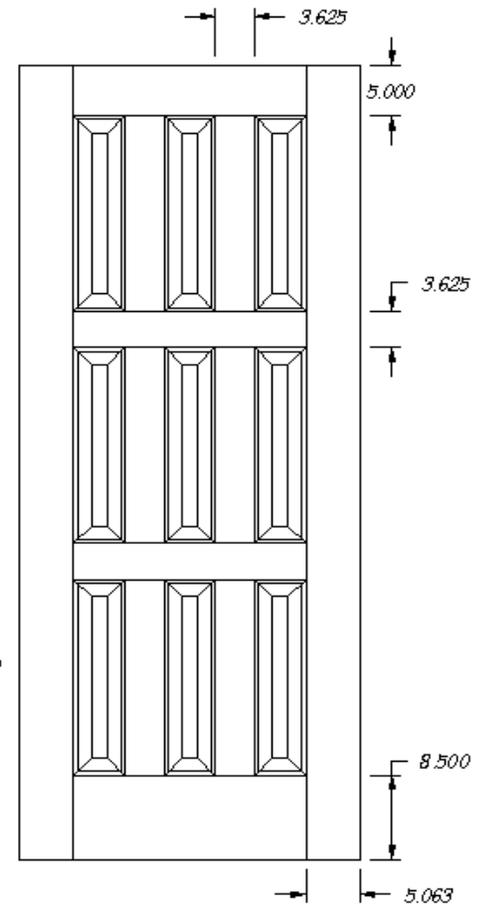
Doors of Distinction



K-3030



K-3060

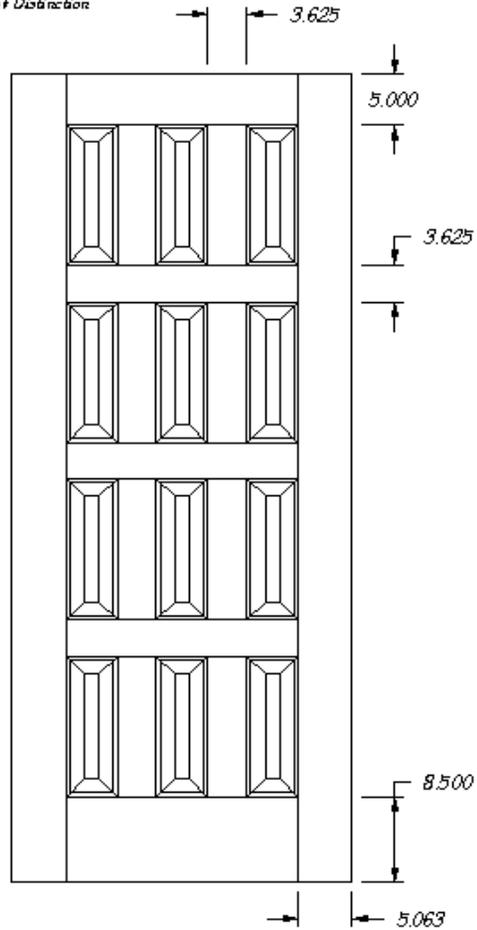


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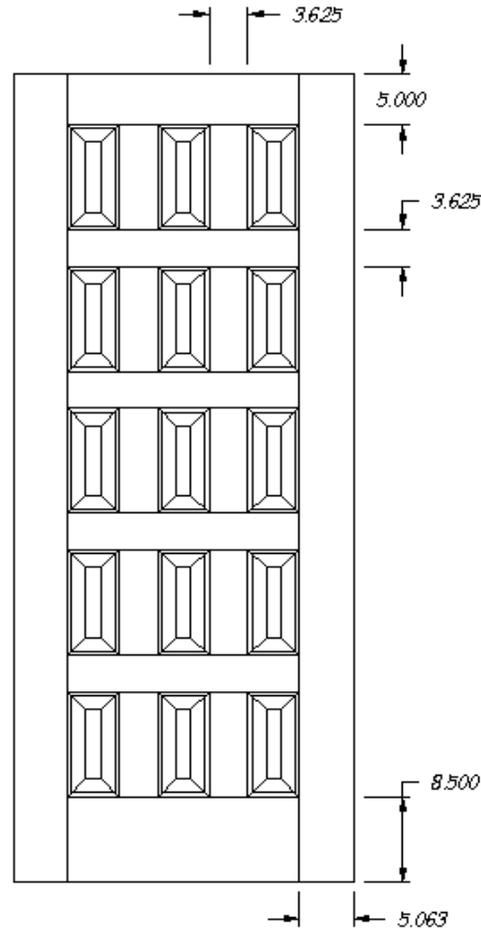


ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.

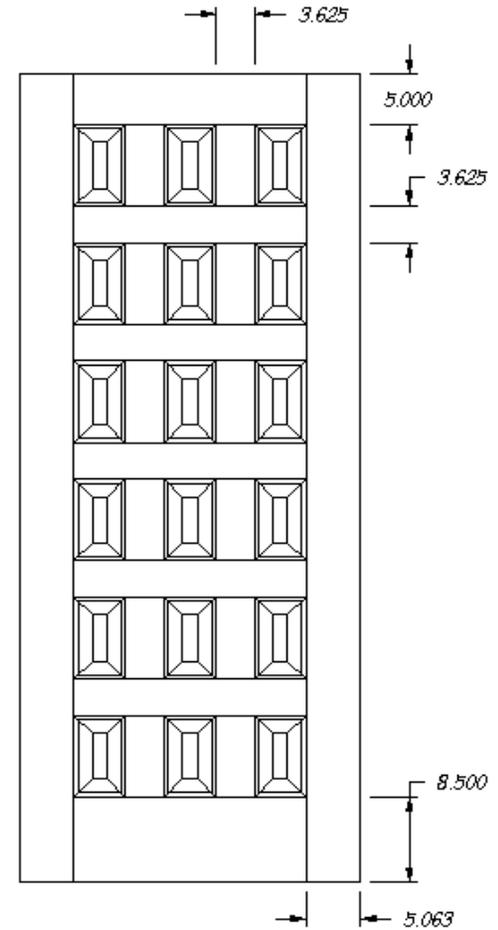
Doors of Distinction



K-3120



K-5930

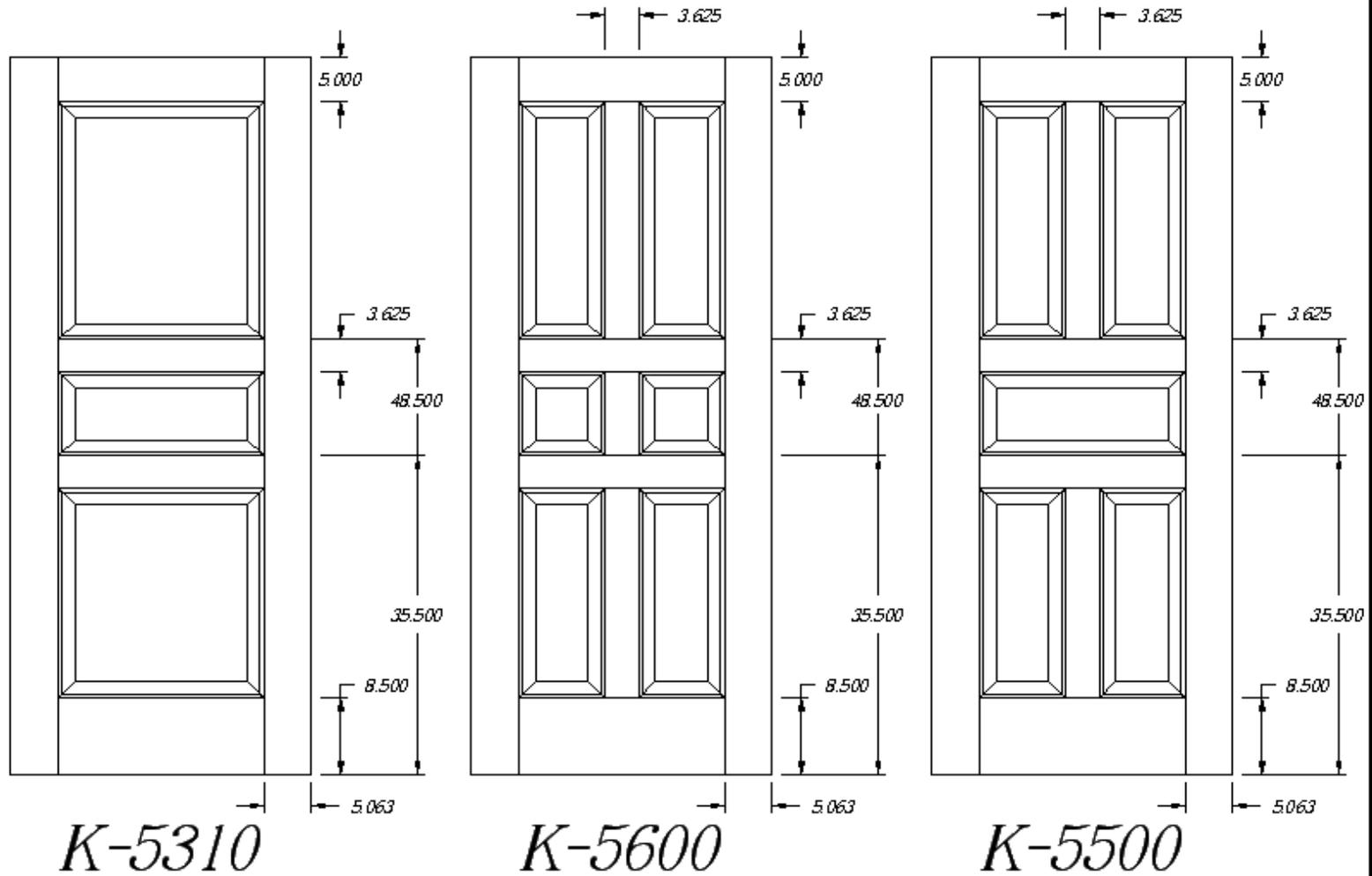


K-3180



Doors of Distinction

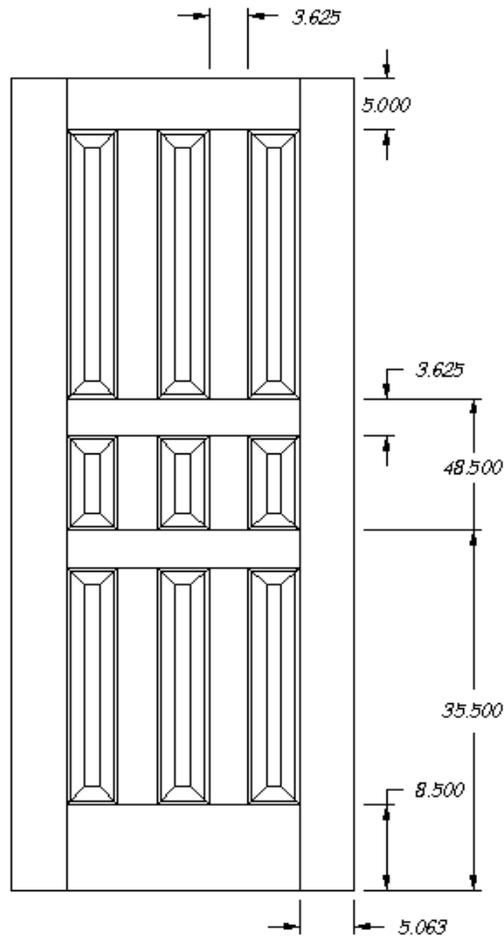
ALL DOORS ARE ALSO AVAILABLE FLAT WITH PANELS OR GLASS.



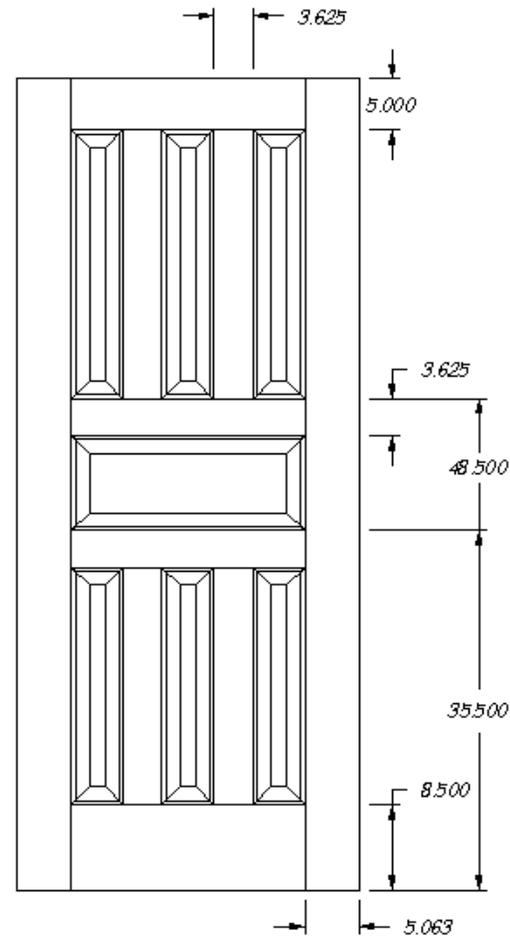


Doors of Distinction

ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.



K-3190

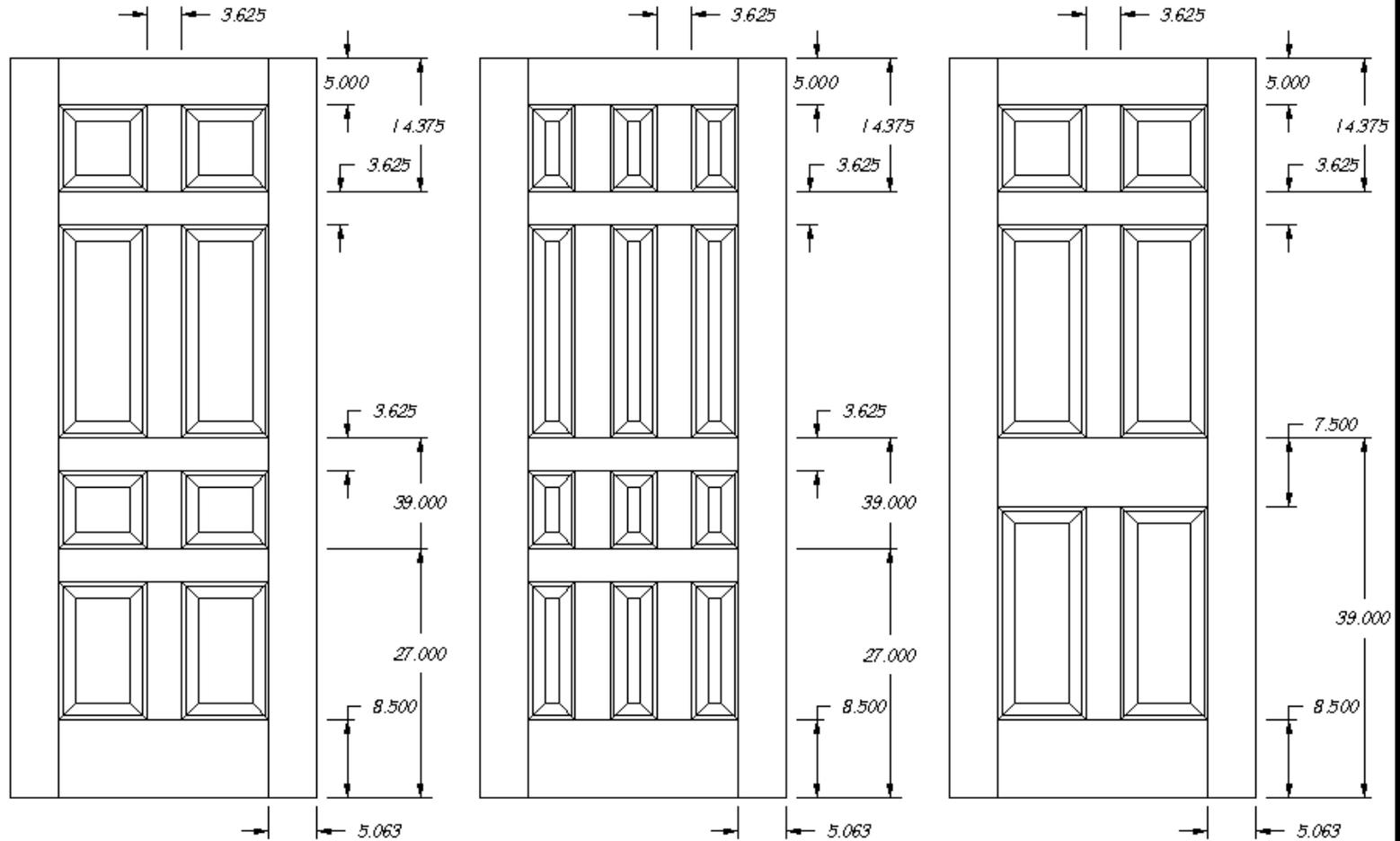


K-3070



ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.

Doors of Distinction



K-3080

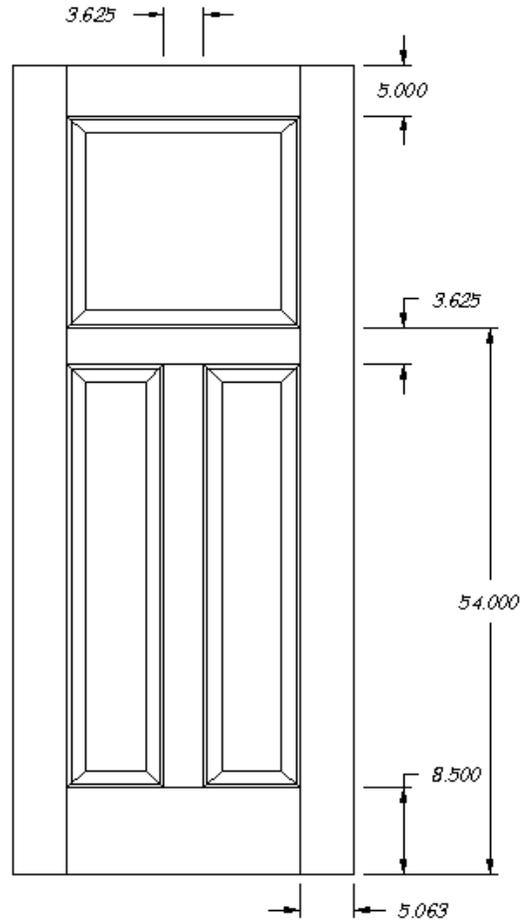
K-3320

K-5610

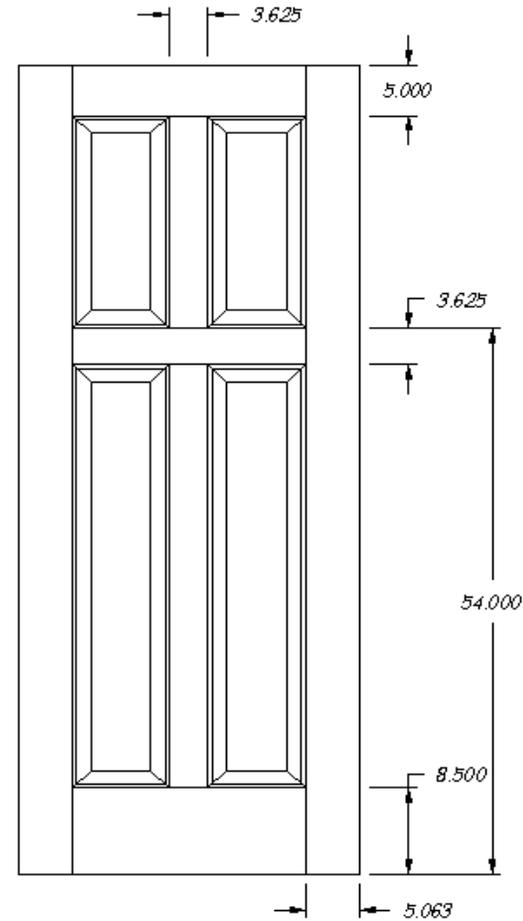


Doors of Distinction

ALL DOORS ARE ALSO AVAILABLE WITH FLAT PANELS OR GLASS.



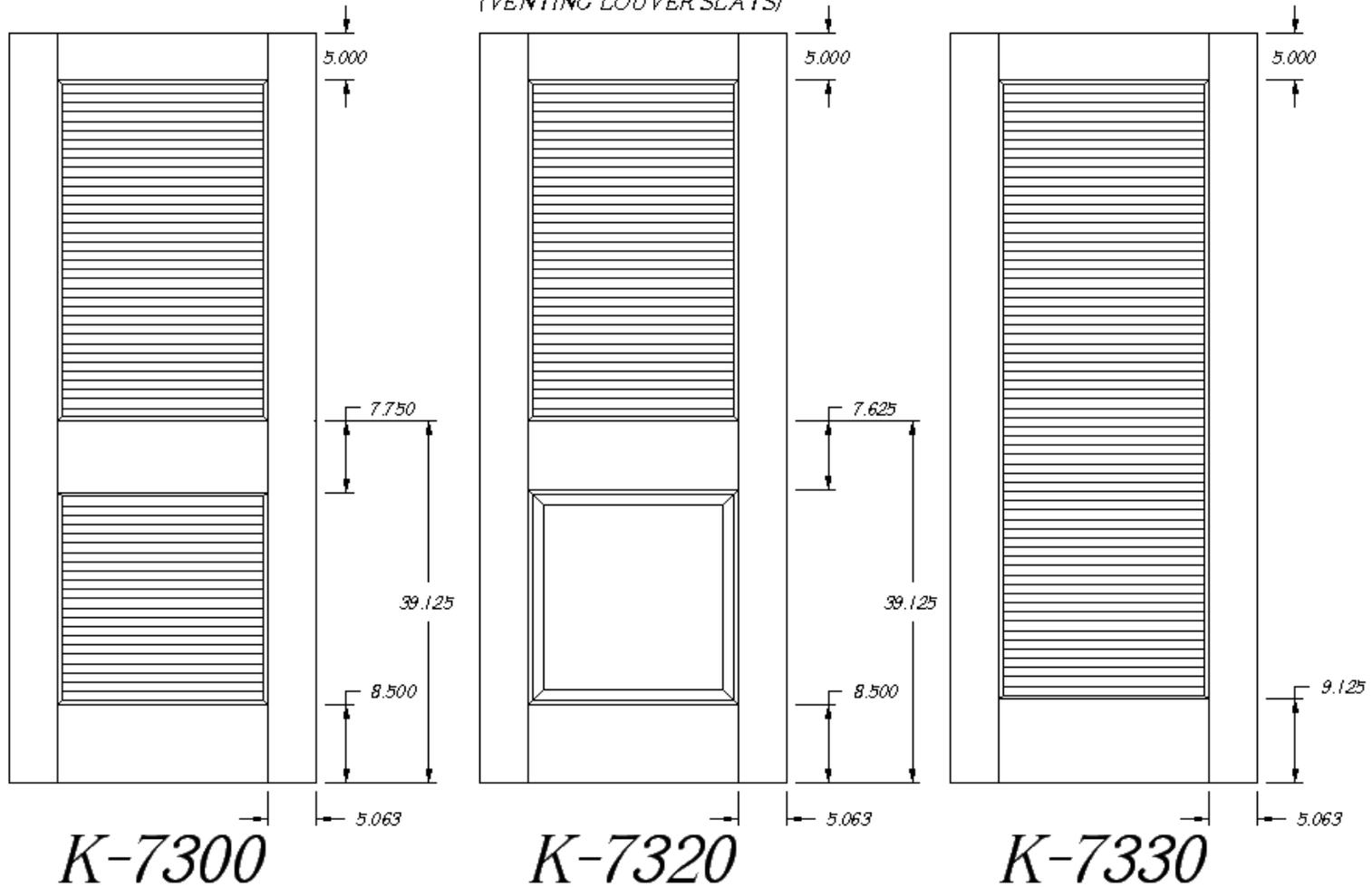
K-5320



K-5410



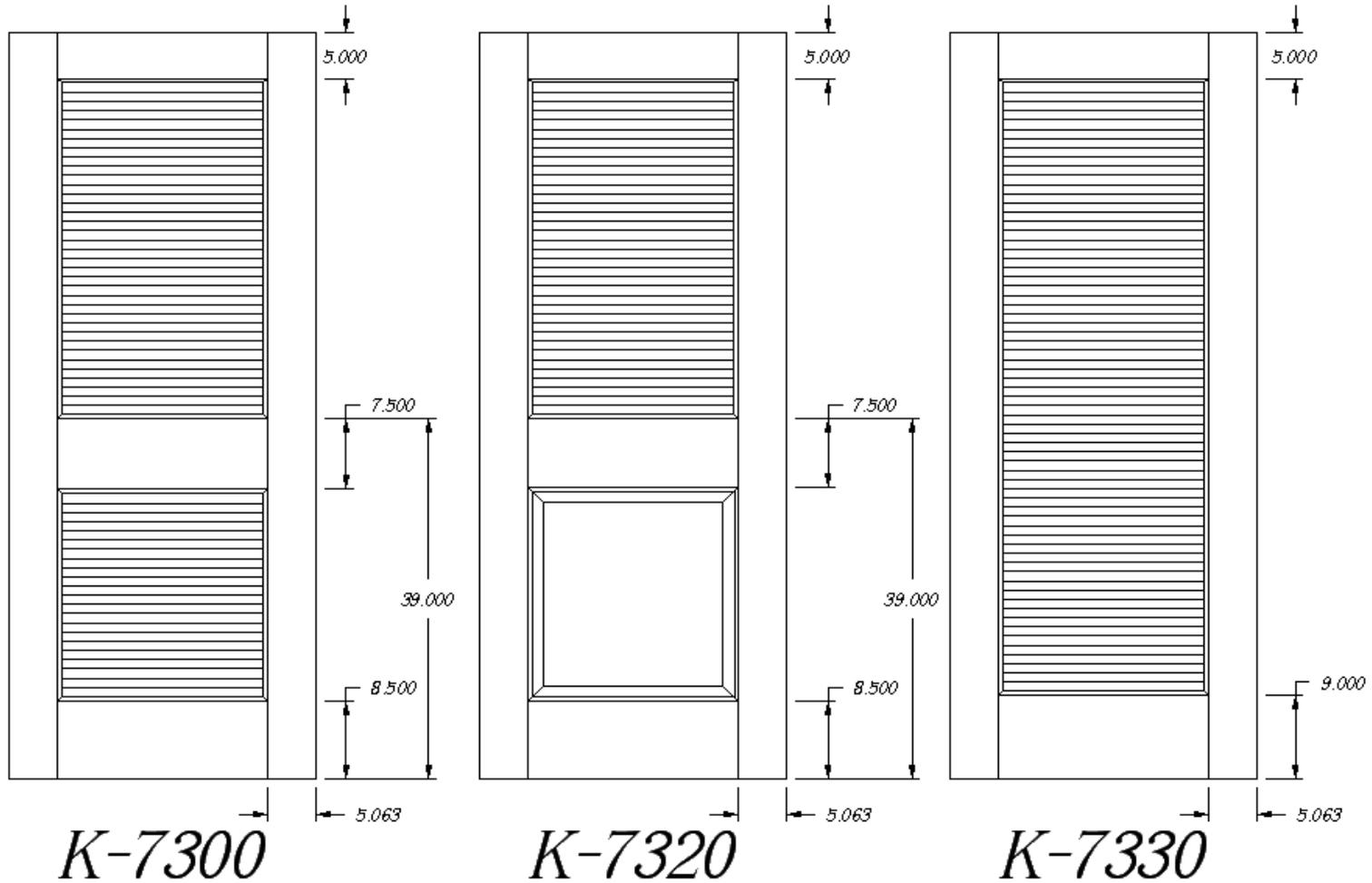
FACTORY REQUIRES LOUVER OPENING TO END WITH 7/8" MEASUREMENT.
FACTORY RECOMMENDS ANTI-SAG BAR ON DOORS WIDER THAN 30",
INCLUDED ONLY IF REQUESTED.
(VENTING LOUVER SLATS)





Doors of Distinction

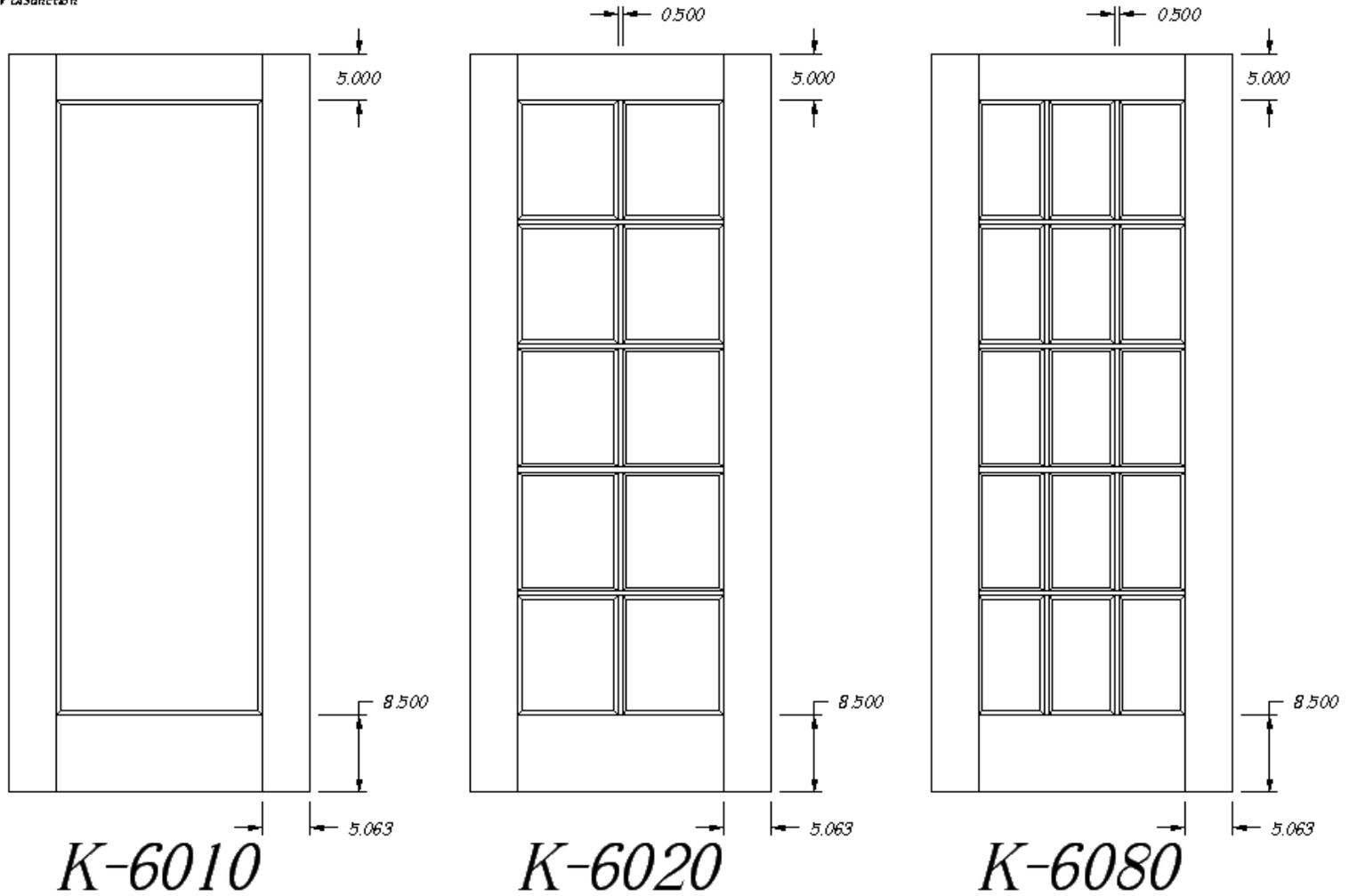
FACTORY REQUIRES CHEVRON OPENING TO END WITH A WHOLE NUMBER.
(NONVENTING CHEVRON LOUVERS)





Doors of Distinction

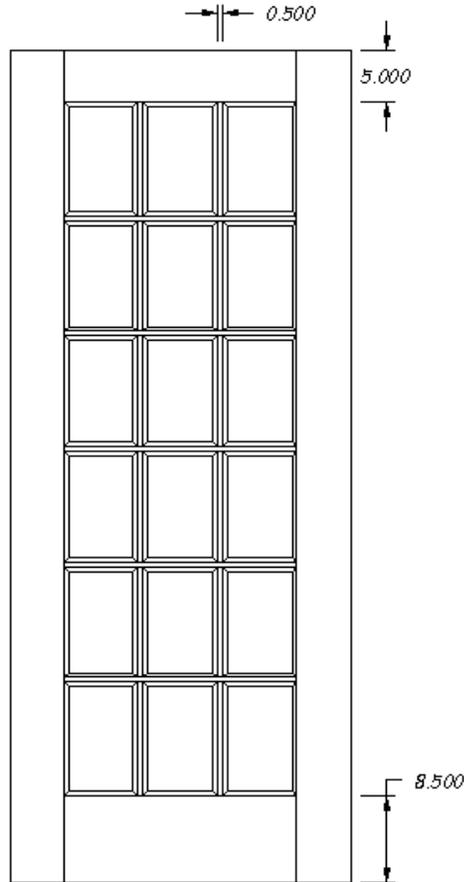
AVAILABLE IN CLEAR TEMPERED, BEVELED, V-GROOVE,
WHITE HUE OPAQUE AND INSULATED.



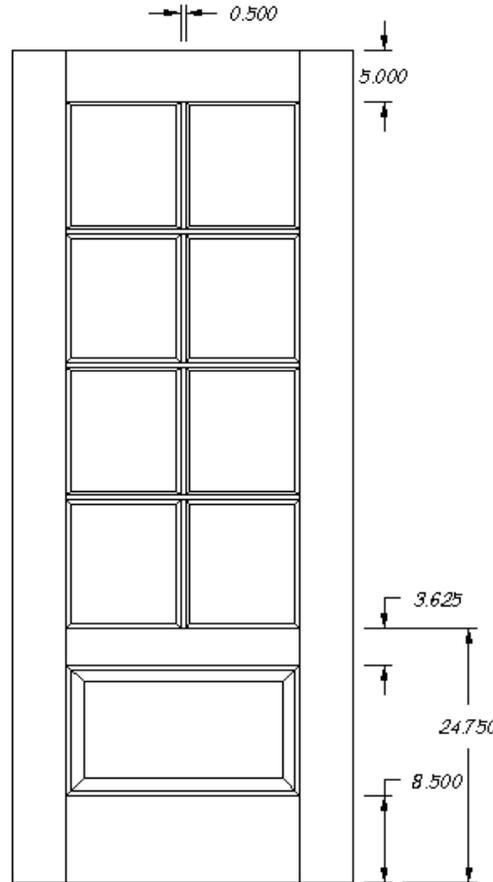


Doors of Distinction

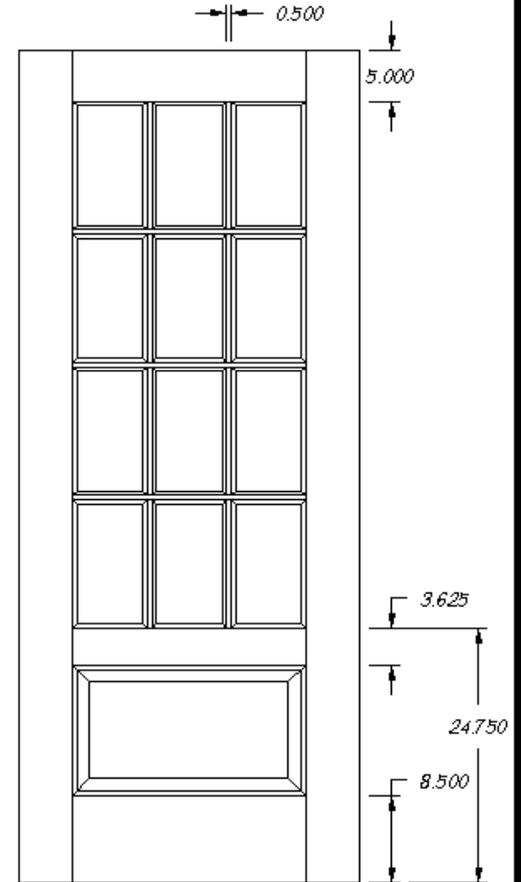
AVAILABLE IN CLEAR TEMPERED, BEVELED, V-GROOVE,
WHITE HUE OPAQUE AND INSULATED.



K-3600



K-3580

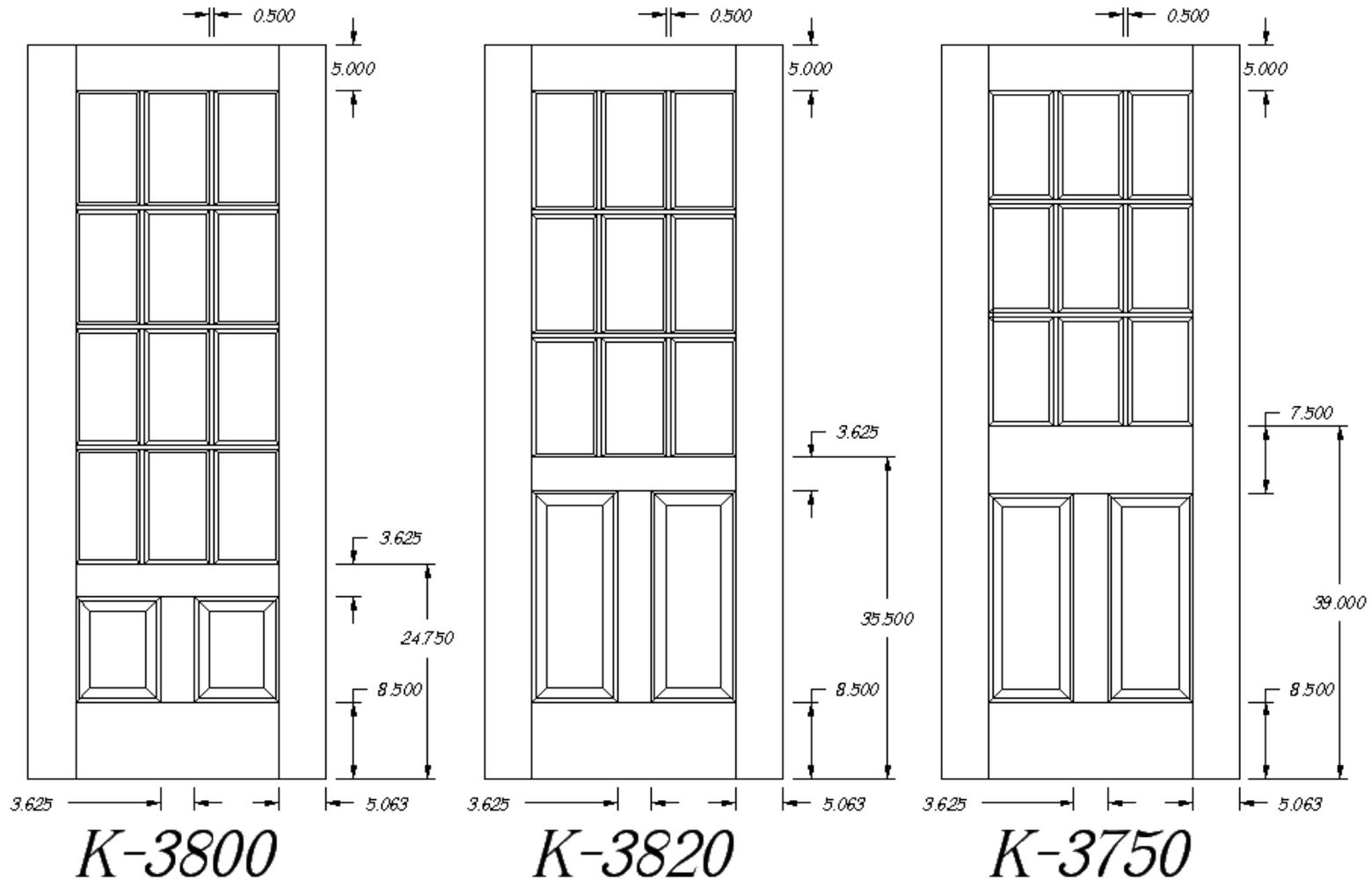


K-3700



Doors of Distinction

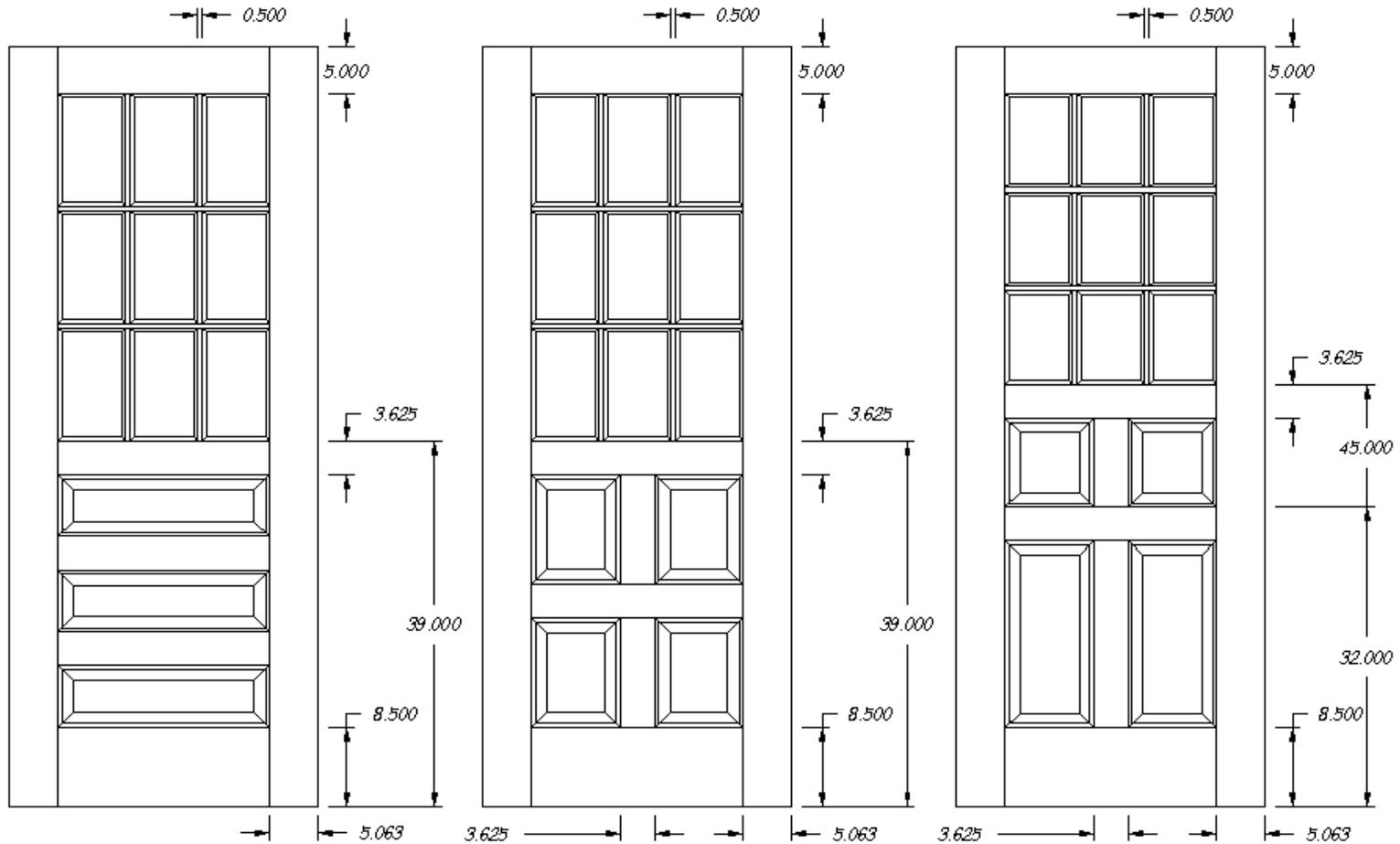
AVAILABLE IN CLEAR TEMPERED, BEVELED, V-GROOVE,
WHITE HUE OPAQUE AND INSULATED.





Doors of Distinction

AVAILABLE IN CLEAR TEMPERED, BEVELED, V-GROOVE,
WHITE HUE OPAQUE AND INSULATED.



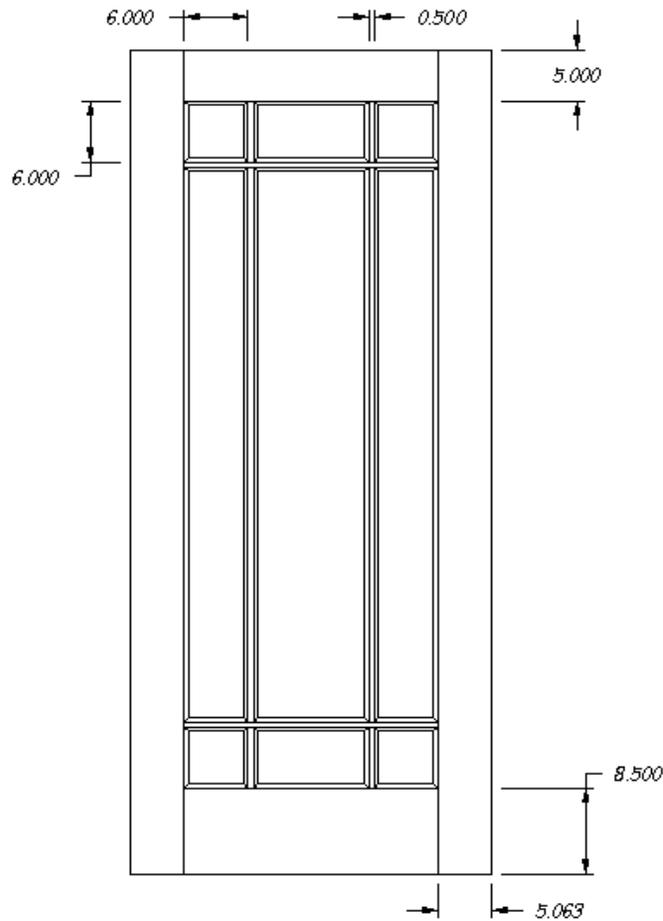
K-3830

K-3840

K-6510



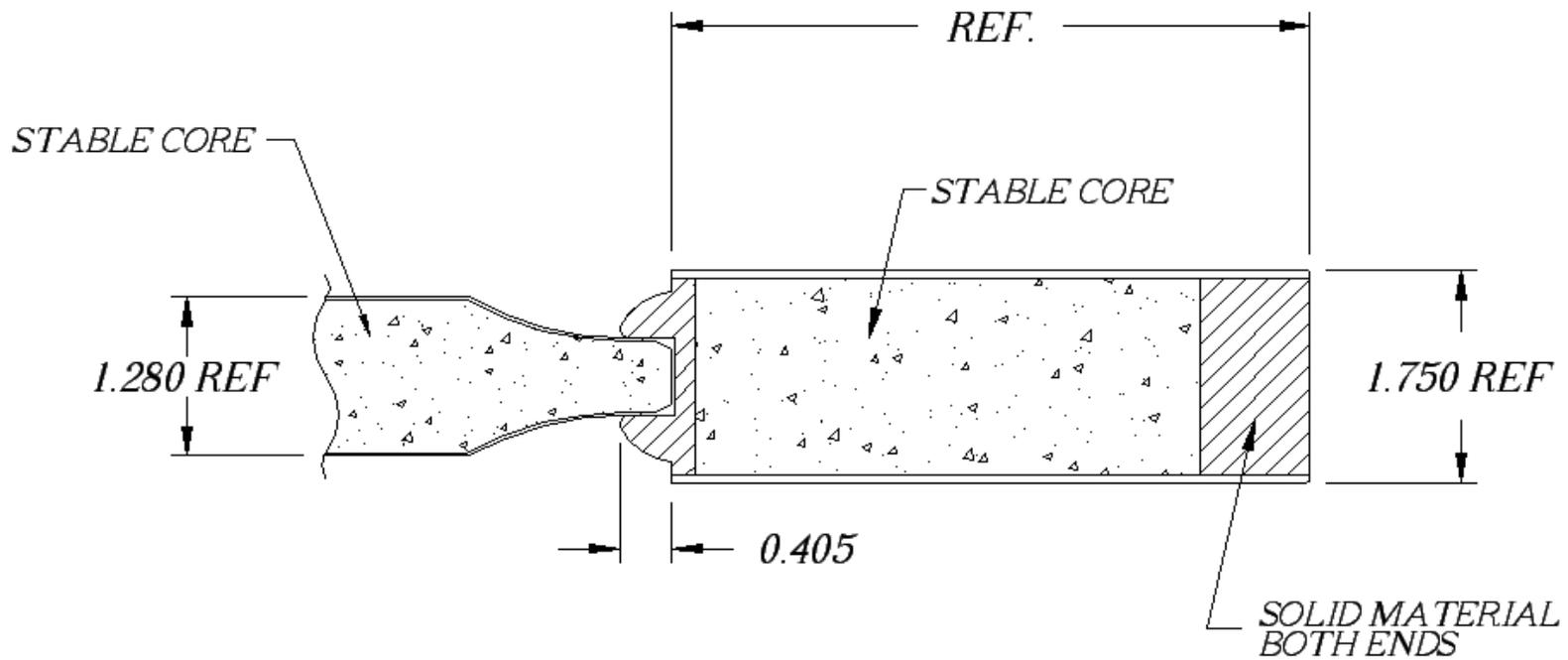
AVAILABLE IN CLEAR TEMPERED, BEVELED, V-GROOVE,
WHITE HUE OPAQUE AND INSULATED.



K-6090

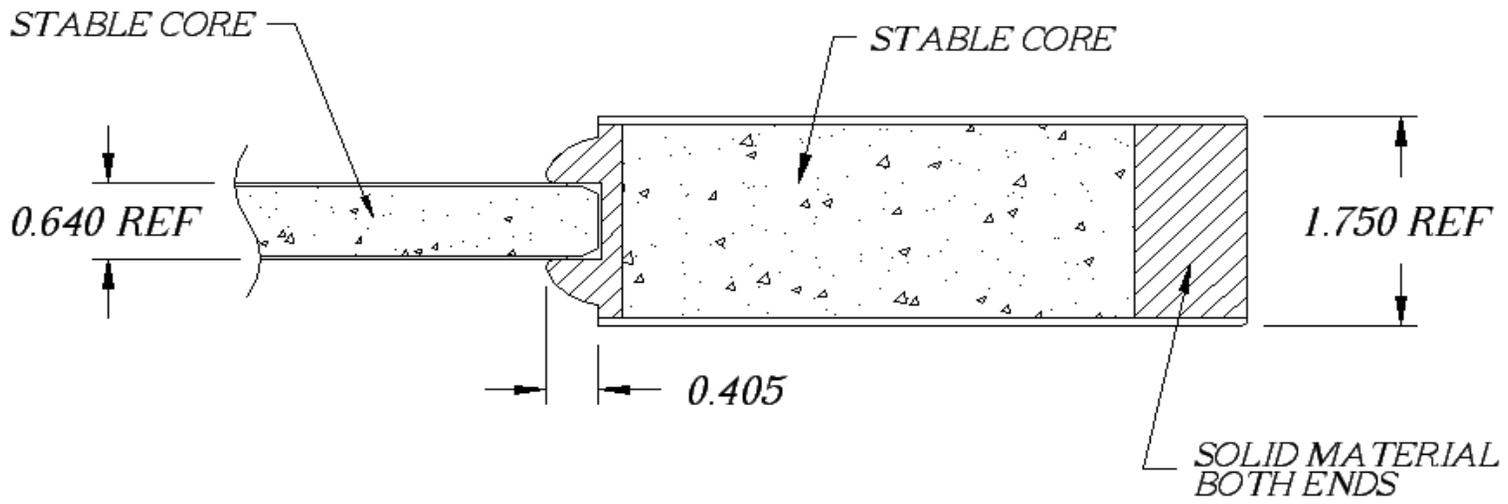


8/4 OVOLO STICKING - RAISED PANEL

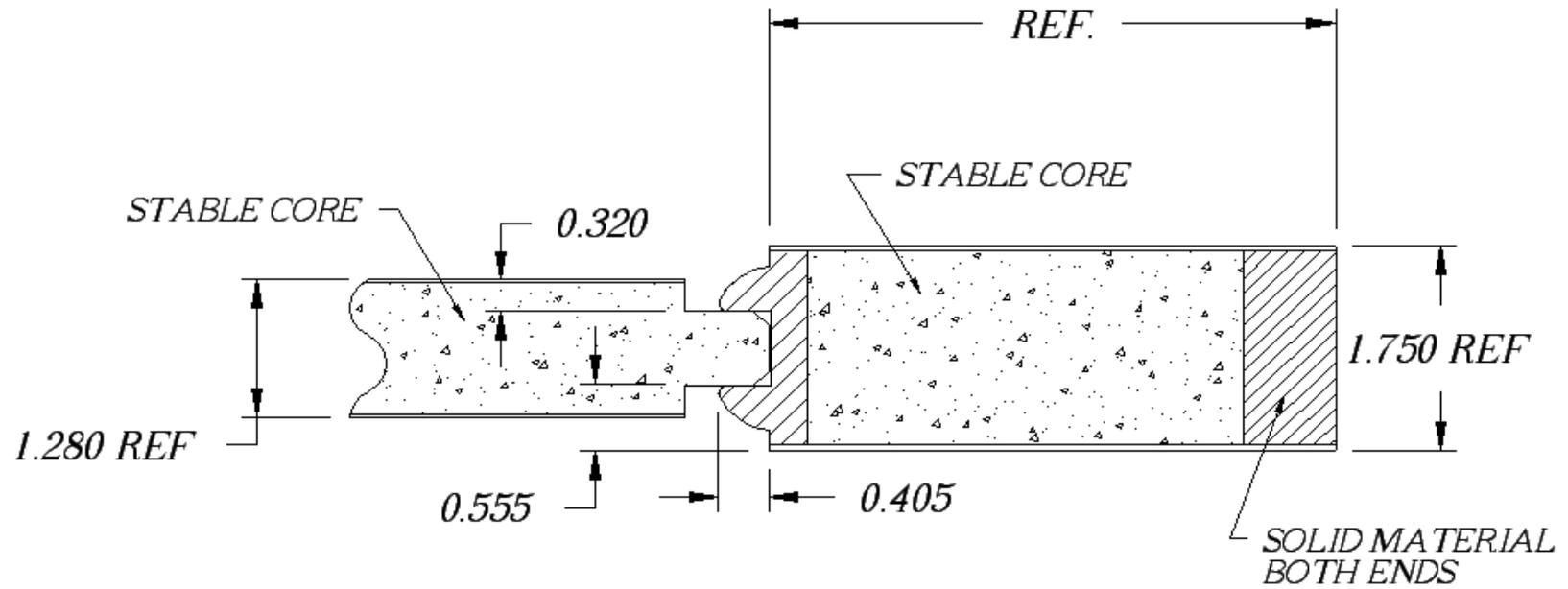




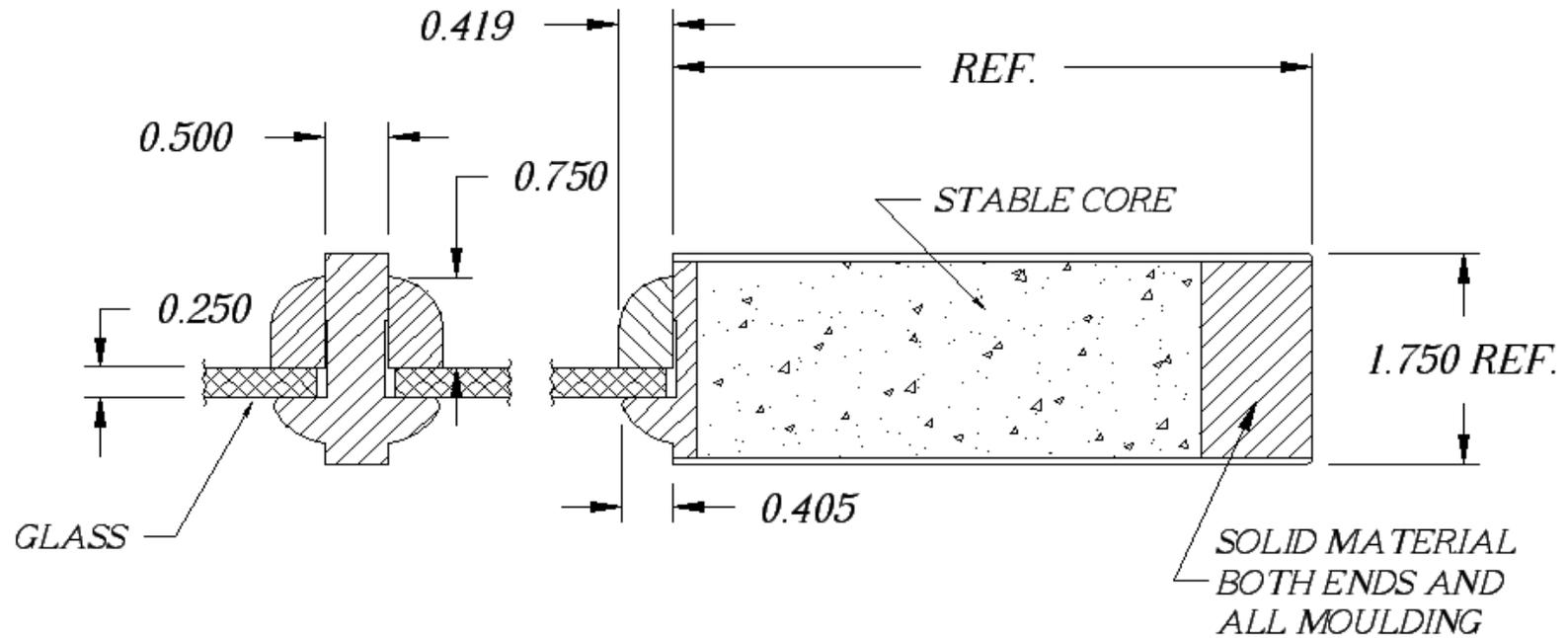
8/4 OVOLO STICKING - FLAT PANEL



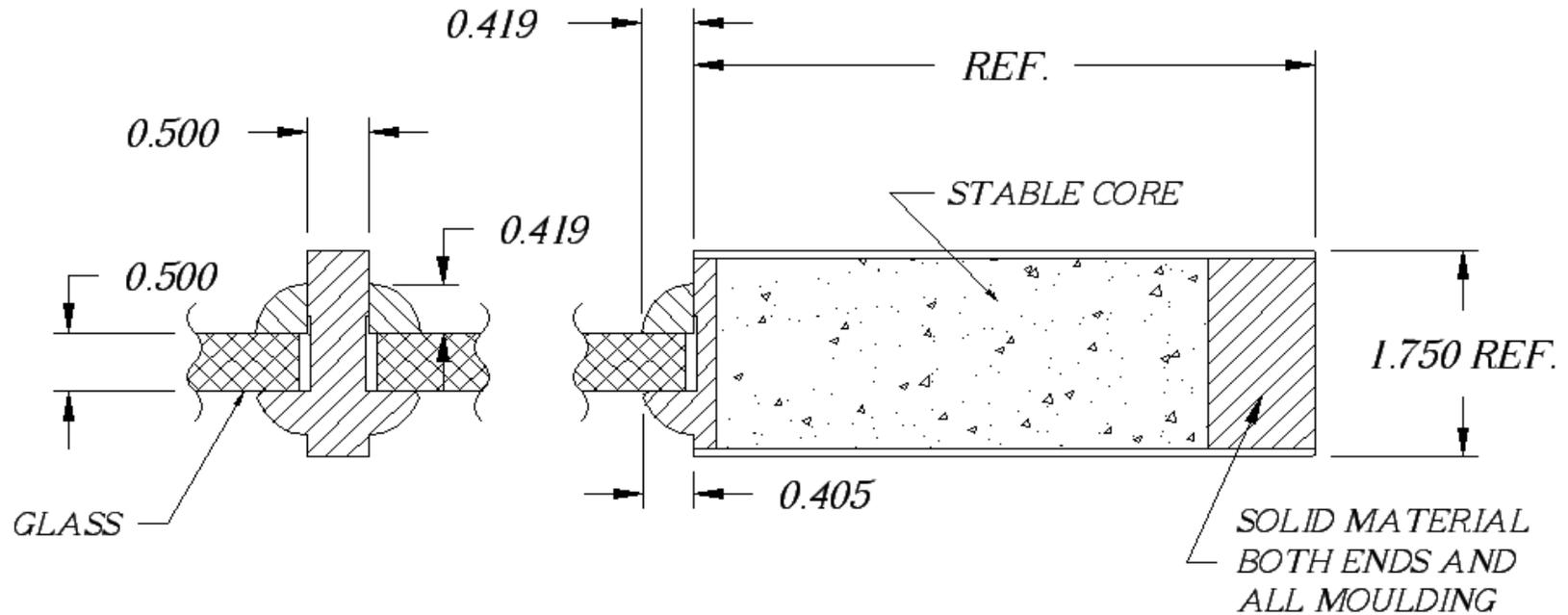
8/4 OVOLO STICKING - STEP PANEL



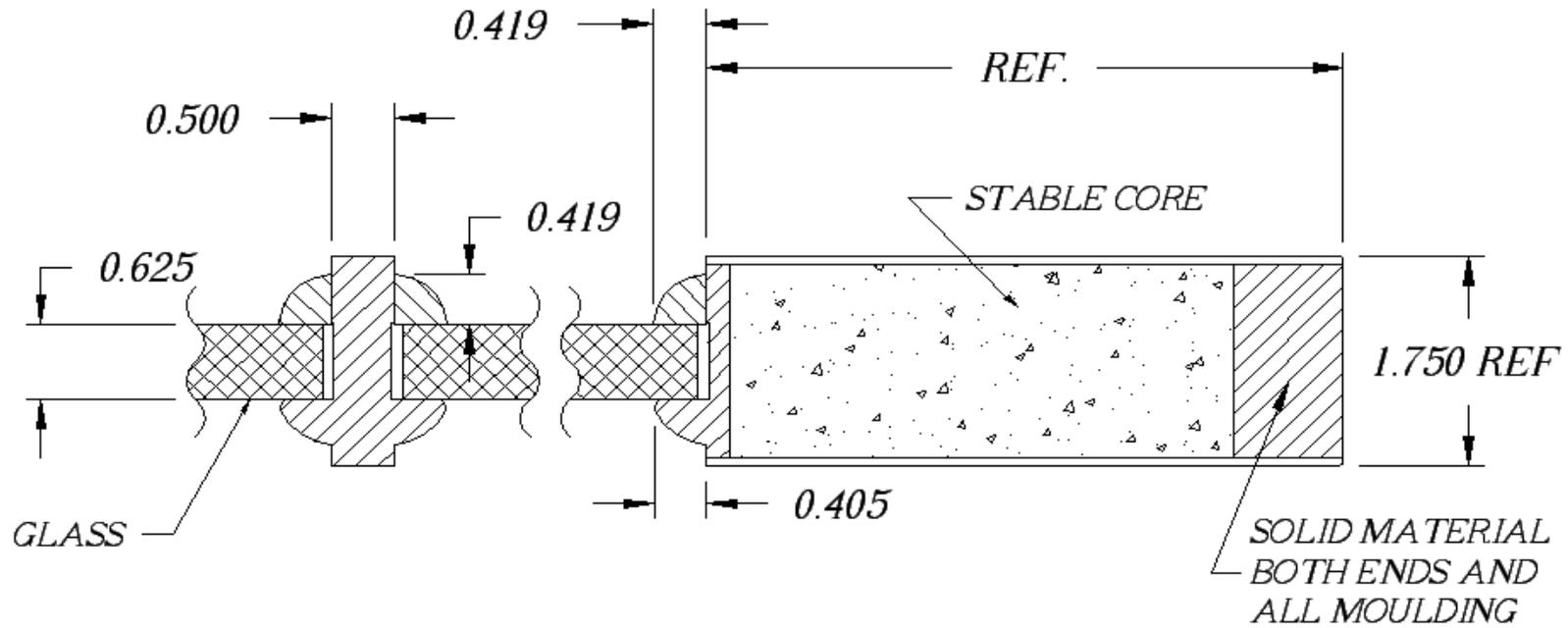
8/4 OVOLO STICKING - 1/4" GLASS



8/4 OVOLO STICKING - 1/2" GLASS

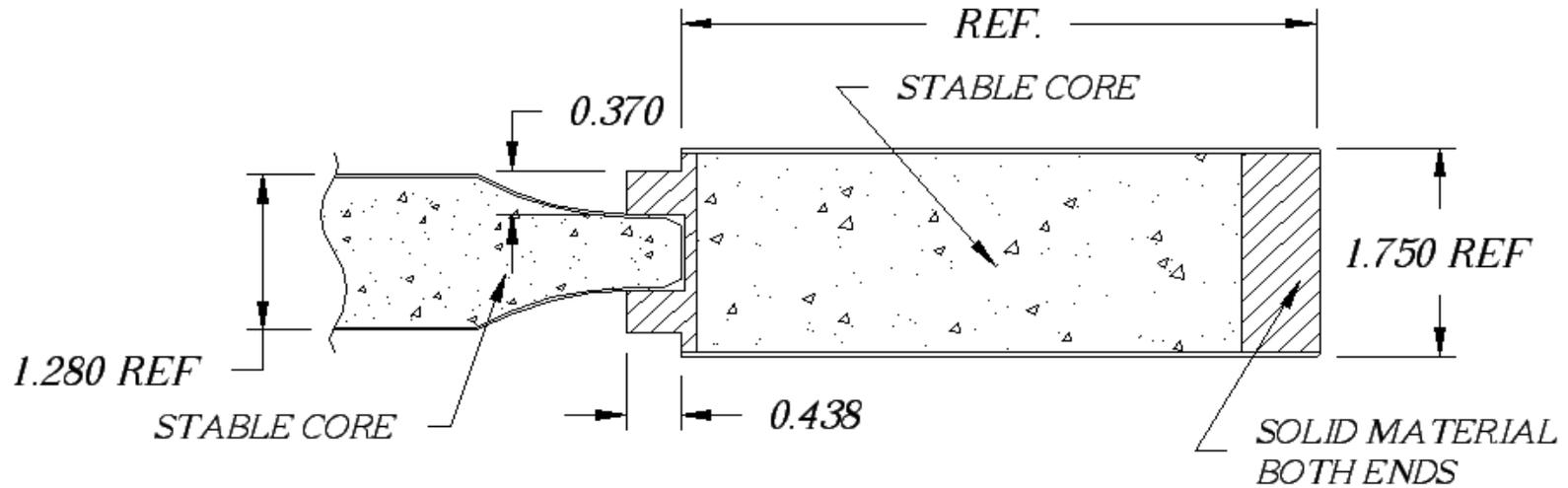


8/4 OVOLO STICKING - 5/8" GLASS

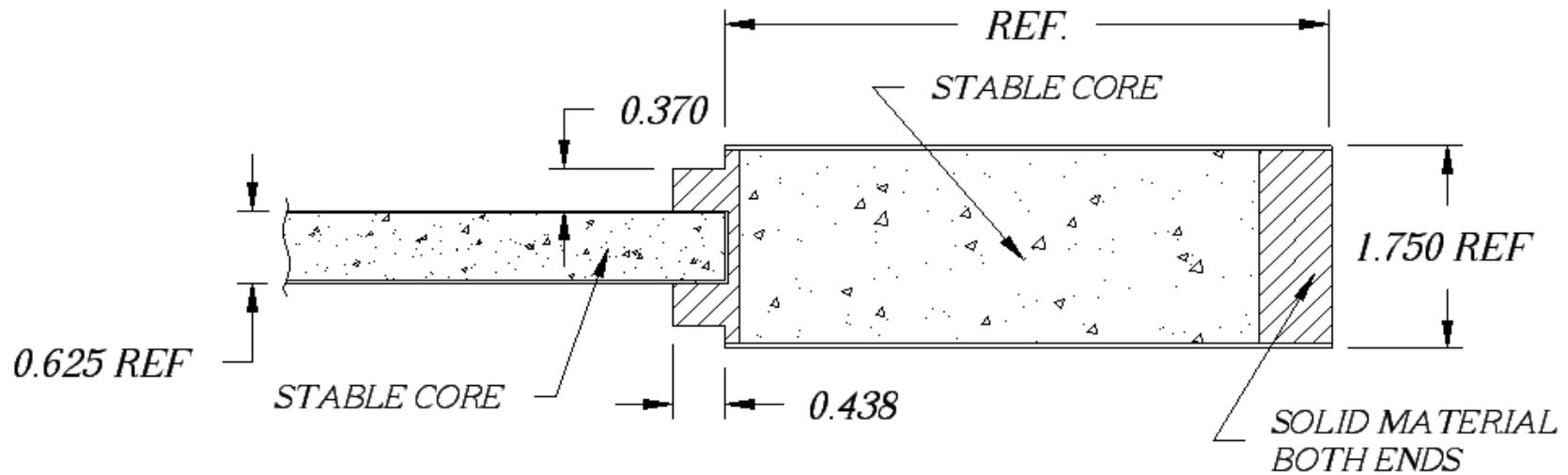




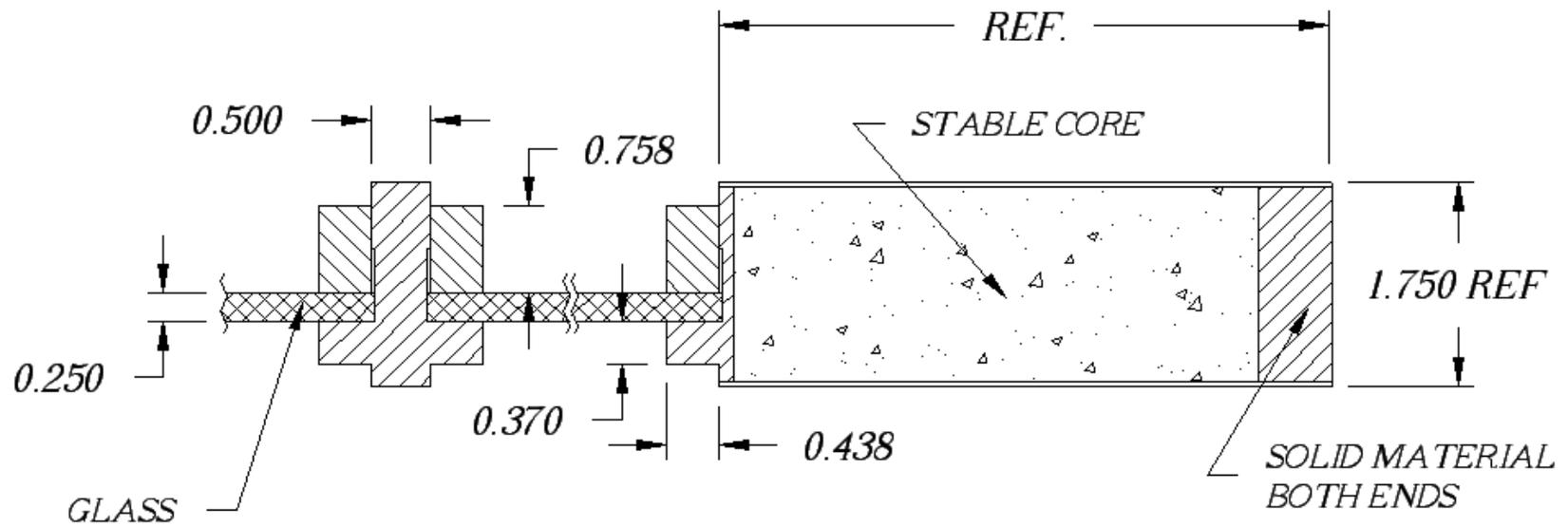
8/4 MISSION STICKING - RAISED PANEL



8/4 MISSION STICKING - FLAT PANEL

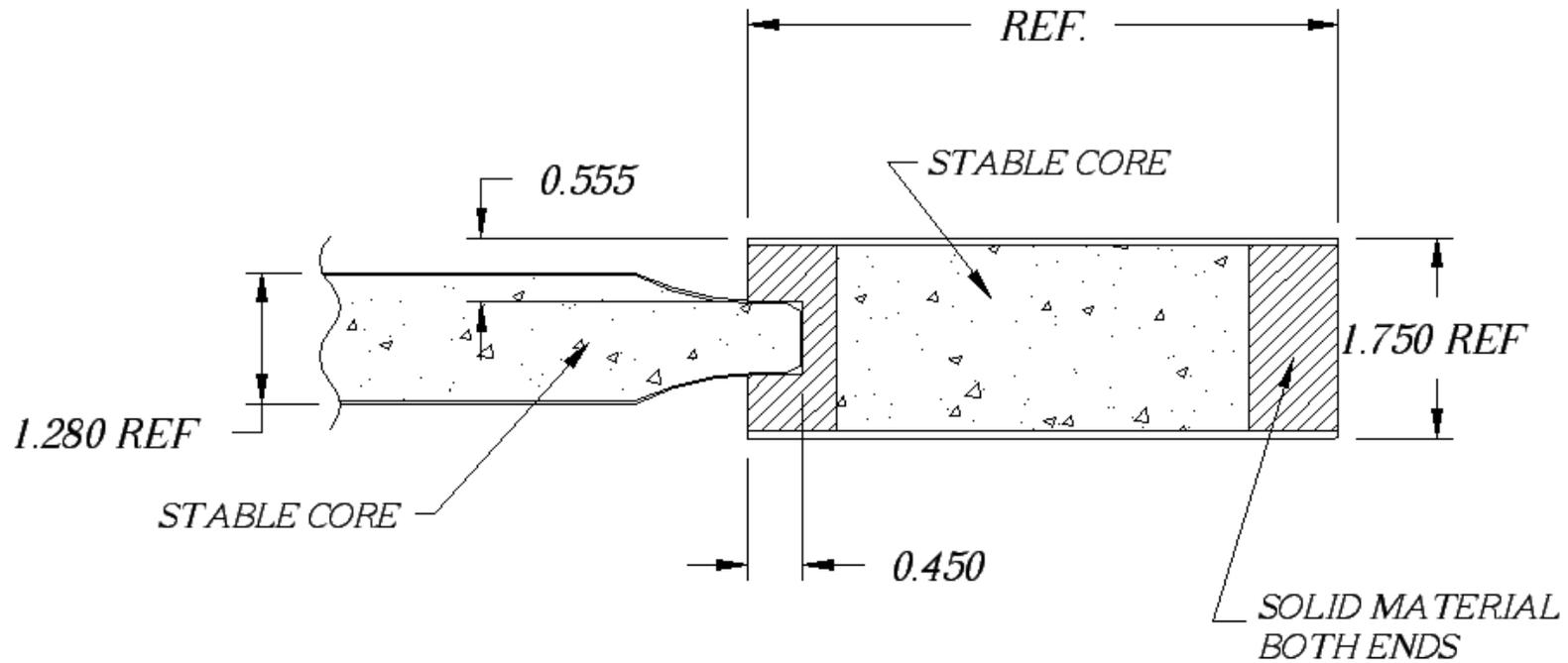


8/4 MISSION STICKING - 1/4" GLASS



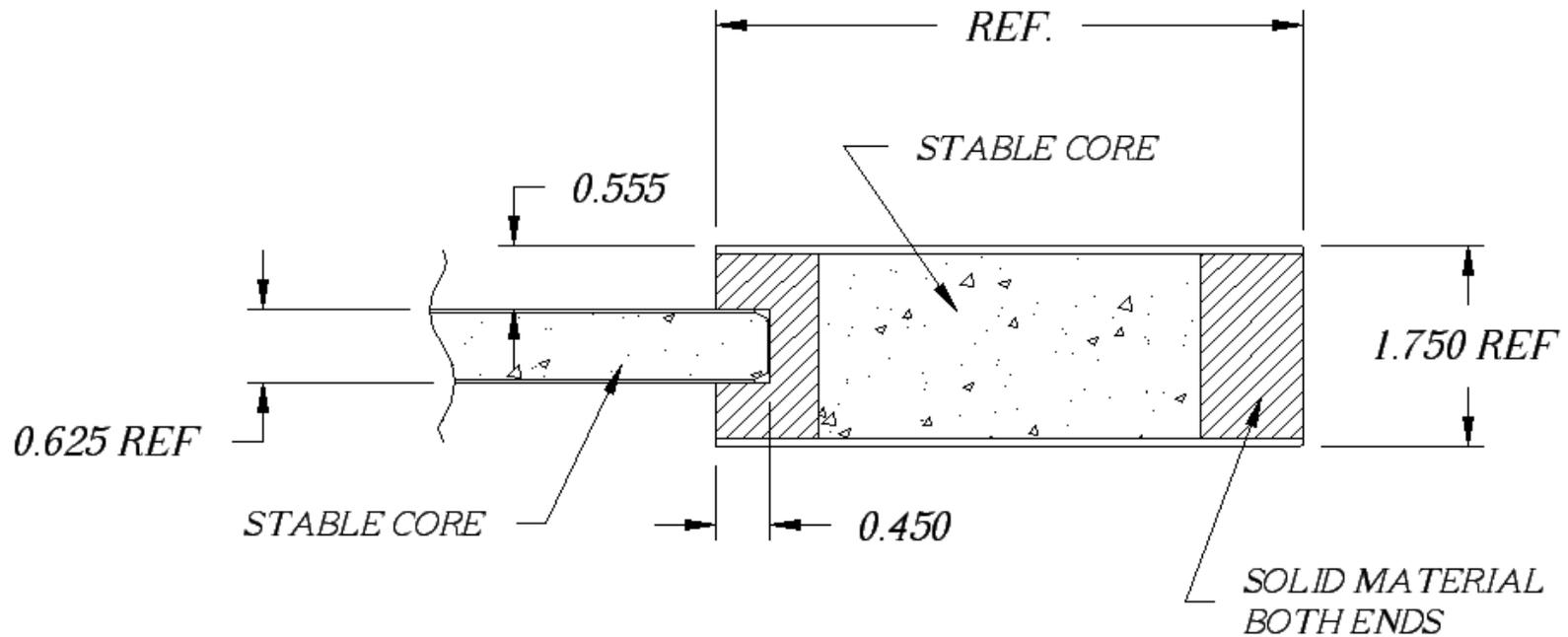


8/4 SQUARE STICKING - RAISED PANEL



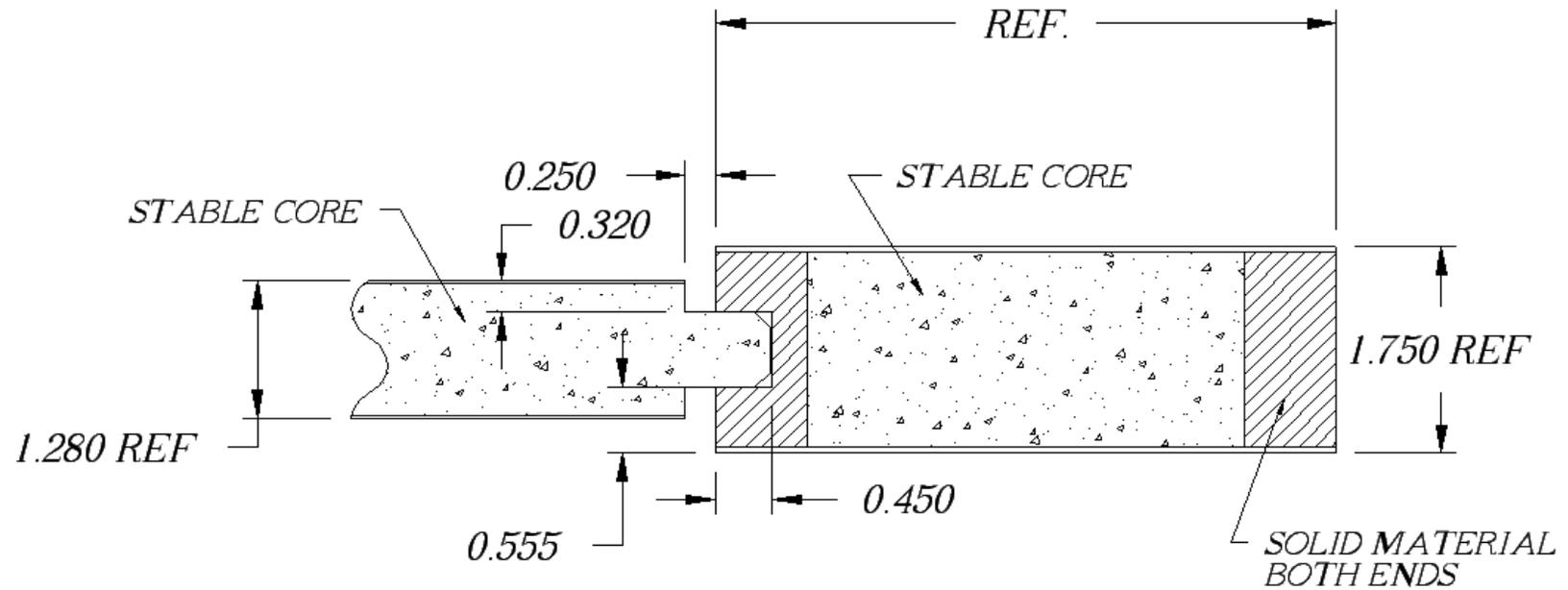


8/4 SQUARE STICKING - FLAT PANEL

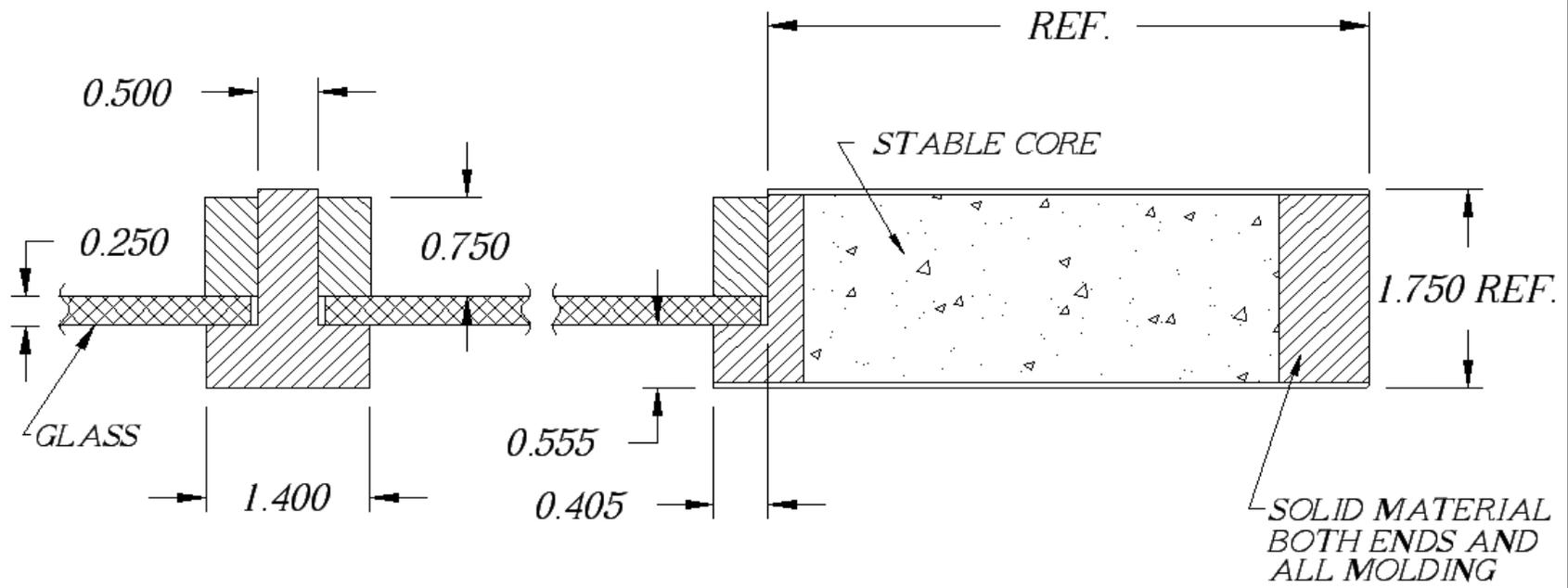




8/4 SQUARE STICKING - STEP PANEL

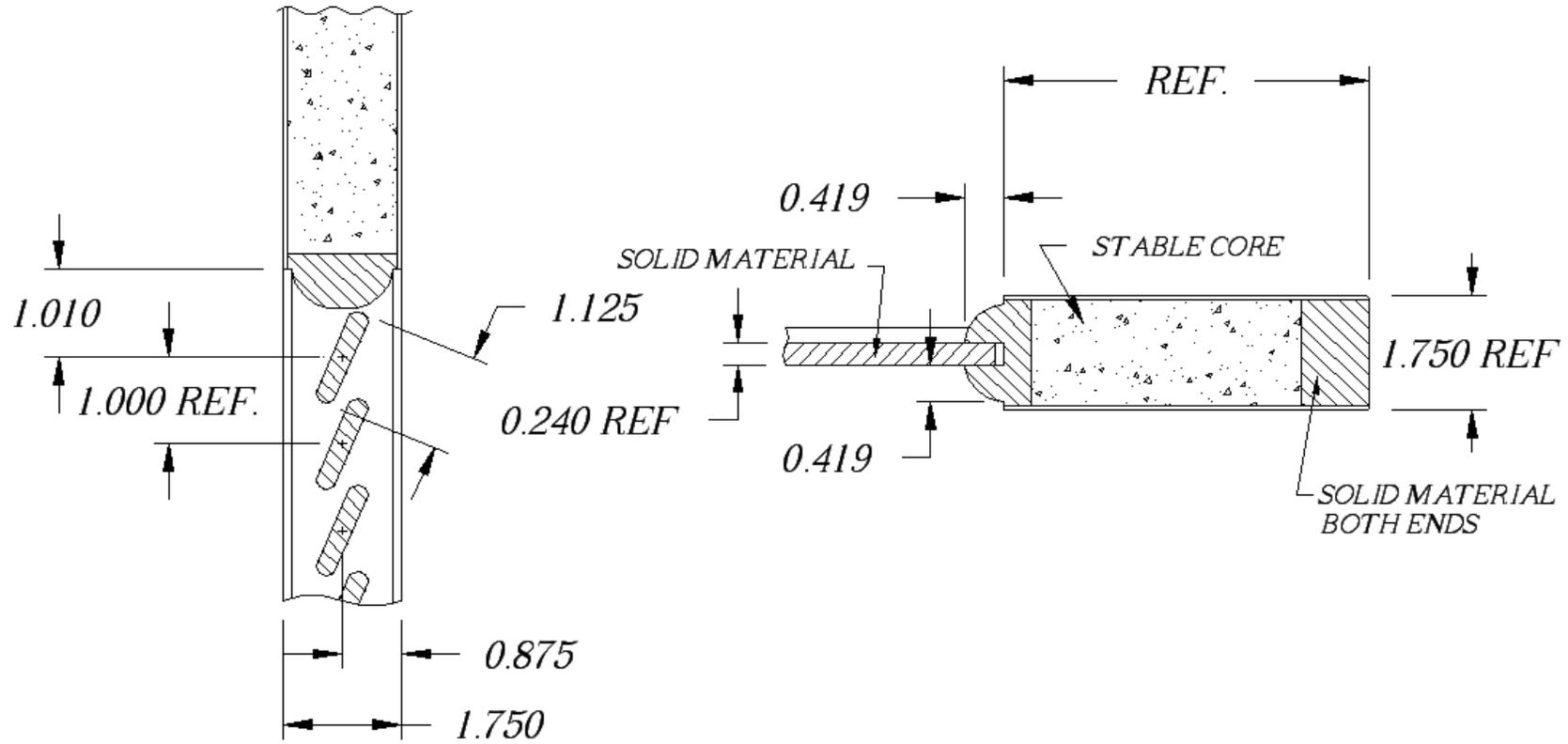


8/4 SQUARE STICKING - 1/4" GLASS



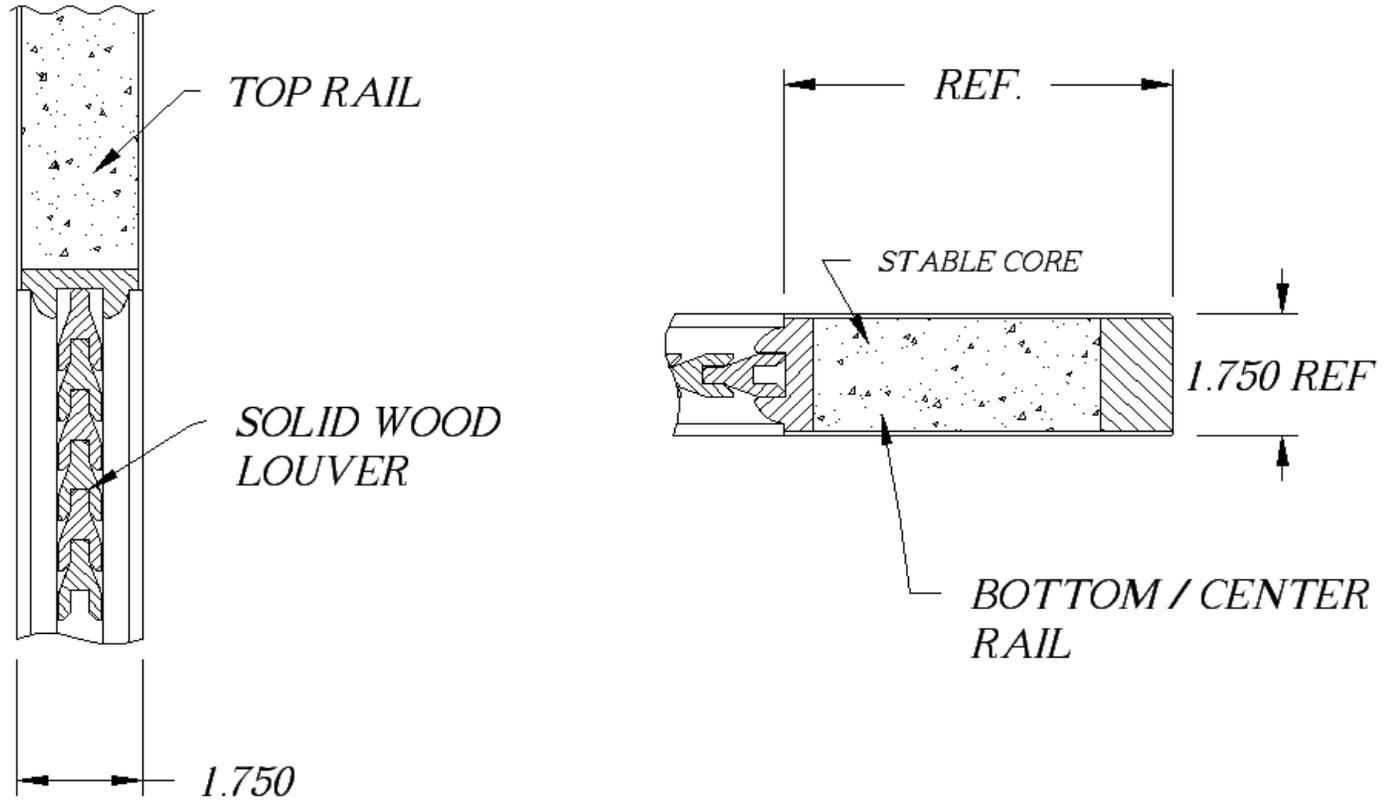


8/4 OVOLO STICKING - LOUVERS



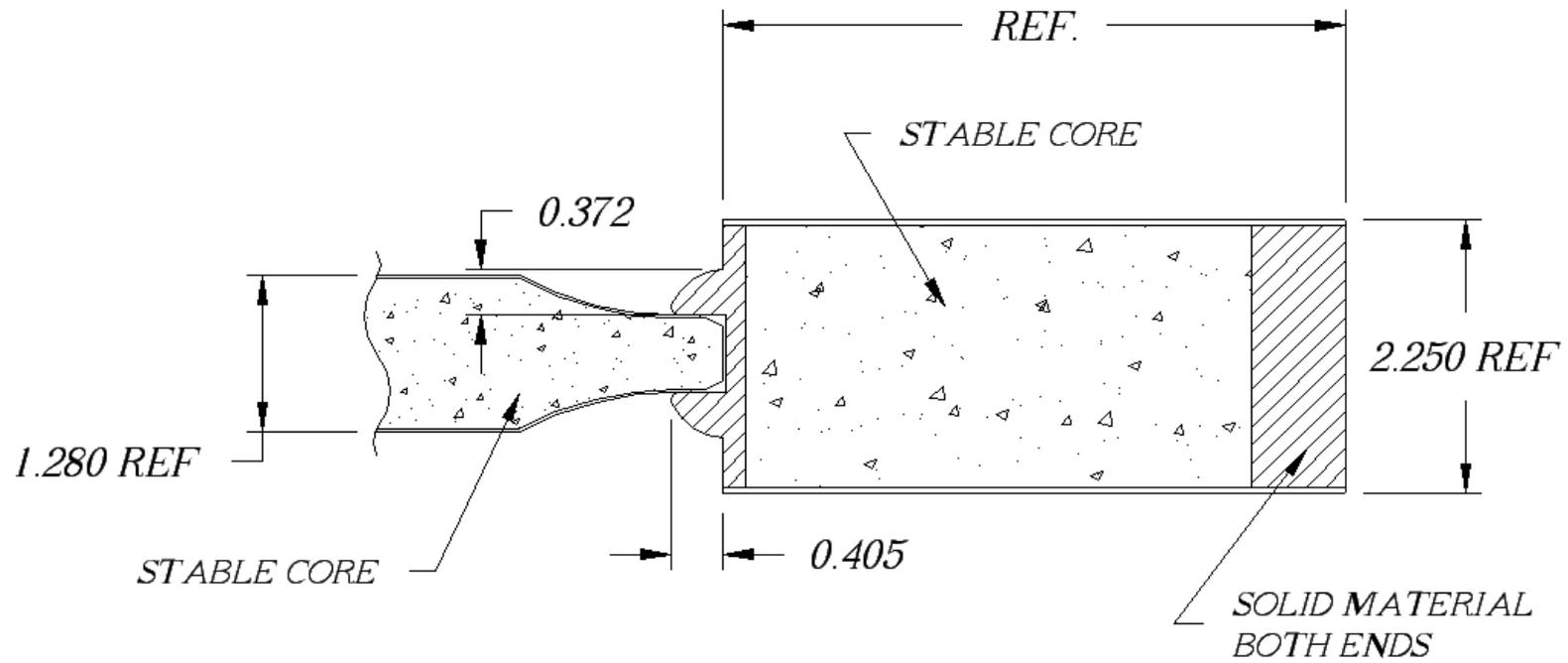


8/4 OVOLO STICKING - CHEVRON LOUVERS (NONVENTING)

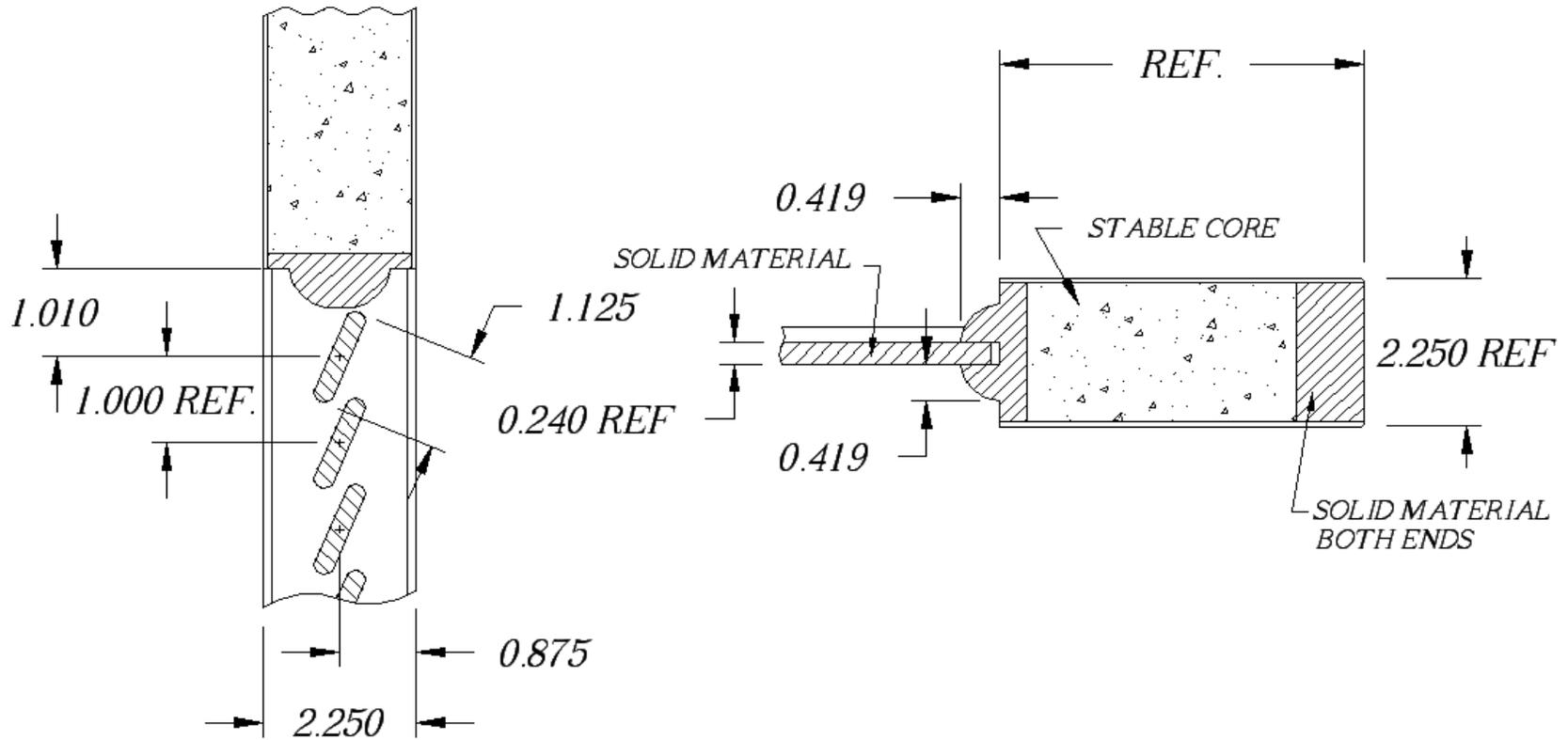




10/4 OVOLO STICKING - RAISED PANEL

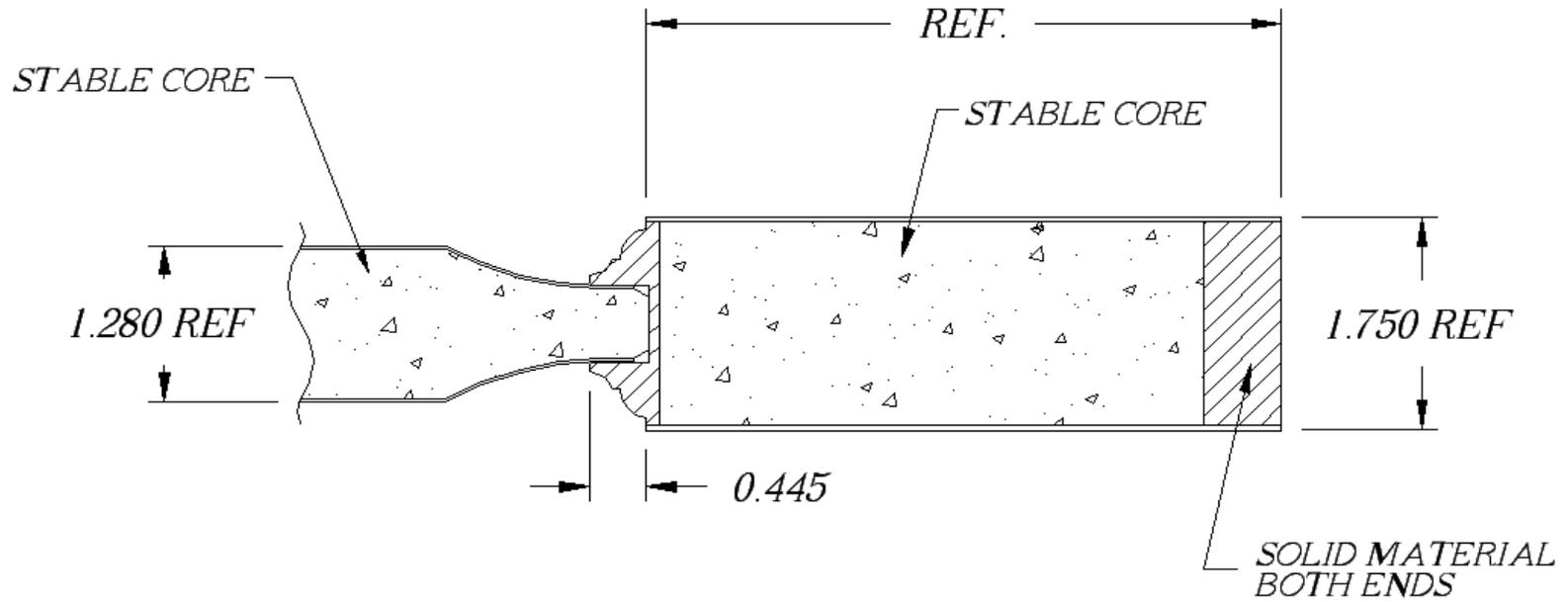


10/4 OVOLO STICKING - LOUVERS

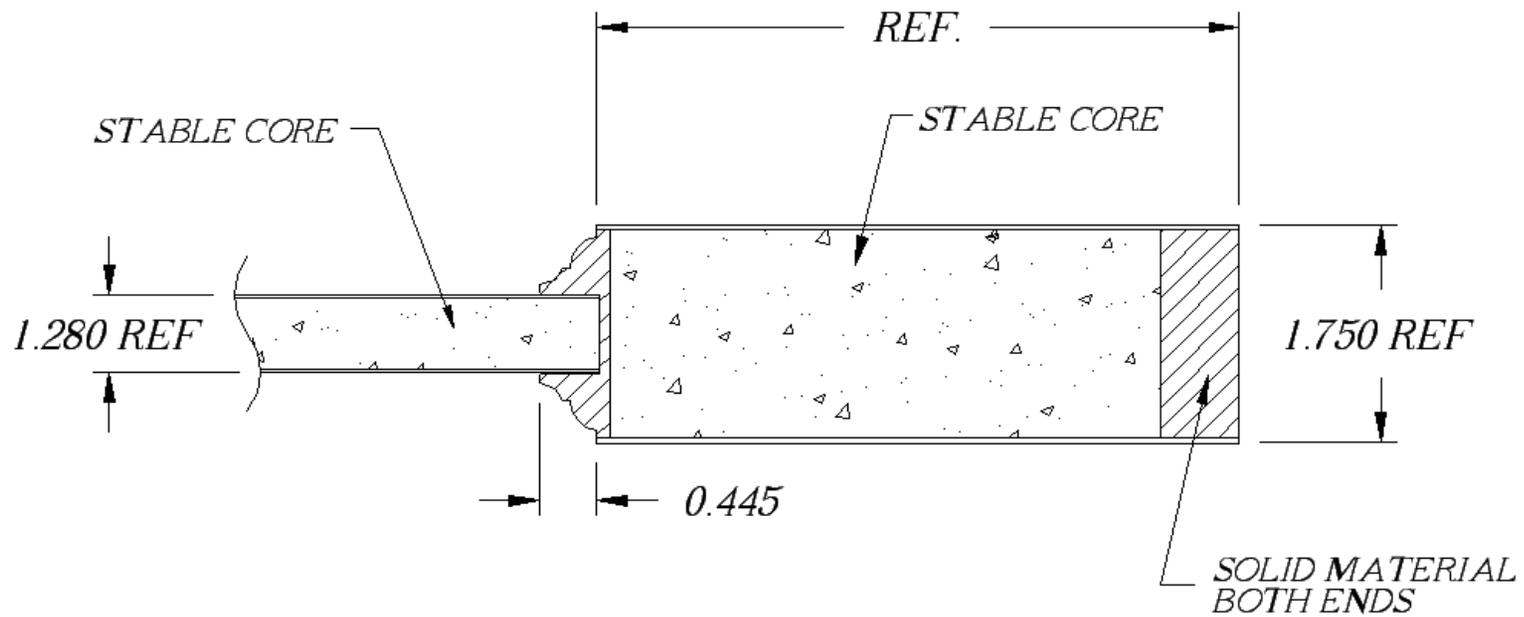




8/4 CLASSIC STICKING - RAISED PANEL

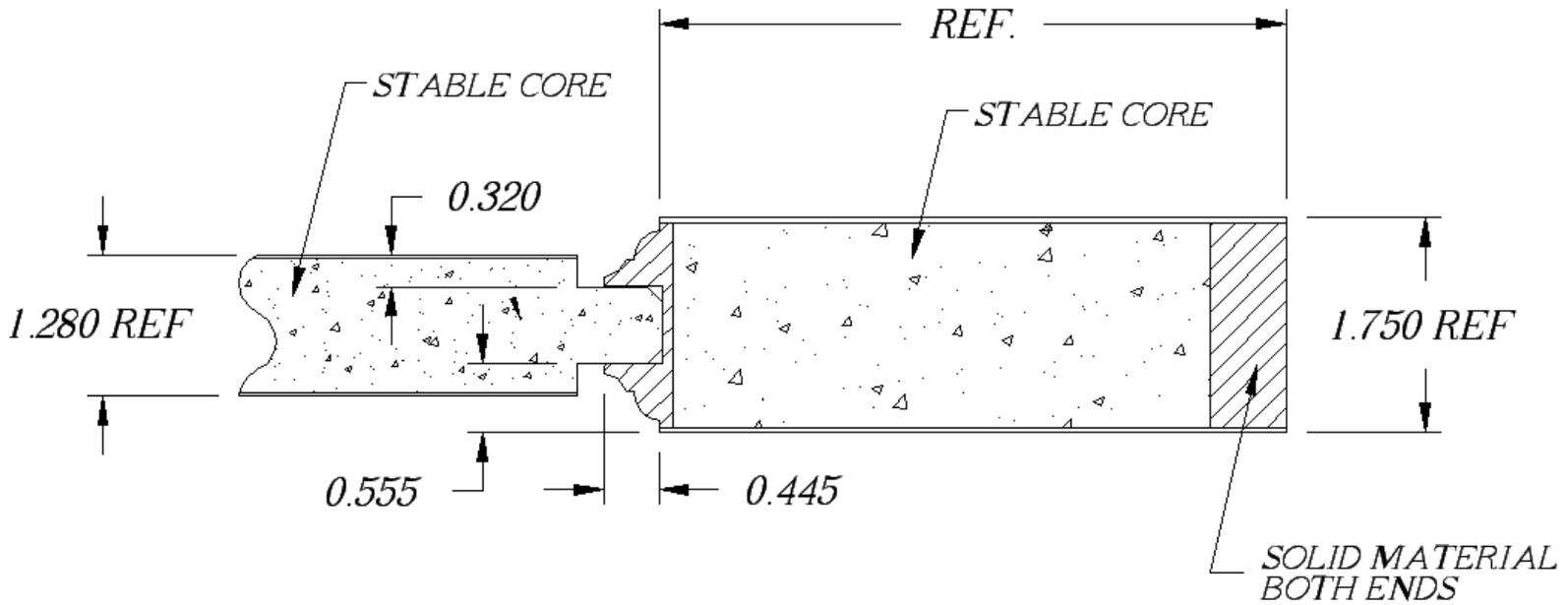


8/4 CLASSIC STICKING - FLAT PANEL

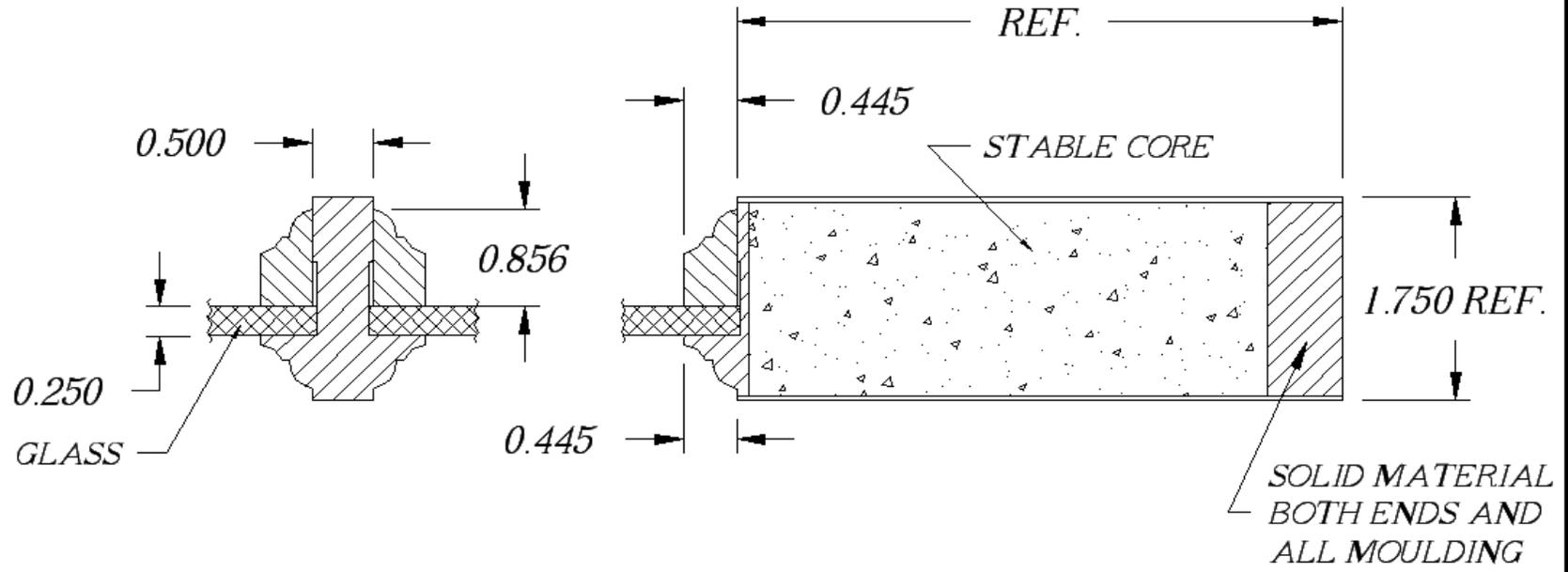




8/4 CLASSIC STICKING - STEP PANEL

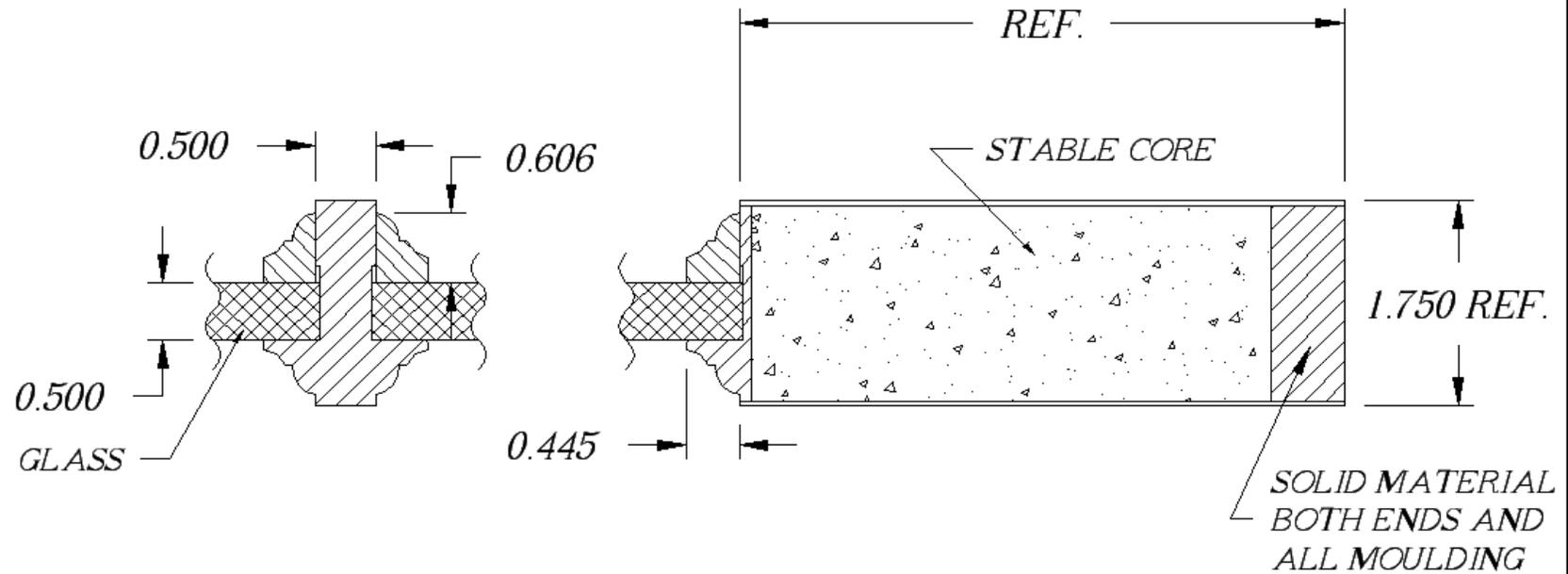


8/4 CLASSIC STICKING - 1/4" GLASS



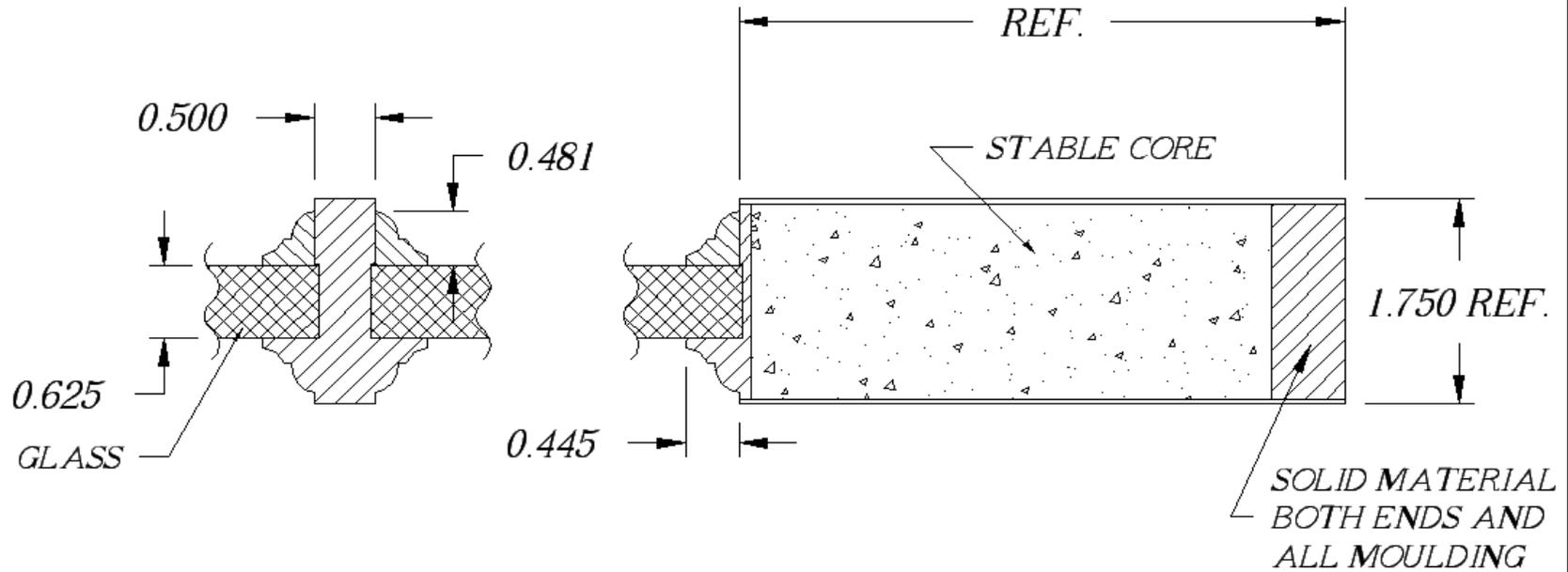


8/4 CLASSIC STICKING - 1/2" GLASS

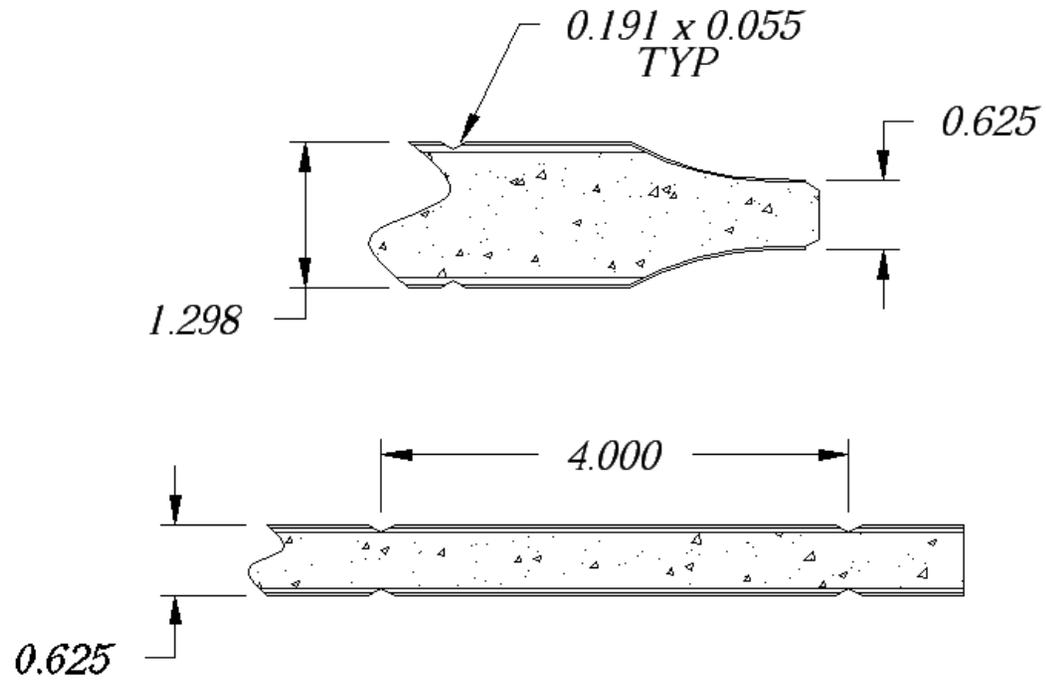




8/4 CLASSIC STICKING - 5/8" GLASS



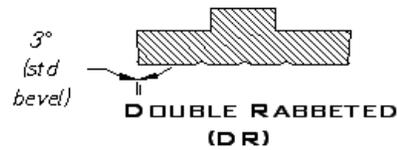
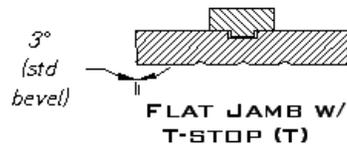
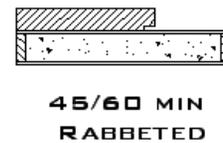
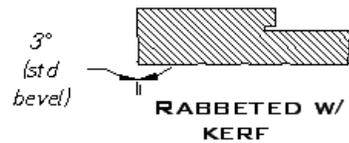
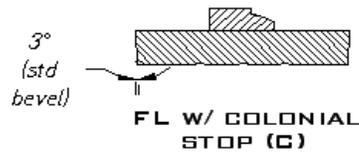
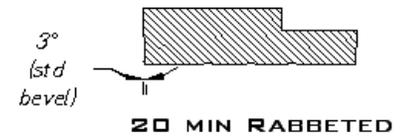
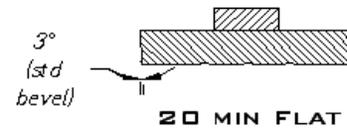
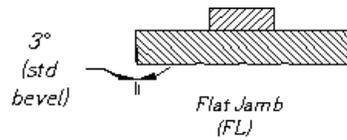
8/4 - V-GROOVE PANELS





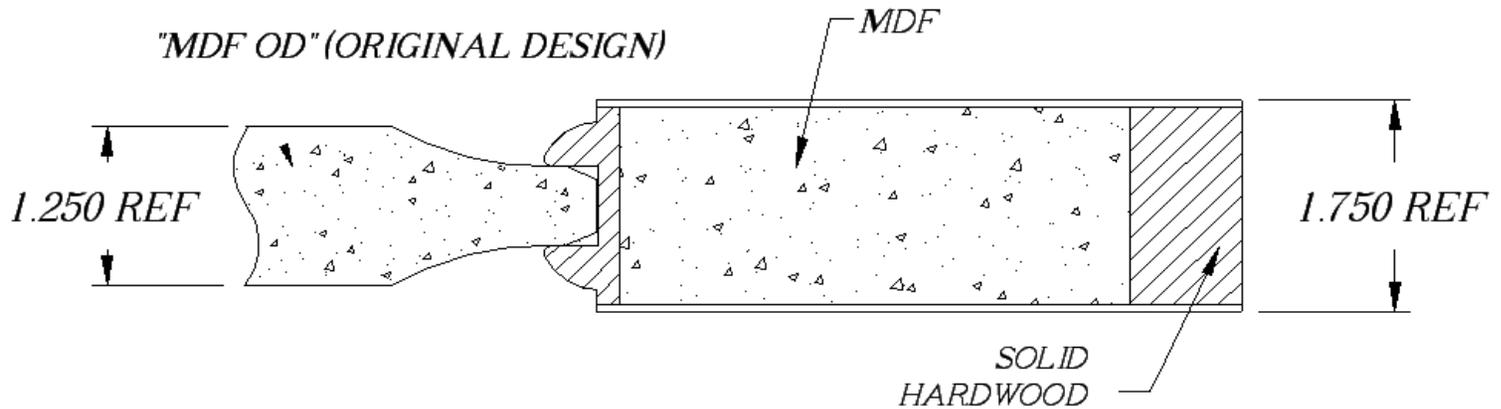
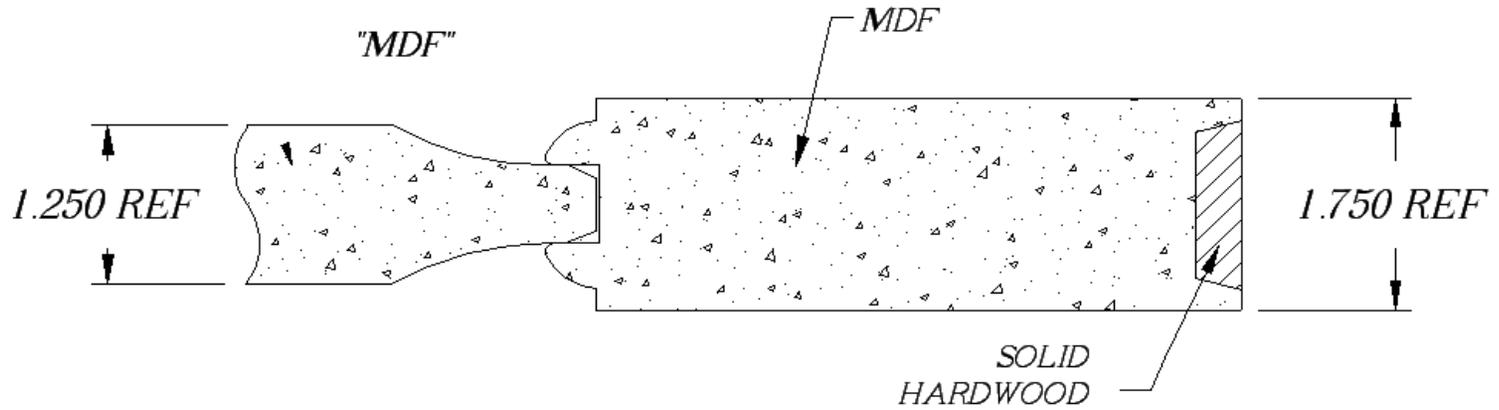
Doors of Distinction

JAMB OPTIONS





8/4 OVOLO STICKING - RAISED PANEL MDF CONSTRUCTION OPTIONS



SECTION 08 1433
STILE AND RAIL WOOD DOORS

NOTE: THIS SECTION USES THE TERM "ARCHITECT." CHANGE THIS TERM TO IDENTIFY THE DESIGN PROFESSIONAL AS DEFINED IN THE AGREEMENT OR GENERAL CONDITIONS OF THE CONTRACT.

PART 1 GENERAL

1.01 SECTION INCLUDES

Edit below to only include applicable work results for this Section.

- A. Interior wood doors, stile and rail design.
- B. Matching wood panels.
- C. Wood door frames.
- D. [Factory] [Shop] finishing.

1.02 RELATED REQUIREMENTS

Inclusion of this Article and listings below is optional; edit listings to include only Sections that are cited in the text of this Section. Verify that these Section numbers and titles are consistent with Sections actually included in the Project specifications.

- A. Section 06 2000 - Finish Carpentry: Wood door frames.
- B. Section 08 1213 - Hollow Metal Frames.
- C. Section 08 1416 - Flush Wood Doors.
- D. Section 08 7100 - Door Hardware.
- E. Section 08 8000 - Glazing.
- F. Section 09 9123 - Interior Painting: Field finishing doors.

1.03 REFERENCE STANDARDS

Inclusion of this Article and listings below is optional; edit listings to include only reference standards that are cited in the text of this Section.

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
- B. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass.
- C. ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass.
- D. ICC (IBC) - International Building Code.
- E. ITS (DIR) - Directory of Listed Products.
- F. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; National Fire Protection Association.
- G. NFPA 105 - Standard for Smoke Door Assemblies and Other Opening Protectives.
- H. UL (DIR) - Online Certifications Directory.
- I. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies.
- J. UL 1784 - Standard for Air Leakage Tests of Door Assemblies and Other Opening Protectives.
- K. WDMA I.S.6A - Interior Architectural Wood Stile and Rail Doors; Window & Door Manufacturers Association; 2013. (ANSI/WDMA I.S.6A)

1.04 ADMINISTRATIVE REQUIREMENTS

Edit below to suit applicable requirements for this Section.

- A. Coordination:
 - 1. Coordinate the work with door opening construction.
 - 2. Coordinate with [door frame and] door hardware installation.
 - 3. Coordinate installation of glazing.

1.05 SUBMITTALS

Edit below to suit applicable requirements for this Section.

- A. Product Data: Indicate stile and rail core materials and construction[; veneer species, type and characteristics].
- B. Shop Drawings: Illustrate applicable door opening criteria, elevations, sizes, types, swings, undercuts required, special beveling, special blocking for hardware, factory machining criteria, factory finishing criteria[, and cutouts for glazing and other openings].
- C. Samples: Submit two samples of door construction, minimum 12 by 12 inch in size, cut from typical top corner of door.
- D. Samples: Submit two samples of door veneer, minimum 12 by 12 inch in size, illustrating wood grain, stain color, and sheen.
- E. Manufacturer's Installation Instructions: Indicate special installation instructions.
- F. Warranty; executed in Owner's name.

1.06 [LEED] [SUSTAINABLE DESIGN] SUBMITTALS

Retain this article for LEED or other sustainable design projects; edit to suit project requirements.

- A. Comply with applicable product requirements and volatile organic compound (VOC) content restrictions specified in Division 01.
- B. Report: Submit data for wood products made from sustainably harvested wood and regionally-sourced wood. Include statement indicating costs for each different wood material made of sustainably harvested wood[and regionally-sourced wood].
 - 1. Provide documentation for composite wood products indicating that bonding agents and adhesives used contain no added urea formaldehyde resins.
 - 2. Provide documentation of VOC content of all interior adhesives actually used.

1.07 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this Section with minimum 5 years of documented experience.
 - 1. Accredited participant in the specified certification program prior to commencement of fabrication and throughout duration of the project.
- B. Quality Certification: Comply with WDMA I.S.6A quality certification requirements for completed work.
 - 1. Provide labels or certificates indicating that the work complies with specified requirements.
 - 2. Provide labels on each product when required by certification program.
 - 3. Upon completion of installation provide certificate certifying that installations and products meet specified requirements.
 - 4. Replace, repair, or rework all work for which certification is refused.

1.08 REGULATORY REQUIREMENTS

Retain this article if applicable; edit to suit project requirements.

- A. Conform to applicable Building Code for fire rated assemblies.
 - 1. Fire rated assembly construction to conform to UL 10C, unless otherwise required by applicable Building Code.
 - 2. Installed Frame and Door Assemblies: Comply with NFPA 80 for fire rated class indicated.
 - 3. Installed Smoke Control Frame and Door Assemblies: Comply with NFPA 105.

1.09 DELIVERY, STORAGE, AND HANDLING

- A. Package, deliver, and store doors in accordance with WDMA quality standard specified.
- B. Do not deliver or install doors until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during remainder of construction period.
- C. Prior to installation, protect doors with resilient packaging. Do not store in damp or wet areas; or in areas where sunlight might adversely affect door finish. Seal top and bottom edges if stored more than one week. Break seal on packaging on the site to permit ventilation.

1.10 WARRANTY

Edit below to suit applicable requirements for this Section. 5 year warranty is standard. Life of installation warranty requires extra cost.

- A. Interior Doors: Provide manufacturer's warranty for [5 years] [the life of the installation] from Date of Substantial Completion.
- B. Warranty: Manufacturer's standard form, signed by manufacturer, installer, and Contractor, in which manufacturer agrees to repair or replace doors that are defective in materials or workmanship, and which have warped (bow, cup or twist) more than 1/4 inch (6.4mm) over any 42 by 84 inch (1067 by 2134 mm) section of door face.
 - 1. Include coverage for delamination of veneer and telegraphing core construction.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Basis of Design Manufacturer:
 - 1. Karona by Jeld-Wen: www.karonadoor.com.
 - a. Door Style: [Custom as indicated] [*Specify Karona's door model number (ie., K3030 - 3 Raised Panels)*].
 - 2. Substitutions: See Division 01 for substitution procedures, if permitted.
- B. Other Acceptable Manufacturers:
 - 1. Karona, Inc.: www.karonadoor.com.
 - 2. Maiman Company: www.maiman.com.
 - 3. Marshfield DoorSystems, Inc.: www.marshfielddoors.com.
 - 4. Oshkosh Door Company: www.oshkoshdoor.com.
 - 5. Substitutions: See Division 01 for substitution procedures, if permitted.
- C. Obtain all doors from a single manufacturer to assure uniformity of appearance and construction.

2.02 WOOD-BASED DOOR COMPONENTS

Edit requirements below, which generally apply to projects pursuing LEED or other sustainable design certification.

- A. Provide all core, lumber, and veneer materials with chain of custody certification provided by the Forest Stewardship Council (FSC®).
- B. Provide all core and veneer materials that are defined as regionally sourced according to applicable sustainable design certification requirements.

- C. Wood doors fabricated from old growth timber are not permitted.
- D. Provide doors manufactured with composite wood materials and components using bonding agents that contain no added urea formaldehyde resins, and that otherwise comply with specified VOC content restrictions.

2.03 STILE AND RAIL DOORS

Edit below to suit applicable requirements for this Section.

- A. Quality Level: [Custom] [Premium] Grade, [Standard] [Heavy] [Extra Heavy] Duty performance, in accordance with WDMA I.S.6A.
- B. Interior Doors: [1-3/8 inches] [1-3/4 inches] thick unless otherwise indicated; [solid lumber] [veneer and lumber stile and rail] construction; [mortise and tenon] [dowel] joints.

Select one or both of the following as applicable.

- C. Door Finishing: Wood veneer facing for field transparent finish at scheduled locations.
- D. Door Finishing: Wood veneer facing for field opaque finish at scheduled locations.

2.04 DOORS [AND PANELS]

Edit this article to suit project requirements. Rift cut may only allow limited species selections; verify with manufacturer.

- A. Veneer Facing for Transparent Finish: [(Insert desired species)], veneer grade in accordance with quality standard indicated, [plain sliced (flat cut)] [quarter cut] [rift cut], with [book match] [slip match] [random matched (mis-matched)] [plank match] between leaves of veneer, [running match] [balance match] [center balance match] of spliced veneer leaves assembled on door or panel faces.
 - 1. [Transom Panels: [Continuous match to door] [End match to door].]
 - 2. [Pairs: Pair match each pair; set match pairs that are within 10 feet of each other when doors are closed.]
- B. Facing Materials for Opaque Finishes: Manufacturer's standard mill option species and cut for stiles and rails; panels of same species or wood-based composite materials.
- C. Adhesive: WDMA Type II - Water Resistant.

2.05 ACCESSORIES

Edit below to suit applicable requirements for this Section; retain only applicable paragraphs and sub-paragraphs.

- A. Glazed Openings:
 - 1. Heat-Strengthened and Fully Tempered Glass: ASTM C1048.
 - 2. Laminated Glass: Float glass laminated in accordance with ASTM C1172.
 - 3. Laminated Safety Glass: Comply with 16 CFR 1201 test requirements for Category II.
 - 4. Fire-Protection-Rated Glass: Safety Certification, 16 CFR 1201, Category II.
 - 5. Glazing: Sealed insulating units, 1 inch thick, made of 1/4 inch glass.
 - 6. Glazing: Single vision units, 1/4 inch glass.
 - 7. Tint: [Clear] [Frosted] [Gray] [(Insert description)].
 - 8. Coating: Low-E type, on #2 surface.
- OR-***
- B. Glazing: As specified in Section 08 8000.
 - C. Panel or Glass Retention Molding: Wood of same species as door facing, manufacturer's standard molding profile and style according to specified door style, mitered corners; prepared for countersink style tamper proof screws].
 - D. Louvers: Wood, of same species as door facing; style and configuration as indicated on Drawings.

2.06 DOOR CONSTRUCTION

Edit below to suit applicable requirements for this Section; retain only applicable paragraphs and sub-paragraphs.

- A. Vertical Exposed Edge of Stiles: Of same species as veneer facing.
 - 1. Fit door edge trim to edge of stiles after applying veneer facing.
 - 2. Bond edge banding to cores.
 - B. Door Fabrication:
 - 1. Factory machine doors for finish hardware in accordance with hardware requirements and dimensions. Do not machine for surface hardware.
 - 2. Fabricate stile and rail wood doors in sizes indicated for Project site fitting.
Retain paragraph above or paragraph below. Usually retain above for stock doors and for custom doors made by door manufacturers.
 - 3. Factory fit doors to suit frame opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting and edge clearances.
 - 4. Transom and Side Panels: Fabricate panels to match adjoining doors in materials, finish, and quality of construction.
 - C. Glazed Openings: Factory glaze doors with glass of type and thickness specified.
 - 1. Non-Rated and 20 Minute Rated Doors: Solid wood moldings.
 - 2. 45 and 60 minute Rated Doors: Compression glazed construction with applied wood stops.
 - D. Exterior Doors:
 - 1. Provide aluminum flashing at the top and bottom rail for full thickness and width of door.
 - 2. Cut and configure door edges to receive recessed weather stripping devices. Provide edge clearances in accordance with referenced quality standards.
 - E. Fire Rated Doors: Mineral core type, with fire resistant composite core (FD), plies and faces; with core blocking as required to provide adequate anchorage of hardware without through-bolting.
- OR-**
- F. Fire Rated Doors: Tested to ratings indicated on Drawings in accordance with ICC (IBC) - Positive Pressure; listed in UL (DIR) or ITS (DIR) and without any visible seals when door is open.
 - G. Smoke and Draft Control Doors: In addition to required fire rating, provide stile and rail door assemblies tested in accordance with UL 1784 with maximum air leakage of 3.0 cfm per sq. ft. of door opening at 0.10 inch w.g. pressure at both ambient and elevated temperatures for "S" label; if necessary, provide additional gasketing or edge sealing.
- OR-**
- H. Smoke and Draft Control Doors: In addition to required fire rating, provide stile and rail door assemblies in compliance with WDMA I.S.6A requirements for "S" label; if necessary, provide additional gasketing or edge sealing.

2.07 FACTORY FINISHING

Edit below to suit applicable requirements for this Section; retain only applicable paragraphs and sub-paragraphs.

- A. Finish work in accordance with WDMA I.S.6A for Grade specified and as follows:
 - 1. Transparent:
 - a. Manufacturers standard, in compliance with performance duty level indicated.
 - b. Stain: As selected by Architect.
 - c. Sheen: [Satin] [Semi-gloss].
 - 2. Opaque:
 - a. Manufacturers standard, in compliance with performance duty level indicated.
 - b. Color: As selected by Architect.
 - c. Sheen: [Satin] [Semi-gloss].

- B. Factory finish doors in accordance with approved sample.
- C. Exterior Doors: Seal door top edge with[color] sealer to match door facing.

PART 3 EXECUTION

EDIT THIS ENTIRE PART 3 TO SUIT PROJECT REQUIREMENTS.

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable to door manufacturer.
- C. Do not install doors in frame openings that are not plumb or are out of tolerance for size or alignment.

3.02 INSTALLATION

Edit below to suit applicable requirements for this Section.

- A. Install doors in accordance with manufacturer's instructions and specified quality standards.
 - 1. Install fire-rated doors in accordance with NFPA 80, Intertek/Warnock Hersey (WHI), and UL requirements as applicable.
 - 2. Install smoke and draft control doors in accordance with NFPA 105 requirements.
- B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.
- C. Field-Finished Doors: Trimming to fit is acceptable, subject to approval of door manufacturer.
- D. Adjust width of non-rated doors by cutting equally on both jamb edges.
- E. Trim door height by cutting bottom edges to a maximum of 3/4 inch.
- F. Trim fire-rated doors in strict compliance with fire rating limitations.
- G. Machine cut and prepare doors[and frames] for specified hardware.

3.03 TOLERANCES

- A. Conform to specified quality standard for fit, clearance, and joinery tolerances.
- B. Maximum Width Distortion (Cup): 1/4 inch measured with straight edge or taut string, edge to edge, over any 42 by 84 inch (1067 by 2134 mm) section of door face.

3.04 ADJUSTING

- A. Adjust doors for smooth and balanced door movement.
- B. Adjust closers for full closure.

3.05 SCHEDULE

- A. Refer to Door and Frame Schedule on the Drawings.

END OF SECTION

t r a d i t i o n a l | c o n t e m p o r a r y | c u s t o m

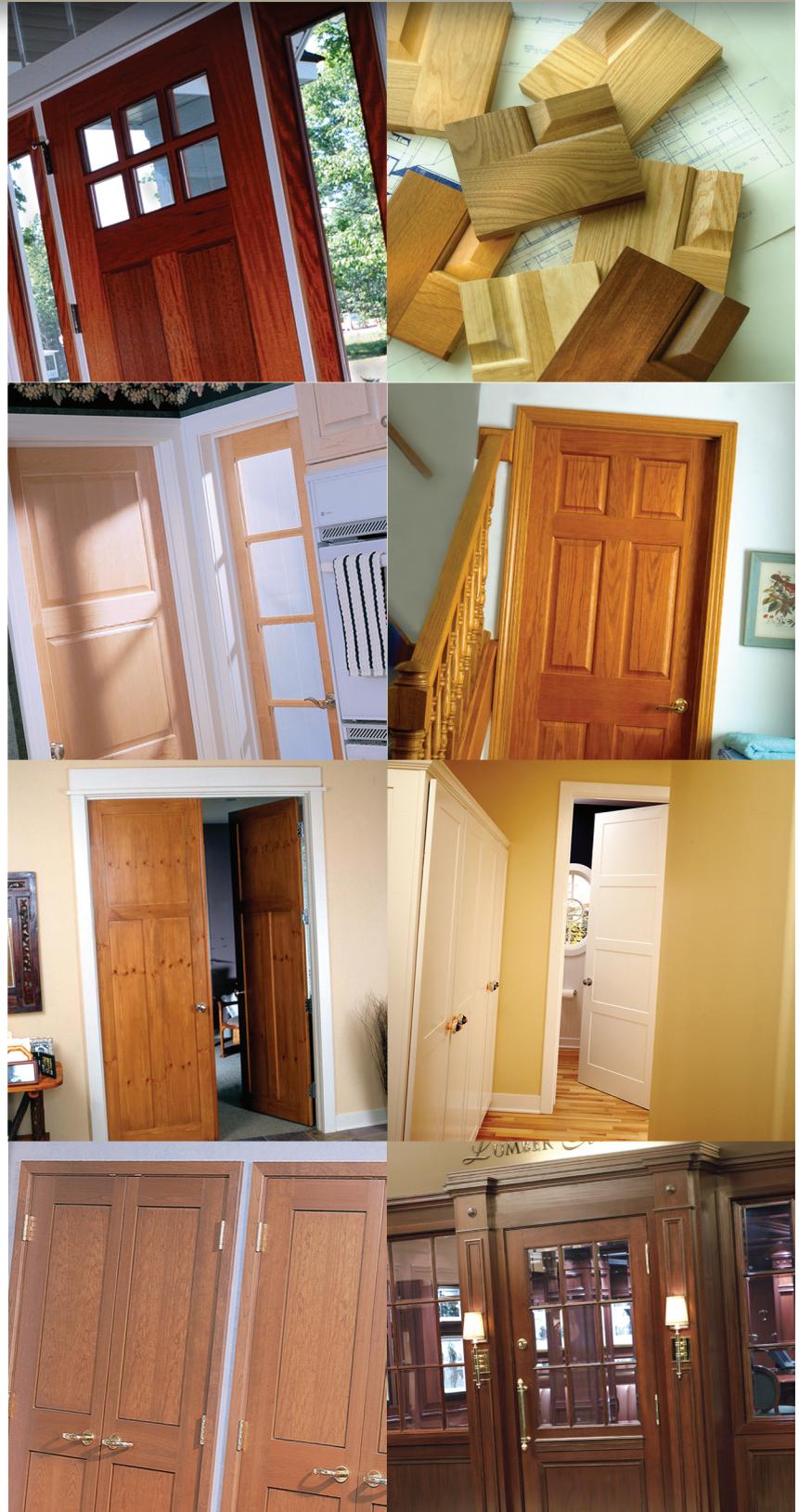
Architectural Guide

KARONA

by JELD-WEN

distinctive design
distinctive quality
distinctive service

karonadoor.com



NEW ACCOUNT PROFILE

(Please complete all sections)

Business Name	Trade Name (D/B/A)		
Mailing Address	City	State	Zip Code
Street Address	City	State	Zip Code
Type of Business	Phone Number	Fax	
Person in charge of payment	Projected Annual Purchase	Number of Employees	
Accounts Payable Email Address			

SALES TAX EXEMPT? No Yes (if yes, please attach exemption certificate)

OWNERSHIP AND FACILITIES INFORMATION

PLEASE CHECK APPROPRIATE ITEM:

Corporation (↓) Partnership Proprietorship Limited Liability Corporation

If corporation, please give the state and date of incorporation: _____

BUILDING / FACILITIES:

Owned Leased Rented

COMPLETE THE FOLLOWING INFORMATION FOR ALL CORPORATE OFFICERS, PARTNERS OR INDIVIDUAL PROPRIETOR:

Name and Title	Street Address	City	State	Zip Code
Name and Title	Street Address	City	State	Zip Code

TRADE REFERENCES

Name & Address	Phone Number	Fax (Current No. Required)
Name & Address	Phone Number	Fax (Current No. Required)
Name & Address	Phone Number	Fax (Current No. Required)
Name & Address	Phone Number	Fax (Current No. Required)

BANK REFERENCES

Bank Name	Bank Officer Name
Address	Checking Account Number
City	Loan Account Number
State	Zip Code

NEW ACCOUNT PROFILE

ACKNOWLEDGEMENT OF KARONA CREDIT TERMS

The undersigned (~~%Purchaser+~~) agrees that all purchases made by purchaser for Karona Incorporated or any of its subsidiaries and affiliated entities (~~%Seller+~~) are subject to the following terms and conditions.

1. All amounts due for goods and services purchased from Seller are payable at the Seller's distribution facility from which the goods and services are delivered. Purchaser acknowledges that such amounts are not payable in installments, but are payable in full as stated herein.
2. All amounts due Seller are payable in accordance with the payment terms granted by Seller's credit department from which goods and services are delivered. If terms are not pre-negotiated, they will be set at Karona Incorporated's Standard terms of Net 30 Days. If any amount due Seller is not paid in accordance with such payment terms, a delinquency charge shall be added to the sum due, which charge shall equal the amount attained by multiplying the delinquent balance by the lesser of (a) one and one-half percent (1½ %) per month or (b) the maximum lawful rate permitted to be charged under the applicable state's law.
3. If Purchaser goes beyond set payment terms, the account will be placed on Credit Hold until payment is received. (See Karona Incorporated's Credit Hold Terms)
4. In the event the account is turned over to an attorney or other agency for collection, or suit is brought on same, or the same is collected through any judicial proceedings whatsoever, Purchaser shall pay all reasonable collection fees, attorney's fee and court costs incurred by seller.
5. Purchaser shall notify Seller by certified mail of any change of ownership of Purchaser. Purchaser warrants to Seller that all financial information furnished for the purpose of obtaining credit is true, correct and complete in all material aspects, and Purchaser authorizes Seller to investigate all references furnished pertaining to the credit and financial responsibility of Purchaser.
6. Purchaser agrees that Seller may obtain financial and credit reports on the business and principals from any lending institution and/or credit reporting bureaus at any time.
7. I understand that a copy of my firm's latest financial statement is a required part of this application for credit. I agree to supply this financial statement and to provide a copy annually or as required. Seller agrees to hold this information in strictest confidence and to use it only as a basis upon which to grant trade credit.

PURCHASER INFORMATION

Type of print name of purchaser

Purchasers Signature

Title

Company

SELLERS INFORMATION

Date

Sales Representative of Seller

NEW ACCOUNT PROFILE

ACKNOWLEDGEMENT OF KARONA CREDIT HOLD TERMS

1. It is understood that Karona's terms of sale are Net 30 from date of invoice. My firm's financial strength is sufficient to allow it to remit according to Karona's terms of sale even though my firm may not have been paid by its client.
2. In the event an order is delayed for credit reasons, the following may occur:
 - a. If credit hold is used, the customer is notified by our accounting department.
 - b. When credit hold is in force, orders are not entered into the order entry system nor accepted by RUSH for the duration of the credit hold. Shipments will also be held.
 - c. If shipments are held, storage charges will be assessed for the period from the originally scheduled shipping date to the day the credit hold is released in accordance with the following charges: \$5.00 per pallet per day storage charge.
 - d. After credit hold is released, it may take as long as ten working days to schedule the shipment.
3. Having an account placed on credit hold twice during any six-month period may result in a requirement to arrange for payment before shipment.

PURCHASER INFORMATION

Type or print name of purchaser

Purchasers Signature

Title

Company

KARONA

MAKE AN ENTRANCE

COMMERCIAL DOOR AND RESIDENTIAL DOOR LIMITED WARRANTY

Warranty Coverage

All doors manufactured by Karona, Inc. ("Karona") (except those doors specifically excluded below from the warranty) are warranted by Karona to the Original Purchaser to be free from defects that would render those doors unserviceable or unfit for the ordinary purposes for which doors of that kind are recommended. The term "Original Purchaser" as used in this warranty means the individual or entity that purchases the door from Karona or the owner(s) of the residential dwelling or commercial structure in which the door was originally installed.

Limited Lifetime Coverage. Commercial and residential interior doors are covered under this limited warranty beginning on the date that the doors are originally purchased and continuing for as long as the doors remain in use at the residential dwelling or commercial structure where, and as, originally installed.

Limited One-Year Coverage. Residential exterior doors are covered under this limited warranty for one year from the date that the doors are originally purchased.

Claim Procedures

Since Karona cannot control the handling or exposure of doors after shipment, the Original Purchaser must inspect the doors when received. If, at the time a door shipment is received, a door has a defect that can be reasonably discovered by inspection of that door, the Original Purchaser must, prior to hanging or fitting the door and within 30 days of the date shipment is received, send written notice of the defect to Karona, Inc. P.O. Box 888410, Grand Rapids, Michigan 49588-8410. If a defect is discovered or occurs after a door is hung, written notice of the defect must be sent by the Original Purchaser to Karona, at the address listed above, within 30 days of discovery of the defect. The Original Purchaser shall not return any goods to Karona until Karona has been provided a reasonable opportunity to inspect the goods at the Original Purchaser's premises to determine whether a defect exists. Karona shall not be liable for any doors repaired, returned, or replaced without its written consent.

Exclusive Remedy

If warranted doors contain defects covered under this limited warranty, Karona's obligation shall be limited to repairing or replacing the doors (not including labor costs to re-finish or re-hang the doors) or to refunding the purchase price Karona received for the doors to the Original Purchaser at Karona's option. **THIS LIMITED WARRANTY IS THE SOLE AND EXCLUSIVE REMEDY OF ANY PURCHASER AGAINST KARONA, INC.**

Exclusions From Coverage

This limited warranty does not apply to any of the following:

- A. Any condition or appearance caused by a failure to follow Karona's written Handling, Installation and Finishing Instructions.
- B. Any exterior door in a non-single family dwelling.
- C. Any interior door used as an exterior door.
- D. Natural variations in the color or texture of wood.

KARONA

E. Warp which does not exceed 1/4 inch in the plane of the door. Warp is any distortion in the door itself and does not refer to the relationship of the door to the frame or jamb in which it is hung. The term “warp” shall include bow, cup, and twist. In measuring the amount of warp in a door, the following method shall be used: Bow, cup, and twist shall be measured by placing a straightedge on the suspected concave face of the door at any angle (i.e., horizontally, vertically, or diagonally) with the door in its installed position. The measurement of bow, cup, and twist shall be made at the point of maximum distance between the bottom of the straightedge and the face of the door.

If the claimed defect is warp, Karona may defer repairing or replacing the door for a period of up to twelve (12) months from the date of claim or the date when the door was installed, in order to permit conditioning and equalizing to humidity and temperature conditions.

- F. Small checks and surface imperfections that may appear over time. Karona’s products are produced with hardwood veneers. However, because of the nature of wood, small checks and surface imperfections may appear over time, especially those subjected to severe climatic conditions such as exposure to sunlight or extreme variations in moisture, humidity, and dryness. These small checks and surface imperfections as well as the shrinking or swelling of the wood surfaces are not considered defects. They are part of the natural weathering process of wood. These occurrences may best be minimized by proper finishing and adequate climatic conditions. (See Karona’s Handling, Installation and Finishing Instructions for more detail).
- G. Any condition arising from any purchaser’s neglect or failure to properly maintain the door.
- H. Any leakage around a glazed portion of a door that has been glazed by someone other than Karona.
- I. The appearance of any field-finished door (except for specific manufacturing defects). Certain species of wood, particularly oak, contain chemicals that react unfavorably with certain finishes. Where possible, the surface should be tested for such an unfavorable reaction.
- J. All doors 1-1/4" and under in thickness.
- K. All doors that are wider than 3’0”, higher than 8’0”, or thicker than 1-3/4".
- L. All doors with face veneers of different species. (E.g., oak interior / maple exterior).
- M. Doors pre-finished at the factory and meeting the criteria of the approved finish sample prior to hanging. Installation of pre-finished doors shall constitute acceptance of finishing (including color and feel) of the door.
- N. Normal wear and tear or deterioration for reasons other than material and workmanship of the door.
- O. Incompatibility of hardware with a particular door construction.
- P. Any condition or work completed on the door that results in the stripping of hinge screws.
- Q. Trimming of cross rails by more than twenty percent (20%) of their width. Pre-fitting width of Designer Series doors by more than 3/16” width. Pre-fitting width of Builders series doors by more than 1/16” width.
- R. Any field modification of a door (removal of panels, glass, etc.).

NOTWITHSTANDING ANY OTHER PROVISION IN THIS LIMITED WARRANTY, KARONA, INC. EXPRESSLY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALSO DISCLAIMS AND EXCLUDES ALL LIABILITY FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, OR ANY OTHER SPECIAL DAMAGES OF ANY PURCHASER, INCLUDING LOST PROFITS, FOR BREACH OF WARRANTY OR OF CONTRACT OR OTHERWISE.

NOTE: Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states also do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. In California, for example, buyers of doors used primarily for personal, family, or household purposes have specific rights to return defective doors to their seller.

KARONA INC. Definition of Terms

Bar: A narrow rabbeted horizontal or vertical sash or door member extending the total length or width of the glass opening; extends from rail to rail or stile to stile; also called ðlight barð or ðglass barð. Diagonal bars may extend from stile to rail or vice versa.

Bead, Glass: A small wood moulding applied to sash door openings to secure the glass, hence ðglass bead.ð

Bedding: Glazing whereby a thin layer (aprox. 3/16ð) of putty or bedding compound is placed in the glass rabbet, the glass inserted and pressed into this bed, glazierð points driven, or beading placed.

Back Bedding: Glazing whereby a thin layer of putty or bedding compound is placed on both sides of the glass perimeter.

Check - (Season Check): A lengthwise separation of the wood that usually extends across the annual growth rings and commonly results from stresses set up in wood during seasoning.

Cope: To cut or shape the end of a moulded wood member so that it will cover and fit the contour of an adjoining moulded wood member.

Door: A millwork assembly of stiles, rails and panels which swings, slides, tilts up or folds in order to close an opening in a wall or cabinet; may be exterior or interior, flush or panel type.

A. **Dutch Door:** A door, usually exterior, with an upper and lower section that can be opened separately.

B. **Entrance Door:** A door on the front entrance of a structure; also ðfrontð of ðmainð entrance door; may be single or pairs.

C. **Fire Door:** A door certified and labeled by a recognized testing agency to pass defined fire resistance tests for a specified length of time.

D. **French Door:** An interior or exterior door consisting of stiles, top and bottom rail and divided glass panels or lights; often used in pairs.

E. **Panel Door:** Consists of stiles, rails and one or more panels, the stiles and rails forming the frame around the panel; ðstile and railð door.

F. **Rim Door:** Consists of stiles and top and bottom rails and usually containing a single or divided glass light(s); ðstoreð door; French door.

G. **Flat Panel Door:** A door in which panels have no bevel or hip raise.

Door Bevel: The bevel on the stile edge (lock edge) of a door, usually 1/16" for doors and 2" in thickness, so that the door may swing free of the door frame; bevel is approximately 3 degrees toward door.

Door Clearance: The space between the edge of a door and the door frame which enables the door to properly operate.

Door Frame: A group of wood parts machined and assembled to form an enclosure and support for a door; door frames are classified as exterior and interior door frames.

Door Jamb: The part of a door frame which surrounds and contacts the edges of the stiles and top rail of a door.

Door Panels: A sheet of thin lumber, plywood or composition material inserted into the frame formed by the stiles, rails and mullions of a door.

A. **Composition Door Panel:** A panel of material other than solid wood or plywood.

B. **Flat Door Panel:** A panel consisting of a flat piece of plywood, solid wood or other material; contrasted to raised door panel.

Dowel: A wood peg or pin used to strengthen a wood joint; doweled construction

Eased Edge: A corner rounded or shaped to a slight radius to lessen splintering and paint failure; is not machined from an appearance standpoint, but rather from a utility standpoint.

Glass:

A. **Diffused Glass:** Glass that is figured, Florentine, hammered, obscure opaque.

B. **Insulating Glass:** Two or three (generally two) pieces, lights or panes of glass separated by a hermetically sealed air space 3/16 to 1 inch in thickness.

C. **Safety Glass:** Glass so constructed, treated or combined with other materials as to minimize the likelihood of cutting and piercing injuries resulting from human contact with this glazing material. Safety glazing material must conform to ANST Z 97.1. Types of safety glass are as follows.

1. **Tempered Glass:** Consists of a single sheet or specially heat or chemically treated plate glass. It cannot be cut, drilled, ground or polished after treatment. When broken at any point, the entire piece immediately breaks into innumerable small granular pieces.

Glazing: Inserting glass into sash and doors.

Glazing Compound: A plastic substance of such consistency that it tends to remain soft and rubbery when used in glazing sash and doors; unlike putty, it resists hardening, cracking and eventual failure; sometimes refers to putty.

Glass Bead: A small wood moulding applied to sash door openings to secure the glass.

Mullion: The upright or vertical member dividing the panel in a door; the vertical member of a sash, window or door frame between openings in a multiple opening frame; the mullion is known as the mullion center.

Muntin: A short bar horizontal or vertical extending from a bar to a stile, rail or another bar.

Ovolo: A convex profile; usually a quarter section of a circle and similar to the profile of a quarter round.

Rail: The cross or horizontal members of the framework of a sash, door, blind or other panel assembly.

- A. **Bottom Rail:** The bottom rail of a sash, door, blind or other panel assembly.
- B. **Diagonal Rail:** A diagonal rail of crossbuck or sawbuck of a panel or sash door.
- C. **Intermediate Rail:** A rail of a door located between the top and bottom rails.
- D. **Lock Rail:** The intermediate rail of the door at lock height.
- E. **Top Rail:** The top rail of a sash, door, blind or other similar panel.

Stile: Upright or vertical outside pieces of a sash, door, blind or screen.

- A. **Stile - Solid:** A door stile of solid lumber (one piece or edge glued).
- B. **Stile - Veneered:** A door stile of composite core and face veneers.

Warp: Any variation from a true plane surface and includes bow, crook, cup and twist or any combination.

Veneer: A thin layer of fine wood used in covering the surface of a lesser grade or composite material.